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MARKETING RISKS: CLASSIFICATION AND METHODS OF ASSESSMENT

The paper provides risks analysis in marketing activities. Two statistical methods are identified for marketing risk assessment. Quantitative methods allow to obtain probabilistic risk assessment. Qualitative methods allow to group risks by categories: high, medium and low. Given classification and evaluation system of marketing risk corresponds with generic indicators of marketing theory. The scientific and methodological approach is used to assess market risks in all areas of marketing: in product, price, sales and communicative policies. Marketing research is an instrument for marketing risks assessment, which trend is based on the probability of certain risks for each marketing activity.
Keywords: marketing risks, risk assessment, quantitative methods, qualitative methods, marketing research

Statement of the problem. Nowadays, the product life cycle is reducing; the number of trademarks is increasing; the effectiveness of advertising campaigns is reducing; the value of traditional mass media is decreasing. In these conditions the risks in marketing are increasing.

The increase in the riskiness of entrepreneurship in the 21st century is evidenced by a new definition of marketing, which was proposed by the American Association of Marketing. The previous version is: "Marketing is the process of planning and implementing of the plan pricing, promotion and implementation of ideas, goods and services through the exchange that meets the goals of individuals and organizations" [1, P. 1].

There is a focus on the risks appears in the new version: "Marketing is a function of organization which includes a set of processes for the creation, promotion and delivery of consumer values on the base of management of relationships with customers,resulting in the organization bears risks and benefits" [2, P. 45].

In the specialist literature the term "risk in marketing" is the subject of debate.

Analysis of the recent research and publications. Risk is inherent attribute of business activities and theory of risks created in the work of many scientists.

A. Smith has laid the bases of the theory of risks. He believed that profit is compensation to the owner of capital for risk [3, p. 157]. In the eighteenth century the scientific basis for quantitative risk calculations not yet formed and businesses relied on luck, experience and intuition. In economics during the nineteenth to the first half of the twentieth century two theories of business risks (classical and neoclassical) were formed.

Classical theory created by J. Mill., N. Senior, F. Knight identifies the economic risk as the mathematic expectation of profit loss or probability of losses that can appear.

Neoclassical theory established in the 30s of the twentieth century by A. Marshall, A. Pigou, J. Magnussen based on the marginal approach. It considered the problem in terms of risks minimization.

Category "risk in marketing" is the subject of research by many scientists.

Authors of the textbook "Marketing" ed. A.Pavlenko under the risk in marketing understand the threat of loss or shortfall in income as a result of implementation of specific decisions or types of production and sales activities, based on the recommendations of Marketing [4, P. 269].

V. Granaturov, I. Litovchenko, S. Harichkov consider that marketing risk determines the possibility of unplanned changes of the final result of activities because of shortcomings in the organization of marketing activities [5, P. 118].

T.P. Danko considers that marketing risk creates a situation of instability, variability, accidents in the goods assessment by the buyer or through the pricing policy of the company, or through the portfolio content, or through the way of notification of the goods (advertising), or through the error in choosing of market promotion form [6, P. 78].

I.M. Volkov, M.V. Grachev believe that marketing risk is the risk of loss due to incorrect strategy or tactics on the market [7, P. 210].

A.Gordienko considers that marketing risk is a high probability to loss initially interested in the product customer, marketing miscalculation in detecting of target market of goods, hard marketing strategies of competitors in this market segment or a decline in demand for the products due to its insufficient quality or inability to meet the expectations of consumers [8].

A.G. Badalova, O.A. Churzina think that marketing risk is a shortfall in income due to lower in sales or price of the goods. Adverse events associated with sales [9]

M. McDonald, B. Smith, K. Ward propose a classification of risks in marketing, which is divided into three groups: market risks associated with the estimation of potential market size; risks associated with the chosen marketing strategy; profit risks [10, P. 293–296]. This classification is not names the sign of distribution on groups. In general, all the risks by nature are risks of reduction in income.

To assess the risks in the marketing A.G. Badalova, O.A. Churzina offer to perform the following procedures [9]: detect a complete list of risks; determine the probability of their manifestation; estimate the expected amount of losses; rank the possible occurrence of losses; establish an acceptable level of risk, determine the risk zone.

Unsolved aspects of the problem. A wide range of views on the types and classification signs of marketing risks is formed in the international scientific community. Often these positions contradict to each other as well as the classic marketing postulates. There are unsystematic mathematical and statistical variations of market risks assessment.

Statement of purpose is to develop the marketing risks classification that corresponds to generic characteristics of marketing theory and to offer the marketing risks evaluation systems.

The main research. Definition of the category "risks in marketing" has to take into account the generic characteristics of marketing as a science: responsibility for solving of the problem of optimizing sale; complexity and synchronicity of marketing instruments using. It is proposed the following definition: risks in marketing is a category to reflect the inherent properties of marketing activity management that appears on objective or subjective reasons, has measurable or immeasurable character and can cause a decrease in planned income in the process of solving problems of sales optimization. Risks in marketing are predictable events that can cause loss or damage.

Risks in marketing advisable to classify by the sign "place of risk arising" and divided into external and internal.

External is the risk of external factors of micro marketing environment: risks in supply, in competition, in intermediary, risks of consumer and contact audiences.

Interior is a risk of internal factor of micro marketing environment – company; risk in commodity; price risk; sales risk; communication risk.

Risks related to factors of macro marketing environment to refer to the marketing risks is inappropriate, but rather to the socioeconomic risks.

To assess the risk in marketing there are two groups of statistical methods: the quantitative - allow to receive the probabilistic risk assessment; the qualitative – allow to group the risks by the categories: high, medium and low (Table. 1).

Table 1 – Quantitative methods of risk assessment in marketing

The method of risk assessment	The indicators which can be assessed by the method	Risk assessment
1. Building of the confidence interval for the general average	a) Assessment of average customers costs for goods in general totality; b) General average assessment of consumption goods; c) Assessment of the general average ratio of buyers to the product in the chosen scale.	Confidence interval is built with some chosen level of reliability − 90%, 95%, and 99%. Risk ie the probability that actual general average is outside the obtained range is: $\alpha = 1 - \gamma$.
2. Construction of confidence interval for the proportion in the general totality	a) Assessment of the proportion of general totality of customers who prefer the goods; b) Estimates of the proportion of buyers who are loyal to the product; c) Assessment rating of TV or radio programs; d) Assessment of program audience	The confidence interval for the proportion in the general totality based on the selected level of reliability γ - 90%, 95%, 99%. The risk that the valuation will be outside the confidence interval is $\alpha = 1 - \gamma$.
3. Construction of confidence interval of forecasting of a certain marketing variable	a) Forecasting of goods sales volume depending on the one or more marketing factors (price, income of buyers, advertising effects); b) Forecasting of sales volumes of trend models (depending on the time); c) Forecasting of the cost of advertising services depending on one or more factors (number of program viewers, site visitors, income of listeners, channel rating).	The confidence interval for the forecast of the dependent variable is based on the chosen level of reliability γ − 90%, 95%, 99%.
4. Finding of sample size	a) Finding of the sample size for assessing of general average; b) Finding of the sample size for assessing of the share signs in general totality	The sample size is calculated on chosen level of reliability γ - 90%, 95%, and 99%. Also, is given the level of limit error Δ. The probability that the limit of error is exceed Δ defined as $\alpha = 1 - \gamma$.

Initial data to build the confidence interval of general average can be obtained from the following marketing research.

a) Estimated Avg costs:

• Customers poll – a representative group of customers is formed and according to poll results there is a row of x_1, x_2, ... x_n costs of n respondents receive;

• Monitoring of consumers – forming of panels that is a representative groups of respondents who represent all segments of the consumer;

• Expert assessment - experts estimate the potential of new products market;

• Experiment – choose one of the methods of the experiment.

b) The assessment of the average consumption:

• Poll of customers;

• Monitoring of buyers;

• Experts assessment;

•Experiment – to study the averages consumption volume of goods the experimental markets are created.

It is possible to offer the following classification of risks in commodity policy which arise in the development of new or modifications of existing product on the market of metal and plastic designs (Table. 2).

Table 2 – Classification of risks in commodity policy which arise in the development of new or modifications of existing product

Types of risks	Probability of risks	Methods of marketing research to reduce risk
Wrong product concept	High	Testing of the concept of product by experts, consumers, producers
Mistakes in commercial policy (trademark, branding of equipment, etc.).	High	Testing of the concept of product by experts, consumers, producers
Product positioning mistakes	High	Testing of positioning
Mistakes in consumers goods perception assessing.	High	Market tests conducting

In the context of risk management in commodity policy in the development of new or modifications of existing product it is reasonable to conduct of some market research (Fig. 1).
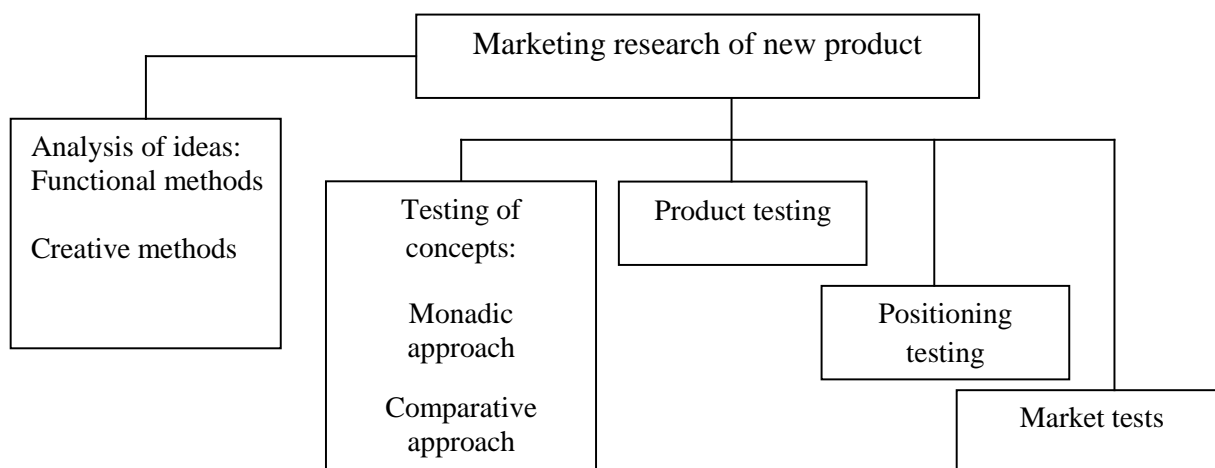
Figure 1 – Types of market research of risks arising in the development of new or modifications of existing product

Commodity risk can also be classified according to the stages of the product life cycle (PLC) (Table. 3).

Table 3 – Classification of risks in commodity policy by stages of PLC

PLC stages	Risks	Risks probability	The object of marketing research to develop risk management measures
Promotion to market	The rejection of goods by consumers	High	Research of consumer attitude to the products company
	Low rates of sales growth	High	Analysis of sales of competitors
Growth	Competitors market entry	High	Market monitoring
	Competitive war	Middle	Research of competitors (intelligence)
	Changing of consumer preferences	High	Consumer research
Maturity	Competitive war	High	Research of competitors and consumers
	Mistakes with the expansion of commodity range	Middle	Research of consumer attitude to the product line expansion
	Errors of product modification	Middle	Research of consumer attitude to the modification
	Decrease in consumer interest	High	Customer loyalty research
Decline	Loss of market share	High	Market research
	Incorrect repositioning	Middle	Market and consumers researches
	Errors of product modification	Middle	Consumer preference research

At each stage of PLC the specific and common commodity risks are highlighted. For their identification, evaluation and neutralization the sets of marketing research of consumers and competitors can be identified.

Research of distribution network in various stages of PLC allow us to estimate the network readiness for product sales, difficulties in the product sales, quality of location of goods on the store shelves (Tab. 4).

Table 4 – Types of marketing research of distribution network on the stages of the product life cycle

PLC stages	Problems in research	Research methods
Promote	Ready to sell of new product Difficulties in implementing of new product Effective location of the new product on the store shelves	Profound interviews and focus groups with representatives of wholesale and retail Retail audit Supervision in points of sale
Growth	Difficulties in implementing of new product Effective goods presentation to the consumer Analysis of the effectiveness of new distribution channels	Profound interviews and focus groups with representatives of wholesale and retail Retail audit Supervision in points of sale
Maturity	Difficulties in implementing of new product Effective goods presentation to the consumer Analysis of the effectiveness of distribution channels	Profound interviews and focus groups with representatives of wholesale and retail Retail audit Supervision in points of sale
Decline	Difficulties in sale of goods Analysis of reasons of inefficient distribution channels	Profound interviews and focus groups with representatives of resellers Retail audit

Study of competitors at all stages of the product life cycle is carried out in two directions: activity monitoring and analysis of products (Tab. 5).

Table 5 – Study of competitors in the various PLC stages

PLC stages	Problems in research	Research methods
Promote	Monitoring of the competitor activity Analysis of competitor activity, goals, strategies, means to achieve the goals Analysis of competitors goods Competitive advantages and disadvantages of products	Analysis of secondary information Consumer interview In-depth interviews and focus groups with representatives of wholesale and retail sale Business intelligence Retail audit

Growth	Monitoring of the competitor activity Analysis of competitor reaction Analysis of competitors activity Analysis of competitors goods Competitive advantages and disadvantages of products	Analysis of secondary information consumer interview In-depth interviews and focus groups with representatives of wholesale and retail sale Business intelligence Retail audit
Maturity	Monitoring of the competitor activity Analysis of competitor reaction Analysis of the main competitors activity Analysis of competitors goods Competitive advantages and disadvantages of products	Analysis of secondary information consumer interview In-depth interviews and focus groups with representatives of wholesale and retail sale Business intelligence Retail audit
Decline	Monitoring of the competitor activity Analysis of the main competitors activity Analysis of competitors goods Competitive advantages and disadvantages	Analysis of secondary information consumer interview In-depth interviews and focus groups with representatives of wholesale and retail sale Business intelligence Retail audit

Risks in pricing can identify and assess by results of market research. In this group of risks the marketing researches focused on determination of price elasticity of demand and price sensitivity of consumers.

To determine the price elasticity of demand in marketing studies used different methods, each of which has certain advantages and disadvantages (Tab. 6).

Table 6 – Methods of study of price elasticity of demand

Method	Method advantages	Method disadvantages
Analysis of the dynamics of sales	Easy to use Allows you to analyze the elasticity of demand on existing products price Allows you to analyze the impact of other factors	Impossibility to use a new products for analyze
The analysis of panel research data	Allows you to analyze the cross-elasticity for competitive products and determine the demand elasticity from income	Impossibility to use a new products for analyze
Market tests (pricing experiments)	Allows you to forecast actual behavior of the consumer It can be used to analyze new products	The high cost A significant period for carrying Lack of Privacy The presence of risk for provocation of competitors to actions in response
Expert polls	Makes it possible to forecast the long-term situation It can be used to analyze of new products	Difficulties in respondents screening Expert estimates may be different than opinions of consumers The limited broadcasting throughout the market

In market research of price sensitivity of consumers two methodological approaches were used (Fig. 2).
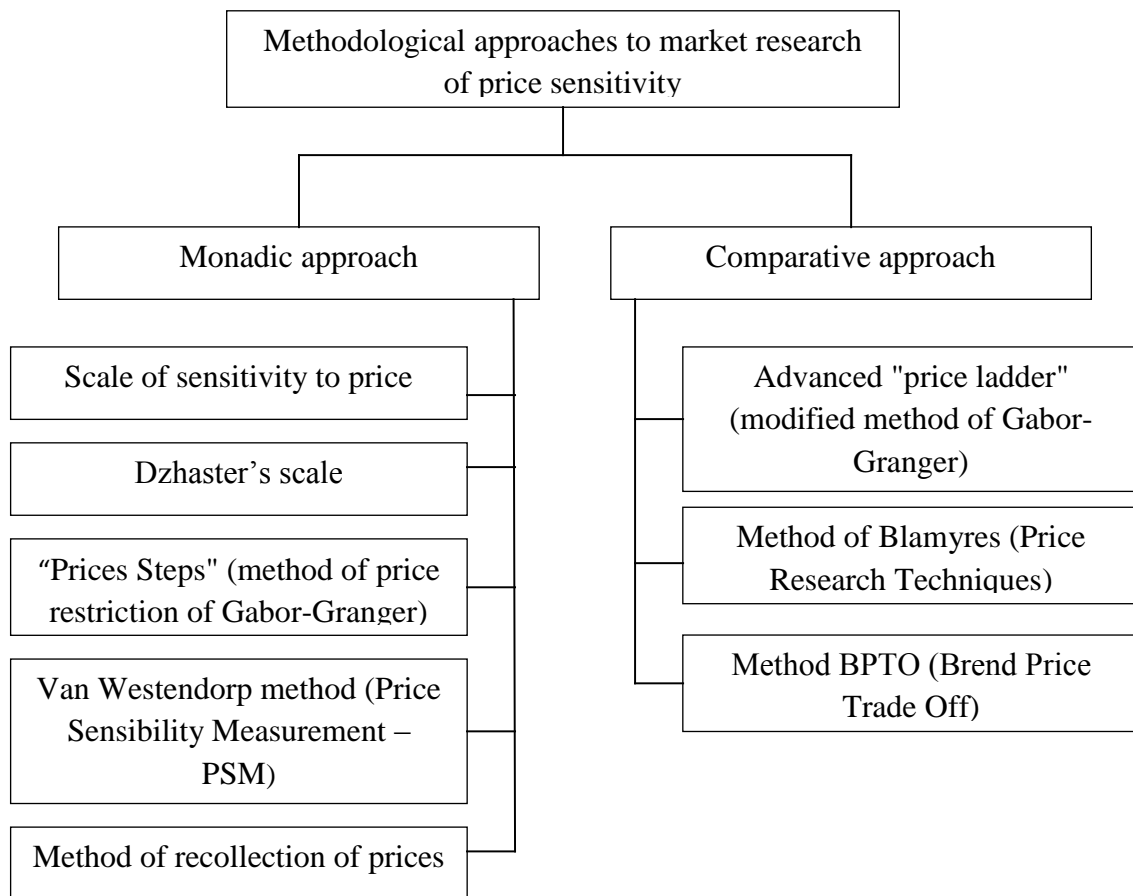

Figure 2 – Methodological approaches to market research of price sensitivity

Monadic approach offer the respondent only one product without the competitive situation. A comparative approach propose to the consumer to compare the price product characteristics with competing products and to find out whether he is ready to buy and at what price.

The scales of sensitivity to prices are based on the use of rating scales with the alternatives from "do not buy exactly" to "exactly buy". By using such alternatives the answers of respondents in three semantic blocks are analyzed:

1) Testing the product. By five point Likert scale respondent assesses his desire to try the product from " do not try exactly" to "exactly try";

2) Usage. After the product demonstration interviewer asks the respondent about the availability of the product at respondent's home. Risks in marketing activities can be divided into three areas (Tab. 7).

Table 7 – Risks in the sale activity of enterprise

Risks	Probability of risk	Methods of marketing research to reduce the risk
1) Errors in the choice and organizing of distribution channel	Middle	Research related to the choice of distribution channel
2) Errors in assortment and merchandising policy	Middle	Marketing researches of merchandising and assortment policy
3) Errors in effectiveness of trade assessing	Middle	Marketing researches of assessing the effectiveness of trade

The probability of all three types of risks can be considered as average, ie within 30-60%, so that there is a sufficient market research technique that reduce risk and get rid of the uncertainty of the situation.

In the communication activities risks arise at various stages of creation, implementation and assessment of the effect of communication activities (Tab. 8).

Table 8 – Risks in communication activities [14, P 178]

Stage of communicative campaign	Risks	Probability of risks
Development of creative strategy	Correspondence to the requirements of consumers	Middle
Development of creative concept	The perception of creative concept by consumers. The failure of creative concept	Middle and High
Implementation of communication	Understanding of the audience Choice of communication channel Calculation of frequency of communication applications	Middle and High
Check the awareness of the subject of communication	Communicative campaign will not increase the awareness	Middle
Checking of the subject of communication recollection	Communicative campaign does not increase the rate of recollection	Middle
Assessment of communication campaigns effectiveness	The cumulative effect of communication campaign turned negative	Middle

Let us consider methods of marketing research on communication activities. Market research of sales promotion and PR are held on similar stages and using identical methods. This market research can be divided into three areas:

• Analysis (testing) of advertising appeal;
• Selection of the most effective channels of information spreading;
• Choosing the optimal format of advertising campaign.
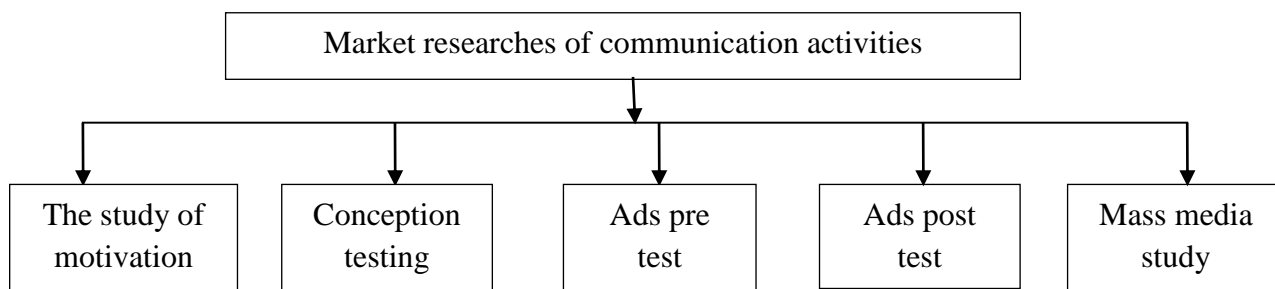Fig. 3 shows the typology of market research of communication activities.

Figure 3 – Types of marketing research of communication activities

Testing of motivation and concepts of advertising appeal is carried out by the same methods of marketing research, as in the case of the market launch of a new product. These methods were considered in the analysis of commodity risks. It can be used in various combinations of qualitative and quantitative marketing researches.

In carrying out of advertising pretest (both quantitative and qualitative) there are three main techniques for information use:

• Interview that conducted after the demonstration of promotional materials;
• Laboratory tests;
• Simulation tests.

We classified functional risks in marketing and proposed the directions of marketing research for their detection. We classified the risk in marketing on the basis of "place of risk arises" on internal and external risks. External is the risk of external factors of micro marketing environment, interior is a risk factor of internal micro marketing environment – of the enterprise.

Research conclusions and recommendations for further research. To assess the marketing risks we developed a method that consists of following stages:

1) building of confidence interval for the general average;
2) building of confidence interval for the share of signs in the general totality;
3) building of confidence interval of certain marketing variable forecast when by the initial data we obtain the regression model;
4) finding of the sample volume is one of the key issues in market research. If the sample is too small to get the characteristics of the general totality, the risks of erroneous forecasts and estimates are great;
5) determining of differences between consumers in different segments.

The logic of scientific marketing research on the risks stimulates to further formation of areas of marketing research in Internet. In particular, quantitative and qualitative methods of their effectiveness assess.

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Маркетингові ризики: класифікація та методи оцінки.

У статті наведено аналіз ризиків у маркетингових заходах. Для оцінки маркетингового ризику визначено два статистичні методи. Кількісні методи дозволяють отримати імовірнісну оцінку ризику. Якісні методи дозволяють групувати ризики за категоріями: високий, середній та низький. Дана система класифікації та оцінки маркетингового ризику відповідає загальним показникам теорії маркетингу. Науковий та методологічний підхід використовується для оцінки ринкових ризиків у всіх сферах маркетингу: у товарах, цінах, продажах та комунікативній політиці. Маркетингове дослідження є інструментом оцінки маркетингових ризиків, тенденція якої базується на ймовірності певних ризиків для кожної маркетингової діяльності.

Ключові слова: маркетингові ризики, оцінка ризиків, кількісні методи, якісні методи, маркетингові дослідження.