ANALYSIS OF INTENSITY OF COMPETITION IN MILK AND MILK PRODUCTS SECTOR IN BULGARIA

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Abstract

The following paper presents the results of an analysis of the intensity of competition in the milk and milk products sector in Bulgaria. The analysis is performed by adapting the Porter’s five forces model and based on the specific features of the sector concerned. For this purpose the author accepts the industrial concept of interpretation of competition: two levels of consideration of the competition intensity are differentiated - product class as a whole and separate product categories. Although not going into greater depth, the study reports the need of deepening the analysis by individual product groups, price levels and specific segments. The author proposes a methodological framework by which an analysis of the intensity of competition is conducted. Due to volume limitations of the publication, the emphasis of the paper is on the intensity of competition between existing companies; the barriers to enter and exit the sector are also presented; substitute products are marked briefly. The remaining forces from the five forces model are marked without going into details.

Key words: competition, intensity of competition, market, sector, substitute products

INTRODUCTION

The literature on the issues of strategic management gives a central attention to the matters related to strategic analysis and the intensity of competition in particular as its main component [1],[2],[3],[4],[5],[6]. However, their examination is performed mainly on a conceptual basis, which prevents their implementation in a particular sector, without considering its inherent characteristics.

Subject of study in the current paper is the intensity of competition in the milk and milk (dairy) products sector. For this purpose, the Porter’s five forces model is applied [1]. It is widely accepted by scientists and researchers in managerial and marketing scientific area [5], [6], [7], [8], [9], [10], [11], [12].

In its particular application in practice, the model needs to be adapted, which reflects the sectoral specificities and characteristics [1],[7].

Characteristics of the object of study

Object of study in the current paper is the milk and milk products sector in Bulgaria as a strategic business area.

The sector is characterized by intense competition and dynamically changing environment. Within its boundaries it is identified a wide variety of companies which are distinguished by their size, product specialization, market coverage, objectives, strategies, product and market profile. Dynamically changing environment is determined by: opportunities for entry and exit of competitors in the sector; continuous change in consumers behavior; changes in the meaning of the different communication channels and specific means; restructuring of distribution channels; development of substitute products; strong vertical integration with the raw materials suppliers; specific regulatory actions and regulations that affect the industry; disloyal competition.1

The thesis stated in the paper is that the analysis of intensity of competition in the selected sector is characterized by its specific features. The intensity of competition could be determined only if the product profile of

1 Author’s research in relation to individual university project № 2-7/2011, UNWE, Sofia: Characteristics of business planning in companies from the FMCG sector in Bulgaria / Completion date: December 2013
the sector and these of the leading competitors are determined [5, 15].
The aim of the paper is to present the results of adapting the Porter's five forces model in the sector of milk and milk products in Bulgaria. Due to the popularity of this model its theoretical aspects are not considered in this paper.

MATERIALS AND METHODS

At the basis of the applied methodology for studying the intensity of competition is the complex approach. For this purpose, a variety of popular methods are used: analysis and synthesis, induction and deduction, structural and comparative analysis, methods for grouping, method of analogy, graphical methods, expert assessment, statistical methods, etc.

The scope of the study covers 24 of the leading manufacturers of milk and milk products in Bulgaria which are of national importance. Primary and secondary information sources are used. For the collection of primary information is performed author's own research, which includes: analytical review of the websites of the companies involved, visiting the companies’ stores, interviews with managers and owners.

The secondary data sources that are used are official financial and accounting documents [14], analyzes of the Ministry of Agriculture and Food (MAF) concerning the market of milk products in Bulgaria [13], data from the Bulgarian Association of Dairy Processors [14].

Methodological framework of the study

The study is carried out by a specially elaborated methodological framework (figure1).

It takes into account all of the starting conditions and limitations. The methodological framework enables the performing of a reliable analysis of the intensity of competition even in conditions of information deficit. This makes it suitable for application by large companies, as well as by medium and small ones experiencing difficulties in the development of management information system due to lack of experience or lack of financial resources.

![Methodological framework of the study](source: Elaborated by the author)

The proposed methodology allows the determination of the sector’s structure and the intensity of competition in the sector by the Porter’s five forces model.

RESULTS AND DISCUSSIONS

In adapting the five forces model are considered some of the important features of the sector associated with: large product diversity, presence of large number of competitors which are distinguished by size, objectives, strategies, financial resources and product-market profile.

The product diversity is a matter of particular interest. The milk products class includes a variety of product categories such as: yoghurt (sour milk), fresh milk, white cheese, yellow cheese, fruit yogurts, fresh fruit milk, bifitus/probiotics, butter, cottage cheese, sour cream, different children's products, etc. Because of this diversity the matters related to product-market profile of the sector and main
competitors acquire significant importance [14].

The identification and analysis of competition is enabled by the application of industrial and market concepts [5]. The first is necessary in order to define the product boundaries in the sector as well as the different product categories, and the second – for the identification of competitors and differentiation of market segments and strategic groups [1], [2], [3], [5].

In order to refine the boundaries of the sector, the concept of strategic business areas and strategic business units is applied [2], [3]. For the aims of the current paper, the industrial concept is considered. Because of this, the adaptation of the model requires introduction of two levels of determination of the intensity of competition: the first refers to the analysis of competition in the product class as a whole, and the second - for the separate product categories.

The market concept requires the analysis to be conducted in separate geographic markets, market segments and distribution channels. Due to the necessity of a thorough and detailed market research, this paper is limited to the analysis of intensity of competition, which is assumed by the industrial concept.

A. Intensity of sectoral (within the class) competition

There are many companies operating within the class. They are different by size, legal form, product specialization, market coverage. The companies include in their scope of business activities manufacturing and trade with milk products and are approved for trade in the EU [13], [14].

Figure 2 shows that the sector is characterized by high intensity of competition throughout the period considered. In 2011, the number of dairy processors in Bulgaria is around 450. In the following years (2002-2007) the competitors’ number decreases to 229, retaining at this level until 2010. In 2011 there are 252 companies identified which are included in the list of approved establishments for manufacturing and trade with food products of animal origin.²

Although the number of competitors is changing over the years, this doesn’t result in reduction of the intensity of competition. Even significantly fewer in number, the operating competitors have a capacity that significantly exceeds the current market absorption. In the conditions of shrinking market, the competitors implement more aggressive strategies and programs for retention the levels of sales, revenues and profits.

There could be identified 24 leading companies of national importance in the dairy sector. They are crucial for the existence of intense competition in the sector. The study conducted allows to be presented a brief information about the companies’ sales revenues and product-market profiles.

**DANONE SERDIKA S.A.** is the absolute Leader in the milk products class with revenues amounting to 98 870 thousand Levs. This represents 25% of the surveyed companies’ turnover. The revenue of **DANONE SERDIKA** exceeds more than twice or more than 100% the Challenger’s revenues represented by United Milk

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Company (UMC) S.A. and more than three times the first two followers’ revenues - respectively TYRBUL S.A. and CODAP Ltd.

Product Portfolio: The Leader of the market has clearly defined product specialization, which focuses on the manufacturing and sale of various types of milk on the market without including other categories of milk products and offering a rich assortment. It covers almost all product categories within the product class and drives innovations in the sector. The Leader uses separate family brands for each product category.

In general, the products of DANONE SERDIKA are oriented towards children, adolescents and young people who are very loyal to the brand and have a serious impact on the purchases. The company aims to take a leadership position in each of the segments covered as it is the undisputed leader in the following categories: fruit milk drinks, fruit yogurts, bifitus.

DANONE SERDIKA is a global innovative company which applies a differentiated marketing with precise segmentation and positioning of the products. It is a driver for change in the sector in the following aspects: introduction of new technologies; process, product and marketing innovations.

DANONE SERDIKA is most active in the marketing support for its products. Due to the highly developed distribution network and aggressive advertising, it provides rapid penetration and imposing its new products on the market. The company implements differentiated marketing and its marketing efforts are aimed at precisely selected target segments. Its brands (“Danone”, “Activia”, “Danonino”, “DZP”, “Na baba”, “Fantasy”) have a precise positioning and leading position in the minds of consumers. The company has serious financial capabilities exceeding those of the other competitors, enabling to ensure financial recourses for its marketing budgets.

United Milk Company (UMC) S.A. is the main Challenger in the sector. Its revenues amounts to the value of 49 271 thousand Levs, which is 13% of the turnover of the population surveyed and 50% of the revenues of the Leader.

The product portfolio of UMC includes: yogurt and fresh milk, including skimmed milk, with calcium, UHT, fruit milk drinks, including flavored and lactic acid, cocktails, cheeses. The company’s yogurts are offered with the following brand names: “Vereia”, “Fibella”, “Hansko”, “Vitalact”, “Vereia-Calciun”, “Vereia 0%”. Leading brand, which is positioned at the highest price level having the largest share of the company’s sales, is “Vereia”. It is also one of the most recognizable brands on the market of fresh milk and yoghurt.

UMC is oriented towards product innovations. In recent years, the company introduced and established on the market fresh milk and yoghurt with zero fat and with calcium, which are offered under the family brand "Vereia-0%" and "Vereia-calcium". In respect of technology the company is one of the leading in the sector.

UMC has well developed distribution network nationwide, which is accompanied by a well developed system of trade supplies. The company’s merchandising provides a good presence in the retail stores. In recent years the company is experiencing some problems of financial nature.
TYRBUL S.A. had a turnover of 31 322 thousand Levs and ranks third in the sector. Although the position occupied, it is not given a special attention, because its products are mainly for export. In Bulgaria its brands could be found in some regions and retail chains that have limited market presence. TYRBUL’s products are in the following categories: yogurt, fresh milk, white cheese, strained yoghurt, cottage cheese. The company owns the family brand “Olimpus” and sub-brands: “Oly”, “Feta”, “Talia”, “Elekton”. In case of an appropriate strategy, the company has the potential to intervene more seriously on the milk products market in Bulgaria.

CODAP Ltd. ranks fourth in turnover and is also export oriented. Its turnover is just over 30 144 thousand Levs, which gives it one of the leading positions in the sector. The CODAP’s revenues represent 8% of the total revenues of companies concerned, 31.0% of the Leader’s (Danone Serdika) sales and 63% of UMC’s. CODAP is a subsidiary company of a German company with the same name. The vast majority of the cream produced by the company is intended for export.

The product portfolio of the company includes most of the main categories dairy products: yogurt, fresh milk, milk drinks, including fruit and flavored, white cheese, yellow cheese, cream for cooking. They are offered under the family brand "My day". CODAP offers a wide variety of fresh milks with different fat contents, calcium, fitness and for children, respectively, in box and bottle. The company offers a full children's serie under the brand "Mlechko". The company's products are distinguished by their packaging that attracts consumer attention.

The company offers its products mostly in city regions and is presented in most of the channels through which the products under the brand "My Day" reach their target markets. The brand products have active marketing support. They are well represented in terms of merchandising and distinguished by the loyal customers.

Zorov 97 Ltd. has a turnover of 16 730 thousand Levs which represents 4.0% of the turnover of the companies surveyed and 17.0% of the Leader’s revenue. The product portfolio of Zorov 97 includes traditional Bulgarian dairy products: yogurt, white cheese, yellow cheese, cream, butter and also various delicacies. “ Parshevitsa” is one of the milk products brands which are recognizable, liked and preferred by the market. Products with the brand name “Parshevitsa” are distributed through a well-developed distribution network and merchandising support.

Two of the companies that by 2009 had a leading position with sales of over 20 000 thousand Levs - FAMA SERDIKA S.A. and 16 689 thousand Levs – MARKELI S.A., respectively with 6% and 4% market share, in 2011 are in difficult financial situation. Others, including: MEGGLE Bulgaria Ltd., Mlechen ray - 2 Ltd., LB Bulgaricum S.A. BCC Handel Ltd., MIZIA MILK Ltd., JOSSI Ltd., MAKLER COMMERCE Ltd., Mlechni produkte Ltd., ELITE 95 Ltd., Dyado Liben Ltd., Philipopolis RC Ltd. and CECH 99 Ltd. have approximately equal market shares of the revenues - between 2-3%. Their total revenues amounted to over 111 000 thousand Levs, which is about 28% of the revenue. The lowest in this group are the revenues of ELITE 95 and the highest - of MIZIA MILK. The examined main competitors and the others more than 200 companies operating in the dairy sector in Bulgaria, determine growing intensity of competition, increased further by the difficult economic situation.

B. INTENSITY OF COMPETITION IN KEY PRODUCT CATEGORIES

The performed analysis outlines the product profile of the sector, which is a result of the diverse products offered by the competitors (figure 4).

Based on the study of product profile of 24 leading companies in the Milk and milk products sector are identified a number of characteristics associated with the intensity of competition.

The most intensive competition is between the companies offering traditional for the Bulgarian taste milk products - yogurt, fresh milk, yellow cheese and white cheese. Yogurt
is offered by 20 companies which is 83% of the population surveyed, fresh milk is offered by 14 companies (58%), yellow cheese - by 17 and white cheese - by 19 companies, respectively 71% and 79%. Usually, for these types of products the companies create and establish family brands.

Lowest number of competitors (three companies) are identified in the segment of bifitus products and its alternative - probiotics. The situation is similar for strained milk and starter cultures (three companies) and for the children series - four companies. The number of companies offering fresh fruit milk, butter and cream is also small.

- **BOR-CHVOR Ltd.** offers yogurt with the same brand name, which is one of the leading on the market. Other company’s brands for the lower price segment are: “Taboo”, “Element”, “Hypnosis”, “Culture”, “Elvi”, “Plovdiv”, “Babino valshebstvo”. Leading brand in the high price segment is “Bor Chvor”.
- **DANONE SERDIKA S.A.** is a leader with its brand "Danone" and especially with the brand „Na baba" that embodies, at least nominally, the Bulgarian tradition. The brand "Na baba" has the most significant marketing support and best image positioning than any other, which in a short time made it a favorite brand for many yogurt consumers.
- **Rodopeya-Belev Ltd.** is the manufacturer of yogurt with the brand name “Rodopeya”, which in recent years was established as one of the favorite products in this category. The manufacturer of the brand imposes it as a product of the Rhodope Mountains. This by default makes it desirable because of the positive image of the mountain, which is associated with natural beauty and ecologically cleanliness and purity.
- **ELVI Bulgaria Ltd.** manages to build a strong brand without using intensive communication campaigns. The company’s brand "Bojenci" become one of the preferred products on the market for a short time. Similarly to the strategy of "Rodopeya", the brand "Bojenci" creates associations for the village with the same name, which, as a historical landmark, keeps the spirit of Bulgaria and is a symbol of its native traditions.
- **Zorov 97 Ltd.** – its brand is called "Farshevitsa". Despite the dissonant brand name, the company had established it on the market and its yogurt is preferred by the customers. Its significant market presence is imposed by the shared application of pull and push strategy.
- **BCC Handel Ltd.** is another main player on the market. Its yogurt with the brand name "Elena" is preferred by the customers because it is produced with probiotic yeast. In Internet forums present opinions that its taste is closer
to the home-made yoghurt. Named after the picturesque mountain town of Elena the product inherits 40-year tradition of the existing dairy.

- Other key competitors on the market of yogurt, some of which have the potential for more significant presence, are:
  - CODAP Ltd. with its brand „My Day“;
  - TYRBUL S.A. with its brand „Oly“;
  - SERDIKA BULGARIA S.A. with its brands „Markeli“, „Mlechen pat“, „Elitsa“;
  - LAKTIMA S.A. with its brand „Balkan“.

There are numerous other companies on the market, including operating at regional and local level, which also attract loyal consumers.

2) Competition on the fresh milk market

The fresh milk is a traditional product for the Bulgarian cuisine. It is also a category with high competition. Of the surveyed 24 leading companies, 14 (54%) offer fresh milk. In recent years the UTH technology was imposed. It allows long storage period of the milk, without deterioration to its quality and characteristics.

Key companies with leading positions on the fresh milk market are:

- United Milk Company (UMC) S.A. with its brands “Vereia”, “Fibella”, “Hansko”. Leading brand of the company is "Vereia". It offers several varieties of milk intended to serve different consumer segments: milk containing 1.5%, 3.6%, 0% fat, and "Vereia-Calcium". “Fibella” is produced by UTH technology. The company's brands are supported by good logistics to ensure constant availability at points of sale, where, almost without exception, they have leading position. The milk is offered in various tetrapack containers with caps. For convenience, the "Hansko" milk is in a quality, comfortable and eco-friendly packaging "Ecolean". The "Vereia" brand has active advertising support.

- CODAP Ltd. is another of the leading companies on the fresh milk market. Its single brand is "My Day", which is also established on the international market. This product is available in packaging that attracts the consumers with its shape and color. Compared with the brands of UMC, "MyDay" brand has a greater depth: with a fat content of 1.5%, 3.0%, Fitness-0.1%, with calcium, for children - "Mlechko", UTH technology. It is offered in both convenient and hygienic PET bottle and tetrapack container. This packaging does not allow the product to absorb smell from the refrigerator and allows better storing.

- DANONE SERDIKA S.A. - its leading brand for traditional Bulgarian products is "Na baba". Due to the active marketing support and good positioning, the brand has become one of the most preferred. One of its main advantages is the packaging that has a wide neck that makes the product very convenient to use. Danone also offers fresh milk under the same brand name, but with no significant market presence.

- MEGGLE Bulgaria Ltd. – its brand “MEGLE” is one of the recognizable brands on the Bulgarian market. The fresh milk with this brand is distinguished by its great taste. It is available with different fat content - 3.6%, 1.0% and 0.1%. The special line of fresh milk MEGGLE "FRESH every day" is produced by a technology that keeps the authentic and natural flavour and taste of the cow milk.

- Other important competitors on the fresh milk market are SERDIKA BULGARIA S.A., ELITE 95 Ltd., BALKAN SPECIAL Ltd., POLIDYEY-2 Ltd., Zorov 97 Ltd., BOR-CHVOR Ltd. and others.

3) Competition on the cheese products market

Two of the products traditional for the Bulgarian manufacturers, which are an integral part of the Bulgarian cuisine, are white cheese and yellow cheese. These two categories are characterized by a dynamic competition, product and process innovations. White cheese

Examination of the competitors’ profile, conducted among 24 of the leading producers of milk and milk products, indicates that 19 of them produce white cheese. According to Nielsen, published on the website "My shop", the best selling cheeses are “Davidovo”, “Elena”, “Madjarov”, “Makler” and “Sitovo” [16, 17]. The largest share of sales has the cow’s milk cheese - 92.8%. Second with 4.3%
ranks the sheep's milk cheese. The goat's milk cheese has 1.5% of total sales. More than two-thirds of sales (67.2%) are due to non-factory packaged cheese, and the rest is for the factory packaged cheese (tin container, box, foil/paper, cardboard). In this category, it is important to note the specialization, product and technological innovations of JOSSI Ltd. which offers a wide variety of cheeses.

Yellow cheese (Kashkaval)
The yellow cheese is the third by intensity milk products category after yogurt and white cheese - 17 of the surveyed companies include it in their product portfolio. Data from the commercial panel Nielsen shows that the best selling packaged cheeses are “Domlyan”, “Madjarov”, “Merone”, “Na baba” and “NDN&K” [18]. The best selling cheese is made of cow's milk - 87.2%. Second is the cheese of sheep's milk - 10.7%. Third ranks the products of goat's milk with 1.4%.

D. Barriers to entry and exit in the sector

Entry barriers
The dairy sector is characterized by a number of features that create relatively high entry barriers for new competitors:

- High economic requirements for market researches, initial investments in tangible and intangible assets.
- Significant financial resources are required to provide initial working capital.
- Requirements for high technological level of manufacturing and need of qualified professionals in manufacturing, marketing and sales.
- In the different market segments and strategic groups are observed leaders who are "persecuted" by one or more competitors that threaten their leadership.
- Market entry is hampered by difficult entry and penetration in the traditional distribution channels and store chains, which occupy an increasing market share.
- Various studies show that consumers of dairy products are loyal to one or a couple of brands. This loyalty is result of creativity, serious communication expenses and consistency in the products’ quality.
- The entry barriers are determined also by a number of legal requirements related to sanitary, product and other requirements that must be met in order to start dairy products manufacturing.

- The economic barriers include also the experience curve, economies of scale, access to technology and know-how, specialized transportation requirements.
- In the current conditions the barriers are even higher as the market shrinks, and the competitors strive to maintain their market position and to occupy new ones.

Exit barriers
In contrast to entry barriers, the exit ones are not so high. The decision to exit the sector is related to assessment of the appropriateness and the economic and financial condition of the particular company.

If the company is not declared in bankruptcy and has no signed contracts that could prevent the exit of the sector, the decision can be taken at any time.

E. Substitute-products
In most of the cases substitute product of a particular milk product could be only another product of “Milk products” class. As existing and potentialy close substitute products are considered the different products within a particular product category. For example, substitute product of traditional yogurt is the plant-based yogurt. In other cases, more distant substitute products could be the different product categories to each other - depending on the reason for purchase, such are: white cheese and yellow cheese, white cheese and cottage cheese, yogurt and fruit yogurt, etc.

It is important to notice that years ago the milk was produced by a classical and proven recipe and the main component of the dairy products was fresh raw milk. At present there is a serious market share of plant-based milk containing different types of plant additives.

F. Main pricing factors
The prices of milk and milk products depend on the development of the main manufacturing expenses. The retention of feed prices on higher levels and their possible further increase will inevitably affect the prices of milk and milk products in the upward direction.
At the same time, a significant increase in prices of dairy products will be limited by the low purchasing power of the population, including by shifting the demand to cheaper products but with lower quality. In this respect, it should also be appended the excess of production capacity in the sector. The chain stores also have an adverse impact on the manufacturers’ prices. They execute pressure on the manufacturers for different forms of promotions and discounts, and in some cases even force them to sell their products at a loss. Moreover, almost all chain stores offer their own brands which are positioned in the lower price segment.

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CONCLUSIONS

First, the analysis conducted shows that the sector is experiencing a high degree of competition, due to several key factors:

- Large number of competitors in the sector. According to the MAF their number is 252.
- A decrease in demand of milk products which is a result of continuing difficult economic situation worldwide.
- In these conditions there is observed a decrease in the frequency of purchase of milk products, downward pressure on product prices and shrinking of margins.
- The presence of many companies in the sector is an important factor that intensifies the competition in "Milk products" class and its inherent categories and product groups.
- Despite the opportunities for differentiation of the companies’ offers in the dairy sector, within the separate strategic groups formed on the basis of ratio "price-quality-differentiation/positioning" is observed intense competition. Such is identified also between the formed strategic groups.
- There is overcapacity in the sector, which can not be used due to the decline in demand. That is why there is an orientation towards lower product prices.
- The worsened economic conditions adversely affect the "balance" of the competition. In search of options for keeping the level of revenues and maintaining the desired profitability, competitors act in accordance with the conjuncture, without long-term strategies.
- Disloyal business practices are another unfavorable factor. They result in non-payment of VAT (value added tax) and use of low-quality raw materials.
- As a result of the factors with unfavorable impact it is observed: a decrease in companies’ sales and revenues, deterioration of profitability in the sector, poor liquidity. Second, the results presented by the current paper indicate that by adapting the Porter’s five forces model and analysis of product-market profile it is possible to assess the intensity of competition in the milk and milk products sector.
- Third, the proposed methodological framework allows the analysis of intensity of competition even in the circumstances of low initial provision of information. Due to the low cost required for its practical application, it can be used by both small and big companies not only in the sector concerned but also for all FMCG.

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