Ministry of Education and Science of Ukraine

Ukrainian-American Concordia University

Department of International Economic Relations, Business & Management

Bachelor's Qualification Work

Price policy of the enterprise in the world market of the LVZ "Khortytsa" example

Bachelor's student of
Field of Study 07 – Management and Administration
Specialty 073 – Management
Educ. program – Management

Alina Varakuta
(*First Name, Last Name)*

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(signature)

Research supervisor

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Doctor of Philosophy
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(signature)

Kyiv – 2022

Abstract:

Prices and pricing policy have always been one of the main components of marketing activities, but they are essential in international management. The essence of pricing policy here is to set such prices for goods and vary them depending on the market situation, to capture a particular share, to ensure the competitiveness of their products in terms of price, and to guarantee the planned volume.

The principle of good in international trade is a clear value to determine that it is fundamentally unsustainable. They are stocks in which the global economy is, market conditions, competitors, intermediaries and buyers, currency exchange rate fluctuations, and volatility. Pricing in the global economy is different from price creation on the domestic market, it has its characteristics, factors and conditions that affect price creation in global trade. Therefore, due to untable world situation asociated s pandemics, the study topic is relevant and timely.

Keywords: pricing, policy, rate fluctuations, import, export.

Ціни і цінова політика завжди є однією із головних складових маркетингової діяльності, але особливе значення вони набувають в міжнародному менеджменті. Суть цінової політики тут полягає в тому, щоб встановлювати на товари такі ціни і так варіювати ними в залежності від положення на ринку, щоб опанувати його певною часткою, забезпечити конкурентоспроможність своїх товарів за ціновими показниками, а також гарантувати намічений обсяг.

Встановити в міжнародній торгівлі ціну товару складно тому, що вона – величина принципово нестійка. На неї впливають цикл, в якому знаходиться світова економіка; кон’юнктура ринку; конкуренти; посередники і покупці; змінні курси обміну валют, пандемія. Ціноутворення в світовій економіці відрізняється від утворення ціни на

внутрішньому ринку, воно має свої особливості, чинники та умови, які впливають на ціноутворення в світовій торгівлі. Тому, у зв’язку із нестабільною світовою ситуацією пов’язаною із пандемією, розгляд теми дипломного дослідження є актуальним і своєчасним.

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Faculty of management and business
Department of international economic relations, business and management

Educational level: **bachelor degree**
Specialty: 073 "Management"
Educational Program "Management"

APPROVED
Head of Department _____

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"____" _____202___

TASK
FOR BACHELOR'S QUALIFICATION WORK

_ **Alina Varakuta**

(Name, Surname)

1. **Topic of the work**

Price policy of the enterprise in the world market

Supervisor of the work: Lesya Leshchii, Ph.D., Associate professor

(surname, name, degree, academic rank)

Which approved by Order of University from ***"22" December 2022 №22-12/2022- 3c***
2. Deadline for bachelor's qualification work submission "***16" May 2022***
3. Data-out to the bachelor's qualification work
Distillery "Khortytsa": information about the activities of this company in the form of financial statements and other data

4. Contents of the explanatory note (list of issues to be developed)

- to consider the essence and role of enterprise pricing policy;
- identify the basic principles and objectives of pricing policy of the enterprise;
- investigate peculiarities of price formation on the international market;
- give a general description of Distillery "Khortytsa
- analyze foreign economic activity of the enterprise;

- to assess pricing policy of LVZ "Khortytsa" on condition of entry to the market of Poland;
- to develop a marketing pricing strategy of LVZ "Khortytsa" on condition of entering the market of Poland;
- determine the efficiency of marketing pricing strategy of the distillery Khortytsa.

5. List of graphic material (with exact indication of any mandatory drawings)

The work includes 5 figures and 26 tables

6. Consultants for parts of the work

Part of the project	Surname, name, position	Signature, date	
		Given	Accepted
1	Approval of the topic		
2	Discussion of work design		
3	The content of the main sections		
4	Discussion of statistical data		
5	Consultation on the presentation		
6	Final consultation before the defense		

7. Date of issue of the assignment

Time Schedule

№	The title of the parts of the bachelor's qualification work	Deadlines	Notes
1.	I chapter	*14.02-13.03.2022*	In time
2.	II chapter	*14.03-10.04.2022*	In time
3.	III chapter	*11.04-24.04.2022*	In time
4.	Introduction, conclusions, summary	*25.04 – 01.05.2022*	In time
5.	Pre-defense	*06.06.2022*	In time

Student_____
(signature)

Supervisor Lesya Leshchii_____

Conclusions: The student worked from the approval of the topic to the preliminary defense, taking into account all the comments of the supervisor. During this time, many edits and comments were made to the work, which allowed to give it a proper look. The student was interested in a good result and was interested in researching her topic.
The topic of the work is relevant and deserves detailed study.
In general, the work is done at the proper level and deserves a high grade.

Supervisor Lesya Leshchii
(signature)

CONTEXT

INTRODUCTION

Relevance of the topic. Prices and pricing policy have always been one of the main components of marketing activities, but they are essential in international management. The essence of pricing policy here is to set such prices for goods and vary them depending on the market situation, to capture a particular share, to ensure the competitiveness of their products in terms of price, and to guarantee the planned volume.

The principle of good in international trade is a clear value to determine that it is fundamentally unsustainable. They are stocks in which the global economy is, market conditions, competitors, intermediaries and buyers, currency exchange rate fluctuations, and volatility. Pricing in the global economy is different from price creation on the domestic market, it has its characteristics, factors and conditions that affect price creation in global trade. Therefore, due to untable world situation asociated s pandemics, the study topic is relevant and timely.

Subsequent scholars get an effort to identify methods: S.I. Dugin and G.O. Kramarenko. Dugina, V.L. Korinev, G.O. Kramarenko, V.G. Kudlay, Y.V. Litvinenko, M.A. Oklander, A.F. Pavlenko and others. According to most domestic and foreign economists, the essence of marketing orientation of price formation process lees in the first priority to meet the needs and demands of consumers.

The point of this paper: The objective of this thesis is to conduct a comprehensive and thorough investigation of pricing methods in the world market. On the basis of the objective, the following tasks are outlined:

to consider the essence and role of enterprise pricing policy;

identify the basic principles and objectives of pricing policy of the enterprise;

investigate peculiarities of price formation on the international market;

give a general description of Distillery "Khortytsa

analyze foreign economic activity of the enterprise;

to assess pricing policy of LVZ "Khortytsa" on condition of entry to the market of Poland;

to develop a marketing pricing strategy of LVZ "Khortytsa" on condition of entering the market of Poland;

determine the efficiency of marketing pricing strategy of the distillery Khortytsa.

Object the study is about global market pricing processes.

Subject research - global market pricing methodology.

Methodological The theoretical provisions of scientific works of Ukrainian and foreign scientists devoted to the problems of pricing methodology in the global market and the peculiarities of pricing policy formation and price level determination became the basis of the study.

The methodological basis of the study combines such methods of scientific knowledge as cognitive method, analytical methods of classification and grouping. Classification and grouping were used to specify thematic and typological features of pricing, how to ensure the competitiveness of their goods in terms of price indicators, as well as to guarantee the intended volume.

Structure of the work. The thesis consists of an introduction, three chapters, a conclusion and a list of references (40 sources). The total number of pages is 60.

CHAPTER 1. THEORETICAL FRAMEWORK FOR PRICING POLICY IN THE INTERNATIONAL MARKET

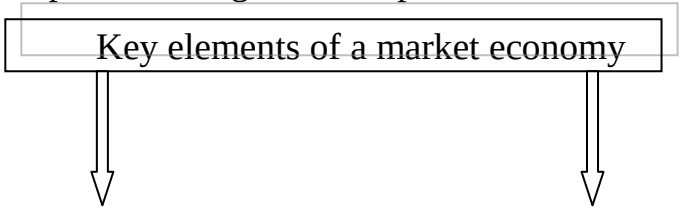
1.1 The essence and role of a company's pricing policy

In a market economy, the market success of a commercial enterprise depends on many factors, among which the optimal pricing policy stands out. Pricing as a basic element of enterprise policy, oriented on the state and prospects of the market, specifics and needs of consumers, should be based on a systematic strategic approach, directly connected with the policy of product positioning and other components of the marketing complex. The complexity of pricing lies in the fact that price is a conjunctural category, it is significantly influenced by political, economic, psychological and social factors: prices as economic tools are used to solve economic and political tasks of society development at all stages of expanded production; prices determine all basic proportions in the economy: being an element of economic relations between production and consumption; prices influence the formation of consumer demand and structure of population's expenses.

Any field of entrepreneurial activity (creation of material goods, provision of services) is associated with price formation, the implementation of the main objectives of the company depends on the value and feasibility of which: profitability, competitiveness, size of sales, profit [2].

Price and pricing are the key elements of a market economy (fig. 1.1).

It has been established that there are several interpretations of price as an economic category, including: 1) price is a monetary expression of the value of goods. This means that the price is based on the cost of labour to produce a good; 2) value is the monetary expression of the value that can satisfy a particular need of the consumer. In other words, the price is the sum of all expenses of the buyer directly or indirectly related to the purchase of goods [11, p. 37].



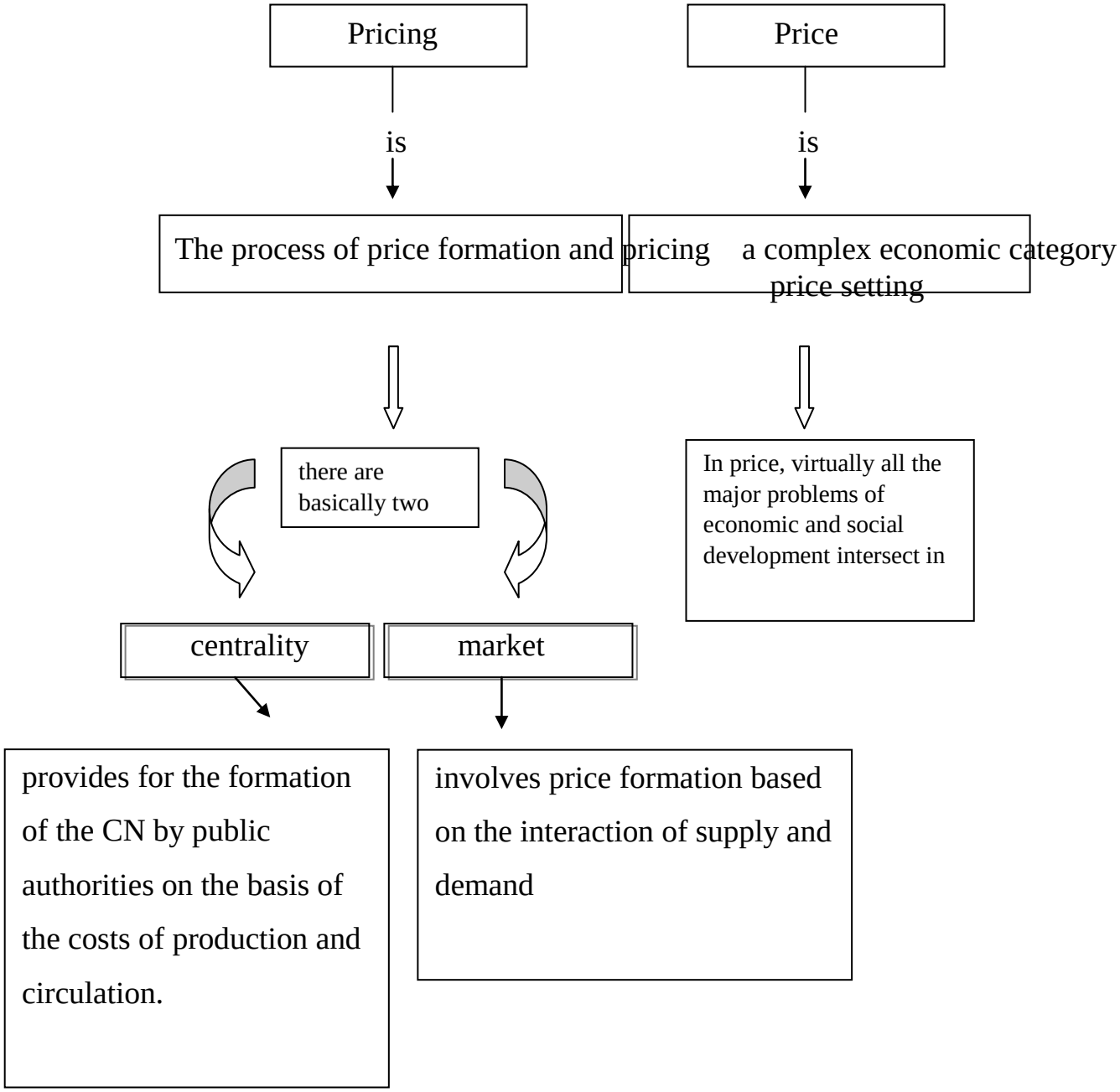


Figure 1.1. Price and pricing as key elements of a market economy

Thus there are two main theories of price. According to one theory, price is the value of a commodity and therefore should be determined using a cost-based approach. The other theory holds that the price of a good is the amount of money a buyer is willing to pay for a good of a certain utility. These theories of price lead to two approaches to price formation (Figure 1.2).

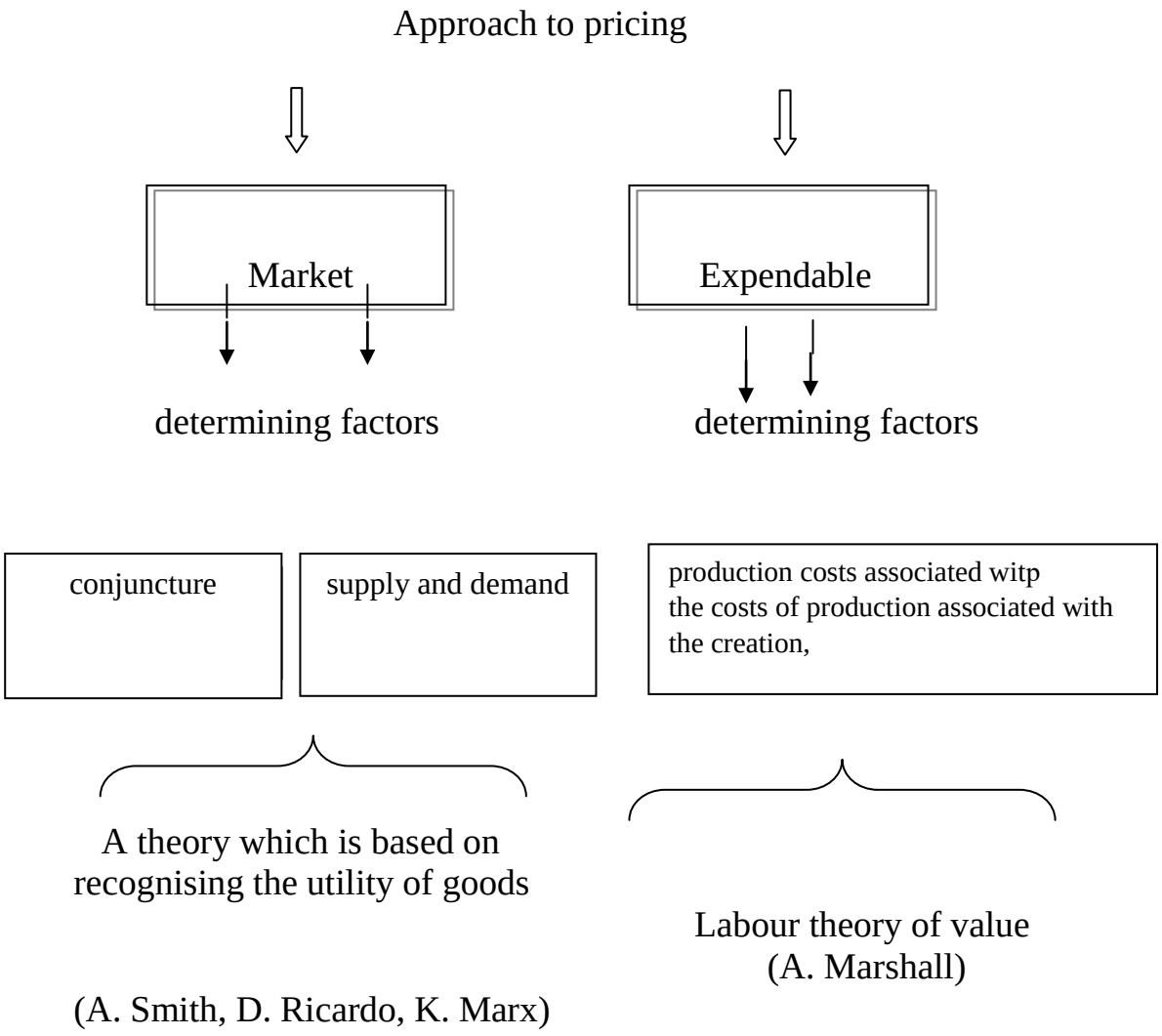


Figure 1.2. Approaches to price formation [21, p. 54]

According to the labour theory of value, which began in the writings of W. Peguy, A. Smith, and D. Ricardo and was later developed by K. Marx, value is determined by the labour inputs to produce a commodity, i.e. it has a labour nature (Figure 1.3).

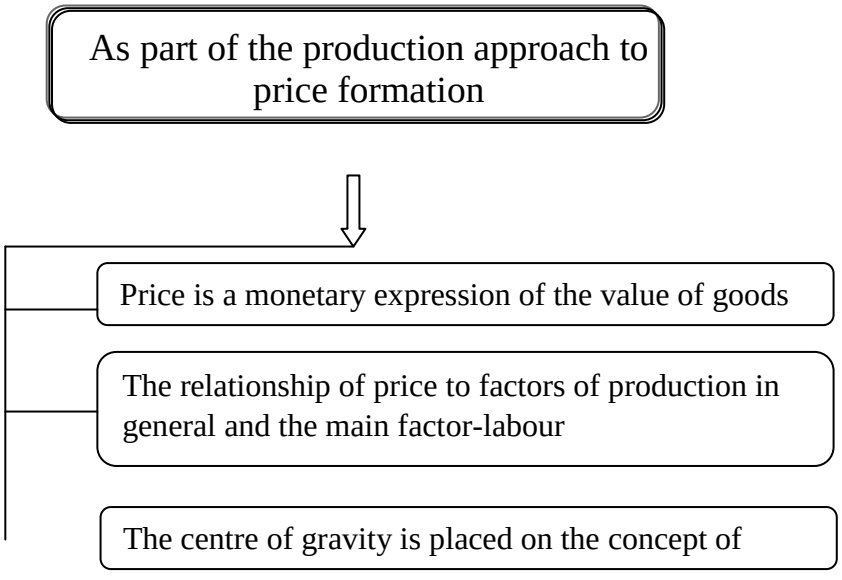


Figure 1.3. Determinants of the production approach to price formation [4].

Consequently, price is an economic category that constitutes the monetary expression of the value of a service or product, a commodity.

1.2 Basic principles and objectives of the pricing policy

To determine the pricing policy of a company in the international market, both the general requirements for a company's pricing policy in the current market economy and the specifics of the company's business should be taken into account.

It is also worth noting that a company's pricing policy is based on certain principles, such as:

1. Conformity of directions of the price policy to directions of the enterprise as a whole.

2. Taking into account market conditions for services and changes taking place.

3. Taking into account the sales channels, the form of sales for consumers.

4. Conformity of the pricing policy with the degree of novelty for the consumer.

5. Consideration of various external factors that do not depend on the enterprise [32, p. 109].

The choice of the pricing policy of the enterprise implies a comprehensive justification. For this purpose it is necessary to take into account all the constituent elements that form the pricing policy. In a market economy, the choice of pricing policy depends on the market model, product life cycle, company objectives, factors affecting the price level.

Consequently, pricing policy is a consumer-oriented activity of the company, based on the use of a set of measures for setting the level of prices, discounts, surcharges, terms of payment for services, price management and control in order to meet the needs of the consumer and the interests of the producer, as a consequence of making a profit.

The process of price calculation is a logical sequence of six steps: setting the objectives of pricing, determining the demand for products, evaluation of business costs, price analysis of competitors, the choice of pricing method and setting the final price. At the same time, the most important are the elaboration of various approaches to defining the economic essence of the concept of "pricing policy", which allowed the author to present it as the enterprise's ability to correctly assess the market situation, feel the effects of decisions to set prices for products and competitors' responses to it, in time to respond to changes. environment and find such solutions that will be perceived by consumers and help the enterprise achieve its goals [28, p. 119].

The main elements of pricing policy are price calculation, a system of discounts and surcharges used by the enterprise to achieve its marketing objectives. At the same time, it is based on the appropriate pricing strategy and pricing tactics. In view of this, the author's vision of the formation and implementation of the pricing policy of the enterprise is proposed (fig. 1.4).

At the initial stage of determining the price of a product, it is advisable to use direct pricing methods. These methods can be used for new products as well as for products already on the market. The choice of method depends on the type of product, the current market situation, and the market information available to the manufacturer. The use of these methods is characteristic of pricing, i.e.

The price determined in this way is adjusted by the manufacturer in accordance with the objectives of the enterprise, taking into account public policy, the actions of competitors, consumer reactions, the behavior of intermediaries, the geography of sales, consistent with the product, marketing and communication policy of the enterprise. Such adjustments may apply to all products of the enterprise, individual product groups or individual products. This is done by means of methods of expert evaluations, parametric methods and methods of forecasting. It is within the scope ofthe pricing strategy that these methods should be used.

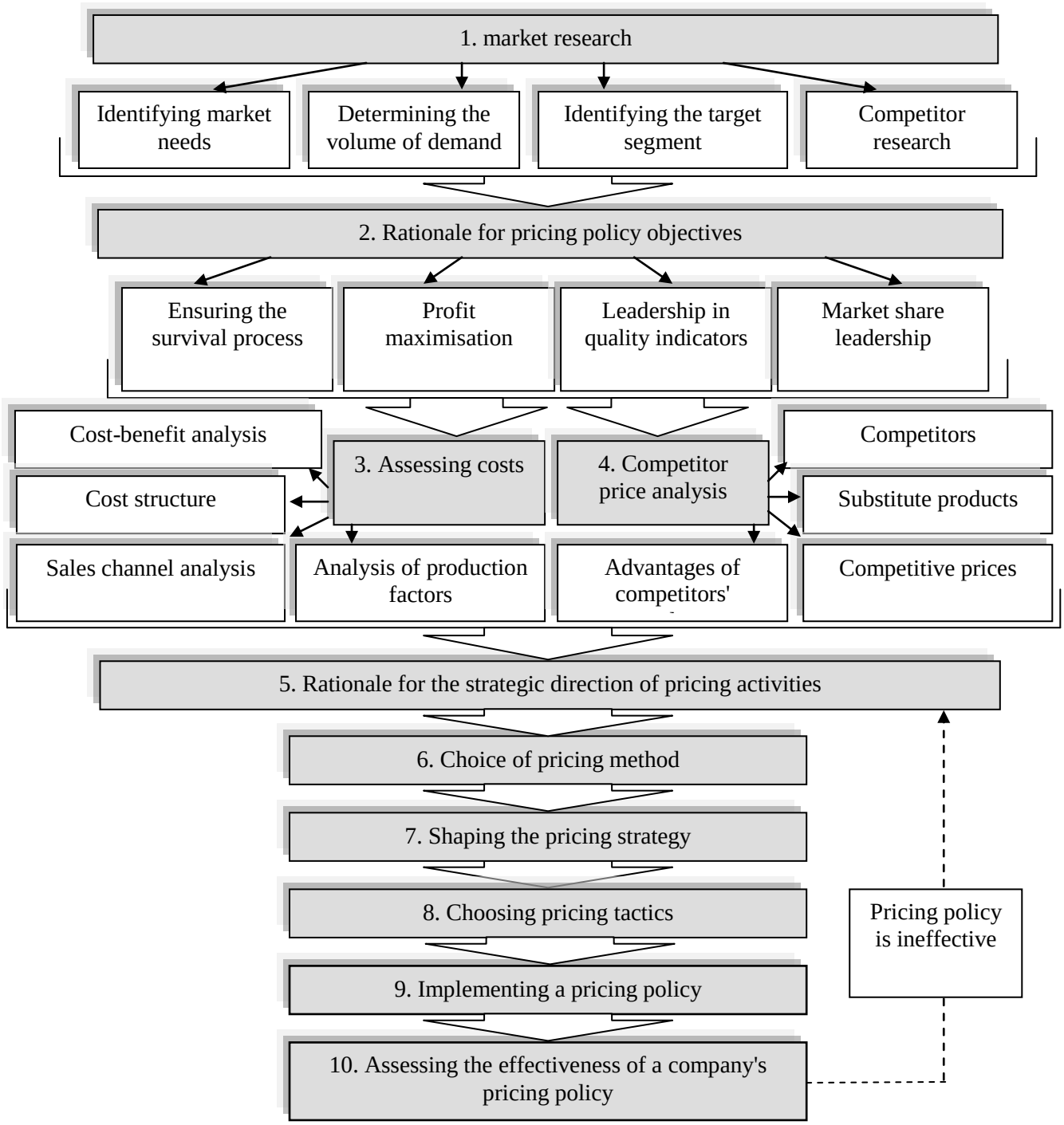


Figure 1.4. Sequence of formation and implementation of the company's pricing policy [4, p. 202]

Indirect pricing methods are used to implement more specific goals of the company or a quick response to market changes. These methods can be applied to

previously established prices. Therefore, it is advisable to use them as measures of pricing tactics.

A study of the literature shows that, historically, the cost-based approach to pricing was the first to be proposed, based on the ideas of cost-based price theories. However, cost-based pricing methods do not reflect or take into account all the factors affecting price in a market economy. Later, the value approach was proposed, which is based on determining the price through the consumer's subjective perception of the utility of the commodity. The evolution of these classical approaches to pricing created the theoretical foundations of modern pricing, the systemic integration of which with the marketing concept was embodied in the marketing approach to price formation [13].

The marketing approach to pricing implies price setting on the basis of producer costs, product utility and the current market situation. Different scientists have a differentiated approach to the specification of marketing pricing methods. Consequently, some authors describe a detailed list of these methods, while others, on the contrary, group them in a generalised way.

However, the main modern pricing methods are based on a set of:

cost-based methods built on the consideration of actual costs of production and sale of products [23];

market-oriented methods focused on consumers and competition [22];

parametric methods taking into account the technical and economic characteristics of the product in the price [28, p. 198].

Consequently, in the formation of pricing policy it is important to determine the extent of its influence on the economic activity of the enterprise, taking into account not only the necessary correspondence between different marketing objectives, but also the limitations set by the market. Pricing policy should be considered only in connection with the objectives set by the enterprise and based on the principles of price formation in the market conditions of economic development.

1.3 Pricing features in the international market

In the last few decades, an important role in the pricing process, especially in global trade, has been played by ancillary services provided by the producer and supplier of any commodity to the importer or end-user. We are talking about common terms of supply: maintenance, warranty repair, other specific types of services related to the promotion, sale and use of goods [26]. This aspect is especially important in modern conditions, in the period of development of high technology, complication of machinery and equipment. There are examples when the price of services in the export of equipment and machinery made up 60% of the cost of delivery.

The development of science and technology, while influencing the improvement of qualitative characteristics of the goods, affects world prices. The introduction of new technologies improves labour productivity, production efficiency, and reduces labour costs.

Under conditions of scientific and technological progress, the value increases in absolute terms for virtually all product groups. However, taking into account the useful effect (e.g., increased speed, reliability, etc.) the relative value of the product, and therefore its price for the consumer decreases [33, p.90].

The analysis of prices should also take into account the movement of the economic cycle, which has certain specifics in the sphere of international economic relations. Yes, in the stage of depression, prices usually do not increase. And vice versa, in the stage of recovery due to the excess of demand over supply, prices rise.

It should be noted that the dynamics of price changes are different depending on the type of goods and groups. For example, when the conjuncture changes, the prices of almost all types of raw materials change most sharply and quickly, the reaction of producers and suppliers of semi-finished products is slower, and the "price reaction" of products is even weaker.

In the international price formation there are clearly two major commodity groups with somewhat conventional designations:

primary commodities

manufactured goods [26].

The first group includes energy, minerals and agricultural raw materials, as well as some foodstuffs, forest products and agricultural fertilizers.

The second group includes almost all other commodities, dominated by manufacturing products.

The metals group occupies a somewhat special position. These products combine features of both primary products and manufactured goods. In international statistics it is accounted separately, but as a rule it is considered as raw materials for production of goods of a higher degree of processing [21, p. 7].

It is believed that pricing is a fairly universal process, but it should be noted a number of features that fundamentally distinguish this sphere from the national economy, which is reflected in the nature of pricing and prices formed in this environment. These features stem from the specifics of the global economy and the international business operating in it. In addition to such common features that distinguish the international economic environment from the national one, such as:

a greater number of participants in foreign economic transactions from different countries;

a wide variety and high dynamism of market structures;

Different and often changing trade and political regimes of individual countries and their international groupings, etc. [33, c. 91].

From the perspective of pricing three most important features should be highlighted.

The first feature is the absence in the international system of systemic price control and related state regulation of prices. Price formation within the national economy is subordinated to the requirements of the social production process of a given country and is the result not only of the free play of market forces, but is also

influenced by state economic policy and the corresponding forms and methods of state regulation.

In contrast, pricing in global trade and international business as a whole does not bear such a burden and is therefore characterised by a certain fragmentation and incompleteness.

Suffice it to note the fact that international agreements are mainly made on the level of wholesale turnover, as a rule, not touching retail turnover. Therefore the prices in this sphere do not act as any system formed on the basis of final demand for the goods, providing reproduction process, but serving fragments of needs of foreign economic sectors of national economies of separate countries. Therefore, these prices are not subject to regulation from the perspective of positive dynamics of economic development.

This does not mean that prices in international business are not regulated at all. No, they can be regulated, often even more than in the domestic markets of individual states. But this regulation has a fundamentally different character.

In the international environment, there are no special bodies monitoring inflation rates, price and income correspondence, the dynamics of money emission and other indicators in order to control them and take measures in case they go beyond any acceptable limits, as it is the case in national economies.

National economies usually operate within a single legal framework for a given country, have a single currency system, and are subject to a common vector of economic development management determined by the national government. In the global economy, these features are usually absent, and we can only note some trends towards their formation under the influence of globalisation processes.

Therefore, we can say that in the international environment prices in general - their levels, dynamics and ratios - are formed in a non-systematic way and are mainly influenced by large monopolistic companies, mainly transnational (TNCs), as well as firms and countries, generally. The following are the main factors affecting the development of the market in the region.

The second important feature of the international pricing sphere is the influence on prices of the international division of labour on the production and marketing of a given commodity. For example, whether a given product is the result of specialised export production or is exported to foreign markets as an excess of domestic production over national needs (as, for example, is the case with a number of food products - wheat, meat, etc.) - the market strategy of exporters in these cases will differ significantly and is bound to be reflected in prices, their level, dynamics and ratios.

The third feature of pricing in international business is the absence of a currency monopoly and therefore the presence of a multi-currency environment, and therefore a more significant role of the currency factor in the formation of prices than exists within national economic systems, which significantly complicates the work of firms and enterprises.

In summary, it should be noted that when analysing processes related to price formation in world commodity markets, it is necessary to carefully consider all factors influencing price formation, both general and applied. Prices determine which costs of producers will be recovered after the sale of goods, which will not, what level of income, profit and where resources will be directed in the future, whether there will be incentives for further expansion of foreign economic activity (FEA).

CHAPTER 2. ANALYSIS OF PRICING POLICY OF THE HORTICA BREWERY ON TERMS OF ENTRY TO THE POLISH MARKET

2.1 General characteristics of the Khortytsa distillery

Global Spirits is the world leader in alcohol production and Eastern Europe's largest international alcohol holding company. The holding's structure includes the largest production sites of the Khortytsa and Odessa Cognac Plants, equipped with high-tech equipment from world leaders. It also includes a distribution company UDC. Its portfolio includes vodka, cognac and wine brands. Global Spirits products are exported to more than 87 countries worldwide. Eugene Chernyak manages the holding. The central office is located in New York (USA).

The Khortytsa Distillery is a leading distillery. The opening of the distillery "Khortytsa" became an event in the distillery industry. The first products came off the conveyer line in December 2003, exactly in one year after the start of construction. The factory was created from scratch, based on a unique project, at a carefully chosen site.

The production capacity of the distillery Khortytsa allows releasing 16 bottles of vodka every second. Average conveyor speed - 30 m/min. The distillery "Khortytsa" has over a hundred different formulations for the production of alcoholic beverages. Total volume of distillery storage is 1000 m3, 100 000 dal or 1 000 000 litres.

Technological complete set of the factory was made under the motto: "The best factory - the best equipment! Distillery "Khortytsa" is equipped by equipment of world leaders of technological support of food industry enterprises. These are engineering systems REHAU, pumps GRUNDFOS, loaders TOYOTA, etc.

ITAL PROJECT's highly reliable filling lines ensure the accuracy of every operation: from careful dosing and corking to quality labelling and date marking.

The production laboratory is responsible for monitoring all production processes and checking the quality of raw materials, semi-finished and finished products. It is equipped with the most modern equipment and reagents. The best specialists of branch work here.

The main treasure of the enterprise is people. It is thanks to the high-class staff, the plant is a leader in the industry. By the way, the average age of the company employees is 28 years. This underlines the enormous potential of the enterprise and makes it possible to look into the future.

The most advanced world technologies that exist in the liquor industry, are used at the distillery "Khortytsa. This ensures high quality of products.

Assortment of marketable output of distillery Khortytsa consists of 7 groups: vodka, nastoyka, cognac, wine, sparkling wine, vermouth, brandy.

General characteristics of the Distillery Khortytsa are shown in Table 2.1.

Table 2.1

General information about the company

	Signs	Characteristics
1	Name of enterprise	Distillery "Khortytsa".
2	Location (registered office)	56, Khortitsa Island, Voznesenovskiy district, Zaporozhye region, Zaporozhye, 69017
3	Date of establishment	2003 y.
4	Form of ownership	private
5	Organizational-legal form	Limited liability company

Table continued 2.1

6	Main area of activity	Production of distilled alcoholic beverages

7	Amount of assets, UAH th.	141,475 thousand UAH.
7.1	incl. share of non-current assets (%)	18,09%
7.2	Share of current assets (%)	81,9%
8	Number of employees	288
9	Type of organisational structure	Linear

Stakeholders play an important role in shaping the economic activity of the enterprise under study.

Let us analyse the stakeholders in Khortytsa Distillery presented in Table 2.2.

Table 2.2

Analytical profile of the enterprise's stakeholders

Stakeholders	Interests/needs	Stakeholder power rank (1 - less weighty)	Stakeholder engagement rank (1 - less weighty)
Suppliers	Selling products at the best possible price in line with the sales plan	7	8
Customers	Satisfy own needs with company products	9	7
Competitors	To obtain suitable sales channels for the promotion of products	1	2
Banks	Providing services for the company (opening a current account for the company and cards for employees, international transactions)	4	4

Continuation of table 2.2

MEDIA	Creating a positive image of the company	5	6
Public authorities	To meet the needs of the state by ensuring real national income, meeting the requirements of state standards.	2	1
Director	Maximise company profits, organise efficient company operations	8	10

Employees	Obtaining jobs, decent wages, providing all the necessary working conditions.	6	9
Supervisory and regulatory authorities	Conducting business in accordance with the law	3	3
Owner	Making a profit and expanding the business	10	5

Having carried out the analysis, we can say that the main stakeholders of the company are: suppliers, employees, customers (including counterparties), director.

The company uses its own fleet of trucks, which fully meet the company's needs for transportation of products. The company uses a modern centralized logistic monitoring system, which ensures real-time control over the activity of vehicles, prompt response and support.

The main structural subdivisions of the Khortytsa distillery are:

- production department;
- marketing department;
- technology department;
- planning and economic department;
- accounting department;
- finance department;
- sales department;
- MED.

The Khortytsa distillery, in order to carry out its business activities, chooses a certain organizational scheme characterized by a certain set of functional areas required for the sale of alcoholic beverages. The functions of this organisation are divided into basic and auxiliary ones.

2.2 Analysis of a company's foreign trade activities

The use of innovative technological and logistical solutions helps Khortytsa distillery to remain a leader in vodka sales on the international market. This is evidenced by the following explanation of product consumption by different countries of the world (Table 2.3).

Geographical structure of Khortytsa vodka exports in 2021, % Table 2.3

Country	Quantity		Cost (according to the € exchange rate)	
	thousands dal. %	%	thousands UAH	%
Belarus	3596,727	29,76	4783646,9	29,32
Poland	3300,225	27,30	4455303,7	27,31
Moldova	2711,66	22,43	3606507,8	22,10
Bulgaria	2478,965	20,51	3470551	21,27
Total:	12087,58	100	16316009	100

Consequently, the data given in Table 2.3 makes it clear that the demand and customer base for this company's products and range of vodka products is significant, which, of course, has a positive impact on the development of Khortytsa Vodka. The main

export countries of the Khortytsa distillery are shown

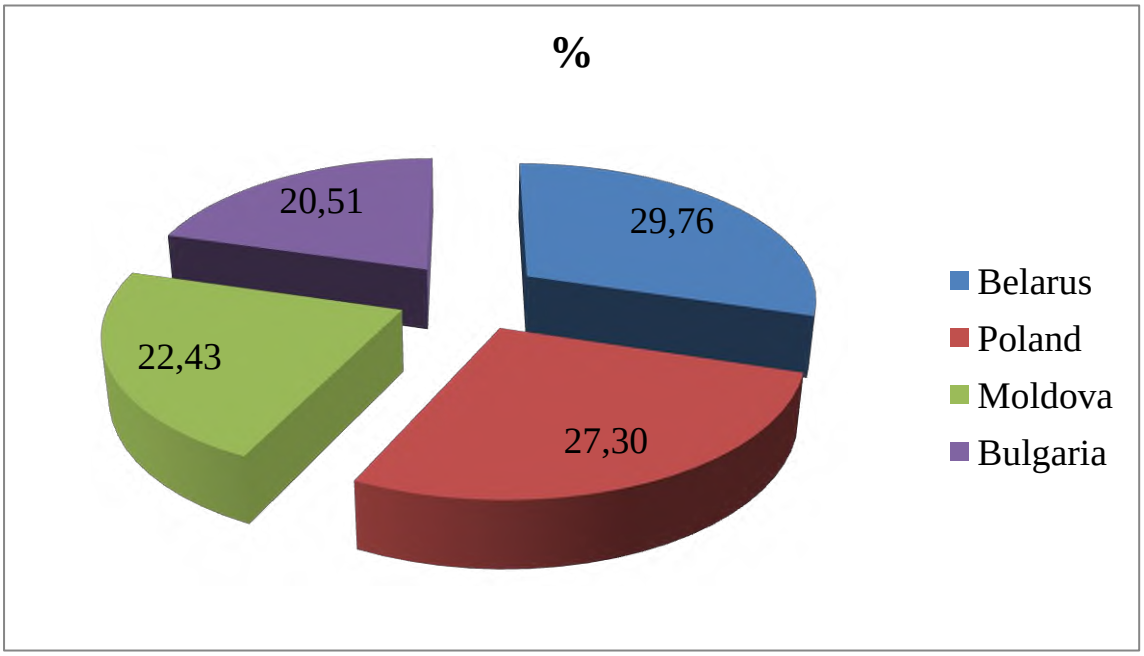


Figure 2.1. Main export countries of the Khortytsa distillery, %

As can be seen from Figure 2.1, the main exporting countries and partners of VOC Khortytsa are Belarus, Poland and Moldova.

The main competitors on the international liquor market for this company are:

- CEDC International (Poland);
- CFC ALCOOLS Company (Poland);
- BREST DISTILLERY "BELALCO" (Belarus).
- Main tasks of MED department at the distillery "Khortytsa" are managing the export potential of the enterprise and creating competitive products;
- ensuring of obligations fulfillment towards foreign partners;
- assimilation of new forms of production, scientific and technical and investment cooperation;
- preparation of contract goods for customs clearance procedure.
- In this case, the volume of export-import operations is constant, homogeneous, and its geography is limited.

- The main function of the MED department is to provide stable and adequate to the potential opportunities of the enterprise, foreign economic activity, deepening of trade relations with foreign partners.
- The main types of works carried out by the department are:
- organization of export-import operations;
- financial and monetary operations;
- Cargo declaration and customs clearance;
- Establishing partnerships with firms in other countries;
- scientific and information work;
- searching for ways for an enterprise to enter a foreign market;
- study of directions and trends of development of the world market of a particular commodity.
- Declaration and customs clearance is one of the main activities of the MED department, as not only the company's customers are abroad, but also its main suppliers of raw materials are foreign partners. This results in a constant flow of raw materials and goods.

The ultimate result of the declarer's activity is to obtain the customs clearance stamp.

According to these general tasks and activities of the MED department, its employees have specific responsibilities.

EDM management at the Khortytsa distillery involves assessment of the competitiveness of its goods in the foreign liquor market through the analysis of competitive forces according to Porter (Tables 2.4-2.7).

Threats from substitute products for alcoholic beverages are assessed in Table 2.4.

Table 2.4

Evaluation of liquor substitute products on foreign markets

Evaluation parameter	Parameter estimation		
	3	2	1
Price-quality substitute products	exist and have a high market share	exist, but have only just entered the market and their share is small	do not exist
	3		
TOTAL	3		
1 points	Low level of threat from substitute products		
2 points	Medium level of threat from substitute products		
3 points	High level of threat from substitute products		

Assessment of the level of intra-industry competition according to the following parameters: number of players, market growth rate, level of product differentiation in the market, limitation in price increases (Table 2.5).

Table 2.5

Assessment of intra-industry competition on external liquor markets

Evaluation parameter	Parameter estimation		
	3	2	1
Number of players	High level of market saturation	Average level of market saturation (3-10)	Small number of players (1-3)
	3		
Market growth rate	Stagnation or decline in market volume	Slowing but growing	High
			1

Continuation of Table 2.5

Level of product differentiation in the market	Companies sell standardised products	A product on the market is standardised in key features, but differs in additional benefits.	Companies' products differ significantly from each other
		2	
Limitations on price rises	Fierce price competition in the market, no scope for price increases	There is room for price increases only to cover cost increases	There is always room for price increases to cover rising costs and higher profits
		2	
TOTAL SCORE	8		
4 points	Low threat of entry for new players		
5-8 points	Medium level of threat of entry for new players		
9-12 points	High level of threat of entry for new players		

Assessing threats to market entry for new players by assessing the height of entry barriers (Table 2.6)

Table 2.6

Assessment of height barriers in external liquor markets

Valuation parameter	Parameter estimation		
	3	2	1
Economies of scale in product manufacture	Absent	Only a few market players have it	Significant
		2	
Strong brands with high levels of knowledge and	Lack of big players	2-3 large players hold around 50% of the market	2-3 large players hold more than 80% of the
		2	
Product differentiation	Low level of product diversity	There are micro niche players	All possible niches are occupied by
			1

Continued Table 2.6

Level of investment and costs to enter the industry	Low (pays for itself in 1-3 months of operation)	Medium (pays for itself in 6-12 months of operation)	High (justifies more than 1 year of operation)
		2	
Access to distribution channels	Access to distribution channels fully open	Access to distribution channels requires moderate investment	Access to distribution channels is limited
	3		
Government policies	No government restrictions	State intervenes in the industry, but at a low level	State fully regulates the industry and sets limits
		2	
Willingness of existing players to lower prices	Players will not go for price reductions	Big players will not reduce prices	Existing players reduce prices at any attempt to introduce cheaper supply.
		2	
TOTAL SCORE	14		
8 points	Low threat of entry for new players		
9-16 points	Medium level of threat of entry for new players		
17-24 points	High level of threat of entry for new players		

The overall results of the analysis of the competitive forces according to the Porter of liquor sales in the external markets of the Khortytsa distillery are shown in Table 2.7.

Table 2.7

Results of the analysis of competitive forces according to the Porter of liquor sales on external markets of the Distillery Khortytsa

Parameter	Value	Description	Areas of work
Threats from substitute products	High	The company owns a product whose analogues exist on the market	Concentrate all efforts on building awareness of the unique offer.
Threats from intra-industry competition	Medium	The company's market is highly competitive and promising. It is not possible to fully compare products from different firms. There are restrictions on price increases.	Carry out continuous monitoring of competitors' offers. Reduce the impact of price competition on sales. Increase the level of product knowledge.
Threat from new entrants	High	The risk of new entrants is high. New businesses emerge all the time due to low entry barriers.	Continuously monitor the emergence of new companies. Carry out campaigns aimed at prolonging consumer contact with the company. To increase the level of product knowledge by the company. To increase the level of knowledge about the product.

Based on the data acquired in Table 2.7 it can be stated that for conducting effective foreign trade of liquor products in foreign markets the Distillery Khortytsa uses the following lines of work:

– Concentrates all efforts on building awareness of the unique offer of distillery products under Khortytsa trademark;

- conducts constant monitoring of the competitors` offers;
- raises level of product knowledge;
- conducts actions, directed to prolong consumer's contact with the company;
- Raises the level of knowledge about the product.

2.3 Assessment of the pricing policy of the Khortytsa distillery as it enters the Polish market

To assess the pricing policy of the Khortytsa distillery when entering the Polish market, we calculate the calculation of commercial expenses when exporting vodka (Table 2.8).

Table 2.8

Calculation of the commercial costs of exporting vodka to Poland

Terms of the FEA contract		Euro	UAH
Importing country	Poland		
Name of goods	Vodka		
Ukrainian Classification of Foreign Economic Activity	2208 60		
Quantity of goods, (bottles of 0,5L)	20000		
Goods' contract price (per 0,5l)	5,0	5	
Basic terms of delivery	FCA		
Delivery time	2 days		
Currency of the price	Euro		
Payment currency	Euro		
NBU exchange rate on payment date	29,5		
Exchange rate of NBU on payment date	29,5		
Form of international payments	Bank transfer		
Terms (schedule) of settlement	100% after delivery		
Guarantee issuance fee			
Expenses for EEO financing (interest on loan)			

Penalty fee	0.3% of the unpaid amount for each day of late payment		
Unit cost of goods	1,6	1,6	

Table 2.8 contains data on the contract price, the form and term of settlement, the NBU exchange rate on the date of payment, the terms of settlement, and the basic conditions of delivery, which are important indicators in determining the effectiveness of the WAC and the costs incurred in the seller-buyer relationship. Table 2.9 summarises the costs incurred for exports. Table 2.9

Aggregate costs incurred in the implementation of exports

Unit purchase price for exports	In % of the value of the goods	Euro
Costs of implementing the SEA	5 %	5 000
Transport costs	3,00 %	600
Loading and unloading costs	0,50 %	500
Insurance fees	1,50 %	1 500
Commission fees, broker fees	0,00 %	
Licence fees	0,00 %	
Customs duty rate	0,20 %	
Other EEA costs		2 000
Expenses for processing FEA documentation		500
Legal fees		700
Marketing, advertising expenses		0
Presentation expenses		300
Business trip		500
Total EEA expenses		39200

Table 2.9 groups the information that directly forms the cost base of a foreign trade transaction. The reliability of the cost of production, the determination of the customs value and the investigation of possible additional restrictions, as well as taxation, are important.

We will calculate the price for exporting vodka to Poland in Table 2.10.

Table 2.10

Calculating the price for exporting vodka to Poland (quantity 20,000 bottles of 0.5 l)

Indicator	Euro	UAH.
The invoice value of goods		
Expenditure on production of goods (prime cost)	32 000	-
Expenditure on purchase of goods for export	-	-
Expenses on implementation of CEAs	5 000	-
Transportation costs	600	-
Loading and unloading costs	500	-
Insurance fees	1 500	-
Commission fees, brokerage fees	-	-
Licensing costs	-	-
Customs value of goods	37 000	1 091 500

Consequently, the customs value of 20,000 0.5-liter bottles of vodka is 37,000 Euro, or 1,091,500 UAH.

Let us calculate economic efficiency of export of vodka from Khortytsa distillery in Table 2.11.

Таблиця 2.11

Cost-effectiveness indicators for CEAs

Calculating the cost-effectiveness of a CEA	Euro
Foreign exchange earnings	100 000
Expenses on goods production (cost price)	32 000
Expenses on the implementation of CEAs	5 000
Transport costs	600
Loading, unloading costs	500
Insurance fees	1 500
Customs value of goods	37 000
Customs fees	200

Customs fees	200
Other costs for CEAs implementation	2 000

Continued Table. 2.11

Expenses for processing FEA documentation	500
Legal expenses	700
Presentation expenses	300
Business trip	500
Total Expenses on ZAO	39 200
Profit before tax from ZAO	60 800
Income tax expense	10 944
Net profit	49 856

The characteristics that characterise the economic feasibility of a SEA (Table 2.12) are as follows:

- Foreign exchange earnings of €100,000.
- Profit before tax from a DEA 60,800 euros.
- Net profit 49856.

Table 2.12

Return on domestic sales figures

Domestic sales	Euro
Revenue from domestic sales	58 000
Domestic sales costs	5800
Total Domestic Sales Expenses	37 800
Profit before taxation on domestic market	20 200
Profit before taxation profitability of the transaction.	0,534

Characteristics that characterise the feasibility of domestic sales:

- Domestic sales revenues of €58,000.
- Profit before tax on the domestic market 20200.

Table 2.13

Cost-effectiveness indicators for CEAs

Cost-effectiveness indicators for CEAs	Value indicators
The profitability of the transaction in terms of profits to taxation.	0,608
Profitability of the PE operation	0,499
Baseline EE efficiency factor	2,55
Alternative efficiency coefficient of the CEAs	3,01

According to the data we see that vodka sales for Distillery Khortytsa are more profitable in the foreign market than in the domestic one, which suggests the necessity of foreign economic activity of the enterprise.

CHAPTER 3. DIRECTIONS FOR IMPROVING HORTYTSA'S PRICING POLICY ON THE INTERNATIONAL MARKET

3.1 DIRECTIONS FOR IMPROVING HORTYTSA'S PRICING POLICY ON THE INTERNATIONAL MARKET

To develop a marketing pricing strategy for the Khortytsa distillery when entering the Polish market, we will first conduct an ABC-analysis and XYZ-analysis of the product range of the enterprise.

To divide assortment into groups A, B and C it is necessary to form appropriate table form (table 3.1).

Commercial product assortment of Distillery Khortytsa consists of 7 groups: vodka, tincture, cognac, wine, sparkling wine, vermouth, brandy.

Table 3.1

ABC analysis of the product range for 2021

Product range	Quantity (in physical units)	Price per unit	Sales volume	Share of sales, %	Share with accumulation, %	Product group A, B, C
Vodka	22853525	17,28	457070,50	12,55	12,55	A
Tincture	21815556	16,90	436311,12	11,98	11,98	A
Cognac	19175109	18,68	383502,18	10,53	10,53	A
Brendi	17099171	18,80	341983,42	9,39	9,39	A
Dry Wine	13730325	17,70	274606,50	7,54	7,54	B
Semi-dry wine	12273527	15,98	245470,54	6,74	6,74	B
Sweet Wine	10525368	18,03	210507,36	5,78	5,78	B
Semi-sweet	9305300	20,88	186106,00	5,11	5,11	B

Continued Table. 3.1

Sparkling wine	8850050	15,17	177001,00	4,86	4,86	C
Vermut	8686160	17,92	173723,20	4,77	4,77	C
Soft drinks	7848501	17,96	156970,02	4,31	4,31	C
Sidr	7684612	17,10	153692,24	4,22	4,22	C
Rich	7557142	17,22	151142,84	4,15	4,15	C
Nestea	7447882	17,05	148957,64	4,09	4,09	C
Juice	7247572	14,30	144951,44	3,98	3,98	C
Together	182099800	–	3641996,00	–	–	–

For the Khortytsa distillery we suggest the following proportions.

Group A - very important goods that bring 60% of result. They account for 1443433 th. UAH in commodity turnover at the Distillery Khortytsa, they should always be available, i.e. it is necessary to create a considerable insurance stock. These goods require detailed planning, constant accounting and control (more frequent inventorying, etc.).

Group B - goods of medium importance, bringing in 30% of the result, having moderate sales volumes, complementing the assortment of the trade enterprise, allowing to attract new customers. For goods of this group it is necessary to have a sufficient safety stock. Accounting and control is at the same level as for goods of group A, but there may be some gaps (e.g. less frequent inventory, identification by barcodes).

Group C - the least important goods; bring in 10% of the result; have negligible sales volumes. These are candidates for exclusion from the range or new products; they should be ordered with caution, set a low mark-up and organise sales promotion activities. If the goods do not change to another group after the promotion, they must be disposed of. The decision to expand or rotate the range should be approached with caution, because goods that occupy a small share of the turnover can at the same time generate good profits.

Next, move on to the XYZ analysis, where the company's goods are allocated according to the consumption structure (Table 3.2).

Table 3.2

XYZ inventory analysis of the Khortytsa distillery

Name of product range unit	∑	SQRT(∑/n)	v	XYZ method group	ABC method group
Vodka	350	9,354143	0,14	X	A
Tincture	648	12,72792	0,49	X	A
Cognac	350	9,354143	0,6	X	A
Brendi	648	12,72792	0,95	X	A
Dry Wine	648	12,72792	1,05	X	B
Semi-dry wine	350	9,354143	1,19	X	B
Sweet Wine	648	12,72792	1,64	X	B
Semi-sweet wine	648	12,72792	1,67	X	B
Sparkling wine	648	12,72792	1,72	X	C
Vermut	350	9,354143	1,81	X	C
Soft drinks	648	12,72792	2,05	X	C
Sidr	350	9,354143	2,11	X	C
Rich	350	9,354143	2,69	X	C
Nestea	350	9,354143	2,72	X	C
Juice	648	12,72792	4,41	X	C

The final step in conducting the ABC analysis and XYZ analysis is to enter the results into the integrated matrix shown in Table 3.3, based on the data above.

Table 3.3

Integrated ABC and XYZ matrix for inventory analysis of the Khortytsa distillery

AX: Vodka Tincture Cognac Brandy	AY	AZ
BX: Dry Wine Semi-dry wine Sweet Wine Semi-sweet	BY	BZ
CX: Sparkling wine Vermouth Soft drinks Cider Rich Nestea Juices	CY:	CZ

Consequently, goods of groups AX and BX of the Khortytsa distillery have a high turnover and stability. It is necessary to ensure constant availability of goods of these groups in foreign trade turnover, but an excessive safety stock should be created. For the goods of the CX group - sparkling wine, vermouth, low-alcoholic drinks, cider, Rich, Nestea, juices the system of orders with constant periodicity can be used and the safety stock can be reduced [8].

Based on this analysis, it should be determined that the company will be able to increase prices for products of groups AH and BX when sold on the Polish market via online trade.

In Annex A we will consider an example of planning an advertising budget in a social network for selling vodka of the company's own brand Khortytsa Distillery. For

the calculations we investigated the sales volumes of the software to be sold through social networks.

These calculations allow stating that the amount of profit will significantly increase after three months of using the advertising campaign of distillery "Khortytsa" in Instagram. That is the application of digital business in Instagram social network is an actual direction of expansion of activity of Distillery "Khortytsa" in the market of Poland.

Therefore, we see the aim of improvement of foreign economic activity on the base of international marketing for distillery "Khortytsya" using Instagram promotion concept that will help to increase sales and provide promotion of goods on the market and get a stable income. Project realization assumes development of content plan for Instagram account of LVH "Khortytsa" in order to form and keep the positive image; strengthening of "Personal selling" direction by means of mailing list; creation of new network in involved market segments; presentation of the company's products in new segments.

Main objectives of communication activities of Khortytsa distillery on Instagram:
building the company's image;

- maintain the level of brand awareness;
- increase the number of customers.
- Increase sales and profits;
- to strengthen the company's position in the market segment

Thus, the following tasks and types of communication should be highlighted in order to inform the target audience of the Khortytsa LAN on Instagram in the Polish market (Table 3.4).

Table 3.4

Main objectives and types of communication for informing the target audience of the Khortytsa distillery on Instagram in the Polish market

Tasks	Types of communication in an Instagram account
Information on the "Personal selling" service via the mailing list	Actual
Presentation of the company's products	PUBLICATION
Creating a positive image	Storis, PUBLICATION
Partner search	Storis, PUBLICATION

A description of the end user of the proposed communication campaign of the LAN Khortytsa is shown in Table 3.5.

Table 3.5

Target audience for the Khortytsa distillery on Instagram

Socio-demographic characteristics	
Age	From 20 to 65 years of age
The sex of a person	Men 60%; Women 40%
Income level	Medium, above average, high
Nationality	Population of Poland
Profession	Young people, pensioners
Education	Secondary specialised 10%; Higher 1 education 70%; Higher 2 education 20%
Psychographic characteristics	
Social layer	Middle and high income
Lifestyle	Urban, family, youth
Behavioural indicators	
Degree of casual purchase	Intentional purchase - 70%; accidental purchase - 30%
Searching for benefits	Searching for added value when buying a product or looking for a product that is distinctive: high quality, high features and so on. Price is a secondary indicator.

Continuation of table 3.5

Behavioural indicators	
Degree of need for the product	Needed, but not often
Degree of readiness to buy the product/service	Insufficiently informed to buy; eager to buy; must buy
A reason to buy	Pre-selection services

Table 3.6 shows the timeline of the communication process improvement project for the Khortytsa distillery on Instagram in 2022.

Table 3.6

Project timetable

№ з/п	Names of work	Implementer	Duration	Start date	End date	Expenditure, thousand UAH.
1	Conducting market research	Director	4	30.01	01.02	x
2	Making a final decision on whether to improve the Instagram account	Manager	2	15.02	19.03	x
3	Developing a content plan	Director	2	15.02	19.03	x
4	Developing activities to build and maintain a favourable image via Instagram	Manager	2	15.02	19.03	123,6
5	Searching for bloggers to promote the account	Manager	2	15.02	29.03	61,1
6	Project implementation	Manager	2	19.04	07.06	40,6
7	Determining the effectiveness of project implementation	Economist	9	08.06	15.07	Within wages

Based on the defined goal and objectives of the project, let's make a content plan for the LAN Khortytsa Instagram account per month (Table 3.7)

Table 3.7

Content plan for the Khortytsa distillery's Instagram account per month

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
1st to 7th of the month	**Post introduction to the company**		**Familiarity with production technology**		**Product description + price + delivery conditions**		
8-14th of the month	**Poll: Which product do you like better?**		**Getting to know the staff**			**Post review**	
15-21 of the month	**Product description + price + delivery conditions**		**Product update**		**Answers to questions**		
22-28 of the month	**Getting to know the manufacturers**		**Product update**			**Post review**	
29-31 of the Me	**Terms of delivery**		**Product description + price**		**Answers to Question**	**Post review**	**Product description + price**

To summarise, the Instagram advertising campaign in the Polish market will run for the whole month according to the developed content plan.

The calculation of the costs for the implementation of the Instagram account promotion project in the Polish market for Khortytsa distillery is shown in Table 3.8.

Table 3.8

Total cost estimate for the implementation of the project to promote the Khortytsa distillery's Instagram account

Direction of expenditure	Sales price (uah)
Creating videos for Instagram	5 000
Creating photo collages	1 600
Organising promotions and sales	8 000
Agreements with bloggers to promote products	13 000
Total	27600

As a result of calculation of expenses for implementation of project on promotion of "Khortytsa" distillery account in Instagram it turns out that the sum for all expenses is 27 600 UAH. The sum is rather small in comparison with the budgets of advertising campaigns of world brands, but from the point of view of a domestic enterprise it is enough.

3.2 Assessment of the effectiveness of the marketing pricing strategy of the Khortytsa distillery

So, as it is defined in Annex A on condition of application of advertising campaign in Instagram the Distillery "Khortytsa" will be able to sell vodka in the market of Poland at the price of 9 Euro.

To predict the efficiency of marketing pricing strategy of LVZ "Khortytsa" 7 experts (sales managers) were interviewed to determine whether the income of the enterprise from export will increase after implementation of the developed campaign on the project of promotion of LVZ "Khortytsa" account in Instagram.

The results of the experts' forecast are shown in Table 3.9.

Table 3.9

Results of the expert survey

Experts	1	2	3	4	5	6	7
Increase in income (UAH thousands)	550	540	530	520	500	520	530

In order to use these expert values to predict revenue growth, a coefficient of variation must be calculated (formula 3.1), the value of which must be at least 33%.

$$\gamma = \frac{\delta}{Q_{cep}} \cdot 100\% \text{, where} \quad (3.1)$$

γ – coefficient of variation,

δ – is the standard deviation,

Q_{cep} – the average value of the added income.

The next step is to calculate the standard deviation using formula (3.2):

(3.2)

$$\delta = \sqrt{\frac{\sum_{i=1}^{n}\left(Q_{iT} - Q_{cep}\right)^2}{n}}, \text{ where}$$

n – number of experts.

The average value of added income is calculated according to formula (3.3):

$$Q_{cep} = \frac{\sum_{i=1}^{n} Q_i}{n} \quad (3.3)$$

But in order to determine the value of the standard deviation, intermediate calculations need to be made, which are shown in Table 3.10.

Table 3.10

Calculations to determine the standard deviation

Indicators	Experts							Amount
	1	2	3	4	5	6	7	
Q_i	550	540	530	520	500	520	530	3690
Q_{cep}	527							
$Q_i - Q_{cep}$	23,00	13,00	3,00	-7,00	-27,00	-7,00	3,00	–
$(Q_i - Q_{cep})^2$	529	169	9	49	729	49	9	1543

So we calculate the standard deviation:

$\delta = \sqrt{\frac{1543}{7}} = \sqrt{220,4} = 14,8$

Now calculate the coefficient of variation:

$\gamma = \frac{14,8}{527} = 0,03 \text{ x } 100\% = 3\%$

Consequently, the coefficient is 3%, which is less than 33%, so expert values can be used.

We will use the standard probability distribution method (formula 3.4) to calculate the predicted income growth values.

$$Q_{пр} = \frac{0 + 4 \cdot B + П}{6}, \text{ where} \qquad (3.4)$$

$Q_{пр}$ – the projected value of the income growth,

O – is the most optimistic value of income growth,

П – the most pessimistic value of income growth,

B – is the most likely value of income growth.

Calculation:

$$Q\text{пр} = \frac{550 + 4 * 530 + 500}{6} = 528$$

Consequently, after calculating the projected revenue growth value, we can conclude that it covers the budget spent on Instagram account promotion.

The results of the Instagram account promotion are presented in Table 3.11.

Table 3.11

Results of the promotion of the Khortytsa distillery's Instagram account

Indicator	Value (UAH)
Campaign budget	27 600
Added income	528 000

According to the results of the experts' evaluation of the promotion account of the Distillery "Khortytsa" in Instagram, it can be summed up that the added income exceeds the budget, already a positive sign. Therefore, the planned project has the right to be implemented and, accordingly, will increase the profitability of the company's activities at the international level

3.3 Excise duty and its impact on pricing policy

The primary normative act regulating the payment of excise duty was the Law of Ukraine, "On State Regulation of Production and Circulation of Ethyl Alcohol, Cognac and Fruit Alcohol, Alcoholic Beverages, Tobacco Products, Liquids Used in Electronic Cigarettes and Fuel." In addition, there were many bylaws produced by the Ministry of Finance and the Tax Service of Ukraine.

As of May 2022. normative acts regulating the introduction and collection of excise duty unified and the Tax Code of Ukraine was adopted. In particular, Article

215 determines the base of excise taxation and sets its value for each industry. Excise tax is an indirect tax on the consumption of certain types of goods (products) defined by the Tax Code of Ukraine as excisable, which includes the price of such goods (products). Excisable goods include alcohol and tobacco, fuels and lubricants, cars, and electricity.

A distinctive feature of modern excises is the following two factors. First, the tax is charged either on the value or per unit of inflation-adjusted output. Second, value-added taxation methods are used to credit excise duties paid on resources used to produce excisable products.

Excise duty performs a regulatory function and affects the level of consumption of goods of the excisable group, shifting consumer choice in the direction of goods that are not excisable. By applying differentiated rates, you can change the consumption structure of excisable goods, and using differentiated rates on imported and domestic excisable goods, you can support your producer.

The increase in excise rates by the state compensates for the inflation-depreciated tax base in previous periods and aims to increase revenues to the state budget. Excise tax is included in the sale price of goods and cost and profit. After that, the value-added tax is charged on this amount.

Thus, when selling goods on the internal territory of Ukraine, the excise tax is determined by the following formula:

A = C x K,

where: A - the amount of excise tax;

C - excise tax rate;

K - the number of goods defined in physical units.

In recent years, the excise tax in the context of the economic downturn (depreciation of the national currency, high inflation), especially during martial law, has become a mechanism for solely obtaining additional budget revenues from the final consumer.

The increase (increase) in excise duty leads to a consistent increase in the production of excisable goods, including alcoholic beverages, and, consequently, an increase in the selling price of finished products.

Price is a monetary expression of the commodity value of products (products), works and services.

The composition of the price of any product in general includes:

· Costs (cost) of production and turnover.

· Taxes, fees, deductions.

· Profit (manufacturer, intermediaries; retailer).

The price structure is a specific ratio of price elements in percentages or shares. The structure of prices for the main components (cost, profit, taxes) and their items, especially the cost, can differ sharply by individual product groups and products.

In actual conditions, prices are formed under the influence of two groups of factors - external and internal. External factors, i.e., factors of the macroeconomic level, do not depend on the activities of the enterprise and consider changes in general economic proportions and conditions in the country and abroad. These include political stability in the country, the availability of essential resources, the market environment, participants in the promotion channels, the scale of state regulation of prices, improving tax legislation, and foreign economic policy.

Political stability in the country creates preconditions for enterprises to work for the future and does not cause them to strive for immediate success by increasing prices. Suppose the political situation in the country is in crisis. In that case, it leads to inconsistencies in foreign policy and, as a result, causes problems both with the supply of resources from outside the country and with the sale of finished products in foreign markets.

Provision of basic types of resources. Lack of primary resources on the market, such as fuel and energy, leads to an instant rise in prices and dependence of enterprises

on importers. Moreover, rising prices are not limited to scarce resources but also cover other market segments, as almost all of them are interconnected by a technological chain.

Market environment. Each type of market (free competition, monopoly, oligopoly, etc.) forms its type of pricing.

In conditions of free competition, prices are regulated by the market itself based on the law of supply and demand and the company cannot set prices above the market, as sales will fall sharply.

Any state influences pricing through fiscal policy, taxation, credit, and other levers. The degree of this influence depends on the goals pursued by the state. As a rule, state regulation of prices is usually carried out in two primary forms: administrative and economic.

Administrative regulation of pricing involves direct intervention in setting and changing prices. This is achieved through state or regulatory legislation.

Economic regulation is based on the operation of market laws of supply and demand, levels of competition and other levers of macroeconomic equilibrium.

The current market situation can change quite quickly, which will always impact pricing issues. To be able to respond to changes in the external environment adequately, the company must develop its pricing strategy.

The pricing strategy is an action plan developed by the company for a certain period, which aims to anticipate, justify, and implement changes in the base prices of the company following changes in market conditions and its pricing policy.

In January 2022. amendments to the Law of Ukraine of 30.11.2021 141914-IX to item 215.3.1 of Article 215 of the Tax Code of Ukraine came into force to increase the excise tax rates on ethyl alcohol, other alcoholic distillates, alcoholic beverages, and beer. The rate is set at UAH 133.31. for 1 liter of 100% alcohol. This increase in excise duty consistently affects the growth of the price of finished products.

However, the decisive factor in rising prices for all products and goods was February 24, 2022, when Russia launched a military attack on Ukraine.
The immediate destabilization of the entire Ukrainian market, regardless of the direction of production, created the preconditions for unpredictable price increases. In a situation where it is impossible to predict how long hostilities will last, what territory they will cover and how many people will be forced to become internally displaced, companies must develop a new way of pricing.

It is advisable to consider dynamic pricing, which is based on a flexible approach and constant adjustment of prices for goods, depending on the market's actual needs. Depending on current market demand, the price may change in minutes, hours, or days.

At the same time, there should be constant control and monitoring of changes in prices for raw materials, energy resources and logistics, and consider changes in consumer behavior.

Therefore, it is essential to take care of regular customers in these troubled times. It may be worthwhile to increase retailers' interest in further developing or building loyalty programs. Having essential products at attractive prices keeps customers whose wallet has recently become thinner—changing markup levels and redefining category roles and product roles. Adjusting the markup matrix based on redefined roles has many benefits.

Regardless of attempts to stimulate interest through stocks, restoring sales levels may not be possible. Therefore, we should review advertising plans and promotional policies to adapt to the new reality. Particular attention should be paid to products with a steady range of consumers.

The proposal to defer payment / increase the intensity of installments in installments is essential enough that the desire to minimize risk and uncertainty about tomorrow does not delay the decision to buy goods that are not essential and are relatively expensive.

All conveniences that allow distributing the payment promptly or facilitating the purchase decision should now be considered and included in the offer—trying to reduce costs (logistics, supplies) by reducing the range and focusing on essential products in this category.

It is to be expected that these steps will allow us to gain a competitive advantage over other market players in the long run and strengthen our position in these troubled times for business.

CONCLUSIONS

The diploma research analyzed and described the pricing policy of a company in the global market on the example of the "Khortytsa" distillery. It was found that to determine the pricing policy of the company in the international market should take into account both the general requirements for the pricing policy of the company in modern conditions of development of the market economy, and the specifics of the company.

Consequently, pricing policy is a consumer-oriented activity of the company, based on the use of a set of measures for establishing the level of prices, discounts, markups, terms of payment for services, price management and control in order to meet the needs of the consumer and the interests of the producer, as a consequence of making a profit.

The price calculation process is a logical sequence of six steps: setting the pricing objective, determining the demand for products, assessing the costs of the enterprise, analysing competitors' prices, selecting the pricing method and setting the final price.To summarise, it should be noted that when analysing processes related to price formation in world commodity markets, it is necessary to carefully study all factors influencing price formation, both general and applied. Prices determine which costs of producers will be recovered after the sale of goods, which will not, what level of income, profit and where resources will be directed in the future, whether there will be incentives for further expansion of foreign economic activity.

The use of innovative technological and logistical solutions helps Khortytsa distillery to remain a leader in vodka sales in the international market.

The main competitors of this company in the international market of vodka products are: CEDC International (Poland); CFC ALCOOLS: CEDC International (Poland); CFC ALCOOLS (Poland); BREST DISTILLERY "BELALCO" (Belarus).

The main tasks of the MED department at the "Khortytsa" Distillery: export potential management and creation of competitive products; ensuring obligations to

foreign partners; development of new forms of industrial, scientific, technical and investment cooperation; preparation of contract goods for the customs clearance procedure.

In this case the volume of export-import transactions is constant, homogeneous and its geography is limited.

To conduct effective foreign trade in liquor products on foreign markets, Distillery Khortytsa uses the following lines of work:

- Concentrates all efforts on building awareness of the unique offer of liquor products under Khortytsa trademark;
- conducts constant monitoring of competitors' offers;
- raises level of product knowledge;
- conducts actions, directed to prolong consumer's contact with the company;
- Raises the level of knowledge about the product.

According to the obtained data we see that vodka sales for Distillery Khortytsa are more profitable in the foreign market than in the domestic one, which indicates the necessity of foreign economic activity of the enterprise.

Consequently, goods of groups AX and BX of Distillery Khortytsa have high turnover and stability. It is necessary to ensure constant availability of goods of these groups in foreign trade turnover, but it is necessary to create an excessive safety stock. For the goods of group CX - sparkling wine, vermouth, low-alcoholic drinks, cider, Rich, Nestea, juices the system of orders with constant periodicity can be used and the safety stock can be reduced [8].

According to the analysis, the company will be able to increase prices for products from the group AH and BX when sold on the Polish market via internet trade.

The calculations allow us to state that profit volumes will increase significantly after three months of the use of the Khortytsa advertising campaign on Instagram. In other words the use of digital business in Instagram social network is a relevant

direction of expansion of activities of Distillery Khortytsa on the market of Poland.

Therefore we see the purpose of improving foreign economic activity on the basis of international marketing for LVS "Khortytsa" to apply the concept of promotion in Instagram, which will increase sales and provide promotion of goods in the market and stable profits. Project implementation supposes development of content plan for Instagram account of LVS "Khortytsa" to form and maintain favorable image; strengthening of "Personal selling" direction via mailing list; creation of new network in involved market segments; presentation of the company's products in new segments.

LIST OF REFERENCES

1. Aaker D. (2003*) Sozdanie silnyh brendov* [Building strong brendov]. Moscow: Publishing House of Grebennikov. (in Russian)

2. Accorsi R., Cascini A., Cholette S., Manzini R., Mora C. (2014) Economic and environmental assessment of reusable plastic containers: A food catering supply chain case study. International Journal of Production Economics, vol. 152, pp. 88–101. DOI: 10.1016/j.ijpe.2013.12.014.

3. Billal M., Hossain M. (2020) Multi-objective optimization for multi-product multi-period four echelon supply chain problems under uncertainty. Journal of Optimization in Industrial Engineering, vol. 13, no 1, pp. 1–17. DOI: 10.22094/JOIE.2018.555578.1529.

4. Cardona-Vald s Y., Alvarez A., Ozdemir D. (2011) A bi-objective supply chain design problem with uncertainty. Transportation Research. Part C: Emerging Technologies, vol. 19, no 5, pp. 821–832. DOI: 10.1016/j.trc.2010.04.003.

5. Chen C.-L., Lee W.C. (2004) Multi-objective optimization of multi-echelon supply chain networks with uncertain product demands and prices. Computers and Chemical Engineering, vol. 28, no 6–7, pp. 1131–1144. DOI: 10.1016/j.compchemeng.2003.09.014.

6. Chen D., Liu Z., Luo Z., Webber M., Chen J. (2016). Bibliometric and visualized analysis of energy research. Ecological Engineering, vol. 90, pp. 285–293. DOI: 10.1016/j.ecoleng.2016.01.026.

7. Chukurna O.P. (2017) Brand positioning strategy on the basis of quality perception: different markets B2B and B2C. Economics: time realities, no. 1 (29), pp. 135–142. Available at: http://economics.opu.ua/files/archive/2017/n1.html. (accessed 10 August 2020).

8. El-Sayed M., Afia N., El-Kharbotly A. (2010) A stochastic model for

forward–reverse logistics network design under risk. Computer & Industrial Engineering, vol. 58, pp. 423–431. DOI: 10.1016/j.cie.2008.09.040.

9. Fahimnia B., Sarkis J., Davarzani H. (2015) Green supply chain management: A review and bibliometric analysis. International Journal of Production Economics, vol. 162, no 101–114. DOI: 10.1016/j.ijpe.2015.01.003.

10. Fedorov V.V. (1979) Numerical methods of maximin. Moscow: Nauka (in Russian).

11. Georgiadis M.C., Tsiakis P., Longinidis P., Sofioglou M.K. (2011) Optimal design of supply chain networks under uncertain transient demand variations. Omega, vol. 39, no 3, pp. 254–272.

12. Hassan M., Baharum A., Ali M.K.M. (2020) Logarithmic penalty function method for invex multi-objective fractional programming problems. Journal of Taibah University for Science, vol. 14, no 1, pp. 211–216, DOI: 10.1080/16583655.2020.1715051.

13. Huang S., Li G., Ben-Awuah E., Afum B.O., Hu N. (2020) A robust mixed integer linear programming framework for underground cut-and-fill mining production scheduling. International Journal of Mining, Reclamation and Environment, vol. 34, no 6, pp. 397–414. DOI: 10.1080/17480930.2019.1576576.

14. Kanaeva O.N. (2004) A two-stage nonlinear stochastic programming problem with a deterministic compensation matrix. Mathematical Structures and Modeling, no 14, pp. 25–33 (in Russian).

15. Kennedy R.K.L., Khoshgoftaar T.M., Villanustre F., Humphrey T. (2019) A parallel and distributed stochastic gradient descent implementation using commodity clusters. Journal of Big Data, vol. 6, article no 16. DOI: 10.1186/s40537-019-0179-2.

16. Kevin Lane Keller. (2011) *Strategic management: building, measuring and managing brand equity*. Publishing: Pearson.

17. Kibzun A.I., Lebedev A.A., Malyshev V.V. (1984) On reducing a problem with probabilistic constraints to an equivalent minimax. Proceedings of the USSR

Academy of Sciences. Engineering Cybernetics, no 4, pp. 73–80 (in Russian).

18. Kibzun A.I., Malyshev V.V. (1984) Generalized minimax approach to solving problems with probabilistic constraints. Proceedings of the USSR Academy of Sciences. Engineering Cybernetics, no 1, pp. 20–29 (in Russian).

19. Lepley F., Joseph D. (2004) *Strategii razvitia Brenda. Originalnyj prakticeskij instrumentarij dla liderstva vashego brenda* [Brand Development Strategy. The original practical tools for your brand of leadership] Dnepropetrovsk: Balance Club. (in Russian)

20. Liu Z., Hu B., Zhao Y., Lang L., Guo H., Florence K., Zhang S. (2020) Research on intelligent decision of low carbon supply chain based on carbon tax constraints in human-driven edge computing. IEEE Access, vol. 8, pp. 48264–48273. DOI: 10.1109/ACCESS.2020.2978911.

21. Movahedipour M., Yang M., Zeng J., Wu X., Salam S. (2016) Optimization in supply chain management, the current state and future directions: A systematic review and bibliometric analysis. Journal of Industrial Engineering and Management, vol. 9, no 4, pp. 933–963. DOI: 10.3926/jiem.2035.

22. Nooraie S.V., Parast M.M. (2016) Mitigating supply chain disruptions through the assessment of trade-offs among risks, costs and investments in capabilities. International Journal of Production Economics, vol. 171, part 1, pp. 8–21. DOI: 10.1016/j.ijpe.2015.10.018.

23. Oklander M., Oklander T., Pedko I., Yashkina O. (2017) Development of the subsystem of forecasting for the system of marketing information management at an industrial enterprise. *Eastern-European Journal of Eenterprise Technologies*, vol. 5, no. 3 (89), pp. 39–51.

24. Oklander M.A., Novoshinska L.V., Chukurna O.P. (2012) Tehnologiya brendingu strahovoï kompaniï [Insurance company branding technology]. *Ekonomist*, no. 11, pp. 39–43

25. Oklander M.A., Oklander T.O. (2016) Evolution of the marketing theory: genesis, conception, periodization. *Marketing and innovation management*, no. 4, pp.

92–105.

26. Olivares-Benitez E., Gonz lez-Velarde J.L., R os-Mercado R.Z. (2012) A supply chain design problem with facility location and bi-objective transportation choices. TOP, no 20, pp. 729–753. DOI: 10.1007/s11750-010-0162-8.

27. Ozturk M.M., Cankaya I.A., Ipekci D. (2020) Optimizing echo state network through a novel Fisher maximization based stochastic gradient descent. Neurocomputing, vol. 415, pp. 215–224. DOI: 10.1016/j.neucom.2020.07.034.

28. Park S.H., Shin W.S., Park Y.H., Lee Y. (2017) Building a new culture for quality management in the era of the Fourth Industrial Revolution. Total Quality Management & Business Excellence, vol. 28, no 9–10, pp. 934–945. DOI: 10.1080/14783363.2017.1310703.

29. Pess a M.V.P., Becker J.M.J. (2020) Smart design engineering: a literature review of the impact of the 4th industrial revolution on product design and development. Research in Engineering Design, no 31, pp. 175–195. DOI: 10.1007/s00163-020-00330-z.

30. Price C.J. (2020) Direct search nonsmooth constrained optimization via rounded l 1 penalty functions. Optimization Methods and Software. DOI: 10.1080/10556788.2020.1746961.

31. Ren J., Tan S., Yang L., Goodsite M.E., Pang C., Dong L. (2015) Optimization of emergy sustainability index for bio diesel supply network design. Energy Conversion and Management, vol. 92, pp. 312–321. DOI: 10.1016/j.enconman.2014.12.066.

32. Rogulin R.S. (2020) A model for optimizing plans for procurement of raw materials from regions of Russia in a timber-processing enterprise. Business Informatics, vol. 14, no 4, pp. 19–35. DOI: 10.17323/2587-814X.2020.4.19.35. 22. Kan Yu.S., Kibzun A.I. (2009) Stochastic programming problems with probabilistic criteria. Moscow: FIZMATLIT (in Russian).

33. Rogulin R.S., Mazelis L.S. (2020) Algorithm and mathematical model of supply chain management for raw wood from the regions in Russia: comparison and

analysis. Perm University Herald. Economy, vol. 15, no 3, pp. 385–404 (in Russian). DOI: 10.17072/1994-9960-2020-3-385-404.

34. Scavarda L.F., Reichhart A., Hamacher S., Holweg M. (2010) Managing product variety in emerging markets. International Journal of Operations and Production Management, vol. 30, no 2, pp. 205–224.

35. Schutz P., Tomasgard A., Ahmed S. (2009) Supply chain design under uncertainty using sample average approximation and dual decomposition. European Journal of Operational Research, vol. 199, no 2, pp. 409–419.

36. Studynskiy G.Y. (2015) Sistemnist rozvitku ta prosuvannja brandu jak umova jogo efektivnosti [Systematic development and promotion of the brand as a condition of its effectiveness]. *Innovatsiyna ekonomika*, no. 5, pp. 185–192.

37. Tellez O., Daguet L., Lehu d F., Monteiro T., Montoya G.O., P ton O., Vercraene S. (2020) A stakeholder oriented approach to the optimization of transports of people with disabilities. Supply Chain Forum: An International Journal, vol. 21, no 2, pp. 93–102. DOI: 10.1080/16258312.2020.1768435.

38. Walsh K. (2000) *Kluchevye pokazateli menedzmenta. Kak analizirovat, sravnivat, kontrolirovat dannye, opredelaushie stoimost kompanii* [Key indicators management. How to analyze, compare, control data defining the value of the company] M.: Case 2000. (in Russian)

39. Wang K.-J., Makond B., Liu S.-Y. (2011) Location and allocation decisions in a two-echelon supply chain with stochastic demand – A genetic-algorithm based solution. Expert Systems with Application, vol. 38, no 5, pp. 6125–6131. DOI: 10.1016/j.eswa.2010.11.008.

40. Yashkina, O. (2017) The optimal pricing strategy of the novelty product determined by function of price elasticity of demand. *Marketing and digital technologies*, vol. 1, no. 2, pp. 125–137.

APPLICATIONS

Annex A

An example of planning a social media advertising budget for the sale of Khortytsa's own brand of vodka on the Polish market

In the absence of social media advertising, the sales of each bottle of vodka on the Polish market does not exceed 50,000 units per month. At the same time, the price of the product is set at 7 EUR. By advertising its activity and the consumer qualities of its products in social media, the company aimed to increase its sales to at least 65,000 units per month. Wishing to at least partially recoup the advertising costs, the company set the unit price at 9 EUR.

Taking into account the requirements of the advertising campaign in social networks, we determine the turnover reaction on advertising which equals r=(65000*9-50000*7)/55000=4.27 EUR. With the help of models it is determined that the level of saturation of the target market with the firm's goods is equal to 6500 units per month, and the decrease of sales in the absence of advertising in social networks will be equal to at least 20%.

We will use the formula:

$E_A = P * n_0 * (1 / k_0 * K) * (N / N_{max}) = 4{,}27*20\%*1/20*50000*0{,}8 \approx 170$ тис. EUR

On the basis of the calculations obtained through the use of the Yule model, it has been established that in order to achieve the desired volume of sales, the size of the advertising budget in social networks should be equal to EUR 170,000. In addition, using the Yule model, it was determined that the number of clients attracted

can be greater than the proposed number, equal to 8% of the number of potential clients, and the advertising campaign itself can be fully implemented in three months.

Let's consider a vector (multi-criteria) optimisation problem in the case of distribution of the advertising budget depending on the type of platform.

The advertising budget depending on the type of platform is variable, and so is the profit from advertising.

In the calculation tables the social platforms are designated as:

Platform #1 - Facebook

Platform #2 - Instagram

Platform #3 - Telegram

Platform #4 - Twitter

An assessment of the main features of an advertising campaign on these platforms is given in Table 1.

Table 1

Output for vector optimisation

Campaign parameters			Actual assessment by platform				Weighting factors, %
Criterion	Nature of the criterion	Unit of measure	№1	№2	№3	№4	
A	Profit level	Thous. EUR	120	100	60	90	20
B	Advertising budget	Thous. EUR	70	30	40	30	20
C	Campaign duration	Month	6	3	6	4	10
D	Company image	Points	8	4	3	5	10
E	Price	EUR	90	80	70	75	30
F	Number of customers	Thousands of people	60	70	50	60	10

The main methods of vector (multi-criteria) optimisation are:

- The uniform optimality method:
- The method of equitable concession.
- Method of minimizing criteria.

- Method of main criterion.
- Ideal point method (Savage Principle).

Each of the above methods implies its own sequence of calculations, has higher or lower degree of accuracy (one method's results must be relied upon to a lesser extent than the other), its own advantages and disadvantages. These and other features of the methods listed, as well as, actually, the formulas by which calculations are made, we will consider in more detail at the introduction of the calculations themselves - for greater clarity of analysis.

Let's normalise the data in Table 1 using the formula:

$$f_j^0(x) = \frac{f_j(x) - f_j^{min}}{f_j^{max} - f_j^{min}}, \quad j = \overline{1,n}. \tag{1}$$

It is also necessary to determine the direction of optimisation of the normalised indicators, i.e. to take into account that for some criteria the lowest (min) value is optimal and for others the highest (max) value. In the second case, the normalised values will have a positive value. This applies to criteria such as safety, aesthetics, product image. In the first case, the normalized values must be multiplied by (-1) - in order to obtain a value that will tend towards the minimum. This refers to the duration of the campaign and the size of the advertising budget.

The values of the normalised scores for the criteria are shown in Table 2, taking into account the areas of optimisation of the criteria.

Table 2

Normalised evaluations of a social media advertising campaign

Criterion	Evaluation by platform			
	№1	№2	№3	№4
A	1,0	0,7	0,0	0,5
B	-1,0	0,0	-0,3	0,0
C	-1,0	0,0	-1,0	-0,3
D	1,0	0,2	0,0	0,4
E	1,0	0,5	0,0	0,3

F	0,5	1,0	0,0	0,5

The data given will be used as input to calculations by multi-criteria optimisation methods.

1. The uniform optimality method.

The calculations will be carried out according to the formula:

$$f(x) = \sum_{j=1}^{n} f_j(x) \to max, \qquad x \in X. \tag{2}$$

Let's calculate the target function using the uniform optimality method for each platform in sequence:

$$f_1(x) = 1 - 1 - 1 + 1 + 1 + 0{,}5 = 1{,}5$$
$$f_2(x) = 0{,}7 + 0 + 0 + 0{,}2 + 0{,}5 + 1 = 2{,}4$$
$$f_3(x) = 0 - 0{,}3 - 1 + 0 + 0 + 0 = -1{,}3$$
$$f_4(x) = 0{,}5 + 0 - 0{,}3 + 0{,}4 + 0{,}3 \mp 0{,}5 = 1{,}4$$

Based on the calculations of this method, the maximum value (f(x) = 2.4) is obtained by the sum of the criteria values for platform number 2 - Instagram.

2. method of fair concession.

The calculations will be carried out according to the formula:

$$f(x) = \prod_{j=1}^{n} f_j(x) \to max, \qquad x \in X. \tag{3}$$

Before carrying out fair concession calculations, the optimised evaluation criteria for the platforms must be reduced to a more correct form for this formula, i.e. a constant must be added to all the values to bring them to the same sign by adding a constant (in our case we add a constant of 2).

Table 3

Adjusted normalised estimates

Criterion	Evaluation by platform			
	№1	№2	№3	№4
A	3,0	2,7	2,0	2,5
B	1,0	2,0	1,7	2,0
C	1,0	2,0	1,0	1,7
D	3,0	2,2	2,0	2,4
E	3,0	2,5	2,0	2,3
F	2,5	3,0	2,0	2,5

Having done this, we obtain the indicators for calculating the target function for each platform using the formula above and find the maximum indicator using it:

$$f_1(x) = 3 * 1 * 1 * 3 * 3 * 2{,}5 = 67{,}5$$

$$f_2(x) = 2{,}7 * 2 * 2 * 2{,}2 * 2{,}5 * 3 = 178{,}2$$

$$f_3(x) = 2 * 1{,}7 * 1 * 2 * 2 * 2 = 27{,}2$$

$$f_4(x) = 2{,}5 * 2 * 1{,}7 * 2{,}4 * 2{,}3 * 2{,}5 = 117{,}3$$

Based on the calculations using this method, the maximum value is the product of the criteria values also for platform No. 2.

3. method of minimising the criteria.

The calculations will be carried out according to the formula:

$$f(x) = \sum_{j=1}^{n} \alpha_j f_j(x) \to max, x \in X, \sum_{j=1}^{n} \alpha_j = 1\,, \alpha_j > 0\,. \qquad (4)$$

Let's calculate the target function by rolling up the criteria sequentially for each assortment item:

$$f_1(x) = 1 * 20\% - 1 * 20\% - 1 * 10\% + 1 * 10\% + 1 * 30\% + 0{,}5 * 10\% = 0{,}35$$

$$f_2(x) = 0{,}7 * 20\% + 0 * 20\% + 0 * 10\% + 0{,}2 * 10\% + 0{,}5 * 30\% + 1 * 10\% = 0{,}41$$

$$f_3(x) = 0 * 20\% - 0{,}3 * 20\% - 1 * 10\% + 0 * 10\% + 0 * 30\% + 0 * 10\% = -0{,}16$$

$$f_4(x) = 0{,}5 * 20\% + 0 * 20\% - 0{,}3 * 10\% + 0{,}4 * 10\% + 0{,}3 * 30\% + 0{,}5 * 10\% = 0{,}25$$

Based on calculations using this method, the maximum value (0.41) is the sum of the criteria values for Platform 2.

4. Method of the main criterion.

The calculations will be carried out according to the formula:

$$f_1(x) \to max, x \in X, f_j(x) \geq d_j, j = \overline{2,n}\,. \quad (5)$$

The most significant criterion is the price (α=30%), which is the maximum for platform 1.

5. Ideal point method (Savage principle).

The calculations will be carried out according to the formula:

$$max\left[F_j^* - f_j(x)\right] \to min, F_j^* = max f_j(x), x \in X. \quad (6)$$

Calculate the potential risk (loss) of choosing a sub-optimal assortment item. The results of the calculation are shown in Table 4.

Table 4

Seavage potential loss matrix

	Потенційний ризик			
	№1	№2	№3	№4
A	0,0	0,3	1,0	0,5
B	1,0	0,0	0,3	0,0
C	2,0	1,0	2,0	1,3
D	0,0	0,8	1,0	0,6
E	-1,0	-0,5	0,0	-0,3
F	-0,5	-1,0	0,0	-0,5
Значення рівня втрат	2,0	1,0	2,0	1,3

Consequently, according to the ideal point method, the lowest level of loss belongs to platform number 2.

The overall selection results are shown in Table 5:

Table 5

Results of the search for an optimal social media campaign using different vector optimisation methods:

Platforms	The uniform optimality method	The fair concession method	Criteria collapse method	Main criterion method	Ideal point method
№ 1	1,5	67,5	0,35	90	2,0
№ 2	2,4	178,2	0,41	80	1,0
№ 3	-1,3	27,2	-0,16	70	2,0
№ 4	1,4	117,3	0,25	75	1,3
Optimal value	2,4	178,2	0,41	90	1,0
The best option	№ 2	№ 2	№ 2	№ 1	№ 2

As you can see, the calculation shows that the most optimal campaign is on platform number two, Instagram. So, for further planning, we will use the price level and the profit-to-budget ratio for the social platform Instagram.

In order to optimally allocate the campaign budget, it is important to establish the expected rate of return for using each individual means of advertising.

In order to facilitate the calculations, the perception ratios of the advertising messages were not taken into account in the study. The data was analysed and the following functional relationship between the considered indicators and the expected rate of return was found using the STATISTICA 6.0 statistical package:

$$K = \begin{aligned} & 0{,}022412419*\hat{x}_1 - \frac{0{,}10388}{10^3}*\hat{x}_1^2 + \\ & \frac{0{,}134993}{10^3}*\hat{x}_2 - \frac{0{,}15959}{10^8}*\hat{x}_2^2 - \\ & 1{,}3508383*\hat{x}_3 + 0{,}00000001*\hat{x}_3^2 - 1{,}7234427 \end{aligned}, \quad (7)$$

Where K – the rate of expected return;

$\hat{x}_1$ – the price of the product being advertised;

$\hat{x}_2$ – the number of people who have received and understood the advertising message;

$\hat{x}_3$ – recall rate of the advertising message.

Table 6

Rate of expected profit from using Instagram to distribute advertising messages

The rate of expected return, %	The price of the advertised product, EUR	Number of people who have seen the advertising message	Memorisation rate of the advertising message
0,35	70	11700	0,25
0,33	70	11300	0,25
0,30	85	10100	0,25
0,23	85	9800	0,27
0,25	90	9700	0,27
0,35	90	10500	0,27
0,50	90	12200	0,27
0,53	90	12550	0,27

Figure 1. shows a graph of the trend line plotted using the above expression (7).

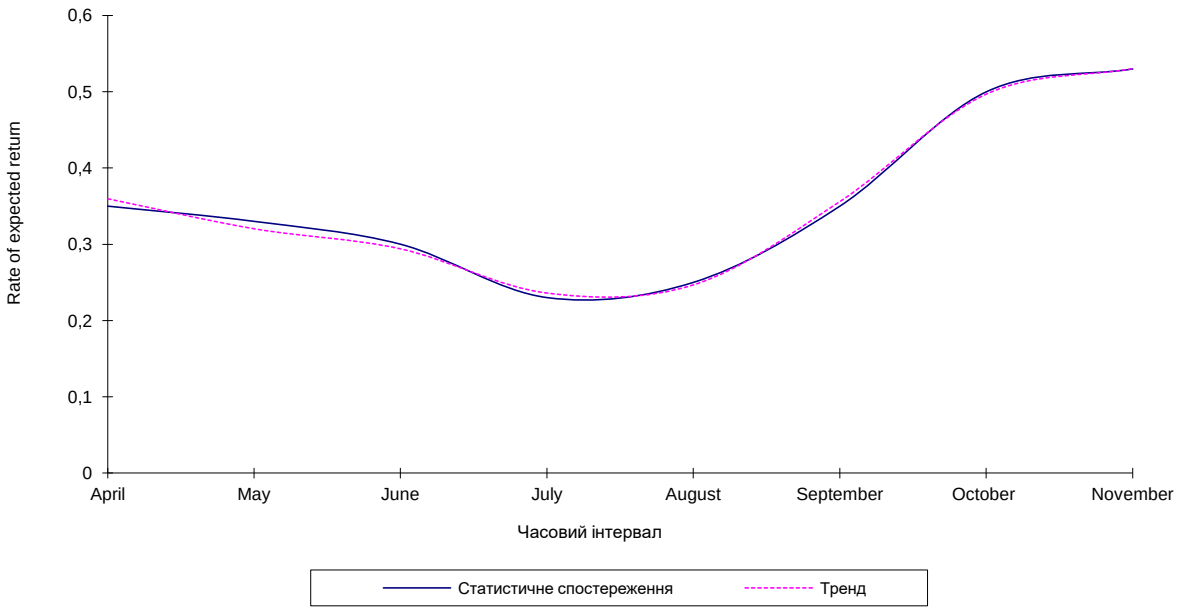


Figure 1. Trend line describing the expected rate of return for the distribution of Instagram ads

So, according to the above trend line, we can see that the volume of profit will increase significantly after three months of using Instagram advertising campaign.

That is the application of digital business in Instagram social network is a relevant direction of expansion of activities of Distillery Khortytsa.