

UDC 339.138

DOI: 0.57111/econ/4.2023.53.

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Implementation of modern marketing tools in entrepreneurial activity

Abstract. Marketing activity focuses on new forms of relations with consumers, and marketing communications determine the current research topic and its relevance. The purpose of the study was to substantiate the use of modern marketing tools in business activities to ensure the sustainable development of the enterprise. During the research, empirical methods were used to review and comprehensively present indicators and features of marketing activity and marketing tools, analysis, and synthesis for a visual representation of the features of marketing tools in use in modern conditions of entrepreneurial activity. Objective information on the state of the industrial products market and the presented elements of the industrial enterprise's marketing activities have been systematized and analysed. A detailed analysis of current trends in the development of marketing activities and the impact of information technology on the development of entrepreneurship is carried out, which is now the basis for the formation of the necessary set of marketing tools that can be used to improve the efficiency of the enterprise. It was determined that in the transition to market mechanisms of functioning, Ukrainian machine-building enterprises needed to optimize their activities, considering the mutual influence of the components of each enterprise's external market and internal marketing environment. It was concluded that Ukrainian enterprises are forced to pay great attention to the processes in a rapidly changing external

Article's History: Received: 10.04.2023; Revised: 07.10.2023; Accepted: 29.11.2023

Suggested Citation:

Shtal, T., Ptashchenko, O., Rodionov, S., & Kurtsev, O. (2023). Implementation of modern marketing tools in entrepreneurial activity. *Development Management*, 21(4), 53-63. doi: 10.57111/econ/4.2023.53.

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environment to adapt and adapt to them promptly; this is especially important for industrial enterprises focused on marketing activities. The presented research in the form of recommendations for using marketing tools has practical significance for modern business structures

■ **Keywords:** marketing complex; marketing activity; Internet marketing; marketing technologies; a set of marketing tools

■ INTRODUCTION

Modern enterprises stand on the path of rapid information space and environment development. The formation of the era of the information society provides restructuring in adopting management decisions on organizational structures at all enterprises. Stable operation on the market is only possible with gradual and coordinated marketing. Under such conditions, the problem of obtaining, collecting, accumulating, analysing, organizing, and rationally using a significant amount of operational and reliable information for decision-making related to various marketing functions is becoming more and more relevant. Therefore, the most important goal of modern marketing activity is to identify new, not yet satisfied needs or new forms of meeting already known needs, orienting production to meet the existing demand, and, thanks to this, staying ahead of competitors. Modern entrepreneurial thinking proceeds from the fact that the sales market is the starting point of all enterprise business activity. Y.-C. Huang (2022) claimed that every enterprise, firm, or organization lives thanks to the market and for the sake of the market. In this regard, marketing activity integrates and coordinates all management functions at the enterprise and directs them to the object of marketing activity – the sales market.

W.G. Zikmund & M. D'Amico (1998), Ye.V. Saveliev *et al.* (2008), P. Kotler *et al.* (2016) determined that the priority directions for the development of marketing activities of enterprises shortly will be focused on increasing the efficiency and optimization of data collection, storage, processing, and analysis, establishing individual sustainable relationships and communications with consumers. Under such conditions, it is necessary to determine the indicators of marketing activity, which will reflect modern trends in marketing development. H. Krchova & K. Švejnová Hoesová (2021) considered that the problem of developing marketing indicators covers a relatively wide range of research and practical aspects of marketing, for example, evaluating the profitability of marketing investments, describing the structure and relationships between internal marketing and financial indicators, evaluating client assets, brand assets, long-term and short-term effects

of marketing expenses, etc. Marketing theorists and practitioners have developed many indicators for evaluating marketing. The researchers (Kotler, 2003; Ambler, 2004; Evans & Berman, 2009) studied how the leading marketing researchers use 15 indicators that allow a comprehensive assessment of marketing effectiveness: 1) brand awareness; 2) consumers who tried the product before purchase (test-drive); 3) the level of customer churn (churn); 4) level of satisfaction; 5) take rate; 6) profit; 7) net discounted value; 8) internal rate of return (IRR); 9) payback lesson; 10) customer lifetime value (CLTV); 11) cost per click; 12) conversion ratio (TCR – transaction conversion ratio); 13) return on investment in advertising; 14) bounce rate; 15) word-of-mouth marketing.

The famous American marketing scientist, P. Kotler (2003), defined Marketing as a social and managerial process aimed at satisfying the needs and needs of individuals and groups through the creation, supply, and exchange. Companies create value for consumers (in the form of a product or service) and develop a strong relationship with them to receive value from them in return (cash). According to P. Kotler *et al.* (2016), the definition of marketing is based on the exchange process and recognizes the importance of the “value” of the product for the end consumer. In works (Ambler, 2004; Kotler *et al.*, 2016; Flaig *et al.*, 2021), the following conclusion was made that marketing activity can be understood as a social-management process, with the help of which individuals and groups of people, through the creation of products and their exchange, get what they need. Thus, the purpose of the study was to determine the features of the implementation of modern marketing tools in business activities.

■ THEORETICAL FRAMEWORK

The target setting of the enterprise, which requires systematic analysis, includes five parameters presented in Figure 1 – market products, market, customer needs, turnover and market share, and market position. Parameters of marketing goals will now be examined from the point of view of small and medium-sized enterprises.

Market products	■ determines the goals of the enterprise regarding the manufactured (offered) products and their combinations
Market	■ should be coordinated with the parameter “market products”, because they are closely related
Customer needs	■ allows you to find out the needs of the market (various combinations of needs) and formulate them as a target setting
Turnover and market share	■ sets business goals for sales and market share
Position on the market	■ ensures market positioning

Figure 1. Parameters of marketing activity

Source: formed based on sources T. Ambler (2004), J.R. Evans & B. Berman (2009), P. Kotler *et al.* (2016)

Market products. Production of marketable products is the main task of any enterprise. As a rule, the market is offered not one type of product (one product or one service) but some combination of them. These goods and services exist next to each other or are closely related. In the first case, the company manufactures and/or sells various products: the carpenter is also a glazier and produces not only furniture and interior items but also window frames and doors; the bookseller includes electronic computing equipment and software in his assortment; the company engaged in the sale and installation of household electrical appliances also deals with some types of sanitary and hygienic equipment, etc. (Ambler, 2004; Evans & Berman, 2009; Kotler et al., 2016). In the second case, the primary services are offered with additional and auxiliary services: the dealer not only sells cars but can also provide financial services at the client's request; the trust company simultaneously provides consultations to enterprises; the seller of household electrical appliances supplies not only new refrigerators but also helps the buyer get rid of old equipment.

Market. When a company offers its products or combinations to the market, it is rarely a single market (in a geographic or demographic sense) (Nesterenko, 2023). Usually, a construction company develops several local markets by creating branches. The house of ready-made clothes offers it to both women and men, is engaged in the search for new, additional groups of buyers, and opens a children's clothing department. The grocery store serves individual families and wholesale customers (Bozhkova et al., 2018; Khaminich et al., 2019). Market products and the market are naturally very closely related. Only some things that can be put on the market should be produced immediately by a small or medium-sized enterprise. In some areas, competitors may be more assertive. In other areas, well-thought-out market segmentation may be required because otherwise, too wide a range of products will be supplied to too small markets, leading to weakening and irreparable losses in small and medium-sized enterprises.

Customer needs. The needs of the clientele determine demand in the market. Market research and market forecasting are primarily used for their analysis. The need is a feeling of lack of something and a desire to eliminate it. Primary, additional, and secondary needs are distinguished. The main ones are initial, causal needs that reflect a feeling of scarcity in essential goods and services: hunger causes a need for food, fatigue – for comfortable furniture (chairs, beds), a sense of shame or bad weather – for clothes, etc. In today's markets, only basic needs no longer determine a customer's purchase decision (Rüßmann et al., 2015; Krysovaty et al., 2018; Shtal et al., 2018a). Additional needs are inextricably linked (in the consumption process) with basic needs. There are psychological, technological, and economic additional needs.

Psychological ones are, for example, the need for beauty and aesthetics, the desire for prestige or power, the desire for completeness in something (collecting), entertainment, a sense of responsibility for others (parental concerns), and passion for new sensations. Security needs are critical, expressed, in particular, in the demand for services in the form of insurance, competent advice, protection of valuables, and physical means of life protection. Technological additional needs related to the operation of technical

means (machines, devices, equipment). They are related to convenience in handling equipment. This also includes the need for complex furniture or word-processing programs (Shtal et al., 2018a; Shtal et al., 2018b). Finally, additional economic needs include economical handling of goods and services, for example, economical electricity consumption, ensuring a high residual value, increasing the necessary intervals between maintenance, purchasing service subscriptions, etc. Secondary needs are not related to primary needs. This includes needs for home delivery of goods, providing loans, training and special training, maintenance and repair, information, etc.

Turnover and market share. This setting sets the company's sales and market share goals. Such quantitative goals should be determined for long periods. Market share can be a significant indicator for small and medium-sized enterprises. These enterprises must pursue a clearly expressed policy of finding market niches to achieve a high market share, even with small sales volumes. Under normal conditions in general markets, in competition with large companies, they cannot do this. Small and medium-sized enterprises usually specialize in a single isolated market and can achieve a high share in specific market segments (Kotler, 2003; Kotler et al., 2016; Reznikova et al., 2019).

Position on the market. This parameter establishes a goal regarding the desired position of the enterprise in the market. It depends on the degree of horizontal and vertical integration of the offered services, the readiness to ally with someone, the amount of desired autonomy, industry specifics, and the company's image. Marketing goals should be formulated taking into account all five goal-setting parameters. None of them can be considered in isolation from the others. Moreover, all of them must be connected or dependent on each other. Therefore, coordination between them is necessary. The specified parameters, related to each other in all directions, form a "five-pointed star". This analytical and systemic view of the path to marketing goals can seem overly abstract and complex. However, any enterprise must collect information about itself and its business environment and consider the future. Moreover, if the entrepreneur is seriously engaged in this, then formulating marketing goals seems easy to him.

■ MATERIALS AND METHODS

During the research, empirical methods were used. Observation, forecasting – for an overview and comprehensive presentation of indicators and features of marketing activity and marketing tools. Analysis, synthesis, and abduction were used for a visual representation of the features of marketing tools in application in modern conditions of entrepreneurial activity. Each method is used at a particular stage of solving the tasks. That is why it was advisable to move on to consider each of the indicated methods separately. For example, using the descriptive research method to describe the enterprise's marketing processes was advisable, which would speed up the adoption of marketing and management decisions. The method of forecasting was used to determine scientifically based prospects of the general dynamics of events in the future, for example, the sequence of using marketing tools to promote the company's products on the market or the company itself as a whole. The abduction method helped build

several hypotheses, that is, proposals based on assumptions about the specific problem of marketing activities and the relationship with entrepreneurship. For example, to form a hypothesis regarding adapting marketing tools to the requirements of the modern world market. The graphic method was used to visually display the sequence of implementation of marketing tools and a set of actions for promotion on the market. The presentation of research results was more systematized in tables and figures. The analysis method was used to study the experience of using marketing tools and their possible adaptation to environmental changes in the conditions of globalization. It also considered the main obstacles to using marketing tools.

The method of synthesis, combining phenomena and knowledge, was used to expand previous experience and ascertain new results of expertise. A distinctive feature of synthesis was that this method was implemented outside of existing frameworks. For example, using some marketing tools in a new variation. Also, when studying the behaviour of consumers of innovative goods and services. This, in turn, leads both to the modernization of modern marketing tools and to the design and specification of the changing needs of consumers of goods in the newest products on the market. A general indicator based on quantitative characteristics was obtained based on multivariate analysis methods. The taxonomic method was used to calculate integral indicators of the financial and economic state of the enterprise and the use of information technologies in marketing activities for 2021 for ten industrial enterprises of the Kharkiv region. Thus, each of the considered methods helped solve a separate research task. In their aggregate, they helped formulate appropriate marketing and management solutions, increasing the enterprise's competitiveness.

■ RESULTS AND DISCUSSION

Characterizing marketing activity, the following trends in its development can be noted (Zikmund & D'Amico, 1998; Evans & Berman, 2009; Kotler *et al.*, 2016). If unsaturated markets are characterized by "product-oriented" marketing activity, then modern marketing activity is "consumer-oriented marketing activity", and the most advanced enterprises can carry out "mixed marketing activity" oriented both on the product and on the consumer. Modern marketing activity can be called "innovative" and strategic. The innovative approach is an operational marketing activity consisting of strategic marketing activities, namely, analysis of segmentation, attractiveness, level of competitiveness, portfolio studies, careful study of the budget, and control of strategy and development (Gorb *et al.*, 2022).

Among the initial tasks of strategic innovative marketing activities, the leading place is developing a system of measures to penetrate innovations into the market. Therefore, the basis of strategic marketing research is market analysis with improving market segments, organization and formation of demand, and modelling of buyer behaviour (Shtal *et al.*, 2018a; Zuliyati & Rusdianto, 2021; Penkova & Kharenko, 2023). According to the authors, strategic innovative marketing reduces the negative impact of external factors and the possibility of the enterprise manufacturing competitive products. However, creative marketing activity in Ukraine must be sufficiently developed because

innovativeness consists of constantly seeking product improvement. Ukrainian manufacturing enterprises spend only a little money to improve production.

Modern marketing activity can be characterized as joint, which appeared under the influence of the development of information technologies (online means of information exchange). Marketing activity focuses on new forms of relationship with consumers since the company can no longer control the demand for its products. Thus, the enterprise directs its efforts to cooperating with consumers on developing and managing its products, goods, or services. In addition to technology, modern marketing activity has been significantly influenced by globalization processes caused by technological development. Internet technologies enable the exchange of information between countries, economic regions, businesses, and individuals worldwide, and transportation technologies facilitate trade and other physical discussions. Like technology, globalization reaches everyone and everywhere, creating an interconnected economy (Kanishchenko, 2007; Korzh, 2010; Reznikova *et al.*, 2019). The main effect is that enterprises compete with each other for the opportunity to demonstrate their efforts to ensure integrity, commonality, and directions for social, economic, and environmental problems of society.

At the current stage, conditions have arisen for the development of a new type of marketing activity, which is often called "socially responsible", "socially ethical" (Amblar, 2004; Kotler *et al.*, 2016; Chi, 2021), or "spiritual". This marketing activity contributes to the fact that companies are forced to consider the product's value in their corporate culture because consumers choose products, goods, or services that satisfy their needs and impressions regarding their spiritual, social, and cultural aspects. Thus, the profit of the enterprise is the result of its high evaluation by the consumer. The development of marketing activity in the conditions of a modern market economy is constantly accompanied by the development of its information support and information technologies, which allows solving the problems of increasing the effectiveness of its influence on the work of the enterprise. As consumers become more cooperative, cultural, and spiritual, the nature of marketing activities changes. Based on the above analysis, the integration process of marketing activity is decisive for the enterprise since, in the dynamic, entrepreneurial environment in which it operates, it is necessary to direct all its spheres of activity, especially marketing, to achieve final goals.

In connection with the rapid development of modern information technologies and the widespread spread of the Internet computer network, many fundamentally new opportunities in marketing activities are of particular importance. Marketing activity focuses on new forms of consumer relations and marketing communications. The enterprise's success in the market today is determined by the need to ensure an effective relationship between the producer and the consumer, which is an obvious fact for the formation of its competitiveness. Scientific and technical progress determines one of the effective ways of solving such a task is the use of communication channels of the global Internet network. At the same time, the effective use of Internet technologies at the enterprise is not possible without the formation of a marketing information system

that would include all the information necessary for the enterprise's activities, would enable a quick response to changes in the surrounding information environment, and would be an essential lever for the formation of the enterprise's information security. Since information acts as one of the most valuable resources of society, the process of its processing can, by analogy, be perceived as technology.

The formation of the global network economy and the expansion of its scope was due to the development and spread of Internet technologies, the transfer of various types of social and economic activities to the electronic environment of the Internet, and the process of transforming traditional organizations into network structures. Thus, the innovative development of the "new economy" is characterized by the socialization of the latest scientific and technical developments, primarily in the field of information technologies, i.e., their introduction and use on the scale of the entire society, production of innovative goods

and services using information technologies, as well as to develop industries that use these technologies; production of goods and services using and for the Internet.

Innovative changes in the world market depend on the level of innovative development of national economies – subjects of this market. Innovative development of industries, in turn, constitutes the national economy's development level. Furthermore, the innovative development of each sector largely depends on the actions of enterprises, management entities, the level of competitiveness, and the amount of profit received in the process of implementing the innovative strategy (Sony, 2018; Krysovaty et al., 2018; Hausman, 2021). In authors opinion, at the current stage of the development of society, the main directions of innovation are Internet technologies, which allow qualitatively increase in the key performance indicators of enterprises. Thus, Internet technologies significantly affect both the activities of enterprises and the national economy (Fig. 2).

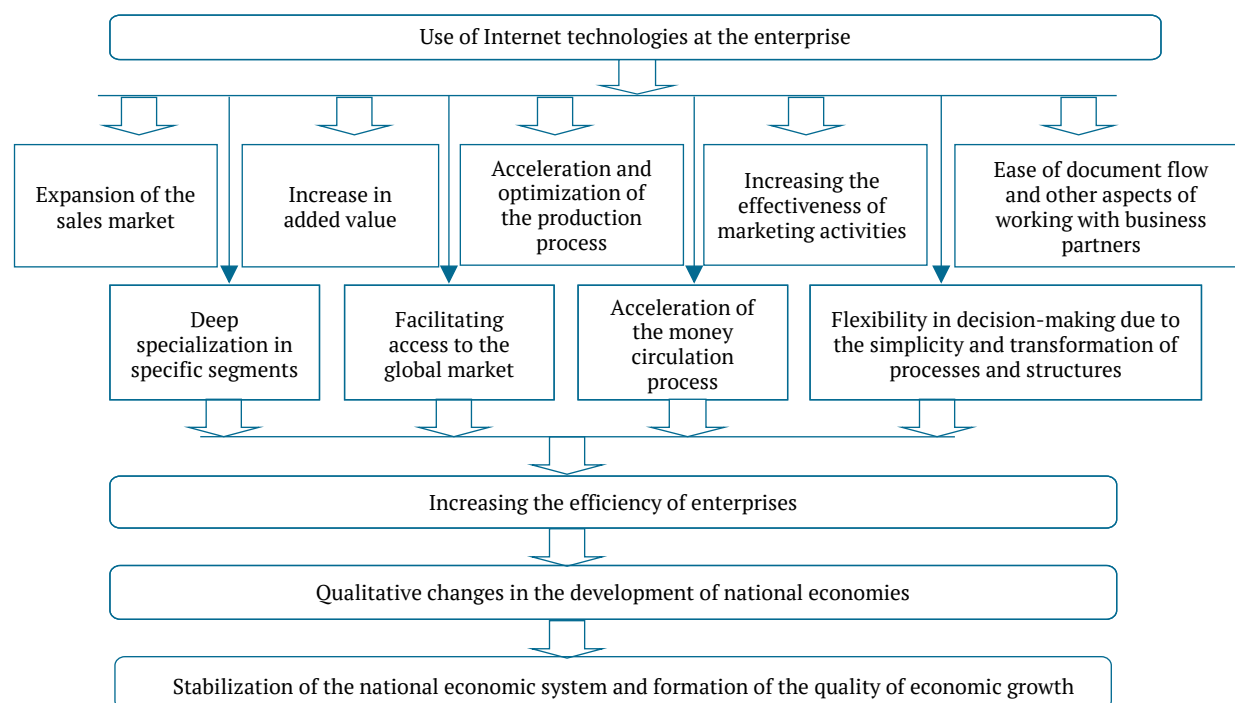


Figure 2. The influence of Internet technologies on the activities of enterprises and the national economy

Source: developed by the authors

There is a need to consider the stages of transformation of foreign companies depending on the degree of their technological development and the chosen strategy:

- creation of an internal information system – an Intranet-type system – at this stage, the Internet is used as a tool for implementing an effective system of internal communications at the enterprise;
- the appearance of an information system of the Extranet type – transparent for partners but closed to third parties, the customer service system works as a business card or a directory of the enterprise;
- involving consumers to work directly in the information system, the emergence of feedback from the consumer through the electronic order system;

- full automation of many business processes, simplification of interaction schemes, expansion of opportunities, and improvement of speed and quality of work coordination;

- a combination of the electronic ordering system, the procurement process automation, and the promotion of goods to the final consumer through electronic stores (Allison, 2019; Blass, 2019; Bilovodska et al., 2020).

To establish the relationship between scientific presentation and practical application, namely for a more detailed representation and systematization of information about the types of information technologies in marketing activities, their typology is proposed in Table 1.

Table 1. Typology of types of information technologies in marketing activities

Typological features	The essential content of typological signs
1. Mobile marketing	
1.1. SMS services	The process of sending mobile messages from the program to the mobile user. A messaging system is a professional or business system. Businesses can use several technical modes to communicate with consumers, authenticate users of online services, and deliver instant messages.
1.2. voice interactive services	This is a technology for creating an interactive voice menu, which can be used both individually as an auto-informant and as part of a software-hardware complex, identifying and directing customer requests. In marketing activities, this technology solves several essential tasks: it increases the rating of the enterprise and the popularity of the brand, allows it to receive additional income, provides prompt feedback to consumers, expands the target audience and increases its loyalty, allowing it to receive valuable statistical marketing data.
1.3. wireless data transfer protocols	A set of logical layer interface agreements defining data exchange between different programs. These agreements specify the same way of transmitting messages and handling errors during the interaction of software distributed in the space of a hardware platform connected by one or another interface.
2. Marketing in social networks	
2.1. teaser advertisement	This is an advertising format that combines the text of an advertisement with a small picture that thematically corresponds to the content of that advertisement.
2.2. promotion in social networks	Activities aimed at familiarizing the maximum number of social network participants (social media) with the promoted resource. Conceptually, sites are advertised in social networks in two ways – SMO (social media optimization) and SMM (social media marketing).
2.3. monitoring of social networks	Social media monitoring tracks mentions of an enterprise, brand, public figure, product, or service in social networks. The activity's main task is searching for information about the brand and its segmentation from the point of view of the following factors: tonality, distribution by resources, authors, and publication time.
3. Internet marketing	
3.1. contextual advertising	Contextual advertising is an advertising banner or text ad on a web page; its appearance immediately makes it clear that it is advertising. Such banners or ads are located directly under the site header, on the sidebars of the web page, or at the bottom.
3.2. search engine optimization and promotion	The process of adjusting the HTML code, text content (content), site structure, and control of external factors to meet the requirements of the algorithm of search engines, to raise the position of the site in the search results of these systems according to particular user requests. The higher a site's position in search results, the more likely a visitor will go to it from search engines since people usually follow the first links.
3.3. marketing research on the Internet	The Internet makes it possible to conduct both primary research, based on data obtained from the company's research on the Internet, and secondary research, based on information published on the Internet and taken from other sources. The Internet can be used to research product markets, to study the firm structure of the market, or to study consumers.
3.4. e-mail marketing	This is a form of direct marketing, the characteristic feature of which is the use of e-mail as a channel for transmitting a marketing message to the target audience.
3.5. viral advertising	This is one of the leading marketing tools used in brand promotion on the Internet and social networks. The method involves creating content that will be of maximum interest to users. Launched on the network, viral advertising will spread at the initiative of the target audience. All potential clients will familiarize themselves with the information as much as possible.
4. Means of software and marketing automation	
4.1. customer relationship management system	Automating the process of tracking consumer behaviour allows it to more accurately influence potential consumers and, following their interests, carry out targeted marketing influence.
4.2. marketing intelligence	Software for marketing intelligence is mainly focused on studying the behaviour of potential consumers on the Internet (in social media, on mail servers, web pages, etc.), which allows analysing information about the most visited user groups in social networks. An essential source of information is links by which a person goes to sites from search engines or mail servers, as well as his search queries.
4.3. marketing automation	Marketing automation software focuses on target customers. To manage the consumer's awareness and interest in the products, a comprehensive marketing influence is carried out – from the beginning of the advertising campaign to the moment of sale and after-sales service.
4.4. automation of marketing document flow	Automation of document flow involves the use of specialized software for working with internal marketing information and internal marketing processes. As a rule, it includes implementing budgeting and planning functions, document flow and internal approvals, and all work related to internal marketing.
5. Marketing information systems	
5.1. geoinformation marketing systems	Geomarketing systems are a form of marketing research that allows it to visually analyse the external and internal indicators of the company, and various aspects of its past, current and future activities, including infrastructure and competitive environment concerning its geographical location.
5.2. industry marketing information systems	Industry marketing information systems are designed to provide managers in various industries with marketing information and support management decision-making in a specific market. They contain tools for transforming marketing data into valuable management information.
5.3. regional information marketing centres	Provision of information centres at the local level and acceleration of local marketing and management decisions.
5.4. interstate information marketing centres	The Interstate IMC (integrated marketing communication) is engaged in creating and maintaining an information fund; analytical activity; user information service; comprehensive market research, analysis of production and sales opportunities of enterprises, providing information interaction with national IMCs, etc.

Source: developed by the authors based on V.V. Bozhkova *et al.* (2018), A. Krysovatty *et al.* (2018), T.V. Shtal *et al.* (2018b)

The proposed classification considers new technologies of information marketing, which are actively developing and being implemented in the business practice of Ukrainian enterprises. The main task is to create integrated information marketing services combining the advantages of most technologies. Such an approach will make it

possible to significantly increase the effectiveness of marketing activities of enterprises, increase labour productivity in the field of market relations, and bring the interests of consumers and the capabilities of producers even closer together. The stages of assessing the use of IT potential in the enterprise's marketing activities are presented in Figure 3.

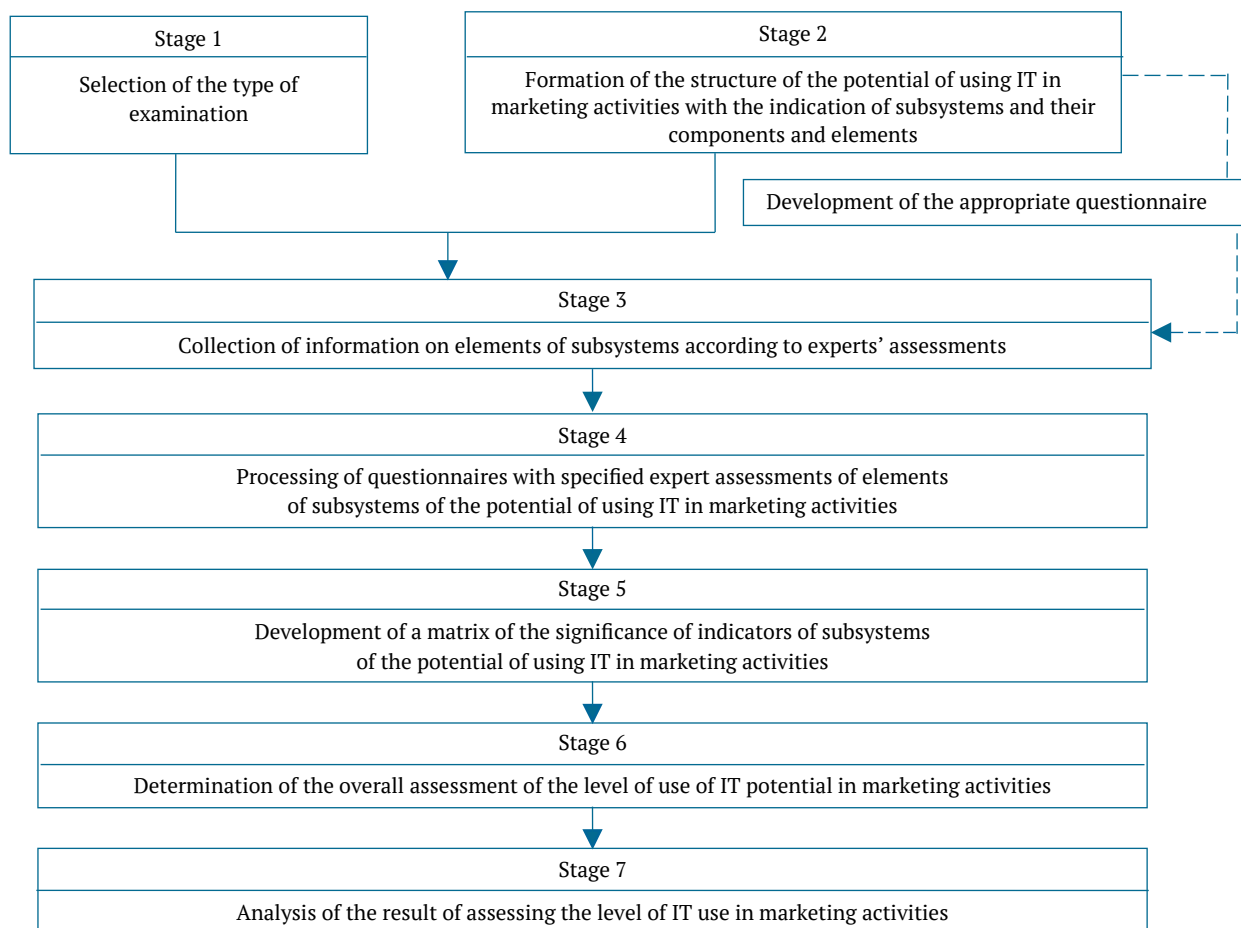


Figure 3. Stages of expert assessment of the level of IT use in the enterprise's marketing activities

Source: developed by the authors

The purpose of assessing IT potential in the enterprise's marketing activities is to identify all its opportunities to ensure effective functioning in conditions of globalization and increased competition. Its activity on the market and competitive position depend on the extent to which the potential of IT is fully used in the marketing activities of the enterprise. Therefore, as

subsystems of using IT potential in the marketing activity of the enterprise, it is proposed to choose the conceptual foundations of the marketing complex: marketing research; product policy; pricing policy; sales policy; communication policy. Table 2 shows a variant of the summary table, which should be formed based on the algorithm's results.

Table 2. Assessment of the level of IT use in the enterprise's marketing activities

The subsystem of IT potential in marketing activity	General expert evaluation of the subsystem	Component subsystems	General expert evaluation of the component of the subsystem	Significance of the constituent subsystem	Balanced assessment by component, in points
Marketing researches	5	Interactive market research	5	4	5
		Research of competitors' websites	3	5	5
		Consumer research (interactive survey)	5	4	5

Table 2. Continued

The subsystem of IT potential in marketing activity	General expert evaluation of the subsystem	Component subsystems	General expert evaluation of the component of the subsystem	Significance of the constituent subsystem	Balanced assessment by component, in points
Commodity policy	4	Testing of new products in interactive mode	4	4	3
		Formation of the marketing environment of goods on the Internet	5	3	4
		Organization of service on the Internet	4	3	5
Pricing policy	5	Building a flexible pricing system based on Internet auctions and electronic trading platforms	5	5	5
Allocation policy	4	Sale of goods via the Internet	4	5	3
		Creation of electronic platforms	3	5	4
		Calculation system (electronic signature)	4	4	4
Communication policy	3	Formation of the Internet communications system	4	3	3
		Conducting advertising campaigns	3	2	4
		Sales promotion	3	3	4
		PR network Internet	2	2	5
		Internet branding	4	4	4
The general assessment of the level of use of IT potential in the enterprise's marketing activities					4

Source: developed by the authors

The proposed assessment will allow the enterprise to identify the level of use of IT potential in its marketing activities. Thus, a systematization, theoretical, and practical analysis of the factors determining the trends in the development of Internet technologies in the marketing activities of enterprises was carried out. The action and impact of each element in ensuring the sustainability of the system of marketing activities of enterprises is considered in detail. The obtained results deepen the theoretical and applied foundations of forming an effective marketing policy for the enterprise. Comprehensive accounting and thorough analysis of the factors that are decisive in the development of the Internet in Ukraine allows to qualitatively improve the complexity of strategic and operational marketing of the enterprise with minimal financial costs (Dmytriiev *et al.*, 2022). The proposed typology and classification of information technologies in marketing systematizes and expands the theoretical vision and institutional foundation of the chosen research problem and forms the basis of their practical application in the activities of enterprises.

The origin of the term multidimensional analysis is explained by the use both in taxonomic methods and in factor analysis of the concept of a multidimensional object, which is understood as either a statistical unit (often called a structural unit) determined by a set of attribute values, or an attribute defined by its values on separate statistical units. However, most often, a statistical unit acts as such an object. Therefore, the concept of multivariate comparative analysis in economic research refers to several heterogeneous methods that identify regularities in statistical populations, the units of which are described by a relatively large set of features. Knowledge of these methods expands the possibilities of conducting various comparisons on multidimensional objects. In taxonomic methods, comparisons are made using a distance matrix. The name of taxonomic methods comes from two Greek words: taxis (meaning arrangement, order) and nomos (law, rule, principle). Taxonomy is the science of the rules of structure and classification.

The central concept used in taxonomic methods is the so-called taxonomic distance. This is the distance

between points of a multidimensional space, calculable, most often, according to the rules of analytical geometry. The dimensionality of the space is determined by the number of features characterizing the units of the studied population. In another task, in which signs act as research objects, the dimension of space is determined by the number of structural units. The taxonomic distance is calculated between units or feature points in a multidimensional space. The calculated distances make it possible to determine the position of each point in relation to other points and, therefore, to determine the place of this point in the whole population,

which makes it possible to arrange and classify them (Krchova & Švejnová Hoesová, 2021; Paying the price of war, 2022; Eurostat, n.d.). Multivariate analysis methods are reasonably simple methods of obtaining a general indicator. They allow it to get the required indicator quite quickly. The economic interpretation of the taxonomic indicator of the level of development is as follows: the closer the value is to 1, the better the level of the economic and financial condition of the enterprise and the level of implementation of Internet technologies in marketing activities. The results of calculations for 2021 for ten enterprises of the Kharkiv region are shown in Table 3.

Table 3. The results of the calculation of integral indicators of the economic and financial state of the industrial enterprise and the use of information technologies in marketing activities for 2021

Name of Company	A crucial indicator of financial and economic activity	A critical indicator of the use of information technologies in the marketing activities of the enterprise
PJSC "Kharkiv Order 'Znak poshany' Engineering factory 'Chervonyi Zhovten'"	0.623575	0.692308
PJSC "Elektromashyna"	0.14248	0.538462
PJSC "KhTZ"	0.566799	0.538462
SE Kharkiv Machine-Building Plant "FED"	0.242577	0.461538
PJSC "Interkondytsioner"	0.289653	0.538462
SE "Izyum state instrument-making plant"	0.375236	0.461538
PJSC "Kharkiv Machine-Building Plant named after S.V. Kosior"	0.298347	0.692308
LLC "Loziv Forging and Mechanical Plant"	0.163715	0.461538
PJSC "Manometr-Kharkiv"	0.4754	0.461538
PJSC "Kharkiv Machine-Building Plant "Svitlo Shakhtaria"	0.206301	0.461538

Source: developed by the authors

The results of the calculations prove that there has been a significant improvement in implementing marketing tools of information support and systems and technical means of automation at machine-building enterprises of the Kharkiv region in five years. Even the negative consequences of the pandemic became an impetus for introducing information technologies on an even larger scale. The integral indicator of the use of information technologies in the marketing activities of 10 Kharkiv machine-building enterprises increased by 0.130952 on average from 2016 to 2021 (10.5%).

CONCLUSIONS

New communication technologies and, in particular, Internet technologies have made marketing activities much more measurable and, accordingly, much more controllable. Thus, one of the main tasks facing company managers today is assessing and analysing the effectiveness of marketing activities and their improvement. Furthermore, this is where unique systems, software solutions, and technical tools designed to automate marketing departments' work to increase marketing efficiency come to the rescue.

Data on marketing tools of information support can be obtained in the same way as indicators that determine the level of automation of machine-building enterprises. Such marketing tools can include the Internet, a website with its

home page, and other types of electronic data exchange. Thus, Ukrainian enterprises in the machine-building industry found themselves in difficult operating conditions, which, along with the complication of the technological, economic, and competitive environment in the market of machine-building products, are inherent in the difficult situation in the country. Crisis phenomena force Ukrainian machine-building enterprises to significantly save money and direct their activities to identify alternative solutions for maintaining competitive positions. Therefore, one of the priority directions should be cost optimization, which can be carried out by finding and investing the smallest amount of investment funds, leading to the most significant economic effect. Further research should focus on practical principles in developing marketing activities of machine-building enterprises based on Internet technologies, considering their specifics of management, defining features, and the level of development in the Ukrainian market and positions at the macro level.

ACKNOWLEDGEMENTS

None.

CONFLICT OF INTEREST

None.

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Імплементація сучасного маркетингового інструментарію в підприємницьку діяльність

■ **Анотація.** Маркетингова діяльність орієнтована на нові форми взаємин зі споживачами та маркетингові комунікації обумовлюють тематику поточного дослідження та її актуальність. Метою дослідження було обґрунтування використання сучасного маркетингового інструментарію в підприємницькій діяльності для забезпечення сталого розвитку підприємства. Під час дослідження використовувалися емпіричні методи для огляду та комплексного представлення показників та особливостей маркетингової діяльності та маркетингового інструментарію, аналіз, синтез для наочного уявлення про особливості інструментарію маркетингу в застосуванні в сучасних умовах здійснення підприємницької діяльності. Систематизовано і проаналізовано об'єктивну інформацію про стан ринку промислової продукції та представлених особливостей маркетингової діяльності промислових підприємств. Проведено докладний аналіз сучасних тенденцій розвитку маркетингової діяльності та впливу інформаційних технологій на розвиток підприємництва, що є сьогодні підґрунтям для формування необхідного комплексу маркетингового інструментарію, який можливо використовувати для підвищення ефективності діяльності підприємства. Визначено, що в процесі переходу на ринкові механізми функціонування, українські машинобудівні підприємства опинилися перед необхідністю оптимізації своєї діяльності з урахуванням взаємного впливу складових зовнішнього ринкового і внутрішнього маркетингового середовища кожного підприємства. Зроблено висновок, що українські підприємства змушені приділяти величезну увагу процесам, що відбуваються в мінливому зовнішньому середовищі, щоб своєчасно адаптуватися і пристосуватися до них, особливо це має значення для промислових підприємств, орієнтованих на маркетингову діяльність. Представлене дослідження у вигляді рекомендацій щодо застосування маркетингового інструментарію має практичне значення для сучасних підприємницьких структур

■ **Ключові слова:** маркетинговий комплекс; маркетингова діяльність; Інтернет-маркетинг; маркетингові технології; комплекс маркетингового інструментарію