# PLANNING OF ENTERPRISE OUTPUT DEMAND IN CASE OF CHANGING MARKETING COSTS ON THE MARKET OF FOOD INDUSTRY

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Sales volumes planning for domestic food industry enterprises requires constant increase of the efficiency of marketing costs usage. The goal of the research is to assess the effectiveness of marketing costs usage and to determine its relationship with the level of demand for products of an enterprise in order to form a marketing budget at food industry enterprises. Research methodology: S-curve demand planning for effective marketing cost distribution; expert survey of specialists at enterprises responsible for strategic planning necessary for calculation of planned indicators for products demand. The results of the research: a methodological approach to assessing the effectiveness of marketing costs usage, based on a logistic curve, which establishes the relationship between the planned budget for marketing and the level of demand for products for strengthening of control over the achievement of enterprise goals, is proposed.

*Keywords: demand, demand planning, marketing, marketing costs, food industry. JEL Codes: D22, D61, L66, M31.* 

## **1. Introduction**

In practical aspect, the provision of effective marketing planning at Ukrainian food industry enterprises is of particular importance on the home market in the context of the dynamic development of retail trade in Ukraine, which is characterized by rapid globalization that to some extent monopolizes the chain of consumer value creation, including production, distribution, marketing and additional service. The topicality of marketing planning at food industry enterprises after Ukraine has signed the Association Agreement with the EU lies in the need to take into account the specifics and particularities of foreign markets in the development of strategic plans by domestic business entities.

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Marketing planning includes a wide range of business operations and processes, subordinating managerial decisions taken at the enterprise to the requirements of ensuring strengthening of its competitive positions based on the most favourable satisfaction of consumers' needs. In the current activity, the solution for this task is achieved by building an effective system of organization and management at the enterprise, based on the rational usage of the appropriate marketing tools and costs redistribution according to perspective marketing budget articles, as an important factor of ensuring the effectiveness of industrial enterprises in the conditions of market economy.

The usage of marketing costs as a component of transaction costs for domestic enterprises in the food industry is not concerted with the demand planning for products; this requires the development of the methodological approach for timely harmonization of interdependent indicators.

The main *goal* of this research is to develop a methodological approach for assessing the effectiveness of marketing costs usage, based on the S-curve, which allows establishing the correlation between the planned budget for marketing and the level of demand for products, in order to strengthen control over the attainment of enterprise objectives.

Correspondingly, the *object* of the study is the effectiveness of marketing costs usage in correlation with activity planning of food industry enterprises.

To achieve this goal, the following tasks need to be fulfilled:

- study of the existing scientific approaches to the economic essence of such concepts as "marketing costs", "transaction costs";

- development of a demand planning model for enterprise output in case of changing marketing costs;

- testing of the model on the materials of food industry enterprises in Ukraine.

The empirical results of the research are based on: application of theoretical and logical generalizations (substantiation of tendencies in marketing budget redistribution typical for food industry enterprises; definition of trade marketing tendencies in Ukraine); forecasting (substantiation of tendencies in marketing budgets redistribution; planning of demand for products of enterprises in case of changing marketing costs); economic statistical and comparative analysis (analysis of formation and distribution of marketing budget for domestic enterprises; study of cooperation conditions of food industry enterprises and the Ukrainian trade networks; substantiation of the recommendations on implementation of marketing plans for the food industry enterprises which were investigated).

Thus, such issue remains unsolved as marketing costs planning in correspondence with the level of output demand at food industry enterprises in Ukraine.

The review of economic literature on the question of the essence of such concepts as "marketing costs" shows that there is a powerful theoretical basics, which includes various scientific approaches. The first approach, which has the name of property rights, initiated by Coase (1937), focuses on the role of transaction costs in

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determining the distribution of property rights, that is, laws, rules, social conventions, and organizations that cause a particular behaviour. An ownership-based approach does not imply differences between firms, markets, households and other structures.

The second approach, proposed by the representatives of neoclassical economics, suggests that transaction costs are everywhere on the market and may arise when transferring any rights, because the exchange participants need to know each other, communicate and exchange. Thus, transaction costs are the costs of ownership transfer. Neoclassical economists believed that transaction costs cannot arise within one firm. They take place in a market-based interaction between firms and individuals. This position, as the practical experience shows, is rather ambiguous (Demsetz, 1988).

Kienzler and Kowalkowski (2017) describe a question inrelation to an important feature of review is a set of actionable takeaways, with both theoretical and methodological implications for pricing strategy research. It is important at planning of demand on the products of enterprises. Stern A. marks, that managers who merely set price levels rather than explicit price structures for their products deprive themselves of a valuable strategic tool (Stern, 1986).

In the aspect of accounting, marketing planning is closely connected to the notion of transaction costs, which are defined as costs in the area of exchange, associated with: sales transactions, transfer of ownership rights; search for suppliers, consumers, new business partners; further contractual activity between players of the market; protection of property rights, etc.

As a result of the analysis of the content and essence of marketing concept, of the study of marketing concept evolution, the need to study the periodization of the theory of costs was detected. Implementation of marketing functions at an enterprise requires the provision of financial resources, therefore the generalization of the establishment periodization of marketing theory and costs is well-grounded.

One of the aspects in applying the principles of holism in the economy, which describes the modern concept of marketing development, is the usage of a holistic approach, including the formation of an expenditure part of the marketing budget.

In the most general form, the following groups of costs are defined: the cost of searching for information; costs related to negotiation, decision-making, bargaining, legal registration; measurement costs (connected to control of quality and quantity of products); costs arising from the need to protect property rights; expenses arising from the opportunistic behaviour of a contractor (attempts by one of the contracting parties to obtain one-way advantages at the expense of the other). Transaction costs are the cost reflection of all the necessary efforts to conquer and retain a market contractor. Studying the interconnection between the levels of development of marketing relations and the dynamics of transaction costs, it is necessary to note their inverse proportional dependence.

The economic literature covers various methodological approaches to the efficiency of transaction costs. Thus, the main characteristic of the economics of welfare that emerges from the basic neoclassical model is the comparison of real

economic results with the ideal calculated on models where it is conventionally considered that transaction costs are zero. Such practice of comparison of the ideal caused the protests of those economists who grounded a more pragmatic methodological approach. In particular, Demsetz (1988) proposed a comparative institutional approach, according to which the focus of the definition of economic efficiency is the choice between real alternatives of the institutional system. It is assumed that different types of contractual relations are used to save transaction costs. The development of this approach at the macroeconomic level of the functioning of separate institutions (firms, corporations) and their performance is proposed to be evaluated as the effectiveness according to the Pareto principle, where the results are achieved by firms through maximization of suitableness function under certain constraints.

Such conclusion is supported by the hypothesis of Coase (1937), according to which the balance of social and private costs is a precondition for achieving maximum production efficiency. An enterprise will be able to organize production only if its private costs do not exceed the social costs that are most valuable when choosing alternative ways of organizing the release of new products and technologies.

The creative use of price structures requires a strong understanding of consumer valuation, of competitive position, and of cost behavior (Stern, 1986).

The transition period of Ukraine is characterized by a significant increase in transaction costs, therefore, often in order to reduce the level of these costs relatively closed financial empires (holdings or corporations) are built, with their own banks, insurance companies, enterprises. This is one of the motives for creating powerful corporations, industrial and financial groups, technology parks and other associations in the country.

Under current conditions, in connection with the transition of economic systems to a higher level of development, the acceleration of scientific and technological progress, the specialization and the globalization of the economic space, there is a clear tendency to increase transaction costs, the level of which in the world practice often reaches half the cost of final output. This circumstance became the ground for theoretical concepts regarding the usage of the category of transaction costs to assess the effectiveness of socio-economic processes in market conditions and, above all, the effectiveness of marketing planning at food industry enterprises in Ukraine.

The assessment of the effectiveness of institutional transformations in the innovation sector should take into account two components: transaction costs – as current costs incurred by economic entities and investments (capital investments) in the long-term process of creating new institutions. Determination of the level of these costs is a complex problem both in the methodological aspect and in terms of information and statistical determination and ensuring the authenticity of the source information, its legalization, which requires the concentration of scientists' attention to the solution for this complex problem. However, the solution of the problem, both

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methodologically and in practice, is of great importance, since it will enable us to answer the question – what is the price of economic reforms in Ukraine, where the results of institutional transformations must be compatible with costs far removed from the results into many years in the future.

### 2. Research methodology

In the work by Bykovska, Plotnikova and Podchernina (Bykovskaja, 2001) planning of the size of marketing costs at the enterprise is considered according to S-curves with the usage of subjective assessment of the situation on the market. During the implementation of a marketing plan, when signals are received from the market, it is possible that a subjective assessment will be erroneous. Usage of the S-shaped curve method allows to adjust the size of the marketing budget at an early stage, which effectively distributes the resources of the enterprise.

The essence of the method is that the demand for enterprise output is a function of its marketing costs. It is known that the dependence of demand on marketing costs is nonlinear, proceeds through a consistent change in the phases of slow and rapid growth, and also is limited by the size of the maximum available market potential, that is, it is described by the S-shaped curve. The presence of nonlinearity and saturation limits is connected to the influence of the factors of growth and constraints specific to each product, market and marketing activities. Grygoruk (2017) examines going near the evaluation of a posteriori efficiency marketing decisions. Wise and Sirohi (2005) in their article suggestion are driven in relation for determining marketing budgets and activities. Abratt and el. (1994) in the article give to recommendation on planning of charges on marketing at advancement of products in on-line environment.

The effectiveness of marketing costs varies according to the growth of marketing budget. After reaching the most accessible segments of the market and moving to the limit of inextensible demand, an enterprise needs to spend more money to reach new consumer groups. There is a certain marginal level of demand, after which additional marketing costs cease to be paid off by the growth of sales and are ineffective. Of course, the method does not take into account the full list of factors that affect the size of the marketing budget, but it provides the source data to calculate the minimum required budget, with a smaller amount of which it is inappropriate to plan the costs of marketing activities of the enterprise.

In order to estimate the size of the economically achievable level of demand and the corresponding limits of the efficiency of marketing budget, an enterprise must foresee the function of demand for its product / product category. If the market is well-studied, the data needed to build a demand curve can be obtained from market research, and the optimization problem is reduced to graphical calculations. In new or insufficiently studied markets, it is not always possible to get exhaustive information. In such situation, one should use mathematical models, which allow on a qualitative level to follow the nature of the dependence of demand on marketing costs. In work Diatlov and Artamonov (1999) the model, which reflects the typical dynamics of the S-shaped demand function, is proposed:

$$Y(M) = Y_{m} \left[1 + \frac{Y_{m} - Y_{0}}{Y_{0}} e^{-\frac{M}{\gamma}}\right]^{1}$$
(1)

where Y (M) – demand level depending on marketing costs, pieces.;  $Y_{max}$  – the maximum achievable level of demand within the limits of possibilities of new markets development of the enterprise, natural units;  $Y_o$  – initial level of demand (the basic value of sales volume of the enterprise), natural units; M – marketing costs (actual marketing budget in the base period), money units; v – the degree of perception of the market, money units.

The above mentioned formulas show that for enterprises whose activity requires marketing costs for advertising and sales promotion (Dzheffry, 2013), there is a certain level of demand, which can be economically unjustified for the implementation of marketing activities.

The differential form of equation (1) is the following:

$$\frac{Y'}{Y} = \frac{1}{v} \frac{Y_m - Y}{Y_m}$$
(2)

The condition for maximizing of margin profit will look like:

$$\pi(M) = (p-c)(Y(M) - Y_0) - M \to \max, \tag{3}$$

where p - price for goods, money units; c - specific fixed costs for the production of goods, money units.

The parameter v, which expresses the size of the "missed" margin profit out of the corresponding "economically inaccessible" sales volumes:

$$\nu = (Ym - Yopt)(p - c) \tag{4}$$

where  $Y_{opt}$  – effective level of demand (determined by the expert method), natural units.

The suitability of such model usage in practice depends on the ability to assess the parameters of the maximum demand level included in it, the initial level of demand and the coefficient reflecting the market perceptiveness. If the values of the demand level on a qualitative level are determined quite easily, the determination of parameter v value is more complicated, because, at first glance, its direct interpretation in terms of measurable economic variables is not available.

## 3. Research results

Testing of the model is applied on the example of the food industry enterprises: LLC "Food Line K" – fruit and vegetable canning industry, PJSC "Kniazia Trubetskoho" – wine industry, PJSC "Bilotserkivskyi konservnyi zavod" – fruit and vegetable canning industry, LLC "Svitovi khlibni tradytsii" – bakery industry, CF "Merkurii" – confectionery industry, LLC "Dana" – non-alcoholic beverages.

In Table 1 the data for planning the demand for products of LLC "Fud Lain K" are grouped.

		U								
Indiantor	Reference	Years								
mulcator	designation	2013	2014	2015	2016	2017				
Marketing costs,	М	260.2	375.6	408 75	420.5	217.9				
thousand UAH	111	200.2	575.0	100.75	120.5	211.9				
Level of demand,	Va	35680	36423	35382	50040	33234				
can	50	55007	50425	55562	50040					
Average price,	n	11.8	11.8	11.8	12.6	12.6				
UAH	Р	11.0	11.0	11.0	12.0	12.0				
Constant costs per										
unit of production,	с	3.2	3.0	2.8	3.5	3.2				
UAH										
Level of demand,	V. * n	421.1	420.7	417.5	620.5	118 7				
thousand UAH	<b>y</b> <sup>0</sup> , h	421.1	429.1	417.5	030.5	410./				

Table 1. Initial data for product demand planning for LLC "Food Line K" in
case of marketing costs change, 2013–2017 years

Marketing costs at the level of 217.9 thousand UAH, the basic level of demand of 33234 cans/year are basic in determining the planned level of demand for products of the enterprise. The average price of 12.6 UAH/can is calculated as the average value of the selling price by product category (olives).

In the analysis of the potential market, the researcher evaluated the value of the maximum achievement of the demand level for the enterprise in the year  $(Y_m)$ , the initial level of demand  $(Y_o = 418.7 \text{ UAH})$  at the level of the basic value of the previous period, which is determined by the certain marketing costs  $(M_o = 217.9 \text{ UAH})$ .

According to the methodology the author calculated the indicators of the described model for studied enterprises, the results of which are given in the table 2.

According to the obtained analysis results (Table 2), assuming the initial level of demand at the level of the basic value of 418.75 thousand UAH, marketing costs of LLC "Food Line K " bring the maximum marginal profit after the disbursement of costs at the level of 257.9 thousand UAH. Marketing costs at the enterprise were disbursed at the level of 84.5% (217.9/257.9\*100%) under the determined parameters; bringing them to the level of 257.9 thousand UAH will ensure the disbursement of maximum marginal profit.

Modelling of demand using the S-curve for PJSC "Kniazia Trubetskoho" shows

that the costs of the enterprise were disbursed at the level of 38.9% (958/2458\*100%) under the determined parameters; bringing them to the level of 2458.0 thousand UAH will provide the growth of marginal profit by 68%.

Modelling of demand using S-curve for PJSC "Bilotserkivskyi konservnyi zavod" shows that the costs of the enterprise were disbursed at the level of 99.6% (25.9/26\*100%) under the determined parameters; bringing them to the level of 242.0 thousand UAH will provide the growth of marginal profit to 79.1 thousand UAH.

Taking into consideration the initial level of demand at the level of the basic value of 1977.0 thousand UAH, marketing costs at LLC "Svitovi khlibni tradytsii" bring the maximum marginal profit after the disbursement of costs at the level of 2477.0 thousand UAH. The presented table data show that marketing costs at the enterprise were disbursed at the level of 66.4% (1977/2477\*100%) under the determined parameters; bringing them to the level of 2477.0 thousand UAH will provide the maximum marginal profit at the level of 919.6 thousand UAH.

Modelling of demand using S-curve for CF "Merkurii" shows that the costs of the enterprise are disbursed at 59.8% (2983.0/4983.0\*100%) under the specified parameters; bringing them to the level of 4983.08 thousand UAH will ensure the growth of marginal profit by 18%.

Taking into consideration the initial level of demand at the level of the basic value of 9246.7 thousand UAH, marketing costs of LLC "Dana" bring the maximum marginal profit after the disbursement of costs at the level of 105.0 thousand UAH. Marketing costs at the enterprise are disbursed at the level of 60% (15/25\*100%) under the determined parameters; bringing them to the level of 105.0 thousand UAH will ensure the maximum marginal profit earning. The actual level of marketing costs for enterprises during studied basic period (2017) and the calculated values are represented (Fig. 1).





Stages of	Enterprises																	
implemen-	LLC	LLC "Food Line K" PJSC "Kniazia Trubetskoho"			PJSC "Bilotserkivskyi			LLC "Svitovi khlibni			CF "Merkurii"			LLC "Dana"				
tation							ko	onservnyi zav	vod"	tradytsii"								
	Mo	Yo*p	π(Mo)	Mo	Yo*p	π(Mo)	Mo	Yo*p	π(Mo)	Mo	Yo*p	$\pi(Mo)$	Mo	Yo*p	π(Mo)	Mo	Yo*p	π(Mo)
1	217.9	418.7	102.3	958.0	9246.7	392.0	25.9	1296.0	10400.2	1977	44389.7	804.1	2983.0	17284	1239.3	15.0	124.9	3.6
2	237.9	443.9	109.4	1258.0	9502.7	487.4	25.9	1371.0	11583.1	2477	47439.7	919.6	3983.0	24884	1435.7	20.0	127.0	4.2
3	257.9	469.1	113.2	1558.0	9758.7	564.7	25.9	1446.0	11950.5	2977	50489.7	827.4	4983.0	32484	1459.5	25.0	129.0	4.6
4	277.9	494.3	113.0	1858.0	10014.7	620.8	25.9	1521.0	12166.3	3477	53589.7	490.6	5983.0	40084	1305.4	30.0	131.1	4.61
5	297.9	519.5	108.2	2158.0	10270.7	652.9	26.0	1596.0	12230.6	3977	56589.7	-11.1	6983.0	47684	984.4	35.0	133.1	4.2
6	317.9	544.7	98.2	2458.0	10526.7	658.0	26.0	1671.0	12143.9	4477	59639.7	-98.6	7983.0	55284	516.6	40.0	135.2	3.5
7	337.9	569.9	82.2	2758.0	10782.7	633.1	26.0	1746.0	11906.3	4977	62689.7	-2116.4	8983.0	62884	-73.6	45.0	137.2	2.3
8	357.9	642.3	59.7	3058.0	11038.7	575.4	26.0	1821.0	11518.2	5477	65739.7	-3495.7	9983.0	70484	-762.7	50.0	139.3	0.8
9	377.9	718.8	29.8	3358.0	11294.7	481.8	26.0	1896.0	10979.9	5977	68789.7	-5098.2	1098.,0	78084	-1529.4	55.0	141.3	-1.2

Source for calculation (Official Sites: PJSC "Kniazia Trubetskoho", PJSC "Bilotserkivskyi konservnyi zavod")

The disbursement of marketing costs at studied food industry enterprises and the planned value of their growth which provides the maximum level of marginal profit is given in Table 3. Also, an important question in this context is application the sales promotion and the programs of loyalty enterprises. Sales promotions sales targeted to consumers encourage purchase or build interest in a product during a specified time period. The key element of sales promotions is its limited time nature (Boone, 2010). Several components of a loyalty program have been covered in research so far, though as noted by Berry (1995), the hierarchy of loyalty program attributes in consumer's mind is not known. Also, recent research agenda by Breugelmans et al. (2015) points out to remaining blind spots in this area.

It can be seen that the maximum level of disbursement of marketing costs, taking into account charges on the programs of loyalty, is at PJSC "Bilotserkivskyi konservnyi zavod" (99.6%), the minimum level is at PJSC "Kniazia Trubetskoho" (38.9%). Calculated data depicts the interval of the possible amount of marketing costs in planning of marketing events.

Enterprise	Basic level of marketing costs (2017), thousand UAH	Planned marketing costs, providing maximum marginal profit, thousand UAH	Share of disbursed marketing costs, %
LLC "Food Line K"	217.9	257.9	84.4
PJSC "Kniazia Trubetskoho"	958.0	2458.0	38.9
PJSC "Bilotserkivskyi konservnyi zavod"	25.9	26.0	99.6
LLC "Svitovi khlibni tradytsii"	1977.0	2477.0	79.8
CF "Merkurii"	2983.1	4983.1	59.8
LLC "Dana"	15.0	25.0	60.0

Table 3. Disbursement of marketing costs at studied food industry enterprises

Usage of the results of calculations in a short-term perspective (up to 1 year) is highly likely to lead to the planned results, as the source data are as close as possible to the realities of the economic situation state of an enterprise and the market development trends.

However, the stimulation of sales in large volumes is not expedient, since it reduces both marginal profit and profitability of marketing costs. It is obvious that the reliability of proposed calculations depends on the accuracy of determining the optimal level of sales, because the parameter v was calculated based on the initial assumptions about the level of effective demand. In practice, the definition of this indicator is based on the statistical information of the sales department, as well as on the level of their deviations, depending on the stimulating activities of an enterprise.

### 4. Conclusions

1. Essence analysis of such categories as "marketing costs", "transaction costs" indicates the existence of basic approaches in determining the distribution of property rights and in the market interaction between market participants. Significant increase in the share of transaction costs in case of insignificant changes in the level of demand determines the need to develop a methodological approach to the effectiveness of their planning for food industry enterprises.

2. In order to determine the dependence of demand level for products of enterprises on marketing costs, a methodical approach based on the construction of an S-curve, which takes into account the interdependence of marginal demand level in case of change in marketing costs, is proposed.

3. Determination of planned level of marketing costs at an enterprise, which is within the basic marketing costs ( $M_o$ ) and its maximum level ( $M_{max}$ ), that is,  $M_o \leq M_p \leq M_{max}$ , involves further evaluation of the segments whose maintenance will lead to maximum performance.

3. Analysis of product demand planning in case of changes in marketing costs at food industry enterprises in Ukraine with the help of S-curves allowed the following conclusions to be drawn. Assuming the initial level of demand at the level of the basic value of 418.7 thousand UAH, marketing costs of LLC "Food Line K" bring the maximum marginal profit after the disbursement of costs at the level of 257.9 thousand UAH. Marketing costs at the enterprise were disbursed at the level of 84.5% under the determined parameters; bringing them to the level of 257.9 thousand UAH will ensure the disbursement of maximum marginal profit.

4. Analysis for PJSC "Kniazia Trubetskoho" shows that the costs of the enterprise were disbursed at the level of 38.97% under the determined parameters; bringing them to the level of 2458.0 thousand UAH will provide the growth of marginal profit by 68%.

5. Modelling of demand using S-curve for PJSC "Bilotserkivskyi konservnyi zavod" shows that the costs of the enterprise were disbursed at the level of 58.68% under the determined parameters; bringing them to the level of 242.0 thousand UAH will provide the growth of marginal profit to 79.1 thousand UAH.

6. Taking into consideration the initial level of demand at the level of the basic value of 1977.0 thousand UAH, marketing costs at LLC "Svitovi khlibni tradytsii" bring the maximum marginal profit after the disbursement of costs at the level of 2477.0 thousand UAH. Marketing costs at the enterprise were disbursed at the level of 79.8% under the determined parameters; bringing them to the level of 2477.0 thousand UAH will provide the maximum marginal profit at the level of 919.6 thousand UAH.

7. At CF "Merkurii" the costs of the enterprise are disbursed at 59.9% under the specified parameters; bringing them to the level of 4983.1 thousand UAH will ensure the growth of marginal profit by 18%.

8. Taking into consideration the initial level of demand at the level of the basic value of 9246.7 thousand UAH, marketing costs of LLC "Dana" bring the maximum

marginal profit after the disbursement of costs at the level of 105.0 thousand UAH. Marketing costs at the enterprise are disbursed at the level of 14.3% under the determined parameters; bringing them to the level of 105.0 thousand UAH will ensure the maximum marginal profit earning.

### References

Berry, L. L. (1995). Relationship marketing of services – Growing interests, emerging perspectives // Journal of the Academy of Marketing Science. No. 23(4): 236–245.

Boone, L. E., Kurtz, D. E., Mackenzie, H. F., Snow, K. (2010). Contemporary Marketing. 2nd Canadian Edition. – Toronto: Nelson Education Inc.: 390–395.

Breugelmans, E., Bijmolt, T. H. A., Zhang, J., Basso, L. J., Dorotic, M., Kopalle, P., Wunderlich, N. V. (2015). Advancing research on loyalty programs: A future research agenda // *Marketing Letters*. No. 26(2): 127–139.

Bykovskaja, Y. V. (2001). K voprosu o formyrovanyy marketynghovogho bjudzheta // *Marketyngh v Rossyy y za rubezhom*. No. 6: 46–52.

Coase, R. H. (1937). The Nature of the Firm // Economica, New Series. Vol. 4. No. 16: 386–405.

Demsetz, S. H. (1988). The Theory of the Firm Revisited // Journal of Law, Economics, & Organization. Vol. 4. No. 1: 141–161.

Djatlov, A. N. (1999). Optymyzacyja marketynghovogho bjudzheta fyrmy s yspoljzovanyem modelej S-obraznykh kryvykh funkcyy sprosa // *Ekonomycheskyj zhurnal VShE*. 4. No. 6: 529–542.

Dzheffry, M. (2013). Marketyng, osnovannyj na dannykh. 15 pokazatelej, kotorye dolzhen znatj kazhdyj. – Moscow: Mann, Yvanov y Ferber. – 384 p.

Grygoruk, P. (2017). The evaluation of a posteriori efficiency of marketing decisions // Marketing and management of innovations. No. 4: 149–161. – http://mmi.fem.sumdu.edu.ua/sites/default/files/mmi2017\_4\_149\_161.pdf [15 08 2018].

Kienzler, M., Kowalkowski, Ch. (2017). Pricing strategy: A review of 22 years of marketing research // *Journal of Business Research*. Vol. 78: 101–110. https://www.researchgate.net/publication/316861311\_Pricing\_strategy\_A\_review\_of\_22\_years\_of\_marketing\_research [20 08 2018].

Official site: Databases of enterprises PJSC "Bilotserkivskyi konservnyi zavod". – https://smida.gov.ua/db/participant/05528450 [02 06 2018].

Official site: Databases of enterprises «PJSC "Kniazia Trubetskoho". – https://smida.gov.ua/db/participant/00413720 [02 06 2018].

Wise, R., Sirohi, N. (2005). Finding the best marketing mix // Journal of Business Strategy. Vol. 26. Issue: 6: 10–11. – https://doi.org/10.1108/02756660510632975 [15 08 2018].

Abratt, R., Beffon, M., Ford, J. (1994). Relationship between Marketing Planning and Annual Budgeting // *Marketing Intelligence & Planning*. Vol. 12. Issue 1: 22–28. – https://doi.org/10.1108/02634509410052621[16 08 2018]

Stern, A. (1986). The strategic value of price structure // *Journal of Business Strategy*. Vol. 7 Issue 2: 22–31.

#### MAISTO PRODUKTŲ PRAMONĖS ĮMONĖS PAKLAUSOS PLANAVIMAS ATSIŽVELGIANT Į BESIKEIČIANČIAS RINKODAROS IŠLAIDAS

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#### Santrauka

Šalies maisto pramonės įmonių pardavimo apimčių planavimui būtna nuolat didinti rinkodaros išlaidų panaudojimo efektyvumą. Tyrimo tikslas – įvertinti rinkodaros išlaidų naudojimo efektyvumą ir nustatyti jo santykį su įmonės produktų paklausos lygiu, siekiant sudaryti rinkodaros biudžetą maisto pramonės įmonėms. Tyrimo metodika: siekiant nustatyti veiksmingą rinkodaros išlaidų paskirstymą, atliktas paklausos planavimas pagal S-kreivę, o planuojamų produktų paklausos rodikliams apskaičiuoti apklausti atsakingi už strateginį planavimą įmonių specialistai. Tyrimo rezultatai: pateiktas grindžiamas logistine kreive metodologinis požiūris į rinkodaros sąnaudų naudojimo efektyvumo vertinimą, kuriame nustatomas planuojamo realizavimo biudžeto ir produktų paklausos santykis, siekiant sustiprinti įmonės veiklos kontrolę.

Raktiniai žodžiai: paklausa, paklausos planavimas, rinkodara, rinkodaros išlaidos, maisto pramonė.