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THE CURRENT STATE OF CONFECTIONERY MARKET IN UKRAINE: COMPETITIVE ASPECTS AND MONOPOLIZATION

СУЧАСНИЙ СТАН РИНКУ КОНДИТЕРСЬКИХ ВИРОБІВ В УКРАЇНІ: КОНКУРЕНТНІ АСПЕКТИ ТА МОНОПОЛІЗАЦІЯ

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Круглікова В.В., Єгоров А.О. Сучасний стан ринку кондитерських виробів в Україні: конкурентні аспекти та монополізація. Оглядова стаття.

У даному дослідженні подана інформація про динаміку ринку кондитерських виробів в Україні, його структуру за останні роки (2014-2017 рр.). Зроблено факторний аналіз та розраховані показники конкурентоспроможності продукції провідних вітчизняних компаній. Багаторівневий характер конкурентної взаємодії господарюючих суб'єктів кондитерського ринку зумовив використання двох методів оцінки конкурентоспроможності: індексного та аналітичного. Визначено рівень монополізації ринку кондитерських виробів в Україні та перспективи його розвитку. Розкрито вплив монополізації ринку кондитерських виробів на рівень конкурентоспроможності його суб'єктів. Визначено особливості та характер проявів монополізації на кондитерському ринку в Україні. Запропоновані рекомендації щодо зниження негативних наслідків впливу монополізації на конкурентоспроможність українських кондитерських підприємств.

Ключові слова: кондитерські підприємства, монополізація, конкурентоспроможність, структура ринку

Kruglikova V.V., Yegorov A.O. The current state of confectionery market in Ukraine: competitive aspects and monopolization. Review article.

This study presents information on the dynamics of the confectionery market in Ukraine, its structure in recent years (2014-2017). Factor analysis has been performed and indicators of competitiveness of the products of leading domestic companies have been calculated. The multi-level nature of the competitive interaction of economic agents in the confectionery market has stipulated application of two methods for competitiveness assessment: index and analytical. The level of monopolization of the confectionery market in Ukraine and the prospects for its development have been determined. The influence of monopolization of the confectionery market on the level of competitiveness of its subjects has been revealed. The specific features and character of monopolization in the confectionery market in Ukraine have been identified. Recommendations concerning the reduction of the negative impact of monopolization on the competitiveness of Ukrainian confectionery enterprises have been offered.

Keywords: confectionery enterprises, monopolization, competitiveness, market structure

The confectionery industry in Ukraine has changed considerably, predominantly, due to the economic crisis, devaluation of hryvnia, decrease in the purchasing power of population, rise in prices for goods and the situation in the East of Ukraine resulting in losing of businesses by definite owners [1]. Maintaining the positive dynamics of industry development in conditions of severe competition with the leading world manufacturers in the domestic market may be possible only if the competitiveness of national enterprises increases and they have stable competitive positions. At the same time, monopolization of the market limits the development of small and medium-sized businesses. They just have to leave the market because of poor competitiveness. As a result, unemployment and poverty indicators rise, options disappear and the pricing is completely concentrated in the hands of monopolists.

The competitiveness of Ukrainian enterprises' products is one of the main causes of the crisis phenomena that are currently observed in national economy. The task of ensuring the competitiveness of the domestic economy remains one of the most urgent during all years of Ukraine's independence. Our country continues to be among outsiders in all world rankings, lagging far behind both in quantitative and qualitative macroeconomic parameters, as well as in the business environment state, not only from the developed countries, but also from countries in transition.

Competition in the market becomes tougher. Producers compete for more favorable conditions of manufacturing and sales of products, for the highest profit and other advantages. This competition is carried out by different methods and may be represented in various forms [2]. Therefore, there is a

need for constant search for new ways to increase the competitiveness of the enterprises.

Analysis of recent researches and publications

Problems of the domestic confectionery industry development were investigated in scientific works of the following researches: Shashina M.V., who explored possible ways to improve the resource potential of the confectionery industry; Tyuha I.V., Kravchuk N.V., who investigated the current trends of the world confectionery market; Kronikovskiy D.O. conducted an analysis of economic factors of influence [3]; the problem of market monopolization was studied by I. Maydich, V. Martsin, O. Okolovich, K. Ul'yanov, M. Kharchenko and others.

The confectionery industry is one of the most developed branch in the Ukrainian food industry, with a total annual production of more than one million tons. The branch is one of the leading consumers of Ukrainian agricultural raw materials: sugar, flour, starch, milk, etc. It is one of the few food industry branches in Ukraine that is self-sufficient, well-developed, fully formed and takes up a successful position in the European market [4].

Unsolved aspects of the problem

In the works mentioned above the authors focus on competition policy problems, antimonopoly regulation and formation of a competitive environment. Meanwhile, issues of competitiveness factor analysis of the confectionery market in Ukraine over the last four years remain beyond the attention of researchers. The relationship between monopolization and competitiveness is not disclosed comprehensively.

The aim of the article is to reveal the peculiarities and character of monopolization of the confectionery market in Ukraine during the last four years and to provide scientific basis for proposals to reduce the impact of its negative consequences on the competitiveness of the domestic economy.

The main part

According to the data of the Antimonopoly Committee of Ukraine [5], during the recent years more than 50% of products' volume has been sold in commodity markets without a competitive structure. Moreover, above 7% of markets do not have even structural preconditions for competition. However, contrary to the official data, monopolization in our country is almost total. It extends on not only markets, but also industries and spheres of the economy [2].

The research of the confectionery market in Ukraine shows that its largest share is the domestic production, which is about 95% of the total. The Ukrainian confectionery market is highly concentrated, with about 800 companies working in it [3]. The factories located in the present occupied territory have been closed, which led to sharp changes in the share of several confectionery companies in the market during 2014-2016.

Simultaneously with the abrupt reduction in the market share of several companies during 2014-2016

years, the Kharkiv corporation "Biscuit-Chocolate" got a winning position, having risen in three years from the fourth place in the rating to the second due to the loss of enterprises by its competitors. The fact that TM "Roshen" closed Mariupol confectionery factory did not prevent it to remain the leader in the Ukrainian market. Corporation "Kyiv-Konti" suffered from the rapid fall in production, in consequence of closure of factories in Donetsk region resulted in the company's shifting from the third to the fourth position. The company "A.V.K." also reduced its production through difficult situation in the East of Ukraine, because its factories were concentrated in Donetsk and Luhansk regions [6]. Consequently, war in the eastern part of Ukraine proved to be a major problem and a threat for the Ukrainian confectionery market, resulting in losing of factories by certain owners.

The world confectionery market is divided into three segments: chocolate, flour and sugar confectionery. The largest share falls on chocolate products (63% of the international market). This is the result of increased demand for black chocolate made of natural ingredients (quality and health safety are the main criteria in the food industry, as well as in others). Belgium is the undisputed European leader in chocolate production with the annual output of 172 thousand tons. Manufacturing of chocolate products also prevails in Ukraine, flour production is quite advanced, and a large proportion of sugar products is practically concentrated in one company – "Roshen" Corporation [7].

We can observe that the absolute leader in all three segments of the Ukrainian confectionery market is TM "Roshen" with annual output of 48.580 tons of chocolate, 47.648 tons of flour and 104.576 tons of sugar products. Although several years ago the priority in production of chocolate products belonged to "A.V.K.", and in flour products to "Kyiv-Konti". "Roshen" Corporation simultaneously occupies about 80% of the Ukrainian sugar sweets market [6].

The world ranking of international manufacturers of the confectionery industry for 2017 is given in the Table 1, where the leaders are Mars Inc. (USA), Mondelez International (USA), Nestle SA (Switzerland), Ferrero Group (Italy), Meiji Co Ltd. (Japan), Hershey Co [7]. Ukrainian manufactures have successfully entered the world market and occupy worthy positions among the other promising countries.

According to the data of "Ukrkonditer" association, three operators produced almost half of Ukraine's confectionery products in 2016: "Roshen", "A.V.K." and "Kyiv-Konti". Exactly the same companies proved to be the main players in the market, although definite leaders are identified in each sub-segment. The American edition of "Candy Industry" has prepared the traditional annual rating of the largest confectionery companies of the world, which includes representatives of Ukraine, namely "Roshen", "Kyiv-Konti" and "A.V.K.". According to "Candy Industry", "Roshen" ranked the 24-th

position. It was noted that "Roshen" owned eight factories employing 10,000 workers. The company's revenue in 2017 amounted to USD 800 million (the same as in 2016). "Kyiv-Konti" Group occupied the 43-rd place with five factories, 3,792 employees and

revenue of 469 million dollars. The company had shifted down by five points as compared with the previous year. "A.V.K." Confectionery ranked the 67-th position [7].

Table 1. World rating of confectionery manufacturers in 2017

Name of a company	Net sales volume (million US dollars)	Number of employees	Number of factories
1. Mars Inc (США)	18,000	80,000	52
2. Mondelez International (США)	12,900	100,000	156
3. Ferrero Group (Італія)	10,637	33,245	22
...
24. "Roshen" Confectionery Corp.	800	10,000	8
43. "Kyiv-Konti" Group	469	3,792	5
67. "A.V.K." Confectionery	275	3,500	3

Source: compiled by the authors on the materials [7]

The comparison of the products of "Roshen" and its competitors ("Kyiv-Konti" and "A.V.K.") by the

main characteristics was carried out using a 10-point scale. The assessment of results is given in the tab. 2.

Table 2. Factor analysis of the competitiveness of confectionery products

Factors of competitiveness	Weight of a factor	"Kyiv-Konti" Company		"Roshen" Corporation		"A.V.K." Company	
		value	weighted value	value	weighted value	value	weighted value
Product quality	0.25	10	2.5	10	2.5	10	2.5
Product price 14/5000 Tsina produktsiyi Product price 14/5000 Tsina produktsiyi Product price 14/5000 Tsina produktsiyi Product price 14/5000 Tsina produktsiyi Product price 14/5000 Tsina produktsiyi Product price	0.2	7	1.4	8	1.6	9	1.8
Advertising effectiveness	0.15	9	1.35	10	1.5	7	1.05
Brand notability	0.2	9	1.8	10	2	9	1.8
Packing	0.1	9	0.9	8	0.8	9	0.9
Nutrient content 22/5000 Vmist pozhyvnykh rehovyn Nutrient content 22/5000 Vmist pozhyvnykh rehovyn Nutrient content	0.05	8	0.4	7	0.35	7	0.35
Content of group E additives	0.05	7	0.35	7	0.35	6	0.3
Overall value	1	59	8.7	60	9.1	57	8.7

Source: own elaboration

The resulting rating and, subsequently, the relevant criterion for the product's competitiveness allow to enlarge number of factors for the assessment, including image features and those that characterize the marketing component of the company's activities

taking into account their importance (that coincides with the author's approach).

The criterion for the competitiveness in this case will be a normalized value of the total evaluation of the competitiveness of products, and, moreover, it is

appropriate to use the maximum score on the chosen scale as the standard (in our case, 10 points).

With the help of data depicted in the tab. 1, the integral index of competitiveness (Iint), based, in turn, on the indices of competitiveness of the quality (Iqc) and economic (Iec) characteristics, was calculated using the following formulas:

$$I_{qc} = \sum \alpha \times \frac{n}{m}, \quad (1)$$

where: α is the weight of a factor;
 n is the minimum value;
 m is the maximum value.

$$I_{ec} = \alpha \times \frac{m}{n} \quad (2)$$

$$I_{int} = I_{qc} / I_{ec} \quad (3)$$

According to our calculations, integral index of competitiveness of "Kyiv-Konti" is equal to 0.19. Corporation "Roshen" and "A.V.K.". Company have indices of 0.18 and 0.14, respectively. Therefore, "Kyiv-Konti" should be considered the strongest among the main rivals in the confectionery industry: its value of the integral index of competitiveness proved to be the highest.

However, according to well-known ratings (for example, Candy Industry's TOP-100 Confectionery Company Rating and generally acknowledged facts), "Roshen" Corporation has a higher competitive position than "Kyiv-Konti". Consequently, it is necessary to use a wider range of indicators in the integrated assessment of the company's competitiveness both static and dynamic and, above all, those that reflect the market positions of the company and its marketing activities.

Rating estimations are used to assess competitiveness of any economic system, industry, branch or company. Consequently, ensuring of competitiveness should be aimed at creating and maintaining of competitive advantages by influencing on factors, conditions, sources and methods of their formation using rating assessments. We understand

enterprise "rating" as the measure of priority of one company compared to others in the definite market. It is a diagnostic tool used to rate and enhance competitiveness of enterprise based on their performance and capabilities. Therefore, the purpose of our research is to assess the rating of competitiveness of the confectionery industry companies. To achieve this goal, we apply the Herfindahl-Hirschman Index (HHI), which is used to assess the level of monopolization of the industry and is calculated by the formula (4) [8]:

$$HHI = \sum (a_j)^2, \quad (4)$$

where a_j is the share of a company in the market, in %; and $\sum (a_j) = 100\%$.

This index, in our opinion, characterizes the real degree of dominance of enterprises in the market and the level of competition in it. Enterprises in the investigated market are considered to be competitive if $HHI < 1.000$. Mergers of companies are allowed within these index value limits. The position of enterprises in the market is considered safe if the situation in the market of the investigated product is as follows:

- there are 10 or more competing companies in the market;
- one enterprise does not occupy more than 31% of the market;
- two enterprises do not occupy more than 44% of the market;
- three enterprises do not occupy more than 54% of the market;
- four enterprises do not occupy more than 63% of the market.

Most enterprises operating in the commodity market are considered uncompetitive if the index value exceeds 1.800 units [8].

Let us look at the share of the confectionery market occupied by the main companies and analyze the contemporary state of monopolization (tab. 3).

Table 3. Change in structure of sales of leading Ukrainian confectionery companies

Name of a company	Share of sales in the market by 2003, %	Share of sales in the market by 2015, %	Share of sales in the market by 2017, %
"Roshen"	48.72	50.00	52.16
"A.B.K."	15.08	15.86	15.94
"Kyiv-Konty"	19.45	17.12	17.96
"Svitoch"	16.75	17.02	13.94

Source: compiled by the authors according to materials [6]

Having analyzed this table, one can conclude that the problem of monopolization is still relevant. The Herfindahl-Hirschman index calculations gave the following results: 3.259.9 for 2003, 3.334.31 for 2015 and 3.491.63 for 2017 respectively. As we can see, since 2003 the largest companies have only increased their market share, thereby creating complex entry conditions into the market for young companies. Thus, monopolization of the domestic confectionery industry negatively affects its development, creates

obstacles for increasing of competitiveness of domestic manufacturers.

Conclusions

The achievement of worthy place in the global world by any manufacturer, branch or industry, raise of their competitiveness are inextricably linked with the solution of important problems aimed at reducing the level of markets' monopolization and the further development of competitive environment, the formation of market structures with effective

competition. It means, on the one hand, support and stimulation of the "invisible hand" of the market, which directs and regulates the business activities of its subjects and aimed at supporting of the constant development of competition in the market economy. On the other hand, the role of the government should be intensified to create a qualitatively new environment for maintaining and developing of this competition.

Evidently, the problem of monopolization is still relevant for Ukrainian confectionary industry. The Herfindahl-Hirschman index (an indicator used to assess the level of monopolization of an industry) calculations gave the following results: 3.259.9 for 2003, 3.334.31 for 2015 and 3.491.63 for 2017 respectively. The given figures display the high degree of monopolization of the market. As we can see, since 2003 the largest companies have only increased their market share, thereby creating complex conditions for entry into the market for

young companies. Thus, monopolization of the domestic confectionery industry negatively affects its development, creates obstacles for increasing of competitiveness of domestic manufacturers.

The factor analysis performed, the resulting rating and, subsequently, the relevant criterion for the product's competitiveness allow to enlarge number of factors for the assessment, including image features and those that characterize the marketing component of the company's activities taking into account their importance (that coincides with the author's

In order to approve their positions in the domestic market of Ukraine, companies would be encouraged to pay more attention to the following competitiveness indicators: quality of manufactured products, share of sales, costs and average prices of their products. In this context, the main task of the state and antimonopoly organizations are to create equal conditions for the steady development of the Ukrainian confectionery companies.

Abstract

The task of ensuring the competitiveness of the domestic economy remains one of the most urgent during all years of Ukraine's independence. Maintaining the positive dynamics of industry development in conditions of severe competition with the leading world manufacturers in the domestic market may be possible only if the competitiveness of national enterprises increase and they have stable competitive positions. At the same time, monopolization of the market limits the development of small and medium-sized businesses. They just have to leave the market because of poor competitiveness. As a result, unemployment and poverty indicators increase, options disappear and the pricing is completely concentrated in the hands of monopolists.

This study provides information on the dynamics of the confectionery market in Ukraine, its structure during the recent years (2014-2017). Factor analysis has been performed and indicators of competitiveness of the products of leading domestic companies have been calculated. The level of monopolization of the confectionery market in Ukraine and the prospects for its development have been determined.

We can observe that the absolute leader in all three segments of the Ukrainian confectionery market is TM "Roshen" with annual output of 48.580 tons of chocolate, 47.648 tons of flour and 104.576 tons of sugar products. Although several years ago the priority in production of chocolate products belonged to "A.V.K.", and in flour products to "Kyiv-Konti". "Roshen" Corporation simultaneously occupies about 80% of Ukrainian sugar sweets market. According to our calculations, integral index of competitiveness of "Kyiv-Konti" is equal to 0.19. Corporation "Roshen" and "A.V.K." Company have indices of 0.18 and 0.14, respectively. Therefore, "Kyiv-Konti" should be considered the strongest among the main rivals in the confectionery industry: its value of the integral index of competitiveness proved to be the highest. However, according to well-known ratings (for example, "Candy Industry's" TOP-100 Confectionery Company Rating and generally acknowledged facts), "Roshen" Corporation has a higher competitive position than "Kyiv-Konti". Consequently, it is necessary to use a wider range of indicators in the integrated assessment of the company's competitiveness both static and dynamic and, above all, those that reflect the market positions of the company and its marketing activities.

Evidently, the problem of monopolization is still relevant for Ukrainian confectionary industry. The Herfindahl-Hirschman index (an indicator used to assess the level of monopolization of an industry) calculations gave the following results: 3.259.9 for 2003, 3.334.31 for 2015 and 3.491.63 for 2017 respectively. The given figures display the high degree of monopolization of the market. As we can see, since 2003 the largest companies have only increased their market share, thereby creating complex conditions for entry into the market for young companies. Thus, monopolization of the domestic confectionery industry negatively affects its development, creates obstacles for increasing of competitiveness of domestic manufacturers.

The achievement of worthy place in the global world by any manufacturer, branch or industry, raise of their competitiveness is inextricably linked with the solution of important problems aimed at reducing the level of markets' monopolization and the further development of competitive environment, the formation of market structures with effective competition. In order to approve their positions in the domestic market of Ukraine, companies would be encouraged to pay more attention to the following competitiveness indicators: quality of manufactured products, share of sales, costs and average prices of their products. In this context, the main task of the state and antimonopoly organizations are to create equal conditions for the steady development of the Ukrainian confectionery companies.

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