INFORMATION TECHNOLOGIES INSIDE CHANNEL MARKETING

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***Abstract**: Information technologies, IT, as a source of specific resources, have led to changes in the ways of performing many functions and marketing activities (distribution services) that are related to the distribution of goods and operation of the channel. The introduction of computer technology greatly improves the inter-organizational cooperation, developing retail and changing relations of economic power, and such an environment gives retailers greater chance to become the leading players in the industry.*
In this context, this paper provides a selective review of key arguments related to information technologies within the marketing channel. First, there is a selective review of key elements relevant to the application of information technology in distribution. On the other hand, illustrates the types of utilization of computer tools in the function of development of marketing channels, and the need for the introduction of computer tools as a contribution to the partnership.

***Keywords**: marketing channel, information technology (IT), cooperation*

1.INTRODUCTION

During the confrontation with the global and dynamic business environment, there is a need to strengthen the internal resources of business organizations and their practical abilities to overcome barriers of trade. Advances in technology can improve relationships among business organizations, the change of power in the channels can be starting point of competitive advantage, but it can also be a significant barrier for those who cannot adapt in time. The introduction of new technology in the form of sophisticated communication, computer and information systems reduces operating costs and speed of performing the operation. The assumption is that the impact of information technologies within the marketing channel is reflected in a better mutual exchange of potential benefits and resources among partners. If the channel is treated as a creation of the group of institutions that perform activities (functions) for the movement of products from production to consumption, then we can say this institution has a number of mutually complementary resources that contribute to the successful functioning of the distribution. It is necessary to achieve the favor of the distribution among the participants, who have extremely different institutional characteristics, through the joint utilization of modern computer marketing tools. But, as it is said: "Application of new concepts and technologies in economics and management is a challenging issue…".[1]
Information technology, IT, represents a departure from the operation of the channel on a global scale. It also becomes a strategic resource that management combines with other available resources to successfully manage. As it is stated: "Globalization, IT and new social values represent… key factors in a proximate future."[2]

[1] Radosavljević, Ž, et.all, „Modern Technology Application in Economics and Management", *International Journal of economics and law*, Vol. 2, No. 4, FORKUP, Novi Sad, April 2012, pp.111
[2] Dr Slobodan Stefanovic, et.al, *Management in business and ecological logistics*, doc.dr Radoje Cvejic, 2010, p. 91

2. THE IMPORTANCE OF APPLYING IT IN DISTRIBUTION

The use of technology, primarily IT, implies its use and purpose other than to connect the internal organizational units. The standardization of network protocols for the exchange of electronic data (TCP/IP[3]) and building of a global communications network based on a combination of satellite and other communication links enhance the exchange of data among businesses mitigating traditional IT barriers. Traditional barriers such as distance of the recipient and sender, the distortion of the physical data transfer, unlimited access to users and the like. This opened up the possibility of collecting and using data not only within their organizations, but also from the market of suppliers and customers for the retailers. A model of the supply chain got even wider, global dimension. As the retail sector of the global expansion of retail chains has become an important investor in the computer network, it shows that large retailers were major contributors to the development of world production of computer equipment and application programs. For the retailer, IT development is important from two perspectives. First, how to use IT to achieve the attractiveness of the retail structure of end users, and secondly, how retail management can with the help of IT to gain the acceptance of participants in the marketing channel. The goal of both views is to increase the margin value in the marketing channel.

Empirical research of sale in experimental hypermarkets of "Metro Group" ("Extra Future Stores") in Europe (Kalyana, Lal, and Wolfram 2006:109), showed that the introduction of computer innovations influenced the growth of sales in these stores for more than 10%. This market research included the statistics of end customers, however, benefit from increased sales are manifold, increasing the prestige market retailers, reduce the cost of promotion, strengthening its market share, increasing cash flow, and thus strengthen its economic and bargaining power in the channel.

Retail is strongly influenced by computer technology, wireless networking, the Internet, global computer information systems and related technologies. Participants of exchange use these technologies to collect, exchange and process data pertaining to facilitate management of production and distribution of goods. The implementation of new IT reduces communication costs and thus affects the transaction costs; making communication ceases to be a limiting factor in the institutional framework of retailing. It appears that the advantage is easier coordination of resources and activities. There is a need for analyzing the impact of IT on the distribution. Continuity of information, which Porter (1985) devoted his value chain requires a computer network of all participants who directly or indirectly affect the physical flow of goods. This connection causes the necessary changes in their mutual relations, so often is a cause for the immediate creation of an inter-organizational cooperation. All participants are looking for ways to provide more data to their managers from the distribution channels. It is known that sudden creation of the narrow types of alliance in the developed economies IT started. Development of distribution in a market economy moves from computer to connecting suppliers of raw materials, manufacturers, warehouses, wholesalers, transporters and point of sale, in a single IT system that will allow the operation of software supply chain. IT is often used for tracking stock in warehouses and stock on the shelves, then the quicker and accurate calculation of the cash account, tracking the needs and habits of final customers, to analyze the procurement process in terms of fulfillment of agreed conditions.

[3] Transmission Control Protocol/Internet Protocol - abbreviation – two basic network communication protocols providing access to the Internet for computers

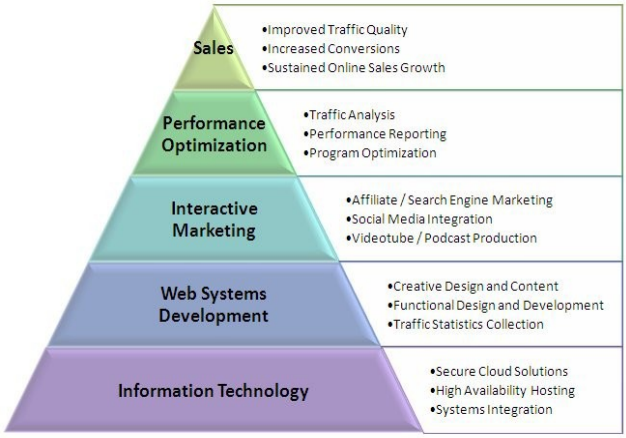

Figure 1: Information Technology

Tasks in the distribution are clearly divided, the manufacturer is responsible for product design and the manufacturer predicts innovation, while brokers are responsible for placing the product on the buyer's disposal in the form of what. There are cases where the manufacturer takes over the distribution of all roles from production to the product is placed at the disposal of the buyer. There are many ways in the practice of such direct sales where the vendor uses its network for retail. However, the important point is that IT, in addition to other communication technologies (telephone, television), also provide a specific way of retail over the Internet - Internet sales or in other words "on-line" sales.

If the manufacturer can be technologically equipped to offer and charge for their products on-line to end user who accept that form of sale, the distribution process is performed without retail intermediary - directly. By converging of all necessary technologies to perform this type of sale or exchange, "business-to-customer", B2C[4] originates. Every day we develop various forms of virtual stores on the Internet that offer and sale of goods without the usual barriers that exist in conventional channels: distance, time, language and other social barriers. Conventional retailers in the future must focus on the supply of goods across multiple channels to ensure the risks of technology development and meet the lower segment of consumers who may be critical to strengthening the bargaining power in the channel of distribution.

3. FORMS OF COMPUTER TOOLS UTILIZATION IN THE FUNCTION OF CHANNEL MARKETING DEVELOPMENT

The assumption of modern marketing is reflected in the exchange process underlying the production of well-known customer. It follows that the manufacturer has market information about consumer preferences, and if with that information plans producing, it means that the dynamics of information is tailored to its production plan. In principle, this is the essence of modern supply chain model developed from the aspirations towards information connectivity goals among all participants of the distribution. Within these factors, it is possible to accommodate the electronic data[5] interchange on the development of marketing as a result of the emergence of information society. No significances of communication and information

[4] Kotler et al. (2004:137), literate translate of "B2C" would be "from final consumer to business customer"
[5] EDI – Electronic Data Interchange, abbreviation

networking would have come to the fore if there were no will and the real possibilities for cooperation between companies. The application of electronic information interexchange between Europe's leading retailers and their suppliers began in 1993. It is pointed out that the pioneers of such links linking was "Procter & Gamble Inc.", regarding the supplier and the "Metro AG", regarding retailers, and they say that only a few major retail chains in Europe achieved electronic connectivity and that these retailers achieve a stable expansion of stores and increase sales. The task of modern computer tools in the service of exchanging goods and services is to better link trade and production in order to meet demands better. They essentially provide useful information on sales and inventories of goods. For issues and timeliness of research, it is important to analyze the most important marketing tools in the computer distribution channel. Electronic data interchange actually implies the use of various specialized computer software that is under the influence of global convergence and standardization in the industry often occurs through the specific computer marketing tools. The latest such tools are available under the name "Efficient Consumer Response", or "ECR", which when loosely translated means "effective answer to the satisfaction of consumers" are the marketing information systems that have a starting point in the supply chain. The emphasis is on cooperation of all parties that appear in the channel in order to create better conditions for the fulfillment of customer needs. ECR was created by convergence of previous computer marketing tools of narrower scope, but now fully focused on customer relations, i.e. "Customer Experience Management"[6], which loosely translated would mean "the management of consumer's experience." Thus, next computer marketing tools can be introduced under ECR:

• "Efficient Replenishment" or "Continuous Replenishment Program" ("CRP") is the practice among the partners in the distribution channel that changes the traditional way in which the dealer orders goods for supplier until achieves the optimal order quantity. CRP managed deliveries based on data from a computer on the actual and forecasted demand. This software currently registers purchase of goods at the cash register and sent data to the distribution channel. It comes to logistics procurement process that does not begin by the order of retailer, then with the end customer that is buying at the cash register. Delivery by the supplier may also be a reflection of direct information on demand or forecast demand in a shorter period of time. Such a form of inventory management affects the efficient filling of ("efficient replenishment") shelf, i.e., reducing the risk of loss of goods on the shelves, improving information sharing among partners, encourages confidence, reduce costs which require stocks, etc.;
• "Efficient Assortment" (abbreviated "EA") in loose translation would mean "effective range". It is used to store revision range in order to better fit on the demand of end customers, while remained profitable enough. That means following the share of revenue from the sale of certain commodity items in relation to total income. This concept takes into account the diversity of retail offer, the availability of space and the like. The support of this concept is very important in avoiding the costs of keeping the product on the shelves that record low revs, then improving the pricing strategy and increase return on investment. The key software in this segment is the "Category Management" ("CM"). To use this tool, it is necessary to classify the

[6] Unlike previous computer marketing tool, "Customer Relationship Management" ("CRM"), "Customer Experience Management "(Burke, 2006:115) is representative of a third generation of marketing tools. Unlike CRM, its significance are RFID, PSA, wireless communications, local GPS navigation, different interior design of shops, better promotional information and other improvements

goods in the group, then to determine their sales, earnings and sales forecast products from the group with separate observation of individual groups.

• "Customer Relationship Management" ("CRM") is a set of computer applications used for communication of the supplier to final customers, i.e. retail structure with end customers. Through this segment of the ECR, data about customers[7] and their consumption structure are monitored. CRM is used to distribute promotional information, automation of ordering goods over the Internet.

• "Radio Frequency Identification" ("RFID") which means "radio frequency identification"[8], represents the latest technological advances in the use of IT. Goods are identified using wireless communication. The application is primarily directed to assist customers buying in the stores, in order to simplify it. However, its achievements in the application are much broader. Although RFID technology is still experimental, it is possible to determine improvements that RFID technology will provide to suppliers chain.

• "Personal Shopping Assistant" ("PSA") is an electronic device with a screen, attached to the stroller handle, which is wirelessly connected to a local network with a central computer. This "sales assistant" is asking buyer to enter the assigned PIN code[9] before the purchase in order the store computer system identifies it. Thanks to wireless technology, PSA device is in interaction with the central computer. Thus, the central computer can obtain information about past purchases from the database and send them to the screen of PSA devices. According to these data, the customer can align its new purchase or list of commodity items that can be changed and adapted.

4. THE NEED FOR THE INTRODUCTION OF COMPUTER TOOLS AS A CONTRIBUTION TO THE PARTNERSHIP

Computer tools in the function of marketing, such as ECR and CM in the supply chain, create a higher level of trust among channel participants, because the transactions monitoring is entrusted with information system, not individual persons. Recording each transaction in commodity computer allows comparison of flow exchange with the set parameters and pre-agreed terms between the partners. This reduces the channel uncertainty and fear of fraud. These marketing information systems have, therefore, the role of senior controllers that do not create, but monitor the respect for the rules of exchange. Opportunities provided by the application of computer technology in retail can influence the choice of suppliers, negotiation, monitoring stock and sales dynamics and collaboration development. Selection of suppliers helps in negotiating the terms of cooperation and helps in evaluating supplier's performance. The manager sets the criterions based on which assess cooperation with the supplier in a given period. The computer based on set of criteria on realized sales, delayed or

[7]Consumer-chip cards that customer is asked to use them with every purchase, receive as a permanent customer, server to retailer for identification of customer and its consumption structure during the payment at POS counters. This information is recorded in a database and later used for the sale analysis.

[8]Advanced technology that eliminates the "bar code" as a means of marking goods (bar code is used in retail outlets since 1974, - the first time in Marsh's Supermarket in Ohio, USA) and using specific nano-chips embedded in products, wrapping material or container into which a unique code to track merchandise items was added.

[9] PIN, Personal Identification Number, abbreviation – usually encompass 4 – 7 numbers used for validation of user's credibility.

premature deliveries, compliance orders and deliveries, the quality of goods and movement of commodity prices and compares criteria between multiple vendors, decide which was the most reliable and thus can affect the channel structure. If the key components of the contract are entered into the computer, it can assess the compliance of each delivery with agreed conditions. The computer contains data collected by electronic devices on the dynamics of the goods or the state of average inventory, the quantity of goods sold, the required time of delivery, retail price and the like. During negotiations with the supplier, the computer can provide in-depth data parameters that best fit the dynamics and conditions of sale of certain goods. Retailer and supplier negotiate on these parameters ("Request for Quote", "RFQ") and enter them into the contract. On receiving goods in the store, software and hardware when record store entrance commodity items using POS or RFID device to captures the output of the goods. With these data, we can see the exact dynamics of selling and when will be the optimal time to order to maintain the availability of goods on the shelves. This reduces the risk of failure and automates the procurement of goods if they past participants of the channel have access to this information.

5. RESUME

When it comes to functionality and designing relationships in channel marketing, an important place must be given to computerization of the channel and its rapid transformation in the supply chain. Taking into account some important theoretical contributions and practical side of applying new forms of information technology, above all in developed countries, it can be concluded that introduction of computer technology enhances collaboration, developing retail and distribution methods, and certainly changes the relationship of economic power, which inevitably leads to creating an environment where retail, as an industry, is likely to become even more powerful factor in the distribution channels for goods and services. Suppliers who are not in the channel, will have to change the existing methods (or models) of partnerships with retailers and adapt to their conditions. The task of modern IT in the service of exchanging goods and providing services is to link better trade and production. The application of IT is crucial for retail development because without it the complex structure of retail chains and smaller retailers would be quite difficult. It would make difficult the functioning of the retail and distribution channels of goods. Under the conditions of modern trade, conventional application of IT is evolving further as a support of the supply chain that represents the application of IT to the extent that physical flow and functioning of all channel participants depends on it. Furthermore, IT helps in the selection, negotiation and evaluation of partners, which affects the dynamics and quality of inter-organizational cooperation and reduces transaction costs.

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