The Role of Partnership and Flexibility in Strengthening Customer Relationships in the B2B Market

Hana Lostakova, Zuzana Pecinová

University of Pardubice, Pardubice, 532 10, Czech Republic

Abstract

In the time of recession, it is necessary to maintain and further strengthen relations between suppliers, their immediate customers and customers of these customers all the way up to the end customers. The means to do this is partnership and flexibility in serving customers including organizing special events for customers. The article defines each aspect of the partnership and flexibility in serving target markets and their role in enhancing the coherence and development of relations between manufacturers and customers in the B2B market and summarizes the results of a quantitative research among managers of chemical business units with products, which focused on mapping benefits and actual level of the individual aspects of the partnership and flexibility for developing and strengthening relationships with customers in the customer network.

Keywords: partnerships; flexibility; strengthening relationships with customers; value network; chemical products.

1. Introduction

The constantly changing market conditions accompanied in recent years by the global economic crisis and recession have brought about the need for closer links between entities in the value network with a view to achieve a faster and more flexible response to the needs and desires of customers. The need to ensure customer retention and loyalty raises the need for further strengthening of relations not only between suppliers and immediate customers, but also between producers and customers of these immediate customers up to the final consumers in value network. Multiparty collaboration is critical to
the effective solution of complex problems and continuous adaptation to changing environments (Ehret, Kashyap and Wirtz, 2013). The aim is to build up strong, personified and long-term relationships between the business partners that secure competitive advantage for both/all partners. Only such relationships make it possible to share information and cooperate in the process of value creation. That is why the relations between entities are often characterized as becoming closer and terms such as partnerships and alliances are being used to be contrasted with the traditional spot market exchange (Claro et al., 2006). It is a resource that creates vitality and enables innovativeness (Savolainen and Lopez-Fresno, 2012). The endeavour to develop relationships and growth of mutual dependence among enterprises are the characteristic features of the present business world (Håkansson et al., 2009).

The superior customer value is considered as the key driver of customer satisfaction, loyalty and retention (Woodall, 2003). Value creation is in the changed conditions approached as a problem-solving process, in which the value is co-created through interaction, where partners contribute and integrate resources (Stenroos and Jaakkola, 2010). This approach represents, in the highly competitive environment, a way leading to an improved competitive position of companies and preventing erosion of profit margins (Sawhney, 2006). Creation of superior value requires multilateral cooperation among entities involved in the problem-solving process, i.e. co-creation of value by a firm and its primary stakeholders (Sarker et al., 2012). This approach places emphasis on partnership and personalized interactions (Prahalad and Ramaswamy, 2004; Sarker et al., 2012). They are symbiotic relationships (Sarker et al., 2012; Kohli and Grover, 2008) between the enterprise and its partners creating the value jointly, i.e. customize and coproduce products/services (Payne, Storbacka and Frow, 2009). The thing that is still more and more accentuated is the need to focus not on the products or services, but on the solution – „offerings that generate goods and services to provide customized outcomes for specific customers“ (Sawhney, 2006; Epp and Price, 2011). According to Sawhney (2006) and Cova with Salle (2008) industrial enterprises have gone from offering products, over offering products/services to offering solutions. Therefore, the service – “a process of doing something for another party” (Vargo, Maglio and Akama, 2008) is considered as the fundamental basis of exchange. There is an exchange that is not based on goods, but on intangibles, specialized skills, knowledge and processes (Sheth and Sharma, 2008), i.e. competences are used for benefit of another party (Vargo and Lusch, 2008).

To be able to offer a product or a service as a part of the solution, it is necessary to „to map entire customer experience to uncover what the customer is trying to accomplish“ (Epp and Price, 2011). The aim is to find out what products or services should be included in the solution and who, how and when should provide them in cooperation with the others so that the required value is offered (Sawhney, 2006; Epp and Price, 2011; Vargo, Lusch and Wessels, 2008). If the offer does not meet the customer’s expectations, he may integrate his own solution by combining offerings of other firms (Epp and Price, 2011). The role of the customer changes – from „to use up“ or „destroy“ value created by the firm, to co-creation of value through the integration of resources (Vargo, Maglio and Akama, 2008). The ability to provide the customer with a suitable solution requires not only competence of the supplier and a network of cooperating partners, but also an adequate level of relationships. Only then the supplier is able to design systems of activities to help customer to create value (Wikstrom, 1996; Lindgreen et al., 2012). In order to ensure an effective network, it is essential to increase cooperation to a qualitatively higher level, based on openness among the partners and sharing information that is necessary to achieve the common target (Lindgreen et al., 2012). Basically, any development of forms of deeper cooperation and partnerships is conditioned by the mutual trust and confidence among the partners.

Partnership management of relations among suppliers and customers is performed to achieve not only the short-term objective of increasing productivity by cutting down on inventory and
shortening processing cycles, thereby increasing a company’s market share and profits, but also long-term objectives of increasing company reputation and market capitalization of firm. Realization of these objectives hinges on a set of practices (Hong and Jeong, 2006; Li et al., 2006; Koh et al., 2007). Practices could refer to general principles, such as development of partnerships or focus on base competencies or to very specific technologies or techniques, such as just in-time delivery systems or Electronic Data Interchanges (EDI). Accordingly, business practices may vary significantly. We chose to group them into four categories: interlinking of value-added activities; consultation with a view to coordinating activities; sharing to achieve some form of financial cooperation between parties; and finally, detachment, whereby an arm’s-length relationship is maintained with business partners (Halley and Beaulieu, 2010).

2. Literature Review and Hypotheses

In this direction, many surveys examining the source of strengthening of relations with customers indicate the importance of partnerships in serving customers (Danese and Romano, 2011; Cheng and Carrillo, 2012), as well as the positive impact of flexibility on customer satisfaction and retention (Roca-Puig et al., 2005).

Suppliers' operational and financial performances improve after they and manufacturing customers jointly implement partnerships. A manufacturer should develop partnering mechanisms with suppliers to achieve higher performance for both the individual firms and the entire supply chain. Partnerships motivate trading partners to engage in higher level of coordination. Transactional hazards can be reduced and performance may improve under the partnering mechanism. The manufacturer may design the procurement partnership as a collaborative mechanism, thus helping a partnering supplier and itself to obtain increased mutual gains (Cheng and Carrillo, 2012). Their cooperation is connected with information sharing, customer involvement, long-term partnership, joint problem-solving and technology-based CRM (Lin, Chen and Chiu, 2010). Customer and supplier integration constructs consider items related to different aspects of the integration (e.g. sharing of production plans and customers' forecasts, feedback on performance, communication on quality considerations and design changes, joint quality improvement efforts, close contact, partnerships) (Danese and Romano, 2011). The partnership-based style of customer service requires trust, mutual information sharing, joint planning, joint research and product development and testing directly with the processor, mutual harmonization of technical equipment and adaptation of technological processes, supplier's help to the immediate customer in promotion and customer service to the clients of the immediate customers, etc. (Lostakova and Stejskalova, 2013).

Flexibility is often viewed as the way to get more choice and thus achieve better solutions (Buzacott and Mandelbaum, 2008) or as the capability to respond to changing environmental conditions and enhance organizational performance (Dunford et al., 2013). In a common way flexibility is defined as the general ability to react on changes (Li and Zhao, 2006). In business context it is “the organization’s ability to meet an increasing variety of customer expectations without excessive costs, time, organizational disruptions, or performance losses” (Zhang, Vonderembse and Lime, 2003). According to Upton (1994) and Upton (1995) flexibility relates to increasing the range of products available, improving a firm’s ability to respond quickly, and achieving good performance over this wide range of products. Flexibility requires a company-wide effort to increase responsiveness and eliminate bottlenecks across the value chain (Hamel and Prahalad, 1989; Yusuf et al., 1999). It can be generated by managers in direct
contact with customers at the bottom of the organization, whereas top managers can act as a stabilizing influence by coordinating the response throughout the branch network (Combe et al., 2012). The alliances and relationships built on trust and understandings of mutual benefits are the key means of enhancing the capacity for flexibility (Child and McGrath, 2001).

Flexibility in servicing customers requires regular contacts with customers, focused on determining the conditions of use of the product, their changing wishes, requirements and preferences. Consequently, it is necessary to create a mechanism of adapting to the customer requirements in all aspects, consisting in complex customer problem solving. It is necessary to be quick, professional, reliable and willing to respond to the changing customer requirements and meet the agreed terms of supply and services. It is essential to be flexible in responding to the complaints and claims of customers and settle them to their full satisfaction. Customer feedback and flexible response to stimuli resulting therefrom strengthen the partnership between suppliers and customers.

The partnership and flexibility in serving customers is becoming increasingly important with products characterized by typical complex buying behavior where a number of members of the buying group in the customer's company is involved in making purchasing decisions (Kotler and Keller, 2013). This is typical of the chemical industry products intended for consumption in the production process.

H1: The usefulness of all aspects of the partnership is very high for strengthening relationships with customers in the B2B market in the investigated categories of chemical products.

H2: The usefulness of all aspects of flexibility is very high for strengthening relationships with customers in the B2B market in the investigated categories of chemical products.

It can be assumed that the more important the aspect of partnership and flexibility is for customers to be able to make decisions on whether to repeatedly buy from a particular supplier, the higher level of assurance and implementation the supplier will seek to achieve in this aspect, as only then it can strengthen retention and loyalty of customers and deepen relationships with them.

H3: The actual level of aspects of the partnership and flexibility is strongly correlated with their perceived importance in strengthening relationships with customers in the B2B market in the investigated categories of chemical products.

The perception of the aspects of the partnership, or flexibility as the case may be, needs to be analyzed in the interrelation. Some aspects of partnership and flexibility can be closely related, and therefore may be perceived by customers equally or considered simultaneously.

H4: The perception of the usefulness of various aspects of the partnership, or flexibility as the case may be, can be explained by a coactivity of latent factors that stimulate strengthening of customer relationships in the B2B market in the investigated categories of chemical products.

Different aspects can be applied to strengthening relationships with customers in different categories of chemical products, as they differ not only in terms of the assortment of products offered on the market, but also in the method of applying and the conditions and methods of customer service.

H5: The usefulness of various aspects of the partnership, or flexibility as the case may be, for strengthening customer relationships in the B2B market varies in the investigated categories of chemical products.

A number of authors, yet not specifically in the chemical industry, have focused on an examination of the factors that affect the nature and strength of the relationship between partners in B2B markets. Money et al. (2010) examined the outcomes of partnership reputation in B2B relationships. They consider flexibility of interaction to be an important characteristic of inter-firm partnership. In a research among business customers of a European telephone company, Hansen et al. (2008) confirmed the effect of
reputation, information sharing and flexibility on the customer perceived value. Trust is also another factor that has a positive effect on buyers' performance (Yigitbasioglu, 2010).

Morgan and Hunt (1994) found that trust and commitment are the key mediating variables for successful relationships, and antecedents of co-operative behaviour. A research carried out among purchasing managers operating in a B2B e-marketplace has shown that trust in the relationship is one of five dimensions that influence the evaluation of relationship performance between two firms (Lages, Lancastre and Lages 2008).

Previous research also confirmed that a significant factor in strengthening relations and improving the performance is information sharing in non-service companies. A research among clients of these companies shows that sharing information improves buyers' performance with respect to resource usage, output, and flexibility (Yigitbasioglu, 2010). Also, according to a research aimed at large scale buyer-supplier relationships within supply chains, sharing information is regarded as one of four subjective measures that characterize service-centered view of B2B relationships (Hansen, 2009).

Wilson and Vlosky (1997) investigated among wood products industry suppliers and distributors, relationship activity indicators. According to them, inter-firm activity predictors are two items regarding marketing programs (joint marketing efforts and new product development), salesforce activities (training, joint calls, lead development) and marketing planning, and communication (supplier and distributor visits, tradeshows). The various joint marketing, selling, planning, pricing, and communication activities help to establish these outcomes over time.

The results of the study into characteristics of the relationship in wood industry between the distributor and its large multinational supplier of forest products show that the characteristic features of this relationship are trust, strong relationship based on shared activities (e.g. planning and implementation of marketing activities, joint sales training, long-term program agreements, exclusive territory and product agreements, joint inventory management), reliability a veracity (Kozak, 1997).

3. Methodology

1.1. Research Goal

The aim of the quantitative marketing research among managers of selected chemical fields of business in the Czech Republic was to map how managers operating at different levels of the management hierarchy and managing various business activities within the internal value network perceive usefulness of various aspects of the partnership-based and flexible style of customer service and special events for customers for strengthening customer relationships. The aim was also to map out how these managers perceive the current level of various aspects of the partnership-based and flexible style of customer service in the line of business that they manage.

1.2. Sample and Data Collection

This quantitative research was carried out using the method of personal interviews at the April of 2013. The quantitative research was conducted in four selected chemical companies in the Czech Republic in different SBUs producing 1) industrial explosives, 2) organic dyes and pigments, 3) organic semi-finished products and specialties and 4) cellulose derivatives, inorganic acids and salts. Those were great companies with a diversified product range with the number of employees more than 1000. Manufacturers of those product categories were selected by deliberate selection with regard to the different character of the examined categories of chemical in terms of breadth of the range of products.
offered, their means of transportation, storage and use and, therefore, demands for customer service and applicability of various instruments for strengthening customer relationships. The aim was to investigate product categories typical for the chemical industry and, at the same time, different in terms of marketing. Industrial explosives are dangerous substances, their manufacture, transportation, storage and use is subject to strict legislative rules. They are used for breaking rocks in quarries, surface and underground mines and during tunnelling and they require the provision of a wide range of special sales and after-sales services. Pigments, or dyes as the case may be, are manufactured in a wide range of shades, they are used to dye textiles, plastics and in the manufacture of paints and varnishes. They require extensive counselling and pre-sales services. Organic intermediates and specialties are traditional chemical products. They are manufactured in a wide range and intended for the manufacture of a series of related organic products. Compared to previous products, purchasers of organic intermediates do not require extensive business and technical services from suppliers, but counseling and cooperation in product distribution are very efficient due to the nature of the products. Cellulose derivatives, inorganic acids and salts are chemical commodity products that are used in a number of subsequent chemical productions. In their delivery, services are provided to customers before, during and after the sale only to a minimal extent, typically it is order processing automation and inventory tracking. In each company and the selected SBU, researches were carried out among managers of these SBUs working in the top, middle and first line management. The respondents were those managers and workers of the chemical business units that are part of the internal value network of SBUs, are in direct contact with customers and directly participate in creating and increasing the value to them and the value of relationships. In each SBU, persons interviewed were directors, staff of strategic research and development, marketing, sales, production, quality management, procurement and services. In total, 44 managers of surveyed SBUs were personally interviewed. The obtained data was processed using statistical software IBM SPSS Statistics and four proposed relations will be tested through comparative, correlate and factor analyses.

1.3. Analyses and Results

A qualitative research among managers of selected chemical fields of business, conducted in March 2013, made it possible to define a number of factors of supply and behavior in favor of strengthening relations between suppliers and customers (Lostakova, 2013). In the opinion of the managers of the surveyed product categories, these factors include a partnership-based and flexible style of customer service. They can be divided into four categories:

1. **Partnership behavior of the supplier staff towards the customer**, in particular, in terms of their professionalism, responsiveness and reliability in serving customers, fulfilling the agreed delivery date and date services to 100 percent, creating a personal relationship of trust with customers and systematically and regularly surveying satisfaction of the customers, their willingness to purchase repeatedly and their loyalty. All these relations lead to the creation of personal ties between the two partners and lead to the deepening of the relationship.

2. **Interconnection of the supplier with the customer**, consisting in information interconnection, joint planning, joint development and testing of products and technologies and supplier participation in securing the use of products and promoting them in the customer markets, again deepening partnerships between suppliers and customers.

3. **Special events organized by the supplier for the customer**, in particular training, organizing of professional conferences, workshops, social and sports events for employees of customer companies.
represent another opportunity to get to know each other better, to establish personal relationships and better understand the requirements and preferences of business partners and to develop a better offer for them and a method of serving customers.

4. Supplier flexibility in serving customers is characterized by the breadth and speed of response to changing customer requirements. This will increase customer flexibility in the markets served by the supplier, increasing its competitiveness in the markets. Supplier flexibility fuels the deepening of the partnership between suppliers and customers throughout the customer network to the final consumer.

The first three categories of aspects were classified as the partnership aspects, the fourth category of aspects as the flexibility aspects, although we cannot make a sharp dividing line between them as they are interconnected as the subsequent data analysis eventually showed.

Usefulness and actual level of aspects of partnership-based and flexible style of service

Perceived usefulness and actual level of different aspects of partnership and flexibility for strengthening the relationship between suppliers and customers was measured on a 7-point ordinal scale from 1 - extremely low for 7 - extremely high (see Table 1).

1-sample Kolmogorov-Smirnov test of conformity of the empirical and theoretical distribution of the benefits and actual level of various aspects has not confirmed normality of the empirical distribution, while, with some exceptions, there is an obvious slant of the distribution to the right towards higher benefits (compare the average and mode values in Table 1). Friedman K-related samples test has confirmed statistically significant differences in the experimental distribution of the various aspects and subsequent Wilcoxon 2-related samples tests have showed statistically significant differences in the perception of usefulness for the strengthening of relations between suppliers and customers, in particular in certain aspects of supplier flexibility (flexibility with changing customer requirements and speed of response to extraordinary customer requirements is significantly more beneficial than the ability to comprehensively adapt to the customer requirements as well as the speed of response to extraordinary customer requirements is significantly more beneficial than the speed of processing a business case), of the aspects of interconnection between the customer and the supplier and in the aspects of supplier special events for customers, in particular events of social character. This fact is reflected in different values of mean, mode and percentiles for these aspects of the partnership-based and flexible style of service (see the values in Table 1).

This has only been reflected in a partial confirmation of the H1 hypothesis and in full confirmation of the hypothesis H2. The H1 hypothesis has been confirmed only in all aspects of the partnership behavior of the supplier staff towards the customer. Than the H1 hypothesis has also been confirmed partially in selected aspects of interconnection of the supplier with customers, regarding cooperation of the supplier with the customer in product research, development and testing and adaptation of technologies to such products by the customer and in selected aspects of special events for customers, namely activities at meetings of top managers and other staff of the supplier with the customer company staff designed to specify the terms of cooperation and exchange of experience in purchasing and using the product (see the mode and median column in Table 1).

These elements of serving the customers in the B2B market can be considered as crucial in strengthening relationships with buyers of the surveyed products, intended for further manufacturing. The managers of supplier companies consider information sharing, strategic planning, cooperation with the customer in its marketability and special events of social nature (median = 3 or 4 or 5) as rather less beneficial, moderately beneficial or rather beneficial for strengthening the relationship between suppliers
and customers, therefore they are of no significant importance in strengthening relationships with customers.

Table 1. The usefulness and actual level of the partnership and flexibility and of all their aspects for strengthening relationships with customers

| CHARACTERISTICS OF PARTNERSHIP-BASED OR FLEXIBLE STYLE OF SERVING CUSTOMERS | Statistics | Mean | Mode | Percentiles | Actual level |
| --- | --- | --- | --- | --- | --- |
| **ASPECTS OF PARTNERSHIP BEHAVIOR OF THE SUPPLIER STAFF TOWARDS THE CUSTOMER** | | | | 25 | 50 | 75 | |
| Professionalism of staff in serving customers | | 6,2 | 6 | 6 | 6 | 7 | 5,6 | 6 |
| Obligingness of the staff in serving customers | | 6,1 | 6 | 6 | 6 | 7 | 5,8 | 6 |
| Creating personal relationships of trust with customers | | 5,9 | 6 | 6 | 6 | 6 | 7 | 5,6 | 6 |
| Meeting the agreed date of delivery to 100 percent | | 6,0 | 6 | 6 | 6 | 6 | 7 | 5,0 | 6 |
| Providing services within the agreed deadline to 100 percent | | 6,0 | 6 | 6 | 6 | 6 | 6 | 5,1 | 6 |
| Long-term reliability in meeting the requirements and serving the customers | | 6,1 | 6 | 6 | 6 | 7 | 5,3 | 6 |
| Systematic and regular surveys of customer satisfaction, retention and loyalty | | 4,9 | 6 | 4 | 5 | 6 | 4,4 | 5 |
| **ASPECTS OF SUPPLIER INTERCONNECTION WITH THE CUSTOMER** | | | | | | | | |
| Interconnecting information systems with customers | | 3,8 | 4 | 3 | 4 | 5 | 3,1 | 3 |
| Sharing databases on customer's clients and serving thereof | | 3,6 | 4 | 2 | 4 | 4 | 3,0 | 3 |
| Sharing information on industry developments and business conditions in different markets | | 4,3 | 5 | 3 | 4 | 5 | 3,5 | 3 |
| Cooperation and assistance in researching the customers' clients' market | | 4,6 | 6 | 4 | 5 | 6 | 3,6 | 3 |
| Joint tactical and operational planning | | 4,4 | 6 | 3 | 5 | 6 | 3,5 | 3 |
| Joint strategic planning | | 4,2 | 4 | 3 | 4 | 5 | 3,5 | 3 |
| Provision of know-how to customers for the use of the products with the customer | | 4,8 | 6 | 4 | 5 | 6 | 4,2 | 4 |
| Sharing functional online information system with customers on order fulfilment | | 4,1 | 4 | 3 | 4 | 5 | 2,9 | 3 |
| Sharing information on the produced quantities of products, supplies intended for customers | | 4,5 | 5 | 3 | 5 | 6 | 3,9 | 4 |
| Joint product research and development | | 4,9 | 6 | 4 | 5 | 6 | 4,1 | 5 |
| Adapting customer technologies to the parameters of the products delivered by the supplier | | 4,7 | 6 | 4 | 5 | 6 | 3,4 | 3 |
| Joint product testing with the customer | | 5,3 | 6 | 5 | 6 | 6 | 4,5 | 4 |
| Participating in the modernization of customer manufacturing plants | | 4,1 | 4* | 3 | 4 | 5 | 2,9 | 1* |
| Participating in the provision of services by the customer to its clients | | 4,3 | 5 | 3 | 5 | 5 | 3,5 | 3 |
| Rental of machinery, devices to the customer for facilitating the use of the supplied product | | 4,0 | 4 | 3 | 4 | 5 | 3,2 | 4 |
| Participating in the promotion of customer products at its markets | | 3,6 | 4 | 3 | 4 | 4 | 2,8 | 1* |
| **ASPECTS OF SUPPLIER SPECIAL EVENTS FOR THE CUSTOMER** | | | | | | | | |
| Training of customer staff | | 5,0 | 5 | 4 | 5 | 6 | 3,8 | 4 |
| Meetings of the supplier top management with the customer top management | | 4,8 | 6 | 4 | 5 | 6 | 4,3 | 5 |
| Meetings of technical and other personnel designed to exchange experience in the use of the product | | 5,3 | 6 | 5 | 6 | 6 | 4,4 | 4 |
| Organization of customer clubs or customer meetings, as the case may be | | 4,5 | 4* | 4 | 5 | 5 | 3,5 | 4 |
| Organization of open days for customers in the enterprise, visits to plants, etc. | | 4,3 | 5 | 3 | 5 | 5 | 3,6 | 3 |
| Congratulations to workers from the customer's enterprise for life events | | 3,3 | 3 | 2 | 3 | 5 | 2,8 | 3 |
| Inviting the customer staff (managers) to social events | | 4,1 | 5 | 3 | 4 | 5 | 3,8 | 4 |
| Joint entertainment of the customer staff to sporting events | | 4,0 | 5 | 3 | 4 | 5 | 3,2 | 4 |
| **ASPECTS OF SUPPLIER FLEXIBILITY IN SERVING THE CUSTOMER** | | | | | | | | |
| Regular contacts with customers to identify their needs, preferences and changes | | 6,0 | 7 | 5 | 6 | 7 | 5,4 | 6 |
| Negotiating further contacts with the customer at every meeting | | 5,1 | 6 | 4 | 5 | 6 | 5,0 | 5 |
| Ability to adapt to customer requirements in all respects | | 5,5 | 6 | 5 | 6 | 6 | 5,0 | 5 |
| Ability to provide comprehensive solutions to customer needs | | 5,8 | 7 | 5 | 6 | 7 | 5,1 | 5 |
| Speed of response to extraordinary customer requirements | | 6,0 | 6 | 6 | 6 | 7 | 5,2 | 6 |
| Flexibility with changing customer requirements | | 5,9 | 6 | 6 | 6 | 6 | 5,1 | 6 |
| Speed of processing a transaction | | 5,8 | 6 | 5 | 6 | 6 | 5,3 | 5 |
| Quick response and resolution of customer complaints | | 5,8 | 6 | 5 | 6 | 6 | 5,1 | 5 |

Notes: a. Multiple modes exist. The smallest value is shown.

In the analysis of the data in most aspects, the research has not proven the H3 hypothesis that the actual level of aspects of the partnership and flexibility is strongly correlated with their perceived importance in strengthening relationships with customers in the B2B market with researched chemical products intended for consumption in the production process. Enterprises in the surveyed fields of business have reserves in a number of aspects (compare statistics of usefulness and actual level of aspects in Table 1, too), and they should improve customer service particularly in important aspects of
strengthening customer relationships. This has also been confirmed by the nonparametric Spearman's coefficients correlation between the usefulness and the actual level of the individual aspects analyzed, but due to the limited scope of the paper, these results are not explicitly presented.

**Factor analysis between usefulness of partnership or flexibility aspects for strengthening the relationship between suppliers and customers**

Non-parametric correlation analysis based on Spearman's correlation coefficients of the perceived beneficial effect of various aspects of partnership and flexibility confirmed a strong correlation between some of them. Therefore, the factor analysis method was applied on all studied aspects. Its results have confirmed the H4 hypothesis as relevant that "perception of the usefulness of various aspects of partnership and flexibility can be explained by a coactivity of latent factors that stimulate strengthening customer relationships with the investigated chemical products" (see Table 2).

Table 2: Rotated Component Matrix of usefulness factors for strengthening customer relationships in the B2B market with the investigated categories of chemical products

| Aspects of partnership and flexibility                                                                 | Component 1 | Component 2 | Component 3 | Component 4 | Component 5 |
|---------------------------------------------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|
| Meeting the agreed date of delivery to 100 percent                                                      | .922         |              |              |              |              |
| Providing services within the agreed deadline to 100 percent                                           | .922         |              |              |              |              |
| Quick response and resolution of customer complaints                                                   | .850         |              |              |              |              |
| Long-term reliability in meeting the requirements and serving the customers                           | .826         |              |              |              |              |
| Professionalism of staff in serving customers                                                          | .874         |              |              |              |              |
| Ability to provide comprehensive solutions to customer needs                                          | .808         |              |              |              |              |
| Speed of processing a transaction                                                                       | .749         |              |              |              |              |
| Flexibility with changing customer requirements                                                        | .718         |              |              |              |              |
| Ability to adapt to customer requirements in all respects                                              | .717         |              |              |              |              |
| Systematic and regular surveys of customer satisfaction, retention and loyalty                          | .714         |              |              |              |              |
| Meetings of technical and other personnel designed to exchange experience in the use of the product   | .737         |              |              |              |              |
| Training of customer staff                                                                            | .666         |              |              |              |              |
| Speed of response to extraordinary customer requirements                                               | .660         |              |              |              |              |
| Joint tactical and operational planning                                                                |              |              |              |              | .922         |
| Sharing information on industry developments and business conditions in different markets              |              |              |              | .880         |              |
| Cooperation and assistance in researching the customers' clients' market                               |              |              |              | .840         |              |
| Adapting customer technologies to the parameters of the products delivered by the supplier           |              |              |              | .823         |              |
| Sharing databases on customer's clients and serving thereof                                            |              |              |              | .807         |              |
| Sharing functional online information system with customers on order fulfilment                         |              |              |              | .672         |              |
| Obligingness of the staff in serving customers                                                          |              |              |              | .622         |              |
| Interconnecting information systems with customers                                                    |              |              |              | .607         |              |
| Organization of customer clubs or customer meetings, as the case may be                                |              |              |              | .519         |              |
| Joint product testing with the customer                                                                |              |              |              |              | .893         |
| Rental of machinery, devices to the customer for facilitating the use of the supplied product          |              |              |              | .838         |              |
| Participating in the promotion of customer products at its markets                                     |              |              |              | .828         |              |
| Participating in the modernization of customer manufacturing plants                                    |              |              |              | .802         |              |
| Joint strategic planning                                                                              |              |              |              | .801         |              |
| Joint product research and development                                                                 |              |              |              | .771         |              |
| Participating in the provision of services by the customer to its clients                              |              |              |              | .638         |              |
| Provision of know-how to customers for the use of the products with the customer                      |              |              |              |              | .575         |
| Inviting the customer staff (managers) to social events                                               |              |              |              | .951         |              |
| Congratulations to workers from the customer's enterprise for life events                              |              |              |              | .896         |              |
| Inviting the customer staff to sporting events                                                         |              |              |              | .881         |              |
| Sharing information on the produced quantities of products, supplies intended for customers           |              |              |              | .857         |              |
| Meetings of the supplier top management with the customer top management                              |              |              |              | .715         |              |
| Negotiating further contacts with the customer at every meeting                                      |              |              |              | .669         |              |
| Regular contacts with customers to identify their needs, preferences and changes                      |              |              |              | .609         |              |
| Organization of open days for customers in the enterprise, visits to plants, etc.                     |              |              |              |              | .576         |
Creating personal relationships of trust with customers

Notes: Extraction Method: Principal Component Analysis;
Rotation Method: Varimax with Kaiser Normalization;
Rotation converged in 8 iterations.

The difference in usefulness of various aspects of partnership, or flexibility as the case may be, for strengthening customer relationships in various categories of chemical products

The research was intentionally conducted among managers of different categories of chemical products, which differ not only in terms of the breadth of the offered product range, but also in terms of the use and procedures of customer service. H5 hypothesis was expressed that the usefulness of various aspects of partnership, or flexibility as the case may be, for strengthening customer relationships in individual examined categories of chemical products is different. The variability of views of managers of different categories of products was tested in non-parametric Kruskal Wallis Tests (due to the number of respondents and the nature of the statistical distribution of the variables). The H5 hypothesis was confirmed only with aspects of partnership and flexibility, listed in Table 3:

Table 3: Kruskal Wallis tests of differences in perception of partnership and flexibility aspects by product categories

| Aspects of partnership and flexibility                                      | Chi-Square | df | Asymp. Sig. | SBU, for which the aspect is more beneficial than for the other |
|----------------------------------------------------------------------------|------------|----|-------------|---------------------------------------------------------------|
| Obligingness of the staff in serving customers                             | 10,308     | 3  | ,016        | IEX, ORS                                                     |
| Providing services within the agreed deadline to 100 percent               | 8,439      | 3  | ,016        | IEX, ORS; DCA                                               |
| Systematic and regular surveys of customer satisfaction, retention and loyalty | 7,981      | 3  | ,016        | IEX, ORS                                                     |
| Joint tactical and operational planning                                    | 10,174     | 3  | ,017        | DCA                                                          |
| Joint product research and development                                     | 14,330     | 3  | ,002        | IEX, ORS, ODP                                               |
| Participating in the modernization of customer manufacturing plants       | 12,528     | 3  | ,006        | IEX, ORS, DCA                                               |
| Participating in the provision of services by the customer to its clients  | 8,626      | 3  | ,035        | IEX                                                          |
| Participating in the promotion of customer products at its markets         | 11,017     | 3  | ,012        | IEX                                                          |

Note: Grouping Variable: SBU (product category)
Legend: IEX - industrial explosives
ODP - organic dyes and pigments
ORS - organic semi-finished products and specialties
DCA - cellulose derivatives, inorganic acids and salts

The subsequent Crosstabs analysis revealed what the differences consist in. They were statistically significant in particular with industrial explosives and organic intermediates and specialties, because in both types of products we need to cooperate much more deeply with customers and assist them in using or processing the products bought and applying the products produced therefrom on customer markets.

4. Conclusion

The research in the selected fields of chemical industry, producing products for further manufacturing, has shown that partnerships and flexibility of suppliers in serving customers is an increasingly important factor in strengthening relationships with customers, especially in the B2B markets. Deepening the partnership is dependent mainly on the supplier behavior towards the customer staff. Very beneficial for strengthening relations with customers, and for increasing their retention and loyalty to suppliers is their professionalism, responsiveness and reliability in serving customers, meeting the agreed delivery dates and date services to 100 percent, creation of a personal relationship of trust with customers and systematic and regular surveys of attitudes of customers to the supplier and its supply and services. This leads to the formation of solid personal ties between the two partners and deepening of mutual relations.
The partnership between suppliers and customers is greatly deepened due to the high flexibility of the supplier in serving the customer, characterized by the breadth and speed of response to changing requirements of customers and supplier's ability to meet extraordinary customer requirements. This will increase customer flexibility on the markets served by it and increase its competitiveness in the markets.

Supplier flexibility is dependent on the interconnection of the supplier with the customer. The research has revealed that, in the case of products intended for further manufacturing, very beneficial for strengthening relations with customers is the collaboration in the development and testing of products and technologies and comprehensive supplier participation and assistance in securing the use or processing of the products with the customer.

The research has confirmed that, in terms of possible special events organized by the supplier for the customer, very beneficial are meetings of top managers and other employees of suppliers and customers, in particular training and professional conferences and workshops, not social cultural and sporting events. It allows them to get to know each other better, to establish personal relationships and better understand the problem, requirements and preferences of business partners and develop a better offer for them and a method of serving customers.

Five key factors were identified of enhancing relationships with customers with the investigated categories of chemical products intended for further manufacturing or use, namely perfect products and services to customers through professionalism, reliability, flexibility and speed of suppliers, sharing of information, know-how and common tactical and operational planning, joint R&D and strategic planning, cooperation in modernization of customer's plants and help in serving markets, personal contacts at all levels and special events for the customer's staff, and creating personal relationships of trust with customers.

The research has shown that the perception of usefulness of most partnership and flexibility aspects does not differ among managers of the surveyed categories of chemical products. They can be considered very useful for strengthening customer relationships for the products of the chemical industry, regardless of the product category. Statistically significant differences in the perception of usefulness of a limited number of the partnership and flexibility aspects for strengthening customer relationships, however, have been identified. These were the aspects that relate to deeper collaboration and customer service. These selected aspects were more beneficial for strengthening customer relationships for managers of industrial explosives and organic intermediates and specialties as the market requires deeper cooperation and more extensive counselling and services from suppliers of these products.

A research performed by Ulaga and Chacour (2001) shows the comparison of the actual customer results with the internal results indicated the gaps between customers’ perceptions and perceptions of the internal supplier’s team. Therefore, the authors of this article in relation to a previous research this year are now conducting a quantitative survey among customers of selected chemical products focused on the perception of usefulness of various aspects of the supply and the behaviour of suppliers for strengthening their relationships with the suppliers. It is also being examined how consumers evaluate the actual level of the various aspects of the supply and the behaviour of their suppliers. This will reveal gaps in the suppliers' supply. It will also be possible to compare the views of managers of supply undertakings with views of managers of customer enterprises and it will show how much they agree on the perception of and attitudes towards tools strengthening relationships in a part of the chemical industry.
Acknowledgements

The authors thank for the financial support provided by the Grant Agency of the Czech Republic under the project No 403/12/1279 “Tools for strengthening the long-term relationships with customers based on integration and cooperation of value network subjects.”

References

Buzacott, J. A. & Mandelbaum, M. (2008). Flexibility in manufacturing and services: achievements, insights and challenges. Flexible Services and Manufacturing Journal, 20, 1-2, 13-58.

Cheng, L. C. & Carrillo, E. E. (2012). Assessing supplier performances under partnership in project-type procurement, Industrial Management & Data Systems, 112, 1-2, 290-312.

Child, J. & McGrath, R. (2001). Organizations unfettered: organizational form in an information-intensive economy, Academy of Management Journal, 44, 6, 1135-1148.

Claro, D. P., Claro, P. B. & Hagelaar, G. (2006). Coordinating Collaborative Joint Efforts with Suppliers: The Effects of Trust, Transaction Specific Investment and Information Network in the Dutch Flower Industry. Supply Chain Management: An International Journal, 11, 3, 216-224.

Combe I. A., Rudd, J. M., Leeflang, P. S. H. and Greenley, G. E. (2012). Antecedents to strategic flexibility: Management cognition, firm resources and strategic options. European Journal of Marketing, 46, 10, 1320 – 1339.

Cova, B. & Salle, R. (2008). Marketing Solutions in Accordance with the S-D Logic: Co-creating Value with Customer Network Actors. Industrial Marketing Management, 37, 3, 270–277.

Danese, P. & Romano, P. (2011). Supply chain integration and efficiency performance: a study on the interactions between customer and supplier integration, Supply Chain Management - an International Journal, 66, 4, 220-230.

Dunford, R., Cuganesan, S., Grant, D., Palmer, I., Beaumont, R. & Steele, C. (2013). Flexibility as the rationale for organizational change: A discourse perspective. Journal of Organizational Change Management, 26, 1, 83-97.

Ehret, M. and Kashyap, M. & Wirtz, J. (2013). Business Models: Impact on Business Markets and Opportunities for Marketing Research. Industrial Marketing Management, 42, 6, 649-655.

Epp, A. M. & Price, L. L. (2011). Designing Solutions around Customer Network Identity Goals. Journal of Marketing, 75, March 2011, 36-54.

Håkansson, H., Ford, D., Gadde, L. E., Snehota, I. & Waluszewski A. (2009). Business in Networks, Chi Chester: John Wiley & Sons.

Halley, A. & Beaulieu M. (2010). A Multidimensional Analysis of Supply Chain Integration in Canadian Manufacturing. Canadian Journal of Administrative Sciences-Revue Canadienne des Sciences de l Administration, 27, 2, 174-187.

Hamel, G. & Prahalad, C. K. (1989). Strategic intent. Harvard Business Review, May-June, 63–76.

Hong, P., & Jeong, J. (2006). Supply chain management practices of SMEs: From a business growth perspective. Journal of Enterprise Information Management, 19, 3, 292–302.

Hansen J. M. (2009). The evolution of buyer-supplier relationships: an historical industry approach. Journal of Business & Industrial Marketing, 24, 3/4, 227–236.

Hansen, H., Samuelsen, B. M., & Silseth, P. R. (2008). Customer perceived value in B-to-B service relationships: Investigating the importance of corporate reputation. Industrial Marketing Management, 37, 206–217.

Koh, S. C. L., Demirbag, M., Bayraktar, E., Tatoglu, E. & Zaim, S. (2007). The impact of supply chain management practices on performance of SMEs. Industrial Management & Data Systems, 107, 1, 103–124.

Kohli, R. & Grover, V. (2008). Business Value of IT: An Essay on Expanding Research Directions to Keep Up with the Times. Journal of the AIS, 9, 1, 23-39.

Kozak, R. A. (1997). Distributor-supplier partnering relationships: A case in trust. Journal of Business Research, 39, 1, 33–38.

Lages, L. F., Lancastre, A., & Lages, C. (2008). The B2B-RELPERF scale and scorecard: Bringing relationship marketing theory into business-to-business practice. Industrial Marketing Management, 37, 686–697.

Li, L. & Zhao, X. (2006). Enhancing competitive edge through knowledge management in implementing ERP systems. Systems Research and Behavioral Science, 23 2, 129–140.

Li, S., Raghu-Nathan, B., B., Raghu-Nathan, T.S., & Subba Rao, S. (2006). The impact of supply chain management practices on competitive advantage and organizational performance. Omega, 34, 2, 107–124.
Lin, R.-J., Chen, R.-H. & Chiu, K. K.-S. (2010). Customer relationship management and innovation capability: an empirical study. Industrial Management & Data Systems, 110, 1-2, 111-133.

Lindgreen, A., Hingley, M. K., Grant, D. B. & Morgana, R. E. (2012). Value in Business and Industrial Marketing: Past, Present, and Future. Industrial Marketing Management, 41, 1, 207-214.

Lostakova, H. & Stejskalova, I. (2013). The key strategic customer benefits leading to strengthening of relations with customers in the chemical industry. Proceedings of the 22nd Anniversary International Conference on Metallurgy and Materials (METAL 2013), Brno, 17th-19th May 2013, Ostrava: Tanger, 1994-1999.

Money, K., Hillenbrand, C., Day, M., Magnan, & G. M. (2010). Exploring reputation of B2B partnerships: Extending the study of reputation from the perception of single firms to the perception of inter-firm partnerships. Industrial Marketing Management, 39, 761–768.

Morgan, R. M. & Hunt, S. D. (1994). The commitment-trust theory of relationship marketing. Journal of Marketing, 58, July 1994, 20-38.

Payne, A. F., Storbacka K. and Frow P. (2009). Managing the Co-creation of Value. Journal of the Academy of Marketing Science. Available from http://link.springer.com/article/10.1007%2Fs11747-007-0070-0/fulltext.html.

Pecinova, Z., Lostakova, H. & Branska, L. (2013). Barriers to the Development of Cooperation in Value Networks with a Low Level of Cooperation, Proceedings of the 22th Anniversary International Conference on Metallurgy and Materials (METAL 2013), Brno (Czech Republic), 15th – 17th May 2013, Ostrava: Tanger Ltd.

Prahala, C. K. & Ramaswamy, V. (2004). Co- Creating Unique Value with Customers: Strategy & Leadership, Boston: Harvard Business School Press.

Sarker S., Sarker, S. Sahaym, A. & Bjorn-Andersen, N. (2012). Exploring Value Cocreation in Relationships between an ERP Vendor and its Partners: a Revelatory Case Study. MIS Quarterly, 36, 1, 317-338.

Savolainen, T. & Lopez-Fresno, P. (2012). Trust in Renewing Human Intellectual Capital - Intangible Asset Creating Vitality and Innovativeness. Proceedings of the 9th International Conference on Intellectual Capital, Knowledge Management & Organisational Learning (ICICKM), OCT 18-19, 2012, Univ Rosario, Bogota, Colombia, 236-244.

Sawhney, M. (2006). Going beyond the Product. Defining, Designing and Delivering Customer Solutions. In Lusch R. F., Vargo S. L. The Service-dominant Logic of Marketing: Dialog, Debate and Directions, Armonk, New York: M.E. Sharpe.

Sheth, J. N. & Sharma, A. (2008). The Impact of the Product to Service Shift in Industrial Markets and the Evolution of the Sales Organization. Industrial Marketing Management, 37, 3, 260–269.

Stenroos, L. A. & Jaakkola, E. (2010). Value Co-creation within Buyer-seller Relationships in Knowledge-intensive Business Services. Available from http://www.impgroup.org/uploads/papers/7487.pdf.

Ulaga, V. and Chacour, S. (2001). Measuring customer-perceived value in business markets. A prerequisite for marketing strategy development and implementation. International Marketing Management, 30, 525–540.

Upton, D. M. (1994). The management of manufacturing flexibility. California Management Review. Winter 1994, 72–89.

Upton, D. M. (1995). What really makes factories flexible? Harvard Business Review, 73, 4, 74–84.

Vargo, A S. L. & Lusch, R. F. (2008). From Goods to Service(s): Divergences and Convergences of Logics. Industrial Marketing Management, 37, 3, 254–259.

Vargo, A S. L., Lusch, R. F. & Wessels, G. (2008), Toward a Conceptual Foundation for Service Science: Contributions from Service-Dominant Logic. IBM Systems Journal, 47, January–March, 5-14.

Vargo, S. L., Maglio, P. P. & Akama, M. A. (2008). On Value and Value Co-creation: A Service Systems and Service Logic Perspective. European Management Journal, 26, 6, 145-152.

Wikstrom, S. (1996). Value Creating by Company-Consumer Interaction. Journal of Marketing Management, 12, 359–374.

Wilson, E. J., & Vlosky, S. P. (1997). Partnering relationship activities: Building theory from case study research. Journal of Business Research, 39, No. 1, 59-70.

Woodall, T. (2003). Conceptualization „Value for the Customer“: An Attributional, Structural and Dispositional Analysis. Academy of Marketing Science Review. Available from Internet: http://www.amsreview.org/articles/woodall12-2003.pdf.

Yigitbasioglu O. (2010). Information sharing with key suppliers: a transaction cost theory perspective. International Journal of Physical Distribution & Logistics Management, 40, 7, 550-578.

Yusuf, Y.Y., Sarhadi, M. & Gunasekaran, A. (1999). Agile manufacturing: the drivers, concepts and attributes. International Journal of Production Economics, 62, 33–43.

Zhang, Q., Vonderembse, M. A. & Limc, J. (2003). Manufacturing flexibility: defining and analyzing relationships among competence, capability, and customer satisfaction. Journal of Operations Management, 21, 2, 173–191.