

# THE DEVELOPMENT OF MARKETING COMMUNICATIONS UNDER THE INFLUENCE OF THE INDUSTRY 4.0

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**Abstract:** In the paper trends in the development of marketing communications influenced the unfolding Industry 4.0 are investigated. Particular attention is paid to the study of the relationship of the virtual and real economic space in which modern firms are deploying marketing activities. The advantages of integrated marketing communications (IMC) as a new approach in the development of marketing strategies are determined. The phenomenon of "synergy effect" when companies is obtaining by multiple effects in the economic, communications and social spheres is explored. The foundation of the formation of the IMC is to focus on the target audience, why particular importance is given to the study of changes in the motives of its consumer behavior in the fourth industrial revolution. Go to the individualization of consumption and, respectively, to the two-way interactive marketing communications, it requires the involvement of both consumer and producer. It noted the increasing role of less controlled sources of influence and information dissemination: the independent media, communities, social networks, business partners, family and friends, experts, governmental and non-governmental organizations, controlling the quality of goods. Formation of an effective set of IMC companies depends on the specifics of the enterprise and the characteristics of the environment in which it operates, and the features of the destination to which they are targeted. Marketers indicate the increase in business interest in the emergence of new business models based on the IMC and on some form of consumer behavior in the real-virtual market. Potential interaction with the consumer, which give these models are considered growth factors of competitiveness of firms in the market are identified.

**KEYWORDS:** INTEGRATED MARKETING COMMUNICATIONS (IMC), VIRTUAL AND REAL ECONOMIC SPACE, SYNERGY EFFECT, MOTIVES OF CONSUMER BEHAVIOR

## 1. Introduction

Today, the achievement of optimum impact on the consumer is provided by an integrated marketing communications coverage of the target audience of the company, that is, using the concept of integrated marketing communications (IMC). In the 1990s. the concept of integrated marketing communications has led to a revolution in the field of promotion, as well as the introduction in the 60s the concept of marketing mix completely changed the practice of marketing [1]. It was found that for the effective management of marketing activities necessary to combine different forms of promotion into a single coherent program of integrated marketing communications [2].

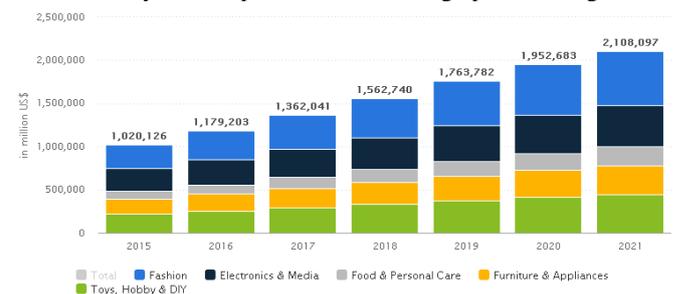
## 2. The reasons for the transformation of marketing communications

Relevance of the implementation of complex integrated marketing communications is due to several reasons:

- The effectiveness of the use of certain tools of the marketing policy of communications, including due to the high cost (for example, television advertising). Using complex IMC allows you to combine the budgets needed to move the same goods through various channels of communication, reducing the cost for each of them. So that the company has achieved its aim effectively, as well as dealing with fewer partners, shifting them complete solutions in a single block.
- The rapid growth of the flow of information and technology marketing communications under the influence of the Internet. The emergence of new distribution channels, interactive media, the development of specialized media requires adjustment and placement of other accents in the strategy of marketing communications firm.
- Moving to the individualization of consumption and, consequently, to a two-way interactive marketing communications that require the involvement of both the consumer and the producer. In such circumstances, an increasingly important role to play become sources of influence and information dissemination: independent media, community social networks, business partners, family and friends, experts, state and public organizations, monitoring the quality of products.
- Glut in the market similar services and goods produced in a highly competitive environment for identical technologies. In such market situation marketers need to be creative in the using of new approaches and technologies promotion to position a particular product / service / brand in the minds of the target audience.

## 3. The relationship of the virtual and the real economic space

Today it can be argued about the sustainable trend of growth in the global market in a virtual environment in sales influenced the unfolding Industrial Revolution 4.0 [3]. Revenue from the sales of e-commerce according the type market segment conventionally is represented as a graph in Figure 1.



**Fig. 1.** The dynamics of e-commerce sales structure depending on the market segment in the global market (in million dollars. USA)

Source: Statista, September 2016; Selected region only includes countries listed in the Digital Market Outlook

This trend, of course, has an impact on all aspects of society. Thus, in the current marketing promotion are entirely new forms of communication and virtual channels. They have also become an integral part of a modern complex IMC.

A feature of the integrated marketing communications is a binary their nature: combining channels and means of promotion - as exists in the real and in the virtual economy (due to Internet space) [4]. Fig. 2. shows that the company can deploy marketing communications in both the real and virtual space separately, in parallel and integrated in both areas (zone of intersection). The most common tools of marketing communication in a real environment are the various types of advertising, public relations, sales promotion activities, personal selling, trade shows, direct marketing. The virtual environment is now becoming the most relevant specific tools such as search engine optimization (SEO), SMO-promotion, social media marketing (SMM), banner and contextual advertising, forums, webinars, virtual exhibitions. In parallel and integrated marketing communication tools involves the development of the media mix. Using the same program IMC media of various types (TV, press, radio, outdoor advertising, Internet, etc.) makes it possible to minimize marketing costs and increase the effectiveness of campaigns to promote various products and services, particularly in the industrial market.

The larger the area of intersection of marketing communications in real and virtual environments as part of IMC, the greater the synergistic effect, which tends to get firm.

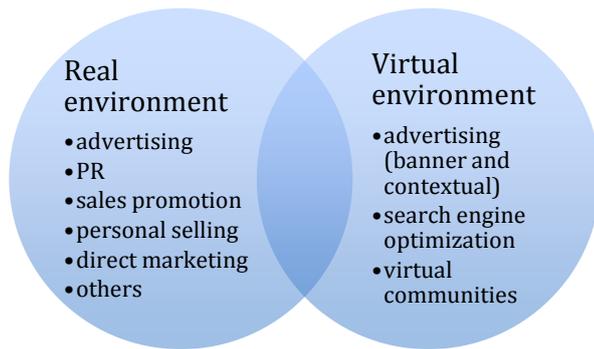


Fig. 2. The binary nature of the IMC

**4. The synergistic effect of IMC**

The unique advantage of using the IMC is to achieve synergies in the marketing activities in the real-virtual market. [5] [1] The synergy in the context of the problem - the excess of the cumulative effect used for the promotion of communications products over the sum of the effects of the individual components of the communication. Its meaning is that the consistent use of various communications tools allows to achieve a higher overall result than separately. At the same time the basic principle in the decision to use multiple means of communication is the choice of means of communication as a major and a few (or one) of the subsidiary. The main means of communication must be able to independently and more effectively reach all communication effects. Aids designed to compensate for any gaps in the coverage of the target audience - or they may contribute to the achievement of certain objectives of communication at the lowest cost or to provide additional benefits in terms of impact on the consumer at the point of sale or consumption of the goods [6]. In any case, there is the potential for the formation of a synergistic effect when using multiple means of communication.

In this connection it is necessary to point out that in studies Arlantseva AV, EV Popova describes the schematic model of integrated marketing communications.[7]

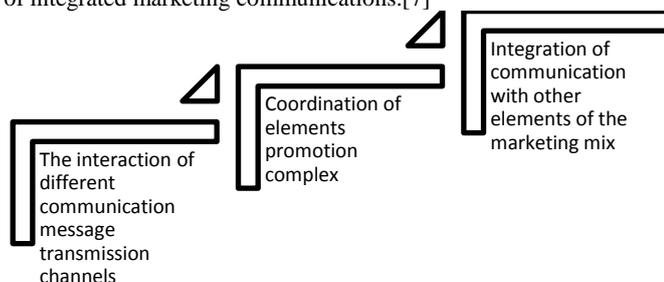


Fig. 3. Driving IMC models from Arlantsev-Popov

On the first level there is a synergistic effect of the structural elements of the communication messages interaction, acting on different channels of human perception (vision, hearing, smell, touch).

On the second level, a synergistic effect is shown by the use of complex elements of promotion: public relations, advertising, sales promotion, personal selling.

Communication effect (displayed on the y-axis), is the result of the impact of various means of promotion, which is manifested in the achievement of certain objectives of communication.

At the third level, a synergistic effect is enhanced when in promotion communication resources are utilized all elements of the marketing mix.

Thus, a synergistic effect occurs at the optimum combination of elements of the marketing message transmitted by various means of communication effects. The inherent advantages

of each instrument of marketing communications, in this scheme, reinforce each other, while the individual instruments shortcomings are compensated and eliminated.

**5. Changes to the motives of consumer behavior in the Fourth Industrial Revolution**

The development of the Internet, information and communication technologies (ICT), sustainable channels of communication, cloud computing and digital platforms, and information "explosion" escaped from the different data channels, provided the appearance of open information systems and global industrial networks (beyond the boundaries of individual enterprise and interacting with each other ), which have a transformative impact on all sectors of the modern economy and business outside the ICT sector itself, and transferred to a new industrial automation fourth stage of industrialization.

According to experts, the implementation of any automation tools, including the Internet of Things according to the concept, would be justified in obtaining a higher economic benefit compared with the accepted forms of production and business processes. One of the benefits go to the Internet of Things is a model of the analysis of user data, its production facilities (machines, buildings, equipment) and the nature of consumption. This opens up unlimited possibilities for the service provider to improve the customer experience, create more convenience, better decisions and reduce customer costs, which leads to satisfaction and loyalty by improving handling this now. [8] These processes must be considered in the near future in the development of modern marketing policy of communications companies, as these trends are consistent with consumer era.

According to J'son & Partners Consulting, the Internet of Things (IoT) is the most technologically advanced and growing trend in the business sector, both on a global scale, and the scale of individual countries. By connecting billions of everyday devices to the Internet - from fitness bracelets to industrial equipment - IoT combines online and offline worlds, opening up new possibilities and challenging the private business, government and consumers.

The urgency of this problem, a fact confirmed by the award of A. Deaton Nobel Prize for Economics in 2015, in his work as a scientist examines decisions on purchases by individual households, depending on the cultural and national particularities, the state of the local market, etc., analyzes the model of consumer behavior , at the micro level. Such studies allow you to plan and implement economic policies more effectively at different hierarchical levels, including at the state level; marketing activities at the level of the international network of companies and local levels. The results of these developments make it possible to more accurately and adequately form of communication in the thresholds and the geographic and historical specifics of the region, and thus be more effective.

Thus, the study of the behavior of customers makes it necessary to identify the motives - the reasons, preconditions, inducing to some actions that accompany the purchase. Information about the consumer behavior of the company is fundamental in the development of integrated marketing communications program, as it allows to choose the optimal combination of resources and communication channels, as well as their sources and carriers.

**6. The model of consumer's behavior changes**

Modern information technologies have strong impact on a model of consumer's behavior in the virtual market. Studying of consumer's behavior(both physical and legal persons) - is a research of all economic, social and psychological influences, which influence the process of preparation and implementation of purchase, using the acquired production, including transfer of the got experience to other persons. In the conditions of the rigid competition in the modern globalized economy there is a problem of understanding of what occurs in consciousness of the consumer from the moment of receipt of external marketing incentives,completing acceptance of a final decision.

In the conditions of post-industrial society the knowledge becomes the main resource, and the economic activity, based on limitation of resources, gives way to the economic activity, based on abundance of information and ways of its transfer. The priority of knowledge acquisition and emergence of the increasing number of non-material requirements leads to formation of new model of consumer's behavior. Other opportunities of the virtual market in comparison with real transformed behavior of the consumer gave him new qualities and caused changes in relationship "seller-buyer". For the virtual organizations, providing exclusively informational goods and services in the virtual environment, research of this problem gets the special relevance.

Actions of the modern buyer-individual are the result of a difficult multialternative choice that was proved by D. Makfalden and J. Hekman [9,10]. Broad access to information due to a global information Network today gives the consumer much more opportunities in maximizing usefulness, and it reduces to a higher level of his satisfaction. The treatment of usefulness extends and alternative opportunities at implementation of a consumer choice increase. And simplification of an interaction of the consumer with the producer creates preconditions for the consumer interests 'shift from the long-term period to the short-term. In the conditions of the increase of consumer's degree of knowledge, decrease in asymmetry of information the possibility of adoption of flexible and adequate decisions grows, that is necessary to consider at development of forecasts of consumer's behavior.

Besides, there is an increase of the consumer influence on the process of a product formation, when modern information and communicative technologies allow to combine satisfaction of individual requirements with effective production in the conditions of the global market. All this leads to formation in economy of an era of the consumer.

Now the attention to research of consumers' behavior in the virtual market and to the formation of behavioral models conceptions increased. The last development in this direction and attempts to systematize them should be noted [11]. Models describe behavior of the consumer in the virtual environment from the various points of view because of what they differ by degree of the accounting of separate effects and the relations, which are taking place while acquisition of the goods in the conditions of the virtual market.

The researches D. Begalli by means of the adapted model 7Cs Model [12] are perspective. The characteristics of the website, influencing decision-making, are considered. In the 7Cs model the following seven parameters are considered: contents, choice, context, comfort, convenience, support of clients and communications. It is important, that market researches were conducted in the B2B market by questioning; selection made 272 known wineries of Italy. Results of research were used for development of strategic solutions of behavior of plants in the virtual market.

The model of communication influence, offered by De Valck [13] is interesting. In a model the influence of social and information networks on the process of purchase decision-making is considered. The results, received within research of model, show seven main stages of decision-making. It is proved, that virtual communities serve as reference groups, which differ from traditional by their non-uniform character, and communications within have the essential impact on consumers' behavior.

In our opinion, the tripartite model of online decision-making, offered by T. Stenger [9], is perspective. In the model T. Stenger supposes, that the triangle of relationship on the Internet, which will form the buyer, the seller and the legislator is perspective. As the legislator the intermediary, who encourages an exchange between the buyer and the seller, can act. Consumers perceive purchase from a position of risk of the wrong choice of goods. For this reason they are looking for information and recommendations from various sources. Proceeding from it, within the model six main scenarios to describe the consumers' decision-making process in Internet are developed. Much attention in works

of this researcher is paid to interactivity in providing information in the virtual market.

## 7. *Role of less controlled sources of influence and information dissemination*

As an example less controlled sources of influence and information dissemination, have been widely used in recent years are social marketing communications.

In this regard, the increasing importance of technology for business gain promotion in social networks. Height number of social networks and corporate resources continues as business integration with social networks is becoming faster.

Number of Internet users and owners of pages in social networks is growing every day. We must understand that over time these networks increasingly will change its direction for informative. This is due to changing tastes of users. The analysis of scientific literature and practical material to say that marketing activities and promotion through social media link raises many questions about the effectiveness of this method. Not all owners of large and medium-sized businesses see the future development of their campaigns through SMM. Many entrepreneurs are faced with the problem of misunderstanding algorithm of actions for running a successful business or rejects potential of SMM in impact on consumers [14].

Social networks have a number of advantages both to other tools of online marketing (search engine optimization, contextual and banner advertising) and to traditional advertising tools (television and outdoor advertising). The main advantages of using social marketing communications as a part of IMC is:

- People tend to share interesting information with their environment. It is this mechanism built so-called viral marketing - creating brand tied to content that users are spreading in their environment.
- The maximum opportunities for audience targeting (ie focusing the campaign on a specific segment of the target audience). This allows you to have much more information than is the case with other marketing tools, and allows to work only with those people who best fit your conception of the audience.
- SMM is not used in the ad format. The main mechanism of interaction - a communication on topics relevant to the user and spread it interesting for content.
- Work with the audience is bilateral: Users can express their opinions, ask questions, participate in research. The result is a high quality and deep interaction with the target audience than in the case of traditional advertising.

Social networks have become increasingly popular marketing program for the company. There is a lot of material on methods of promoting goods and services through SMM, which quickly changed and improved because of changes in orientation of users of social networks.

Current market conditions and the level of development of information technologies determine further development of IMC theory. In our opinion, it should be identified such trends in the development of integrated marketing communications:

- 1) extension of individual marketing strategies and marketing relationships within the IMC;
- 2) extensive use of new tools of marketing communications, as well as their coordination in the Internet space;
- 3) the distribution of responsibility (outsourcing): transfer of management complex integrated marketing communications outside organization specializing in the marketing function;
- 4) orientation of communicative messages to several different audiences sequential positioning of the product / service / brand;
- 5) the using of developments in psychotechnologies including NLP at creation of communication messages;
- 6) evaluation of the effectiveness of complex integrated marketing communications.

## 8. Conclusion

The introduction of network communication between machines, equipment, buildings and information systems, the ability to carry out environmental monitoring and analysis of the production process and their own status in real-time transfer of intellectual systems of management and decision-making leads to a change of "paradigm" of technological development, also known as Industry 4.0.

The growth trend in sales in the global market for goods and services in a virtual environment under the influence of course, affects the marketing promotion: there are actual entirely new forms of communication and virtual channels. They have also become an integral part of a modern complex IMC.

In connection with the transition to a new economic paradigm in Industry 4.0 there are fundamental changes in the marketing activities of modern companies:

- Accelerating the spread of commercial communications through the use of new technological possibilities of marketing communications channels;

- The tendency to the predominance of virtual tools in the promotion of the complex structure of the IMC;

- The interactive nature of the interaction with the consumers with the ability to target and / or customization directly at the place and time stipulated by way of the Internet of Things;

- New principles of cooperation in the "producer-consumer" chain, reducing intermediary links;

- The transition to a new type of competition, which is relatively "equalizes" the possibility of leading international industrial corporations and small businesses through the use of "social" communication channels, and to demonstrate how new technological envelope provided goods and services;

- The ability to more accurately measure the economic efficiency of the IMC and communication by monitoring the digital data about consumers.

It is important that under the influence of the Industry 4.0, with the increasing role of information technology in society, development of the market depends largely on the buyers. In order to achieve the most effective response to the demands of consumers need to use interactive means of disseminating information, which leads to a new way of functioning of marketing communications within the IMC concept.

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