

# WPT4

# D.T4.1.17

Industrial innovation workshop - Bioeconomy sector regional analysis







Project information		
•		
Project Index Number:	CE1519	
Project Acronym:	CHAIN REACTIONS	
Project Title:	Driving smart industrial growth through value chain innovation	
Website:	https://www.interreg-central.eu/Content.Node/CHAIN-REACTIONS.html	
Start Date of the Project:	01.04.2019	
Duration:	36 Months	
Document Control page		
Deliverable Title:	D.T4.1.17 Industrial innovation Workshop – Bioeconomy sector regional analysis	
Lead Contractor of the Deliverable:	PP2 – Styrian Technology Park	
Responsible PP:	PP7 WTP	
Authors:	<ul><li>Iga Kryszczuk</li><li>Łukasz Wyszkowski</li><li>Jarosław Osiadacz</li></ul>	
Contractual Delivery Date:	30.09.2020 – 31.03.2022	
Actual Delivery Date:	12.04.2021	





# **Table of content**

1	INTRODUCTION	1
	REGIONAL SECTOR ANALYSIS	
	2.1 Overview of sector	
	2.2 SWOT analysis	4
	2.3 Trends	5
	2.4 Market analysis (customers & competition)	8
	2.5 Summary & recommendations	





# 1 INTRODUCTION

Following the regional IGAs' actions of the support and implementation of transnational pilots aiming at supporting value chain innovation (WPT3) and establishment of transnational networks of innovations stakeholders as the kick-off activity to develop transregional innovation networks and agendas in selected industrial sectors (WPT4), further activity of project partners is to perform the crucial data obtaining which will later on be included into the elaboration of transnational industrial innovation roadmaps and agendas, as fulfillment of foreseen outputs O.T4.1 Thematic industrial innovation roadmaps and O.T.4.2 Thematic innovation agendas.

Due to COVID situation in Europe, measures in separate countries and dependant issues arising daily by fulfillment of working obligations, project partners decided to perform the in-depth analysis of priority sectors on reginal level, instead of organising a number of workshops with a risk of low participation of key stakeholders.

#### 2 REGIONAL SECTOR ANALYSIS

Regional analysis is performed for the purposes of future planning activities in the diary sector, with the main objective to collect relevant inputs and data for elaboration of transnational industrial innovation roadmap and later on the transnational industrial innovation agenda for the target sector.

The questionnaire was fulfilled thoroughly, to produce the representative regional report of the target sector.

# 2.1 Overview of sector

# What is the history of the sector in the region?

In the past, three species of animals that provided milk were kept in Poland - goats, sheep and cows. Based on archaeological research, it can be assumed that the breeding economy began in the 6th millennium BCE. In the Middle Ages, its level increased significantly, but still keeping cattle, especially steers used as draft force, was of fundamental importance. The use of cows for milk did not matter much then. Milk and its products, produced using traditional methods and equipment, were largely used for personal needs. In the 18th century, attempts were made to improve the condition of cattle breeding. Landowners began to import dairy breeds of cows from the Netherlands, which, however, were difficult to adapt to our conditions. It was popular then to establish the "olędarnie" - so-called dairy farms.

However, the nineteenth century brought fundamental changes in the development of the dairy industry. This state of affairs was greatly influenced by: the increase in agricultural and breeding knowledge and technological progress in the field of machinery and equipment, especially the invention of the milk separator and other tools used in the production of butter and cheese. At the end of the 19th century, the first dairy cooperatives were established and the dairy industry emerged as an industry. At the same time, the education system educating professionals in this field began to be created and developed.





# What affects the growth of the sector?

Changing consumer demand patterns are affecting food production. The "Traditional" value drivers of price, taste, and convenience have been complemented by newer and "Evolving" drivers such as health and wellness, safety, social impact, and experience. Central to all of these drivers is a need for transparency from food companies. Given the ever-changing nature of the consumer food value drivers, dairy producers must look to their production processes to innovate with new products and to optimize output without compromising on quality and safety.

As a consequence of the aforementioned factors influencing the consumption of dairy products, one can also point to the diversification of consumption depending on the place of residence of buyers. In the case of milk, consumption is much lower in larger towns. On the other hand, in the case of processed products, the opposite tendency can be indicated - the consumption of products such as yoghurt or cheese is higher in large agglomerations than in small towns and villages. This trend has continued over the past ten years. The observed level of consumption of dairy products is influenced by many factors, among which the phenomenon of shifting demand from unprocessed products towards highly processed and functional products offering additional benefits for the consumer is particularly important.

# Who are the leaders in the sector?

Dairy cooperatives, which are responsible for over 70% of the production of dairy products in Poland, are assessed annually on the basis of 10 detailed criteria. The list below is a collective ranking of 10 detailed rankings according to the above criteria. The first dairy in each category of the ranking obtained the most points, the last one the least, inversely to the place taken:

- 1) SM Mlekovita has been in the first place for years The top ten in the ranking was very interesting, as long as there are no surprises in the leading places, because for years the first place has been taken by SM Mlekovita from Wysokie Mazowieckie, which is a huge company with the largest range of products, constantly expanded with new departments, such as the menu line ready-made products or nutrients for active people says Waldemar Broś. In total, there are over 500 different dairy items. So, SM Mlekovita does everything with milk.
- 2) OSM in Giżycko with a high purchase price for milk The second place was taken by the District Dairy Cooperative in Giżycko, where the dominant product is ripened cheese, but not only cottage cheese, butter and small amounts of dairy products. When it comes to results, especially economic, they are at a very high level in this cooperative. For farmers, the purchase price is the most important, and this is at a very high level both in OSM Giżycko and in Mlekovita.
- 3) OSM Koło, appreciated by consumers for dairy products The third place went to the District Dairy Cooperative in Koło, which is known primarily for the production of powdered milk, but not only. Consumers especially appreciate the butter, cottage cheese, cottage cheese and fancy goods produced by this cooperative.
- 4) OSM in Bieruń producing for HoReCa It is not the first time that the District Dairy Cooperative in Bieruń is in the top 10, this time in 4th place. It is a company of a slightly different nature, producing mainly for the HoReCa market, i.e. for the needs of the hotel and catering industry. Of course, when the pandemic hit, this cooperative had its problems, but it managed to get out of them and everything is going in the right direction.
- 5) OSM in Włoszczowa has very good financial results The next, 5th place was taken by the District Dairy Cooperative in Włoszczowa, which has a wide range of products from





- haberdashery to cottage cheese, but nevertheless the most specialized in the production of ripening cheeses. He has very good financial results and pays a high price for milk.
- 6) OSM in Sierpc, known for its ripening cheeses The District Dairy Cooperative in Sierpc took 6th place. It is an extremely stable cooperative that has been in the top ten for years. It is known throughout the country for its maturing cheeses, including the flagship royal cheese. Every year it makes progress through development and investment.
- 7) SM in Gostyń, specialized in condensed milk The seventh place was taken by the Dairy Cooperative in Gostyń, i.e. the main producer on the domestic market of condensed milk, but also butter and haberdashery.
- 8) SSPM in Strzelce Krajeńskie is developing dynamically Strzelecka Spółdzielnia Producentów Mleka in Strzelce Krajeńskie is a cooperative of a purchasing type, known as a producer group, developing very dynamically. Her results allowed her to take the 8th place in the ranking.
- 9) Lazur the dominant producer of blue cheese The next 9th place was taken by the cooperative which is the dominant producer of blue cheese in our country, i.e. Lazur Spółdzielczy Union of Agricultural Producers Groups in Nowe Skalmierzyce. Of course, blue cheese is produced by several other dairies, such as Mlekovita, but Lazur is distinguished by a strict specialization in this direction, after all, it only produces blue cheese. These cheeses are becoming more and more in demand on the domestic market. In this cooperative, changes in the management have taken place in recent years, resulting in the appointment of a young and ambitious management board.
- 10) OSM Garwolin for delicious butter and cottage cheese The top ten is completed by Okręgowa Spółdzielnia Dleczarska Garwolin with its seat in Wola Rębkowska, whose products have been known on the Warsaw market for many years. First of all, they are cottage cheese, but also delicious butter and haberdashery. Powdered milk is also produced in this cooperative.

# Are there any specific government regulations related to the sector?

The rules resulting from legal regulations facilitate the creation and running of business by entrepreneurs, including cooperatives, or inhibit their development. Despite the socio-economic changes related to the introduction of the market economy and Poland's accession to the European Union, the Cooperative Law of September 16, 1982 is still in force. However, in addition to the provisions on the structure of the cooperative and organizational issues contained in the aforementioned legal act, the conduct of business by the entities in question is influenced by legal regulations, such as the Act of 20 April 2004 on the organization of the milk and milk products market, the Civil Code, the Act of September 15, 2000 on agricultural producer groups and their associations, tax-related acts and EU legislation. In many documents, the European Commission emphasized that cooperatives are an important element of a mixed market economy. Their interests must be protected and not be discriminated against. Therefore, one should avoid creating unfair and unnecessary legal barriers both at the level of the Community and individual Member States [EC 2001]. Cooperatives are entities whose operation depends on their members. It is up to their decision to establish a cooperative, its functioning and determining directions of development. The cooperative conducts activities for and in the interest of cooperatives in order to meet their economic and social needs. The pursuit of these economic entities is, inter alia, securing work or exchanging, selling goods and services between the cooperative and its members by concluding membership agreements that are as favorable as possible for the cooperatives.





Apart from the differences resulting from the organization of the dairy industry (dairy cooperatives are the dominant form of conducting business activity) and regarding cooperative law, national legal regulations concerning the dairy industry are still in place:

- 1) Act on the organization of the milk and milk products market Journal of Laws 2009 No. 11 item 65
- 2) Announcement of the Marshal of the Sejm of the Republic of Poland of 9 January 2009 on the publication of the uniform text of the Act on the organization of the milk and milk products market, together with the Act Regulation on the model of the monthly register of milk and milk products and the model form for submitting information on the quantity of milk and milk products Journal of Laws 2005 no.88 item. 751
- 3) Regulation of the Minister of Agriculture and Rural Development of 5 May 2005 on the model of the monthly register of milk and milk products and the model form for providing information on the amount of milk and milk products Regulation on veterinary requirements for production and for traditional dairy products Journal of Laws 2004 no.236 item 2368
- 4) Regulation of the Minister of Agriculture and Rural Development of October 12, 2004 on veterinary requirements for production and for traditional dairy products Ordinance on the methods of taking milk samples for testing the fat content of milk and the methods of determining the fat content of milk Journal of Laws 2004 No. 194 item 1997
- 5) Ordinance of the Minister of Agriculture and Rural Development of 25 August 2004 on methods of taking milk samples for testing milk fat content and methods for determining milk fat content Regulation on occupational health and safety in the processing of milk and its derivatives Journal of Laws 1998 No.138, item. 897
- 6) Regulation of the Minister of Agriculture and Food Economy of October 26, 1998 on occupational health and safety in the processing of milk and its derivatives

#### 2.2 SWOT analysis

Please, define what specific strengths and weaknesses does the region have demonstrably compared to other Central European regions in terms of production, value creation and marketing of the sector.

Strengths	Weaknesses
<ul> <li>modern production technologies</li> <li>qualified staff</li> <li>low cost level</li> <li>high quality of products</li> <li>innovation</li> <li>recognized brands</li> </ul>	<ul> <li>decline in the industry's profitability</li> <li>distance from outlets</li> <li>fragmentation of the industry's structure</li> </ul>

Please, define what opportunities and threats arise from strengths and weaknesses to further create value in relation to the sector.





Opportunities	Threats
<ul> <li>no production quotas</li> <li>development of exports on the common market</li> <li>promotion of the consumption of milk and its products on the domestic market</li> <li>promotion of Polish brands on foreign markets</li> <li>increased consumption of fermented products</li> </ul>	<ul> <li>decline in consumption of milk and milk products in Poland and abroad</li> <li>trade liberalization</li> <li>long-term zloty strengthening trend</li> </ul>
What can be done to take advantage of these opportunities?	What can be done to reduce these risks?
What are the opportunities for the Polish dairy industry? The greatest of these is the abolition of the milk quota system. The abolition of milk quotas resulted in a dynamic increase in the production of milk and its products, with a simultaneous drop in prices and production profitability. However, the price reduction allowed for effective competition with products from third countries. Another opportunity for the Polish dairy industry is the further development of exports, mainly on the common market but also to the countries of the former Soviet Union. A strategic change for the Polish dairy industry is a strategic change in the commodity structure of exports, so that by increasing the share in the export of highly processed products, we strive to increase the value of exports, and not its volume. Another opportunity is the systematic work on promoting the consumption of milk and its products on the internal market, which, however, is an activity that brings effects deferred in time. Similarly, the promotion of Polish brands on external markets may be an	The main threats that the Polish dairy industry is currently facing include the liberalization of trade in milk and its products. Opening the EU borders to products from third countries raises concerns about flooding the EU market with cheap preserves. In the face of this threat, it may turn out that the price of products will once again become the primary factor of competitiveness. Another threat to the dairy industry enterprises is the decline in the consumption of milk and dairy products in Poland and the EU. The strong zloty also contributes to lowering the competitiveness of the Polish industry (currently its value has dropped, but following good data on the condition of the Polish economy during the pandemic, it should be expected to strengthen in the longer term). The Polish dairy sector does not deviate from EU standards, neither in terms of product quality and safety, nor in terms of innovation. Industry representatives seem to understand that both competition and cooperation can bring benefits to each of the market participants.

# 2.3 Trends

What current and future trends and developments will influence the sector's production, value creation and marketing (climate changes, digitalisation, circular economy, globalization, regionalization, ecommerce, greater health awareness, experience orientation, etc.)?





World milk production is forecast to reach almost 860 million tonnes in 2020, 1.4% more than in 2019, with expected increases in Asia, Europe and North America, as well as modest gains in Oceania, Central America and in the Caribbean and in Africa. In turn, milk production in South America is likely to decline. In Europe, milk production is projected to reach 229 million tonnes in 2020, 1.0% more than in 2019, with expected production expansions in the European Union, Russian Federation and Belarus. In the European Union, the expected increase is driven by improved productivity and a slight increase in the number of dairy cattle combined with improved pasture conditions. Price stability at farm level, mainly supported by EU-wide aid to the livestock sector, also supports the increase in milk production.

The global dairy market is expected to grow with a CAGR of 5% over the forecast period (2020-2025). Growing demand for dairy products is being fueled by a growing population, higher income levels, and growing health awareness. The world market is dominated primarily by the milk segment, followed by the butter and cheese segment. The yoghurt and dairy dessert segments are expected to be the fastest growing segments in the world.

# What are the trends in sales over last 5-10 years?

Milk purchase. Purchase of milk in December 2019 amounted to 975.2 million liters (GUS) In the period from January to December 2019, 11,812.1 million liters were purchased, i.e. 2% more than in the corresponding period of 2018. In the period from January to December 2019 the most milk was lost in the following voivodeships: Warmińsko-Mazurskie (589.7 million I), Kujawsko-Pomorskie (355.9 million I), Mazowieckie (292.9 million I) and Wielkopolskie (284.5 million I). From other voivodships, milk was mainly sent to the Podlaskie Voivodeship (1,702.3 million I). According to the data of the Central Statistical Office, in December 2019 the average purchase price of milk was 139.73 PLN / hl and was 1.1% higher than in November 2019, but 0.3% lower than in the corresponding month of 2018. . In the period of twelve months of 2019, the average price of milk was 135.18 PLN / hl and was 0.7% higher than in the corresponding period of 2018. In the period from January to November 2019, 2,930.8 million liters of drinking milk were produced, which was 0.2% more than in the same period of 2018. In the period of eleven months of 2019, 318.3 thousand cars were produced. tonnes of ripened rennet cheeses, which was 0.8% more than in 2018. According to the data of the Central Statistical Office, the total production of butter in January - November 2019 reached 207.8 thousand, tonnes, i.e. by 3.4% more than in the corresponding period of 2018. During eleven months of 2019, the production of skimmed milk powder was reduced by 3.3% compared to the same period of 2018, i.e. to 143.6 thousand. tone. On the other hand, the production of whole milk powder increased by 16.7% compared to 2018 and amounted to 34.4 thousand. tone.

#### What is sensitivity of the industry?

The EU dairy processing sector is characterized by high saturation, strong downstream bargaining power, fluctuating input prices, and increasingly sophisticated consumer demands implying that associated firms continuously have to adjust their production. Thus, firms in the dairy processing sector frequently need to adapt, which implies that production flexibility can be an essential firm characteristic in this industry.

Summing up, factors that <u>negatively</u> affect the consumption of dairy products:

- constantly extensive and fragmented nature of milk production, which results in little opportunities for intensive promotional activities
- high substitutability and low variety of low-processed dairy products
- low brand recognition of low-processed products (especially cream, butter and cheese by weight)





- abandoning the traditional way of preparing meals and choosing pre-processed products (decline in the image of the product)
- medical recommendations for the preventive withdrawal of milk consumption among children due to food allergies or lactose intolerance

#### positively:

- promotion of the consumption of milk and milk products among children and adolescents, including government and local government campaigns
- increasing the environmental awareness of consumers and returning to traditional methods of production
- intensive promotional activities emphasizing the added value pro-health values such as digestive support, lowering cholesterol, preventing cancer or strengthening values, such as increasing immunity or improving condition (functional food)
- Ongoing process of innovation in the field of packaging
- increase in population income

#### ambivalently:

- fashion for a healthy lifestyle
- reducing the time of preparing meals.

#### What are management trends in the industry?

After a period of significant organizational and ownership transformations in the dairy sector of our country, the dairy cooperatives occupy an unquestionable high position. The share of dairy cooperatives in purchasing cow's milk in the country is over 70%. There are two types of integration in dairy cooperatives: horizontal and vertical. The former applies to the farmers themselves, who unite in order to, inter alia, elimination of competition among themselves for the sale of their raw material and increasing its value on the market of dairy products by processing milk by their dairy for these products. In the case of vertical integration, a dairy cooperative through its enterprise mainly buys milk from its members, processes it into ready-to-eat products and sells them to buyers. Therefore, it performs organizational, production, commercial and economic functions. Farm owners who produce milk through membership in a dairy cooperative strengthen their economic condition and farm safety. Dairy cooperatives, therefore, theoretically and practically play a very important role and tasks in the dairy industry of our country, where milk production was carried out by over 400 thousand. farms. The cooperative principles distinguish the discussed entity from capital companies. First of all, it is worth mentioning the principle of voluntary and open membership, according to which cooperatives are voluntary organizations, available to everyone who meets the conditions set out in the regulations and statute, without discriminating against gender, social status, race, political beliefs and religion.

A member of a cooperative is obliged to pay an entry fee and declared shares in accordance with the provisions of the statute. In addition, members conclude a cultivation contract (or milk delivery) with the cooperative, under which they undertake to produce and deliver milk to the cooperative. Each cooperative has its own internal contract template which is passed on to new members. The contracts provide that the agricultural producer is obliged to deliver to the cooperative all the milk produced by him, in accordance with the requirements set out in the Polish Standard and other applicable regulations. It is worth signaling that some agricultural producers give up membership of the cooperative in order to obtain a higher price of milk from the companies. Such actions are often ill-considered and are not beneficial for agricultural producers in the long run. It should be emphasized that membership in a cooperative is associated with a number of rights and - importantly - they can affect its activities.





One should mention, for example, the democratic management of cooperatives. According to the Cooperative Law Act, the members gathered at the general meeting (or meeting of delegates) elect the management board and the supervisory board.

**The Industry 4.0 paradigm** in the dairy industry has an interesting future ahead of it. However, it requires professionalism, which means that from now on, plant managers should treat automation as an area as important as production technology.

- MES. The inability to monitor indicators means the inability to control. The OEE Equipment Effectiveness Index is a recognized tool for monitoring and improving the effectiveness and efficiency of production plants. It is now widely used in industry. OEE MES solutions are used for general production management, allowing for its detailed planning and monitoring. They are standardized and flexible, as well as scalable they can be used both in plants on existing lines, as well as when designing new ones.
- Platform solutions supporting production management. Industrial automation and the tools used in it have significantly developed in the last decade due to the development of computer science and wireless technologies. Island solutions will be replaced by systems integrated both horizontally and vertically. Therefore, creating such platforms requires careful selection of a cooperation partner who will provide not only substantive support at the implementation stage, but also effective 24/7 service for the next 15-20 years. This requires from the partner both the appropriate human resources and a stable financial situation, enabling continuous improvement of knowledge about the current state of technology.

The practice of implementing advanced automation solutions and intelligent production and media management shows that the sequence of development of automation systems in various branches of the food industry is similar. After rearmament and additional investment in processing capacity, the plants focus on their optimal use. This requires the integration of automation between individual lines and device infrastructure, and in the next step, most often building a platform solution, connected at many points with the company's IT system. Efficient modernization also means that the accompanying investment projects must be processed faster. The main benefits that we can achieve are full, intelligent cost and loss control and flexibility.

# 2.4 Market analysis (customers & competition)

#### What are the main target groups of potential customers for sectoral products / services?

The market of milk and dairy products can be divided into consumer segments that differ in terms of factors influencing purchasing decisions. These segments are composed of: average and traditional consumers, loyal to products and brands, and modern consumers, looking for innovation. The first group selects well-known products, i.e. rennet cheeses, white cottage cheese, yoghurts and cheese with traditional flavors, milk in foil and UHT, kefirs, buttermilk.

They don't look for new products, they don't buy new products that have just appeared on the market. They pay attention to the appropriate relationship between the benefit and the price.

Consumers loyal to the selected products are those who earn more. The most important selection factor for them is the quality of the products. They have selected, proven products that they will not change for others, because in them they have a guarantee of good quality. These consumers mostly buy products of two and three brands. Manufacturers, trying to comply with these requirements, place on the market





additional products within the same category under the same brand name. As a result, the customer buys new products while remaining faithful to one company. The third group are consumers looking for products that are completely new or modified in terms of taste, nutrients, functional additives, and the type of packaging. They do not show loyalty to one brand, but are looking for better products that better suit their needs. They are driven more by curiosity and convenience than by price.

#### What type of lifestyle and/or habits related to consumption exists on the market (B2C and B2B relations)?

The changing lifestyles of consumers, including the decision to choose smaller meals, are driving the demand for new, innovative, healthy and ready-to-eat dairy snacks. Changing consumer behavior has forced famous brands such as Kraft Heinz and Danone to expand their portfolio with lightweight (guilt-free) versions of their products.

At the same time, it was noted that young consumers are the most dominant demographic to switch to alternative dairy products due to increased awareness of animal welfare and their environmental impact. One of the most popular growth alternatives to dairy products are oat and soy-based products. Young customers are increasingly demanding new flavors such as spicy yoghurt dips, flavored butter and alcoholbased ice cream. In addition to new flavors, consumers are looking for products with improved texture that provide a pleasant experience.

Consumer awareness of gut health continues to rise in 2020, and people are becoming increasingly sensitive to the importance of a healthy, functioning gut and how it can affect overall well-being. To achieve optimal gut health, researchers suggest consuming more dairy products rich in probiotics, fiber, and prebiotics, found in fermented dairy products such as kefir, milk, cheese, and yogurt.

#### Who are the main competitors?

Dairy cooperatives are under pressure from competition from other companies in the dairy sector. The advantages that a dairy cooperative may have in relation to competitors are: having more effective technologies, higher differentiation of products, recognized trade brand, long lasting relationships with customers, high qualifications of employees, low costs of human labor and cheap raw materials. Moreover, large cooperatives with an established position in the domestic market have taken over the most profitable market segments, focusing on product groups such as milk drinks, desserts and UHT products. On the other hand, small dairy cooperatives usually serve the nearest local markets, focusing on the production of low-processed dairy products. Large cooperatives have a clear advantage over small cooperatives, the main sources of which are high quality of production, high product differentiation and large scale of production. Small cooperatives evaluate the condition of their resources much worse in the context of achieving EU standards. The resources of production equipment, means of transport for milk collection and financial resources are rated the worst. Due to the above conditions, large cooperatives have better opportunities to implement offensive market strategies. Small cooperatives, due to the shortage of production resources, have difficulties in producing modern products of the highest quality quality. The strategies they use are more defensive because they try to stay in the market. They compete for the possibility of selling their products by lowering prices, which destabilizes and worsens the situation of the entire sector.

# Where are they coming from (location)?





Taking into account the structure of the domestic market, the biggest competitors of dairy companies are other enterprises located in the country. The ownership structure is not as important here as belonging to the group of large enterprises with a wide portfolio of highly-processed products and small enterprises with a small portfolio of products, usually low-processed.

#### How easy is for other businesses to enter the regional market and become a competitors?

Barriers to entry into the sector limit the ability of new companies to freely enter a given market. The level of barriers to entry to the dairy sector is assessed by the managers of dairy cooperatives as moderate. The most serious restriction is high capital needs related to the start-up of a business (rating 4.6 / 5). This means that an entity entering the dairy sector, wishing to catch up with enterprises already operating in it, will need significant capital resources necessary to start the production process. Another highly rated entry barrier factor is difficult access to the distribution network (rating 4.5 / 5). Due to the lower scale of production, most cooperatives assess the significance of production scale effects as a barrier to the entry of new companies as a fairly large threat to their market position (rating 3.6 / 5). The lowest scores were given to the features relating to the retaliatory activity of enterprises already operating on the milk market in relation to those entering the market, as well as the state policy related to hindering the entry of new entities into the dairy market. At the same time, the risk of new units entering the market concerns mainly products with a high degree of processing and ensuring the achievement of higher profitability.

The appearance of a new enterprise on the market causes a change in its character and properties, manifested, among others, by in price changes, the need to reduce costs or increase overall competitiveness. Therefore, it is very important to know the situation in the sector regarding the possibility of other players entering the market.

#### 2.5 Summary & recommendations

The coronavirus pandemic has caused a very big disruption in the dairy industry. As a result of the slowdown in foreign trade, the prices of products and, at the same time, the prices of the raw material dropped significantly. From mid-2020, prices in the European Union continue to increase. Due to the diversification of sales markets, the dairy sector has limited the decline in exports of its products to Russia. Industry organizations and ministries promote Polish products in Africa and the Far East, which results in growing interest in, among others, in India, Vietnam and Japan. Experts emphasize that it is equally important to support the domestic consumption of dairy products, which still more than 2/3 go to Polish consumers. Fortunately, the activities that have been carried out for several good months indicate that we managed to go through this difficult crisis situation quite freely. He points out that the reason for this is the diversification of markets, including greater opening to the Chinese market.

Producers are looking for new recipients not only for powdered milk, but also UHT milk and cheese. A number of activities are undertaken by producers and processors themselves, supported by ministries, government institutions and industry organizations. Poland is becoming the "tiger" of the dairy industry, although we still lack very strong promotional support.





The Polish food production industry is trying to enter the difficult African and Far Eastern markets. Polish producers are definitely prepared to conquer new markets, because our plants are mostly well managed by very good managerial staff. On the other hand, the world is more and more open to Polish products, appreciating them because they present high quality. The second important feature is the affordable prices of Polish products in relation to the presented quality. Today, from such distant and distant countries as India, Vietnam, China or Japan, our processors receive a lot of inquiries for specific goods. Recipients from these countries are open to the sale of our goods on local markets, and in some cases they also want to re-export Polish goods to other markets - where Poland does not yet have the authorization and agreement of veterinary certificates.

Still, 70 percent. milk production goes to the domestic market. Therefore, the task of trade organizations is not only to support exports, but also to encourage greater internal consumption. Although it grows by approx. 2 percent. annually, it is still much lower than in France or the Scandinavian countries.