

# **RELATIONSHIPS MARKETING STRATEGIES IN SUPPLY CHAINS**

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## ABSTRACT

Supply chain management is one effective strategy for gaining competitive advantages, and thus it is attracting the attention of researchers trying to explain the nature of this concept, to find the reasons for its appearance, and to study its perspectives for further development. One of those perspectives is the integration of marketing and supply chain management: on the one hand, this allows for a significant increase in effectiveness of the supply chain; on the other hand, it demands serious further development of the conceptual basis. The goal of this article is to study relational strategies between partners in a supply chain, as the basis for the idea of supply chain management. This article examines cooperative, competitive, and commanding strategies of such relations and analyzes empirical data from Russian companies.

*Keywords:* relationship marketing, supply chain management, demand chain management, relational strategies, Russian market

## INTRODUCTION

Facing globalization of business and aggressive competition, modern companies need to find new sources of competitive advantage. The focus of this search is beginning to move away from raising efficiency by lowering costs (development in this direction has reached certain limits), towards increasing the value of what is offered to the customer.

At one time the search for new ways of improving efficiency led to the appearance and development of the classical approach to supply chain management. Now, one of the more dominating directions in the development of supply chain management is marketing. The classical approach to managing supply chains has its roots in logistics; the root of its goal was economic efficiency of the inventory flow (?) and, correspondingly, of companies [Cooper, Lambert, Pagh, 1997]. Followers of the marketing approach adhere to a different logic: the possibility of efficient cost reductions in supply chains is being exhausted, and what is now needed is a new resource that facilitates optimization of work in the chain. This resource is the value of the final product, created concurrently with the buyer involved in the production process [Prahalad, Ramaswamy, 2004].

The marketing approach to supply chain management provides the opportunity to raise the price of what is offered to the customer by increasing its value, and this process demands additional research [Heikkila, 2002; Juttner, Christopher, Baker, 2007] that, in turn, should lead to a core reorganization of supply chain management [Baker, 2003]. To answer this question demands understanding the nature of relations inside the supply chain.

The goal of this article is to examine relational strategies in the supply chain, using empirical material in a theoretical framework developed here. This goal requires addressing these tasks: 1) to show that the marketing aspect is dominant in evolving

concept of supply chain management; 2) to study the nature of relations in the chain; 3) to confirm theoretical conclusions with empirical material.

Understanding the contemporary mechanism for creating competitive advantages is impossible without a careful analysis of the concept of supply chain management, which is already recommended as an efficient means for reducing costs and claims to lead to a new level of competitive advantages. This issue is important in practice and for current research into related issues.

The paper is comprised of four parts. The first part presents theoretical overview, assumptions and hypotheses. The second looks at the methods, used to analyze the research questions, including research design and measures used. In the third part is the basic analytical part — it includes cluster analysis and hypothesis tests. The fourth part brings up our conclusions.

## **THEORY AND HYPOTHESES**

### ***Theoretical background***

The companies, that are oriented on profit margin in a long run perspective, the assertion, that (a) value of proposition for every client has to be positive, i.e. value for customer should exceed clients' costs on acquisition of those goods; and, that (b) every company is the part of, at least, one of the supply chain, — is the axioms. Leading companies (on global and local markets) differ from competitors by the ability to generate greater value and manage the supply chains more effectively. Hereby, the answer to the strategic management question “why one companies are successful and other – not”, includes, besides others, the decision on marketing strategies and on relational strategy. In other words, the companies should solve minimax (maximin) task in uncertainty in supply chain, and efficient solution leads companies to the leadership on the market.

In terms of marketing strategy, no matter how many clients does the company serve: it can be successful with a single client, or hundred of clients. It is more

important to answer another question — why are the customers of buys the products, that is, whether the company creates added value, or limited to a standard product with a maximum margin (in case of monopoly, for example). The decision of what marketing strategy to choose, that is, in fact, the decision of whether to create additional value and, if so, how — are determined by several factors. These, mainly external, factors include: the degree of industry concentration, the strength of competitors, dependence on customers of products or services of the company, availability of substitutes, internal target indicators and strategic objectives of the company. The more complex the environment, the more efforts are required to establish the value of the company; the stronger are the competitors, the more aggressive should be the marketing activities; the higher the degree of industry concentration, the more companies involved in a small proportion, and less flexibility for companies with high market share, the less probability of substitute products, the lower the elasticity of demand at a price.

The ability of the company to create value depends on its business model, access to resources and the marketing environment. The marketing environment is constantly compounded: the time to copy the new products is rapidly decreasing; consumer behavior radically changed due to new virtual communication platform, as well as due to changing lifestyles and behavior of contemporary buyer: finally, the evolving nature of competition is different — «contemporary competition is not among companies, it is among supply chains» [Christopher, 2005]. On the market where the customer can find almost any offer, to compare features, prices; where segments of the rapidly declining virtually to the size of just one client — the company must not only reduce costs and create a valuable product for the relatively large segments, but also to create value for individual customers. Otherwise, companies will be driven from the market by numerous competitors. In this regard, either the paradigm of marketing [Sheth, 2007], and an understanding of competitive

business model [Prahalad, Ramaswami, 2003] have been transformed from the exchange paradigm to co-creating value with customers paradigm.

Co-creating value with customers — is a process of creating individually valuable goods by involving the customer in a process of production. This approach does not contradict with the general principle of marketing, namely that the client will always choose the proposal that it more valuable. The logic of marketing assumes a permanent reduction of segments and improvement of product characteristics that are important and valuable to an increasingly smaller segment. One of the simplest examples of co-creation value — is the system of self-serving. Customers are offered the resources to meet their own needs. This approach usually considered by companies as a tool of costs reduction [Sheth, 2007]. However, our paper is not only about the system of self-serving, but the real integration of the client in the production process. Integration implies that the client is involved in the production process, helping the manufacturer create a unique, valuable products [Prahalad, Ramaswami, 2005]. Co-creation of value has significant limitation of a technical nature — the companies usually are concentrated on their core competencies [Hamel, Prahalad, 1990], hence, the production of unique products by one company is difficult. The question is how to integrate into the relationship «producer-customer» those suppliers who are able to create additional value. Companies that work in a new marketing paradigm have to implement innovative approach to the relationship with suppliers to ensure not just effective cost reduction, but also effective value co-creation with customers.

Any company, as an open system, is part of supply chains. In other words, the supply chains, as such, exist in any case. The exception is a vertically integrated corporations (rather hypothetical in today's business), which theoretically does not need external resources. It is so-called «Economy of Robinson Crusoe». In other cases, the company (due to lack of internal resources, [Wernerfelt, 1984; de Wit, Meyer, 2004]) calls on the suppliers. If the company does not manage the

relationships in the supply chain, i.e. it is easier (from a management point of view) and cheaper (in terms of transaction costs) to find a new supplier, rather than develop a relationship with an old, it — is a passive member of the supply chain. This company use «competitive» relational strategy (the case of independence of partners of each other). Competitive strategy is characterized by relatively small companies that are either a) work on undeveloped markets, where companies do not have the ability to plan (e.g. Russian market in the first half of 1990; where companies were not able to establish close relationship since economical environment was very unstable), or b) the developed markets where clients are able to find substitutes easily (e.g. commodity markets).

In a case where the company may receive additional benefit from managing relationships in supply chain, companies are ready to invest in the development of the relations (in the communications infrastructure, in the adaptation of production, logistics and other processes, in the joint research of the market and even in the joint strategic management planning). This strategy is called «cooperative» (case of mutual dependence). Partners cooperate to manage the interaction in the supply chain. Compared to the competitive strategy, cooperative strategy is more complicated and expensive process, requiring a close and long-term relationship between the partners in the chain.

### *Assumptions and hypotheses*

This paper includes the results of analysis of empirical data that was gathered in different companies that use different marketing and relational strategies, that work in different marketing context.. That is why the author developed several assumptions, that are significant for hypotheses and, finally, for the conclusions of this work. The assumptions cover following areas: the choice of key supplier (P1), the choice of relational strategy with this supplier (P2), the choice of marketing strategy of the company (P3). Below these assumptions are described deeper.

Assumption P1. The author assumes that companies are able to identify their own key supplier. The key supplier is a supplier, which is a partner of a company for more than two years, and which the company (the respondent) evaluates as the most important supplier compare to other suppliers. Besides it, the respondents were asked to choose one of the most important area (market) of their work where the company has, at least, two suppliers. It helped the researcher to eliminate the cases with command relationships. In other words, this assumption helps the author to make conclusions on relationship marketing strategies in supply chain, because we chose important sphere and a key supplier. Below in the paper we assume, that relational strategy refers to particular supplier, but marketing strategy refers to the whole company.

Assumption P2. The author assumes, that the company choose either competitive or cooperative strategy with key supplier. The companies with command strategies with key supplier were eliminated from the survey.

Assumption P3. The author assumes, that all companies, more or less, are marketing oriented. The marketing strategy of the company different and significant difference is how valuable are the goods of the company and how the company produces these valuable goods.

Basing on these assumptions, as well as on the theoretical part and previous work, we developed several hypotheses. The first hypotheses (H1) is that all companies are divided in four clusters (see table 1).

**Table 1. Dividing the companies in four clusters**

|                              |  | Relational strategy with key supplier   |   |
|------------------------------|--|---|---|
|                              |  | Competitive strategy  | Cooperative strategy  |
| <b>Marketing orientation</b> | <b>Marketing is not a dominant orientation</b> | <i>Cluster 1.</i> Companies that are not oriented on marketing and value development and that realize competitive strategy. | <i>Cluster 4.</i> Companies that are not oriented on marketing and value development and that realize cooperative strategy. |
|                              | <b>Marketing is not a dominant orientation</b> | <i>Cluster 2.</i> Companies that are oriented on marketing and value development and that realize competitive strategy.     | <i>Cluster 3.</i> Companies that are oriented on marketing and value development and that realize cooperative strategy.     |

Basing on the goals and tasks of the survey, the author developed two other hypotheses: about the environment of the companies of different clusters (H2), about the level and significance of specific investments in relations with key suppliers of the companies of different clusters (H3). Moreover, the author examines the financial, market and marketing results of the companies of different companies.

Hypothesis H2. There is positive relation between the choice of different strategies and the frequency and speed of changes in the business environment. The frequency and speed of changes in the environment is studied with four basic parameters: general change of market situation, frequency and speed of technological changes, the change of demand structure and change in competitive environment. The author assumes, that cluster 1 companies work on the undeveloped markets, the cluster 4 companies – on developed markets.

Hypothesis H3. The cluster 1 and 2 companies (competitive strategies) invest in relations with key supplier less, that cluster 3 and 4 companies (cooperative strategies).

These hypotheses help author to answer important question in the nature of different relational strategies and to understand relationship marketing strategies in supply chains.

## **METHODS**

## ***Research design***

The empirical part of the survey consists of four parts: planning the survey, chose of the measures and data preparation, cluster analyses and testing hypotheses, conclusions and recommendations. The part of collecting data was excluded, because it was outsourced, that is why this part includes only analytical part of the research.

*Planning the survey.* Basing on the conclusions, made in theoretical part of the paper as well as on previous papers and qualitative part of the survey, goals, tasks, basic parameters of the survey were developed.

*Chose of the measures and data preparation.* The task of the second part of the survey – to choose parameters for cluster analysis. Finally, two scales were chosen: the scale “marketing orientation” and the scale “relational strategies”. Factor analysis (Confirmatory Factor Analysis in SPSS 16.0.) was used for both scales to reduce data [Thurstone, 1931]. After factor analysis 8 variables from the scale “relational strategies” and 5 variables from the scale “marketing orientation” were picked for further analysis.

*Cluster analyses and testing hypotheses.* After the variables for luster analysis were picked, author accomplished the procedure the cluster analysis procedure (K-Means in SPSS 16.0.). The cluster analysis was chosen to divide companies in four groups (clusters) and investigate hem separately [Steinhaus, 1956]. Basing on results of hypotheses tests, the author made *conclusions and developed recommendations*.

## ***Measures***

On this stage of investigation, the author has two main tasks. The first task is to determine variables that define cooperative or competitive strategies. The second task is to determine variables that define marketing orientation. Cooperative/competitive strategies were defined by variables, suggested by N. Campbell [Campbell, 2002] and later modified and used by Krotov, Kouchtch and Smirnova [Krotov, Kouchtch, Smirnova, 2008]:

- ✓ *Long-term relationships with key suppliers.* Cooperative relationship strategies assume long-term relationships with key suppliers — companies have to have time to get return on investment in cooperative relationships.
- ✓ *Joint reduction of total costs* — an important criteria, reflecting the desire of the partners to adhere to the cooperative relationship that would implement programs to reduce overall costs. For competitive relationship the primary role — to reduce the purchase price. For cooperative relationships — to reduce total costs.
- ✓ *Ability of buyers to create additional value.* The main task of buyers in the competitive relationships — cost reduction. In the framework of cooperative relations problem buyers primarily solve a strategic problem, and after that — reduce costs.
- ✓ *Clarity of the objectives of relations.* Availability of clear, concise, specific goals characterizes the relationship as cooperative.
- ✓ *Mutual benefit from relationships.* In contrast to the cooperative, competitive relationship does not imply the conditions of mutual benefit of both partners in the long run.
- ✓ *Joint development of business processes and joint strategic planning* — the key indicators of the integration of the companies in the supply chain.
- ✓ *Specific investments in relations.* The presence of specific investments in relationships with partners in the supply chain suggests that the partners are interdependent, therefore, a significant amount of specific investment shows the confidence high level of trust between the companies, long-term nature of relationships, etc.

Marketing orientation was defined basing on following variables:

- ✓ *The degree of differentiation.* Differentiation is an integral part of marketing strategy. Marketing strategy - this is the search differentiation.
- ✓ *The degree of uniqueness of the products (services).* Every company strives to produce unique products, as unique products easier to set a price premium, etc.
- ✓ *The amount of innovative products.* Search differentiated characteristics unique products are usually accompanied by high levels of innovation activity. The more a company focuses on marketing, the more innovative products it produces.
- ✓ *Quality of products.* Quality is an integral indicator of the results of marketing activities. Higher quality of products — more marketing oriented the company is.
- ✓ *Wide product range* — is another characteristic associated marketing-oriented company. The wider product range — more marketing oriented the company is.

Two lists of variables were analyzed with the function of factor analyses to decrease the number of variables and pick most significant variables.

### ***Sample and Data Collection***

The research program “Supply management in Russian companies” was run by the Research Institute of Management at the Graduate School of Management at St. Petersburg State University. This research was carried out under the aegis of the national priority project “Education.”

Respondents from 208 companies representing 17 regions in Russia participated in our study. Companies from St. Petersburg and Moscow made up 19% and 14% of the sample, respectively, while other regions made up from 1% to 6% each. The greatest share of companies (15.9%) were in retail and wholesale trade (10.6% and 5.3% respectively). Different branches were represented as follows:

mechanical engineering (9.1%) and instrument making (4.3%), food processing (11.5%), wood (6.7%), light industry (91%), chemical industry (1.9%), information technologies and telecommunications (7.7%), metalworking (2.9%), and construction (8.7%).

The size of companies was set by two basic criteria: number of personnel and sales volume. In terms of personnel, the majority of companies sampled are of average size: 67.8% of companies have 70-500 employees. Business with more than 1000 employees made up 20% of the sample. More than 55% of our companies have sales volume of less than 200 million rubles.

We should also note that almost 98% of firms in our sample are private (non-state). 39.9% of these companies have market share of less than 15% (18.3% of them have less than 5%). 21.6 % of companies control 16-25 % of the market. 63.5 % of the companies were founded after 1990. While the sample is not entirely representative of the Russian economy, it does allow us to draw some conclusions.

The research was designed in such a way, that in every company two respondents were interviewed, so every company was interview twice. The respondents were either directors of the companies or directors of functional departments (marketing or purchasing). The overall information about the structure of questionnaires is shown in table 2.

## **Table 2. The structure of questionnaires**

|   | <b>Questionnaire 1</b>  | <b>Questionnaire 2</b>   |
|---|---|--|
| <b>Quantity of interviewers</b>           | 208   | 208  |
| <b>The object of the research</b>         | The company in general  | Relationships with key supplier  |
| <b>The structure of the questionnaire</b> | General information on the company<br>The role of purchasing and supply management in the company<br>Geography of the procurement<br>Relationship and procurement strategy<br>Information technology in procurement<br>The economic role of procurement<br>The overall strategy of the company and its marketing strategy<br>The overall performance of the company<br>The data on respondent | General information on the company<br>Satisfaction with the cooperation with the supplier<br>The level of trust of the supplier<br>Commitment to relationships with suppliers<br>Long-term orientation on the relationship with the supplier<br>Planning for the interaction and overall strategic planning<br>Flexibility of partners in the relationship<br>Specific investment in the relationships<br>The data on respondent |

## **DATA ANALYSIS**

### ***Cluster analysis***

To achieve the goal of dividing into the cluster, the procedure of cluster analysis was executed (K-Means, SPSS, 16.0). Seven iterations were made to get cluster centers (see table 3). On the theoretical part of research we defined, that it should be four clusters, thus the centers of clusters were calculated according to this assumption. Поскольку

**Table 3. Iterations**

| <b>Iteration</b> | <b>Cluster number</b> |          |          |          |
|------------------|-----------------------|----------|----------|----------|
|                  | <b>1</b>              | <b>2</b> | <b>3</b> | <b>4</b> |
| 1                | 4,688                 | 5,049    | 4,877    | 4,138    |
| 2                | 0,683                 | 0,623    | 0,306    | 0,196    |
| 3                | 0,299                 | 0,283    | 0,158    | 0,190    |
| 4                | 0,139                 | 0,141    | 0,093    | 0,205    |
| 5                | 0,104                 | 0,070    | 0,068    | 0,105    |
| 6                | 0,000                 | 0,069    | 0,000    | 0,107    |
| 7                | 0,000                 | 0,000    | 0,000    | 0,000    |

Out of 208 cases that was available for analysis, 7 cases were excluded from the analysis because of its “command” nature of relational strategy. Additional 12 cases were also excluded, because there was no valid answer on variables for cluster analyses. Total 189 cases were distributed per four groups (clusters). One of the tasks of cluster analysis — to show the difference between clusters, so it was important to have high F-test for variables [Fisher, 1918], see table 4. The maximum F-test are for the variables “Joint strategic planning” (F=78,151), “Specific investments in relations” (F=46,191), “Joint development of business processes” (F=50,319), “Wide product range” (F=44,771) and “The degree of differentiation” (F=46,191). Analyzing the list of variables, it seems that it is quite logical that it is these variables that have maximum F-test. They are not abstract, like “Mutual benefit from relationships” or “Quality of products” and show real difference between clusters. Besides, the significance level is high for all these variables.

**Table 4. Results of ANOVA test**

| <b>Variable</b>                                     | <b>Mean Square</b> | <b>Error of mean square</b> | <b>F-test</b> | <b>Sig.</b> |
|---|--------------------|-----------------------------|---------------|-------------|
| <i>Scale "Relational strategy"</i>                  |                    |                             |               |             |
| Long-term relationships with key suppliers          | 15,088             | 1,380                       | 10,934        | 0,000       |
| Joint reduction of total costs                      | 14,730             | 1,360                       | 10,832        | 0,000       |
| Ability of buyers to create additional value        | 5,726              | 1,009                       | 5,672         | 0,001       |
| Clarity of the objectives of relations              | 6,207              | 0,678                       | 9,153         | 0,000       |
| Mutual benefit from relationships                   | 7,514              | 0,748                       | 10,043        | 0,000       |
| Joint development of business processes             | 50,270             | 0,999                       | 50,319        | 0,000       |
| Joint strategic planning                            | 63,166             | 0,808                       | 78,151        | 0,000       |
| Specific investments in relations                   | 48,053             | 1,058                       | 45,420        | 0,000       |
| <i>Scale "Marketing orientation"</i>                |                    |                             |               |             |
| The degree of differentiation                       | 63,434             | 1,373                       | 46,191        | 0,000       |
| The degree of uniqueness of the products (services) | 36,625             | 0,998                       | 36,685        | 0,000       |
| The amount of innovative products                   | 52,874             | 1,213                       | 43,604        | 0,000       |
| Quality of products                                 | 32,538             | 1,453                       | 22,401        | 0,000       |
| Wide product range                                  | 40,634             | 0,908                       | 44,771        | 0,000       |

As a result, four cases were classified in four clusters (see table 5): cluster 1 — 39 cases, cluster 2 — 54 cases, cluster 3 — 61 cases, cluster 4 — 35 cases. The smallest number of cases (companies) are in the third cluster, which, from the standpoint of the author, is the cluster of the most promising and innovative companies. The largest number of companies falling into the fourth cluster, which, from the standpoint of the author, include the company focused on efficiency in the supply chain (co-operate with key suppliers to joint costs reduction). This pattern, in general, reflects the overall situation in the Russian business at the time of the study in 2006 (see table 5).

**Table 5. Dividing the companies in four clusters**

|                              |  | Relational strategy with key supplier  |  |
|------------------------------|--|--|--|
|                              |  | Competitive strategy   | Cooperative strategy   |
| <b>Marketing orientation</b> | <b>Marketing is not a dominant orientation</b> | <i>Cluster 1.</i> Companies that are not oriented on marketing and value development and that realize competitive strategy. <b>n=39.</b> | <i>Cluster 4.</i> Companies that are not oriented on marketing and value development and that realize cooperative strategy. <b>n=61.</b> |
|                              | <b>Marketing is not a dominant orientation</b> | <i>Cluster 2.</i> Companies that are oriented on marketing and value development and that realize competitive strategy. <b>n=54.</b>     | <i>Cluster 3.</i> Companies that are oriented on marketing and value development and that realize cooperative strategy. <b>n=35.</b>     |

Note:

\* n — quantity of companies (cases) in each cluster

The data in table 6 clearly shows, that, as the author supposed (H1), there are four different clusters with relatively high results on F-test on most important variables. Cases in the first cluster have relatively low values for absolutely all variables, and the greatest “lag” is for key variables, that evaluate marketing orientation and relational strategy. According to these data we named this cluster “advantage-seeking companies”. These are the companies that do not need long-term relationships with partners, they do not invest in relations, and they are free to choose new suppliers. Probably, they either work on unstable market, where it is impossible to trust own partners due to rapid economic and politic changes, or develop most of value for customers by themselves, hence resources they need are very simple and it is possible to find substitutes.

Companies that are in cluster 4 (table 6), in contrast to the first cluster, are the «leaders» on almost all variables. Based on the data obtained, the company that the cluster can be described as «market leaders». Market leaders seeking for solutions how to meet the needs of their customers and how to manage supply chain effectively. In other words, these companies are as close as possible to the concept of co-creation value with customers (demand chain management). These companies are working on

the «complex» markets and create competitive advantages through proactive management.

Companies in cluster 2 (table 6) «shift» to the competitive relationship strategies, but focus on marketing. Based on the data obtained, the company that the cluster can be described as «market experts». Market experts focus on creating value for its clients, but do not seek to establish cooperative relationships in supply chain due to rapidly growing market, for instance.

Companies that are in cluster 3 (table 6) «shift» to the cooperative relationship strategies, but it do not focus on marketing. Based on the data obtained, the company that the cluster can be characterized as the «Supply chain experts». This are the companies whose primary objective is to minimize costs through cooperation with partners.

**Table 6. Cluster centers**

| Variable  | Number of cluster |                    |                    |                    |
|---|-------------------|--------------------|--------------------|--------------------|
|   | 1                 | 2                  | 3                  | 4                  |
| <i>Scale “Relational strategy”</i>                  |                   |                    |                    |                    |
| Long-term relationships with key suppliers          | 2,36              | 2,35               | <b><u>3,25</u></b> | <b><u>3,46</u></b> |
| Joint reduction of total costs                      | 2,97              | 3,70               | <b><u>3,92</u></b> | <b><u>4,49</u></b> |
| Ability of buyers to create additional value        | 3,49              | 3,87               | <b><u>4,18</u></b> | <b><u>4,34</u></b> |
| Clarity of the objectives of relations              | 3,82              | <b><u>4,31</u></b> | <b><u>4,57</u></b> | <b><u>4,71</u></b> |
| Mutual benefit from relationships                   | 3,62              | 3,96               | <b><u>4,31</u></b> | <b><u>4,63</u></b> |
| Joint development of business processes             | 1,46              | 1,54               | <b><u>3,18</u></b> | <b><u>3,46</u></b> |
| Joint strategic planning                            | 1,41              | 1,52               | <b><u>3,20</u></b> | <b><u>3,83</u></b> |
| Specific investments in relations                   | 1,38              | 1,13               | <b><u>2,79</u></b> | <b><u>3,23</u></b> |
| <i>Scale “Marketing orientation”</i>                |                   |                    |                    |                    |
| The degree of differentiation                       | 2,00              | <b><u>3,50</u></b> | 1,82               | <b><u>4,31</u></b> |
| The degree of uniqueness of the products (services) | 2,49              | <b><u>4,44</u></b> | <b><u>3,44</u></b> | <b><u>4,43</u></b> |
| The amount of innovative products                   | 1,56              | <b><u>3,24</u></b> | 2,02               | <b><u>4,06</u></b> |
| Quality of products                                 | 2,36              | <b><u>4,06</u></b> | 2,97               | <b><u>4,17</u></b> |
| Wide product range                                  | 1,67              | <b><u>3,65</u></b> | 2,59               | <b><u>3,77</u></b> |

Note:

Symbol clusters: 1 — «advantage-seeking companies», 2 — «market experts», 3 — «supply chain experts», 4 — «market leaders».

\* significance <0.001

\*\* significance <0.01

### *Analysis of environmental characteristics of different clusters*

One of the basic assumptions of this study is that companies that operate on dynamic and competitive markets are forced to seek for new sources of competitive advantages. New competitive advantages are usually found in cost reduction (cooperation in the supply chain for cost reduction) and in increase of the value for customers (marketing orientation of the companies and value co-creation). In this section the author studies the second hypothesis H2 (there is positive relation between the choice of different strategies and the frequency and speed of changes in the business environment).

**Table 7. Mean values of indicators of market conditions of the various clusters**

| Variable                            | Number of clusters** |      |             |      |             |      |             |      |
|-------------------------------------|----------------------|------|-------------|------|-------------|------|-------------|------|
|                                     | 1                    |      | 2           |      | 3           |      | 4           |      |
|                                     | M                    | SE   | M           | SE   | M           | SE   | M           | SE   |
| General changes on the market*      | 3,53                 | 0,13 | <b>3,67</b> | 0,13 | 3,52        | 0,10 | <b>3,89</b> | 0,17 |
| Changes in the technology*          | 3,05                 | 0,20 | 3,72        | 0,11 | <b>3,79</b> | 0,11 | <b>3,94</b> | 0,17 |
| Changes in the demand structure*    | 3,42                 | 0,16 | <b>3,87</b> | 0,09 | 3,69        | 0,11 | <b>4,27</b> | 0,13 |
| Changes in competitive environment* | 3,68                 | 0,15 | <b>3,85</b> | 0,13 | <b>3,85</b> | 0,11 | <b>3,97</b> | 0,19 |

Note:

\* Scale from 1 to 5; 1 — slow changes, 5 — fast changes.

\*\* Symbol clusters: 1 — «advantage-seeking companies», 2 — «market experts», 3 — «supply chain experts», 4 — «market leaders».

M — mean

SE — standard error

From table 7 is clear, that companies of cluster four (“market leaders”) work on “dynamic” markets compare to companies from cluster 1 (“advantage-seeking companies”). This is proved by all four variables and proves the hypothesis of the author that companies on dynamic markets should implement complicated marketing and relationships strategies. Examination of the results in table 7 shows that most rapid changes in technologies are for cluster 3 and 4 (companies with cooperative relationships with key supplier), while rapid changes in the demand structure — for cluster 2 and 4 (market-oriented companies).

It is also important to study the changes in technologies on different markets, the results are shown in table 8.

**Table 8. Mean values of technological changes of different clusters**

| Variable  | Number of clusters ** |     |             |     |             |     |             |     |
|---|-----------------------|-----|-------------|-----|-------------|-----|-------------|-----|
|   | 1                     |     | 2           |     | 3           |     | 4           |     |
|   | M                     | SE  | M           | SE  | M           | SE  | M           | SE  |
| General changes of technology*                  | 2,90                  | ,10 | <b>3,33</b> | ,01 | 3,28        | ,21 | <b>3,63</b> | ,06 |
| Market opportunities due technological changes* | 3,18                  | ,27 | <b>3,74</b> | ,97 | 3,47        | ,19 | <b>4,17</b> | ,82 |
| Particular changes in technology*               | 3,05                  | ,28 | <b>3,67</b> | ,89 | 3,60        | ,08 | <b>3,94</b> | ,03 |
| Ability to predict changes in technology*       | 2,77                  | ,18 | 3,00        | ,16 | <b>3,34</b> | ,25 | <b>3,34</b> | ,30 |

Note:

\* Scale from 1 to 5; 1 — slow changes, 5 — fast changes.

\*\* Symbol clusters: 1 — «advantage-seeking companies», 2 — «market experts», 3 — «supply chain experts», 4 — «market leaders».

M — mean

SE — standard error

Results, shown in table 8 are quite interesting, that most rapid changes in technologies are for companies with market orientation. From the authors point of view, it proves, that technologies give companies the ability to create innovative products and to apply innovative approaches.

### ***Analysis of the level of specific investments of different clusters***

The investigation of the specific investments in relationships is divided into three parts. In first part, the author examines the scale of “the volume and significance of specific investments”. The main objective is to determine the relationship of the level of specific investments in relationships made by supplier and by company of different clusters. The author then proceeds to the scale of “influence of investments”. The main objective is to determine whether the effective specific investments in the cooperative relationship. Finally, the author examines the scale of “adaptation of different systems”. The first scale has high value of alpha Cronbach  $\alpha=0,806$ .

**Table 9. Mean values of volume and significance of specific investments of different clusters**

| Variable   | Number of clusters ** |      |                    |      |                    |      |                    |      |
|--|-----------------------|------|--------------------|------|--------------------|------|--------------------|------|
|  | 1                     |      | 2                  |      | 3                  |      | 4                  |      |
|  | M                     | SE   | M                  | SE   | M                  | SE   | M                  | SE   |
| The volume of investments made by supplier       | 1,97                  | 0,21 | 2,13               | 0,18 | <b><u>2,38</u></b> | 0,16 | <b><u>2,52</u></b> | 0,25 |
| The significance of investments made by supplier | 1,79                  | 0,18 | 2,02               | 0,19 | <b><u>2,37</u></b> | 0,16 | <b><u>2,35</u></b> | 0,25 |
| The volume of investments made by company        | 2,32                  | 0,24 | <b><u>2,44</u></b> | 0,21 | <b><u>2,41</u></b> | 0,16 | <b><u>2,87</u></b> | 0,24 |
| The significance of investments made by company  | 2,11                  | 0,22 | 2,15               | 0,22 | <b><u>2,41</u></b> | 0,16 | <b><u>2,94</u></b> | 0,23 |

Note:

\* Scale from 1 to 5; 1 — doesn't corresponds with real situations in the company, 5 — corresponds with real situations in the company

\*\* Symbol clusters: 1 — «advantage-seeking companies», 2 — «market experts», 3 — «supply chain experts», 4 — «market leaders».

M — mean

SE — standard error

The results, shown in table 9, proves the hypothesis H3: volume and significance of specific investments. The companies in third and fourth cluster are more dependent on partners. Also it is important to highlight, that mean values of all clusters are relatively low. Besides it, the mean values of all variables for third cluster are about the same and in other clusters – different.

For deeper analysis, the author tested the correlation between the volume of investments made by supplier and the volume of investments made by company and between the significance of investments made by supplier and the significance of investments made by company. The results of cluster analysis are shown in table 10. The correlation of both pairs of variables increase from first cluster to fourth, but the correlation for the volume variables increases faster (see table 10).

**Table 10. Correlation of variables of the scale “volume and significance of specific investments”**

|  | The volume of investments made by company |        | The significance of investments made by company |        |
|--|---|--------|---|--------|
| The volume of investments made by supplier       | <i>Cluster 1</i>                          | 0,268* |   |        |
|  | <i>Cluster 2</i>                          | 0,432* |   |        |
|  | <i>Cluster 3</i>                          | 0,589* |   |        |
|  | <i>Cluster 4</i>                          | 0,695* |   |        |
| The significance of investments made by supplier |   |        | <i>Cluster 1</i>                                | 0,512* |
|  |   |        | <i>Cluster 2</i>                                | 0,500* |
|  |   |        | <i>Cluster 3</i>                                | 0,591* |
|  |   |        | <i>Cluster 4</i>                                | 0,621* |

Note:

\* sig. <0.001.

\*\* Symbol clusters: 1 — «advantage-seeking companies», 2 — «market experts», 3 — «supply chain experts», 4 — «market leaders».

Second scale that the author studies is the scale “influence of investments”. As the author expected cooperative relationship the influence of investments on the efficiency of interaction higher than in the cluster four. Therefore, not just the volume of investment in the cooperative relationship, but also greater returns, and this indicates that the cooperative relationship is much better, and consequently, investment in the competitive relationship can be described as sunk costs.

**Table 11. Mean values of the variables on the scale “influence of investments”**

| Variable   | Number of clusters ** |      |      |      |                    |      |                    |      |
|--|-----------------------|------|------|------|--------------------|------|--------------------|------|
|  | 1                     |      | 2    |      | 3                  |      | 4                  |      |
|  | M                     | SE   | M    | SE   | M                  | SE   | M                  | SE   |
| The influence of supplier’s investments on efficiency of relationships | 2,08                  | 0,21 | 2,26 | 0,21 | <b><u>2,55</u></b> | 0,17 | <b><u>2,53</u></b> | ,026 |
| The influence of company’s investments on efficiency of relationships  | 2,03                  | 0,19 | 2,04 | 0,18 | <b><u>2,67</u></b> | 0,15 | <b><u>3,07</u></b> | 0,27 |

Note:

\* Scale from 1 to 5; 1 — doesn’t corresponds with real situations in the company, 5 — corresponds with real situations in the company

\*\* Symbol clusters: 1 — «advantage-seeking companies», 2 — «market experts», 3 — «supply chain experts», 4 — «market leaders».

M — mean

SE — standard error

Comparing the results of two previous scales, “volume and significance of specific investments” and “influence of investments” are presented in table 11. The correlation between “the volume of investments made by supplier” and “The influence of supplier’s investments on efficiency of relationships” is quite high (0.849-0.896).

**Table 12. Correlation of variables of the scale “volume and significance of specific investments” and “influence of investments”**

|  | The influence of supplier’s investments on efficiency of relationships | The influence of company’s investments on efficiency of relationships |
|--|--|---|
| The volume of investments made by supplier | <i>Cluster 1</i>   | 0,896   |
|  | <i>Cluster 2</i>   | 0,888   |
|  | <i>Cluster 3</i>   | 0,849   |
|  | <i>Cluster 4</i>   | 0,890   |
| The volume of investments made by company  |  | <i>Cluster 1</i> 0,350  |
|  |  | <i>Cluster 2</i> 0,479  |
|  |  | <i>Cluster 3</i> 0,720  |
|  |  | <i>Cluster 4</i> 0,595  |

Note:

\* sig. <0.001.

\*\* Symbol clusters: 1 — «advantage-seeking companies», 2 — «market experts», 3 — «supply chain experts», 4 — «market leaders».

### ***The financial and market results of different clusters***

The final phase of the analysis of different clusters in this paper — the examination of the performance of the companies of different clusters. This analysis shows how the financial and market results differ for companies in different cluster. Limitation of the methodology of this study is that results shown in tables below — are not objective — it is the opinion of respondents on companies’ development. The other limitation is that strategy and the results are evaluated at one time. Nevertheless, the author takes this assumption and examines the views of respondents about the success of companies.

The performance of the companies are divided into three categories: market, financial and marketing performance. Each of the variables shows no absolute value

but relative, that is changing over time. This approach allows us to escape from the subjective assessment of performance and demonstrate results more objectively. The table 13 show results on market performance.

**Table 13. Mean values of market performance of the company**

|                                | Number of clusters ** |      |             |      |      |      |             |      |
|--------------------------------|-----------------------|------|-------------|------|------|------|-------------|------|
|                                | 1                     |      | 2           |      | 3    |      | 4           |      |
| <b>Variable</b>                | M                     | SE   | M           | SE   | M    | SE   | M           | SE   |
| Overall market position change | 3,32                  | 0,21 | <b>4,13</b> | 0,18 | 3,75 | 0,09 | <b>4,40</b> | 0,13 |
| Change in sales                | 3,45                  | 0,18 | <b>4,08</b> | 0,15 | 4,00 | 0,10 | <b>4,43</b> | 0,15 |
| Change in market share         | 2,86                  | 0,24 | <b>3,94</b> | 0,21 | 3,57 | 0,19 | <b>3,91</b> | 0,20 |

Note:

\* Scale from 1 to 5; 1 — negative changes, 5 — positive changes.

\*\* Symbol clusters: 1 — «advantage-seeking companies», 2 — «market experts», 3 — «supply chain experts», 4 — «market leaders».

M — mean

SE — standard error

As the author expected, the best results showed the company focused on marketing, that is, the second (market experts) and fourth clusters (market leaders). Market leaders, as leaders should, showed slightly better results. Advantage-seeking companies perfume lowest results. The data on financial performance presented in table 14.

**Table 14. Mean values of financial performance of the company**

|                          | Number of clusters ** |     |             |     |             |     |             |     |
|--------------------------|-----------------------|-----|-------------|-----|-------------|-----|-------------|-----|
|                          | 1                     |     | 2           |     | 3           |     | 4           |     |
| <b>Variable</b>          | M                     | SE  | M           | SE  | M           | SE  | M           | SE  |
| Change of profitability  | 3,24                  | ,10 | <b>3,92</b> | ,11 | 3,73        | ,15 | <b>4,06</b> | ,13 |
| Change in cost reduction | 3,14                  | ,21 | <b>3,37</b> | ,25 | <b>3,40</b> | ,22 | <b>3,71</b> | ,24 |
| Change in ROI            | 3,00                  | ,18 | <b>3,27</b> | ,20 | <b>3,30</b> | ,19 | <b>3,88</b> | ,15 |

Note:

\* Scale from 1 to 5; 1 — negative changes, 5 — positive changes.

\*\* Symbol clusters: 1 — «advantage-seeking companies», 2 — «market experts», 3 — «supply chain experts», 4 — «market leaders».

M — mean

SE — standard error

At this point, it is interesting to note that, despite the fact that the fourth cluster shows the highest results, the results of companies in second and third cluster are comparably the same. Marketing performance results shown in table 15. The difference of market performance and marketing performance is that market performance

**Table 15. Mean values of marketing performance of the company**

|   | Number of clusters ** |     |             |     |      |     |             |     |
|---|-----------------------|-----|-------------|-----|------|-----|-------------|-----|
|   | 1                     |     | 2           |     | 3    |     | 4           |     |
| Variable                                    | M                     | SE  | M           | SE  | M    | SE  | M           | SE  |
| The change in customers' satisfaction       | 3,41                  | ,10 | <b>4,17</b> | ,13 | 3,90 | ,10 | <b>4,20</b> | ,13 |
| The change in value creation                | 2,94                  | ,20 | <b>4,15</b> | ,10 | 3,78 | ,08 | <b>4,14</b> | ,15 |
| The change in amount of successful products | 2,58                  | ,23 | <b>3,83</b> | ,27 | 3,66 | ,12 | <b>4,21</b> | ,22 |
| The change of time needed for NPD           | 2,67                  | ,12 | <b>3,59</b> | ,28 | 3,37 | ,18 | <b>3,85</b> | ,25 |
| The success of NPD                          | 2,67                  | ,12 | <b>3,92</b> | ,18 | 3,53 | ,15 | <b>4,09</b> | ,09 |

Note:

\* Scale from 1 to 5; 1 — negative changes, 5 — positive changes.

\*\* Symbol clusters: 1 — «advantage-seeking companies», 2 — «market experts», 3 — «supply chain experts», 4 — «market leaders».

M — mean

SE — standard error

Generally, from the author's point of view, the results are quite natural. It must be noted that the average values of the second cluster are very similar and sometimes higher than a fourth of the cluster. In spite of the marketing relational strategy the better results are for market-oriented companies.

## CONCLUSION

The paper presents the analysis of relationships strategies and market orientation of the company. The examination of evolution of supply chain management shows that further development of this concept depends on technologies —more specifically on communication and information technologies — and is closely linked to integration with marketing. This integration is already appearing in how

advanced companies comprehend the need for the final customer to be oriented to value and to accept this as the basic precondition for constructing supply chains (i.e. to go not to the final customer with the needed good, but with maximum flexibility to create the necessary good depending on requirements by the customer). Our thesis finds support from research into the practice of involving of customers in the manufacturing process. Within the limits of the concept of supply chain management, this means reconstructing business models of chains so that companies have the opportunity to work from the customer; and here, most importantly, the question of relational strategies in the new business model of supply chains is key (technical issues aside). The analysis of relations between companies in a supply chain shows that three basic relational strategies exist: competitive, cooperative, and command. The real question is strategic, insofar as practically all a company's business processes and its model for making profit depend directly on the chosen relational strategy. By virtue of their opportunistic, and thus ineffective, nature, we see command relations as pathological, although in practice they are not uncommon. The marketing concept, i.e. orienting the company to the customer, has a place in both other strategies. However, if in the competitive strategy the selling company is oriented to creating maximum value for its immediate customer, then in cooperative relations both companies aim for maximizing value for the final customer. Finally, in competitive relations value for the final customer is indirectly reflected, but, first, it is reflected indirectly, and second, it is interpreted and deformed through this indirect reflection. In this way the competitive and cooperative strategies differ in the marketing perspective.

The cooperative relational strategy can be directed at maximizing efficiency of operational activity (traditional supply chain management) or at maximizing value for the final customer. In the classical case, the company invests in creating a supply chain to gain corresponding rents from efficient operational activity. In the case of a marketing orientation, the company also invests in managing supply chains, but it

receives additional profit by increasing the price of the good as a result of increasing its value. If the classical concept of supply chain management began to develop following the impulse to introduce the idea of distributing information of a quantitative nature (e.g. size of demand, change in demand, receipt of purchase orders, volume in each link of the chain, etc.), the new (marketing) concept includes the idea of distributing information of a qualitative nature (what is valuable to the customer).

Companies in the first cluster, i.e. advantage-seeking companies with no marketing orientation and competitive strategy towards key supplier do not perform best results. These companies do not invest in relations, the market is stable.

Companies oriented on marketing with competitive strategy towards key supplier, i.e. market expert and companies oriented on marketing with cooperative strategy towards key supplier, i.e. market leaders show the best market, financial and marketing performance.

Companies with competitive strategy towards key supplier and that do not oriented on marketing, i.e. supply chain experts lead in several characteristics, work on relatively stable market and invest in relationships.

## REFERENCES

- Baker S. 2003. *New Consumer Marketing*. John Wiley and Sons: Chicester.
- Campbell N. 2002. An international approach to organizational buying behavior. In: Ford D. (ed.). *Understanding Business Marketing and Purchasing*. 3rd ed. Thomson Learning: London; 389-401.
- Christopher M. 1998. *Logistics and Supply Chain Management: Strategies for Reducing Costs and Improve Services*. Financial Times/Pitman: London.
- Christopher M., Peck H. 2003. *Marketing Logistics*. 2nd ed. Elsevier Butterworth-Heinemann: Oxford.
- Cooper M., Lambert D., Pagh J. 1997. Supply chain management: More than a new name for logistics. *The International Journal of Logistic Management* 8 (1): 1-14.
- Cronbach, L. J. 1951. Coefficient alpha and the internal structure of tests. *Psychometrika*, 16(3), 297-334.
- Fisher M. 1997. What is the right supply chain for your product? *Harvard Business Review* 75 (2): 105-116.
- Goldman S., Nagel R., Preiss K. 1995. *Agile Competitors and Virtual Organizations: Strategies for Enriching Customer*. Van Nostrand Reinhold: N. Y.
- Gundlach G. T., Bolumole Y. A., Eltantawy R. A., Frankel R. 2006. The changing landscape of supply chain management, marketing channels of distribution, logistics and purchasing. *Journal of Business & Industrial Marketing* 21 (7): 428-438.
- Heikkila J. 2002. From supply to demand chain management: Efficiency and customer satisfaction. *Journal of Operations Management* 20 (6): 747-767.
- Juttner U., Christopher M., Baker S. 2007. Demand chain management — integrating marketing and supply chain management. *Industrial Marketing Management* 36 (3): 377-392.
- Mentzer J., DeWitt W., Keebler J., Min S., Nix N., Smith C., Zacharia Z. 2001. Defining supply chain management. *Journal of Business Logistics* 22 (2): 1-25.
- Oliver K., Webber M. 1982. Supply chain management: Logistics catches up with strategy. In: Christopher M. (ed.) *Logistics, The Strategic Issues*. Champan and Hall: London; 63-75.
- Prahalad C. K., Ramaswamy V. 2004. *The Future of Competition: Co-Creating Value with Customers*. Harvard Business School Publishing: Boston, MA.
- Rainbird M. 2004. Demand and supply chains: The value catalysts. *International Journal of Physical Distribution and Logistics Management* 34 (3/4): 230-251.
- Steinhaus H. 1956. Sur la division des corp materiels en parties. *Bull. Acad. Polon. Sci.*, C1. III vol IV:801– 804.