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Juliusz Juszczak

Warsaw University of Life Sciences – SGGW, Poland

NORWEGIAN AND POLISH DAIRY MARKETS, STATE AND PROSPECTS

NORWESKI I POLSKI RYNEK MLECZARSKI, STAN I PERSPEKTYWY

Key words: Norwegian and Polish dairy market, state, forecasts

Słowa kluczowe: norweski i polski rynek mleczarski, stan, prognozy

Abstract. The aim of this paper was to analyse and compare states of Norwegian and Polish dairy markets in last years, as well examine their prospects. The study was based on FAO, Statistics Norway, Central Statistical Office of Poland, MarketLine industries profile data for period 2009-2014 and it included following issues: market data of volume and value, its forecast, category and geographic segmentation, market shares and distribution channels. There also reviewed profiles of leading companies, as well was analysed Porter's five forces driving of those markets. Norwegian market is smaller than Polish seven times in terms of volume and with but only twice smaller in terms of value. Norwegian dairy market is oligopolistic while Polish is highly competitive.

Introduction

Polish and Norwegian economies differs each other. Poland is still found in group of emerging countries, while Norway is developed country since many years. Norwegian market, though close geographically but very differs to Polish and even to neighbouring Swedish and Danish. Significant impact on it is the fact that Norway does not a member of European Union. Norwegian milk farmers cannot rely on European Union subsidies as Polish farmers but only on domestic help. Characteristic to Norway market is quantitative domination by small companies – often family businesses. But on the other hand in many sectors, including dairy market is dominated by maximum 4-5 companies and has oligopolistic character as opposed to Polish. Moreover due to recent closure of the market for the Nordic region and a strong regionalization in Norway as well as small population of this country, there are very strong connections between companies within specific industries. This fact causes also specific limited trust to international partners, often limiting trade mainly to the Nordic region. This relates to many segments of market. But this does not preclude competition between groups of companies. At the same time small scale regions causes monopolization of distribution in different regions. Furthermore in many segments leading importers of goods are producers.

Polish dairy sector faces a process of restructuring as well as the level of farming and the level of dairy sector with growing concentration and modernisation of production and processing. This concerns mainly concentration in medium and large milk farms. It is a result of Poland accession to European Union in 2004 and this transformation is accelerating, which occurs also in dairy industry [Runowski 2014]. Polish dairy industry is fragmented which concerns co-operatives as well as stock companies. The share of global-wide enterprises in the domestic market is insignificant. The dairy sector is one of the food industry branches with substantial contribution of the co-operative sector. Dairy co-operatives integrating agricultural producers with processing played a crucial role in restructuring of dairy farming [Szajner 2010]. Having low domestic demand foreign trade plays a crucial role as regards the situation of the European dairy market. Polish dairy export is traded mainly on the EU market. Dairy exports account for 20-25% of milk procurement and 20% revenue of sales. On the other hand the importance of import is negligible (3% of market supplies or 0,3-0,5 million tons). Reasonable changes in the structure of exports were observed after Polish accession to the EU [Szajner 2009].

These conditions may vary what happens on these markets. Differences in development affect dairy markets of these countries. The study was based on Statistics Norway, Main Statistical Office of Poland, leading companies and Marketline industries profile data for period 2009-2014. To show what is level of differentiation between those two markets, in this paper will be examined characteristic data of those markets and it included following issues: market data of volume and value, its forecast, category and geographic segmentation, market shares and distribution channels. There also reviewed profiles of leading companies, as well as analysed Porter's five forces driving of those markets.

It is worth noting that the dairy market consists of retail sales of cheese, milk, soy products, spreadable fats, yogurt, cream, chilled dessert and fromage frais. The volume in markets consists of cheese, yoghurt and spreadable fats, milk (powdered and concentrated milk), soy products (soy desserts), chilled dessert and fromage frais. Any currency conversions used in the creation of this paper have been calculated using 2013 annual average exchange rates. For the purposes of this paper, Europe consists of Austria, Belgium, Czech Republic, Denmark, France, Finland, Germany, Greece, Hungary, Italy, Ireland, the Netherlands, Norway, Poland, Portugal, Romania, Russia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Market data

The Norwegian dairy market grew by 1% in 2014 to reach a volume of 175.3 million kg, while Polish dairy market grew by 3.1% in 2014 to reach a volume of 1388.7 million kg. The compound annual growth rate of the Norwegian market in the period 2009-2014 was 1.8%, compared to compound annual growth rate (CAGR) of the Polish market in above period which was 2.1%.

Table 1. Norwegian and Polish dairy market volume, 2009-2014

Tabela 1. Wielkość rynku mleczarskiego w Norwegii i w Polsce w latach 2009-2014

Year/Rok	Dairy market/Rynek mleczarski			
	Norway/Norwegia		Poland/Polska	
	mln kg	growth/ wzrost [%]	mln kg	growth/ wzrost [%]
2009	160.4	-	1133.2	-
2010	162.9	1.6	1157.1	2.1
2011	167.1	2.6	1180.1	2.0
2012	170.6	2.1	1208.1	2.4
2013	173.6	1.8	1220.9	1.0
2014	175.3	1.0	1388.7	3.1
CAGR 2009-2014	-	1.8	-	2.1

Source: own elaboration based on *Statistics Norway* and *GUS(CSO) Poland* data

Źródło: opracowanie własne na podstawie roczników statystycznych Norwegii i danych GUS w Polsce

Table 2. Norwegian and Polish dairy market value, 2009-2014

Tabela 2. Wielkość rynku mleczarskiego w Norwegii i Polsce w latach 2009-2014

Year/Rok	Dairy market/Rynek mleczarski							
	Norway/Norwegia				Poland/Polska			
	mln USD	mln NOK	mln EUR	growth/ wzrost [%]	mln USD	mln PLN	mln EUR	growth/ wzrost [%]
2009	3007.2	17673.3	2263.4		5823.9	18405.3	4387.4	
2010	3085.7	18134.7	2322.5	2.6	6052.3	19127.1	4559.5	3.9
2011	3186.7	18728.2	2398.5	3.3	6360.0	20099.5	4791.3	5.1
2012	3307.9	19440.5	2489.7	3.8	6710.9	21208.5	5055.7	5.5
2013	3371.3	19813.1	2537.4	1.9	6884.0	21755.5	5186.1	2.6
2014	3459.8	20333.2	2604.0	2.6	7163.6	22639.1	5396.7	4.1
CAGR 2009-2014				2.8				4.2

Source: own elaboration based on [*MarketLine Industry Profile, Dairy in Norway 2014, MarketLine Industry Profile, Dairy in Poland 2014*]

Źródło: obliczenia własne na podstawie danych [*MarketLine Industry Profile, Dairy in Norway 2014, MarketLine Industry Profile, Dairy in Poland 2014*]

Probably because of difference in scale of population of examined countries, Norwegian market volume is seven times smaller than Polish. However, in mentioned period both markets volumes grew almost the same i.e. approximately 2.0%.

Is worth noting that the Norwegian dairy market grew by 2.6% in 2014 to reach a value of \$3459.8 million. The compound annual growth rate of the market in the period 2009-2014 was 2.8%. Comparatively the Polish dairy market grew by 2.6% in 2014 to reach a value of \$7163.6 million. The compound annual growth rate of the market over the same period was 4.2%.

Although Norwegian market volume is seven times smaller than Polish in terms of value it is smaller slightly more than twice than Polish. It may be result of generally higher price level in Norway compared to Poland's one.

Market volume forecast

According to the Norwegian Marketline date, in 2018, the Norwegian dairy market is forecast to have a volume of 174.8 million kg, a decrease of 0.1% since 2014, whereas the Polish dairy market is forecast to have a volume of 1388.7 million kg, an increase of 11.6% since 2014. The compound annual growth rate of the Norwegian market in the period 2014-2018 is predicted to be 0.1%, compared to compound annual growth rate of the Polish market in the same period, which is predicted to be around 2.6%.

Table 3. Norwegian and Polish dairy market volume forecast, 2014-2018

Tabela 3. Prognozy wielkości rynku mleczarskiego w Norwegii i Polsce w latach 2014-2018

Year/ Rok	Dairy market/Rynek mleczarski			
	Norway/Norwegia		Poland/Polska	
	mln kg	growth/ wzrost [%]	mln kg	growth/ wzrost [%]
2014	175.3	1.0	1243.7	1.9
2015	176.0	0.4	1277.5	2.7
2016	176.6	0.3	1309.9	2.5
2017	175.9	(0.4)	1346.9	2.8
2018	174.8	(0.6)	1388.7	3.1
CAGR 2014- 2018		0.1		2.6

Source: see tab. 2

Źródło: jak w tab. 2

Taking into account above predictions it may be said that in mentioned period Polish market volume will grow in terms of compound annual growth rate by 2.6% in comparison to Norwegian market growth by 0.1%. Nearly eight times smaller population and hence significantly lower expected demand for dairy products may dictate such low forecasted scale of growth of Norwegian market volume over that period.

In 2018, the Norwegian dairy market is forecast to have a value of \$3702.2 million, and an increase of 7.0% since 2014. The compound annual growth rate of the market in the period 2014-2018 probably will be hovering around 1.9%. Comparatively in 2018 the Polish dairy market is forecast to have a value of \$8755 million, an increase of 22.2% since 2014. The compound annual growth rate of the market over the same period is predicted to be 4.9%.

Table 4. Norwegian and Polish dairy market value forecast, 2014-2018

Tabela 4. Prognozy wielkości rynku mleczarskiego w Norwegii i Polsce w latach 2014-2018

Year/Rok	Dairy market/Rynek mleczarski							
	Norway/Norwegia				Poland/Polska			
	mln USD	mln NOK	mln EUR	growth/ wzrost [%]	mln USD	mln PLN	mln EUR	growth/ wzrost [%]
2014	3459.8	20333.2	2604.0	2.6	7163.6	22639.1	5396.7	4.1
2015	3530.0	20745.8	2656.9	2.0	7519.1	23762.6	5664.5	5.0
2016	3598.9	21150.7	2708.7	2.0	7882.6	24911.4	5938.4	4.8
2017	3647.5	21426.4	2745.3	1.4	8295.8	26217.2	6249.6	5.2
2018	3702.2	21757.8	2786.5	1.5	8755.0	27668.4	6595.6	5.5
CAGR 2014-2018				1.9				4.9

Source: see tab. 2

Źródło: jak w tab. 2

Considering quoted projections it can be found that forecasted compound annual growth rate of Norwegian market value is more than two times smaller than Polish in the same period, respectively 1.9% and 4.9%. Besides fact that in terms of volume Norwegian market in 2018 is forecasted to be almost eight times smaller, in terms of value it is smaller less than three times than Polish.

Market segmentation and distribution

Cheese is the largest segment of the dairy market in Norway and Poland respectively accounting for 30.7% and 29.6% of the markets total value. The milk segment is second in above terms in both markets as well, and it accounts adequately for a further 23.5% and 23.6% of the markets.

In category segmentation both markets look quite similar. Still significant difference is differential in value of yogurt and spreadable fats segments for studied markets. Consumers' tastes are the probable reason of this fact. It should be noted that in 2013 in terms of value Norway accounts for 2.1% of European dairy market, while Polish market accounts for two times bigger part, which is 4.2%. Germany and France account for a feather 29.6%, respectively 15.8% and 13.8%.

Examined markets account together for slightly more than 6% of whole European dairy market. These markets have small share in comparison to first two listed countries that account for nearly one-third of European market. But both Norwegian and Polish market going to grow, thus their share will probably rise.

In the Norwegian dairy market it is important that in 2013 Tine Group was the leading player generating a 71.4% share of the market's value. Synnove Finden AS accounted for a further 5.2% of the market. In 2013, in Poland the leading player of market was SM Mlekpól, generating a 12.2% share of the market's value. SM Mlekovita accounted for further 9.7% of the market.

In terms of shares there are significant differences between Norwegian and Polish dairy markets. Norwegian market was highly concentrated with concentration ratio (CR1 equals 71.4% and CR4 equals 81.9%) and Herfindahl-Hirschman Index (HHI exceeds 5000), thus it can be characterised as in range from oligopoly to monopoly. Comparatively, Polish market was not concentrated with CR1 of 12.2% and CR4 of 34.2% and HHI less than 1000, therefore can be described as highly competitive.

In 2013 in both countries the leading distribution channel was supermarkets / hypermarkets form, accounting respectively for a 77.3% and 46.9% share of total markets value. Differences in order of further channel shares of

Table 5. Norwegian and Polish dairy market category segmentation in 2013

Tabela 5. Struktura rynku mleczarskiego w Norwegii i w Polsce w 2013 roku

Category/ <i>Kategoria</i>	Dairy market segmentation/ <i>Struktura rynku mleczarskiego</i>			
	Norway/ <i>Norwegia</i>		Poland/ <i>Polska</i>	
	value/ <i>wartość</i>	%	value/ <i>wartość</i>	%
Cheese/ <i>Sery</i>	1035.2	30.7	2034.7	29.6
Milk/ <i>Mleko</i>	791.0	23.5	1622.6	23.6
Yogurt/ <i>Jogurty</i>	442.6	13.1	873.2	12.7
Spreadable fats/ <i>Thuszcze</i>	331.4	9.8	1610.4	23.4
Soy Products/ <i>Produkty sojowe</i>	33.6	1.0	92.1	1.3
Other/ <i>Inne</i>	737.5	21.9	651.0	9.5
Total/ <i>Razem</i>	3371.3	100	6884.0	100

Source: see tab. 1

Źródło: jak w tab. 1

Table 6. Milk market in selected European countries in 2013

Tabela 6. Rynek mleka w wybranych krajach europejskich w 2013 roku

Country/ <i>Kraj</i>	Milk mark/ <i>Rynek mleka</i>	
	mln USD	%
Germany/ <i>DE</i>	25 810.9	15.8
France/ <i>FR</i>	22 665.8	13.8
Russia/ <i>RU</i>	16 752.1	10.2
United Kingdom/ <i>UK</i>	15 338.3	9.4
Poland/ <i>PL</i>	6 884.0	4.2
Norway/ <i>NO</i>	3 371.3	2.1
Rest of Europe/ <i>Pozostale kraje Europy</i>	72 867.2	44.5
Total/ <i>Razem</i>	163 689.6	100.0

Source: own elaboration based on FAO data

Źródło: opracowanie własne na podstawie danych FAO

Table 7. Norwegian and Polish dairy market share by value in 2013

Tabela 7. Udział poszczególnych zakładów produkcyjnych w norweskim rynku mleka w 2013 roku

Norway/Norwegia		Poland/Polska	
company/zakład	share/udział [%]	company/zakład	share/udział [%]
Tine Group	71.4	SM Mlekoop	12.2
Synnové Finden AS	5.2	SM Mlekovita	9.7
Agra Industrier A/S	2.7	Hochland AG	6.5
Kavli Norge AS	2.5	Zott GmbH & Co. KG	5.8
Other/Inne	18.1	Other/Inne	65.8
Total/Razem	100.0	Total/Razem	100.0

Source: see tab. 2

Źródło: jak w tab. 2

Table 8. Norwegian and Polish dairy markets distribution channels by value in 2013

Tabela 8. Kanały dystrybucji na norweskim i polskim rynku mleka w 2013 roku

Distribution channels/Kanały dystrybucji	Share/Udział [%]	
	Norway/Norwegia	Poland/Polska
Supermarkets, hypermarkets/ <i>Super - hipermarkety</i>	77.3	46.9
Convenience Stores/ <i>Sklepy spożywcze</i>	12.2	11.7
Specialists Retailers/ <i>Specjalistyczni sprzedawcy</i>	7.4	14.3
Independent Retailers/ <i>Niezależni sprzedawcy</i>	1.8	26.8
Other/Inne	1.2	0.3
Total/Razem	100	100

Source: see tab. 2

Źródło: jak w tab. 2

examined markets may be dictated by differential in density and structure of population described countries, which are significantly diversified.

Leading companies

Norway. TINE SA is a Norway-based producer, distributor and exporter of food and dairy products. The company is a dairy cooperative that is owned by Norwegian farmers. It has operations in the US and Europe. The company offers a range of products that include cottage cheese and curd, desserts, finished dough and sauces, cream, juice, milk, cheese, sour cream and crème fraîche, butter and yogurt. TINE markets its products under the following brands: Biola, Bruno Stene, Cultura, Go' morgen, Jarlsberg, Litago, Norvegia, Keyhole Products, Now, Piano, School milk, Bounce, TINE iced coffee, TINE Cream Cheese, TINE Culture Milk, TINE Lactose, TINE Cooking Products, TineMelk, TINE Yoghurt, TINE Organic and YT. The company's subsidiaries include Diplom-Is, TINE Holding, FellesJuice, OsteCompagniet, Melkerampa, Salmon Brands, TINE Eiendom Espehaugen and Landbrukets Ferskvaredistribusjon, among others. The company has around 5600 employees.

Poland. Spółdzielnia Mleczarska MLEKPOL is a biggest Polish dairy cooperative. The company processes more than 1,200 million litres of milk annually. The company's products include milk, cream, desserts, cream, variety of yogurts, sour cream, butter, and a variety of cheeses, including cream cheese, cottage cheese, and hard cheese. The company's biggest brands include: Białe, Grani, Łaciate, Milko, Mazurski Smak, Mrągowska, Świeże, Zambrowskie. The company's subsidiaries include Osowa, Rolmlecz, and SOMLEK. The company has around 2300 employees.

Conclusions

1. These considerations are fragmentary and do not comprehensively explore the issue. They may have missed actual conditions, yet may be motivation for further consideration. The following conclusions are offered as a result of this analysis.
2. Norwegian and Polish dairy markets are differentiated by their volumes, in 2014 respectively 175.3 and 1388.7 million kg. Still their compound annual growth rate for period from 2009 to 2014 is almost the same. Volume forecasts show that from 2014 to 2018 Polish dairy market will grow faster than Norwegian, accordingly by 2.6% to 1388.8 million kg and by 0.1% to 174.8 million kg.

3. In terms of value, difference between examined markets is smaller. In 2014 Norwegian dairy market was smaller slightly more than two times in comparison to Polish. Difference of compound annual growth rate of markets values has similar scale, adequately 2.8% and 4.2%. Prospects of future values show that from 2014 to 2018 Norwegian dairy market will grow by 1.9% to \$3702.2 million and Polish by 4.9% to \$8755.0 million. Higher degree of growth in Polish market may be dictated by Polish membership in European Union, thus access to EU subsidies, considerable export expansion, mostly to the EU market, as well as stabilisation of economic conditions for production and processing – an improvement in the profitability of milk production and the favourable financial standing of the dairy industry.
4. In 2013 shares of these markets in European dairy markets were small, respectively 2.1% accounted for by Norwegian and 4.2% accounted for by Polish. In comparison to leading markets, Russian market accounts for 15.8%, examined markets have little importance. However, thanks to predictions of growth, their profile in European dairy market will rise.
5. Considering markets shares, it is concluded that Norwegian dairy market is described in range from oligopoly to monopoly because of its small number of players and 71.4% shares accounted for by leading company Tine SA. Polish market on the other hand is found as a highly competitive because of its high number of players and 12.2% shares accounted for by leading company SM Mlekpól.
6. In terms of category segmentation, Norwegian and Polish are quite similar. But two main categories of products are cheese and milk. In Norway their account respectively for 30.7% and 23.5% of market share. In Poland the same categories accounts for 29.6% and 23.6% of market shares.

Bibliography

- FAO, [online], <http://fao.org>.
- GUS, Central Statistical Office of Poland, [online], <http://stat.gov.pl>.
- MLEKPOL, [online], <http://www.mlekpól.com.pl>.
- MarketLine Industry Profile, Dairy in Norway. 2014. Marketline, November 2014.
- MarketLine Industry Profile, Dairy in Poland. 2014. Marketline, November 2014.
- Runowski H. 2014. *Ekonomika rolnictwa - przemiany w gospodarstwach rolnych. Rolnictwo, gospodarka żywnościowa, obszary wiejskie - 10 lat w Unii Europejskiej*. Wydawnictwo, SGGW, 31-48.
- Statistics Norway, [online], <http://www.ssb.no>.
- Szajner P. 2009: *Assessment of the competitiveness of the dairy food chain in Poland*. [online], <http://www.euro-qualityfiles.net/AgriPolicy/Report%202.1/Poland%20Agripolicy%20D2-1.pdf>.
- Szajner P. 2010: *An Assessment of Polish Dairy Market – Situation and Outlook*, [online], http://ec.europa.eu/agriculture/markets/milk/hlg/acadb112_szajner_doc_en.pdf.
- TINE, [online], <http://www.tine.no>.

Streszczenie

Celem badań było przedstawienie stanu norweskiego i polskiego rynku mleczarskiego oraz rozpoznanie ich perspektyw. Materiał stanowiły dane FAO, Norweskiego Biura Statystycznego, GUS w Polsce oraz raporty firmy Marketline dotyczące tych rynków za lata 2009-2014. Badania dotyczyły wolumenu i wartości rynków, ich prognozy, segmentacje pod względem kategorii i udziałów w rynku europejskim, struktury rynków kanałów dystrybucji. Dokonano przeglądu profili wiodących firm, jak również przeprowadzono analizę pięciu sił Portera tych rynków. Pod względem wolumenu norweski rynek jest aż siedem razy mniejszy od polskiego, ale tylko dwa razy mniejszy pod względem wartości. Norweski rynek jest oligopolistyczny, podczas gdy polski wysoce konkurencyjny.

Adres do korespondencji
Mgr Juliusz Juszczyk
Warsaw University of Life Sciences – SGGW, Poland
Faculty of Economic Sciences
Nowoursynowska Str. 166, 02-787 Warsaw
phone: (22) 593 42 71
e-mail: juliusz_juszczyk@sggw.pl