INCREASING THE COMPETITIVENESS OF UKRAINIAN AND BULGARIAN FOOD INDUSTRY ENTERPRISES

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Abstract: *The purpose of this article is to explore the possibilities of attracting innovations to identify reserves that can increase the competitiveness of enterprises on the example of Ukrainian and Bulgarian enterprises. It was determined that innovations can help identify reserves to increase the competitiveness of enterprises.*

Keywords: *innovations, reserves, competitiveness, food industry enterprises, innovative products.*

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The study is based on the thesis, that deals with the attraction of innovation to identify reserves that can increase the competitiveness of enterprises. On the example of the activity of Ukrainian and Bulgarian enterprises, a comparative analysis of attracting innovations to find reserves was conducted. The urgency of this issue is to find untapped opportunities in enterprises, which will increase their level of competitiveness, using innovative approaches in various fields – management, organizational, personnel, production, resources, and so on.

The publication considers the peculiarities of the food industry, as these companies in both Ukraine and Bulgaria are the basis of the country's economy. Therefore, the location of reserves can increase the competitiveness of these enterprises.

Innovative activity is able to increase the competitiveness of enterprises by identifying reserves. But, at the same time, the introduction of innovations requires significant costs and a high degree of risk. Therefore, there is a need to assess the economic efficiency of innovation in enterprises. It is based on methods of calculating the economic efficiency of innovation, which are proposed by scientists, but often preference is given to industrial enterprises that produce their own innovative products, have special departments and staff performing research and development work. Based on the elaboration of existing methods (according to Methodological provisions for the organization of state statistical monitoring of innovation activities of enterprises), selected

individual parameters and coefficients that allow to determine the existing situation regarding the attraction of innovations in the food industry:

- the ratio of personnel employed in research and development, which characterizes the professional staff of the enterprise and shows the share of personnel directly involved in the development of new products and technologies, production and engineering design, other types of technological preparation for production or introduction of new products or implementation of new services, relative to the average list of all permanent and temporary employees of the enterprise. This ratio is determined by the formula:

$$K_{пр} = \frac{Ч_i}{Ч_п}, \quad (1)$$

where $Ч_i$ – number of persons employed in the field of research and development, persons;

$Ч_П$ – the total number of employees of the enterprise, persons;

- the product renewal ratio – reflects the share of new products in total sales of the enterprise. Based on this indicator, it is appropriate to draw a conclusion about the feasibility of financing innovation, because new products are usually competitive and usually, there are no problems with its sale, considering that the marketing service works effectively. It is calculated by the formula:

$$K_{ОП} = \frac{O_{ВНП}}{O_{ЗОП}}, \quad (2)$$

where: $K_{ОП}$ – product renewal rate;

$O_{ВНП}$ – quantity of new product types, units;

$O_{ЗОП}$ – total number of marketable product, units;

- the coefficient of development of new products makes it possible to assess the ability of the enterprise to implement innovative or subjected to technological change products and is calculated by the formula:

$$K_{НП} = \frac{BP_{НТ}}{BP_{З}}, \quad (3)$$

where: $BP_{НТ}$ – profit from the sale of new or improved products and products manufactured using new or improved technologies, UAH;

$BP_З$ – profit from the sale of all products of the enterprise, UAH;

The use of the outlined coefficients for the evaluation of innovation allows to take into account more accurately all the results and consequences that are expected from its implementation in enterprises, and to make rational decisions about the feasibility of implementation.

Resource assessment was conducted to identify reserves based on the involvement of innovations. It is carried out in order to determine the impact of

innovation on the consumption of a particular type of resource and to overcome the problem of scarcity (important in the case of scarce or non-renewable resources, especially those that are imported).

Agricultural specialization and geographical location are close in Ukraine and Bulgaria.

The economic development of both countries, natural resources and the current economic structure open wide prospects for cooperation and trade. Therefore, it is appropriate to compare the activities and implementation of innovations in Ukrainian and Bulgarian food companies in order to share experiences and identify untapped opportunities. However, Bulgarian has been a member of the European Union since 2007, which has had a significant impact on the further development of the country's economy, including restructuring and modernization in the food industry, and this has had a major impact on the competitiveness of enterprises.

The development of the Bulgarian food industry was supported by the rapid growth of agricultural production. In 2010, total value added in agriculture amounted to 5.2% of Bulgaria's GDP (1.876 million euros in 2010). Bulgaria is among the top eight EU member states in terms of average agricultural yield growth. Sikora and Uziębło (2013) noted that in 2010 this figure increased by 23% for Bulgaria and 12.3% in the EU.

According to the National Statistical Institute (2017) in 2014 the value of food products amounted to BGN 10.3 billion, including: food products - BGN 7.1 billion. and beverages - BGN 1.6 billion. Its share in the total value of the country's industrial output compared to 2006 increased from 13.6 to 19.4%. In 2016, Bulgaria produced 97,793 tons of sausage, 11,208 tons of fish and fish products (processed or canned), 28,081 tons of chocolate and chocolate products, 162,042 thousand liters of grape wine and 515,217 thousand liters of beer. According to Lyatev and Karzanov (2019) for 2007-2017, the share in exports of agricultural products from the country was 65.3%, and in imports - 78%. In the trade turnover of food products with third countries there is a slight increase - by 1.2%: growth of trade with the Balkan region (14.3%) and the Arab countries (by 6.3%); reduction of trade turnover with OECD countries (by 7.5%) and the CIS (by 4.2%). According to the Statistical Directory (2021) in 2018-2020, production of food, beverages and tobacco products increased - to total production, respectively, by 14.40%; 14.41%; 15.62%. The analysis of this indicator, according to the processing industry in the same years was: 16.95%; 16.88%; 18.61%. The decline in food, beverage and tobacco production in 2019 is likely due to adverse climatic conditions and the spread of the global pandemic.

Thus, in the conditions of European integration and strong competition, the food industry of Bulgaria has achieved a relatively stable and dynamic development, which makes it one of the most important sectors of the national economy.

The food industry has a complex structure and contains more than 20 industries, the leading ones are: sugar, meat, dairy, oil and animal fat, fruit and vegetable canning, confectionery, alcohol, wine, etc.

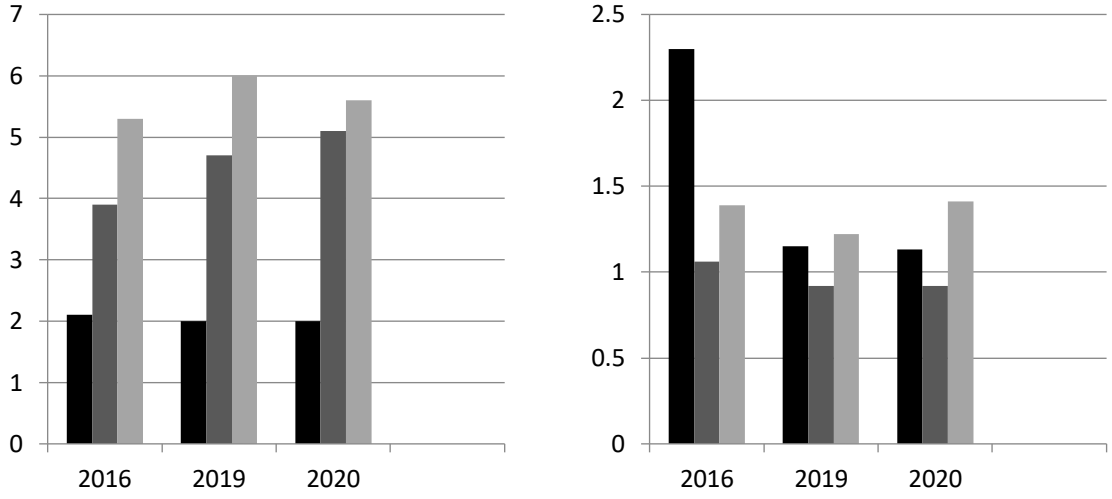
There are several well-known confectionery companies in the country and in the world. Confectionery factory "Stancho Kolev LTD" is equipped with six automated lines for the production of chocolate and chocolate bars. A team of technologists, engineers, technicians and qualified personnel works in the production of high-quality chocolate products. The monthly production capacity is 1.5 million boxes of chocolate and 3 million chocolate bars. Milmex Ltd. was established in 1994 as a workshop for the production of chocolate products. The company has a production plant located near the city of Sofia, with a total built-up area of 2780 m2. The plant produces more than 60 types of chocolate products: dessert blocks, candies and semi-finished products using the highest quality raw materials. Pobeda AD is one of the leading producers of cookies, mini-cakes and chocolates in Bulgaria. The factory is located on an area of 2900 m2, has 4 production shops, 2 special laboratories and 13 production lines. The Gayo Chocolate factory is located in Plovdiv. Specialization: production of quality chocolate without soy lecithin, artificial flavors and vegetable fats. This is a small enterprise, employs 4 people, but the products are world-renowned and sold abroad. In recent years, foreign companies such as NESTLÉ and Kraft Foods have invested in the confectionery sector and have set up production facilities in the country.

However, sugar is one of the main exports of the country, which the country exports about 140,000 tons per year. "Sugar Factories" - the largest complex in Bulgaria for the production of food. The group "Sugar Plants" JSC includes plants for the production of sugar, sugar products and ethyl alcohol, etc.

In Ukraine, in terms of production of cocoa, chocolate and sugar confectionery, due to the introduction of innovations at enterprises such as Roshen Corporation and CJSC AVK, this industry ranks third in terms of technological innovation costs, their products are increasingly exported to various countries of the world. Unfortunately, the historically traditional for Ukraine sugar industry is declining more and more and the funding for innovation is significantly reduced every year. This is due to the fact that the production of sugar from beets is expensive and the existing production capacity needs to be transferred to other types of raw materials, such as raw cane. In addition, Russia was the main importer of Ukrainian sugar, and events in the east and the annexation of Crimea led to the cessation of these trade relations.

The introduction of the latest machinery and production technology in the food industry contributes to improving the quality of industrial products and increasing its level of competitiveness in both domestic and foreign markets. Active investment and innovation policy of the food industry includes technical re-equipment, modernization, optimization of existing production facilities for the production of modern competitive products and more.

In the confectionery market, product is presented in different forms, the sales of which are not the same. The percentage of sales of chocolate products in Bulgarian and Ukraine is shown in Figure 1.



in Bulgarian in Ukraine

Figure 1. Dynamics of exports of confectionery products: sugar products; chocolate and other products containing cocoa; bakery, confectionery or biscuit products, etc., 2016-2020, %

Source: calculated according to the Analysis of Bulgarian Agricultural Trade in 2016 and in 2020; State Statistics Service of Ukraine (2021)

As you can see from Figure 1, both the composition and sales in different countries and by years are different. Paradoxically is the low share of exports of Ukrainian confectionery products from total exports of the food industry. In the future, it is appropriate to review this situation and implement radical measures at the state level to increase sales of confectionery on the world market.

The manufacturer of chocolate and confectionery "Nestle Bulgaria" since the company's entry into the Bulgarian market in 1994 has invested more than 260 million levs, which were aimed at increasing productivity, developing new products, implementing energy efficiency and innovative technologies, staff training.

Chipita Bulgaria has a small decrease in income and profit. However, the company maintains its leading position in the country in the croissant market with an 82% share in the cost and baking snacks (58%), according to the annual activity report.

After the division of business in Bulgaria into several separate companies, another global corporation for the production of chocolate, cookies, cocoa - "Mondelize" (formerly "Kraft") participated in the ranking with two of its companies. With revenue growth of more than 10%, Mondelez Bulgaria (which deals with marketing, trademarks, trade, sales and distribution in the

country) rises to 10th place. However, the company's profit fell more than twice. The company reported a successful year with record sales in the "cookies" category (+ 20%) and stable growth in the "chocolate" category (+ 5.1%). Traditionally, Milka has been the product that has contributed the most to net sales. Record market shares were: 15.5% sweet cookies (+ 1.8%) and 47.3% share of Milka tablets (+ 1.4%).

Georgieva's publication (2018) states that the company "Prestige-96" - Veliko Tarnovo has entered the niche of healthy products. The market for cookies, waffles and dry pastes (mini-cakes), where Prestige-96 operates, according to AC Nielsen, is estimated by Marketing Director Ivan Stoev at BGN 300 million per year. Prestige-96 is the sales leader in terms of value in all three categories. In addition, the total market share is growing and reaches 23% in value, "said CEO Darina Stoyanova.

The state joint-stock enterprise "Sugar Plants" actively produces sugar, confectionery, ethyl alcohol and high-protein feeds. The company is a market leader in the sale of hard and soft candies, locus and halva. The company's latest project is antimicrobial candies for throat treatment.

Thus, the increase in the competitiveness of the food industry in Bulgaria is due to the introduction of innovative technologies, renewal of production, modernization at all levels, which ensures a high level of sales of goods on the international market.

The introduction of the latest machinery and production technology in the food industry contributes to improving the quality of industrial products and increasing its level of competitiveness in both domestic and foreign markets. Active investment and innovation policy of the food industry includes technical re-equipment, modernization, optimization of existing production facilities for the production of modern competitive products and more. The fact that the country is a member of the EU also plays a very important role, so procurement takes place on the basis of coordination of the supply of goods and relevant orders.

Analyzing the volume of sold innovative products of the food industry of Ukraine and Bulgaria for the period from 2016 to 2018, we use the coefficient development of new products, which allows to assess the ability of individual industries to implement innovative or technological products (Fig. 2).

The coefficient of development of new products indicates significant differences between the introduction of innovative products in Ukraine and Bulgaria. Thus, in almost all the years selected for analysis, the coefficient of development of new products is almost twice as high in Bulgaria than in Ukraine.

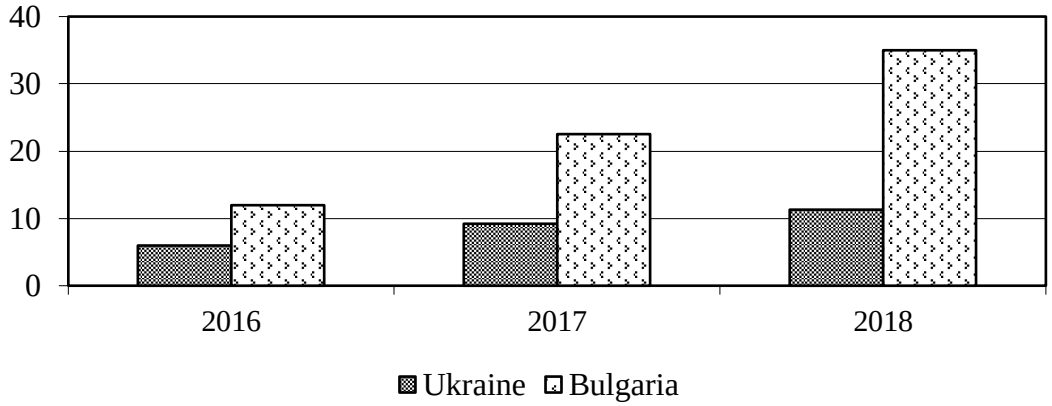


Figure 2. Sale volume of innovative products of food idustry of Ukraine and Bulgaria, 2016-2018, %

Source: calculated according to the Analysis of Bulgarian Agricultural Trade in 2016 and in 2020; State Statistics Service of Ukraine (2021)

The professional and staffing of enterprises selling products in the food industry allowed to determine the staff ratio. The calculation results are presented in Figure 3.

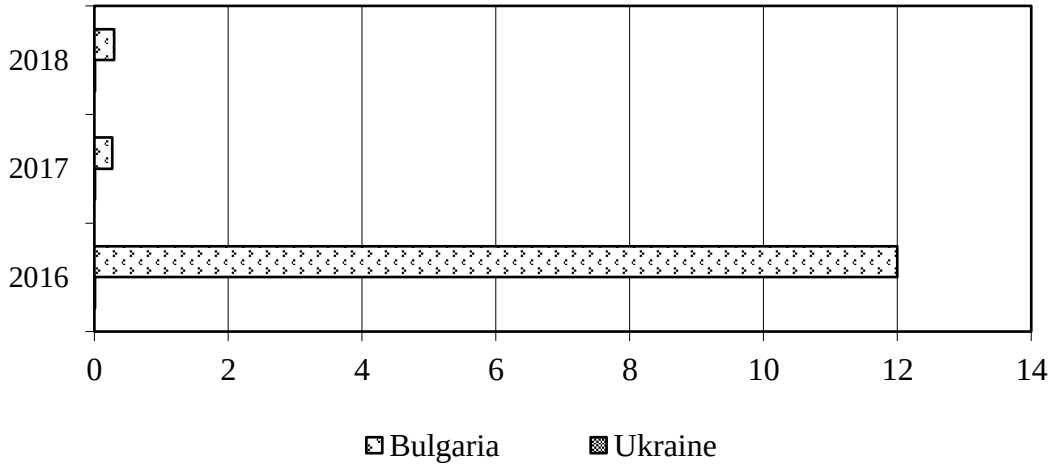


Figure 3. Staff ratio determined for the food industry of Ukraine and Bulgaria, 2016-2018

Source: calculated according to the National Statistical Institute and the State Statistics Service of Ukraine (2021)

As we can see, with the growth of the average number of full-time employees in Ukraine (data of the upper line), the number of employees engaged in research and design work decreases, which critically affects the dynamics of the indicator. The reason for this trend is the outflow of highly qualified personnel and scientists abroad and the need for large investments in innovation and, consequently, the high risk of innovation. This means that in the economy of Ukraine there is no tendency to develop in the direction of

innovation, often outdated equipment and technologies are used, no attention is paid to the fundamental implementation of innovations.

To calculate the next two coefficients, unfortunately, we did not find the initial data for the Bulgarian food industry, so the comparative analysis needs to be refined.

Thus, speaking separately about the food industry, it should be noted that on average in recent years the highest rate of development of new products - in the production of beverages, dairy products and ice cream and for the production of bread and bakery products; the smallest – in the production of ready-made animal feed, sugar, confectionery, grain processing, starch production. The food industry in both Ukraine and Bulgaria has extremely favorable conditions for its effective development, and is one of the leading structural components of the national economy, and its functioning is a leading factor in economic and social growth, the main condition for improving living standards. In Ukraine, the food industries that are most developing in the innovative direction are confectionery and beverage production. Despite this, domestic enterprises need to introduce the latest technologies, actively implement innovations, which is possible through the implementation of research and development work; The involvement of highly professional staff, in turn, will help identify reserves to increase competitiveness in the world market and the opportunity to move from the country - producer of raw materials to the country - producer of final products. And in this situation, the experience of Bulgaria is useful.

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