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IMPROVING MARKETING INFORMATION SYSTEM OF AN INDUSTRIAL ENTERPRISE AS THE MOST IMPORTANT ELEMENT OF CHANGE MANAGEMENT SYSTEM

The article investigates the key elements of marketing information systems, the factors of improving them in order to perform changes at an enterprise more effectively. The authors suggest the model of marketing information system for enterprises.

Keywords: marketing information; change management; marketing information systems.

Світлана І. Ашмаріна, Олена В. Погорєлова, Анна С. Зотова УДОСКОНАЛЕННЯ МАРКЕТИНГОВОЇ ІНФОРМАЦІЙНОЇ СИСТЕМИ ПРОМИСЛОВОГО ПІДПРИЄМСТВА ЯК НАЙВАЖЛИВІШОГО ЕЛЕМЕНТУ СИСТЕМИ УПРАВЛІННЯ ЗМІНАМИ

У статті обгрунтовано елементи маркетингових інформаційних систем, чинників їх удосконалення з метою більш ефективного проведення змін на підприємстві. Запропоновано авторську модель маркетингової інформаційної системи підприємства.

Ключові слова: маркетингова інформація; управління змінами; маркетингові інформаційні системи.

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Светлана И. Ашмарина, Елена В. Погорелова, Анна С. Зотова СОВЕРШЕНСТВОВАНИЕ МАРКЕТИНГОВОЙ ИНФОРМАЦИОННОЙ СИСТЕМЫ ПРОМЫШЛЕННОГО ПРЕДПРИЯТИЯ КАК ВАЖНЕЙШЕГО ЭЛЕМЕНТА СИСТЕМЫ УПРАВЛЕНИЯ ИЗМЕНЕНИЯМИ

В статье обоснованы основные элементы маркетинговых информационных систем, факторов их совершенствования с целью более эффективного осуществления изменений на предприятии. Предложена авторская модель маркетинговой информационной системы предприятия.

Ключевые слова: маркетинговая информация; управление изменениями; маркетинговые информационные системы.

Introduction. The current state of Russian market can be characterized by lack of information interaction between its main participants. The legislative basis to define the criteria of information exchange and regulate the issues concerning access to economic information for market entities is not sufficiently elaborated. Information systems development at various levels is one of the key tasks in stabilizing the Russian economy and raising its competitive position at the world market. Besides, the influence of economic crisis inspired the new round of competitive struggle, fastening integration processes, and because of market richness, the extension of consumers' requirements. This situation makes producers implement constant monitoring and analysis of external and internal environment of enterprises, assessing the

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results of their activity and competitors' activities too. That is impossible without effective marketing information management system.

Specific characteristics of marketing information is the quick loss of its value, incompleteness and discrepancy of initial data which cause the necessity for a special approach to processing and analysis. That is why working with marketing information demands special management system creation. The system should allow studying this kind of information quickly and effectively to make it possible to be used while making efficient marketing decisions.

Information and methodical supply of engineering industry enterprise activity is extremely important nowadays. It is provoked by the special character of this industry enterprise functioning: the oligopoly character of this branch market, the lack of qualified specialists in the sphere of information systems design, the absence of elaborated instruments of marketing information study and making decision on its basis.

The enumerated problems allow concluding that the issues of effective marketing information system design and development at engineering enterprises are especially urgent within contemporary extremely changeable economy.

Latest research and publications analysis. Information supply for enterprises' functioning is an important economic task that is why it arises special interest among scientists. The key research of the problems related to marketing development and marketing information systems was done by T. Ambler (2004), T. Mayor (2001), O. Oiner (2001), O. Tretyak (2013). However, there are some matters that still remain unstudied, such as the integration of marketing information systems into the management system of the enterprise taking into account the specific characteristics of Russian enterprises.

The object of the research is the system of organizational and economic relationship aimed at improving the efficiency of marketing information management at industrial enterprises.

The goal of the article is to elaborate some practical recommendations on information supply of industrial enterprises' marketing activity.

The research methods are systems analysis, expert evaluation, economic and mathematical modelling.

Key research findings. Nowadays information is one of the most important factors for any enterprise. Qualitative and timely information supply becomes the basis for successful enterprise development and guarantees long-term competitive advantage at the market (Filip, 2005).

The authors took the definition of marketing information given by R.T. Rust et al. (2004) as the framework for further research. So marketing information is a specific type of basic enterprise resources meeting all the demands connected with removing uncertainty of the receiver and used for marketing or other management activity in order to raise effectiveness. Marketing information has its own place in the enterprise management system because its characteristics determine correctness and value of management decisions. The type of marketing information which can help the achievement of the set goals should be defined at each stage of the management process. We find it necessary to classify and systematize marketing information in order to simplify the searching process of necessary data and to structure the sources of enterprise data or knowledge base. This procedure will make marketing activity at

the enterprise more effective. Thus, the authors suggest their own classification (Figure 1) based on the following criteria: processing level; performed functions; receiving period; stability level of information flow; analyzed time period; the scope of study of the analyzed phenomenon; data characteristics; the origin sources; presenting type; territory characteristic.

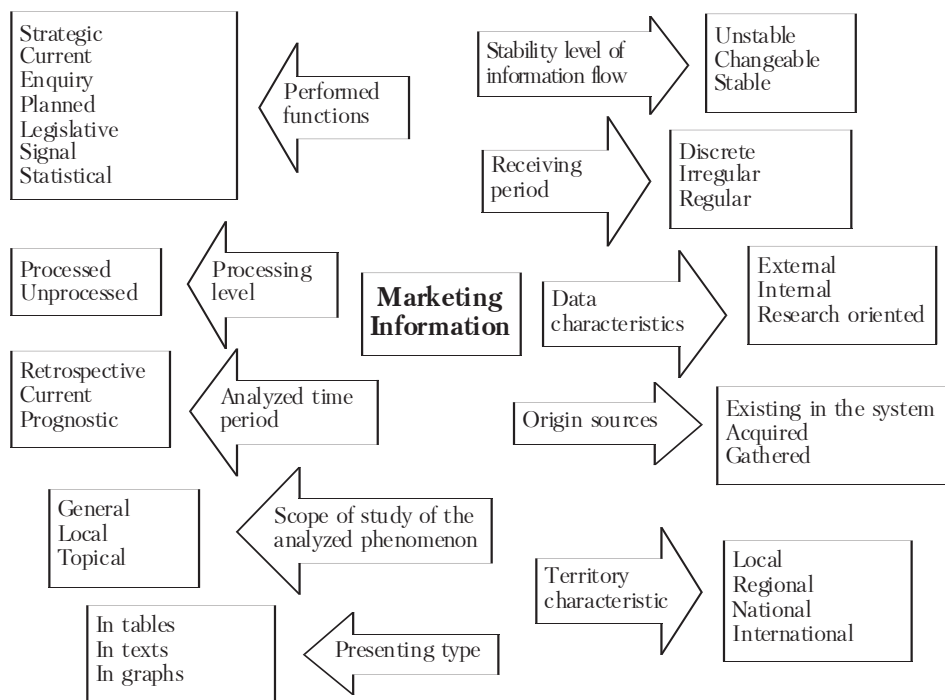


Figure 1. Industrial enterprise marketing information classification, developed by the authors

To raise the efficiency of marketing information management the enterprise should design the corresponding management system. Traditionally, like in R.F. Dwyer's research (2006) marketing information management system is understood as the management system of such procedures as gathering information, its processing, analysis, systematization, keeping and transmission of marketing information used for preparing and making managerial decisions aimed to raise efficiency of enterprise development. The most effective instrument of marketing information management is marketing informational system.

One of the most significant characteristics of contemporary marketing information system is that it should produce new knowledge being at the same time rather complex organizational structure. So it combines both active and passive parts. Such property allows achieving the synergy effect. L.C. Giunipero et al. (2013) argue that this effect appears when data processing is organized through marketing data bases and knowledge promoting the emergence of new information and knowledge resources being the basis for new knowledge.

So the authors suggest the following definition of marketing informational system – the integrated system of corresponding elements of marketing data bases and

knowledge bases of the enterprise transforming marketing information and data into management information and knowledge resources.

The key elements of marketing information system can be grouped according to its functional use into informational block, technology and computer block, program and methodology block, organizational and legal block.

The current level of marketing information systems development assumes their transformation into improving automation processes of working with existing databases (Yusupov and Zabolotskiy, 2000). The task of the development of existing information systems nowadays has moved to the strategic level and is extremely important for successful functioning of an enterprise at the market. It means that some significant financial and intellectual resources should be brought into play in order to create highly effective information systems for managing various production spheres inside the enterprise.

At the moment the main activity on the improvement of information systems aimed at modernization of technical communication tools should satisfy the needs of specialists working in the area of management processes automation. At the same time the volume of qualitative information the managers have is not enough for raising the management activity efficiency. This situation leads to automation management standing idle and their unproductive use. Thus, information process automation outstrips in its development the information processes because of the lack of information which is necessary for successful functioning of production systems.

Another development trend of today's information systems is their interconnection on the basis of information and communication exchange of market entities. This leads to the creation of corporate information databases organized into a united information space. In order to realize this idea with high quality it is necessary that all participants of the united information space strictly follow the existing corporate standards within the communication processes.

The authors of this research performed some survey among directors and top managers of major engineering industry factories on the territory of Samara region (Russia) asking them about the problems in the sphere of marketing information supply. As the result of the survey some key problems have been identified:

- the absence of trustworthy and complete information on the domestic sales markets for their products (more than 45% of the respondents);
- lack of information on legislative changes that regulate entrepreneurial activity (about 27% of the respondents);
- weak development of the information services market referring to the search of highly qualified specialists (about 28% of the managers).

Our survey showed that Russian enterprises understand the necessity of information services of specific companies supplying marketing information.

One of the key problems revealed during the survey was delayed information about the changes in fiscal legislation that leads to groundless expenditures of monetary resources of enterprises.

Another problem is the low security level of authors' rights in the country which limits the distribution of information about foremost technologies or innovations.

Some managers think that low professional level of specialists in the field of information systems, both their own and from marketing or consulting companies, is especially problematic.

Some managers are not satisfied with the quality of the information they get. Assessing it according to such characteristics as timeliness, completeness, trustworthiness they pointed out that some important data such as foreign sectoral market are inaccessible. Such information provided by marketing agencies or foreign trade companies is not complex enough and rather often is too expensive. Information collections about enterprises published in some regions take into account only the enterprises of the region and do not give complex understanding of all competitors in a branch (industry).

The survey showed that most managers are interested in creating an effective marketing information management system and it can be proved by their readiness to pay for necessary information resources. More than 70% of managers are ready to pay for information on new production technologies and new sales technologies, about 50% of them are ready to pay for the data on foreign sales markets.

Building an effective marketing information management system demands observing some set of conditions and principles. The most important is to follow systematic approach to management which deploys organizational and economic technologies. They are the foundation for building a dynamic informational model at the enterprise level.

As it was mentioned in (Pudovkina, 2012; 2013) before the information management system should be built according to specific characteristics of a particular enterprise. Its specific character can influence the ways of information processing, information channels projecting, the rate of usage of this or that information sources.

Thus, the designed marketing information system is a part of the total management system of the enterprise which should correspond to rules and standards of working with information accepted at an enterprise. Information system is essential to supply the constant process of macro- and microeconomic study of marketing phenomena beginning from the moment when data comes into the system and ending with formulating practical recommendations on making efficient management decisions.

The authors elaborated the model for the formation of marketing information system with complex multilevel structure (Figure 2).

The methodical basis for this model was marketing functions decomposition, defining information needs for each function, structuring and forming the ways of data and knowledge bases creation, projecting of the bank of marketing tasks decision methods and models, finding out the most efficient ways for their solution. The structure of the model should include expert modules and modelling complexes which are part of software equipment.

The conditions of enterprise performance are constantly being transformed because of the influence of various factors and this causes the necessity of regular monitoring of the functioning process of marketing information management system to find out whether it corresponds to general aims and tasks of an enterprise.

The important element of marketing information system is the decision support module uniting information and knowledge resources which are essential for decision making in marketing.

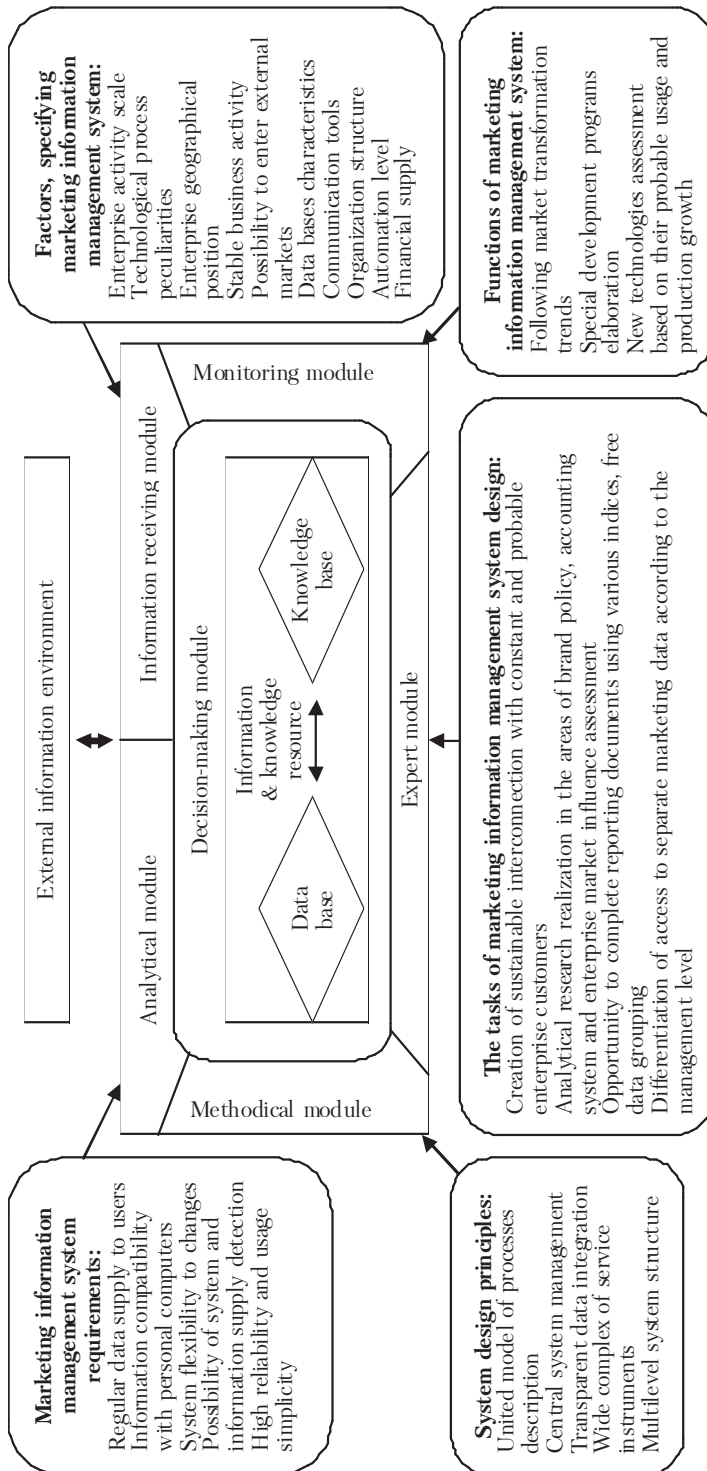


Figure 2. The model of marketing information system at an enterprise, developed by the authors

Conclusion. The authors' marketing information system offers the following advantages: the system is universal and can be applied at different tasks solution; its module structure allows forming the system essential for the enterprise at the current development stage and to install only those blocks which are relevant for users (managers) of an enterprise; data bases and knowledge bases designed for separate categories and knowledge areas make it possible to analyze only the information necessary for specific marketing tasks; the system gives the opportunity to use the results of its functioning for solution of the tasks given to other departments within an enterprise. Thus, marketing information management system suggested by the authors allows increasing the management activity effectiveness, shortening the time for making managerial decisions and improving the quality and efficiency of information supply of the overall enterprise marketing activity.

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