ANNALS OF THE POLISH ASSOCIATION
OF AGRICULTURAL AND AGRIBUSINESS ECONOMISTS

Received: 22.12.2021
Acceptance: 28.01.2022
Published: 15.03.2022
JEL codes: L26, P13, Q13

Annals PAAAE • 2022 • Vol. XXIV • No. (1)

DOI: 10.5604/01.3001.0015.7118

PAULINA LUIZA WIZA

Poznań University of Life Sciences, Poland

DETERMINANTS OF COMPETITIVENESS OF DAIRY ENTERPRISES ON THE EXAMPLE OF THE WIELKOPOLSKA REGION

Key words: dairy enterprises, milk market, competitiveness, economic and financial evaluation, regionalization, Wielkopolska Region

ABSTRACT. The aim of the article is to determine the competitive potential of selected dairy enterprises located in the Wielkopolska Region and establish the determinants of competitiveness of the researched entities. The selection of the research sample was purposive and was determined by two assumptions. First of all, the Wielkopolska Region, according to the data of the Central Statistical Office, takes third place in terms of milk production in Poland, where the cooperative character of milk processing prevails. This region has the largest number of dairy cooperatives, i.e., 26 cooperative dairy plants operated in 2019, constituting a share, in the whole industry, at a level of 16%. Secondly, for empirical research, only district dairy cooperatives located in the Wielkopolska Region were selected, which, since 2007 to 2019, submitted their financial statements to the Emerging Markets Information Service (EMIS) database, conducted business activities and were engaged in milk processing and the production of dairy products. At the end of 2019, there were fifteen entities that met the above criteria, and this group was selected for further empirical analysis. The conducted research shows that dairy cooperatives, having short term financial liabilities and an average income from sales, have the best competitive potential. The weakest competitive potential was achieved by cooperatives with long-term financial liabilities and a low profitability of sales of offered products. The evaluation of competitive potential showed that the direction of influence of evaluated elements of competitive potential was not clearly defined. It means that we should think over the construction of the synthetic measure for the evaluation of the competitive potential of dairy enterprises, which, apart from the financial condition, will consider other areas i.e., the production potential, investment outlays borne by an enterprise for modernization, the purchase volume of milk and the number of suppliers cooperating with a given enterprise.

INTRODUCTION

One of the important issues in micro-, meso- and macroeconomic terms is competitiveness. Shaping and gaining a competitive advantage in contemporary economic conditions is an important source of obtaining advantageous results against competitive entities [Godziszewski 2001, Domańska 2013]. Building an advantage against market rivals determines the continuous development of enterprises in a competitive market [Domańska 2013, Mierzwa, Zimmer 2016].

According to Marek Stankiewicz [2005] and Katarzyna Domańska [2013], competitiveness can be defined as "the ability to achieve goals in an economically efficient manner in a market competitive arena". The achievement of objectives by economic entities operating in competitive conditions is determined by the developed competitive advantage, which is the basis for shaping a sustainable process and having a larger market share than competitors [Obłój 2001, Domańska 2013]. A competitive advantage is shaped by the competitive position and competitive potential that an enterprise has. The effective management of competitive potential is carried out through the use of competition strategies, which are a set of instruments of competition, which consequently results in strengthening the competitive advantage of a given economic entity [Domańska 2013].

The importance of competitiveness is becoming more and more important in relation to the milk processing industry, which is characterised by high average profitability, as well as a relatively high average annual growth rate, besides having an important role in meeting the nutritional needs of society [Mierzwa, Zimmer 2016]. Significant difficulties in the entry of new players into the dairy industry result in intensified competition, as well as offensive actions of dairy processing enterprises. Enterprises, in order to be able to efficiently and effectively conduct business in the changing economic environment, must ensure their financial sustainability. Milk processing enterprises, in order to ensure their financial balance, are obliged to care about the attractiveness of the dairy products they produce, as well as about their own economic security on the domestic market and foreign markets [Domańska 2013, Mierzwa, Zimmer 2016].

The dairy industry is one of the basic branches of Polish agriculture and the food industry. According to the Central Statistical Office (GUS), in 2020, milk production in Poland amounted to 14.4 billion litres, which makes Poland one of the most significant milk producers, coming 5th in the European Union and 12th in the world in milk production [GUS 2021]. The dairy industry includes both milk producers and milk processors. The raw material base of the Polish dairy industry consists of individual suppliers producing about 12 million tons of milk per year [GUS 2021]. In Poland, the organisation of milk processing is mainly based on dairy cooperatives [Jabłońska-Urbaniak 2010, Chądrzyński, Nowak 2014]. The marketisation of the economy, as well as integration with the European Union, contributed to the development of the dairy industry, triggering adaptation processes

enabling dairy enterprises to function in a new environment. These activities caused the adaptation of supply to changing demand and growing consumer requirements, including changes in production structures, concentration, as well as technological progress in milk production and processing [KOWR 2021]. According to National Agricultural Fund (KOWR) data, at the end of 2020 there were 306 purchasers in the Register of First Purchasers of cow's milk, including 181 dairy cooperatives. In December 2020, cooperatives accounted for 59.2% in the structure of all milk purchasers. First entities listed in the Register of First Purchasing Entities, kept by the Director General of the National Agricultural Fund, purchase milk in all provinces. A significant number of these entities is concentrated in central and eastern Poland, as these are the regions of the country where the raw material base is concentrated. Almost 76% of all dairy cooperatives are located in the Mazowieckie, Wielkopolskie, Łódzkie, Kujawsko-Pomorskie, Podlaskie, Warmińsko-Mazurskie and Lubelskie Voivodships and it is where over 66% of domestic milk deliveries are conducted. In 2020, dairy cooperatives purchased 9.3 million tons of raw material, i.e., 74.8% of total milk deliveries for purchase made by entities with various forms of ownership [KOWR 2021].

One of the voivodeships where milk production plays a key role for the economic, environmental and social situation of farms, and, thus, determines the development of the dairy sector in the whole country, is the Wielkopolska Region. Based on data from the Central Statistical Office [GUS 2021], it was shown that in 2019 over 1,964 million litres of milk were produced in the Wielkopolska Region (accounting for 13.9% of national production), placing the Wielkopolska Region in third place, in terms of milk production in Poland, after the Mazowieckie Region (3,302 million litres, accounting for 23.4% of national production) and the Podlaskie Region (2,823 million litres, accounting for 20.0% of national production) [GUS 2021]. The Wielkopolska Region, compared to the rest of the country, is distinguished by many factors associated with milk production and processing, among which the following should be mentioned first of all: the lowest labour and land intensity, the highest level of technical equipment of labour, the investment rate, the productivity of land, labour and assets, and the highest level of production intensity (the highest average herd size and milk yield of cows) [Domańska 2013].

The aim of the article is to determine the competitive potential of selected dairy enterprises located in the Wielkopolska Region and establish the determinants of competitiveness of the researched entities. The selection of the research sample was purposive. It was determined by two assumptions. First of all, the Wielkopolska Region, according to the data of the Central Statistical Office, takes third place in terms of milk production in Poland, where the cooperative character of milk processing prevails. Dairy cooperatives operate on the territory of the whole country, but the Wielkopolska Region has the largest number of them, i.e., 26 cooperative dairy plants operated in 2019 in the Wielkopolska Region, constituting a share in the whole industry at a level

of 16%. Secondly, for the empirical research, only district dairy cooperatives located in the Wielkopolska Region were selected, which, since 2007, submitted their financial statements to the Emerging Markets Information Service (EMIS) database, conducted business activities and were engaged in milk processing and the production of dairy products. At the end of 2019, there were fifteen entities that met the above criteria, and this group was selected for further empirical analysis.

RESEARCH MATERIAL AND METHODOLOGY

The research material consisted of financial reports of fifteen dairy cooperatives operating in the Wielkopolskie voivodeship, published in the database of the Emerging Markets Information Service [EMIS 2021]. The time scope of analysis includes the years 2007-2019. Characteristics of the studied enterprises, based on selected published data, are presented in Table 1.

In order to determine the competitive potential of dairy cooperatives in Wielkopolska a synthetic measure developed and applied by Jacek Szanduła [2011] to assess the financial condition of enterprises in the fish industry was used.

Table 1 presents detailed characteristics of cooperative dairy enterprises situated the Wielkopolska Region which constituted the object of research in the empirical analysis of this article. Characteristics of the researched entities were made on the basis of such criteria as: the number of employed workers, the sales revenue, the sales revenue per employed person and the share of a given cooperative in the sales value of the dairy industry in Poland. Table 1 presents data for 2019 for fifteen dairy cooperatives in the Wielkopolska Region. Analyzing the data presented in Table 1 for fifteen Wielkopolska dairy cooperatives in 2019, 3 groups of entities were identified. The largest enterprises with regard to the number of employees, revenue gained, market share and other factors mentioned in Table 1 were classified into the first group. The largest dairy cooperatives in the Wielkopolskie Region in 2019 were:

– OSM Koło, which had a market share of 2.52%, employed 679 workers and obtained a sales revenue of PLN 772,707,445;
– OSM Gostyń with a 1.42% market share, 453 employees and a sales revenue amounting to PLN 434,274,310;
– OSM JANA in Środa Wlkp. is the third largest dairy enterprise operating in the Wielkopolskie Voivodeship. In 2019, OSM JANA in Środa Wlkp. employed 313 people. The cooperative earned a sales revenue of PLN 190,211,520, accounting for a 0.62% share of the total dairy industry in Poland.

The second group of enterprises consists of entities employing more than 120 employees, but no more than 300, with market shares between 0.22% and 0.44%, obtaining

Table 1. Characteristics of dairy cooperatives in Wielkopolska (data for 2019)

Company name	Number of employees [persons]	Sales revenue [PLN]	Revenue per 1 employee [PLN/ person]	Share of a given cooperative in the sales value of the dairy industry in Poland [%]	Type of assort-ment
OSM Czarnków	193	134,165,350	695,157	0.44	differentiated
OSM Gostyń	453	434,274,310	958,663	1.42	
OSM JANA w Środzie Wlkp.	313	190,211,520	607,705	0.62	
OSM Jarocin	87	43,374,410	498,556	0.14	
OSM Koło	679	772,707,445	1,138,008	2.52	
OSM Konin	179	100,412,350	560,963	0.33	
OSM Kowalew-Dobrzyca	86	33,434,780	388,777	0.11	
OSM Łobżenica	120	72,856,490	607,137	0.24	
OSM Ostrów Wlkp.	75	31,033,280	413,777	0.00	
OSM Rawicz	76	25,688,070	338,001	0.08	
OSM Strzałkowo	82	63,666,980	776,427	0.21	
OSM Śrem	106	48,042,050	453,227	0.16	
OSM Top-Tomyśl	53	13,122,520	247,595	0.04	
OSM Wolsztyn	255	33,131,418	260,496	0.22	
OSM Września	111	62,437,260	562,498	0.20	

Source: own study based on financial statements published by the surveyed dairy cooperatives in the EMIS database

a sales revenue between PLN 64 and 134 million, with the exception of OSM Wolsztyn, which had a sales revenue of PLN 33 million, but, due to its market share of 0.22% and employment of 255 employees, it was decided to qualify this entity to the second group (Table 1). Medium-sized dairy cooperatives operating in the Wielkopolska Region in 2019, apart from the above OSM Wolsztyn, were OSM Czarnków, OSM Konin and OSM Łobżenica (Table 1).

The third group of enterprises includes the smallest dairy cooperatives, which include entities with less than 120 employees and a market share of 0.00-0.21% with a sales revenue below PLN 64 million. The smallest dairy cooperatives in the Wielkopolska Region in 2019 are OSM Września, OSM Śrem, OSM Jarocin, OSM Kowalew-Dobrzyca, OSM Strzałkowo, OSM Rawicz, OSM Ostrów Wlkp., and OSM Top-Tomyśl (Table 1).

The smallest dairy cooperative operating in 2019 in the Wielkopolska Region was Top-Tomyśl with a market share of 0.04%, with 53 employees, and a sales revenue of PLN 13,122,520 (Table 1). Based on the data collected in Table 1, it can be concluded that the share of all Wielkopolska dairy cooperatives in the sales value of the dairy industry in Poland in 2019 was 6.73%, which indicates the significant importance of indicated entities in the dairy industry as a whole.

The synthetic measure was determined based on the following procedure: (1) a set of diagnostic variables was determined; (2) indicators were divided into stimulants (phenomena positively influencing the formation of the competitive potential of the studied economic entities) and destimulants (phenomena negatively influencing the competitive potential); (3) destimulants were transformed (quotient transformation); (4) variables were normalized by unitization; (5) a measure of the competitive potential of dairy cooperatives in the Wielkopolska Region was determined by calculating the weighted average of indicators. Explaining reasons of such choices concerning the construction of measure, it should be pointed out that each of them is a result of analysis of literature on the subject and the result of research experience of the author of the publication.

The first stage was selecting the variables. It was done according to content-related criteria, referring to hitherto conducted research in the scope of an analysis of factors conditioning the competitiveness of particular economic entities functioning in the Polish dairy industry. Also, the properties of variables were taken into consideration. This involved the possibility of numerically expressing the level of analyzed aspects of competitiveness potential of particular economic entities of the dairy branch as well as the availability and completeness of data for examined Wielkopolska dairy cooperatives [Zeliaś 2000]. In the applied synthetic measure, financial indices were distinguished as in Table 2.

In the second stage of the construction of the synthetic index, a categorization of financial indices indicated in Table 2 was made. The criterion of dividing the indicators was their influence on shaping the competitive potential of the studied dairy cooperatives in the Wielkopolska Region. It contributed to distinguishing financial indicators which can be stimulants, destimulants and nominators. Stimulants were qualified variables, the increase in value of which determine the increase of the competitive potential of a given entity. In this case, the author classified the following as stimulants: return on assets (ROA), return on sales (ROS), asset turnover (RA), current asset turnover (RAO) and revenue dynamics (DP). The destimulants include variables, the increase of which determines a decrease in the competitive potential of a given entity. In this case, the author included the operating cycle (CO). On the other hand, nominants are characterised by an optimal level, from which any deviation is considered an unfavourable phenomenon. In this case, the author qualified the current ratio (WB) and the debt rate (SZ) as nominants. Indicating whether a given variable is a stimulant or a destimulant is generally not a problem. However, in the case of nominants, the difficulty lies in determining the optimal level of the variable.

Table 2. The financial indicators taken into consideration in the evaluation of the competitive potential of dairy cooperatives in Wielkopolska in 2007-2019

Category (refers to the assessment of the competitive potential of the surveyed entities)	Indicator name with formula	Unit	Source of data
Profitability area	Return on assets $ROA = \frac{\text{nenet profit (loss)}}{\text{total assets}} \times 100\%$	%	Financial statements published each year by the dairy companies surveyed collected using the EMIS database
	Return on sales $ROS = \frac{\text{profit (loss) from sales}}{\text{net revenue from sales}} \times 100\%$	%	
Financial liquidity area	Current ratio $WB = \frac{\text{current assets}}{\text{current liabiliities}}$	-	
Debt area	Debt ratio $SZ = \frac{\text{liabilities and provisions to lability}}{\text{total assets}}$	-	
Performance area	Asset turnover $RA = \frac{\text{net sales revenues}}{\text{total assets}}$	-	
	Current asset turnover $RAO = \frac{\text{net sales revenues}}{\text{currentl assets}}$	-	
	Operating cycle $CO = \frac{365 \times \text{(receivables + inventories)}}{\text{net sales revenues}}$	-	
Market value area	Revenue dynamics $DP = \frac{\text{net sales revenues}}{\text{net sales revenues}_{t-1}}$	-	

Source: own study

In determining the optimal level of values for financial indicators classified by the author of the publication as nominants, the following literature items were used: Maria Sierpińska and Tomasz Jachna [2004], Aswath Damodaran [2007], Robert Kowalak [2008], Robert Machała [2008] and Jacek Szanduła [2011].

The third stage in the construction of the synthetic measure was the choice of the stimulus method for the destimulants. Since a statistical variable is an aggregate of partial indicators, all variables should be transformed into stimulants. In the case of destimulants, it was decided to perform a quotient transformation, which is one of the more frequently used solutions in this area [Gatnar, Walesiak 2004]. The transformation of variables from destimulants to stimulants was performed according to the following formula:

$$x_i^s = -x_i$$

where:

i = 1,2, ..., n, n – the number of observations of the indicator (here the number of enterprises), $x_{j,i}^s$ – the i-th value of the indicator x_j transformed to a stimulant, $x_{j,i}$ – the i-th value of the x_j indicator.

In contrast, the following formulae were used for the transformation of nominals into stimulants:

$$x_{j,i}^s = \begin{cases} 0, for\ x_{j,nom,D} \leq x_{j,i} \leq x_{j,nom,G} \\ x_{j,nom,G} - x_{j,i}\ for\ x_{j,i} > x_{j,nom,G} \\ x_{j,i} - x_{j,nom,D}\ for\ x_{j,i} < x_{j,nom,D} \end{cases}$$

where:

$x_{j,nom,D}$ – the lower value of the nominal interval for the indicator x_j,

$x_{j,nom,G}$ – the upper value of the nominal interval of the indicator,

j = 1,2,..., m, m – the number of indicators (number of variables).

Among the indicators presented in Table 2, the operating cycle was identified as a destimulant, while the current ratio and the debt rate as nominants. In the literature on the subject, the optimum range for the current ratio is indicated as 1.2 to 2.0 [Sierpińska, Jachna 2004, Szanduła 2011], stressing that a situation when both no liquidity and excessive liquidity is observed is unfavourable for the functioning of an economic entity. A low level of liquidity of the company may result in the risk of its insolvency. On the other hand, too high a liquidity is connected with the inefficient management of financial resources. However, these two cases should not be considered symmetrically. The inability to repay liabilities on time may result in the deterioration of relations with suppliers, which, in turn, leads to the slowing down or halting of production and, ultimately, to an enterprise's bankruptcy. Liquidity ratios inform about the possible occurrence of the insolvency risk.

According to Jacek Szanduła [2011], the recommended range for the current ratio is [1.2; ∞], as over-liquidity will not negatively affect the value of the synthetic ratio. On the other hand, the operating efficiency in the synthetic indicator will be expressed through other indicators. In the case of the debt ratio, the recommended range in the literature is between 0.57 and 0.67 [Sierpińska, Jachna 2004]. Too high a share of external financing in the structure of liabilities may result in the necessity to repay debt, which is connected with the risk of losing financing. On the other hand, too low a value of the debt ratio may indicate the poor use of foreign capital by an enterprise. The essence of the debt ratio is to provide information about potentially excessive debt. Therefore, the study adopted a range of [0;0.6] for the debt ratio, which means that a low proportion of foreign capital will not be treated as a negative situation.

The fourth stage concerns the choice of the normalisation procedure. Financial indicators are expressed in different units, i.e., PLN, days. Some are devoid of denominators, which makes it difficult to aggregate them directly. The mean values and variances of individual variables are also different, so to bring the sub-indices to mutual comparability, normalization should be carried out [Szanduła 2011]. Next, unitarisation was carried out. For normalized variables, correlation coefficients were calculated, which are presented in Table 3. In the normalisation procedure, both standardisation and unitisation were carried out. Based on the normalisation procedures carried out, no significant differences were found in the results obtained.

Since the stimulation procedure requires that the variables building the synthetic index be independent, the initial set of variables was reduced. The set of variables was reduced by conducting a factor analysis and eliminating correlated variables. The critical value of the correlation coefficient was taken as 0.05, which was arbitrarily determined. The final set of variables used in the study are: return on assets, return on sales, the current ratio, the debt rate, asset turnover, current asset turnover and revenue dynamics.

Table 3. Correlation coefficients of financial indicators after unitisation

	ROA	ROS	WB	SZ	RA	RAO	CO	DP
ROA	1	-0.09329	0.43031	0.286175	0.006095	-0.28117	-0.10154	0.322127
ROS	-0.09329	1	-0.04666	-0.02445	0.091745	0.203566	0.051608	0.110067
WB	0.43031	-0.04666	1	0.505938	0.072341	-0.24064	-0.13229	-0.04488
SZ	0.286175	-0.02445	0.505938	1	0.205359	-0.21957	-0.13586	-0.00764
RA	0.006095	0.091745	0.072341	0.205359	1	0.306896	0.360677	0.199379
RAO	-0.28117	0.203566	-0.24064	-0.21957	0.306896	1	0.669777	0.18572
CO	-0.10154	0.051608	-0.13229	-0.13586	0.360677	0.669777	1	0.072396
DP	0.322127	0.110067	-0.04488	-0.00764	0.199379	0.18572	0.072396	1

Source: own study

The fifth stage is the calculation of the synthetic indicator through the weighted arithmetic average of the subindices.

$$z_i = \sum_{j=1}^{m} w_j x'_{j,i}$$

where:

z_i – -the i-th observation of the synthetic indicator (the synthetic indicator for the i-th company in a given year), w_j – the weight of the j-th indicator, $x'_{j,i}$ – the i-th normalised value of indicator x_j.

An important issue in the construction of the synthetic measure was how the individual financial indicators were weighted. The w_j weights, determined in the above formula, indicate the importance of a given indicator in the evaluation of the enterprise's competitive potential. Due to a lack of universal solutions as to how to weigh the indicators, a system of equal weights was adopted in the constructed synthetic measure. Finally, the synthetic variable was determined at a level of the simple arithmetic mean of partial indicators. The estimated synthetic indicator is a convex combination of stimulants, which makes it a stimulant itself. This means that the higher its value, the better the company's competitive potential.

RESULTS OF RESEARCH

Any enterprise that is engaged in economic activity, according to the theory of the market economy, is aimed at achieving a positive financial result. Profit, otherwise known as the surplus of revenues over the costs of a company, is necessary to finance the activities and development of the company, thus creating the potential for long-term future profits. Increasing the sales volume, and thus the market share, and launching new projects requires additional outlays, which are financed, among others, by profit [Bednarski, Waśniewski 1996, M. Zuba, J. Zuba 2011]. For an enterprise, profit is a test of the effectiveness of its entrepreneurial activities and a reward for the economic risk taken. It reflects the material effect connected with the better use of production factors (machines, materials and working time), the use effect arising as a result of improving the quality of products and services and the economic effect expressed in meeting specific customer demand [Janik 2001]. The effectiveness of the enterprise is also indicated by the relation of the achieved profit to the incurred outlays, defined as profitability. To the area of profitability analysis belong the profitability indicators of assets, which illustrate the ratio of net financial result to the average state of assets. They constitute an important instrument of an economic entity's property resource management. The analysis of these ratios enables the company to: stimulate the effective use of fixed and current assets, strive to maintain the volume of assets at a rational level – corresponding to the size of its business, stimulate the elimination of redundant and excessive stocks of assets,

control the company's investment activities and control the level of incurred costs and generated income [Bednarski 2002]. The second area of the classical study of enterprise profitability includes the analysis of profitability of sales. The importance of this analysis stems from the fact that it enables a synthetic assessment of sales profitability. The sale of products manufactured by an enterprise or goods purchased by it is an economic process that results from the relationship between the enterprise and the market. The market is, to a large extent, shaped by the volume and prices of sales of goods. If sales are made in the right quantity and at the right price, the enterprise's activity in the market is successful. The measure of the effects of the sale of products and goods expressed in value is the sales revenue, which should be high enough to cover the related costs. The sales profitability ratio is, thus, the relation of the net financial result to the sales revenue [Nowak 2005].

Table 4 shows changes in the return on assets ratio for Wielkopolska dairy cooperatives in 2007-2019. The return on the asset ratio informs about the enterprise's ability to generate profits and the efficiency of managing its assets. The higher the ROA, the better the financial condition of the enterprise. The highest value of ROA was recorded for OSM Koło in 2013 at 2.51 and OSM Strzałkowo in 2019 at 2.32 (Table 4). OSM Koło is one of the largest dairy cooperatives in the Wielkopolska Region with a share in the total dairy industry of 2.51% and employment of 679 employees, recorded in 2019 (Table 1). The actions taken by OSM Koło have contributed to an increase in the return on assets ratio. These actions can be qualified by, among others, the investment in the modernisation of technological lines and the specialisation of production towards the production of milk powder. On the other hand, OSM Strzałkowo is one of the smaller dairy cooperatives in the Wielkopolska Region with a share in the total dairy industry of 0.21% and employment of 82 employees recorded in 2019 (Table 1). The actions taken by OSM Strzałkowo contributed to an increase in the return on assets ratio. These actions can primarily include the modernisation of the technological line and an improvement in the quality of the products offered and, through marketing activities, increasing brand recognition. The lowest value of the return on assets index was recorded for OSM Konin at -6.09 in 2019 (Table 4). OSM Konin has a share in the total dairy industry of 0.33% and is characterised by the employment of 179 employees recorded in 2019 (Table 1). The low value of the return on assets indicator recorded for OSM Konin in 2019 was conditioned by the high debt of the cooperative, the low volume of th sales revenue, the proximity of the operation of larger dairy enterprises, i.e., OSM Koło, which ultimately contributed to the acquisition of OSM Konin by OSM Koło. While analysing the tendencies of changes in return on assets index of Wielkopolska dairy cooperatives in 2007-2019, it was found that the highest increase of return on the assets index in the analysed period was observed for OSM Top-Tomyśl, OSM Konin and OSM JANA in Środa Wlkp. On the other hand, the highest decrease in the return on assets index in the analysed period was recorded for OSM Kowalew-Dobrzyca, OSM Września and OSM Jarocin (Table 4).

Table 4. The return on assets ratio of Wielkopolska dairy cooperatives in 2007-2019

Company name	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Change [%] (2019/2007)
OSM Czarnków	0.40	0.56	0.71	0.79	0.77	-0.15	0.15	-0.12	-0.04	0.45	-0.10	-0.13	-0.21	-53
OSM Gostyń	0.25	0.56	0.31	0.18	0.23	-0.60	-0.09	-0.16	0.08	-0.08	0.06	-0.13	0.18	72
OSM JANA w Środzie Wlkp.	-0.01	0.07	0.06	0.12	0.13	-0.06	0.01	-0.11	0.18	0.20	0.09	-0.12	-0.18	1,800
OSM Jarocin	0.15	0.06	0.36	0.71	0.65	0.52	0.36	-0.20	-0.18	0.04	-0.01	0.05	-0.18	-120
OSM Koło	1.09	-3.03	1.40	1.40	1.17	-0.03	2.51	0.07	-0.11	1.21	1.64	0.17	0.27	25
OSM Konin	-0.09	-0.20	0.00	0.32	0.70	0.74	0.10	-0.06	-2.10	-0.11	-1.79	-5.32	-6.09	6,767
OSM Kowalew-Dobrzyca	0.05	-0.20	0.07	-0.15	-0.08	-0.14	-0.49	-0.17	-0.17	-0.14	-0.19	-0.38	-1.61	-3,220
OSM Łobżenica	0.07	-0.80	0.62	0.24	0.49	0.45	0.34	0.33	0.07	1.17	0.04	-0.18	0.43	614
OSM Ostrów Wlkp.	-0.10	0.07	-0.12	-0.02	-0.14	-0.14	-0.15	-1.82	-1.20	-0.17	-0.39	-0.86	-0.38	380
OSM Rawicz	-0.11	-0.18	-0.13	-0.11	-0.11	-0.12	-0.13	-0.53	-0.21	-0.14	-0.43	-0.93	-0.21	191
OSM Strzałkowo	0.55	0.86	1.39	0.76	0.53	0.75	1.30	0.20	1.50	2.37	1.85	1.80	2.32	422
OSM Śrem	1.04	0.11	0.51	0.15	-0.12	0.00	0.51	0.56	0.16	0.51	-0.07	0.06	0.15	14
OSM Top-Tomyśl	-0.01	-1.47	1.07	0.30	-0.12	-3.84	0.27	-1.08	1.02	1.04	-0.07	-0.49	-1.10	11,000
OSM Wolsztyn	-0.11	3.11	-0.04	-0.17	-0.16	-0.08	-0.10	-0.09	-0.09	-0.12	-0.09	0.13	-0.13	118
OSM Września	0.61	-4.04	1.07	0.39	0.14	-0.10	0.67	-1.42	-1.08	-0.47	-0.26	-0.03	-0.80	-131

Source: own calculations based on data from EMIS the database

The return on sales ratio indicates the percentage of sales represented by the profit margin after all costs and taxes have been deducted. A higher level of this ratio indicates a more favourable financial condition of the business. A worsening of the ratio means that the enterprise must realise more sales to achieve a certain amount of profit. Table 5 presents changes in the sales profitability index for Wielkopolska dairy cooperatives in 2007-2019. In the analysed period OSM Koło, OSM Konin, OSM Kowalew-Dobrzyca, OSM Rawicz and OSM Wolsztyn recorded a positive value of the sales profitability index. It means that, in the mentioned cooperatives, the financial condition has improved, which can be associated with the implementation of the planned volume of sales of products and the implemented investment in the modernization of the machinery park. However, OSM Czarnków, OSM Strzałkowo, OSM Top-Tomyśl and OSM Września in 2007-2019 recorded a negative value of the return on sales index. It means that the financial condition of the indicated cooperatives deteriorated, which forced the studied enterprises to increase the volume of sales by searching for new recipients and sales markets. Analysing trends in the sales profitability index of Wielkopolska dairy cooperatives in 2007-2019, the highest increase in the index was found for OSM Rawicz, at a level of 16%. OSM Kowalew-Dobrzyca and OSM Wolsztyn showed no change in the return on sales index in the analysed years. On the other hand, the highest decrease of the return on sales index in the analysed period was recorded for OSM JANA in Środa Wlkp. and OSM Top-Tomyśl (Table 5).

The debt ratio indicates the level of indebtedness of a company. The higher the value of the total debt ratio, the more indebted the company is. An increase in the value of the ratio to a level above 50% may indicate a deterioration of the financial credibility of the company and, thus, an excessive credit risk. On the other hand, a decrease in the value of the ratio over time can be interpreted as a decrease in the financial risk and, thus, an increase in creditworthiness, although often much depends on the industry in which the company operates. Figure 1 presents changes in the debt rate ratio for Wielkopolska dairy cooperatives in 2007-2019. In the analysed period, the highest value of the debt rate ratio was recorded for OSM Konin in 2019 at -7.31 and OSM Strzałkowo at -10.39 (Figure 1). For the remaining researched dairy cooperatives in the Wielkopolska Region, the debt rate index in the analyzed time range was at a level of 0.20.

The asset turnover ratio represents the overall efficiency of all assets combined. The asset turnover ratio can be interpreted in two ways. Firstly, it indicates how much turnover was made with average assets to realise sales by the company. Secondly, it tells how much sales revenue was generated from 1 PLN of assets employed. The higher the value of the sales revenue achieved from the assets employed, the higher the efficiency of the enterprise. The higher the ratio, the better the enterprise is managed. Table 6 presents the asset turnover ratio for Wielkopolska dairy cooperatives in 2007-2019. The asset turnover ratio in the analyzed period took a positive value for OSM Łobżenica, OSM Wolsztyn and OSM Września. This is a positive phenomenon, as the indicated cooperatives earned

Table 5. The profitability of sales index of Wielkopolska dairy cooperatives in 2007-2019

Company name	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Change [%] 2019/2007
OSM Czarnków	-1.45	-1.48	-1.38	-1.39	-1.46	-1.52	-1.49	-1.53	-1.50	-1.40	-1.46	-1.48	-1.50	3
OSM Gostyń	0.64	-1.64	0.64	0.65	0.63	0.65	0.63	0.62	0.62	0.62	0.64	0.63	0.62	-3
OSM JANA w Środzie Wlkp.	-1.72	0.63	0.62	0.62	0.64	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.63	-137
OSM Jarocin	0.66	-1.69	-1.63	0.65	0.65	0.63	0.63	0.64	0.63	0.62	0.63	0.64	0.64	-3
OSM Koło	0.63	0.64	0.62	0.63	0.63	0.63	0.63	0.63	0.63	0.64	0.62	0.62	0.62	-2
OSM Konin	0.69	0.66	0.69	0.67	0.66	0.65	0.64	0.63	0.64	0.63	0.64	0.67	0.65	-6
OSM Kowalew-Dobrzyca	0.63	0.66	0.64	0.66	0.66	0.65	0.64	0.63	0.63	0.63	0.65	0.64	0.63	0
OSM Łobżenica	0.63	-1.75	0.63	0.62	0.62	0.62	0.62	0.61	0.61	0.62	0.62	0.62	0.62	-2
OSM Ostrów Wlkp.	0.63	-1.73	0.63	0.66	0.62	0.63	0.63	0.64	0.64	0.63	0.68	0.66	0.64	2
OSM Rawicz	0.63	0.64	0.64	0.64	0.64	0.64	0.63	0.63	0.64	0.63	0.64	0.68	0.73	16
OSM Strzałkowo	-1.37	-1.65	-1.64	-1.38	-1.38	-1.36	-1.34	-1.42	-1.24	-1.25	-1.30	-1.29	-1.27	-7
OSM Śrem	0.64	-1.70	-1.69	0.65	0.64	0.64	0.64	0.64	0.63	0.66	0.62	0.62	0.62	-3
OSM Top-Tomyśl	-3.76	-1.42	-1.28	-1.32	-1.35	-1.48	-1.40	-1.41	-1.42	-1.34	0.62	0.62	0.62	-116
OSM Wolsztyn	0.62	0.82	0.64	0.64	0.63	0.62	0.62	0.62	0.63	0.64	0.62	0.62	0.62	0
OSM Września	-1.69	-1.83	-1.68	-1.50	-1.49	-1.51	-1.51	-1.58	-1.41	-1.53	-1.51	-1.50	-1.49	-12

Source: own calculations based on data from the EMIS database

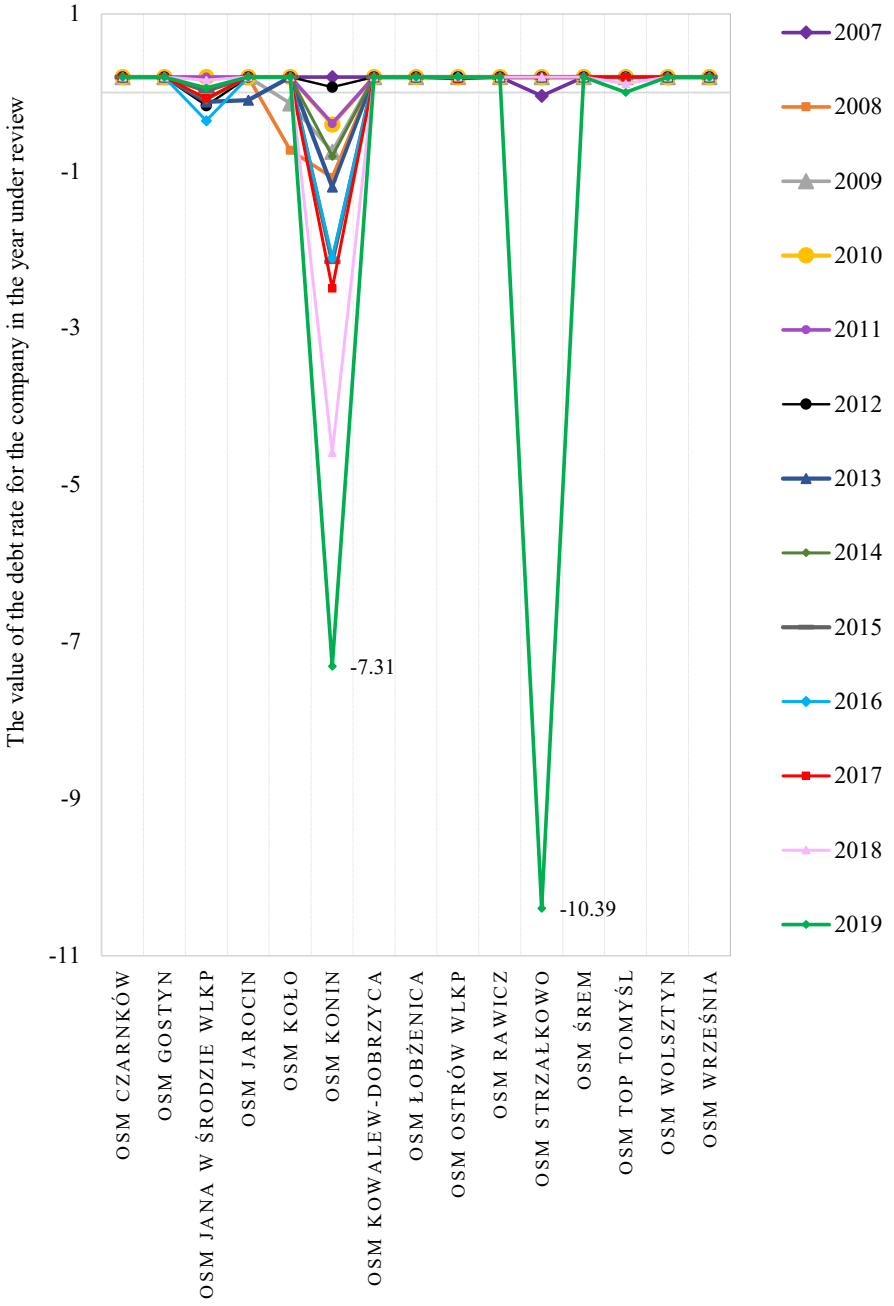

Figure 1. Debt ratio of Wielkopolska dairy cooperatives in 2007-2019
Source: own calculations based on data from the EMIS database

Table 6. The asset turnover ratio in Wielkopolska milk cooperatives in 2007-2019

Company name	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Change [%] 2019/2007
OSM Czarnków	-1.75	-1.66	-1.73	-1.65	-1.60	-1.60	-1.51	-1.40	-1.71	-1.83	-1.67	-1.77	-1.69	-3
OSM Gostyń	-0.79	-0.55	-0.64	-0.53	-0.39	-0.27	-0.31	-0.20	-0.78	-0.91	-0.49	-0.43	-0.60	-24
OSM JANA w Środzie Wlkp.	0.05	0.12	-0.11	0.18	0.19	-0.26	0.06	0.39	0.27	-0.26	0.25	0.48	0.32	540
OSM Jarocin	2.78	2.12	1.70	1.27	1.71	0.87	0.12	0.76	0.29	-0.04	0.30	0.46	0.49	-82
OSM Koło	-0.90	-1.28	-1.09	-0.99	-0.75	-0.69	-0.71	-0.48	-1.00	-1.17	-0.94	-0.54	-0.30	-67
OSM Konin	-0.84	-2.35	-2.04	-1.64	-1.03	0.53	-0.53	-0.39	-1.62	-1.03	-0.20	-1.70	-1.05	25
OSM Kowalew-Dobrzyca	0.02	0.06	-0.17	0.02	0.19	0.22	0.31	0.19	-0.23	-0.59	-0.10	-0.30	-0.15	-850
OSM Łobżenica	0.31	0.46	0.77	1.11	1.58	1.68	1.77	2.22	1.54	1.11	2.20	1.77	1.54	397
OSM Ostrów Wlkp.	0.48	0.75	0.27	-0.27	-0.05	-0.05	0.15	0.63	0.45	-0.23	0.15	0.63	-0.30	-163
OSM Rawicz	-0.33	-0.12	-0.62	-0.47	-0.37	-0.41	-0.23	-0.24	-0.72	-1.02	-0.39	-0.67	-1.56	373
OSM Strzałkowo	-0.48	-0.47	-0.48	-0.25	-0.65	-0.68	-0.68	-0.33	-0.81	-0.65	-0.52	-0.73	-1.03	115
OSM Śrem	-0.05	0.36	0.26	0.31	0.70	0.58	0.53	0.80	0.65	0.05	0.72	0.41	0.40	-900
OSM Top-Tomyśl	-0.64	-0.19	-0.29	-0.51	-0.32	0.15	0.29	-0.01	-0.43	-0.74	-0.14	-1.22	-1.03	61
OSM Wolsztyn	2.06	1.05	0.36	0.92	1.54	1.78	1.19	1.42	0.70	0.34	0.85	0.84	1.29	-37
OSM Września	0.78	1.20	1.09	1.34	1.29	1.31	1.39	2.44	-0.01	1.45	1.94	1.94	1.67	114

Source: own calculations based on data from EMIS database

higher revenues from the assets involved in their activities. It means that OSM Łobżenica, OSM Wolsztyn and OSM Września, in the analyzed period, increased the effectiveness of the use of their assets (Table 6). On the other hand, the effectiveness for OSM Czarnków, OSM Rawicz, OSM Gostyń, OSM Koło, OSM Konin, OSM Rawicz, OSM Strzałkowo and OSM Top-Tomyśl, in the analysed period, took a negative value. It is a negative phenomenon because the indicated dairy cooperatives obtained lower revenues from the assets involved in their activities. It means that OSM Czarnków, OSM Rawicz, OSM Gostyń, OSM Koło, OSM Konin, OSM Rawicz, OSM Strzałkowo and OSM Top-Tomyśl, in the analyzed period, decreased the effectiveness of use of assets engaged in activity (Table 6). Analysing trends in the turnover ratio of Wielkopolska dairy cooperatives in 2007-2019, the highest increase of the assets turnover ratio was recorded for OSM JANA in Środa Wlkp and OSM Łobżenica. On the other hand, the highest decrease in the asset turnover ratio in the analysed period was recorded for OSM Śrem and OSM Kowalew Dobrzyca (Table 6).

Figure 2 presents changes in the competitive potential of Wielkopolska dairy cooperatives in 2007-2019 calculated with the use of a synthetic indicator created as an arithmetic mean of weighted partial indicators. After conducting correlation analysis, the return on assets ratio, return on sales ratio, current ratio, debt ratio, asset turnover ratio, current assets turnover ratio and income dynamics ratio were used for the final calculation of the synthetic indicator. On the basis of Figure 1 and Table 7, it has been determined that the best competitive potential in the analyzed period was characterized by OSM Wolsztyn, with an average value of the synthetic index amounting to 0.558, OSM Łobżenica with an average value of the synthetic index at a level of 0.453 and OSM Jarocin with an average value of the synthetic index at a level of 0.182. It is worth emphasizing that the indicated dairy cooperatives are characterized by a local character of sales of offered products. They only have only short term financial obligations which are repaid in a given financial year. At the same time, the indicated dairy cooperatives have a sales revenue at a level of PLN 33-73 million and the share of the indicated cooperatives in the value of sales of the dairy industry in Poland assumes values in the range of 0.14-0.24% (Table 1). On the other hand, the lowest competitive potential in the analyzed period was characteristic for OSM Czarnków with an average value of the synthetic index amounting to -0.551, OSM Top-Tomyśl with an average value of the synthetic index at a level of -0.500 and OSM Konin with an average value of the synthetic index at a level of -0.209 (Table 7). The factors determining the lowest competitive potential among the studied cooperatives are financial results achieved by the indicated enterprises. OSM Czarnków, OSM Top-Tomyśl and OSM Konin in the analysed period were characterised by a low income dynamics index, a low sale profitability index and a high debt rate index. The indicated dairy cooperatives are characterised by a local character of sales of offered products. They have long-term financial obligations, which contributes to lowering their competitive potential.

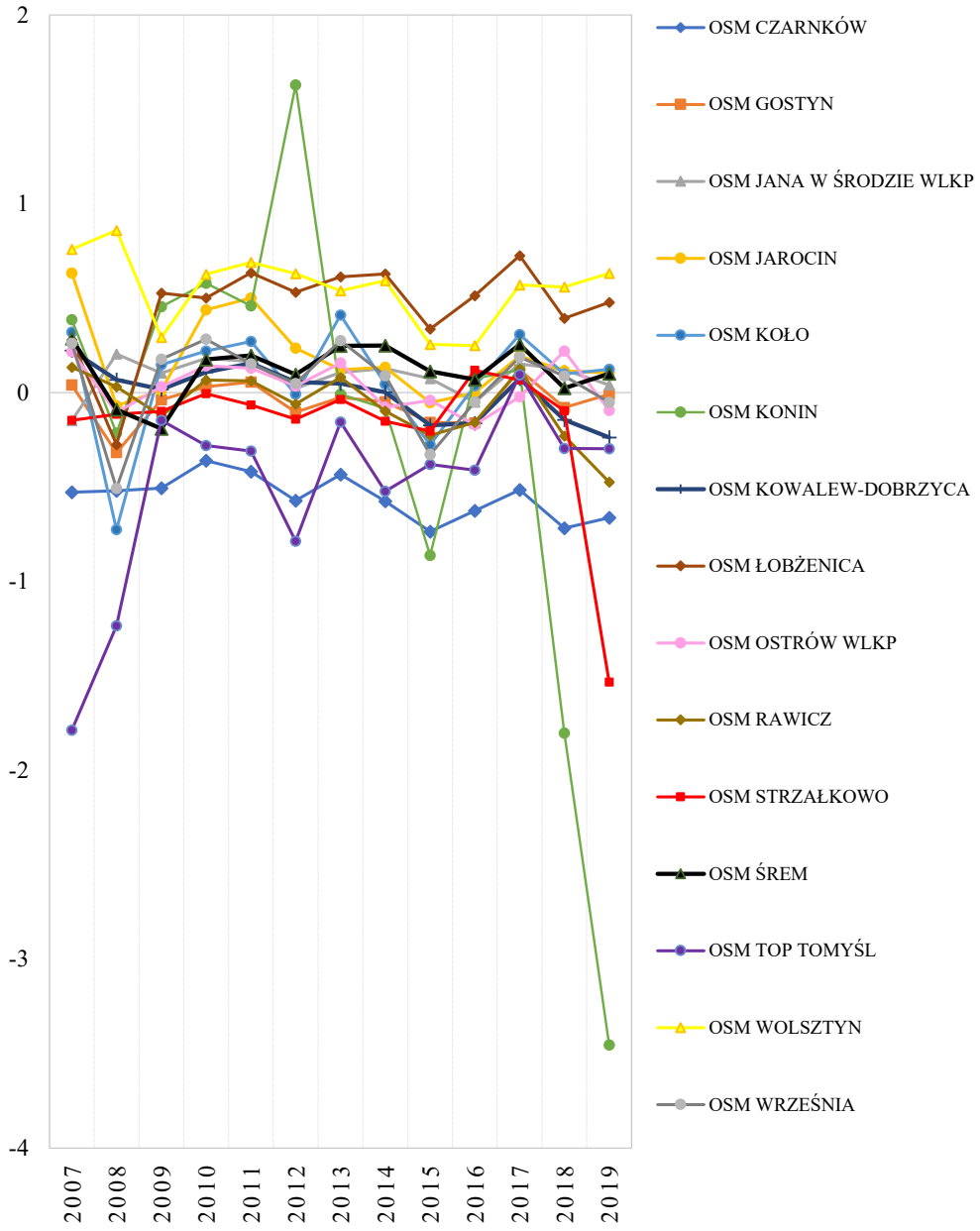

Figure 2. The competitive potential of Wielkopolska dairy cooperatives in 2007-2019
Source: own study

Table 7. Ranking of dairy cooperatives in Wielkopolska in the years 2007-2019

Company position	Company name	The average value of the synthetic measure for 2007-2019
1	OSM Wolsztyn	0.558
2	OSM Łobżenica	0.453
3	OSM Jarocin	0.182
4	OSM Śrem	0.118
5	OSM JANA w Środzie Wlkp.	0.084
6	OSM Koło	0.074
7	OSM Września	0.048
8	OSM Ostrów Wlkp.	0.032
9	OSM Kowalew-Dobrzyca	0.003
10	OSM Gostyń	-0.052
11	OSM Rawicz	-0.066
12	OSM Strzałkowo	-0.184
13	OSM Konin	-0.209
14	OSM Top-Tomyśl	-0.500
15	OSM Czarnków	-0.551

Source: own study

SUMMARY AND CONCLUSIONS

The conducted analysis shows that the best competitive potential (measured by financial condition) in 2007-2019 was achieved by OSM Wolsztyn, OSM Łobżenica and OSM Jarocin, i.e., dairy cooperatives with a local character of sales of offered products, having only short term financial obligations, which are repaid in a given financial year. The weakest competitive potential was achieved by OSM Konin, OSM Top-Tomyśl and OSM Czarnków, i.e., cooperatives with long-term financial liabilities and a low profitability of sales of offered products. An evaluation of competitive potential showed that the direction of influence of evaluated elements of competitive potential was not clearly defined. The same factor had a positive effect on the competitive advantage for some of the studied Wielkopolska dairy cooperatives and a negative effect for the others. It means that we should rethink the construction of the synthetic measure for the evaluation

of the competitive potential of dairy enterprises, which, apart from the financial condition, will consider other areas i.e., the production potential, investment outlays borne by an enterprise for modernization, the purchase volume of milk and the number of suppliers cooperating with a given enterprise. The construction of the synthetic measure which would consider the specificity of the dairy sector would enable to precisely define the competitive potential of dairy enterprises.

The competitiveness of dairy enterprises is determined, inter alia, by the financial results achieved, the amount of milk processed, the assortment and its quality, legal regulations on the milk market as well as the proximity of farms and enterprises. The future of dairy cooperatives in the Wielkopolska Region depends on their ability to offer real economic benefits to their members and consumers. A cooperative achieves economic benefits when it is an efficient economic entity in a market economy characterised, in particular, by fierce competition for consumers. It is, therefore, important and timely to determine the impact of the volume of raw material purchased by cooperative dairies on their profitability.

BIBLIOGRAPHY

Bednarski Lech. 2002. *Analiza finansowa w przedsiębiorstwie* (Financial analysis in an enterprise). Warszawa: PWE.

Bednarski Lech, Tadeusz Waśniewski. 1996. *Analiza finansowa w zarządzaniu przedsiębiorstwem* (Financial analysis in business management). Warszawa: Fundacja Rozwoju Rachunkowości w Polsce.

Chądrzyński Mariusz, Mirosława Marzena Nowak. 2014. Wybrane aspekty ekonomiczno-finansowe działalności spółdzielni mleczarskich (Economic aspects of the innovative activity of enterprises of the food industry). *Roczniki Naukowe Stowarzyszenia Ekonomistów Rolnictwa i Agrobiznesu* 16 (4): 68-73.

Damodaran Aswath. 2007. *Finanse korporacyjne: teoria i praktyka* (Corporate finance: theory and practice). Gliwice: Helion.

Domańska Katarzyna. 2013. Konkurencyjność produkcji mleka w Polsce w ujęciu regionalnym (The competitiveness of milk production in Poland – regional approach). *Roczniki Naukowe Stowarzyszenia Ekonomistów Rolnictwa i Agrobiznesu* XV (4): 105-111.

EMIS. 2021. *Providing access to the very best information on over 197 emerging markets.* http://www.securities.com, access: 16.11.2021.

Gatnar Eugeniusz, Marek Walesiak. 2004. *Metody statystycznej analizy wielowymiarowej w badaniach marketingowych* (Methods of statistical multivariate analysis in marketing research). Wrocław: Wydawnictwo AE we Wrocławiu.

Godziszewski Bohdan. 2001. *Zasobowe uwarunkowania strategii przedsiębiorstwa* (Resource determinants of corporate strategy). Toruń: Wydawnictwo UMK.

GUS (Central Statistical Office). 2021. *Rocznik Statystyczny Rolnictwa w 2020 roku* (Statistical Yearbook of Agriculture in 2020). Warszawa.

Jabłońska-Urbaniak Teresa (ed.). 2010. *Rolnictwo i gospodarka żywnościowa w Polsce* (Agriculture and food economy in Poland). Warszawa: The Ministry of Agriculture and Rural Development.

Janik Wiesław. 2001. *Przedsiębiorczość i przedsiębiorstwo* (Entrepreneurship and enterprise). Lublin: WSPiA.

Kowalak Robert. 2008. *Ocena kondycji finansowej przedsiębiorstwa w badaniu zagrożenia upadłością* (Assessing the financial health of a company in a bankruptcy risk survey). Gdańsk: Center for Counseling and Personnel Improvement.

KOWR (Krajowy Ośrodek Wsparcia Rolnictwa – National Agricultural Fund). 2021. *Informacja o sytuacji na rynku mleka i produktów mlecznych* (Information on the situation on the milk and dairy products market). National Agricultural Fund: Analysis and Strategy Office, https://www.kowr.gov.pl/uploads/pliki/analizy/miesieczne/KOWR_2021_PA-%C5%B9DZIERNIK_Informacja%20o%20sytuacji%20na%20rynku%20mleka.pdf, access: 15.11.2021.

Machała Robert. 2008. *Zarządzanie finansami i wycena firmy* (Financial management and company valuation). Wrocław: Oficyna Wydawnicza Unimex.

Mierzwa Dominika, Joanna Zimmer. 2016. Konkurencyjność i bezpieczeństwo ekonomiczne przedsiębiorstw na rynku mleka (Competitiveness and economic security on dairy market). *Problemy Drobnych Gospodarstw Rolnych* 3: 73-83. DOI: 10.15576/PDGR/2016.3.73.

Nowak Edward. 2005. *Analiza sprawozdań finansowych* (Analysis of financial statements). Warszawa: PWE.

Obłój Krzysztof. 2001. Logika przewagi konkurencyjnej (Logic of competitive advantage). *Przegląd Organizacji* 9: 3-6.

Sierpińska Maria, Tomasz Jachna. 2004. *Ocena przedsiębiorstwa wg standardów światowych* (Evaluation of a company according to global standards). Warszawa: Wydawnictwo Naukowe PWN.

Stankiewicz Marek Jacek. 2005. *Konkurencyjność przedsiębiorstwa* (Competitiveness of the company). Toruń: TNOiK Dom Organizatora.

Szanduła Jacek. 2011. Pozycjonowanie i ocena kondycji finansowej przedsiębiorstwa na tle konkurencji przy użyciu wielowymiarowej analizy porównawczej (The positioning and evaluation of the company financial condition against the background of the competitors by using multivariate analysis). *Prace i Materiały Wydziału Zarządzania Uniwersytetu Gdańskiego* 4: 333-346.

Zeliaś Aleksander. 2000. *Taksonomiczna analiza przestrzennego zróżnicowania poziomu życia w Polsce w ujęciu dynamicznym* (Taxonomic analysis of the spatial differentiation of the standard of living in Poland in dynamic terms). Kraków: Wydawnictwo Akademii Ekonomicznej w Krakowie.

Zuba Maria, Jan Zuba. 2011. Wpływ wielkości skupu mleka na rentowność wybranych spółdzielni mleczarskich w Polsce (Impact of milk purchase size on profitability of chosen milk cooperatives in Poland). *Roczniki Naukowe Stowarzyszenia Ekonomistów Rolnictwa i Agrobiznesu* XIII (1): 490-494.

***

UWARUNKOWANIA KONKURENCYJNOŚCI PRZEDSIĘBIORSTW MLECZARSKICH NA PRZYKŁADZIE WOJEWÓDZTWA WIELKOPOLSKIEGO

Słowa kluczowe: przedsiębiorstwa mleczarskie, rynek mleka, konkurencyjność, ocena ekonomiczno-finansowa, regionalizacja, Wielkopolska

ABSTRAKT

Celem artykułu jest określenie potencjału konkurencyjnego wybranych przedsiębiorstw mleczarskich zlokalizowanych w województwie wielkopolskim, oraz określenie uwarunkowań konkurencyjności badanych podmiotów. Dobór próby do badań był celowy i determinowany dwoma założeniami. Po pierwsze, województwo wielkopolskie według danych GUS zajmuje trzecie miejsce pod względem produkcji mleka w Polsce, gdzie dominuje spółdzielczy charakter przetwórstwa mleka. W 2019 roku w tym województwie było 26 spółdzielczych zakładów mleczarskich, co stanowiło 16-procentowy udział w całej branży. Po drugie, do badań empirycznych wybrano wyłącznie okręgowe spółdzielnie mleczarskie zlokalizowane w województwie wielkopolskim, które w latach 2007-2019 przekazywały sprawozdania finansowe do bazy Emerging Markets Information Service (EMIS) i prowadziły działalność gospodarczą, a także zajmowały się przetwórstwem mleka i produkcją produktów mleczarskich. Podmiotów, które spełniały wymienione kryteria na koniec 2019 roku było piętnaście i tę grupę wybrano do dalszych analiz empirycznych. Zastosowano wielowymiarową analizę porównawczą. Z przeprowadzonych badań wynika, że spółdzielnie mleczarskie, posiadające krótkoterminowe zobowiązania finansowe oraz średnie przychody ze sprzedaży miały najlepszy potencjał konkurencyjny. Najsłabszy potencjał konkurencyjny osiągnęły spółdzielnie z długoterminowymi zobowiązaniami finansowymi oraz wykazujące się niskim wskaźnikiem rentowności sprzedaży oferowanych produktów. Ocena potencjału konkurencyjnego wykazała też, że kierunek wpływu ocenianych elementów potencjału konkurencyjnego nie był jednoznacznie określony. Stwierdzono również, że należy się zastanowić nad konstrukcją miernika syntetycznego, służącego do oceny potencjału konkurencyjnego przedsiębiorstw mleczarskich, który oprócz kondycji finansowej będzie uwzględniał inne obszary, tj. potencjał produkcyjny, nakłady inwestycyjne poniesione przez przedsiębiorstwo na modernizację, wielkość skupu mleka oraz liczbę dostawców współpracujących z danym przedsiębiorstwem.

AUTHOR

PAULINA LUIZA WIZA, MSC ING.

ORCID: 0000-0003-2355-9811
Poznań University of Life Sceiences, Faculty of Economics
Department of Economics and Economy Policy in Agribusiness
28 Wojska Polskiego St., 60-637 Poznań, Poland
e-mail: paulina.wiza@up.poznan.pl

Proposed citation of the article:
Wiza Paulina Luiza. 2022. Determinants of competitiveness of dairy enterprises on the example of the Wielkopolska Region. *Annals PAAAE* XXIV (1): 300-321.