



FORECAST OF THE EXPORT OF CONFECTIONERY PRODUCTS OF UKRAINE TO FOOD MARKETS

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Abstract: Forecasting the development of confectionery industry, allows to consider a picture of perspective functioning of this type of management and to designate the further ways of market development. Realization of the industry export potential is extremely important for the national economy, so it is necessary to determine the main directions of competitive products production that can substantiate management decisions regarding future scenarios of development of market demand for confectionery products and its structure. The article defines the real state and development dynamics of confectionery industry of Ukraine; outlines possible directions of development of foreign economic activity on the already mastered and new perspective markets, improves strategies in unstable and difficult competitive conditions, production planning of competitive goods, which can satisfy demands of foreign and domestic consumers. For forecasting the development of foreign economic activity the statistical method of time series analysis was used, for determining the export dynamics of confectionery industry products directed on establishing regularities in level changes of investigated parameters in time; the main tendency of development of sales in the foreign market are identified. It has been proved that the analysis of time series is the initial basis for estimating tendencies of export development in confectionery production and further construction of export forecasts for market segments. According to the calculations data, the annual increase of export volumes of some kind of products, of confectionery industry for the period of 2021-2023 are predicted. The experience of experimental testing of the proposed approach shows that forecasting methods based on trend analysis can complement the existing tools of marketing and management of foreign economic activity, justify measures for the development of export market segments.

Key words: Confectionery industry, Cocoa and chocolate, Statistical methods, Forecasting, Trend analysis.

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1. Introduction

The research on the export potential of the confectionery industry and forecasting the directions of its development is necessary to prepare for possible situations that may occur in the future and bring the situation to the expected positive result. According to Fortune Business Insight, the global confectionery market in 2019 amounted to 196.56 billion dollars, and in 2020 was bound to reach 202.63 billion dollars. However, due to the COVID-19 pandemic, it is projected that in 2020 the world market will fall to 188.52 billion dollars. However, the categories of pastries, cookies and snacks are most likely to suffer

the least [Trends in the global flour confectionery market (2020)]. According to estimates, for the 2019-2020 financial years, world sugar consumption will decline by 1.2%. In the world for the first time in 40 years, demand for sugar fell (2020). In 2019, world imports of sugar confectionery amounted to 11.1 billion dollars. Over the past four years, imports have grown by an average of 4% annually. The lion's share of world imports are various types of candy, without the addition of cocoa and chocolate [Trends in the world market of sugar confectionery (2020)].

In 2019, there were 341 enterprises in Ukraine producing cocoa, chocolate and sugar confectionery.

Ukraine's share in the global confectionery market in 2018 was estimated at about 93 billion dollars, which amounted to 0.9% [Kilnitska *et al.* (2018)]. According to the State Customs Service of Ukraine, in 2019 the country exported sugar confectionery products in the amount of 148520 thousand USD, which amounted to 30% of the total share; chocolate products - in the amount of 169636 thousand USD (34%); with a total weight of 158.354 tons. In 2019, Ukraine exported sugar confectionery 6.2 times, and chocolate products - almost 2 times more than it imported from other countries [Statistical export and import of goods (2020)]. Every year, the American industry publication Candy Industry compiles a list of the 100 best confectionery companies in the world, which traditionally includes Ukrainian companies – «Roshen», «Konti» Group and «AVK». Thus, «Roshen» in 2019 ranks 27th in the ranking, minus two positions compared to 2018. «Roshen» owns eight factories, which employs 10 thousand employees. The company's revenue in 2019 amounted to \$ 800 million [same as in (2018), and in (2015) and (2016)]. In 44th place – «Konti» Group with five factories; 8.1 thousand employees and revenue of 473 million dollars. During the year, the company dropped by one point [Global Top 100 Candy Companies: Part 2. Candy Industry (2019)]. Note the presence of Ukrainian producers in this world ranking, where the best indicators are confectionery industries of only two Western European countries– Germany (13 companies) and Switzerland (6 companies). According to European analysts, the market of Ukrainian confectionery is expected to grow by an average of 2.2% per year until 2025 [Confectionery Ukraine (2020)]. All the above indicates the prospects for the development of the confectionery industry and the need to increase the export potential of Ukrainian enterprises in the international market.

The purpose of this article is to analyze the current state of the Ukraine confectionery industry and determine the prospects for increasing export products based on methods of time series forecasting analysis in post-crisis conditions to overcome the effects of the pandemic. The hypothesis of the study is that the main factors and trends of the past period will remain the same for the period of forecasting confectionary exports, and the forecast will improve the process of substantiating the commodity structure of exports and production planning for foreign market development of the national confectionery industry. Determining the real

state and development dynamics of the confectionery industry based on reliable and trustworthy sources of information, allows substantiating the prospects for the development of export products and market segments in a competitive environment.

2. Literature review

Specialists in the world and in the domestic scientific space have been actively engaged in research of forecasting problems, scenario approach for enterprise development and peculiarities of their planning. Scientists have developed scenarios for global food systems, including the use of quantitative tools of the CGIAR approach to model the global future and strategic forecasting [Brooks and Place (2019)] the systematization of the research based scenario in business and management was carried out [Tiberius *et al.* (2020)]. A number of researchers place their main emphasis on scenario planning and forecasting as management technologies and emphasize the need for empirical research [Millett (2003), Käki *et al.* (2014)]. Emphasis on methods and methodology for developing management scenarios is made by Bishop *et al.* (2007). The problems of the interaction between knowledge management, strategic forecasting and new technologies have been studied by Nascimento *et al.* (2020), economic models used in determining the future of food security [Tétart (2020)]. Researchers pay attention to retrospective forecasting as a tool for overcoming cognitive barriers and expanding the range of opportunities for enterprises in the analysis of future positions [Thorén and Vendel (2019)].

Problems of the confectionery industry development as a whole and its individual specializations are widely covered in the scientific literature. Researchers assess the prospects and opportunities for the development of Ukrainian production and sales of confectionery products, export and import activities of the confectionery industry of Ukraine [Kronikovskiy (2014)]. Gorbunov & Bereza (2019) assessed the innovative development of the national confectionery industry. Problems of competition in the sectorial markets of chocolate producers and the need to maintain the profitability of companies in unstable macroeconomic conditions were considered in the work of Kandrashina *et al.* (2016). Park *et al.* (2020) focused on government support measures for the production of low-sodium and low-sugar products; they consider an important problem of testing the authenticity of cocoa

and chocolate products, the application mechanism of analytical tools in the cocoa production sector. Researchers believe that before sustainable production of high-quality chocolate can be achieved, the negative impact of production on the environment, economy and society must be eliminated [Perez *et al.* (2020)]. In modern confectionery market research, much attention is paid to marketing tools to promote products on the market [Hýdýroðlu (2019)]. Researchers use econometric research methods in investment development of the food and confectionery subsector [Navyashree and Bhat (2020)]. Despite the existing developments in the field of forecasting, its applied principles on the possibility of expanding the export market of confectionery products of Ukrainian producers need further development.

The methodological basis of the mechanism for forecasting the development of industry enterprises in foreign markets are processed and marketing approaches that take into account the specifics of the functioning of domestic production in unstable conditions. The process approach is seen as an approach to the organization and analysis of enterprises in the industry, based on its interconnected business processes [Capitanio *et al.* (2010), Irtyshcheva *et al.* (2020)]. The advantages of this approach are: consumer orientation; focus on results; efficiency in decision-making. In this case, it is necessary to have a development forecast, which will, when outlining the prospects, focus on innovation in the implementation of business processes while increasing the competitiveness of enterprises. Theoretical and methodological developments in the marketing direction were developed by Kotler *et al.* (2010), as the main advantages of which are: focus on innovative quality products, the end result, the availability of customer base. The combination of these approaches in the construction of forecast scenarios allows outlining the important elements of the development mechanism, to determine the expected results and probable processes. Therefore, it is necessary to assess the effectiveness of foreign economic activity of the industry.

To determine the current state of the confectionery industry of Ukraine, forecast the prospects of its potential realization, were used statistical methods of production and sales analysis, distribution of exports by markets (Methodological provisions for the organization of state statistical monitoring of foreign trade in goods, approved

by the State Statistics Committee of 29.12. 2017, No. 354). To determine the development level of the Ukraine confectionery industry, based on quantitative indicators of production, income from sales of products, the methods of statistical trend analysis were used. The time series analysis is the starting point for assessing trends in the consumption of selected foods and the subsequent construction of short-term forecasts. Time series analysis methods can be successfully used to determine trends in the food market [Köppelová and Svatošová (2019)]. Researchers believe that the method of trend analysis of economic indicators (in comparison to different years) also allows analyzing how the processes of intensification of production, socio-demographic status are Mahmoud and Pegels (1990), Nazim and Afthanorhan (2014), Anantha and Sidana (2019). The processing of enterprises economic indicators in the industry was carried out using the application package “Statistics” MS EXCEL. To forecast the development of exports, the calculations of the most important statistical indicators of the dynamics were performed: absolute growth, growth rate, rise rate, the absolute value of 1% growth. This will give a probable forecast for the development of exports of confectionery products. Our confectionery export forecast is based on exponential smoothing. The basic equation looks like this:

$$S(t+1) = S(t)^* (1 - \alpha) + \alpha^* Y(t)$$

where, $S(t)$ is the prediction made at time t ;

$S(t + 1)$ displays the forecast in the time period immediately following the time t .

3. Results and Discussion

Adhering to the main purpose of this study, there is a need to analyze and assess the state of the confectionery industry of Ukraine and the sale of its products on international markets. To determine the prospects for the development of the confectionery market, which includes the production of various types of products, it is appropriate to divide it into sectors: 1) sugar - the group includes caramel candies, toffee, marshmallows, pastilles, oriental sweets, jelly candies, *etc.*; 2) chocolate - bars, chocolate bars; chocolates, *etc.*; 3) flour - cakes, pastries, gingerbread, waffles, biscuits, cookies, *etc.* In statistical information sources there are other combinations that should be combined into three sectors: sugar confectionery; chocolate and

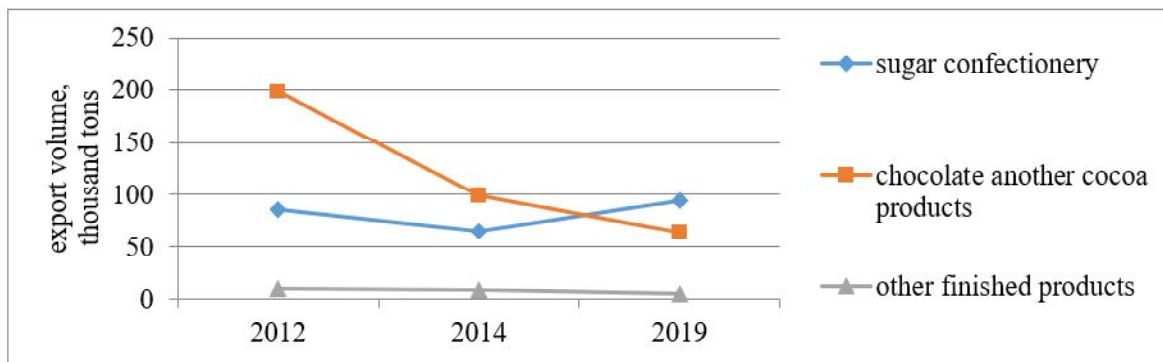


Fig. 1: Exports dynamics of confectionery industry by sector, 2012-2019

Source: Author's own work based on data from the State Statistical Service of Ukraine (2012 - 2019).

other products; bakery and flour confectionery.

In 2019, the volume of production of the confectionery industry of Ukraine is set at 22.472 million UAH, of which almost 31% was sold outside the country, while in 2014 these figures were, respectively, 15.391 million UAH, and 28.5%, respectively. In 2019, the export of sugar confectionery amounted to 94, 4 thousand tons, which is 9.9% more than in 2018 (85.1 thousand tons); chocolate products - respectively 63.9 thousand tons and 63.4 thousand tons, *i.e.* only 0.5 thousand tons more. However, if we compare the volume of modern Ukrainian exports with 2015, we can conclude that there is an increase in production and expansion of borders for domestic exporters, as exports of chocolate, sugar and other confectionery products are gradually changing [Ukraine's foreign trade Statistical yearbook (2019)]. Considering the imports statistics of confectionery products, we can conclude that the opposite trend is taking place: the products volume is declining. The volume of import confectionery to Ukraine in 2019 decreased by 2% in monetary terms or by 30% in real goods. And if in 2014 about 142 thousand tons of confectionery products were imported, in 2019 this figure was 82.5 thousand tons, *i.e.* 58% less Ukraine's foreign trade [Statistical yearbook (2020)]. This may be a manifestation of two factors - the restriction of international trade or the satisfaction of domestic demand for domestic products. The analysis of the confectionery industry state in Ukraine shows significant changes in the structure of the main types of production and the peculiarities of the sale of finished products. In 2019, 94423.3 tons of sugar confectionery (including white chocolate) without cocoa were exported in the amount of 148494.3 thousand dollars; 63930.7 tons of chocolate and other

prepared food products containing cocoa in the amount of 169604.9 thousand dollars; 1788. 2 tons of other finished products in the form of blocks, tiles or loaves, weighing more than 2 kg or in liquid form, in the form of a paste or powder, in granules or other similar form, presented in containers or in primary packaging in the amount of 2864.6 thousand dollars; 103536.4 tons of bakery, flour confectionery, with or without cocoa; wafer plates, empty capsules suitable for use in pharmaceuticals, wafer wafers for sealing, rice paper and similar products in the amount of 173477.5 thousand dollars. The dynamics analysis of confectionery export products by main sector shows a general trend of decline, with the exception of sugar confectionery (Fig. 1).

Imports of confectionery products in the main sectors in 2019 amounted to 15257.2 tons of sugar confectionery in the amount of 55985.5 thousand dollars; 33628.7 tons of chocolate and other prepared foods containing cocoa in the amount of 150405.4 thousand dollars; 1758.7 tons of other finished products in the amount of 6046.1 thousand dollars; 25939.3 tons of bakery, flour confectionery; wafer plates, empty capsules suitable for use in pharmaceuticals, wafer wafers for sealing, rice paper and similar products in the amount of 81698.7 thousand dollars (Fig. 2). Analysis of the imports dynamics of confectionery products 27.8 thousand tons, which is 30.4% more than in 2017 [Analysis of the chocolate market in Ukraine (2019)]. But the figures are still not high. One of the reasons for the reduction of "net" imports can be called the spread in Ukraine of international chocolate companies manufacturing products of foreign brands.

The exports analysis allows us to identify the

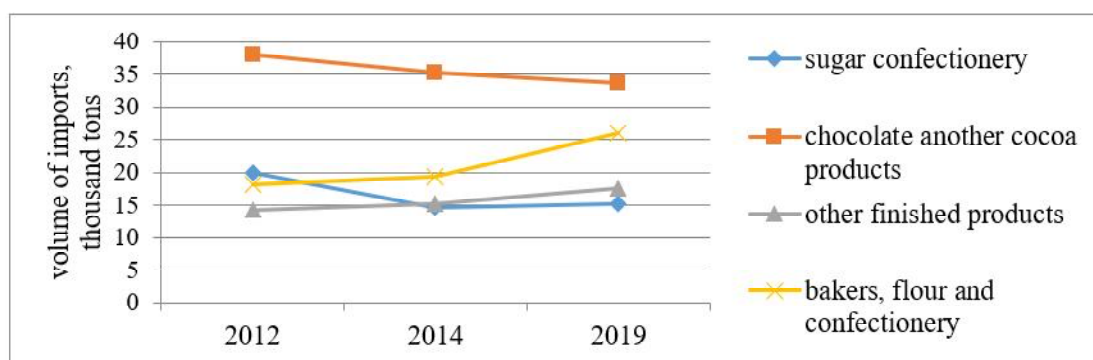


Fig. 2: Imports dynamics of confectionery industry by sector, 2012-2019

Source: Author's own work based on data from the State Statistical Service of Ukraine (2012 - 2019).

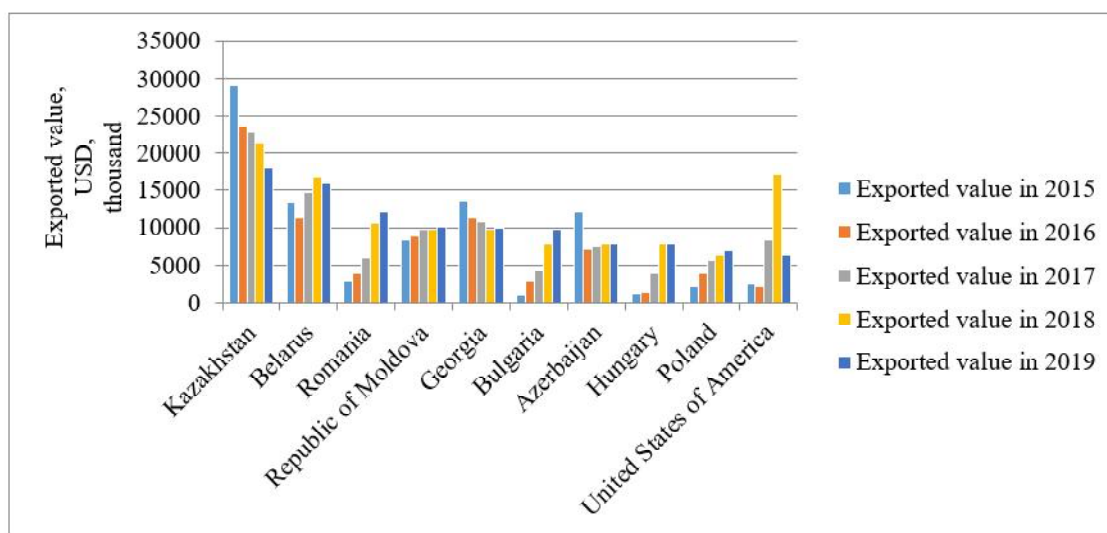


Fig. 3: Dynamics of exports of chocolate and other products containing cocoa in 2015-2019

Source: Trade Map. List of importing markets for a product exported by Ukraine in 2015-2019.

Table 1: Comparison of exports and imports in 2019 of certain types of confectionery products in Ukraine, USD in millions.

No	Products	Export	Import	Balance
1	Sugar confectionery (including white chocolate)	148.5	56.0	92.5
2	Confectionery containing cocoa	204.6	327.5	-122.9
3	Bakery confectionery	173.5	81.7	91.8

Source: Author's own work based on data from the State Statistical Service of Ukraine (2019).

markets of Romania, Belarus, Kazakhstan and Poland, which occupy the largest share of goods among the main customers of confectionery in 2019. The comparison of exports and imports of certain types of confectionery products in Ukraine shows a positive balance for the two main groups of goods, except for confectionery products containing cocoa (Table 1).

The main volume of confectionery supplies to Ukraine traditionally comes from the European Union, which accounts for 94.38% of their total imports. Since the beginning of 2012, the EU has increased exports of

confectionery products and significantly increased its share of the Ukrainian market. There is a noticeable disproportion in domestic foreign trade: almost half of the total imports of these products come from EU countries, and Ukraine supplies only 5% of total exports. As a result, the foreign trade balance with the EU is negative. In addition, Turkey and China (51% and 27% respectively) increased their presence in the Ukrainian confectionery market [Ukrainian Food Export Board Analytics (2019)]. Analysis of the sale of sugar confectionery shows an increase in the volume of these

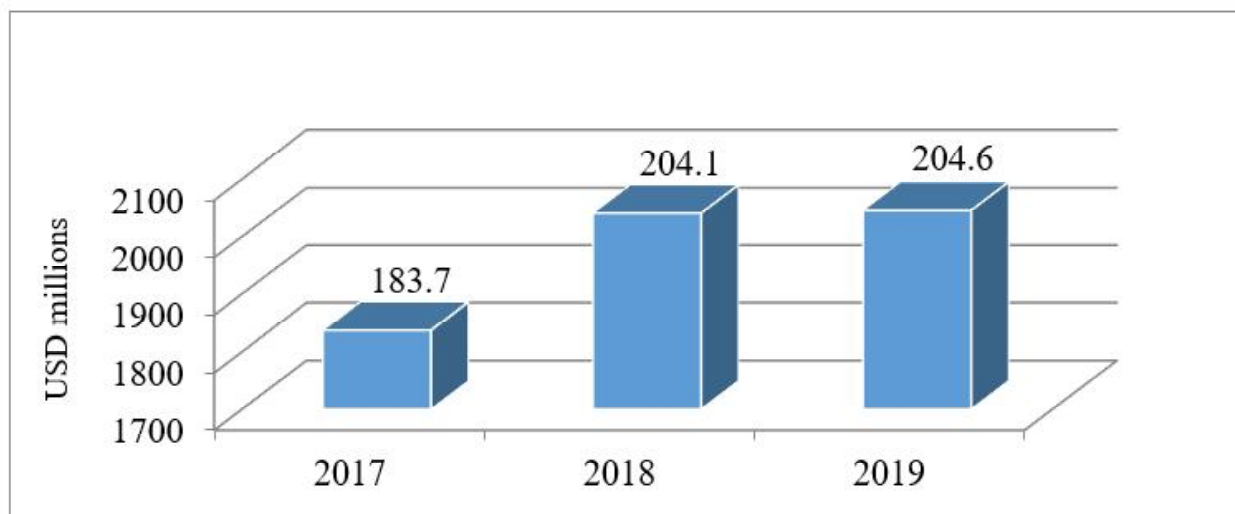


Fig. 4: Export dynamics of confectionery products containing cocoa for 2017- 2019 (USD in millions)
Source: Author's own work based on data from the State Statistical Service of Ukraine (2017 - 2019).

products in 2019 to almost all exporting countries. At the same time, new opportunities have opened up for Ukraine in the confectionery market, as new countries-exporters of sugar confectionery have appeared with large volumes of purchases of goods. Active customers were: Lithuania, China, Tajikistan, Germany, *etc.*, which purchased the relevant products in the amount of more than 1 thousand tons for a total of 46421.2 thousand dollars, which is 31.3% of the total value of exported sugar confectionery [Ukrkondprom Association Statistics (2019)].

As for a separate sector - cocoa products, the total export of chocolate products in 2017 amounted to 60.898 thousand tons with a total value of 150.113 million dollars. The main buyers of Ukrainian chocolate products in recent years were Moldova (0.276 thousand tons), Kazakhstan (0.482 thousand tons), Belarus (0.349 thousand tons), Georgia (0.326 thousand tons), Azerbaijan (0.316 thousand tons), Romania (0.281 thousand tons), Bulgaria (0.229 thousand tons), Poland (0.177 thousand tons), Latvia (0.161 thousand tons), Iraq (0.145 thousand tons). The manufacture of chocolate products in 2018 amounted to 208.2 thousand tons, which is 15% more than in 2017. In 2018, Ukrainian enterprises exported 63,4 thousand tons of chocolate products, i.e. 3.7% more than in 2017. (Key Figs. of the Confectionery Segment in 2018, 2019). The dynamics of revenues from exports of chocolate and cocoa products for 2015-2019, for the main 10 exporting countries are shown in Fig. 3.

Analysis of the sale of bakery, flour confectionery, with or without cocoa; wafer plates, empty capsules suitable for pharmaceutical use, wafer wafers for sealing, rice paper and similar products also indicates the emergence of new exporters of Ukrainian products of this type. Active customers of these products were: Belarus, Turkey, *etc.*, who purchased the relevant products in the amount of more than 1 thousand tons for a total amount of 76134.9 thousand dollars, which is 43.9% of the total value of exported products of this type [Association "Ukrkondprom". Statistics (2019)].

In our opinion, the confectionery industry has significant prospects, because in the world it belongs to the sectors of the economy that are developing dynamically. In addition, it is a fast-growing segment of the consumer market due to the accelerated transformation of demand under the influence of healthy food and safety trends, as well as the industry's ability to adapt and develop to consumer preferences through innovation [Lovkis *et al.* (2020)], which is important in countries with economies in transition, especially because of the focus on the countries of South-Eastern Europe in the context of trade with major trading partners and the focus on future EU membership. The introduction of the latest equipment and production technology in the confectionery industry will help improve product quality and increase its level of competitiveness in both domestic and foreign markets. In general, the dynamics of production of the confectionery industry in Ukraine since 2011 has

Table 2: Chain and baseline indicators of the series dynamics of confectionery products exports containing cocoa for 2017-2019.

Year	Export volume, million USD	Absolute growth		Rise rate		Growth rate		The absolute value of 1% increase
		Chain	basic	Chain	basic	Chain	Basic	
2017	183.7	–	–	100	100	–	–	–
2018	204.1	20.4	20.4	111.11	111.11	11.11	11.11	1.837
2019	204.6	0.5	20.9	100.24	111.38	0.24	11.38	2.041

Source: Author's own work based on data from the State Statistical Service of Ukraine (2017-2019).

decreased significantly for all types of products, which was influenced by both external and internal economic and political factors. The world market shows that recently consumers have begun to prefer dark chocolate due to lower sugar consistency. To forecast the development of foreign market segments of the confectionery industry of Ukraine, based on state statistics for 2017-2019, we will calculate the export dynamics of the largest segment by the structure of foreign exchange earnings from exports, namely confectionery products containing cocoa, including chocolate [Ukraine's foreign trade Statistical yearbook (2020)] (Fig. 4).

Calculations of chain and basic indicators of the series dynamics of sales of confectionery products with cocoa content in foreign markets for 2017-2019 are given in the Table 2. As you can see from the calculations, exports in 2019 compared to 2018 increased by 0.5 million USD or by 0.2%. The maximum increase is observed in 2018 (20.4 million USD). The minimum increase was recorded in 2019 (0.5 million USD). The growth rate shows that the trend is growing, indicating an acceleration in exports. In 2019, compared to 2017, exports increased by 20.9 million USD or by 11.4%.

Let's calculate the average characteristics of the series. The average level of the series y of the dynamics characterizes the typical value of absolute levels. The average level of the interval series is calculated by the formula

$$\bar{y} = \frac{\sum y_i}{n} \quad (1)$$

$$\bar{y} = \frac{592.4}{3} = 197.4$$

The average value of exports from 2017 to 2019 amounted to 197.47 million dollars.

The average rise rate

$$\bar{T}_p = \sqrt[n-1]{\frac{y_n}{y_1}} \quad (2)$$

$$\bar{T}_p = \sqrt[2]{\frac{204.6}{183.7}} = 1.0554$$

On average, the rise rate for the entire growth period of the analyzed indicator is 1.0554.

Average growth rate:

$$\bar{T}_{np} = \bar{T}_p - 1 \quad (3)$$

$$\bar{T}_{np} = 1.0554 - 1 = 0.0554.$$

On average, exports of cocoa-containing confectionery products grew by 5.5% annually.

The average absolute growth is a generalized characteristic of individual absolute increments of series dynamics.

Average absolute growth

$$\bar{dy} = \frac{y_n - y_1}{n - 1} \quad (4)$$

$$\bar{dy} = \frac{204.6 - 183.7}{2} = 10.45$$

Thus, every year the export of products increased annually by 10.45 million USD. Let's forecast the export of confectionery products containing cocoa for the next 3 years, using the rate of absolute growth

$$y(2020) = 204.6 + 10.45 = 215.05 \text{ million USD};$$

$$y(2021) = 215.05 + 10.45 = 225.5 \text{ million USD};$$

$$y(2022) = 225.5 + 10.45 = 235.95 \text{ million USD}.$$

According to calculations, it is forecasted an annual

Table 3: Baseline and forecast indicators of exports of confectionery products containing cocoa (USD in millions).

t	y	St	Formula	(y - S _t) ²
2017	183.7	187.83	(1-0.3)×183.7+0.3×197.47	17.057
2018	204.1	199.219	(1-0.3)×204.1+0.3×187.83	23.824
2019	204.6	202.986	(1-0.3)×204.6+0.3×199.22	2.606
2020	215.05	211.431	(1-0.3)×215.05+0.3×202.99	13.099
2021	225.5	221.279	(1-0.3)×225.5+0.3×211.43	17.815
2022	235.95	231.549	(1-0.3)×235.95+0.3×221.28	19.371
				93.772

Source: Author's own work based on data from the State Statistical Service of Ukraine (2017 - 2019).

increase in exports of confectionery products containing cocoa. Let us supplement our forecast calculations with the method of exponential smoothing [Akram *et al.* (2016)]. The method is that a series dynamics is smoothed by a moving average in which the weights obey the exponential law.

The exponential mean is calculated by the recurrent formula

$$S_t = \alpha \cdot Y_t + (1 - \alpha) S_{t-1} \quad (5)$$

where, S_t is the value of the exponential average at time t , S_{t-1} is the value of the exponential mean at the moment ($t = 1$).

Exponential smoothing can be applied, first of all, at a constant volume of consumption ($\alpha = 0.1 - 0.3$). At higher values ($0.3 - 0.5$) the method is suitable for changing the structure of consumption, for example, taking into account seasonal fluctuations. As S_0 we take the arithmetic mean of the first 3 values of the series of achieved indicators of exports of confectionery products containing cocoa in the period 2017-2019

$$S_0 = (183.7 + 204.1 + 204.6) / 3 = 197.47.$$

The indicators value and formulas for calculations by the method of exponential smoothing are given in the Table 3.

Prediction methods called “smoothing” take into account the effects of function ejection much better than methods that use regression analysis.

We use for the calculation of the equation

$$S(t+1) = S(t) \cdot (1 - \alpha) + \alpha \cdot Y(t) \quad (6)$$

$$S(6+1) = 231.549 \times (1 - 0.3) + 0.3 \times 235.95 = 232.869.$$

Thus, the probable forecast of exports of confectionery products containing cocoa for 2023 is

232.869 million USD.

The standard error is calculated by the formula

$$e_t = \sqrt{\frac{\sum (y_i - S_{i-1})^2}{n-1}} \quad (7)$$

where, $i = (t - 2, t)$

$$e_t = \sqrt{\frac{93.772}{6-1}} = 4.331$$

The moving average method is an improved method of exponential time series smoothing. Exponential smoothing provides a clear idea of the trend and allows you to make predictions. This method is based on the condition that export sales in the next period will be equal to the arithmetic mean of the volume of exports for previous n -periods. The forecast determines the expected options for economic development based on the hypothesis that the main factors and trends of the past period will remain for the forecast period or that you can justify and take into account the direction of their changes in the future. When developing forecasts, the price situation of the world cocoa market and the factors influencing trade liberalization on the structure of exports should be taken into account [Molendowski and Klimczak (2016)]. Thus, forecasting the export of confectionery products containing cocoa by the method of exponential smoothing, allows us to supplement the already calculated indicators, the probable forecast for 2023.

4. Conclusion

The study found that domestic confectionery companies have sufficient potential for successful competition in the foreign market of confectionery. Analysis of export trends for 2017 - 2019 showed that the main segment in the structure of foreign exchange earnings from exports in the market are confectionery

products containing cocoa. For the confectionery industry of Ukraine, new markets of countries-customers of cocoa confectionery have opened with large volumes of purchases of products. Active export markets are: Kazakhstan, Belarus, Romania and Poland. On average, since 2017, exports of chocolate and cocoa products have increased by 5.5% annually. Based on the analysis, it is established that the effectiveness of the export potential of Ukrainian confectionery manufacturers is mainly provided by quality production of chocolate, cocoa products and marketing tools for positioning well-known brands «Roshen», «Konti» and «AVK». In order to provide tools for product forecasting and marketing, methods are proposed that are based on the use of trend analysis of the export dynamics of cocoa confectionery. According to forecast calculations, the annual increase in exports of confectionery products containing cocoa is forecasted. The author's approaches allow to analyze how the processes of intensification of export production and complement modern methods of forecasting the development of the market of food industry enterprises [Köppelová & Svatošová (2019), Anantha & Sidana (2019)]. The application of this technique will help managers to make a forecast of the development of the potential of foreign economic activity of enterprises. The marketing strategy for the development of the market of enterprises in the industry should preserve the principle of food safety and high quality confectionery, providing a wide range of products at a competitive price. The introduction of forecasting methods for the implementation of marketing strategies will allow planning production volumes, increasing export potential, and successfully competing with global confectionery brands in the market in terms of overcoming the crisis of the global pandemic.

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