APPLICATION OF RELATIONSHIP MARKETING CONCEPT IN THE INDUSTRIAL MARKET

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Abstract

The study aims to identify approaches to relationship marketing management in the industrial market, as well as to develop an algorithm for customer relations management at an industrial enterprise. The Ettenberg's "4R" model is proposed as the basic model for relationship marketing management. The complex approach suggested by the authors includes activities related to setting goals, selecting business perspectives and performance indicators for each of the business perspectives. The system of marketing information based on the marketing metrics is proposed as the basis for the relationship marketing management algorithm.

The information base of the study is comprised of internal data of an industrial enterprise. In order to identify the main features of the target segment and develop the strategy, a statistical analysis is carried out using the classification trees method for the data of sales and a customer share. The analysis involves the exhaustive CHAID classification trees method. It results in selecting the target segment of customers and developing its profile. Major marketing decisions are proposed for each marketing mix tool.

Key words: relationship marketing, customer relationship management, "4R" Model, Exhaustive CHAID classification trees method

JEL Code: L60, M31, C12

Introduction

Changes in the industrial market environment define special tasks for marketing management. The concept of relationship marketing can help with solving one of the most important tasks – establishing efficient interaction with customers. The aim of the study is to develop an algorithm of customer relationship management for an industrial enterprise, taking into account the main principles of relationship marketing concept.

Customer relationship development has been an object of scientific and applied studies for many decades. However, relationship marketing remains one of the least explored and understood issues in marketing theory. The theory of relationship marketing was recognized worldwide in the 1990s. It covers a wide range of marketing problems and was defined as a "new" concept of marketing (Berry, 1995). Relationship marketing is not based on the terms of transactions, but rather on the values of relations and thus on the shift from short-term transactions to long-term relationship (Kotler, 1992; Gronroos, 1991). Its goal is increasing the importance of customer retention. Bennett (1996) shares the idea and believes that relationship marketing aims to establish stable long-term relationship. It is or should be characterized by trust, openness, genuine customer priority, the principles of straight dealings and willingness to sacrifice short-term benefits for long-term ones. Finch, O'Reilly & Abeza (2015) provide a holistic understanding of relationship marketing in its interdisciplinary nature involving the concepts of management, psychology and sociology. They come to the conclusion that the quality of the relationship is an integral part of the behavioral intentions of a customer. Sheth, Parvatiyar & Sinha (2015) emphasize the importance of cooperation and value creation for the ones involved in the relationship.

For an industrial enterprise, the main goals of marketing management involve personalizing product offers and establishing close long-term contacts with partners. Increase of profits is achieved mainly with growing sales to regular customers. Breman & Turnbull (2001) draw their conclusions from the empirical studies of the Industrial Marketing and Purchasing Group (IMP): most of the contracts in the industrial markets are based on established business relationship, mutual trust and readiness to adapt. Baker (1999) notes that when a company fails to offer the best product at the market price or an equivalent product at a lower price to its business partners in the industrial market, the only option is to develop relationship and increase the value of cooperation through additional services. Egan (2011) agrees that industrial marketing is not limited to managing the exchange of goods between companies, but rather uses a complex set of human relations.

The essence of relationship marketing is development of a business philosophy that involves all business units and becomes the basis for building all business processes in order to create products demanded by the customer. It implies improving relations with regular customers, suppliers and intermediaries in order to ensure mutual value of cooperation, which allows the company to increase its profitability and competitiveness.

The research results in developing an algorithm and a strategy of relationship management for a specific target segments of an industrial enterprise, which allows the company to build business processes in order to provide the result wanted by a customer. The authors identify success factors for the target segment and propose marketing solutions for each marketing mix tool. The relationship management algorithm uses the marketing information system (MIS) based on the marketing indicators of the balanced scorecard (BSC).

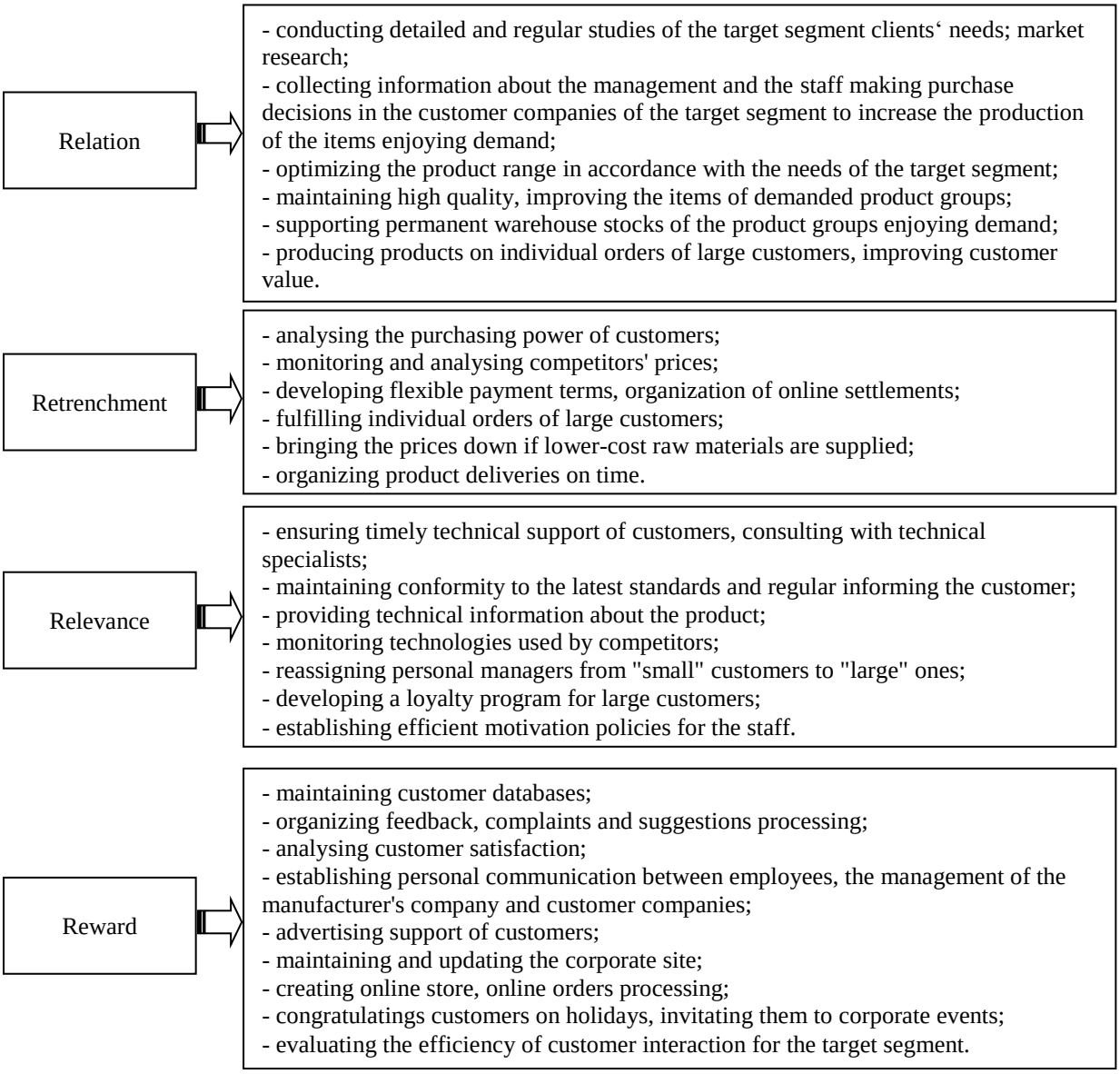
1 Analysis of relationship marketing models

Building business processes in a company aiming the result wanted by a customer requires monitoring the level of achievement of this result and the effectiveness of customer interaction. This task can be accomplished by organizing the communication process and information exchange between partners. Therefore, the shift from traditional marketing to the concept of relationship marketing requires rebuilding of the marketing information system. It should minimize marketing costs for the company while allowing it to establish relationship with target markets and customers.

The "4C" and "4R" models emphasize customer relationship and customer needs. These models focus customers in the process of creating the value they would like to receive. Lauterborn (1994), the creator of the "4C" model, makes the customer a target of all the marketing tools. The product is presented as customer needs; price is regarded in terms of costs to the customer; place is the convenience of purchase; promotion reflects communication with the customer. The "4R" model implies the personalization of marketing. Schultz (2004) proposed four tools: relevance between the producer and the customer, requiring a clear conformity of the products to the customers' requests; respond to market changes; relations with customers, based on the fulfillment of promises; reward from the customer for the received value, expressed in further cooperation. A similar model was proposed by Ettenberg (2003), who introduced the following marketing tools: relation between the enterprise and its customers; retrenchment as economy, the required technology and convenience of consumption bringing the enterprise and its customer closer to each other; relevance as a correlation of brand value with motivation to purchase products; and reward of customers as a long-term satisfaction of their preferences and needs.

The authors choose the "4R" model as a basic model of an industrial enterprise relationship marketing management. It allows a manager to build business processes in the company focusing customer needs and develop key marketing solutions (Fig. 1).

Fig. 1: Relationship marketing complex in the industrial market



Source: authors' elaboration

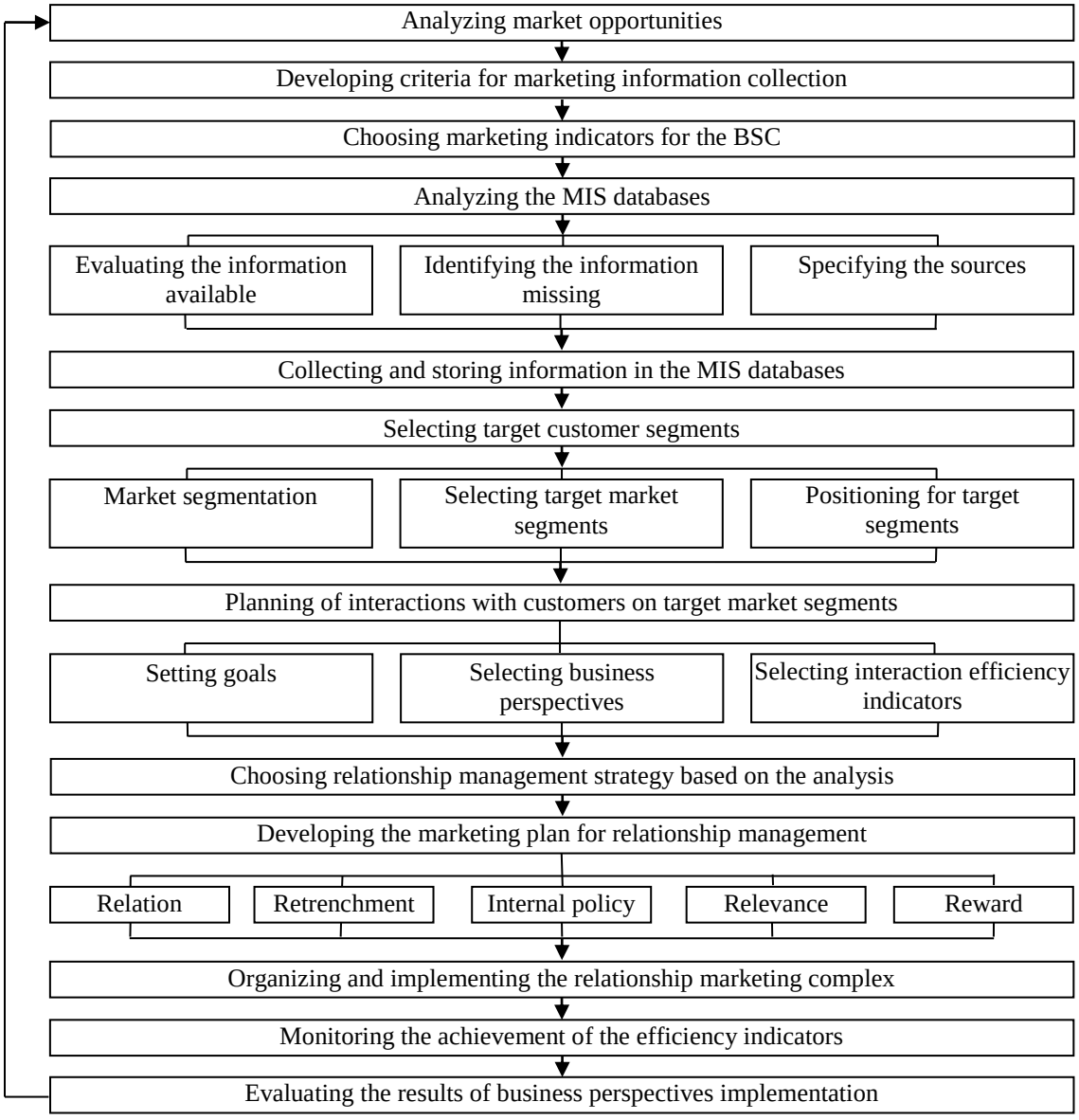
The goal of relationship management is to increase the efficiency and the value of relationship for both the company and the customer.

2 Algorithm of process of management of mutual relations with target segments of customers in the industrial market

The authors propose the relationship management algorithm for the target segment of customers (Fig. 2). The choice of the target segments and the strategy is based on the

marketing information system (MIS) with the balanced scorecard (BSC) of marketing indicators evaluated for each business perspective (Kapustina, Izakova, Drevalev, 2017).

Fig. 2: Relationship management algorithm for the target segments of customers in the industrial market



Source: authors' elaboration

Developing a MIS of an industrial producer based on the BSC provides for an efficient information exchange that allows monitoring financial indicators evaluating marketing activities effectiveness with due regard to the industry specifics.

Segmentation in industrial markets has a number of features defined by the uniqueness of the market. The industrial market is limited by the number of consumer industries. It is also

characterized by high professional level of buyers, close business relationship between the buyer and the seller, the purchases defined by production needs of a buyer, their large volumes and complex decision-making process and its implementation. Individual approach to each corporate client leads to high costs of sales management. Segmentation of the market allows reducing these costs and increasing the sales efficiency. Taking into account the fact that the customers are not unified, the authors recommend using multidimensional static methods (Kapustina, Izakova & Vozmilov, 2016). The authors suggest using the method of classification trees as the most universal and informative method that allows including a large number of independent variables for segmentation. It also allows automatic selection of the most significant variables, which are then used to form the tree model. The ability to visualize the results in the form of a hierarchical tree structure is one of the advantages of the method.

The authors have selected the Chi-Square Automatic Interaction Detection (CHAID) method, an automatic relationship detector based on the Pearson χ^2 criterion. The essence of the method consists in the study of contingency tables between each predictor variable Xi and the response variable Yi and checking for significance using the χ^2 criterion. The formula for calculating the Pearson χ^2 criterion is as follows:

$$\chi 2 = \sum \left[\left(\mathrm{F}_0 - \mathrm{F}_n \right)^2 / F_n \right] \quad (1)$$

where F_0 and F_n are respectively the observed and expected frequencies;

n is the number of degrees of freedom.

As a result of the analysis, target variable categories can be defined.

3 Results of the relationship management algorithm implementation for the target segments of customers of an industrial enterprise

The task of the case study is to test the concepts proposed by the authors by developing a relationship management strategy for Adeplast LLC, an industrial manufacturer of a wide range of PVC profile products in the Urals region of Russia. The data used for the analysis was comprised of the internal marketing information of Adeplast.

In order to profile the target segment, all the customers of the company were broken down into categories by total sales: large, medium and small customers (Table 1).

Tab. 1: The ratio of Adeplast's customer categories by sales volume in 2016.

Customer category	Share of customers, %	Share in total sales, %
Large	26	84
Medium	38	14.5
Small	36	1.5

Source: authors' elaboration

The analysis was carried out using the exhaustive CHAID classification trees method with SPSS 20. This method gives the lowest risk statistics and the highest percentage of reliable predictions. At the parent node, the minimum number of observations was chosen to be 15, at the child node the number is 5. The dependent variable is the category of buyers, independent variables are the number of types of products purchased by the buyer, the frequency of purchase, the region of the customer location. The evaluation of risk statistics (estimate – 0.033, standard error – 0.041) allowed the authors to assume the adequacy of the model, the percentage of correct values predicted by the model is 77.1%.

The distribution of observations on the nodes of the classification tree was carried out using logical conditions, where 1 is "the observation belongs to the node". The analysis provided the following characteristics of the "Large customers" segment as the most attractive one for the company in terms of its share in the sales – 84% (Table 2).

Tab. 2: Characteristics of the target segment – large customers

Node	Node		Benefit		Response, %	Index, %
	Number of observations	Percentage in the sample, %	Number of observations	Percentage in the sample, %		
5	32	21.3	28	51.9	87.5	243.1
8	19	12.7	9	16.7	47.4	131.6
3	66	44.0	17	31.5	25.8	71.5

Source: authors' elaboration

The nodes with the index exceeding 100% are of most interest to the company. Node 5 is the most attractive one with the share of large buyers that accounts for 51.9% of all large customers of the company, 87.5% within the group. This node shows the figure 2.43 times higher than the average share of all large customers in the sample (index is 243.1%). Characteristics of the segment: orders with the frequency of less than once a month, not more than 2 types of products. Node 8 is the second most attractive segment representing 12.7% of the customers. The share of large buyers in this node is 16.7%, with 47.4% large customers.

Characteristics of the segment: orders with the frequency of less than once a month, not more than 2 types of products, located in the Sverdlovsk Region or Ekaterinburg.

Drawing the contingency tables for the "terminal nodes" variables and the preferred types of products allowed the researchers to identify the product groups that are most often purchased by the target customers and on the contrary, the items that enjoy no demand.

Based on the results of the analysis involving classification trees and contingency tables, the target segment profile is identified for Adeplast (Table 3).

Tab. 3: Characteristics of the profile of the target segment of corporate clients of Adeplast

Characteristics of the segment	Recommendations
Large buyers, providing sales of at least 2 mln rubles a year. Share of customers - 26%. Share in total sales - 84%. The customers are mostly located in Ekaterinburg and the Sverdlovsk region. Only certain types of products are purchased, mainly belonging to one or two product groups (profile of the 3rd series, the window sill and the glazing molding). No purchases of reinforced profile, the profile of the door series. The frequency of orders products - less than once a month (2-3 times a year).	Maintaining relationship with this segment of customers, developing a loyalty program. Individual work with every client to expand the range of products ordered and increase the frequency of purchases, cross-selling. Ensuring permanent stocks of the demanded product groups. Planning of the product range, analyzing the possibility of abandoning the production of the products without demand. Developing a promotion program in Ekaterinburg and the Sverdlovsk region.

Source: authors' elaboration

For the "Large customers" target segment, which provided 84% of the company's sales, the authors recommended implementing the "improving the quality of relations" customer relationship management strategy. The segment strategy included the following tasks: targeting internal business processes on the customers to increase their satisfaction, reassigning personal sales managers from small- and middle-scale customers to large customers, establishing a system of personal relationship, developing incentives for large customers, providing guaranteed availability of products and their prompt shipment.

Implementation of the "4R" marketing model with the "improving the quality of relations" strategy and the respective tools targeting the "large customers" segment has proved to have positive impact. The costs have been reduced and the efficiency of customer interaction has increased. Apart from that the customer loyalty has increased. The changes led to the increase in profits for the segment and an overall increase in the annual revenue.

The task of the company's management is to ensure that all the tools of the developed marketing system receive the required information. This will allow maintaining long-term

relations with partners, fulfilling obligations, creating mutual value, which lead to significant advantages in the industrial market with tough competition.

Conclusion

The goal of developing a relationship management strategy for the target segments of an industrial enterprise is to establish business processes in the company in a way that ensures the result wanted by the customer. It also pursues the goal of identifying success factors on the target segment in order to develop solutions for each marketing tool.

The case study showed how important it is for a company operating in the industrial market to understand the specifics of relationship marketing in order to improve efficiency of marketing tools and gain competitive advantage. Developing and successfully implementing the customer relationship management strategy based on the segmentation of the industrial market allows efficient interaction with target customers. It results in increasing profitability and competitiveness of the company.

The application of the algorithm of relationship marketing management should be based on reliable marketing information. Marketing information system should allow taking into account the links between the marketing activities and subjects of relationship, the values of partners, as well as optimizing marketing costs based on the tasks, the business environment and selected market segments.

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