

## MARKET RESEARCH OF THE UKRAINIAN SWEETS MARKET

### МАРКЕТИНГОВІ ДОСЛІДЖЕННЯ РИНКУ СОЛОДОЦІВ

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*The article conducts a market research of the Ukrainian sweets market. The research used the capabilities of MS Excel software tools and made a forecast of exports and imports of sweets in Ukraine. It has been determined that one of the most important factors affecting the price of confectionery is the dollar exchange rate. Since its fluctuations can lead to an increase or decrease in the price of products. Correlation studies have been carried out and it has been determined that the change in the dollar exchange rate has a small impact on the price of sugar. Swing charts have been built to assess the dynamics of changes in the dollar and sugar prices for the period 2021–2024. Also, current trends in the sweets market have been identified, namely: increased demand for natural products and vegan alternatives; changing tastes, preference for exotic products; digitalization, which makes sweets look Instagrammable; online sales.*

**Keywords:** market research, correlation analysis, Ukrainian sweets market.

*В статті проведено маркетингове дослідження ринку солодоців України. Тобто, визначено основні поняття та принципи, описано мету дослідження, проаналізовано структуру ринку солодоців України, визначено споживчий попит, виявлено аналіз актуальних тенденцій, досліджено конкурентне середовище, та виявлено перспективи розвитку. Зазначено, що маркетингові дослідження є важливим інструментом для успішної стратегії розвитку бізнесу, оскільки вони дозволяють збирати та аналізувати інформацію, необхідну для ефективної взаємодії з аудиторією. При проведенні маркетингових досліджень важливим етапом є збір інформації та прийняття правильних управлінських рішень, в результаті якого є можливість отримати необхідні дані для ефективного розв'язування бізнес завдань. Особливостями маркетингового дослідження є цільова аудиторія та динамічний характер, що є дуже важливим в епоху прогресуючих технологій та частими змінами на ринку. Для проведення маркетингового дослідження використано можливості інструментів програмного засобу MS Excel та виконано прогноз експорт та імпорт солодоців в Україні. Визначено, що одним з найважливіших факторів які впливають на ціну кондитерських виробів є курс долара. Його коливання можуть призвести до збільшення або зменшення ціни на продукцію. Це можуть бути як інгредієнти: цукор, какао-боби, сухофрукти, готові ввезені солодоці, так і вітчизняні виробни. Проведено кореляційних аналіз із використанням пакету аналізу даних у MS Excel, та визначено, що не дуже великий вплив на ціну цукру має зміна курсу долара. Побудовано графіки розмаху, що дозволяють оцінити динаміку зміни курсу долара та цін на цукор за період 2021–2024 рр. Також, визначені сучасні тренди на ринку солодоців, а саме: збільшення попиту на натуральні виробни та веганські альтернативи; зміна смаків, перевага надається екзотичним продуктам; цифровізація, через яку солодоці мають виглядати інстаграмно; онлайн-продажі. Тому, щоб конкурувати на ринку кондитерських виробів в Україні необхідно проводити маркетингові дослідження та включати маркетинг у виробничу та збутову діяльність підприємств.*

**Ключові слова:** маркетингові дослідження, кореляційний аналіз, ринок солодоців України.

**Statement of the problem.** Today, it is important for an enterprise to be able to adapt quickly and correctly to changes, ensure stability in financial and management planning, and meet market requirements in order to be competitive. Marketing research is an important tool for a successful business development strategy, as it allows you to collect and analyze the information necessary for effective interaction with the audience.

One of the main functions of marketing is to conduct research to gather information and make the right management decisions. If the research is properly conducted, the company receives the necessary data to effectively solve business problems. The peculiarities of marketing research are its target audience and dynamic nature, which is very important in our time with advancing technologies and frequent changes in the market.

**Analysis of recent research and publications.** The works of Cluley R., Green Z. and Owen R. state that the changing role of the market researcher in the digital age is a natural result of the rapid evolution of marketing and the availability of large amounts of data. It is important to constantly learn and adapt to the rapidly changing marketing environment in order to use digital technologies for the benefit of your organization and customers [1; 2].

Busca L. and Bertrandias L. have provided a comprehensive framework for marketing research based on a historical analysis of the development of the Internet and the identification of four cultural epochs. It allows us to understand the evolution of the Internet and its impact on consumers and business processes. The main epochs that are distinguished, such as collaboration systems, traditional market systems, co-creation systems, and assumption market systems, reflect important moments in the development of Internet culture [1; 3].

Researcher A. Azoyan notes that SEO website optimization really plays an important role in modern marketing research, especially when it comes to collecting and analyzing data from the Internet. Website optimization helps to improve visibility in search engines, increase traffic, and attract more targeted traffic. This, in turn, makes it possible to obtain more data for further marketing research [1; 4].

Authors M. Oklander, T. Oklander, and O. Yashkina note that online research on the Internet has become very popular in modern marketing for a number of reasons, including accessibility, efficiency, and the ability to quickly process and analyze data [1; 5].

Researchers V. Arestenko and T. Arestenko emphasize that Social Media Marketing (SMM) is an important component of modern marketing strategies. This area of marketing is aimed at using social media platforms such as Facebook, Instagram, Twitter, LinkedIn, YouTube, and others to achieve marketing goals and interact with the audience [1; 6].

Thus, according to the analysis of recent publications, the Internet and digital media have significantly changed the approach to marketing and expanded the possibilities for collecting and analyzing market and consumer data. Therefore, research in the field of marketing and the use of modern Internet technologies is of great importance for practicing marketers and researchers.

**Highlighting previously unresolved parts of the overall problem.** Confectionery products attract a wide range of demographic groups, from children to adults, making this market versatile and interesting to explore. Today, there is no longer any problem with choosing products for every taste, look, quantity and price. As consumer preferences are constantly changing, driven by such influences as flavor innovation, health and culture, we have an opportunity to research the market and identify new trends and preferences. Consumers from all over the world have the opportunity to enjoy a variety of confectionery products, as the sweets market has no geographical restrictions. In order for companies to be competitive in the confectionery market in Ukraine, it is necessary to conduct market research.

Various tools can be used to conduct market research, including the capabilities of MS Excel. Namely, to forecast exports and imports of sweets in Ukraine, to study the correlation between the dollar and sugar prices, and to build swing charts that allow us to assess the dynamics of changes in the dollar and sugar prices for the period 2021–2024.

**Statement of the task.** The purpose of the article is to carry out the first steps of marketing research using modern digital technologies on the example of the Ukrainian sweets market.

**Summary of the main results of the study.** The global confectionery market is full of offers and is growing by 2–3% every year. It is a dynamic and versatile area that is constantly evolving. Therefore, it is necessary to constantly look for new ways to attract the attention of consumers. The largest market share belongs to North America and Europe. Every year the market is growing and expanding, in 2021 it was estimated at \$202.63 billion, and in 2024 it will already reach \$230 billion. This is due to the growing popularity of giving sweets for various holidays, as well as the emergence of sugar-free, vegan, and even medicinal products. For several years in a row, chocolate has been the leading market segment, and it is more often used for snacking or stress relief and mood improvement [7].

The confectionery market is highly concentrated in terms of major producers. Thus, the world's top 10 producers account for the majority of the market (Table 1). The top 100 includes Ukrainian companies producing sweets, such as: "Roshen", "Konti", "Millennium". As of the beginning of 2024, "Roshen" ranks 24th with sales of \$800 million, and "Millennium" ranks 70th with sales of \$225 million [8].

Table 1

**Top 10 companies in the world in 2024**

№	Company name	Sales billion USD	Number of employees, thousand people
1	Mondelēz International	36	91
2	Mars Inc.	22	34
3	Ferrero Group	18.2	41.444
4	The Hershey Company	11.16	21
5	Pladis	10.97	17
6	Nestle SA	9.4	275
7	Meiji Co. Ltd.	7.83	17.3
8	Chocoladefabriken Lindt & Sprungli AG	5.96	14.446
9	Haribo GmbH & Co. K.G.	3.3	7
10	Want Want China Holdings Ltd.	3.22	41.23

Source: developed by the authors based on [9]

The largest sales volume for the first six months of 2024 was made by Mondelēz International (Chicago, Illinois, USA), which represents such well-known brands as: Milka, Toblerone, Oreo, Halls, Belvita, etc.

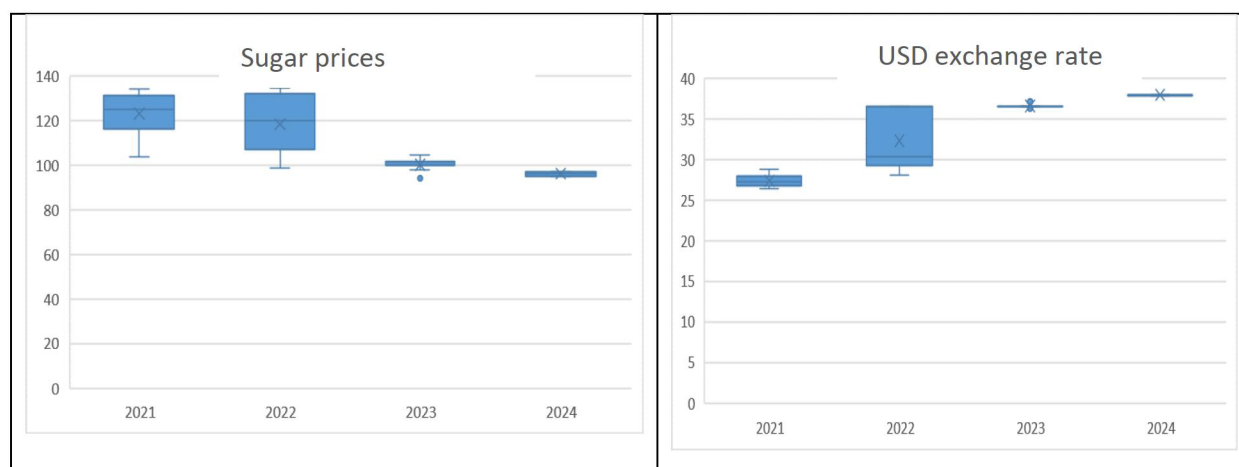
International trade is very developed, which causes large volumes of imports and exports of products. According to the available data, exports of cakes, confectionery, bakery products in 2022 amounted to USD 31,575,914 thousand, and in 2023 approximately USD 40,000,000 thousand. The main exporters of this segment are Canada and Germany with shares of: USD 3,873,295 thousand and USD 3,797,845 thousand, respectively.

Some of Ukraine’s importers in 2022–2023 are: Moldova, Germany and the USA. The total exports of this segment in 2022 amounted to USD 30,023 thousand, in 2023 – USD 37,070 thousand. But recently, there has been a decrease

in exports due to the full-scale invasion of Ukraine by Russia in 2022. The main export segments are: chocolate 30%, candy 25%, biscuits 20% and all other 25% [9].

Most often, Ukraine imports these products from Poland (\$37,147), Romania (\$6660), and Italy (\$5,221). The total value of imports in 2023 is 81,252 thousand dollars. The confectionery market of Ukraine consists of 90% of domestic products and only 10% of imported products. However, imports of this segment significantly exceed exports in our country, as it has become popular to consume exotic products and those with almost no sugar. Imported products are usually more expensive than domestic ones [9].

To conduct the study, we used the capabilities of MS Excel tools and made a forecast of exports and imports in Ukraine. First, we analyzed data for the periods of 2019–2020 and 2021–2022 (Fig. 1).



**Figure 1. Sweets export forecast for 2024**

Source: developed by the authors based on [10]

Exports are projected to reach \$732.8 million, which marks a significant increase compared to previous periods. This forecast value exceeds previous years and indicates a possible significant expansion of the industry in the country. However, there is a low probability that this figure will amount to only \$189.3 million, which indicates possible risks and unpredictability in the dynamics of exports of this sector (Fig. 2).

The projected volume of imports for 2024 is -74.6 million USD. This may be the result of various factors. Given the low probability, it can be assumed that this figure could reach 244.5 million USD. This indicates potential fluctuations in the value of imports and their instability in the future.

One of the most important factors affecting the price of confectionery is the US dollar exchange rate. Its fluctuations can lead to an increase or decrease in the price of products. These can be both ingredients: sugar, cocoa beans, dried fruits, ready-made imported sweets, and domestic products.

Having chosen sugar as one of the main ingredients for the production of sweets and analyzed its interaction with the dollar exchange rate using correlation analysis, we concluded that the relationship is weak, as we obtained a negative correlation. That is, the dollar exchange rate has almost no effect on the price of sugar, and they have little interaction with each other. This may also mean that an increase in the dollar may lead to a slight decrease in the price of sugar, and a decrease in the price of sugar may affect the growth of the exchange rate, as it is an important export commodity for some countries.

For the study, we used the MS Excel data analysis package and obtained descriptive statistics (Table 2).

For the period from 2021 to 2024, the average value of the sugar price was 112.9132, and for the dollar exchange rate it was 32.38943. The standard deviation for the sugar price is 2.275568, indicating that most prices lie within about  $\pm 2.28$  of the mean. A higher standard deviation indicates more significant price fluctuations in the dataset. For the dollar exchange rate, the standard deviation is 0.728246, which indicates that the average dollar exchange rate usually deviates from its mean by about 0.73 hryvnia. A smaller standard deviation indicates a more stable exchange rate. The standard variance for the dollar is 4.489208, which indicates the average dispersion of dollar values around its mean. The lower the dispersion rate, the more stable the currency is. The dollar exchange rate is a proof of this. For the price of sugar, this value is 14.02754, indicating a large dispersion of prices, which indicates its instability.

The use of spreadsheets such as MS Excel and swing charts allows us to estimate the dynamics of changes in the dollar and sugar prices for the period 2021–2024 (Fig. 3).

Thus, in 2022, as a result of the Russian Federation's invasion of Ukraine, there was a sharp rise in sugar prices caused by the general increased demand for food. After this period, sugar prices gradually decreased over the following years and stabilized at a certain level.

And in 2022, the US dollar reached its highest value, which was significantly different from the previous year, with its lowest value equal to the highest in 2021. Over the next two years, from 2023 to 2024, the exchange rate stabilized, although it remained higher than in 2021, confirming a certain stability of the currency markets.

**Conclusions.** The Ukrainian sweets market is very powerful, promising and dynamic. Despite

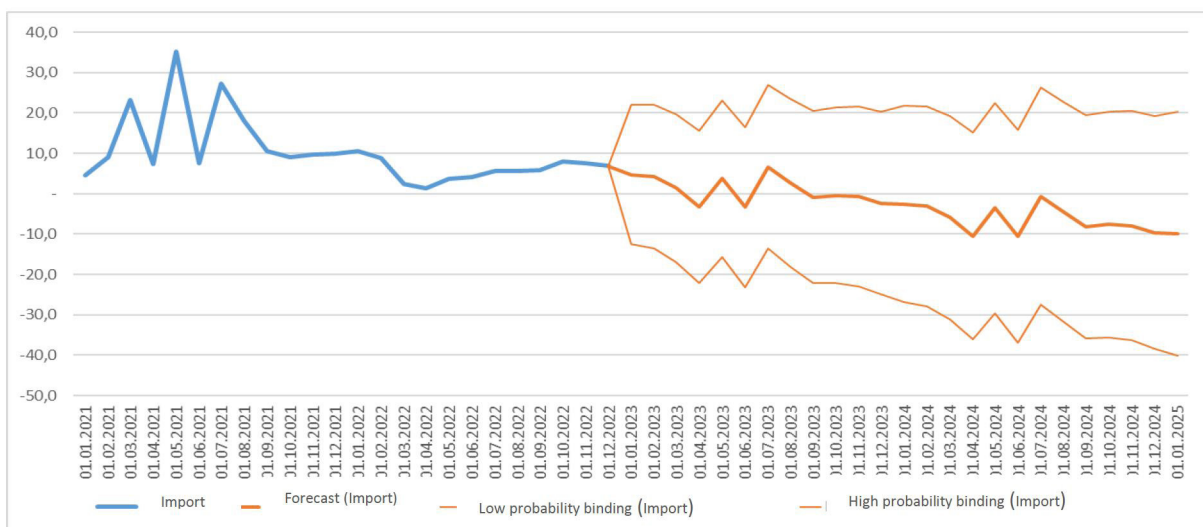


Figure 2. Forecast of sweets imports in 2024

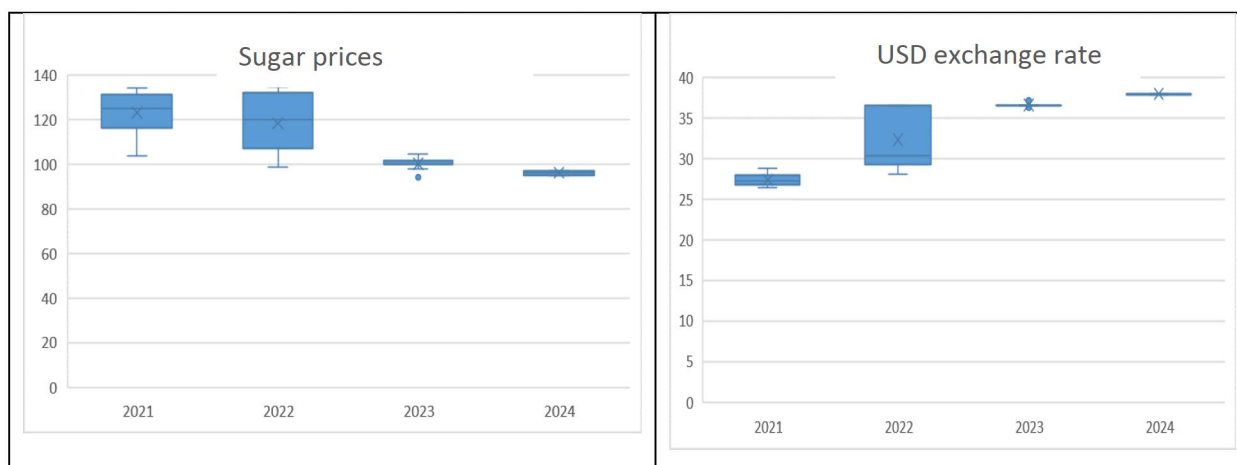
Source: developed by the authors based on [10]

Table 2

**Descriptive statistics on the relationship between the dollar and sugar prices**

Sugar price		USD/UAN exchange rate	
average value	112.9132	average value	32.38943
standard error	2.275568	standard error	0.728246
median	108.25	median	33.82065
fashion	99.8	fashion	36.5686
standard error	14.02754	standard error	4.489208
dispersion	196.772	dispersion	20.15299
excess	-1.55972	excess	-1.94816
asymmetric error	0.321327	asymmetric error	-0.09187
interval	40.2	interval	11.6336
minimum	94.2	minimum	26.3666
maximum	134.4	maximum	38.0002
sum	4290.7	sum	1230.798
account	38	account	38

Source: developed by the authors based on [10]



**Figure 3. Dynamics of changes in sugar prices and USD exchange rate in 2021–2024**

Source: developed by the authors based on [10]

the difficult economic situation, it does not stop functioning and continues to develop. There are more than 750 operating companies, including small shops and giant leaders. They occupy the bulk of the market and provide it with a wide range of products. The top 5 leaders include: Roshen, AVK, Svitoch, Conti, Mondelez Ukraine. They supply sweets not only to our country but also export to other countries (Moldova, Germany, and the United States). Total exports in 2023 amounted to USD 596,355 billion and are increasing every year. The leaders of our country are among the top 100 confectionery companies in the world, and Roshen is among the top 30.

As a result of the online survey, we received information that the most favorite segment among sweets is chocolate products, chosen by more

than half of the respondents. Google Trends provided data showing that chocolate is also the most popular request of Ukrainians, followed by cakes, and that the most influential factor when choosing confectionery is price, followed by brand and packaging.

It was found that the current trends in the sweets market include healthy eating, and the main trends in the development of the sweets market are: demand for natural products and vegan alternatives; changing tastes, with preference given to exotic products; digitalization, which makes sweets look Instagrammable; online sales.

Therefore, in order to compete in the confectionery market in Ukraine, it is necessary to conduct market research and incorporate marketing into the production and sales activities of enterprises.

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