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# **The relevance of “value elements” in dyadic buyer-seller relationships. Establishing the construct “relationship picture”**

**Work-in-progress paper**

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# **Exploring the relevance of value elements in dyadic buyer-seller relationships. The role of the relationship picture.**

## **Abstract**

### **Purpose of the paper and literature addressed**

In our paper we introduce the “relationship picture” as a concept that indicates how the people involved in a relationship see it. Relationship pictures are in fact the interpretation of the relationship in the actors’ mind. As such, the relationship picture is the mental basis of the analysis of and the actions in and about the relationship. It is a representation of the relationship and has a close connection with relationship value. The relationship picture is each partner’s particular reflection of the whole value of the relationship in which they are involved.

Our main research question is: “how can the comprehension of the relationship picture help business relationship management?” To comprehend such a complex phenomena as the relationship picture, we attempt to discover the essential, the constituents and the structure of it.

### **Research method**

We analyse a dyadic database of more than 170 business relationships in different industries. Dyadic data collection was conducted in Hungary between 2009 and 2011. There are 67 statements from the both buyer and supplier sides about the shared business relationship which exists between them.

### **Research findings**

The theoretical conceptualisation of the relationship picture construct is one of our research findings. Based on a dyadic database an empirical exploration was conducted of two parties (buyer and supplier) relational picture of the same relationship.

Interesting findings include the discovery and the comparison of the structure of different relationship pictures of the supplier and the buyer. We identified four factors on the supplier’s side: smoothness of relationship, the partner’s network potential, assumed support from the partner and sales expectations; and nine factors on the buyer’s side, namely also the smoothness of the relationship and the network potential, but also the importance of the purchased goods for the supplier, the utilization of the purchased goods needs some adaptation, savings on the purchase, buying expectations, satisfaction with financial conditions and the duration of the relationship. The overall level of satisfaction is largely the same on the buyer’s and supplier’s side.

### **Main contribution**

Empirical exploration of the actors’ relationship picture is a contribution to the already existing literature on dyadic buyer-seller relationships.

The paper illustrates an experience how to investigate and compare empirical data from a dyadic database. Because of the difficulties of dyadic data collection, this field is relatively under-researched.

### **Keywords**

relationship picture, dyadic database, relationship value

## Introduction

In our paper we introduce the relationship picture as a concept that indicates how the people involved see the relationship. Relationship pictures are in fact the interpretation of the relationship in the actors' mind. This relationship picture means the mental basis of the analysis of and the actions in and about the relationship. The relationship picture as a representation of the relationship has a close connection with relationship value. Relationship picture is each partner's particular reflection of the whole value of the relationship in which they are involved in.

The strategic importance of relationship pictures lies in the fact that they are used as a basis to plan, make and act on decisions. Accordingly knowing the decision maker's relationship picture can help to more deeply understand and to foresee a little bit better his behavior in the relationship. To investigate together the buyer's and the seller's relationship pictures in a dyad can reveal the balance or the eventual structural tension of a business relationship. This type of analysis, by opening up some behavioral alternatives can facilitate to managing and developing the relationship. Therefore, the paper focuses on the phenomenon of relationship pictures, their content and structure. Our main research question is: "how the comprehension of relationship picture can help business relationship management?" To comprehend such a complex phenomena as the relationship picture we attempt to discover the essence, the constituents and the structure of it.

The paper begins with a short literature review, which serves to underpin our relationship picture definition. The section on methodological issues presents the foundation of our research design. Findings of the analysis of a large dyadic database constitute the third part of the paper. We conclude the paper with managerial implications and further research recommendations.

## Literature review

This short literature review begins with a concise discussion of the business relationship and its value. Secondly, it is followed by relationship picture issues and thirdly deals with the extant findings on business dyad research.

## Business relationship and value

The "business relationship" is a complex interactive and dynamic phenomenon of which the essence is to do business. IMP researchers developed two empirically-based models to describe the complexity of this phenomenon. The Interaction Model (Håkansson 1982) gives detailed knowledge about the processes of a business relationship. The A-R-A Model (Håkansson and Snehota 1995) presents the essential content of the business relationship, what is the connectedness of the actors, the resources and the activities of the two parties. Keep et al (1998) examine historically the forces that influence the long-term business relationships in four American industries. As a conclusion, they state that "for all except Pullman, the joint benefits were dominant throughout the relationship" (Keep et al. 1998:42).

Business here means an exchange of "something". The exchange of the object between two organisations creates value both for the supplier (money) and the buyer (product/service).

According to Wilson's opinion, business relationships create value in the sense that the competitiveness of the partners participating increase through it, for example, they access technologies, markets or information that they would not have been able to access respectively on their own. Although not all relationships are symmetrical, but in order for the relationship to operate well, both parties must find something in it that they would not have been able to realise in an advantageous way, on their own (Wilson 1995). This "something" is the value created by the business relationship, meaning the utility of the business relationship for both parties. In economic sense utility is the fundamental of value (e.g. Landreth 1976, Baslé et al. 1988, Baslé et al. 1993, and Deane 1997).

The evaluation of utility is subjective and, as Say already emphasised it, the product's value "is determined by the utility attributed to it by the consumer" (quoted by Landreth 1976). Nonetheless, by knowing the consumer's preferences (declared preference) value can in theory be apprehended and measured. However, value cannot be considered an inner characteristic of the product. Even in the 18<sup>th</sup> century Bernoulli wrote that value is not an inner attribute of things, but is determined by the relationship between the evaluating person and the evaluated thing (Blasé et al 1993).

Value is always perceived; this expresses a relationship between people and objects and it is in close relationship with exchange. Exchange takes place among people, thus value is presumably in connection with the relationships between people. The complexity of value derives from the fact that it is on the one hand in all cases perceived and depends on the individuals' or the groups' decisions, fundamentally influencing the individuals' and the groups' behaviour, while on the other hand, value is also an objectified historical and social category (Smelser and Swedberg 1994).

Value is primarily utility, but also the determinant, the compass of behaviour (Mandjak 2002). Simplifying to a great extent, we can say that we consider the utility side of value as the economic component of the concept, and the compass nature of it as the social component. Thus, we can understand value as a complex phenomenon that is made up of economic and social components, that is in all cases perceived and is therefore subjective (Mandjak 2002).

### **Business relationship picture**

Perceptions play a significant role in the decision making process, however there are further elements that are relevant in this respect. Managers involved in the decision-making process always possess certain experience about the strategy of the organisation, which brings us back to the Interaction Model (Håkansson 1982). The decision maker plays a certain role (Lambin 1999) and each role that one plays has a certain degree of freedom (Crozier and Friedberg 1977). He or she has a particular approach to the situation and the decision itself which is deeply influenced by his or her mental models (Cockburn et al 2000). According to March (1994), during decision making, „interpretation is considered to be central, searching for meaning (understanding) to be a basic need" (March 1994:216). The Webster Online Dictionary says „interpretation is a mental representation of the meaning or significance of

something”. These elements work together as constituents of the decision maker’s mental picture of a (particular) business relationship.

Our statement greatly builds on the connection known as Thomas’ Theorem in sociology (de Querioz and Ziolkovski 1994). The essence of Thomas’ Theorem is that if someone considers a situation to be realistic, then that situation actually becomes realistic in the consequences that are, built upon his judgment of the situation. In other words, subjective views become objective through social actions.

Studying and inspired by the network picture literature (Corsaro et al 2011, Ford et al 2002, Håkansson et al 2009, Ramos and Ford 2011) we introduce the relationship picture as a concept that indicates how the people involved see the relationship. Relationship pictures show how the actors in the relationship view the relationship itself. **Business relationship pictures** are in fact the interpretation of the relationship in the actors’ minds. Relationship picture means the mental basis of the analysis of and the actions in and about the relationship. The relationship picture as a representation of the relationship has a close connection with relationship value; that is an individual, particular reflection of the complex value of a business relationship. The value, as we have emphasised above, is at the same time economic utility and compass. The reflection of this ensemble of the economic and social elements of the value is what gives the relationship pictures content. Based on this individually-reflected value, the managers make decisions about the particular relationship, more precisely about his behaviour around and within that relationship. Summarising what we have discussed and inspired by the network picture definition of Ford and Ramos (2006) we can expand our definition: the relationship picture is a representation of the different elements of the value of a business relationship which altogether influence the decisions related to the business relationship itself.

According to Thomas’ Theorem, we emphasize that the importance (or rather the strategic importance) of relationship pictures lays in the actors’ plan to make decisions and act on the basis of these relationship pictures. In other words the behavior of the actors inside and about the business relationship is based on their relationship pictures.

#### **Extant findings on business dyads**

Focusing mainly on the IMP approach, we reviewed some existing research on dyadic relationships from the latest years’ literature. These studies differ from our work in the following ways: the number of dyads analysed, research method (qualitative or/and quantitative), research framework (or the scope of research), whether they examined single end (buyer or seller) or both ends of the dyadic relationship (buyer and seller), single case or multiple case, and the number of sectors the research was conducted in (*see* Table 1 in *Appendix*). In the followings we focus on the advantages and the limitations of the previous works and the commensurability of their methodology with our research.

In our study we use a very similar methodology to Brennan et al. (2003) who analyse 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 our

model for the seller and for the buyer as well. We have to add, that the value indicators may differ for the buyer and for the supplier. Brennan et al. (2003) use also mixed methods, qualitative and quantitative methods. In the qualitative part they used case study methodology for 13 dyads and for the quantitative study they used mail questionnaire, asking 129 suppliers. For the case studies, previously published case studies are used as the basis for the framework of the research. They analysed both ends of the relationship with multiple cases in several sectors for the case studies, while the quantitative part was conducted in single end (supplier) in a single case and in one sector. In our study we present results of quantitative research only. 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.

Bigne and Blesa (2003) examine both sides of dyadic relationships in a single case in one sector among 179 dyads using personal interviews. They measure different factors on both sides because of their specific research aim. They analyse the distributor’s trust and satisfaction – especially the social interaction dimension of satisfaction – with the relationship considering the manufacturer’s market orientation behaviour. Market orientation was measured among the manufacturers, while perception of trust and satisfaction was measured only among distributors.

Duffy (2008) applies a unique approach in her research concerning dyadic relationship. She uses a framework developed from the political economy literature, arguing that many others used this approach for the analysis of buyer-seller relationships. Accordingly to Stern and Reve (1980) and Duffy (2008) the “ability to integrate a number of diverse concerns in inter-organizational research in a general framework”. The essence of this approach is that it 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 and Reve, 1980 in Duffy, 2008:229). 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 supply food retailers or food service companies directly. As an advantage, we may emphasize that the sample size (155 questionnaires) is notable. Johnsen and Ford (2008) have also picked one sector for their analysis, namely the textile industry. They used a multiple case study with 4-7 semi-structured interviews among 8 suppliers; method did not permit an examination of both sides of the relationships. Their research concept aims to create a typology of size asymmetry in the dyad.

Barnes et al. (2007) reveal perceptual gaps between buyers and sellers. They used a triangulated methodology of personal interviews, telephone interviews and case studies among 54 dyads. They analysed both ends with multiple cases in several sectors using buyer-seller and channel management literature as a research framework.

The methodology used by Goffin et al. (2006) is also not an everyday approach in analyses of buyer-seller relationships. They use a technique from psychology for investigating interpersonal relationships – the repertory grid technique. They claim that direct questioning has limitations in this research field, and argue that using 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: 196). With the help of this technique researchers can understand complex topics such as business relationships. They used a multiple respondent approach with the sample of 39 buyers (two or more respondents per company). They do not apply this technique for questioning the suppliers, unfortunately.

Leek and Mason (2008) use the network picture approach for analysing dyadic relationships. Applying network pictures to individual customer-supplier relationship is the fourth level of network picture applications they mention. The first level is the industry level, the second is when examining a firm in its focal network and the third one is when network pictures are applied to represent make/buy decisions. Five network pictures were collected from two companies (customer and supplier) with the help of in-depth interviews. It is a highly exploratory qualitative approach; they used multiple case studies for one dyad.

The impactful work of Walter et al (2001) which is highly cited in B2B literature examines the value creation process in buyer-seller relationships. Their survey has a considerable sample size of 247 supplier questionnaires. With this high amount of data, the authors made a classification of value creation through customer relationships.

A dyadic approach was also applied by Svensson (2004) in attempt to develop and describe the construct of interactive vulnerability in buyer-seller relationships. The theoretical framework of the interactive vulnerability construct is supply chain management, hence Svensson`s (2004) research may be considered as an application of the dyadic approach. The author conducted a mail survey among one vehicle manufacturer and its most important suppliers. Questionnaires consisted of the same items for both ends, and the bivariate analysis is based on around 60 complete pairs of questionnaires. The analysis allowed the author to create a typology of interactive vulnerability in buyer-seller relationships based on the research results of one sector. The methodology has several similarities compared to our research: we also set questionnaires with same questions for both ends of the relationships and used Likert scale questions to reveal the perceptions of buyers and sellers about the same relationships.

Van de Vijver and Ivens (2007) give a comprehensive summary about the advantages and disadvantages of using single or multiple informants in quantitative studies. The research objective of van de Vijver and Ivens covers two main areas: to examine (1) the perceptions of the two sides of the business relationship and (2) the use of multiple respondents within the same organisation. The results show that (1) “the supplying company is generally somewhat less positive about the quality of the buyer-seller relationship” (van de Vijver and Ivens, 2007:7) and (2) “Respondents who have a more strategic level generally are more positive about the collaborative relationship than those respondents working at a tactical level. This conclusion is relevant for both the buying and the supplying firm” (van de Vijver and Ivens, 2007:7). According to the authors the results confirm the need of using multiple respondents in quantitative studies about buyer-seller relationships.



Smirnova et al. (2011) report a unique application of the dyadic approach. They apply the dyadic approach to intra-organizational relationships as opposed to inter-organisational relationships, namely to understand the role of marketing-purchasing collaborations. They conducted a survey among 148 Russian companies across different industries with 296 respondents as a multiple case study. The questionnaires for marketing and purchasing functions contained the same questions. The study examines the relationship between customer orientation, marketing-purchasing interaction, marketing-purchasing collaboration and finally, business performance. They use literature about inter-functional collaborations and interactions as a theoretical framework.

We are of the view that the composite of values and experiences forms a perceived picture (relationship picture) which is related to a particular kind of business partnership between particular partners. Analysing both ends of the same relationship raises the methodological issue how to make a comparison between the relationship picture of the suppliers and the buyers.

Although previously commonly used, the use of difference scores has major limitations, particularly in relation to consumer research. Besides validity, potentially spurious correlations and variance restrictions, the area of reliability is also problematic. For example, in a case where X and Y are reliably measured, the reliability of (X-Y) will be lower if X and Y are moderately correlated. The considerably low reliability might pose interpretational challenges. Therefore, Peter et al. (1993) warn against the general usage of difference scores in consumer research. However, the authors state that there are some specific cases where this remains the most appropriate approach to conceptualise and test a certain research question. As such, in a case where examining buyer-seller relationships, calculating difference scores might be expedient (for example, to measure the level of conflict between a seller and buyer indirectly). Since our research focuses on a phenomenon (relationship picture) which is embedded in a dyadic inter-organisational context and cannot be measured through explicit questions, we decided to calculate and analyse difference scores.

### **Methodological issues**

In this part we discuss methodological issues in a broader sense. Firstly we consider some general, epistemological questions following principles and important details of our research design are presented.

### **Philosophical stance and methodology**

To explore the nature of relationship pictures we analyse a dyadic database of business relationship value. This database has extreme riches of data describing the business relationships.

### **Logic of the empirical research and some assumptions**

The logic of the investigation of a complex phenomenon (presented above) is applied in the following way. At the same time of presenting our application we formulate some assumptions as well. We think that relationship pictures have different constituents. Behind the constituents there is the essence of business relationship picture. This essence is expressed

by the particular structure of the relationship picture. In this respect it is important to know the relationship picture structure, or to recognize the different patterns of it.

Our first and very general assumption is the existence of two relationship pictures, one for the supplier's side and one for the buyer's side. We suppose also that business relationship is working if based on this relationship picture; there is a certain type of assumed (perceived) value creation for each partner.

To be able to study these assumptions we have to make our presented logic concrete. Our large dyadic database contains different value elements of the business relationship, measured by Likert scales. In this study we consider relationship picture constituents as the perception of the different value elements either by the buyer or by the seller. Each particular score given is understood as the actual perception of the element. Corresponding to our general assumption we can say that if some constituents of the picture exist in the mind of the buyer or the seller for those they give a higher score than 1.

Exploratory factor analysis is a usual way to discover inherent effects. We assume that the essence of the buyers' and the sellers' relationship pictures is rather similar, as there is a value creation on both sides. The relationship picture structure is considered as the particular form (attributes) of the found factors. It means the number, the weights and the variance of the factors. We assume that the structure of the two sides' pictures is mainly similar.

### **Business research question**

Our main research question is: "how can the comprehension of relationship pictures help business relationship management?" To comprehend such a complex phenomena as the relationship picture, we attempt to discover the essence, the constituents and the structure of it.

Why is this research question interesting? Knowing the structure of the relationship picture offers at least two possibilities. To describe and to better understand the relationship is one advantage. The analysis of the similarities and the differences of the two pictures (buyers' and sellers') give an opportunity to discover the potential dynamics of the relationship. Here dynamics are understood as the inherent tension between the two pictures. More precisely, if the two pictures are mainly similar, the relationship seems to be relatively balanced. In a balanced relationship there is a higher probability of the continuity of the same behaviour of the parties in the interaction process (Miles 2012). However in the case of differences of the two pictures there is a higher probability of change in the partners' behaviour toward and regarding each other. This could lead to another stage of the relationship evolution (Ford 1980).

The interest of dyadic research is to discover what the two parties' relationship pictures are about the same shared relationship. What are the constituents and the structure of the supplier's and buyer's relationship picture? What are the structures of these pictures? The next section contends with two practical issues of our quantitative research, the questionnaire and the data collection.

### **Practical proceedings – the questionnaire**

We aim to gain a better understanding of how suppliers and buyers see each other, as well as their relationship in a business relationship context. A pair of basically identical questionnaires was applied, utilizing the dyadic approach accordingly. The complete questionnaires consist of several blocks with questions, all together 67 Likert statements (on five point scales) to which the respondents should indicate their degree of agreement or disagreement. According to the Hungarian grading practice we have used the following notation: 1 – strongly disagree/ not at all, 2 – disagree/ not really, 3 – neutral, 4 – agree/ quite, 5 – strongly agree/ very much.

The supplier`s side questionnaire consists of these blocks of questions as follows: (1) possibilities in product manufacturing, (2) importance of the product for the buyer, (3) financial suitability, (4) profitability of the relationship, (5) transaction costs reduction, (6) the income potential of the relationship, (7) the role of the relationship, (8) network potential, (9) externality effects of the relationship, (10) personal contacts, relationships, (11) the buyer`s (perceived) satisfaction with the product, (12) stability in production/sales, (13) smoothness of the relationship, (14) stability of the relationship, (15) competence of the buyer, (16) emanation of the relationship, (17) the (perceived) market position of the buyer, (18) the buyer`s strategic considerations towards non-market players and one single item at the end: the final evaluation of the buyer.

The buyer`s side questionnaire consists of also 18 blocks of questions as follows: (1) recognition of the product, (2) importance of the product for the supplier, (3) financial suitability, (4) profitability of the relationship, (5) transaction costs reduction, (6) the purchasing potential of the relationship, (7) the role of the relationship, (8) network potential, (9) externality effects of the relationship, (10) personal contacts, relationships, (11) the satisfaction with the product (of the buyer), (12) stability in production/purchasing, (13) smoothness of the relationship, (14) stability of the relationship, (15) competence of the supplier, (16) emanation of the relationship, (17) the (perceived) market position of the supplier, (18) the supplier`s strategic considerations towards non-market players and also one single item at the end: the final evaluation of the supplier.

For those questions related to the typology of business relationships, Håkansson (1982) provided the grounding. The questions related to the transaction between the buyer and selling centres are based on Bonoma and Johnston (1978). The identified value drivers for business customers by Lapierre (2000), the functions of the business relationship by Walter et al. (2001) and the questions raised by Anderson et al. (1994) related to the network context of business relationships provided background to formulate the items.

### **Practical proceedings – the data collection**

The data was collected between April of 2009 and December of 2010. Each interviewer was responsible for collecting data on only one dyad, having taken into account that one company could have been represented only once in the database.

The interviewers were postgraduate students at the Corvinus University of Budapest, who already hold a master's degree with a major in engineering, and intend to earn a second

degree by completing a major in management. A face-to-face questionnaire administration was applied, where the interviewers presented the items orally. According to the pilot tests on a small cross section of potential respondents to be surveyed, the questions did not prove to be sensitive neither from a social or business point of view. Therefore, instead of self-administered questionnaires, the responses were recorded on the answer sheets by the interviewers. Also a one-page summary was required about the sector of the respondent companies in the case of each company. Previously, the interviewers were involved in a workshop where a guideline for survey interviewing was provided, the aims and purposes of the research project were introduced and they became familiar with the questionnaire.

The examination of the dyad could have started either with the supplier or with the buyer. Afterwards the interviewer contacted a manager from the first company (supplier/buyer), who then contacted one of its partners (buyer/supplier) recommended as one of the most important partners by the first company. The respondents were managers directly or indirectly involved in the dyadic relationships under examination. The respondents' confidentiality and anonymity were guaranteed.

## **Findings**

In this working paper we present the results of an exploratory research in a dyadic database about the relationship picture. In this section we present the results of our research about the relationship pictures. Firstly we discuss how buyers and suppliers see each other. Secondly we present the discovered essentials and structures of the two sides' relationship pictures.

### **How buyers and suppliers see each other – analysis from a supplier and buyer side perspective**

The final evaluations of the partners are very similar: 4.22 in average on the supplier's side and 4.26 in average on the buyer's side (abs=0.04, question s67/b67).

There are 61 items from the 67 that correspond with each other both on the suppliers and the buyers' side. Most of the items both on the buyer's and supplier's side were rated very similarly: there are only 17 cases from the 61 where the difference in the absolute values exceeds 0.35.

The highest difference between the average of the item ratings on the supplier's and buyer's side was 0.94, while the lowest was 0.01. This is why – considering a 5-point Likert scale – we decided to present here those cases where the difference more than one-third of the maximum difference. However those cases where the concordance is relatively high (difference is or under 0.05) are also worth mentioning.

Buyers rated the helpfulness of the technician and the purchasing experts of the supplier higher (+0.43) than the suppliers did it vice versa. (question b50) Furthermore buyers were more convinced (+0.45) about the supplier's readiness to support their business relationships if necessary. (question s62/b62).

Suppliers seem to be more concerned about issues related to market representation and image. They highly appreciate when the buyer provides the main (difference compared to

buyer`s side: +0.88, question s22b24) or additional (difference compared to buyer`s side: +0.94, question s23b25) presence for them in its market.

The detailed table of comparison of the similarities and differences can be found in the Appendix of the paper.

### **Relationship pictures: factors on the supplier`s and buyer`s side**

We performed exploratory factor analysis (principal components) with Varimax rotation to isolate the main factors of the respondents` relationship pictures both on the supplier`s and the buyer`s sides.

In addition, the appropriateness of the data for factor analysis was confirmed with the help of the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy index (supplier`s side: 0.781, buyer`s side: 0.606) and Bartlett's test of sphericity (significance on supplier`s side: 0.00, buyer`s side: 0.00).

The factor analysis yielded 4 factors on the supplier`s side and 9 factors on the buyer`s side.

On the supplier`s side a total of 62.17% of variance in the original variables was explained by the 4 factors; each factor had at least three variables with loadings in excess of 0.6 loading upon it. On the buyer`s side a total of 73.95% of variance in the original variables was explained by the 9 factors; each factor had at least two variables with loadings in excess of 0.6 upon it.

We identified the factors on the supplier`s side as follows: (1) smoothness of the relationship, (2) the partner`s network potential, (3) assumed support from the partner and (4) sales expectations.

The factors on the buyer`s side are (1) smoothness of the relationship, (2) the partner`s network potential, (3) the importance of the purchased goods for the supplier, (4) the utilisation of the purchased goods needs some more adaptation, (5) savings on the purchase, (6) buying expectations, (7) the utilisation of the purchased goods does not need more adaptation, (8) satisfaction with financial conditions, (9) duration of the relationship.

Both buyers' and suppliers' responses indicated the importance of the partner`s network potential and the clear presence of sales expectations – these factors are existing on both sides. The items of the factors are shown in Figure 3 (supplier) and Figure 4 (buyer).

The factor analysis yielded some interesting findings on the structure of the relationship pictures of suppliers and buyers.

### **Relevance for business**

Applying a dyadic approach, exploratory research was conducted to identify a number of dimensions of suppliers and buyers' relationship pictures. In this research we defined relationship pictures as a representation of the different elements of the value of a business relationship. This representation is important from the point of view of decision making related to the business relationship itself, and for the decision maker as well. We have asked

questions about the constituents of the relationship pictures. We have suggested the existence of these pictures in both sides of the relationship and were interested about the similarities and differences of these two pictures and discovered the eventual structure of them.

Our findings show the existence of the two relationship pictures. In this database we have found that the general picture in the two sides is quite similar and similarly positive. The average score of the final evaluation of the buyer in a supplier side is 4,224 in the five point Likert scale. On the buyer side the final evaluation of the supplier is 4,269 points. These results support our first and general assumption concerning the existence of the two pictures. The similarities like to support our third assumption too.

As we have presented the detailed analysis, we can say that there is an important group of the details of the two dimensions (meaning the different questions) where the two pictures are very similar (these are the questions where the differences of the scores are very low or do not exist). In another part of the total picture of the two partners are different (these are the questions where the scores differ). In fact these results are only partly support our third assumption. We initially thought that the two relationship pictures will be similar but the analysis resulted in some differences, for instance regarding the role of technical helpfulness and readiness from the buyers side and the importance of the good-will and image in the supplier`s side. Despite this, the two overall relationship pictures are quite similar.

To discover the inherent structure of the two pictures we ran an exploratory factor analysis. The objective of applying this method is to understand the content of each picture. It results two different structures: on the supplier side, four factors were identified. At the same time on the buyer side, nine factors were found. At first appearance it seems to be a quite different structure of the two relationship pictures, but after closer analysis we can say that the two first factors of the two sides are very similar.

Smoothness of the relationship is one of these factors. It is a behavioural component of the two parties` relationship picture. The most important content of the smoothness of the relationship is the trust. Trust in the fulfilment of the given promise and the fair and calculable behaviour of the partner are the key constituents. The partner`s network potential is the second similar factor of the two relationship pictures. Reputation and innovativeness give the essence of this factor. In both sides, the partner`s good will in his own business is important. Innovativeness is considered essential from the point of view of each partner`s own development. In fact, reputation and innovativeness indicate the basis of the future positive behaviour about each of the two parties, and as such, the possibility and security of the future interactions.

The content of the sales expectations factor in the supplier`s relationship picture is very similar to what the buyer considers as buying expectations and as savings on the purchase appear as two factors. Additionally on the buyer`s side there are two factors regarding the adaptation, which are likely to be complementary.

Our fourth assumption concerned the essence of the relationship pictures. We considered the results of the exploratory factor analysis as the dimensions of the essence of each picture. We

supposed that where the essence of the pictures of the two sides is the same it means that the two side's factors are similar. However, the result of the exploratory factor analysis presents only two similar factors on both sides and all the other factors are different. In our context it means that the two essences are different. Consequently, the assumption about the similarities of the essence of the two sides' pictures is not supported.

Concerning the inherent structure of the two pictures we also supposed the similarity of the two sides. We considered that the structure is similar if the number, the weights and the variance of the factors are similar. The results of the exploratory factor analysis show that neither the numbers of the factors (4 in the supplier side and 9 on the buyer side), nor the factor weights, or the level of variance are the same. In our understanding this means that the inherent structure of the buyers' and the suppliers' relationship picture is different. Subsequently our assumption is not supported.

### **Discussion**

To summarise our results of the research, these correspondences well with some basic ideas of mental models theory (Cockburn et al. 2000) and balance theory (Peterson 2006). The similarity and high ranking of the business relationship pictures in both sides mean that the relationship is important for both parties, and that they find it useful to maintain the relationship with each other. This perception of its usefulness means the value of the business relationship and the scores show the picture of it. We can say that both suppliers and buyers found their business relationships of great value and we can assume that this perception has a positive effect on relationship commitment (Håkansson 1982, Ford 1980, Morgan and Hunt 1994). However there is a need for further research in this area.

The differences of the factors mean the two pictures are ultimately structured differently. Thus this means that both parties value the relationship but the content of this value is different for each. It means that in each relationship value has been created but each party looks for his own value (Wilson 1995).

An interesting result is that the structure of the suppliers' relationship picture has fewer essential factors than the buyers' side. We could say that the suppliers' image is less sharp than the buyers' one, or that maybe the buyers have a more complex picture of their relationships than the suppliers. This is something which is in correspondence to one of the basic ideas of the resource based theory. Organisations within an industry may differ in their resources and these resources may not be perfectly mobile across organisations (Barney 1991). Therefore buyers could be more sensitive about the possibilities of purchasing certain resources.

### **Managerial implications**

Our research results could draw managers' attention to several issues. One of the greatest problems of business relationship management comes from the interactive nature of the relationship itself (Ford et al. 1998). One of its consequences is certain doubtfulness in the planning of goals and the actions in a business relationship. On the other hand, business relationships are highly valuable assets for a company (Håkansson et al. 2009). Therefore the

success of their management is a key contribution to the performance of an organisation. That is why the cognition of the relationship picture may help managers in a several ways.

The manager analysing his own relationship picture may develop his reflexivity and improve the quality of his decision making.

Knowing the partner's relationship picture makes possible two things for the manager. On the one hand, directly managing the different picture constituents, the manager could try to influence the partner's picture. By this influence he could perhaps manoeuvre the partner's decision making regarding the relationship. On the other hand this understanding can help to envisage the partner's behavioural alternatives about the relationship.

Knowing the two involved partners' relationship pictures about the same relationship may help the manager to understand the dynamics of the particular relationship. Comparing the structure of the two relationship pictures provides this dynamic. Depending on whether the two pictures are in balance or not the manager may try to foresee the probability of behavioural changes in the relationship.

Our research results also draw managers' attention to the extent of the smoothness of the relationships and the importance of the partners' network potential.

### **Limitations and outlook**

There are several limitations of this research. One of the most important ones is the non representative sample, which hinders any generalization of the results. However, the dimensional structure of our data indicates the need to refine certain parts of the initial questionnaire.

Our results can stimulate some more and deeper study of the relationship picture. One interesting direction may be the closer investigation of the causes of the differences discovered between the structure of the suppliers' and the buyers' pictures. Another possibility is the analysis of the dynamics of the relationship pictures of the same business relationship.



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## Appendix

	Sample	Research method(s)	Framework	Single end / both ends	Single case / multiple case	Number of sector
<i>Barnes et al. (2007)</i>	54 dyads	Personal interviews, telephone interviews, case studies	Buyer-seller and channel management literature	Both ends	Multiple case	Several
<i>Bigne and Blesa (2003)</i>	179 dyads	Personal interviews	Behavioural conception of market orientation	Both ends	Single case	One
<i>Brennan et al. (2003)</i>	13 dyads	Case studies	Prior published case studies	Both ends	Multiple case	Several
	129 suppliers	Mail questionnaire	Literature and qualitative phase	Single end	Single case	One
<i>Duffy (2008)</i>	155 suppliers	Mail questionnaire	Political economy literature	Single end	Single case	One
<i>Goffin et al. (2006)</i>	39 buyers	Structured interviews	Repertory grid technique	Single end	Multiple case	One
<i>Johnsen and Ford (2008)</i>	8 suppliers	Semi-structured interviews	Typology of size assymetry	Single end	Multiple case	One
<i>Leek and Mason (2008)</i>	1 dyad	In-depth interviews	Network pictures	Both ends	Multiple case	One
<i>Smirnova et al. (2011)</i>	296 respondents in 148 companies	Personal interviews	Interfunctional collaborations and interactions	-	Multiple case	Several
<i>Svensson (2004)</i>	60 dyads	Mail survey	Supply chain management	Both ends	Single case	One
<i>van de Vijver and Ivens (2007)</i>	82 respondents in 3 dyads	Personal interviews	Articles in relationship management	Both ends	Multiple case	One
<i>Walter et al (2001)</i>	247 suppliers	Personal interviews	Direct and indirect functions of relationships	Single end	Single case	Several

Table 1 *Different studies about dyadic relationship*

Items	Supplier	Buyer	S - B	B - S	S - B
the P/S mean an important share in the total purchasing cost of the buyer (S) / total sales of the supplier (B).	2.58	3.05	-0.47	0.47	<b>0.47</b>
the solvency of the buyer has improved in the last year. (S) / the delivery capability of the supplier has improved in the last year. (B)	3.37	3.79	-0.42	0.42	<b>0.42</b>
only a few of the P/S generate profit for us. (S) / Only a few of P/S bought in the relationship have favorable prices. (B)	1.87	2.33	-0.46	0.46	<b>0.46</b>
helpfulness technician/purchasing experts	4.11	4.54	-0.43	0.43	<b>0.43</b>
international connection to purchasing channels	2.90	3.38	-0.48	0.48	<b>0.48</b>
potential support with connections	2.96	3.41	-0.45	0.45	<b>0.45</b>
the professionalism of the partner`s staff	4.15	4.53	-0.38	0.38	<b>0.38</b>
P/S have a significant role in the production or sales activity of the buyer (S) / supplier (B).	4.05	3.61	0.44	-0.44	<b>0.44</b>
the P/S generate profit for us. (S) / The P/S bought in the relationship have favourable prices. (B)	4.21	3.66	0.55	-0.55	<b>0.55</b>
main presence on the market	3.41	2.53	0.88	-0.88	<b>0.88</b>
additional presence on the market	3.53	2.59	0.94	-0.94	<b>0.94</b>
image	3.54	3.17	0.36	-0.36	<b>0.36</b>
the impact of this practice on other potential partners	3.76	3.25	0.51	-0.51	<b>0.51</b>
good reference (for existing and potential buyers (S) / sellers (B))	3.78	3.27	0.51	-0.51	<b>0.51</b>
good reference (for existing and potential sellers (B) / buyers (S))	3.38	2.88	0.50	-0.50	<b>0.50</b>

Figure 1 Averages and the differences of averages between the supplier and buyer side of the dyads – differences in perceptions

Items	Supplier	Buyer	S - B	B - S	S - B
solvency of the buyer (S) / delivery capability of the supplier is appropriate for us (B)	4.41	4.38	0.03	-0.03	<b>0.03</b>
expectations on sales value	3.53	3.56	-0.03	0.03	<b>0.03</b>
sales profit - importance of relationship	3.47	3.48	-0.01	0.01	<b>0.01</b>
innovation - key driver	3.70	3.66	0.04	-0.04	<b>0.04</b>
contact frequency	3.77	3.75	0.03	-0.03	<b>0.03</b>
personal contact on different managerial levels	3.42	3.39	0.03	-0.03	<b>0.03</b>
phone or mail contact	4.41	4.40	0.01	-0.01	<b>0.01</b>
buyer`s (!) satisfaction on the major of the bought products/services	4.40	4.41	-0.01	0.01	<b>0.01</b>
smoothness of business practice	4.31	4.29	0.02	-0.02	<b>0.02</b>
long-term relationship	4.59	4.59	0.00	0.00	<b>0.00</b>
keep promise	4.64	4.61	0.02	-0.02	<b>0.02</b>
willingness to provide press support	2.31	2.35	-0.04	0.04	<b>0.04</b>
final evaluation of buyer (S) / supplier (B)	4.22	4.26	-0.04	0.04	<b>0.04</b>

Figure 2 Averages and the differences of averages between the supplier and buyer side of the dyads – similarities in perception

1	2	3	4
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1	42. The type of behaviour formed together with the buyer helps us to handle and solve the conflicts arisen in the relationship.	0.810			
	41. The type of behaviour formed together with the buyer helps to reduce the number of conflicts.	0.809			
	39. The practice of the relationship with this buyer has a smooth character.	0.729			
	40. The type of behaviour formed together with the buyer makes us easy to calculate the response of the buyer.	0.709			
	44. It is a long-term relationship.	0.691			
	43. The relationship can be characterized with the mutual confidence of the partners.	0.685			
	46. The behaviour of the buyer is fair.	0.683			
2	57. The buyer is a leader in the technology development.		0.881		
	58. The buyer is well-known as a significant innovator.		0.835		
	56. The buyer has a significant reputation in his business.		0.809		
	60. The buyer has broad connections with the representatives of the international purchasing channel.		0.681		
3	64. The buyer is ready to use his connections with the press to support us if it is necessary.			0.824	
	54. The relationship means a reference for our press contacts.			0.774	
	62. The buyer is ready to use these connections to support us if it is necessary.			0.761	
	53. The relationship means a reference for our partner authorities and institutions.			0.640	
4	19. The relationship with this buyer is important for us, because of its high sales value.				0.831
	17. We are expecting a high sales value with this buyer.				0.779
	37. The relationship with this buyer provides us with a significant safety in the production.				0.672

Figure 3 *Factors on the supplier's side*

		1	2	3	4	5	6	7	8	9
1	46. It has a high probability that the partners in this relationship will keep they promised each other.	0.832								
	49. The professional behaviour of the supplier is favourable for us.	0.823								
	48. The staff of the supplier is professional.	0.797								
	47. The behaviour of the supplier is fair.	0.782								
	36. We are satisfied with all P/S bought in the relationship.	0.703								
	44. The relationship can be characterized with the mutual confidence of the partners.	0.662								
	41. The type of behaviour formed together with the supplier makes us easy to calculate the response of the supplier.	0.611								
2	56. The supplier has a significant reputation in his business.		0.867							
	60. The supplier has broad connections with the representatives of the international purchasing channel.		0.831							
	55. The supplier is market leader in his business.		0.810							
	58. The supplier is well-known as a significant innovator.		0.784							
	59. The supplier has broad connections with the representatives of the purchasing channel within the country.		0.698							
	65. The buyer has an active role in different professional and social organizations.		0.661							
3	6. P/S have a significant role in the production of the supplier.			0.883						
	5. The P/S mean an important share in the total sales of the supplier.			0.843						
	7. The P/S support the cost-reduction efforts of the supplier.			0.837						
4	2. The P/S bought in the relationship fit mainly our technology.				0.865					
	4. The P/S bought in the relationship fit mainly our sales policy.				0.848					
5	14. Only a few of P/S bought in the relationship have favourable prices.					-0.802				
	12. The P/S bought in the relationship have favourable prices.					0.797				



	22. The relationship with this supplier is important for us, because of its high sales profit.					0.637				
6	19. We are expecting a high buying value from the supplier.						0.845			
	18. We are expecting a high buying volume from the supplier.						0.834			
7	3. The P/S bought in the relationship fit perfectly our sales policy.							0.834		
	1. The P/S bought in the relationship fit perfectly our technology.							0.821		
8	8. The payment deadline required by the supplier is appropriate for us.								0.862	
	9. The credit provided by the supplier is appropriate for us.								0.839	
9	34. We have this relationship with the supplier for a long time.									0.913
	45. It is a long-term relationship.									0.713

Figure 4 *Factors on the buyer's side*

