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## ОЦІНЮВАННЯ РІВНЯ ОБСЛУГОВУВАННЯ КЛІЄНТІВ У ЛАНЦЮГУ ПОСТАВОК ПРОДУКЦІЇ ХАРЧОВОЇ ПРОМИСЛОВОСТІ

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**Наведено рішення, пов'язані з еволюцією задоволення клієнтів у ланцюзі поставок макаронних виробів. На прикладі ланцюга поставок макаронних виробів досліджено питання щодо підвищення рівня обслуговування клієнтів. Проведене опитування клієнтів дало змогу провести аналіз проблеми задоволення клієнта.**

**Ключові слова:** задоволення клієнтів, ланцюг поставок макаронних виробів, конкурентоспроможність, опитування клієнтів, АВС-аналіз результатів опитування.

## EVALUATION OF CUSTOMER SERVICE IN THE SUPPLY CHAIN OF FOOD PRODUCTS

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**The paper presents the issues related to the evolution of customer satisfaction in a supply chain pasta. On the example of supply chain pasta explored the issue of improving customer service. Conducted customer surveys allowed us to analyze the problem of customer satisfaction.**

**Key words:** customer satisfaction, supply chain pasta, competitiveness, customer surveys, ABC analysis of the survey results.

**Problem formulation.** Pasta – its one of the most important lines of food industry. Taking into account that noodle in the basket of basic Ukrainian consumers foodstuffs occupies a substantial place, especially in a winter-spring period, then it can be referred to the group of products with fast rotation. However, changes which are related to the structure of separate types of pasta took place in the last decade. Demand increased to the products with higher maintenance of cellulose. Thus, for a manufacturer actualized the problem of adaptation of production structure to the necessities of concrete segments of market. On this account for enterprise it is necessary to co-operate during the planning process with other elements in the supply chain [2, 3, 6, 9]. A strong competition at this market requires from enterprise the continuous improvement process of its products, and also services, that are related to the supply policy. Thus, all types of activity, conducted with researching of clients satisfaction in the supply chain, are actual today. In this work presented the results of measuring of clients satisfaction through the supply chain pasta.

**Analysis of current research outputs and publications.** Firms which wants to be competitive at the market compelled to invest into the building of long-term relationships with a client, because only in such way for producers rises the chance of creation of stable competitive advantage [1, 7]. In the table. 1 depicted data about production and consumptions volumes of pasta in Ukraine, which testifies to the favourable tendencies in this area. At the Ukrainian market of pasta before the crisis observed a steady increase of imported products – mainly Italian and Russian. Nearly 60-65 % of pasta market capacity in Ukraine is occupied by domestic products. During 2006 – 2009 the import of pasta diminished from 17,5 to 13,8 thousand ton, namely in 1,27 times. In 2009, comparatively with 2008, the part of imported products reduced to 13,8 thousand ton [5].

**Production and sale volumes of pasta in Ukraine**

Year	Pasta without fillings and thermal processes, thousand ton	Product sales through the enterprise trade network (flour, bakery products and pasta (in a count on a flour), thousand ton	Pasta without fillings and thermal processes per one person, kg	Consumption of bakery products (bread, pasta converted to the flour, flour, cereals, legumes) (per one person per year; kg)
2005	104	1493	121,5	124
2006	108	953	122,5	120
2007	107	952	122,4	116
2008	113	933	123,5	115
2009	108	845	1106	112
2010	116	807	118,3	111
2011	135	834	118,2	110

Source: based on [5]

Market operators mark that in 2010 there was increasing of new foreign trade marks in the Ukrainian market. If in 2009 the assortment of the imported pasta products was limited to 10-15 positions, then at 2010 their amount grew up to 50 articles [4]. Therefore for the domestic producers of pasta it is important to retain both: institutional clients and eventual consumers. Although the role of producers in communications with end-user is limited, but suggestion of products with a good value depends (in accordance with their expectations) first of all from them. In that time the producers of pasta at the market of B2B are forced to take actions in relation to the appreciation of the added value through the all supply chain. In current realities, as Christopher M. marked, a market competition takes place not only between separate enterprises, but also between the supply chains. The efforts of many companies that collaborates, intended to provide for consumer finished products with the highest quality [of 8 c. 25].

Every participant is a specific link in the supply chain and one of the basic directions of their activity – he is the payment into the increasing of products cost. In addition, their actions influence on efficiency of all supply chains [12, c. 139]. One of the key elements which increase the cost of product / favour in the supply chain – is customer service. In order to obtain the satisfactory level of customer service, companies should strive to meet their expectations by the forms and standards, as well as taking into account forms and standards that competitors use [11, c. 134].

It is known that one of principal reasons of losing customers is their dissatisfaction with the level of service that may occur due to communication gap between client and members of the supply chain within the meaning of perception of procedural and behavioral needs [10, c. 16-19]. Therefore a questions of customer service is one of the major elements which influence on the quality of collaboration and on the attained results through the all supply chain.

**Article objectives.** Taking into account realities of pasta market, proposed the methods of measuring of clients satisfaction level in the supply chain of pasta products, that will allow for domestic enterprises to educe the dissatisfied necessity of the clients and promote the level of competitiveness not only of enterprise but also to the whole supply chain.

**Presentation of main materials.** An enterprise, activity of which is analysed, engages in a production and providing of commercial services which are related to food industry. The basic consumers of enterprises products is a network of shops which also executes a role of suppliers. The market of consumer goods has a strong competition, that is why an enterprise that wishes to save it's positions must constantly aspire to the improvement of quality of processes, which are executed in the supply chain,

including the service of customers. Only strong motivation towards the improvement of quality and awareness in relation to importance of personnel role in all supply chains can make the result in achievement of desirable results from the point of view of satisfaction of clients necessities by products / services.

The most active in attracting loyal customers are industrial companies [11, c. 138]. Research of clients satisfaction in the market of pasta implies, first of all, searching for an information, the source of which are reports from the contact with a client, magazines, branch editions, news-letters, special literature, catalogues, selling aids of competitors, results of clients questioning, and also analysis of the declined requests and the performed orders. In order to identify the level of clients satisfaction, except the analysis of informative sources, with a purpose of getting the primary marketing information a customer survey was conducted. At planning of selective researches, first of all, was defined minimally adequate sample size where the sample estimations would represent basic properties of the general aggregate. The sample size is determined using the formula  $n = \frac{t^2 \times v_x^2}{v_d^2}$ , where  $v_d = \frac{\sigma_x}{\bar{x}}$  – variation of errors,  $\bar{x}$  – average

characteristics, and  $v_x = \frac{\sigma}{\bar{x}}$  – variation of characteristics. For a given probability P=95% t=1,96, taken the values  $v_x=20\%$ , a  $v_d=5\%$ , sample size was 62 respondents.

In an order to estimate the level of clients satisfaction during the serving by the employees of supply chain, the next criteria of evaluation are outlined: the speed of commercial suggestions preparation by an enterprise; ability to give additional information that characterizes the competence of personnel supply chain; ability of workers to estimate the terms of business agreements; ability to form answers for practical suggestions of clients.

A rating method is used to define validity of the chosen criteria. The evaluation of respondent answers carried out by the four-point scale so that 1 is an unsatisfactory level of pleasure, 2 is a middle degree of pleasure, 3 is a high level of pleasure, 4 is a very high level of pleasure. The results of questioning are summarized in a table. 2, where degree of importance of the chosen criteria shown in %.

Table 2

**Basic information about the results of questioning**

Estimation of criteria importance	Determination of factors importance degree based on the answers of respondents, %			
	preparation speed of commercial proposals	ability to provide additional information, competence	evaluation of business agreements terms	formulating answers to practical suggestions
1	5	25	10	60
2	20	15	35	30
3	65	20	5	10
4	10	40	50	0

Source: own development

The interpretation of research results is given on Fig. 1. It is possible to make a conclusion, that 75% of respondents estimated "speed of preparation of commercial suggestions" as such, that has a high (estimation 3) and very high level of pleasure (estimation 4). For the second criteria (ability to provide additional information, competence) answers of respondents differ significantly.

Nevertheless half of respondents estimate the very good terms of commercial orders. But the majority of respondents "forming of answers for practical suggestions" estimated very low (see the table. 2). An estimation by the clients of this criteria requires the improvement of enterprise functioning in the sphere of practical suggestions.

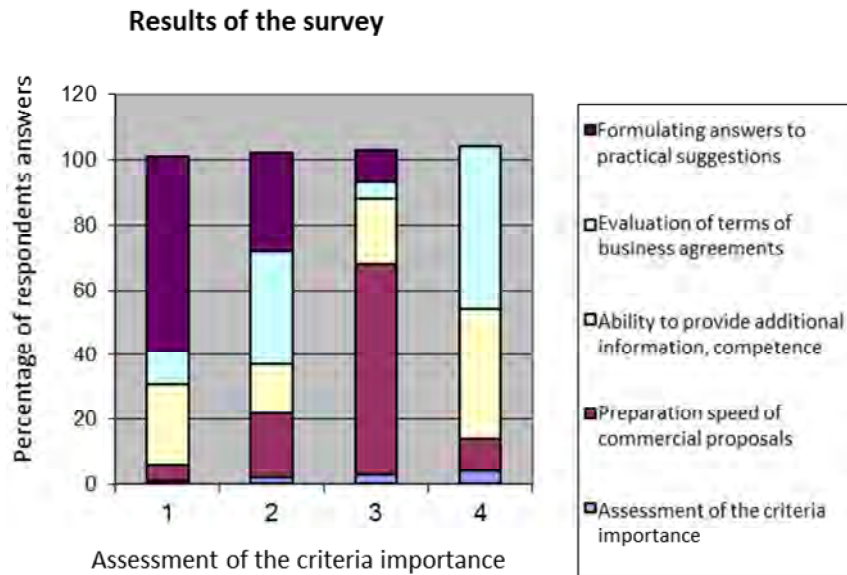


Fig. 1. The results of respondents questioning using certain criteria (4-ball estimation)  
Source: own development

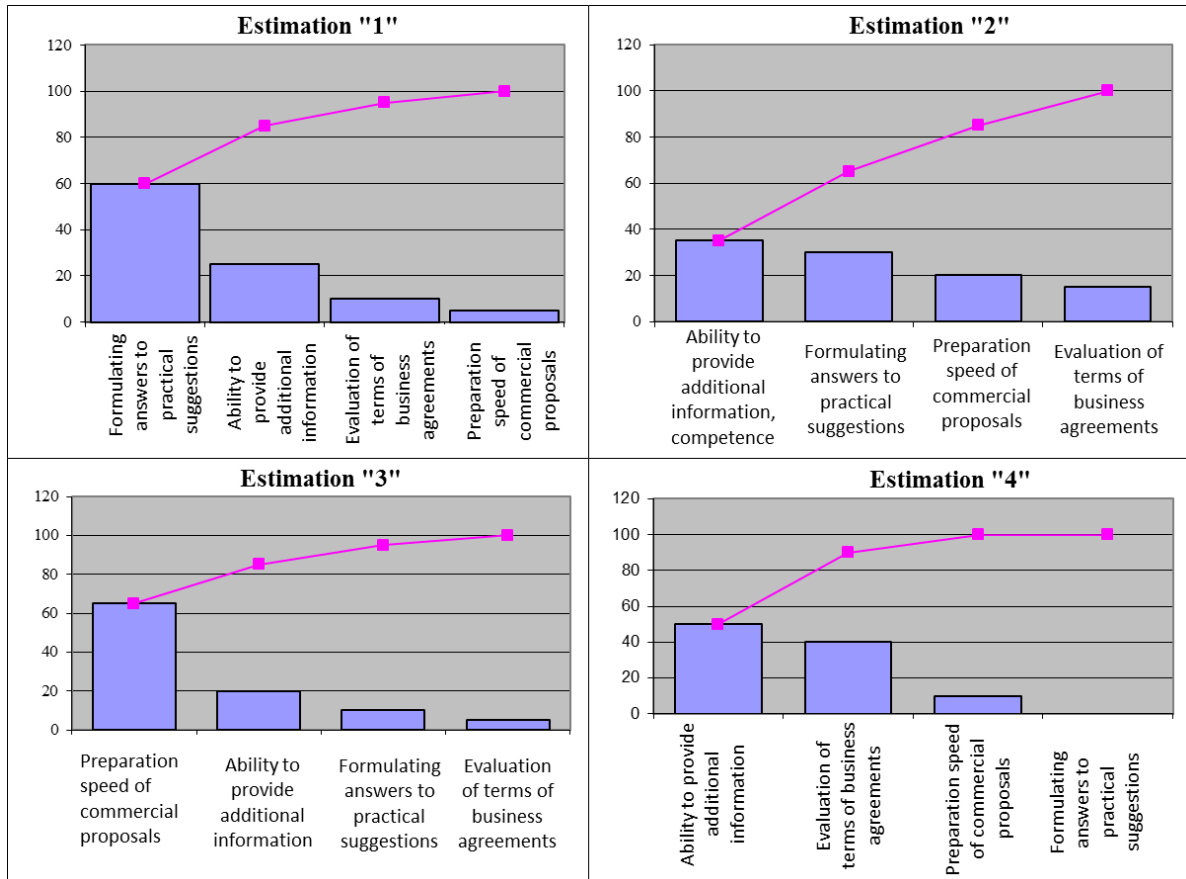


Fig. 2. Graphic interpretation of ABC-analysis of respondents questioning results  
Source: based on [7, c. 411]

Practical suggestions, got from clients (contractors), mainly touches the development of technological and organizational principles of business. The underestimation of market requirements influences, first of all, the reduction of competitiveness of enterprise products. In Fig.2 represented the ABC-analysis of evaluation of selected criteria according to "1", "2", "3", "4" points. Research's have

shown the criteria and the range of their actions which must be improved, in order to increase the degree of enterprises clients satisfaction. The terms of optimal changes in these areas, are:

– creating the worker teams, that will be responsible, first of all, for advertising activity, special agreements, and also for the monitoring of implementation of other types of enterprise marketing activity;

– system improvement – a client must have a rapid and reliable contact in the Internet, when it is necessary to get information about certificates and permissions on the use of products and raw material in what product is produced from;

– an "openness of enterprise" is a process which will help a client personal understanding of all stages of supply chain: supply of raw material, production, sales, and the improvements of management processes that allow to improve co-ordination and the best understanding of clients necessities.

**Conclusions and perspectives for further research.** The important element of research was getting an information, that touches serving of customers, which was used during the construction of the information system of customers service. On this occasion it was important to identify criteria for evaluation of customer satisfaction, that became possible due to the conducted questioning. Clients determined the most essential aspects of provided services, which influence the level of their satisfaction. The answers of respondents and their analysis allowed to the participants of supply chain to determine the most important descriptions of services that need for improvement, and also to set the degree of changes that must be done. The results of questioning allowed to plan further actions, which are aimed at improving of customer services quality.

In the article the issues related to the evolution of satisfaction in the supply chain of pasta food industry are presented. On the basis of selected market, the questions of customer service quality is considered. The conducted inspection of client satisfaction allowed to analyze the problem using the basic criteria of evaluating the level of customers service: preparation speed of commercial proposals, ability to provide additional information, that is important for the client, and competence of employees, evaluation of business agreements terms regarding to the supply of pasta and formulating the answers to practical customer suggestions.

1. Васелевський М. Зв'язок з клієнтом в електронних системах CRM як тренд маркетингово-логістичної діяльності / М. Васелевський // Вісник Нац. ун-ту "Львівська політехніка" "Проблеми економіки та управління". – Львів, 2009. – № 640. – С. 236–243. 2. Григорак М.Ю. Логістичне обслуговування: Навчальний посібник / М.Ю. Григорак, О.В. Карпунь. – К.: НАУ, 2007. – 160с. 3. Крикавський Євген. Логістичне управління: Підручник /Є. Крикавський – Львів: Національний університет "Львівська політехніка", 2005. – 684 с. 4. Решетило Л.І. Сучасні тенденції ринку макаронних виробів в Україні / Л.І. Решетило, С.І. Ганич // Збірник науково-технічних праць. Науковий вісник НЛТУ України. – 2011. – Вип. 21.6. – с. 288 – 291. 5. Україна у цифрах у 2011 році /Статистичний збірник. – К.: Державна служба статистики України, 2012. – 250 с. 6. Blaik P., *Logistyka. koncepcja zintegrowanego zarządzania*, Wyd. III zmienione, Polskie Wydawnictwo Ekonomiczne, Warszawa 2010. 7. Daroń M., Górska M. *Poziom zadowolenia klienta w łańcuchu dostaw przemysłu makaronowego /Logistyka №6*, 2012. – С. 411– 415. 8. Christopher M., *Logistyka i zarządzanie łańcuchem podaży*, Wydawnictwo Profesjonalnej Szkoły Biznesu, Kraków, 1998. 9. Ciesielski M. (red.), *Zarządzanie łańcuchami dostaw*, PWE, Warszawa 2011. 10. Hill N., Alexander J., *Pomiar satysfakcji i lojalności klientów*, Oficyna Ekonomiczna, Kraków 2003. 11. Mazurek-Łopacińska K., *Orientacja na klienta w przedsiębiorstwie*, Polskie Wydawnictwo Ekonomiczne, Warszawa 2002. 12. Pabian A., *Distribution In partnership marketing of European Union Companies and Its Economical Conditions [w:] J. Urbańska (red.), Socio-Economic Background of Management Processes in European Union, Serie Monographs No. 3, Sekcja Wydawnictw Wydziału Zarządzania Politechniki Częstochowskiej, Częstochowa 2006.* 13. *Zarządzanie łańcuchem dostaw*, Harvard Business Review, Harvard Business School Press, Wydawnictwo Helion, Gliwice 2007.