

Typology of business relationships using buyers' and suppliers' perceptions

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Abstract

This paper focuses on the perception of the business relationship values in a dyadic approach. An overview of the related literature provides a good basis for conceptualization. The Integrated Business Relationship Value Model was chosen as a concept of the research; therefore, this paper presents the validation of the constructs of this model using the PLS-SEM software for the sample of 174 respondents. Based on the model, a survey regarding the economic and social values of the relationship was conducted with the supplier and buyer side of the dyads. The results of the analysis provide a description of the perceptions of both sides of the relationship based on the economic and social value constructs. The results also provide a segmentation of the sample based on value perceptions. We found three segments of behavior using the dual perception approach: (1) In “matching segment” relationships, the perception of the relationship is similar on the both sides; (2) In “happy supplier segment” relationships, the perceptions are different, and the relationship is more valuable for the supplier; (3) In “happy buyer segment” relationships, the relationship is more valuable for the buyer. This article contributes both the conceptualization and the typology of dyadic relationships. The results show that approximately 48 percent of the investigated relationships are mismatched, which indicates a need for greater focus on the evaluation of relationships in practical business management processes.

Keywords: Business relationships, dyadic relationships, perceptions, interaction

1. Introduction

This article focuses on the business interaction and, more precisely, the interaction process. The research aim fits the IMP philosophy, namely how to “characterize, categorize, and explain some aspects of business interaction” (Håkansson et al., 2009, p. 28). The basis of our research is the dyadic relationship, which we use to characterize business interaction through empirical findings about dyadic relationships in different sectors.

Organizations enter business relationships to use their own resources in a more economical way and to access resources created by the other party (Ford et al., 1998). The business relationship is important for the partners because they can either increase their turnover through the relationship or decrease their costs, which is why organizations accept the investments and adaptation required to form durable relationships (Ford, 1984). According to Wilson, business relationships create value because the relationship increases the competitiveness of the participating partners. They can access technologies, markets, and information that they could not have accessed on their own. Although not all

relationships are symmetrical, in order for the relationship to operate well, both parties must find something in the relationship that they could not have achieved on their own (Wilson, 1995).

The value of business relationships has an important motivational role. The creation and maintenance of the relationship provides value for both parties. Because values are determined by participants' own interpretation and perception, values can differ in terms of their objects and their importance. Thus, the business relationship is a value creating process while it ensures the distribution of values between the partners.

Business relationships are composed of exchange episodes. The frequency of these exchanges and the experience acquired during past exchanges form the business relationship that the participants understand according to their own point of view (Håkansson, 1982; Håkansson & Snehota, 1995). These individual and group perceptions play an important role in the judgment of the relationship. Individuals and groups have different perceptions of their own social reality. Therefore, a given reality, such as the value of business relationships, has a different meaning for the supplier compared with the buyer. This difference in perception arises at the exchange level due

to diverse understandings of the complexity (Hallen et al., 1987).

Håkansson and Snehota (1995) determined three different functions: for the dyad, the individual company, and third parties of the business relationship. They argued that business relationships have different economic consequences for the relationship itself, for each company, and for the business network (Håkansson & Snehota, 2000). These three levels of consequences make the management of business relationships difficult and complex. At the relationship level, the perception of power relations may differ among the participants (Håkansson, 1982), and at the network level, the appreciation of the participants in the relationship can differ from the perspective of the other members in the network.

The value of a business relationship involves the profit resulting from the given relationship and the value resulting from the existence of the relationship (Ford et al., 1998). However, consideration of the connectedness (Håkansson & Snehota, 1995) and the embeddedness (Axelsson & Easton, 1992) of the business relationship reveals value at the network level as well. The network indirectly influences the value of the business relationship (Blankenburg Holm et al., 1996).

Based on the numerous theoretical models developed by authors such as Reddy (1991), Wilson (1995), and Anderson and Narus (1999), and the results of prior empirical research (Mandják, 2002; Mandják et al., 2002; Mandják et al., 2003), we assume that the value of business relationship has economic, social, and, to a lesser extent, sociological and socio-psychological characteristics. Based on this logical framework, we defined the Integrated Business Relationship Value Model providing the opportunity to categorize business relationships.

This article investigates the research questions regarding the perceptions of the buyer and supplier in a dyadic approach based on the Integrated Business Relationship Value. Our research questions are concerned with the value and typology of business relationships:

1. How do the supplier and the buyer perceive a single relationship and the economic and social outcome of the relationship?
2. What are the common and differing elements of their perceptions?
3. How do these perceptions reflect the interactive characteristic of the relationship if we examine the relationship as the object from an external perspective?

Do the similarities and the differences in perceptions reflect different types among the dyads?

2. Theoretical basis and problem discussion

In this theoretical part of the article, we summarize the major findings of previous research on topics related to our research aim. Business relationships have been widely analyzed from a range of viewpoints in the B2B literature and in the work

of the IMP Group. First, we will introduce recent studies in which the authors explore business relationships and try to understand the nature and operation of these relationships with the help of the participants' perceptions.

An interesting question concerning the nature of the business relationship is how to characterize them by their closeness. Goffin et al. (2006) tried to describe the factors that might characterize partnership-like relationships because they claimed that close relationships are not adequately understood. Similarly, Duffy (2008) enriched the work in this field by classifying business relationships using the continuum of buyer-seller interactions. He focused on identifying significant differences between partnerships and other types of cooperative business relationships. Both of these studies analyze business relationships from the perception of different parties: either the buyer (Goffin et al., 2006) or the supplier (Duffy, 2008).

Brennan et al. (2003) focused on adaptation. They emphasized that business relationships are mostly about the adaptations of the partners and argued that the most important characteristic of the relationship is that "at least one of the partners adapts to the specific needs of the other." Although our paper does not focus on the adaptation process itself, Brennan et al.'s research method shows comparable similarities and differences to our own, which we will introduce in detail in later sections.

Barnes et al. (2007) and Henneberg et al. (2009) tried to make a conceptualized framework to describe business relationships while being aware of that: (1) each business relationship is unique, so "no 'general' rules can be derived and only 'thick' descriptions which are able to lay out the concrete make-up of a business relationship are deemed to be possible" (Henneberg et al., 2009, p. 3); and (2) business relationships can be described most precisely through the perceptions of the different parties in the relationship. Both studies applied the dyadic perspective. Describing the quantitative types of operationalization of business relationships, Henneberg et al. (2009) listed dyadic operationalization as the fifth type as a fully dyad point of view¹. In this type of operationalization, "buyers and sellers are asked the same question about the same business relationship, and then the answers are compared and aggregated." They also added that "from the different operationalization only the dyadic ones are commensurable with IMP tradition." Our study fits this dyadic operationalization of business relationships.

2.1 Dyadic relationship as the interaction itself

In order to understand the dyadic relationship we have to understand at first how a dyadic relationship is built between two parties. Dyadic relationships are built by exchanges. The exchange activity contains social and economic elements

1. The five types of operationalization of business relationships are: 1. Monad, 2. Antagonistic Perceived Monad, 3. Internal Dyad, 4. Perceived Dyad, 5. Dyad.

(Håkansson & Prencert, 2004). Therefore, we can assume that these elements will play a crucial role in the relationship perceptions of the partners. Business relationships are series of interactions; thus a dyadic relationship is the sum of interactions between the partners. Additionally, “no single interaction within a dyad takes place in isolation, but is affected by and affects numerous simultaneous interactions” (Ritter & Ford, 2004, p. 113). Therefore, relationship perception is also affected by other interactions of the partners in the network.

Among the different studies concerning the interaction between supplier and customers, the research results of La Rocca and Snehota (2011) contribute to our research regarding the perceptions of the two parties, which they call actors’ representations of their counterparts. La Rocca and Snehota (2011) examined the role of knowledge in interaction. The findings show that the representations that actors have concerning other actors with whom they interact in a business relationship have two properties. First, they are continuously emergent; second, they are relationship specific (La Rocca & Snehota, 2011, p. 80).

We are also interested in what the partners perceive and evaluate in a relationship when they report their perceptions of the relationship with their partners. If we look at the interaction process as a value-creation process, we can accept that the parties will certainly evaluate the relationship through the value they can gain from the relationship. The IMP approach recognizes two types of value creation processes: the exchange value and the use value (Håkansson & Prencert, 2004). We assume that both types of values are perceived in the dyadic relationship. Defining the value creation process in the dyadic relationship is not in the focus of our study; rather, we accept the works of Ulaga and Eggert (2006) and Walter et al. (2001) in this field. According to the research results of La Rocca and Snehota (2011), customer value for a supplier is created in the interaction.

We next introduce the relevant literature on the examined relationship factors and the methodology and field of analysis of buyer-seller relationships.

2.1.1 Relationship characteristics

Empirical studies about dyadic relationships differ in the relationship characteristics they analyze. One of the most often analyzed and controversial characteristic is trust: “Trust is not simply an input to a relationship; it is both a prerequisite and an outcome of the relationship development” (Johnson et al., 2004, p. 26 in Goffin et al., 2006). In their exploratory study, Goffin et al. (2006) did not measure the factor of trust in supplier-manufacturer relationships, but rather the perception of ‘personal relationship,’ ‘relationship maintenance,’ and ‘reliability.’ They identified nine key attributes of close supplier-manufacturer relationships based on the literature and their empirical study: special product capability and new product development as the supplier’s competences; feedback as an attribute of communication;

dependency, personal relationship, size of organization, volume of turnover, and complaint handling as building blocks of trust; and relationship maintenance as one of the characteristic of partnership-like relationships.

When Duffy tried to find the key indicators of partnership (2008), the results showed that the role of trust in a relationship is context specific. Other studies have shown that trust has a multidimensional construct that must be considered in studies addressing relationship typology because trust is an important relationship characteristic. According to the research results, trust and relational norms, frequency and scope of communication and information sharing, and interdependence were the greatest discriminating factors when analyzing limited coordination type, highly coordinated, and partnership type buyer-seller interactions.

Bigne and Blesa (2003) analyzed the distributor’s trust and satisfaction – especially the social interaction dimension of satisfaction – with the relationship considering the manufacturer’s market orientation behavior. The research results showed that trust is an antecedent of satisfaction and that the distributor’s trust in the manufacturer improves his satisfaction with the relationship.

In Barnes et al. (2007), 24 factors of dyadic relationships were investigated and organized into four dimensions: legitimacy and compatibility; social relations; economic bonds and shared values; and learning bonds. The research results were presented along these dimensions. The most important results of their research concerning our research aim will be introduced in section 2.4.

Brennan et al. (2003) differed from the studies introduced above because they examined the factors of dyadic adaptation and not the relationship generally. They analyzed supplier and customer adaptation of production planning and scheduling; stockholding and delivery; products; information exchange; production process; financial or contractual terms and conditions; and organization structure. These factors are irrelevant to our study, but the methodology of their research warrants further consideration later on in this article.

2.1.2 Methodology and field of analyzing buyer-seller relationships

We summarized the major characteristics of different research concerning dyadic relationships from the latest year’s literature in Appendix I. These studies differ in the following ways: the number of dyads analyzed, research method (qualitative and quantitative), research framework (or the scope of research), whether they examined single end (buyer or seller) or both ends of the dyadic relationship, single case or multiple case, and the number of sectors in which the research was conducted. In the following descriptions, we focus on the advantages and the limitations of the previous works and the commensurability of their methodology with our research.

Our study uses a methodology similar to Brennan et

al. (2003) who analyzed dyadic adaptation. In both cases, respondents were asked to complete the questionnaire regarding the most important buyer-seller relationship. They used the same classification system of adaptation for suppliers and customers, while we used the same value constituents of the integrated business relationship value model for the seller and for the buyer. However, the value indicators may differ for the buyer and for the supplier. Brennan et al. used mix-method, qualitative and quantitative methods. In contrast, our study presents the results of quantitative research. They acknowledged that “ideally data would be gathered from both ends of the relationship...” In our research, we revealed both sides of the dyadic relationship.

Although Bigne and Blesa (2003) examined both sides of dyadic relationship, they measured different factors on both sides because of their specific research aim detailed in section 2.1 of this paper. Market orientation was measured among the manufacturers, while perception of trust and satisfaction was measured only among distributors.

Duffy (2008) applied a unique approach concerning dyadic relationships by using a framework developed from the political economy literature. She argued that others used this approach for the analysis of buyer-seller relationships and that this framework has the “ability to integrate a number of diverse concerns in inter-organizational research in a general framework” (Stern & Reve, 1980 in Duffy, 2008, p. 229). This approach essentially divides “the inter-organizational dyad into an internal economy (the form and processes linking the channel members) and an internal polity (the power-dependence relationship)” (Stern & Reve, 1980 in Duffy, 2008, p. 229). In the conceptualization process, the performance of the relationship focuses only on the economic performance. The study was conducted in one sector and from one side of the dyad, among suppliers who directly supply food retailers and food service companies. The sample size (155 questionnaires) is notable. Johnsen and Ford (2008) also chose one sector for their analysis, namely the textile industry. They used a multiple case study with 4–7 interviews among suppliers, which did not permit examination of both sides of the relationships.

Goffin et al. (2006) used the repertory grid technique, taken from psychology, to investigate interpersonal relationships. They claimed that direct questioning has limitations in this research field and argued that the “repertory grid enables the respondents to articulate their views on complex issues and pushes them beyond the use of jargon” (Goffin et al., 2006, p. 196). With the help of this technique, researchers can understand complex topics such as business relationships. Goffin et al. used a multiple respondent approach with a sample of 39 buyers (two or more respondents by company). Unfortunately, they did not apply this technique to questioning the suppliers.

Mason and Leek (2008) used the network picture approach to analyze dyadic relationships. Applying network

pictures to individual customer-supplier relationships is the fourth level of network picture applications². Five network pictures were collected from two companies (customers and suppliers). This highly exploratory qualitative approach is hardly commensurable to our present study, but the approach still yielded some interesting findings concerning various perceptions of managers on different levels because they used multiple case studies (see section 2.5).

La Rocca and Snehota (2011) measured the supplier quality and the customer quality in the pre-interaction phase and in the post-interaction phase between a supplier company and its most important customers. Structured questionnaires among selling agents and their counterparts in 32 business relationships were used. For the measurements, they applied the SERVQUAL scale (Parasuraman, Zeithaml, & Berry, 1994) in case of the supplier and an ad-hoc developed scale in case of the customer. They claimed that “the literature does not offer specific constructs and measures suitable for assessing how counterparts in business relationships see each other as customers and suppliers” (La Rocca & Snehota, 2011, p. 82). They explained that in choosing a quantitative approach, we can get a “larger set of comparable observations that can be aggregated to offer more systematic empirical evidence. Another aspect is that a more systematic and standardized empirical data set allows for more articulated statistical analysis” (La Rocca & Snehota, 2011, p. 83). We also set this aim when choosing quantitative method for our research.

The work of Walter et al. (2001), which is often cited in B2B literature, examines the value creation process in buyer-seller relationships. Their survey featured an outstanding sample size of 247 supplier questionnaires. With this high amount of data, the authors made a classification of value creation through customer relationships. We set similar research aims in making a typology of business relationships using the perceptions of both sides of dyadic relationship.

2.2 Perception of dyadic relationship

In our study, we assume the perception of the dyadic relationship is influenced by some demographic characteristics of the firms. First, we examined the findings available in the literature. Second, we sought the relevance of these variables based on our empirical research. We investigated the findings of earlier studies regarding the following factors: firm size, firm type, length of the relationship, and the managerial level of the respondent. In the next sections, we summarize the findings.

2.2.1 Dyadic relationship and firm size

Johnsen and Ford (2008) examined the link between asymmetry in size and other characteristics of customer-supplier relationships. The research aimed to identify how 2. The first level is the industry level, the second is when examining a firm in its focal net and the third one is when network pictures are applied to represent make/buy decisions

suppliers can cope with and better manage the consequences of size asymmetry. The suppliers were all smaller than their customers and ranged from small (under 50 employees) to large (more than 250 employees). Because this study is a single end study, research results can be drawn only from the suppliers' perceptions. The research findings show among others, that "many smaller suppliers had similar goals to their larger customers, and that both parties would be prepared to adapt for the sake of the long-term development of the relationships." This result supports the previous work of Ford et al. (2003 in Johnsen & Ford, 2008, p. 481). "Smaller suppliers frequently offered particularity as a means of attempting to secure their relationships with important large customers..." (Johnsen & Ford, 2008, p. 481). Because it was a qualitative exploratory study, the results can be used only with limitations due to the different research aim of this paper.

2.2.2 Dyadic relationship and firm type

In a buyer-supplier relationship, a buyer or a supplier firm can be presented by several different types, for example, a manufacturer, a service provider, or a distributor. In most of the previous studies we examined, the type of the firm was not relevant to the analysis of the relationship (Walter et al., 2001; Leek & Mason, 2008; Duffy, 2007; Brennan et al., 2003). The type of the examined firms was also irrelevant for Johnson and Ford (2008) and for Barnes et al. (2007), but these authors noted that all firms they included in their studies were manufacturers. The exploratory study of Goffin et al. (2006) focused on supplier-manufacturer relationships; in this case, all the buyer firms were manufacturers. Bigne and Blesa (2003) analyzed the market orientation of manufacturers as suppliers and the trust and satisfaction of retailers (distributors) as buyers in the relationships. Because our sample reflects a heterogeneous firm type (see section 3 on the research method), we analyze the influence of the firm type on the perception of their relationships.

2.2.3 Dyadic relationship and the length of relationship

Barnes et al. (2007) conducted their research among companies with different sizes and relationships of varying duration. The results showed that generally the perceptual gaps between the two parties are small; each party perceives the relationship similarly. In short term relationships (less than two years), medium-sized suppliers have stronger perceptions of the relationships than their multinational buyers. Perceptual differences were less apparent in medium-term relationships (2–5 years), and no significant gaps were discovered among the long-term (more than 5 years) relationships. These results suggest that perceptual gaps become smaller with time.

2.2.4 Perception of dyadic relationship on different managerial levels

The perceptions of dyadic relationships on different managerial levels can be easily examined when applying multiple case studies. Using the network approach, Leek and Mason (2008) had some important findings concerning different views of the same dyad. The most important finding is that managers who work on a relationship daily and communicate regularly have similar perceptions of the relationship, while senior managers have a slightly different perspective due to less day-to-day involvement in the relationship and less regular communication about the relationship. Different individuals perceive the relationship atmosphere differently, and more senior the manager is, the broader his or her view of the network (Leek & Mason, 2008). Although we used a single case survey among the companies, the respondents represent different managerial levels. We may assume that the differences in the managerial level also result differences in perceptions of the relationship.

3. Conceptual framework and research method

As we set the research questions on the perception of the value of the relationship both on the buyer and supplier sides, we formulated our conceptual framework meeting these requirements and the use of a dyadic approach in the empirical research. To determine the conceptual framework of our research, we addressed the challenges of investigating dyadic relationships that are evidenced in the literature. We set a research plan to examine both ends of dyadic relationships in a large sample from multiple industrial sectors; these challenges were mentioned by Brennan et al. (2003).

We chose the Integrated Business Relationship Value Model (Mandják, 2002; Mandják & Simon, 2004) as a conceptual framework for our study. This model allows analysis of the social and economic value of the relationship on three levels: the exchange, relationship, and network levels.

The results of previous research (Mandják & Durrieu 2000; Mandják, 2002; Mandják & Simon, 2004) show that the value of business relationship is defined as a concept that expresses the perceived usefulness and motivation recognized in, or assigned to, a business relationship. The value of the business relationship is composed by two value types: the economic value type (utility), and the social value type (motivation). The economic value type is the expression of income and expenses within a business relationship. The social value type means the sense of direction and impulsive forces of social interaction related to a business relationship.

The scope of each value type reflects the three levels of the business relationships and signifies that each value type exists at the episode, the relationship, and the network level. The value types are composed of different value constituents. Accordingly, we can find economic value constituents and social value constituents which differ at the exchange, relationship, and network levels.

The model contains the variables describing the

Table 1: The structure of the Integrated Model of the Business Relationship Value.

Buyer's value	Buyer's perception		Value level	Supplier's perception		Supplier's value
	Value types			Value types		
	<i>Economic value Utility</i>	<i>Social value Motivation</i>		<i>Economic value Utility</i>	<i>Social value Motivation</i>	
	*value constituents	*value constituents		*value constituents	*value constituents	
	*value constituents	*value constituents		*value constituents	*value constituents	
	*value constituents	*value constituents		*value constituents	*value constituents	

perceptions of the supplier and buyer within a dyadic relationship (Table 1). We regard the perception of the value types in the dyad as the dual perception of the two players presented in our analysis. The dual perception means that the perspectives of the supplier and the buyer are analyzed together as to whether these views match or mismatch and to what extent. The value type perception of the buyer or the seller is the function of value constituents regarded as the latent variables of our model, which are functions of the indicators describing the elements of the value types. The latent variables can be assigned to the exchange, relationship, and network levels of the theoretical function on both sides. We always analyze the supplier and buyer side together, as they are two sides of a dyadic relationship.

Analyzing both sides of the business relationship value reveals the value sharing (Anderson, 1995) between the two actors. This value sharing can be symmetric or asymmetric. In the case of symmetric value, sharing the importance of the business relationship value is similar for the buyer and the supplier; however, the inherent structure of the two values could be different. Asymmetric value sharing means that one of the parties sees greater importance in the business relationship value than the other.

How is the Integrated Value Model integrated? The model

integrates the economic and the social value types by bringing together the different value constituents and integrating the buyer's and the supplier's perceptions either individually or collectively. Theoretically, the model integrates the results of the European, mostly IMP, and the North American research approaches. Appendix II shows a detailed presentation of the structure of the model, which contains the value constituents included in the conceptual model.

After the model selection, we designed the empirical research in the following way. We conducted a survey with a standard questionnaire for interviewing the buyer and the supplier of the same relationship. For the data collection, we used the method of personal interview as a quantitative technique. The survey was conducted among firms in Hungary with different demographic characteristics (such as industry, size, etc.). The database consists of the evaluation of business relationships (from both the supplier and the buyer) on a five-point scale. The questionnaire also contained important demographic data regarding the partners in the dyads and the industries. We included the demographic data based on the findings of former empirical studies described in our literature summary. We aimed to determine whether the types of the dyads and their differences can be explained

Table 2: Research characteristics

Sample	174 dyads
Research method	Personal interviews
Framework	Integrated Business Relationship Value Model
Single end/both ends	Both ends
Single case/multiple case	Single case
Number of sector	12

by the demographic variables of the firms. We analyzed 174 dyadic relationships in total. Table 2 summarizes the main characteristics of our empirical research.

4. Analysis

Analysis of the empirical data consists of four major phases. The first phase encompasses univariate analyses and missing value analysis. The second phase is concerned with construct measurement. The third phase consists of cluster analyses that aimed to identify different types of business relationships. Finally, multivariate analysis of variance is employed to examine the differences between the types of business relationships.

4.1 Preparatory analyses

We investigated 174 supplier-buyer relationships. The supplier and buyer represent more sectors that are mainly companies. Some institutions are evident, mainly among the buyers, but their share is less than 10 percent. The distribution of the sample according to the demographic variables of the supplier and buyer side and the comparison in the dyads are shown in Appendix III.

The data includes constructs described by indicators on the exchange, relationship, and network levels for the economic and social values. Both sides of the dyad, the supplier, and the economic size have about 30 indicators in the constructs. Overall, the amount of missing values was small. Missing values were imputed by means of the EM-algorithm as implemented in IBM SPSS.

4.2 Construct measurement

In order to increase the predictive validity of our measures, we used multi-item measurement (Diamantopoulos et al., 2013). In order to assess the reliability and validity of construct measurement, we relied on partial least squares structural equation modeling (PLS-SEM, Hair et al., 2012) as implemented by SmartPLS 2.0 M3 (Ringle et al., 2005). The use of PLS-SEM is recommended for small sample sizes (Reinartz et al., 2009) and when the construct scores are of interest for the study (Henseler et al., 2009).

We executed PLS-SEM using the factor weighting scheme (Henseler, 2010). For each construct, we report Cronbach's alpha (Cronbach, 1951), the composite reliability (Heise & Bohrnstedt, 1969), the average variance extracted (AVE, Fornell, & Larcker, 1981), and the loadings of its indicators in Appendix IV. All constructs have a composite reliability greater than 0.7, thereby meeting the conventional threshold of Nunnally (1978). Almost all of the Cronbach's alpha values exceed this threshold. However, because neither the research design nor PLS-SEM ensures tau-equivalent measurement, Cronbach's alpha should be regarded as a lower bound to reliability rather than a consistent estimate (Sijtsma, 2009).

Moreover, all constructs exhibit AVE values above or close to 0.5, indicating uni-dimensionality and therefore convergent validity. Overall, we conclude that our constructs have sufficient reliability and validity.

Another important outcome of the PLS-SEM analysis is the latent variable scores. These latent variable scores have zero mean and unit variance and build the basis for the following analyses.

4.3 Cluster analyses and the analysis of the effect of the variables

In order to identify different types of relationships, we sought homogenous segments based on the latent variable scores that can be interpreted as the evaluation of the relationship on the buyer and supplier side. To overcome potential problems of influential observations, we conducted hierarchical cluster analysis with single linkage method. We identified four observations as different from all others and excluded them from the further analyses. We then applied hierarchical cluster analysis using the Ward method in order to form balanced groups of observations. We decided to analyze the three-cluster solution as the three types of the relationship perception.

In order to analyze the cluster solutions according to the clustering (latent) variables, we conducted variance analysis³, the results of which are summarized in Appendix V. The connection is significant for all the clustering variables; only the variable connected with the importance of the product has no significant effect. This result indicates that the clusters can be significantly explained by the clustering variables (the latent variables of the constructs). The differences between the clusters have been analyzed by the same method; the results will be presented with the description of the clusters.

5. Evaluation and results

We present our evaluation and results according to the research questions. Answering the first and second question, we refer to the clusters in general. A detailed analysis of the clusters will be given only answering the third research question.

5.1. General perception of the relationships

The first research question refers to the perception of the supplier and buyer side and whether these sides are perceived similarly or differently. Figure 1 (Appendix VI) shows all the variables, including the economic and social variables. The 0 value on the scale represents the average value, the values above 0 are the more important values, and the values below

3. In the variance analysis we used the General linear method multivariate (MANOVA) method of SPSS

0 are the values less important than the average value. If we consider the supplier value of the relationship as the function⁴ of the economic and social variables, then the supplier value can be illustrated as the area covered by the values of the variables on the supplier side. The same is true for the buyer side. Thus, the areas represented on Figure 1 (Appendix VI) can be considered and compared for both sides of the dyad for the segments. Without direct measurements, we can see that the two areas are similar for cluster 1, and the two areas are rather different for clusters 2 and 3. The same conclusions can be drawn from Figures 2/1 and 2/2 (Appendix VI) where the buyer and supplier sides are represented separately. If we compare the supplier and buyer areas, we can answer the first research question and conclude that the perception of the supplier and buyer side is in some cases similar and in some cases different.

5.2. The differences of the perceptions

If we calculate the subtotal values for the economic and social values on both sides, we can see the similarities and differences, according to the second research question. The economic values are a bit different in the first cluster, while the mean of the social variables are the same for this cluster. Significant differences are shown in the second and third clusters; both the economic and social values are higher for the supplier than for the buyer in the second cluster. In the third cluster, a considerable difference is evident between the buyer and supplier perception according to the economic value, and the perception of social values is different as well. The buyer's perception is slightly above the average, while the supplier's perception for the social value is much less than the average. In the third cluster, the perception of the buyer is much better than the perception of the supplier, while in the second cluster the perception of the supplier is better both for the economic and social values.

5.3. The types of perceptions

4. The function means here a type of theoretical function: the total value of the supplier or buyer side is depending on the variables in the model representing the supplier or the buyer

Based on the presentation of the perception of the two sides of the dyad, we can focus on the third research question and the segments of the relationships.

The 3 clusters can be characterized based on the clustering variables:

Cluster 1: "The matching segment"

The relationship is highly valued on both the buyer and supplier sides. The values of the buyer and supplier sides show an importance above the average, and the participants of the relationship regard the relationship as an important and valuable construct. The latent variables are evaluated on a similar level. Although the dyads are not typical regarding the type of the companies or the profile of the participants, but in the dyads are rather bigger buyer than supplier or the buyer and supplier are in the same size category. The matching segment is the largest segment. Fifty-two percent of the dyads can be found here, which means that about half of the relationships reflect a matching perception in the dyad.

Cluster 2: "The happy supplier segment"

The relationship is better evaluated by the supplier compared to the buyer. Although the evaluation has no high values on both sides, both the supplier and buyer evaluate the values and the importance of the relationship below the average, but the supplier regards the relationship as more important and valuable. A small difference between the buyer and supplier side exists in the evaluation of the security of the relationship, the emanation of the relationship, and the evaluation of the partner's position in his own industry. This segment includes 37 percent of the dyads, which reflects the largest segment with different perceptions of the supplier and the buyer.

Cluster 3: "The happy buyer segment"

The relationship provides value only for the buyer while the relationship for the supplier remains rather unimportant. The buyer's perception regarding the economic and functional values is positive. The cluster is small with 19 members, of which 58 percent (11 dyads) have existed for less than five years. The relationship works as a routine segment because the evaluation of the routine value has the same positive value, which means that the participants have a routine relationship that is quite valuable for the buyer, but is neither important nor valuable for the supplier.

Table 3: Perception of social and economic values in the segments

<i>Means</i>	<i>Cluster_1 (n=91)</i>	<i>Cluster_2 (n=64)</i>	<i>Cluster_3 (n=19)</i>
Supplier economic value	0.52	-0.19	-1.82
Buyer economic value	0.46	-0.63	-0.11
Supplier social value	0.64	-0.67	-0.82
Buyer social value	0.64	-0.95	0.11

If we analyze the differences on the latent variables level with variance analysis, we observe significant differences in the evaluation of the variables on both sides. Although no significant difference exists in the evaluation of “recognition of the product” and in the “possibility of manufacturing the product” on the supplier side, this variable is on the same level of importance for all the participants on both sides. Significant differences exist in the evaluation concerning all other variables on the buyer and supplier sides.

Differences are apparent among the segments on the latent variable level. Comparing the first and second clusters, no significant differences exist in the evaluation of “suitability of financial conditions” and “security of product sales” in general, “supply potential of relationship” on the buyer side, “income potential of the relationship” on the supplier side, and “importance of the relationship” and “network potential of the relationship” on both sides. Less significant differences mean the variables are similarly evaluated in terms of economic values. More significant differences exist in the evaluation of the social values on both sides when comparing the “matching” and the “happy supplier” segments.

Fewer significant differences regarding the social variables exist between the “matching” and the “happy buyer” segments. More significant differences regarding the economic variables are apparent.

Significant differences exist between the clusters “happy supplier” and “happy buyer.” From the buyer perspective, the only significant differences exist between the evaluations of almost all the variables. The supplier side exhibits no difference in the evaluation of “profitability of the relationship,” “income potential of the relationship,” and “smoothness of the relationship.” However, other variables show significant differences between the “happy supplier” and “happy buyer” segments.

5.4. Perception of dyadic relationships according to the demographic variables

No big differences concerning firm size exist between the clusters. We analyze the differences comparing the firm size in the dyad depending on whether they are in the same size category or whether the buyer or supplier is larger or smaller. Comparing these results with the results mentioned above reveals a slightly similar tendency in the length of relationship. If the supplier is smaller, the relationship tends to be somewhat longer. Forty-one percent of the relationships are less than five years old, and 59 percent of the relationships are more than five years old if the suppliers are smaller. If they are in the same size category or if the supplier is bigger, then approximately 50 percent of the relationships are less than five years and the other half are more than five years old. No significant difference between the clusters exists regarding the company size differences, but there is a slight tendency.

If the supplier is smaller, then the dyads belong to the first or second cluster. Fifty-six percent of these dyads are in the first “matching” cluster, and 38 percent are in the “happy supplier” segment. These results correspond with the results of Johnsen and Ford (2008) because the matching segment suggests similar goals, and the smaller supplier tends to build a longer relationship.

Our sample reflects a heterogeneous grouping of firms that are manufacturers and service providers or buyers. We found that the type of the firm is irrelevant to the character of the relationship and the type categories of dyads. No significant difference in the profile of the relationship exists if the buyer and seller are both in the service or the manufacturing category, or if they are of different types. This result is similar to the results found in the literature review.

We surveyed higher and middle managerial level respondents. No significant difference exists in the perception of the two levels in most cases, especially in the “matching” segment. The “happy supplier” segment shows a slightly higher number of respondents on the supplier side, and the same tendency is shown in the “happy buyer” segment for the buyer side (this segment contains a slightly higher managerial level buyer respondent). However, these connections are not statistically significant. Thus, our results are similar to the results of the literature.

The length of the relationship is the only demographic variable where we could find some influence on perceptions. We achieved similar results as Barnes et al. (2007) considering the perceptual gap of the buyer and supplier sides of the dyads. No relevant gap exists between the perceptions of the two sides. Because we have dyadic data, we prepared an adjusted relationship length variable that smoothed the differences between the perceptions, which allowed us to investigate the length of relationship in the different clusters and led us to find significant differences. The “matching” cluster reveals longer relationships, typically more than five years old, but we can find some dyads with relationships of less than five years. In the other two clusters where the perception of the supplier and the buyer are different, we can find even shorter relationships.

6. Discussion

6.1. Research contribution

This article contributes both a conceptualization and a typology of dyadic relationships. The Business Relationship Integrated Value Model has been used in our previous research papers, but here we conducted the validation of measurement models based on a large sample. Few empirical research papers analyze dyadic samples. Thus, the contribution of this paper lies in our empirical research as well.

The core of this paper's contribution lies in its description of the typology of dyadic relationships. In the three segments of behavior we identified by using the dual perception approach, we found many relationships where the perception of the relationship is similar on both sides, segments where the perceptions are different and the relationship is more valuable for the supplier, and cases where the relationship is more valuable for the buyer, according to the dual perception.

The main contribution of this research is the empirical finding that existing business relationships reflect different types of value sharing. Relationships with symmetric value sharing are apparent, as well as relationships with asymmetric value sharing. These asymmetric relationships reflect two types. In buyer-happy relationships, the buyer has more value than the supplier. In supplier-happy relationships, the supplier gets more value than the buyer.

The first type is the "matching segment," which constitutes about half of the relationships in our research. These relationships are working well, the perceptions of both partners are similar, and the partners regard the relationship as a valuable one. In the "happy supplier" and "happy buyer" segments, the perception of both sides is not the same; rather the perceptions are either in favor of the supplier or in favor of the buyer. The demographic variables of the companies are insignificant in these cases; rather the typology depends on neither the company size nor the company type. The only difference is the length of the relationship; longer relationships are in the "matching segment."

6.2. Limitations and further research

Several limitations of the research are apparent, mainly in the empirical research. The sample is convenient and not representative. Although the respondents represent different sizes, business types, and profiles, the sample is not representative in these variables. While more businesses are represented, the subsamples of each business is small, which does not allow the analysis of the businesses in the sample. The respondents are mainly companies, although some institutions are represented. However, the subsample of institutions is so small that we cannot properly analyze the differences between companies and institutions. Another limitation is the single case characteristic of the empirical research; just one relationship of one dyad has been investigated. Extending the research in a multi-case direction could allow comparison between the relationship characters within one company.

Further research should continue conceptually building the bridge between the analysis of the perception and evaluation of relationships and management approaches to relationships. We should continue the collection of dyadic samples in a structured way that can provide more conclusions regarding the businesses and type of respondents. The field research should provide either a larger, representative sample

for some selected businesses or focus on one business where we collect a representative sample regarding the size and profile of companies. Both approaches can provide more reliable conclusions for one or more businesses.

6.3. Managerial implications

Our typology of business relationships, which is based on the perceptions of buyers and suppliers, might be useful for future studies in the relationship management field. Similarly, the recent studies of Zaefarian, Henneberg, and Naudé (2010) have applied business strategy types to business relationship strategies.

In this research, we investigated the relationship between the supplier and buyer in dyads by applying the dual perception approach. This approach revealed that the average values of the supplier and buyer sides are similar regarding the factors of the relationship and the total relationship value. The largest segment (52 percent) showed matching evaluations, which reflected no major discrepancies between the two sides of the dyad in this segment. However, the other two segments revealed discrepancies between the evaluations of the two sides. In the "happy supplier" segment (38 percent), the evaluation of the supplier is better; they are more satisfied with the relationship, which might indicate a probable switch of the buyer, or a new supplier seeking the strategy of the buyer. In the smallest segment (11 percent), the buyer is more satisfied than the supplier, which does not necessarily indicate switching because the supplier must find a new, "better" buyer, but does indicate a discrepancy in the relationship. These results should be investigated in greater detail with continued dyadic research. However, the fact that 48 percent of the investigated relationships are mismatched regarding the evaluation of both sides indicates for greater focus on the evaluation of relationships in business management. Managers can pay more attention on the possibilities of symmetric and asymmetric value distribution in diverse sectors and industries that are not necessarily dependent on the company size or type.

Knowledge of business relationship value is essential during organizational decisions. The value of business relationships fundamentally influences the decisions associated with these relationships. Business relationship value affects how the supplier and the buyer act in a given business relationship – whether they should develop the relationship, maintain it, or simply end it. Business relationship value also influences the supplier and the buyer in deciding which existing relationship is most important or least essential.

References

- Anderson, J.C. (1995). Relationships in business markets: Exchange episodes, value creation, and their empirical assessment. *Journal of the Academy of Marketing Science*,

- 23(4), 346–350.
- Anderson, J.C., Narus, J.A. (1999). *Business Market Management: Understanding, Creating and Delivering Value*. Englewood Cliffs, New Jersey: Prentice Hall.
- Axelsson, B., Easton, G. (Eds.). (1992). *Industrial Networks: A New View of Reality*. London: Routledge.
- Barnes, B.R., Naudé, P., Michell, P. (2007). Perceptual gaps and similarities in buyer-seller dyadic relationships. *Industrial Marketing Management*, 36(5), 662–675.
- Bigne, E., Blesa, A. (2003). Market orientation, trust and satisfaction in dyadic relationships: A manufacturer-retailer analysis. *International Journal of Retail & Distribution Management*, 31(11), 574–590.
- Blankenburg Holm, D., Eriksson, K., Johanson, J. (1996). Business networks and cooperation in international business relationships. *Journal of International Business Studies*, 27(5), 1033–1053.
- Brennan, D.R., Turnbull, P.W., Wilson, D.T. (2003). Dyadic adaptation in business-to-business markets. *European Journal of Marketing*, 37(11/12), 1636–1665.
- Cronbach, L.J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16(3), 297–334.
- Diamantopoulos, A., Sarstedt, M., Fuchs, C., Wilczynski, P., Kaiser, S. (2012). Guidelines for choosing between multi-item and single-item scales for construct measurement: A predictive validity perspective. *Journal of the Academy of Marketing Science*, 40(3), 434–449.
- Duffy, R.S. (2008). Towards a better understanding of partnership attributes: An exploratory analysis of relationship type classification. *Industrial Marketing Management*, 27(2), 228–244.
- Ford, D. (1984). Buyer/seller relationships in international industrial markets. *Industrial Marketing Management*, 13(2), 101–112.
- Ford, D., Gadde, L.E., Håkansson, H., Lundgren, A., Snehota, I., Turnbull, P., Wilson, D. (1998). *Managing Business Relationships*. Chichester: Wiley.
- Ford, D. (ed.) (1990) *Understanding Business Markets: Interaction, Relationships and Networks*. London: Academic Press.
- Fornell, C., Larcker, D. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50.
- Goffin, K., Lemke, F., Szwejczewski, M. (2006). An exploratory study of 'close' supplier-manufacturer relationships. *Journal of Operations Management*, 24(2), 189–209.
- Hair, J.F., Ringle, C.M., Sarstedt, M. (2011). PLS-SEM. Indeed a silver bullet. *Journal of Marketing Theory and Practice*, 19(2), 139–151.
- Hair, J.F., Sarstedt, M., Ringle, C.M., Mena, J. (2012). An assessment of the use of partial least squares structural equation modeling in marketing research. *Journal of the Academy of Marketing Science*, 40(3), 414–433.
- Håkansson, H. (1982). *International Marketing and Purchasing of Industrial Goods: An Interaction Approach*. Chichester, Wiley.
- Håkansson, H., Ford, D., Gadde, L.-E., Snehota, I., Waluszewski, A. (2009). *Business in Networks*. Chichester: Wiley.
- Håkansson, H., Prenkert, F. (2004). Exploring the exchange concept in marketing. In Håkansson, H., Harrison, D., Waluszewski, A. (Eds.): *Rethinking Marketing*. Chichester: Wiley.
- Håkansson, H., Snehota, I. (1995). *Developing Relationships in Business Networks*. London: Routledge.
- Håkansson, H., Snehota, I. (2000). The IMP perspective: Assets and liabilities of relationships. In J.N. Sheth (Ed.), *Handbook of Relationship Marketing*. Thousand Oaks, CA: Sage.
- Hallén, L., Johanson, J., Mohamed, N.S. (1987). Relationship strength and stability in international and domestic industrial marketing. *Industrial Marketing and Purchasing*, 2(3), 22–37.
- Heise, D., Bohrnstedt, G. (1970). Validity, invalidity, and reliability. In E.F. Borgatta and G.W. Bohrnstedt (Eds.), *Sociological Methodology*. Vol. 2. (pp. 104–129) San Francisco, CA: Jossey-Bass.
- Henneberg, S.C., Ashnai, B., Naudé, P. (2009). Is there such a thing as a 'dyadic operationalization'? Some considerations regarding quantitative research and the interaction model of business relationships. *25th Annual IMP Conference, Marseille: Euromed Management*, 3–5 Sept. 2009.
- Henseler, J. (2010). On the convergence of the partial least squares path modeling algorithm. *Computational Statistics*, 25(1), 107–120.
- Henseler, J., Ringle, C.M., Sinkowics, R. (2009). The use of partial least squares path modeling in international marketing. *Advances in International Marketing*, 20, 277–319.
- Johnsen, R.E., Ford, D. (2008). Exploring the concept of asymmetry: A typology for analysing customer-supplier relationships. *Industrial Marketing Management*, 37(4), 471–483.
- La Rocca, A., Snehota, I. (2011). Knowledge in use when actors interact in business relationships, *The IMP journal*, 5(2), 79–93.
- Mandják, T. (2002). *The value of business relationships*. (Doctoral dissertation). Available at <http://www.impgroup.org/dissertations.php?dissertationSearch=Mandjak>
- Mandják, T., Simon, J. (2004). An integrated concept on the value of business relationships: How could it be useful? In *20th IMP Annual Conference, Copenhagen, Denmark*, www.impgroup.org: 1–32.
- Mandják, T., Simon, J., Lantos, Z. (2003). What do managers think about the value of business relationships? In *19th Annual IMP Conference, Managing in Networks, Proceedings, Lugano*, 1–21.
- Mandják, T., Durrieu, F. (2000). Understanding the non-

- economic value of business relationships. In D. Ford, P. Naudé, T. Ritter, P.W. Turnbull, S. Leek (Eds.), *16th Annual IMP Conference. Proceeding, CD Rom, Bath*, 1–16.
- Mandják, T., Simon, J., Sajtos, L. (2002). Why chemical buyers are different? In R. Spencer (Ed.), *18th IMP Annual Conference, Dijon, CD-ROM*: 1–13.
- Mason, K.J., Leek, S. (2008). Learning to build a supply network: An exploration of dynamic business models. *Journal of Management Studies*, 45(4), 774–799.
- Nunnally, J.C. (1978). *Psychometric Theory*. New York: McGraw-Hill.
- Parasuraman, A., Zeithaml, V.A., Berry, L.L. (1994). Reassessment of expectations as a comparison standard in measuring service quality: Implications for further research. *Journal of Marketing*, 58(1), 111–124.
- Reddy, M.N. (1991). Defining product value in industrial markets. *Management Decisions*, 29(1), 14–19.
- Reinartz, W., Haenlein, M., Henseler, J. (2009). An empirical comparison of the efficacy of covariance-based and variance-based SEM. *International Journal of Research in Marketing*, 26(4), 332–344.
- Ringle, C.M., Wende, S., Will, A. (2005). SmartPLS 2.0, www.smartpls.de.
- Ritter, T., Ford, D. (2004). Interactions between suppliers and customers in business markets. In H. Håkansson, D. Harrison, A. Waluszewski, (Eds.), *Rethinking Marketing*. Chichester: Wiley.
- Sijtsma, K. (2009). On the use, the misuse, and the very limited usefulness of Cronbach's alpha. *Psychometrika* 74(1), 107–120.
- Ulaga, W., Eggert, A. (2006). Value-based differentiation in business relationships: gaining and sustaining key supplier status. *Journal of Marketing* 70(1), 119–136.
- Walter, A., Ritter, T., Gemünden, H.G. (2001). Value creation in buyer-seller relationships. *Industrial Marketing Management* 30(4), 365–377.
- Zaefarian, G., Henneberg, S.C., Naudé, P. (2010). The fit of business relationships with business strategies. *26th Annual IMP Conference, Budapest, Hungary*, 2–4 Sept. 2010.
- Wilson, D.T. (1995). An integrated model of buyer-seller relationships. *Journal of the Academy of Marketing Science* 23(4), 335–345.
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Appendix I: Different studies of dyadic relationships

	Svensson (2004)	Barnes et al. (2007)	Bigne and Blesa (2003)	Brennan et al. (2003)		Duffy (2008)	Goffin et al. (2006)	Johnsen and Ford (2008)	Leek and Mason (2008)	Walter et al. (2001)	La Rocca and Snehota (2011)
Sample	63 dyads	54 dyads	179 dyads	13 dyads	129 suppliers	155 suppliers	39 buyers	8 suppliers	1 dyad	247 suppliers	32 dyads
Research method(s)	mail survey	personal interviews, telephone interviews, case studies	Personal interviews	Case studies	Mail questionnaire	Mail questionnaire	Structured interviews	Semi-structured interviews	In-depth interviews	Personal interviews	Personal interviews
Framework	interactive vulnerability construct based on supply chain management	Buyer-seller and channel management literature	Behavioral conception of market orientation	Prior published case studies	Literature and qualitative phase	Political economy literature	Repertory grid technique	Typology of size asymmetry	Network pictures	Direct and indirect functions of relationships	Knowledge in interaction
Single end/both ends	Both ends	Both ends	Both ends	Both ends	Single end	Single end	Single end	Single end	Both ends	Single end	Both ends
Single case/multiple case	Single case	Multiple case	Single case	Multiple case	Single case	Single case	Multiple case	Multiple case	Multiple case	Single case	Multiple case
Number of sector	One	Several	One	Several	One	One	One	One	One	Several	One

Appendix IIa: Detailed presentation of the Integrated Model of the Business Relationship Value: The buyer's value of the business relationship

<u>Value level</u>	Buyer's perception	
	Value types	
	<i>Economic value</i>	<i>Social value</i>
<u><i>Exchange episode</i></u>	– Recognition of the product – Importance of the product to the supplier – Suitability of the financial conditions	– Personal relationships – Satisfaction with the product – Security of supply of the product
<u><i>Relationship</i></u>	– Profitability of the relationship – Decreasing the transactional costs – Supply potential of the relationship	– Smoothness of the relationship (routines) – Security of the relationship – Competence of the supplier
<u><i>Network</i></u>	– Own portfolio management – Network potential – Related effects	– Emanation of the relationship – The supplier's position in his own industry – Non-market strategy of the supplier

Appendix IIb: Detailed presentation of the Integrated Model of the Business Relationship Value: The supplier's value of the business relationship.

<u>Value level</u>	Supplier's perception	
	Value types	
	<i>Economic value</i>	<i>Social value</i>
<u>Exchange episode</u>	– Possibility of manufacturing the product – Importance of the product to the buyer – Suitability of the financial conditions	– Personal relationships – Buyer's satisfaction with the product – Security of product sales
<u>Relationship</u>	– Profitability of the relationship – Decreasing the transactional expenses – Income potential of the relationship	– Smoothness of the relationship (routines) – Security of the relationship – Competence of the buyer
<u>Network</u>	– Own portfolio management – Network potential – Related effects	– Emanation of the relationship – The buyer's position in his own industry – Non-market strategy of the buyer

Appendix III: The demographic characteristics of the sample

Size of the company	Supplier (%)	Buyer (%)
Micro	14.6	19.5
Small	22.8	27.8
Middle	19.3	29.0
Big	43.3	23.7

Size category of the partners	Number of dyads	%
Equal	51	29.3
Bigger supplier	73	42.0
Bigger buyer	50	28.7

Profile	Supplier	Buyer
Production	21.6	13.2
Services	58.5	61.1
Both	19.9	25.7

Category of the profile	Number of dyads	%
Same	91	52.3
Different	83	47.7

Length of the relationship	Number of dyads	%
-5 years	77	45.3
5-10 years	44	25.9
More than 10 years	49	28.8

Position of the respondent	Supplier	Buyer
Owner	27.1	23.8
Senior manager	12	16.3
Manager	34.3	34.4
Other	26.5	25.6

Appendix IV: Construct Measurement

<i>Construct</i>	<i>Cronbach's Alpha</i>	<i>Composite Reliability</i>	<i>AVE</i>	<i>Loading</i>
Indicator				
<i>Recognition of the product (Buyer's perspective)</i>	0.7716	0.8532	0.5930	
The P/S bought in the relationship perfectly fit our technology.				0.7130
The P/S bought in the relationship largely fit our technology.				0.7713
The P/S bought in the relationship perfectly fit our sales policy.				0.7754
The P/S bought in the relationship mainly fit our sales policy.				0.8168
<i>Emanation of the relationship (Buyer's perspective)</i>	0.7780	0.8585	0.6116	
The contact with this supplier means a good reference for our existing and potential suppliers.				0.8695
The supplier refers to this relationship.				0.5098
The relationship means a good reference for our existing and potential buyers.				0.8650
The relationship means a reference for our partner authorities' institutions and for our media contacts.				0.8260
<i>Importance of the relationship (Buyer's perspective)</i>	0.6209	0.7795	0.4724	
The relationship with this supplier is important for us because it is appropriate for us.				0.6112
The relationship with this supplier is important for us because of its high sales profit.				0.6135
The relationship with this supplier is important for us because it gives us the main presence on the market.				0.8009
The relationship is important for us because it ensures an additional presence on the market.				0.7057
<i>Non-market strategy of the supplier (Buyer's perspective)</i>	0.7199	0.8117	0.4210	
The supplier has good connections with the approving and regulatory authorities.				0.5575
The supplier is ready to use these connections to support us if necessary.				0.5746
The supplier conducts an active policy towards the media.				0.5909
The supplier is ready to use their connections with the media to support us if it is necessary.				0.6992

<i>Construct</i>	<i>Cronbach's Alpha</i>	<i>Composite Reliability</i>	<i>AVE</i>	<i>Loading</i>
Indicator				
<i>Network potential (Buyer's perspective)</i>	0.6688	0.8168	0.5990	
The supplier is in a business with strict quality standards.				0.8034
The supplier is in a business with strict technical standards.				0.8198
The supplier is in a business where the innovation is a key business-driver.				0.6925
<i>Profitability of the relationship (Buyer's perspective)</i>	0.7489	0.8481	0.6548	
Only a few of the P/S bought in the relationship have favourable prices (reversed).				0.6444
The P/S bought in the relationship have favourable prices.				0.8971
Most of the P/S bought in the relationship have favorable prices.				0.8627
<i>Related effects (Buyer's perspective)</i>	0.7594	0.8595	0.6732	
The experience of the relationship with this supplier can be used in other relationships.				0.7010
This relationship with this significant supplier improves our image for our buyers.				0.8811
The business practice with this supplier has a positive effect on our other relationships as well.				0.8670
<i>Competence of the supplier (Buyer's perspective)</i>	0.7793	0.8715	0.6958	
The staff of the supplier are professional.				0.8808
The professional behaviour of the supplier is favorable for us.				0.9056
The technician or purchasing experts at the supplier help us every time if we have a problem in the relationship.				0.7011
<i>Security of the relationship (Buyer's perspective)</i>	0.8022	0.8721	0.6327	
The relationship can be characterized by the mutual confidence of the partners.				0.8285
It is a long-term relationship.				0.6511
There is a high probability that the partners in this relationship will keep their promises to each other.				0.8588
The behavior of the supplier is fair.				0.8265

<i>Construct</i>	<i>Cronbach's Alpha</i>	<i>Composite Reliability</i>	<i>AVE</i>	<i>Loading</i>
Indicator				
<i>Security of supply of the product (Buyer's perspective)</i>	0.7105	0.8718	0.7729	
The relationship with this supplier provides us with significant safety in production.				0.8460
The relationship with this supplier provides us with significant safety on the market (safety in purchasing).				0.9111
<i>Smoothness of relationships (routines) (Buyer's perspective)</i>	0.8068	0.8729	0.6326	
The practice of the relationship with this supplier has a smooth character.				0.7722
The type of behavior formed with the supplier makes it easy for us to calculate the response of the supplier.				0.8082
The type of behavior formed with the supplier helps reduce the number of conflicts.				0.8509
The type of behavior formed with the supplier helps us handle and solve the conflicts that arise in the relationship.				0.7463
<i>Suitability of the financial conditions (Buyer's perspective)</i>	0.5446	0.7810	0.6514	
The payment deadline required by the supplier is appropriate for us.				0.6157
The credit provided by the supplier is appropriate for us.				0.9611
<i>Supply potential of the relationship (Buyer's perspective)</i>	0.7373	0.8531	0.6615	
We are expecting a high sales volume from the supplier.				0.8754
We are expecting a high sales value from the supplier.				0.8561
We are expecting a very profitable purchasing with this supplier in the future.				0.6966
<i>The supplier's position in its own industry (Buyer's perspective)</i>	0.8411	0.8839	0.5619	
The supplier is market leader in its area.				0.8110
The supplier has a significant reputation in its area.				0.7124
The buyer is a leader in the technology development.				0.7800
The supplier is well-known as a significant innovator.				0.8442
The supplier has broad connections with the representatives of the purchasing channel within the country.				0.6106
The supplier has broad connections with the representatives of the international purchasing channel.				0.7159

<i>Construct</i>	<i>Cronbach's Alpha</i>	<i>Composite Reliability</i>	<i>AVE</i>	<i>Loading</i>
Indicator				
<i>Suitability of the financial conditions (Seller's perspective)</i>	0.7779	0.8584	0.6051	
The buyer is a good payer.				0.8393
The credit requirement of the buyer is appropriate for us.				0.8061
The solvency of the buyer is appropriate for us.				0.8159
The solvency of the buyer has improved in the last year.				0.6330
<i>Security of product sales (Seller's perspective)</i>	0.8830	0.9445	0.8948	
The relationship with this buyer provides us with a significant safety in production.				0.9383
The relationship with this buyer provides us with a significant safety on the market (safety in sales).				0.9535
<i>Smoothness of the relationship (routine) (Seller's perspective)</i>	0.8245	0.8825	0.6529	
The practice of the relationship with this buyer is smooth.				0.7986
The type of behavior formed together with the buyer makes it easy for us to calculate the response of the buyer.				0.7490
The type of behavior formed together with the buyer helps us to reduce the number of conflicts.				0.8457
The type of behavior formed together with the buyer helps us handle and solve the conflicts that arise in the relationship.				0.8352
<i>Security of the relationship (Seller's perspective)</i>	0.7523	0.8378	0.5658	
The relationship can be characterized by the mutual confidence of the partners.				0.8211
It is a long-term relationship.				0.7903
There is a high probability that the partners in this relationship will keep their promises to each other.				0.6357
The behavior of the buyer is fair.				0.7484
<i>Profitability of the relationship (Seller's perspective)</i>	0.6741	0.7670	0.5348	
The sold Products/Services generate profit for us.				0.5597
Much of the sold Products/Services generate profit for us.				0.6554
Only a few of the sold Products/Services generate profit for us (reversed).				0.9282

<i>Construct</i>	<i>Cronbach's</i>	<i>Alpha</i>	<i>Composite</i>	<i>Reliability</i>	<i>AVE</i>	<i>Loading</i>
Indicator						
<i>Possibility of manufacturing the product (Seller's perspective)</i>	0.9095		0.9441	0.8944		
All the resources to the P/S can be ensured without problems.						0.8971
The resources to the biggest amount of P/S can be ensured easily.						0.9920
<i>Income potential of the relationship (Seller's perspective)</i>	0.8531		0.9111	0.7738		
We are expecting a high sales volume with this buyer.						0.8904
We are expecting a high sales value with this buyer.						0.9191
We are expecting a high sales profit with this buyer.						0.8270
<i>Competence of the buyer (Seller's perspective)</i>	0.7725		0.8684	0.6876		
The staff of the buyer are professional.						0.8482
The professional behavior of the buyer is favorable for us.						0.8425
The technician or purchasing experts at the buyer help us whenever we have a problem in the relationship.						0.7959
<i>Importance of the relationship (Seller's perspective)</i>	0.6361		0.7812	0.4810		
The relationship with this buyer is important for us because of its high sales value.						0.7832
The relationship with this buyer is important for us because of its high sales profit.						0.7724
The relationship with this buyer is important for us because of the very high quality expectations of the buyer.						0.7124
The relationship is important for us because it ensures an additional presence on the market.						0.4543
<i>Emanation of the relationship (Seller's perspective)</i>	0.7449		0.8327	0.5101		
The contact with this buyer means a good reference for our existing and potential buyers.						0.8027
The buyer recommends us to their partner as a potential seller.						0.4176
The relationship means a good reference for our existing and potential sellers.						0.8142
The relationship means a reference for our partner authorities and institutions.						0.7897
The relationship means a reference for our media contacts.						0.6673

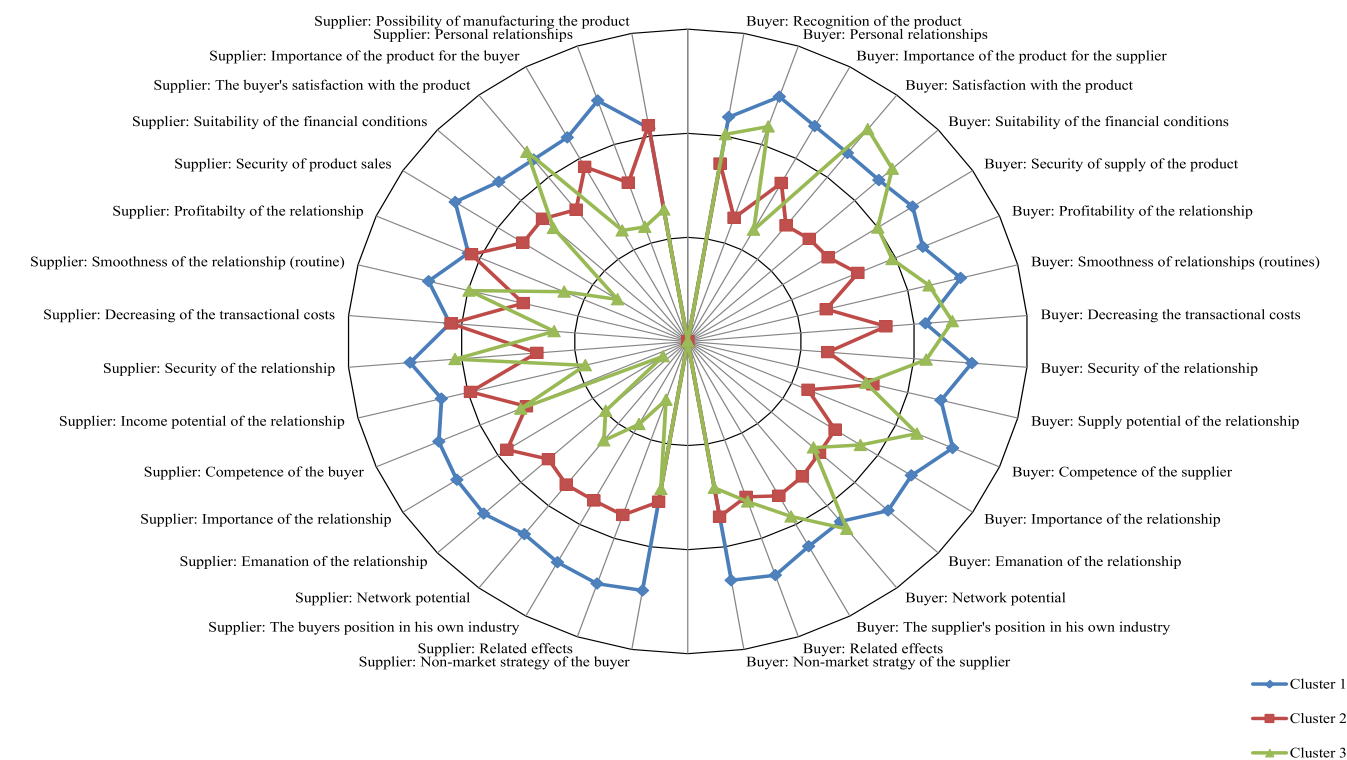
Construct	Cronbach's Alpha	Composite Reliability	AVE	Loading
Indicator				
<i>Network potential (Seller's perspective)</i>	0.8007	0.8833	0.7171	
The buyer is in a business with strict quality standards.				0.8865
The buyer is in a business with strict technical standards.				0.8851
The buyer is in a business where innovation is a key business driver.				0.7630
<i>The buyers position in his own industry (Seller's perspective)</i>	0.8496	0.8897	0.5760	
The buyer is a market leader in its area.				0.7597
The buyer has a significant reputation in its area.				0.8244
The buyer is a leader in technology development.				0.8430
The buyer is well-known as a significant innovator.				0.7843
The buyer has broad connections with the representatives of the purchasing channel within the country.				0.6158
The buyer has broad connections with the representatives of the international purchasing channel.				0.7031
<i>Related effects (Seller's perspective)</i>	0.7203	0.8254	0.5438	
The experience of the relationship with this buyer can be used in other relationships.				0.6169
This relationship with this significant buyer improves our image with other buyers.				0.7705
The business practice with this buyer has a positive effect on our other relationships as well.				0.7635
Our entire company must make strong efforts to be able to fulfil the high standards of this buyer.				0.7861
The buyer has good connections with the approving and regulatory authorities.				0.6801
<i>Non-market strategy of the buyer (Seller's perspective)</i>	0.7780	0.8440	0.4757	
The buyer is ready to use these connections to support us if necessary.				0.6112
The buyer conducts an active policy towards the media.				0.6717
The buyer is ready to use their connections with the media to support us if necessary.				0.6487
The buyer has an active role in various professional and social organizations.				0.7825
The buyer is an active lobbyist.				0.7307

Appendix V: Comparing the types of business relationships (MANOVA results)

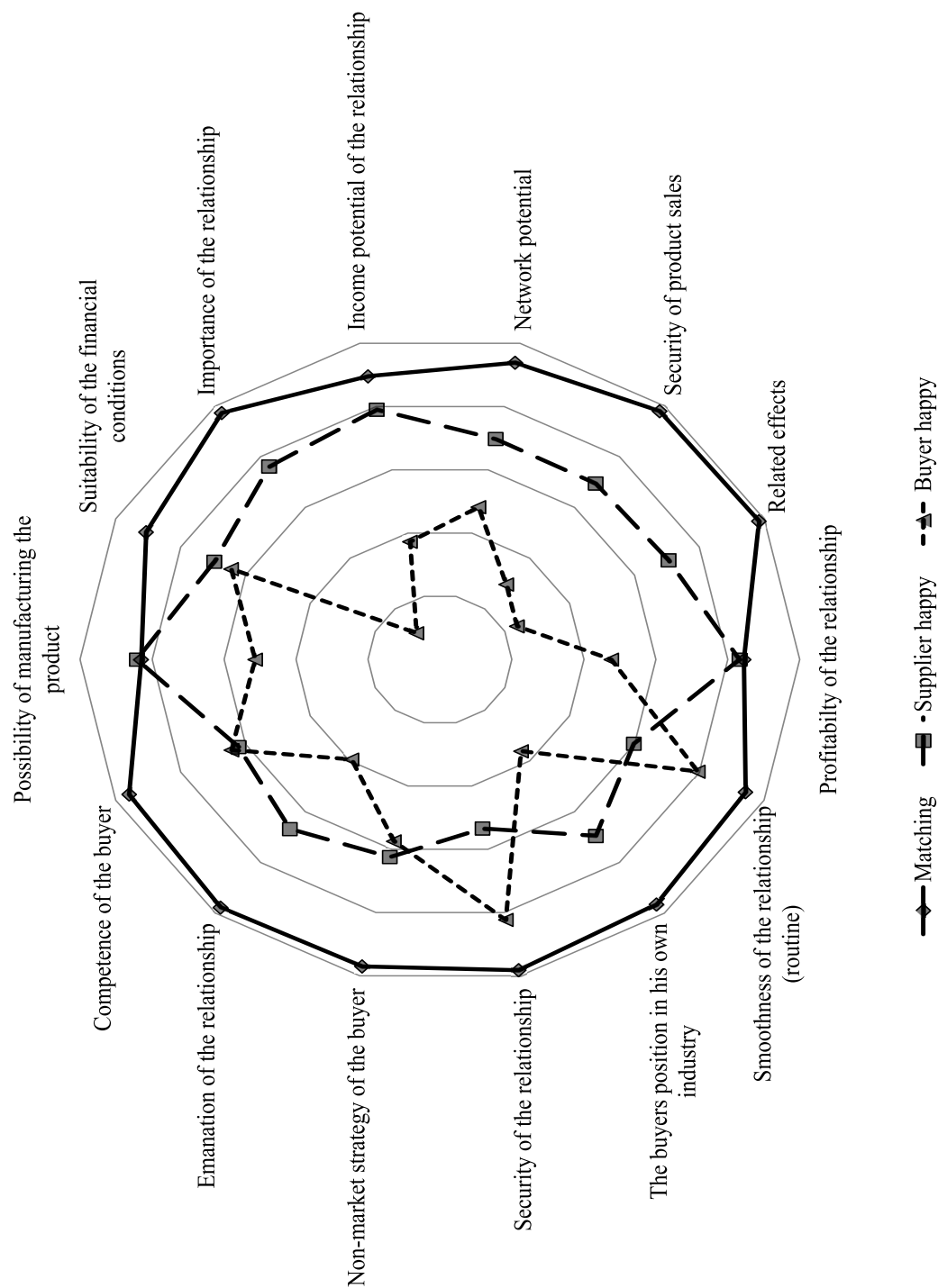
Business Relationship		Main	Types	Types	Types
Characteristic		effect	1 vs. 2	1 vs. 3	2 vs. 3
Buyer Perspective	Recognition of the product	n.s.	n.s.	n.s.	n.s.
	Suitability of the financial conditions	***	n.s.	***	***
	Security of supply of the product	***	n.s.	***	***
	Profitability of the relationship	***	***	n.s.	***
	Smoothness of relationships (routines)	***	***	n.s.	***
	Security of the relationship	***	***	*	***
	Supply potential of the relationship	***	n.s.	***	***
	Competence of the supplier	***	**	n.s.	***
	Importance of the relationship	***	n.s.	***	***
	Emanation of the relationship	***	***	n.s.	***
	Network potential	***	n.s.	***	***
	The supplier's position in its own industry	***	***	n.s.	***
	Related effects	***	***	n.s.	***
	Non-market strategy of the supplier	***	***	n.s.	***
Supplier Perspective	Possibility of manufacturing the product	n.s.	n.s.	n.s.	n.s.
	Suitability of the financial conditions	***	n.s.	***	***
	Security of product sales	***	n.s.	***	***
	Profitability of the relationship	*	***	**	n.s.
	Smoothness of the relationship (routine)	***	***	*	n.s.
	Security of the relationship	***	***	n.s.	***
	Income potential of the relationship	**	n.s.	**	n.s.
	Competence of the buyer	***	*	n.s.	***
	Importance of the relationship	***	n.s.	***	***
	Emanation of the relationship	***	n.s.	n.s.	***
	Network potential	***	n.s.	***	***
	The buyer's position in its own industry	**	***	*	**
	Related effects	***	***	n.s.	*
	Non-market strategy of the buyer	***	***	n.s.	***

*** p < 0.001; ** p < 0.010; * p < 0.05; n.s. not significant

Appendix VI: Figure 1 – The latent variables in the segments



Appendix VI: Figure 2/1 - Characteristics of types of business relationships from the supplier's perspective



Appendix VI: Figure 2/2 - Characteristics of types of business relationships from the buyer's perspective

