“Assessment of the enterprise marketing performance”

AUTHORS
Maryna Korzh
Andriy Gaievskyi
Karyna Hurdzhyian

ARTICLE INFO

DOI
http://dx.doi.org/10.21511/ppm.15(4).2017.01

RELEASED ON
Tuesday, 12 December 2017

RECEIVED ON
Sunday, 01 October 2017

ACCEPTED ON
Monday, 06 November 2017

LICENSE
This work is licensed under a Creative Commons Attribution 4.0 International License

JOURNAL
"Problems and Perspectives in Management"

ISSN PRINT
1727-7051

ISSN ONLINE
1810-5467

PUBLISHER
LLC “Consulting Publishing Company “Business Perspectives”

FOUNDER
LLC “Consulting Publishing Company “Business Perspectives”

NUMBER OF REFERENCES
21

NUMBER OF FIGURES
2

NUMBER OF TABLES
4

© The author(s) 2018. This publication is an open access article.
Abstract

Nowadays, the Ukrainian economic system is facing difficulties because of country’s integration into the world globalization processes, and crisis phenomena create uncertainty and lack of stability to entrepreneurship that results in the increase in risk of international business processes. Therefore, assessing the marketing performance of a domestic enterprise under the instability is of particular interest. This requires for quantitative and qualitative system-based and situational reasoning of its marketing development plan. The main objective of the paper is to determine the methodological approaches to assessing both the quantitative and qualitative results of an enterprise’s marketing performance. It is determined that in the current context of the national economic system, the operation of business must include the actions directed to mutually agreed economic, image-building, informational, environmental, and social goals. In this regard, the concept of marketing strategy of an enterprise’s functioning and development in a volatile environment based on the system-based and situational approach is developed, and the assessment tools to evaluate marketing strategy performance are proposed (marketing performance evaluation model based on sales revenue index; forecasting the amount of profit from participation in international business processes; plan of actions in cases of forecasting the profit from participation in international business processes taking into account the effectiveness of marketing strategies realization; PSR-FM method that allows to integrate evaluation results of customers’ perceptual and transactional loyalty). The approaches to assessing the effectiveness of the enterprise’s marketing strategy development allow to analyze both the marketing performance of an enterprise at large and the specific marketing initiative regardless of area of economic activity.

Keywords

marketing strategy, marketing strategy effectiveness, performance assessment (evaluation), marketing activity, customer loyalty

JEL Classification

M11, M31

INTRODUCTION

Currently Ukrainian economic system is experiencing a delicate stage in the development because of the Ukraine’s integration into the world globalization processes. In turn, the downturns in the development of modern society create uncertainty and instability for entrepreneurs. This leads to an increase in the risk of implementing international business processes, the participants of which use different operations and approaches aimed at increasing their own profit.

Therefore, at the present days, there is a highly profound interest in the marketing system development, its tools, as well as in forming the effective marketing strategy the central focus of which is not only the successful sales organization on both domestic and foreign markets and one-time profitable business operation, but also providing and keeping the reliable positions in the world economic space.

Most of the existing approaches to solving this problem are unilateral and aimed at activating the certain marketing functions, the imple-
mentation of which is not always consistent with each other. This leads to a deviation from the expected results in the business process organization. Thus, to date, there is an urgent need not only to formulate a modern marketing system, but also to create a mechanism which allows to coordinate efforts in the marketing sphere in order to increase the effectiveness of both every separate event and marketing activity in general, while taking into account the maximum factors affecting the efficiency of the latter.

In addition, it should be noted that company managers argue that, except for quantitative criteria using to evaluate their marketing activities effectiveness, determining the consumer loyalty level becomes more and more important. Thus, nowadays, evaluating the marketing strategy effectiveness of a domestic enterprise in a volatile environment, which requires a quantitative and qualitative system-situational motivation for the marketing program of its development, is of particular interest.

1. LITERATURE REVIEW

The existing researches of domestic and foreign scholars are devoted to both theory and practice of evaluating the effectiveness marketing strategy of an enterprise, as well as the analyzing the individual parameters of consumer loyalty.

Makhitha (2016) notes the need of a marketing strategy not only for large enterprises, but also for small and medium-sized businesses to survive in the market.

Olefirenko (2016) points at the marketing costs optimization as a priority tool to increase the profitability of the business entity and add to competitive position at the market. The author also notes that the methods of economic and mathematical modeling allow to formalize models for planning the distribution of costs, demand and profit, which is a prerequisite for the forecasting the necessary directions.

In other research, Olefrenko and Shevliuga (2017) emphasize that in developing markets, improving the company’s financial results is possible as a result of focusing on innovative goods and services introduction.

In turn, most of researchers note the need to assess consumer loyalty as a result of enterprise’s performance. Thus, Jamal Hosseini Ezzabadi and Mohammad Dehghani Saryazdi (2013) submit the research results, which confirm the relationship between the management of knowledge about the consumers and their loyalty to the company; therefore the comprehensive assessment of both perceptual and transaction consumers’ loyalty is important. Perceptual (emotional) loyalty can be defined as a certain type of consumers’ behavior, which is expressed in their long-term interaction with the enterprise and characterized by positive attitude to the enterprise regardless of competitors’ proposals, even if these proposals are more profitable in terms of financing. Both the willingness of consumers to recommend the company (NPS method) and their level of satisfaction are the main parameters for assessing perceptual loyalty (ACSI method). Azarnoush Ansari and Arash Riazi (2016) confirm that the level of consumer satisfaction has a greater impact on their loyalty than the perceived value. Therefore, the authors recommend that company executives allocate more resources to strategies resulting in a greater consumer satisfaction. But both the NPS method and the ACSI method have a common disadvantage, which is that they do not measure the negative recommendations provided by consumers. For this reason, Robert East, Jenni Romaniuk, and Wendy Lomax (2011) offer the WOM (world of mouth) metrics, which allows for simultaneous measurement of both positive and negative recommendations.

No doubt that satisfied consumers show strong loyalty and a higher level of purchasing intentions, but it should be noted that the relationship between satisfaction and actual purchases is more complicated, as evidenced by Curtis, Abratt, Rhoades, and Dion (2011). Thus, the regularity of purchases indicates the existence of transactional (loyalty) behavior, which can be defined as a certain type of consumers’ behavior, expressed in their long interaction with the enterprise and their repeated purchases, but is characterized by a lack of emotional consumers’ commitment to the en-
enterprise. As a result of the lack of consumers’ emotional commitment to the company, there is a risk of switching them over to the competitor’s goods or services at first opportunity. Valentina Stan, Barbara Caemmerer, and Roxane Cattan-Jallet (2013) believe that in order to hold the customers, it is important to focus on the costs of switching over to the competitors’ products through either a real increase in their level or forming the consumers’ perceived switching costs as rising. Nor Asiah Omar, Rosidah Musa, Che Aniza Che Weland, and Norzalita Abd Aziz (2012) argue the behavior of newly-engaging consumers and those with long-term interaction may be very different, so in order to keep consumers, it is important to segment them based on how long they interact with the business. But typically, RFM-analysis is used to assess transaction loyalty. However, most of scientists make sure that it is uncertain to study just one measure of consumer loyalty or use just one methodology for evaluating, so Mohamed Zaki, Dalia Kandeil, Andy Neely, and Janet McColl-Kennedy (2016) suggest combining the results of the RFM-analysis and the NPS method with consumers’ demographic characteristics.

Inasmuch as loyalty programs are the most popular consumer loyalty tool, Ina Garnefeld, Andreas Eggert, Sabrina Helmand, and Stephen Tax (2013) conducted a laboratory experiment that demonstrates loyalty programs with more significant rewards reinforce not only behavioral loyalty, but also form a positive attitude towards the enterprise, while less significant rewards affect only behavioral loyalty. Noskova and Romanova (2015) assess the influence of other instruments, structured according to the 7P concept, on the consumers’ loyalty of retail outlets. Also, it should be noted that one of the problems in forming consumer loyalty is the limited communication with them; therefore, Mazaraki and Dubovik (2015) proposed to apply a customized approach to finding the most acceptable integrated communication in the e-loyalty system of consumers.

However, research analysis results showed that the issues related to the evaluation of both quantitative and qualitative results of the company’s marketing activity as a whole, as well as the evaluation of a particular marketing event performance, are not sufficiently highlighted in modern scientific literature, which indicates the research urgency, and consequently has predetermined the research direction in scientific and practical aspects.

2. GOAL AND RESEARCH METHODOLOGY

The main objective of the article is to determine the methodological approaches to assessing both quantitative and qualitative resulting indicators of the enterprise’s marketing activity, which characterize its performance at the market. The methodological basis of the research includes conceptual bases of the marketing theory, the dialectical logic concepts, and the researches of Ukrainian and foreign scholars in the sphere of the development of an enterprise marketing activities based on the strategic approach are the methodological basis of the research.

To achieve the stated purpose, the authors use the dialectical method of scientific knowledge and a number of general scientific and special research methods, interrelated and consistently applied according to the general logic of the analysis: theoretical generalization, analysis and synthesis, system analysis, and statistical analysis and economic-mathematical modeling, etc.

3. KEY RESEARCH FINDINGS

To determine the marketing performance, it is necessary, at first, to define its impact on the sales income. In this regard, it is necessary to identify the criteria and indicators for the analysis while marketing planning, as well as to determine the amount of costs for an enterprise’s marketing activity to be successful in the market environment.

To exclude double accounting of the value drivers’ influence, in order to reduce the error of calculations and increase the accuracy of forecasting in the marketing system, consider the influence of the factors having a direct effect, that is, the determinative ones.

As is well known, the formula to calculate the operating efficiency, regardless of its level and scale, is as follows:
\[ E = \frac{\text{Prof}}{C}, \]  

where \( \text{Prof} \) – performance (result) of a particular activity, action, function, etc. (profit); \( C \) – costs for certain activities, actions, functions, etc.

As for the marketing activities efficiency, from a theoretical perspective, the result of marketing activity should be understood as its quantitatively ultimate goal, but individual attention is needed to set goals for each direction. Since the objectives of marketing in the practical aspect are even more diverse than in the theoretical one, to simplify the problem decision (scientific and methodological approach development to assess the marketing strategy effectiveness), it is expedient to select one main indicator and express each measure’s effectiveness, which characterizes the activities performance in general. The resulting indicator is as follows: a change in the profit on the sale of final products (if necessary, the indicator of market share that is the target in the entrepreneurship implementation can be used). In addition, the necessity to use quantitative approaches while conducting marketing control of the enterprise’s performance in the business environment argues for this choice.

At the same time, the effectiveness of any marketing event or the entire marketing activity of the company for a certain period can be calculated as the ratio of the profit indicator on the marketing activities or a specific measure per unit of costs required:

\[ E_m = \frac{\text{Prof}_m}{C_m}, \]  

where \( \text{Prof}_m \) – profit on the marketing activity or profit on the improvement of one of the blocks of marketing management system; \( C_m \) – aggregate costs associated with the marketing activity or improvement of one of the blocks of the marketing management system.

In turn, the profit from implementing or improving the marketing activities is determined as follows:

\[ \text{Prof}_m = \text{Prof}_1 - \text{Prof}_0, \]  

where \( \text{Prof}_0, \text{Prof}_1 \) – total producer’s profit from operation in the market and sales of products before and after marketing measures, respectively.

Profit is the difference between the income received and the available costs, and the level of income, in turn, is in direct proportion to the volume of sales, i.e.:

\[ \text{Prof} = R - C, \]  

where \( \text{Prof} \) – total sales income during producer’s functioning at the market, which depends on products sold; \( C \) – total costs related to the production and marketing of products in the international market.

Aggregate sales income in its turn can be expressed in mathematical terms through the function \( f_1 \) by regression analysis, which consists in constructing a linear relationship between two indicators (in our case, between income and sales):

\[ R = f_1(q) = a \cdot q + b, \]  

where \( q \) – the volume of products manufactured and sold in the market; \( a, b \) – regression dependence indicators.

Then we have:

\[ \text{Prof}_m = (R_1 - C_1) - (R_0 - C_0) = (a \cdot q_1 + b - C_1) - (a \cdot q_0 + b - C_0) = a \cdot q_1 - a \cdot q_0 - C_m. \]  

At this stage, the relationship between the various blocks of the marketing management system and sales income can be represented by constructing a functional dependence. Consider the main components of the marketing complex above as factors influencing sales in the context of marketing.

Dependence between volume of sales and the marketing complex main components can be constructed via functional relationship (to minimize error).

\[ q = f_2(A_1, A_2, A_3, A_4, A_5), \]  

where \( A_1 \) – effectiveness of both trade policy and trademark control of an enterprise; \( A_2 \) – price
policy effectiveness (matching the price to its optimal level); \( A_1 \) – staff’s competitive performance; \( A_4 \) – advertising effectiveness; \( A_5 \) – product movement effectiveness.

Empirical expression of the function \( f_2 \) is the most effective again. This dependence is generally as follows:

\[
q = k \cdot A_1^{y_1} \cdot A_2^{y_2} \cdot A_3^{y_3} \cdot A_4^{y_4} \cdot A_5^{y_5},
\]

where \( k \) – proportionality coefficient speaking for relationship between sales revenue and indices chosen; \( y_1, y_2, y_3, y_4, y_5 \) – power coefficients describing the product policy efficiency \( (A_1) \), correspondence the selling price to the optimal level at the international market \((A_2)\), staff’s competitive performance \( (A_3) \), advertising effectiveness \( (A_4) \), product movement effectiveness \( (A_5) \), respectively.

The effectiveness of trade policy and brand management is one of the key indicators of the enterprise’s successful marketing. Company CEOs argue that in addition to the quantitative criteria for evaluating their marketing performance, determining the level of consumers’ loyalty becomes of increasing importance. The lack of a unified approach to assessing consumer loyalty requires the justification of the method of integration of perceptual and transactional loyalty evaluation results.

While exploring the perceptual loyalty of consumers, some scholars expect the evaluation of parameters such as company awareness or popularity through constructing the Scandinavian “map of the market” or the relation to the brand/brands of the enterprise, building the “Me map” model. However, most enterprises note the need to determine the level of consumers’ satisfaction and the probability of their recommending the company, product or services to other consumers. It should be noted that it is expedient to track the insensitivity of consumers to the competitor actions by determining consumer readiness to stay with the enterprise when the prices of competitors are reduced (“elasticity of demand” method), to define the maximum price for goods when the consumer refuses to consume it in favor of another enterprise (“cost of transition” method) or to determine the consumer’s desire to prefer the other brand (“verbal probability” and “relative loyalty” methods).

In turn, when assessing the customer’s transaction loyalty, the profitability of marketing investments (ROMI) is determined; by means of the retention coefficient, the number of consumers who continue to buy the enterprise’s goods or services is estimated, and the “customer lifetime” method allows for determining the duration of dealing with consumers. However, most marketers prefer RFM- or ABC-analysis to determine the level of consumer loyalty.

It should be noted that methods for assessing consumer loyalty are not complex, and these methods complementarity can improve the enterprise efficiency as a whole, therefore, to measure the consumer loyalty, it is necessary to choose the optimal method depending on the loyalty program objectives and the enterprise goals as a whole, the target audience, and the goods or services offered. PSR-FM (Preference, Satisfaction, Recommendations, Frequency, Monetary) method allows to integrate the results of assessing the consumers’ perceptual and transactional loyalty via parameters such as consumer satisfaction level, readiness to recommend the company to contact audiences, insensitivity to the competitor actions, regularity of consuming the enterprise’s goods or services, and the total value of purchases made by a consumer (Figure 1).

PSR-FM method provides for the panel study undertaking that will allow monitoring the dynamics of changes in customer loyalty parameters as an effective indicator of the enterprise’s marketing effectiveness. The frequency of conducting the survey is determined based on semiannual inquiry results.

Customer Satisfaction Index allows to determine the value and ratio of price, quality, accessibility, and other factors influencing consumer loyalty. Each factor has its own level of satisfaction which is assessed by the buyer on a 10-point scale (with a further 100-point interpreting). After the key issues are listed, three more questions are asked:

- “What is your satisfaction level with the overall quality of this enterprise’s goods (services)?” (1 – unsatisfied, 10 – very satisfied);
“How does this company meet all your requirements and expectations?” (1 – expect more, 10 – expect less);

“How ideal is the product (service)?” (1 – below the ideal, 10 – above the ideal).

Then customer satisfaction index is evaluated where weight coefficient is calculated through Delphi method:

\[
CSI = \frac{1}{9} \cdot 100 \cdot (PQ - 1) \cdot 0.3885 + (CE - 1) \cdot 0.3190 + (PV - 1) \cdot 0.2925,
\]

where \(CSI\) – Customer Satisfaction Index; \(PQ\) – perceived quality; \(CE\) – customer expectations; \(PV\) – perceived value.

Appropriate value of the consumer satisfaction index is 80-100%. If the value of the consumer satisfaction index is less than 80%, it is necessary to develop a set of actions aimed at identifying consumer-friendly aspects of the company’s activities that need to be improved.

The critical value of the consumer satisfaction index is less than 40%, when there is maximum consumer loss likelihood if any alternative offers.

It should be noted that willingness to recommend the company to contact audiences is the highest level of consumer satisfaction. This indicator can be determined by the one-digit method, authored by Frederick Reichheld. This method involves calculating the net loyalty coefficient based on respondents’ answers on a 10-point scale to the question: “Would you recommend using our company’s services?”

\[
NPS = %Pr - %D,
\]

where \(NPS\) – Net Promoter Score (“Net Loyalty Coefficient”); \(Pr\) – promoters rate (percentage ratio) (respondents that gave “9-10” answer) of the total number of respondents; \(D\) – critics percentage ratio (those who answered “1-6”) of the total number of respondents.

Acceptable net loyalty ratio is 40% or more. Coefficient less than 40% may indicate either the lack of consumer’s satisfaction with important aspects of the enterprise’s activity or the low perception of services quality. In the first case, it is necessary to carry out additional research in order to identify the reasons for consumers’ dissatisfaction and their unwillingness to recommend the enterprise to friends and acquaintances. In the second case, one should raise the service quality percep-
tion by making changes in the marketing communications activity of the enterprise.

Drawing an adapted Scandinavian “market map” involves one question to be set up: “Which brands / goods of the enterprise do you know or have ever consumed?”, with the possibility of choosing one answer option for each product/brand proposed. This allows to group the consumers into eleven groups (Table 1) and build the very map of the market, upon which indicators such as the proportion of informed persons (knowers) about the company’s products, the share of enterprise’s goods consumption, the degree of indifference, and the share of potential customers are calculated (Table 2).

**Table 1. Adapted Scandinavian “map of the market”**

<table>
<thead>
<tr>
<th>Consumer estimation criteria</th>
<th>Knowers’</th>
<th>Non-knowers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tiers</td>
<td>Preferrers</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>Indifferents</td>
<td>–</td>
</tr>
<tr>
<td>Ex-Triers</td>
<td>Product-Rejectors</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>Enterprise-Rejectors</td>
<td>–</td>
</tr>
<tr>
<td>Non-triers</td>
<td>Product-non-triers</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>Competitor-triers</td>
<td>–</td>
</tr>
</tbody>
</table>

So then, as a result of the Scandinavian “market map” construction, a share of persons informed (knowers) about the company’s products is calculated, which allows for drawing conclusions about the nature of further marketing communication activities of an enterprise. Calculation of the consumption share of enterprise’s goods allows to determine the coverage level of consumers who know about the company.

If the consumption share is low, then it is important to find out the reasons for the low level of consumption and to plan ways for encouraging consumers to make purchases. When calculating the proportion of the enterprise’s goods exclusion, it is important to determine why consumers stop to consume the products of an enterprise or why they start to purchase goods from competitors. The level of commitment to the company’s goods reflects the share of consumers with transaction loyalty. From now, it is necessary to determine whether they are perceptually loyal. The level of indifference reflects the proportion of consumers who have selling potential and can become loyal in the future. The “share of potential consumers” indicator reflects the share of consumers who have never purchased goods from the enterprise. If such goods are consumed by competitors, it is necessary to determine the methods of encouraging consumers to contact the company for the first time. If such goods are not consumed at all, then it is important to determine the reasons for this and, if possible, to formulate the need for these products.

Thus, according to the research results, the company is able to develop or make changes to its communication program and move on to develop and implement a program of forming consumer loyalty. A similar half a year re-study after the program implementation will allow to evaluate its effectiveness and make timely management decisions.

To assess transaction loyalty, it is suggested to investigate parameters such as: the regularity of enterprise’s goods or services consumption and the total cost of consumer purchases. Transactional loyalty of consumers can be estimated based on the internal information of an enterprise using the FM-analysis, which is based on the parameters on which the reference groups are formed:

- **frequency** – the number of purchases made by the consumer over a certain period of time (half a year, year);
- **monetary** – the total amount of all consumer purchases effected during a certain period of time.

To conduct the FM analysis, it is necessary to create a database for each consumer, which will include data on the quantity and amount of all their purchases. The data received for each parameter are divided into three groups; each user is assigned an ID from 1 to 3 depending on his activity. Consumers with the M3 ID are those who provide 80% of the total sales to the company, M2 consumers – 16%, and those with an M1 identifier provide 4%. The distribution of consumers in the number of all purchases is individual in each individual case. By combining the results received, each cone
### Table 2. Analytical support for implementation of enterprise loyalty programs

<table>
<thead>
<tr>
<th>Index (rate)</th>
<th>Calculation formula</th>
<th>Estimation criteria, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share of knowers (K)</td>
<td>[ K = \frac{\sum_{i=1}^{n} x_i}{n} = \left( \frac{K_n}{K_n + NK_n} \cdot 100 \right) + \ldots + \left( \frac{K_n}{K_n + NK_n} \cdot 100 \right) ]</td>
<td>High: &gt; 80, 40-80, Low: &lt; 40</td>
</tr>
<tr>
<td></td>
<td>where ( K_n ) (knowers) – number of respondents who know about the enterprise’s goods; ( NK_n ) (non-knowers) – number of respondents not informed about the enterprise’s goods; ( n ) – total amount of the enterprise’s goods</td>
<td></td>
</tr>
<tr>
<td>Share of triers (T)</td>
<td>[ T = \frac{\sum_{i=1}^{n} x_i}{n} = \left( \frac{T_r}{K_n} \cdot 100 \right) + \ldots + \left( \frac{T_r}{K_n} \cdot 100 \right) ]</td>
<td>High: &gt; 80, 40-80, Low: &lt; 40</td>
</tr>
<tr>
<td></td>
<td>where ( T_r ) (triers) – number of respondents who buy the enterprise’s goods</td>
<td></td>
</tr>
<tr>
<td>Share of preferers (TP)</td>
<td>[ TP = \frac{\sum_{i=1}^{n} x_i}{n} = \left( \frac{P_r}{T_r} \cdot 100 \right) + \ldots + \left( \frac{P_r}{T_r} \cdot 100 \right) ]</td>
<td>High: &gt; 80, 40-80, Low: &lt; 40</td>
</tr>
<tr>
<td></td>
<td>where ( P_r ) (preferers) – number of respondents who purchase goods of the enterprise analyzed entirely</td>
<td></td>
</tr>
<tr>
<td>Share of indifferents (TI)</td>
<td>[ TI = \frac{\sum_{i=1}^{n} x_i}{n} = \left( \frac{I_n}{T_r} \cdot 100 \right) + \ldots + \left( \frac{I_n}{T_r} \cdot 100 \right) ]</td>
<td>High: &gt; 60, 20-60, Low: &lt; 20</td>
</tr>
<tr>
<td></td>
<td>where ( I_n ) (indifferents) – number of respondents purchasing goods from both enterprise in question and from competitors</td>
<td></td>
</tr>
<tr>
<td>Share of product-rejectors (ET)</td>
<td>[ ET = \frac{\sum_{i=1}^{n} x_i}{n} = \left( \frac{P_r E_n + E_n R_r}{T_r + E_n T_r} \cdot 100 \right) + \ldots + \left( \frac{P_r E_n + E_n R_r}{T_r + E_n T_r} \cdot 100 \right) ]</td>
<td>High: &gt; 60, 20-60, Low: &lt; 20</td>
</tr>
<tr>
<td></td>
<td>where ( P_r E_n ) (product-rejectors) – number of respondents who no longer purchase such goods; ( E_n R_r ) (enterprise-rejectors) – number of respondents who previously bought goods, and now buy them from competitors; ( E_n T_r ) (ex-triers) – number of respondents who bought goods in time past</td>
<td></td>
</tr>
<tr>
<td>Share of potential buyers (PU)</td>
<td>[ PU = \frac{\sum_{i=1}^{n} x_i}{n} = \left( \frac{NT_r}{K_n} \cdot 100 \right) + \ldots + \left( \frac{NT_r}{K_n} \cdot 100 \right) ]</td>
<td>High: &gt; 80, 40-80, Low: &lt; 40</td>
</tr>
<tr>
<td></td>
<td>where ( NT_r ) (non-triers) – number of respondents who know about products but never bought them</td>
<td></td>
</tr>
</tbody>
</table>

The consumer will receive a code of FM, which will consist of two digits (33 – the segment of “best” consumers, 11 – “worst” consumers). Accordingly, the goal of implementing the enterprise loyalty program is to expand the segment of “best” consumers and reduce the number of “worst”. Consequently, it is proposed to conduct segmentation of consumers according to indicators such as: the level of satisfaction, readiness to recommend the company to contact audiences, the degree of insensitivity to the competitors’ actions, the frequency and total cost of bookings carried out, i.e., on the consumer
loyalty parameters. The data obtained for each indicator are divided into 3 groups, and each consumer is assigned a code from 1 to 3 (Table 3).

As a result of combining the received data on all indicators, each consumer will be assigned a 5-digit code (from “111_11” to “333_33”), in which the first digit is the code on the “degree of insensitivity to the actions of competitors indicator, the second is the level of consumer satisfaction”. The third is “the willingness to recommend the company to contact audiences”, the fourth is the “frequency of bookings”, and the fifth is “the total cost of the bookings”. Thus, all consumers can be divided into 243 groups (Table 4). Having analyzed the groups received according to certain parameters of loyalty the following groups were generalized: loyal consumers, consumers with transitional loyalty, consumers with transactional loyalty, regular consumers, and the enterprise refusals.

### Table 3. Segmentation of consumers

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer satisfaction index, %</td>
<td>Less than 40</td>
<td>40-80</td>
<td>Above 80</td>
</tr>
<tr>
<td>Willingness to recommend the company to contact audience, grade</td>
<td>1-6</td>
<td>7-8</td>
<td>9-10</td>
</tr>
<tr>
<td>Insensitivity to the competitors’ actions</td>
<td>Ex-triers</td>
<td>Indifferents</td>
<td>Preferers</td>
</tr>
<tr>
<td>Frequency of consumer purchases</td>
<td>F1</td>
<td>F2</td>
<td>F3</td>
</tr>
<tr>
<td>Total cost of consumer purchases (monetary)</td>
<td>M1</td>
<td>M2</td>
<td>M3</td>
</tr>
</tbody>
</table>

### Table 4. Segments of consumers

<table>
<thead>
<tr>
<th>PSR-code</th>
<th>FM-code</th>
<th>Consumer code (frequency of purchase, total purchase cost)</th>
<th>Type of customers</th>
</tr>
</thead>
<tbody>
<tr>
<td>333</td>
<td>333</td>
<td>CL CL PL CL CL PL CL CL PL</td>
<td>Loyal customers</td>
</tr>
<tr>
<td>322</td>
<td>PoCL PoPL PoPL PoPL PoPL PoPL PoPL PoPL PoPL</td>
<td>Customers with transitional loyalty</td>
<td></td>
</tr>
<tr>
<td>331</td>
<td>PoCL PoCL PoCL PoCL PoCL PoCL PoCL PoCL PoCL</td>
<td>Customers with transactional loyalty/regular buyer</td>
<td></td>
</tr>
<tr>
<td>331</td>
<td>PoCL PoCL PoCL PoCL PoCL PoCL PoCL PoCL PoCL</td>
<td>Customers with transactional loyalty/regular buyers</td>
<td></td>
</tr>
<tr>
<td>311</td>
<td>TL TL RC TL TL RC TL TL RC</td>
<td>Persons who gave up on the enterprise (enterprise rejecters)</td>
<td></td>
</tr>
</tbody>
</table>

Some of these groups in turn were divided into smaller segments, depending on their promise in further interaction with the enterprise. Thus, among the loyal consumers, the following segments were distinguished: consumers with complex loyalty and consumers with perceptual loyalty.

Consumers with transitional loyalty were segmented as follows: consumers with potential loyalty and consumers with potential perceptual loyalty.

It should be noted that “regular consumers” segment does not have the potential of forming loyalty. In the “enterprise-rejectors” consumer group, the following segments are identified: consumers who have lost perceptual loyalty; consumers who have lost transaction loyalty; and lost regular consumers.

“CL” denotes segments of consumers with complex loyalty, which bring the greatest profit to the enterprise and are the most promising in the further cooperation. This segment’s representatives consume only the services of one enterprise and are insensitive to the competitors’ actions. In addition, these consumers are characterized by a high degree of satisfaction with the enterprise’s goods or services, and, as a result, they are willing to recommend this company to the contact audience. The customers of this segment should be directed to the main communication efforts of the enterprise in order to maintain their loyalty, achieve their maximum satisfaction and desire to recommend the company to the close family and friends.

“TL” means segments of consumers with transaction loyalty; they consume the services of only one enterprise at a low level of satisfaction or the unwillingness to recommend the company to the contact audience. This situation may be caused by the lack of a competitive offer.

In this case, the communication efforts of an enterprise should be aimed at forming or increasing perceptual loyalty of those consumers who bring more profit to the enterprise. “PL” means consumers with perceptual loyalty that are insensitive to the actions of competitors, consume services of only one enterprise as a result of full satisfaction, are ready to recommend the company to contact audiences, but consumers of this segment bring the smallest profit to the enterprise. In this case, the enterprise communication efforts should be aimed at sales promotion.

“PoCL” and “PoPL” signify segments of consumers with transitional loyalty. Consumers with potential loyalty offer the greatest profit to the enterprise, but they are either not fully satisfied with the services provided or are not ready to recommend the company or are sensitive to the competitors’ actions. The main purpose of the enterprise’s communicating activity aimed at this segment’s consumers is to form their loyalty through finding out the reasons for dissatisfaction and consumption of competitors’ services, finding ways to form their insensitivity to the competitors’ actions.

These consumers can be divided into three groups:

1. Consumers, who bring the largest profit to an enterprise, are highly satisfied with goods and services consumed, but they are not willing to recommend the enterprise to the contact audience. This is because of low level of the service perceived.

2. Consumers, who bring the smallest profit to an enterprise, but they are highly satisfied with the enterprise’s goods and services. If consumers are insensitive to the actions of competitors, then the level of profit will increase.

3. Consumers who bring the largest profit to an enterprise, but are not willing to recommend it to contact audience taking into account (under) not too high level of satisfaction with goods and services consumed. This may be because of low prices or availability of up-market goods and services. The enterprise’s communicating efforts in this case should be aimed at increasing either quality of goods, services of an enterprise or quality of goods and services perceived by consumers.
Consumers with potential perceptual loyalty bring the smallest profit to a company, but they are not sensitive to competitors’ actions. These consumers can be transformed into so called “brand layers” who will recommend the travel company to the contact audience.

“RC” denote the segments of regular customers which are prospectless in terms of further cooperation (cooperation in the future), because they bring the smallest profit as a result of their absolute dissatisfaction and unwillingness to recommend the company to contact audience.

Special focus should be on the consumers with perceptual loyalty who have abandoned the company but brought the largest profit marked “LPL”. The main object of the enterprise’s communicative activities aimed at this segment’s consumers is to regain them through both finding out why they became to purchase competitors’ services and loyalty renewing.

The economic expediency of returning lost consumers marked “LTL” must be determined in each individual case. Since the cost of returning a customer who had previously abandoned the company’s services is 12 times higher than the cost of his maintenance, and the cost of attracting a new consumer is 5 times higher than the cost of his maintenance, it can be concluded that the return of the lost consumer is twice as expensive as attraction of a new one. The return of the consumer segment, marked by the “LRC”, is economically impracticable, since these consumers lost perceptual loyalty and also brought the smallest profit to the company.

According to the repeated consumer loyalty research results, a matrix of strategic development priority directions of the enterprise’s marketing communication activity is being constructed which provides an opportunity to take into account the trends of changing perceptual and transactional loyalty of consumers and make managerial decisions on making changes to the marketing communication activity of the enterprise.

Thus, formula (7) estimating the marketing effectiveness is as follows:

\[ E_m = \frac{1}{C_m} \cdot a \cdot k \cdot A_{i1} \cdot A_{j1} \cdot A_{k1} \cdot A_{l1} \cdot A_{m1} - \]
\[ -a \cdot k \cdot A_{i1} \cdot A_{j1} \cdot A_{k1} \cdot A_{l1} \cdot A_{m1} - C_m, \]  

(11)

where \( A_{i0}, A_{i1} \) – trade policy and company brand management effectiveness before and after the marketing strategy implementation, respectively; \( A_{j0}, A_{j1} \) – price policy effectiveness (price accord to its optimum level) before and after the marketing strategy realization, respectively; \( A_{k0}, A_{k1} \) – staff competitive ability before and after the marketing strategy implementation, respectively; \( A_{l0}, A_{l1} \) – advertising effectiveness before and after the marketing strategy implementation, respectively; \( A_{m0}, A_{m1} \) – product movement effectiveness before and after the marketing strategy implementation, respectively.

Sometimes, not increment in profit but an increase in the volume of product sales is of greatest importance: when the development of new markets begins; when the purpose of international business is to strengthen its position in the developed foreign markets, etc. In such cases, it is appropriate to evaluate the marketing performance by the indicator of sales. Then, the model for assessing the effectiveness of marketing activities will be as follows:

\[ E_m^q = \frac{k \cdot A_{i1} \cdot A_{j1} \cdot A_{k1} \cdot A_{l1} \cdot A_{m1}}{C_m}, \]  

(12)

where \( E_m^q \) – marketing performance index based on volume of sales index.

With the help of the model proposed, the effectiveness of marketing activities as a whole in the enterprise or business process, as well as the effectiveness of a particular marketing event in the market regardless of the level, can be estimated. In this case, the numerator will be the difference between the profit indicators before the marketing event and after the marketing event, i. a. , at the regional level.

It should also be noted that since the main objective of any business entity is to maximize the resulting indicators that characterize the effectiveness of its functioning on the market (one of these indicators is the profit obtained as a result of participation in international business processes,
regardless of its orientation, sphere activities and principles of functioning), there is a need to build a model for forecasting profit from production and sales activities with participation in entrepreneurship (Figure 2), focusing on the principles of marketing and taking into account the maximum number of factors that affect the effectiveness of the entity in the business space, the nature and features of manifestation which have been studied above.

In this case, the organizational model is not an end in itself; it must reflect the requirements that are necessary to ensure profitability, in particular, resource efficiency, process efficiency and market efficiency.

Proceeding that the main factors influencing the profit from participation in business processes (ROF) are the price and gross output of production, we have the formula:

\[
\begin{align*}
\text{Prof} &= \frac{\text{Prof}_i \cdot S}{\text{Prof} + S} \\
&= \frac{\text{Prof}_i \cdot S}{S + \text{Prof}_i} \\
&= \frac{\text{Prof}_i \cdot S}{S + \text{Prof}_i} \cdot S \cdot q = \frac{\text{Prof}_i}{S + \text{Prof}_i} \cdot P \cdot q,
\end{align*}
\]

where \( P \) – price per unit; \( \text{Prof}_i \) – profit on end product sales; \( S \) – product unit cost.

At the second stage of modeling, it is necessary to construct gross output function (using macroeconomic production functions, through which the highly aggregated characteristics of the production process at the level of industries, groups of industries, and the production system as a whole are studied).

**Figure 2. Model of enterprise profit forecasting depending on the effectiveness of the marketing strategy**

---

Stage I

- Estimating the effectiveness of the participation in the business process, whereby profit forecast will be calculated \( (\text{Prof}) \)

- Estimating the factors affecting product sales profit in the market. Each factor is expressed by corresponding quantitative indicator:
  - sales revenue \( (q) \);
  - product sales price \( (P) \)

- Building a profit formula from participating in a business process based on selected indices

Stage II

- Estimating the manufacturing efforts \( (V) \) through the following function \( V = f(F; L) \)

- Determining the factors influencing the indicator of the production effort volume. Each factor is expressed by corresponding quantitative indicator:
  - basic funds \( (F) \);
  - number of employed (labor costs) \( (L) \)

- Estimating the gross output depending on the volume of industrial efforts when entering the market

Stage III

- Calculation of profit from participation in the business process, taking into account marketing system effectiveness
The Cobb-Douglas function dominates in the study of production functions at the macro level. The Cobb-Douglas function demonstrates the dependence of output on two main indicators: labor costs, which are expressed by the number of people employed in the production process, and fixed capital, which is manifested through the volume of fixed assets.

The homogeneous first-degree static two-resource Cobb-Douglas function is as follows:

\[ V = A \cdot L^\alpha \cdot F^{1-\alpha}, \]  

where \( V \) – overall production; \( L \) – labor costs; \( F \) – capital; \( A, \alpha \) – parameters (Abramovitz that evaluates the contribution of the output expansion and the coefficient of elasticity, respectively).

The limitations of the Cobb-Douglas function are that an important analytical indicator, the elasticity of the substitution of resources, is clearly defined in it, such that is equal to one.

Thus, this function does not allow to take into account the peculiarities of the transition economy, characterized by uncertainty and globalization, and therefore involves the use of a standard scale of elasticity coefficients. In addition, this function is aimed at taking into account volumes of production, however, in modern conditions, this indicator is adjusted by market factors.

In order to adapt this approach to the real conditions of international business entities, it is necessary to introduce an indicator of manufacturing efforts volume \( (V) \), which depends on the volumes of productive assets and the number of employed, taking into account the corresponding coefficients of elasticity for each of them. This will allow taking into account the peculiarities of the production environment of a specific manufacturer and will increase the accuracy of calculation. Thus, we have a situation in which the volume of manufacturing efforts is estimated by the formula:

\[ V = k_1 \cdot F^{e_f} \cdot L^{e_r}, \]  

where \( e_f \) – coefficient of overall production and sales upon the number of employed calculated as follows:

\[ e_f = \frac{F - F_2}{\Delta F} \cdot \frac{q_1 - q_2}{\Delta q}, \]  

and \( k_1 \) – adjustment coefficient (scaling factor) that takes into account pace of technological innovation and other factors.

To find the coefficient of elasticity of overall production from the volume of fixed assets, it is possible to construct a straight line based on the regression analysis:

\[ q = f_1(F) = \psi_0 + \psi_1 \cdot F + e. \]  

To calculate the coefficient of elasticity of the finished goods production volume upon the volume of fixed assets on the basis of adjusting the volumes of production carried out earlier, the indicators of fixed assets with the largest and lowest value are chosen. Then, on the basis of the selected indicators and corresponding indicators of the production volume, the production elasticity coefficient is calculated upon the volume of fixed assets.

At the next stage, it is necessary to start an analysis of the number of people employed. We postulate the straightforward form of dependence between the volume of overall production and the number of employed:

\[ q = f_2(L) = r_0 + r_1 \cdot L + e. \]  

The final calculation of the elasticity coefficient of overall production upon the number of employed is carried out by selecting the indicators of number of employed with the largest and the smallest values. The indicator of overall production and sales will be considered as a function of manufacturing effort volume, and, in this case, there is the possibility of using linear dependence through the construction of the regression equation:

\[ q = f_3(V) = s_0 + s_1 \cdot V + e. \]
Within the chosen statistical period, to perform further calculations and to derive the final formula, which allows forecasting volumes of production, it is necessary to determine the value of manufacturing efforts indicator, upon which the possibility appears to form a table of statistical data for building a linear relationship between the volumes of production in a given commodity group and volumes of manufacturing efforts.

Thus, we have the equation of overall production volumes dependence on volumes of manufacturing efforts as follows:

\[ q = f_3(V) = s_0 + s_1 \left( k_1 \cdot F^{e_1} \cdot L^{e_1} \right). \] (21)

Then, based on the calculations performed, formula (13) takes on this form:

\[ Prof = \frac{Prof}{S + Prof} \cdot P \left( s_0 + s_1 \cdot k_1 \cdot F^{e_1} \cdot L^{e_1} \right). \] (22)

However, it is not enough for a modern manufacturer to predict the profit from the final products manufacturing, since the real profit from its implementation is influenced by a large number of market and marketing indicators. Thus, in order to obtain a formula that allows predicting the final profit from the sale of finished products to consumers, it is necessary to multiply the indicator received by an adjusting marketing factor that characterizes marketing efficiency:

\[ \text{Prof} = \frac{Prof}{S + Prof} \cdot P \left( s_0 + s_1 \cdot k \cdot F^{e_1} \cdot L^{e_1} \right). \] (23)

\[ \text{Prof} = \frac{Prof}{S + Prof} \cdot P \left( s_0 + s_1 \cdot k \cdot F^{e_1} \cdot L^{e_1} \right) \times \]
\[ \times \frac{1}{C_m} \left\{ a \cdot k_1 \cdot A_{i1}^{y_1} \cdot A_{21}^{y_1} \cdot A_{31}^{y_1} \cdot A_{41}^{y_1} \cdot A_{51}^{y_1} - a \cdot k_1 \cdot A_{10}^{y_1} \cdot A_{20}^{y_1} \cdot A_{30}^{y_1} \cdot A_{40}^{y_1} \cdot A_{50}^{y_1} - C_m \right\}. \] (24)

As a result, we obtain a two-factor model for forecasting profit from production and a seven-factor model to forecast profit from manufacturing and sales of market products given the participation in the business process, that is, from the enterprise’s production and sales taking into account the functioning in the markets, regardless of the magnitude of a particular product group.

\[ q = f_4(V) = K_4 \cdot \left( k \cdot F^{e_1} \cdot L^{e_1} \right)^z, \] (25)

where \( f_4 \) – function that characterizes the relationship between the volumes of manufactured and sold products and the manufacturing efforts of multicollinear form; \( K_4 \) – coefficient of proportionality, indicating the existence of an empirical relationship between the volumes of manufactured and sold products and manufacturing efforts; \( z \) – index of degree, characterizing the degree of manufactured and sold products volumes dependence on the manufacturing efforts.

Thus, following the corrections we have:

\[ \text{Prof} = \frac{Prof}{S + Prof} \cdot P \left( K_4 \cdot \left( k \cdot F^{e_1} \cdot L^{e_1} \right)^z \right) \times \]
\[ \times \frac{1}{C_m} \left\{ a \cdot k_1 \cdot A_{i1}^{y_1} \cdot A_{21}^{y_1} \cdot A_{31}^{y_1} \cdot A_{41}^{y_1} \cdot A_{51}^{y_1} - a \cdot k_1 \cdot A_{10}^{y_1} \cdot A_{20}^{y_1} \cdot A_{30}^{y_1} \cdot A_{40}^{y_1} \cdot A_{50}^{y_1} - C_m \right\}. \] (26)

As a result, we obtain a two-factor model for forecasting profit from production and a seven-factor model to forecast profit from manufacturing and sales of market products given the participation in the business process, that is, from the enterprise’s production and sales taking into account the functioning in the markets, regardless of the magnitude of a particular product group.

\[ \text{CONCLUSION} \]

In conclusion, in current economic environment, the functioning of the enterprise should consist of actions aimed at achieving mutually agreed economic, image, information, environmental, and social goals. In this regard, the article develops the concept of forming a marketing strategy for the operation and development of an enterprise under instability, which is based on system-situational approach use. A tool for evaluating the effectiveness of marketing strategies is proposed: model for evaluating
the marketing activities effectiveness on the basis of sales; model to forecast the amount of profit from participation in international business processes; plan of actions in predicting profit from participation in business processes, taking into account the effectiveness of the complex implementation marketing strategies; and the PSR-FM method, which allows to integrate the results of consumers’ perception and transaction loyalty evaluations). The proposed tools are universal because they allow for analyzing the effectiveness of the company’s marketing as a whole and the effectiveness of a particular marketing event, regardless of the sphere of economic activity, as well as to form or adjust marketing strategy to obtain additional competitive advantages in a dynamic market environment.

REFERENCES

16. Оценка качества услуг с применением CSI [Otsenka kachestva uslug s primeneniem CSI]. Website ‘GenskayFormula.com’. Retrieved


