

**On the Value of Cooperative Buyer-Seller
Relationships in Industrial Markets**

by

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ABSTRACT. During the last years cooperative buyer-seller relationships in industrial markets were more and more discovered as instruments of strategy. While quite a number of publications emphasize the role of the concept of relationship value for the management of cooperative buyer-seller relationships, only very limited empirical research has been done on this topic so far. Therefore, this paper describes a large-scale, three-step empirical study that is aimed at conceptualizing and measuring the value of cooperative business relationships from both buyer and supplier perspective using methods of multivariate analysis. Results show that benefits and sacrifice may be considered as building blocks of relationship value, with relationship benefits being the main value drivers.

INTRODUCTION

Cooperative buyer-seller relationships in industrial markets have become increasingly important during the last years, although they are by no means new management concepts. This rise in importance particularly seems to be due to the fact that the forced development of cooperation was discovered as a third way between markets and hierarchies in order to create competitive advantage. Therefore, cooperation became instruments of strategy (Wilson and Möller 1995).

However, the fact that several studies prove substantial failure rates of cooperation (Fontanari 1996) draws attention to the necessity of an adequate management of cooperative business relationships. In this context the crucial starting point is the relationship value resulting for the respective partners: in order to be able to successfully manage cooperative relationships in the long term, relationship value optimization should be the focus of all considerations about the organization of cooperation.

While the importance of the concept of relationship value for the management of cooperative buyer-seller relationships is well recognized (Doz 1988; Borys and Jemison 1989; Zajac and Olsen 1993; Wilson 1995; Anderson 1995), only little empirical research on this topic exists so far.¹ Thus, it is the intention of this paper to empirically answer the question for the value of cooperative buyer-seller relationships in industrial markets. Since business processes in such markets are not based on action and reaction, but on interaction (Kirsch,

Kutschker, and Lutschewitz 1980; Möller and Wilson 1995), both buyer and supplier perspective have to be taken into account.

THEORETICAL BACKGROUND AND HYPOTHESES

Cooperative Business Relationships

Business relationships between buyers and sellers play a key role within the intensive discussion on relationship management both in academic theory and business practice. However, in many cases a biased understanding of business relationships can be stated that may be characterized as follows: Business relationships are of importance where buyer and seller have a very closed relation, adapt their behavior to each other, negotiate about relatively high value volumes, have to deal cooperatively with complex transaction situations, or where similar conditions apply (Engelhardt and Freiling 1995). While such situations often may occur in industrial markets, they do not justify the general identification of business relationships with cooperative business relationships since disregarding the manifold spectrum of buyer-seller relations (Campbell 1985) leads to a problematic understanding of relationship management. Thus, a definition of the term business relationship is necessary that on the one hand accounts for the whole range of the phenomenon and on the other hand forms the basis for focussing on specific relationship types such as the cooperative buyer-seller relationships dealt with in this paper. With reference to Diller and Kusterer (1988), Plinke (1989; 1997), Bauer (1995) and Homburg (1995) we define a business relationship as a non-accidental interaction process between an autonomous buyer and an autonomous seller, which ultimately is driven by economic goals and starts from the first business transaction. The term “business transaction” does not necessarily imply the conclusion of a legal contract. Thus, other than contractual obligations between the partners are not excluded.

Proceeding on the assumption that a cooperative business relationship only exists, if both buyer and seller choose a cooperative interaction strategy (Campbell 1985), such a relationship can be defined as cooperative interaction process between a buyer and a seller, which ultimately is driven by economic goals and starts from the first business transaction.² Therefore, a cooperative business relationship differs from the general understanding of a business relationship by the specific quality of the interaction process. To describe this

quality, subsequently characteristics are discussed that can empirically be tested for their discriminating power between cooperative and non-cooperative business relationships.

1. *Long-term orientation*: According to Heide and John (1990) and Ganesan (1994) the degree of long-term orientation rather than the duration of a relationship is an adequate indicator to differentiate between cooperative and non-cooperative business relationships. This leads to hypothesis H₁ that cooperative as compared with non-cooperative business relationships are characterized by a higher degree of long-term orientation.
2. *Relationship-specific investments*: The interdependence of partners in cooperative business relationships (Tröndle 1987) points to the necessity of an efficient coordination of all relationship activities. In this context, mutual adaptations, which have to be considered as relationship-specific investments (Hallén, Johanson, and Seyed-Mohamed 1991; Håkansson and Snehota 1995), are of utmost importance. Thus, hypothesis H₂ can be formulated that cooperative as opposed to non-cooperative business relationships involve higher relationship-specific investments.
3. *Contractual safeguarding*: As mentioned earlier, other than contractual obligations in a legal sense may occur in business relationships. Referring to the work on relational contract law (Macaulay 1963; Macneil 1978, 1980), especially in cooperative business relationships a reduction of formal and contractually fixed legal grounds in favor of implicit agreements and relationship-specific norms, which develop during the relationship, is to be expected. This leads to hypothesis H₃ that in cooperative business relationships contractual safeguarding plays a minor role than in non-cooperative relationships.
4. *Frequency of interaction*: Cooperative business relationships imply an intensive mutual coordination of partners. Therefore, hypothesis H₄ can be formulated that these relationships are characterized by a higher frequency of interaction than non-cooperative business relationships.
5. *Change of contact persons*: Especially the IMP Group (1982) has called attention to the importance of social interaction processes for the development of long-term business relationships. Since, as already noticed, particularly cooperative business relationships are expected to be based on long-term orientation, in such relationships relatively stable patterns of social interaction with the consequence of a lower degree

of fluctuation of interaction partners should be present. Thus, our last hypothesis (H₅) is that in cooperative business relationships contact persons change less frequently than in non-cooperative relationships.

Decision theoretic value concept and definition of the concept of relationship value

While dealing with the value of (cooperative) business relationships is still in its early stages, in the fifties and sixties of the last century an intensive discussion of the value concept from the perspective of the firm took place in the German-language literature on business administration. In this context, four general views about the nature of value can be identified (Wittmann 1956; Engels 1962): value objectivism, identification of value with price, value as subject-object relation, and a value concept based on decision theory. The latter is a further development of the notion of value as subject-object relation, originating from the work of Engels (1962), and is discussed in more detail.

The decision theoretic value concept (Engels 1962; Stützel 1976; Wöhe 1986; Roeb 1994) starts from the proposition that the value of economic goods never is an immanent quality that, like a physical attribute, objectively exists and is independent of the valuing person. On the other hand, however, this value also never is the result of a purely subjective assessment in the sense of an isolated relation between the valuing person and the goods to be valued. Rather, the value of economic goods is always the result of a rational calculation of the valuing person against the background of given goals, alternatives and environmental variables and, therefore, a measure of preferability. Since alternatives and environmental variables have to be considered to be given, the goals, which are to be reached by the respective economic goods, remain as variable determinants of value. These goals are subjectively determined and axioms in the sense that they are not particularly scrutinized. While the decision theoretic value thus in this respect has subjective character, it is diametrically opposed to purely subjective value on the other hand: it represents objective value in so far as it can be examined intersubjectively, i.e. can be calculated by everyone, provided that the respective goal function, alternatives and environmental variables are known.

To sum up, the decision theoretic value is a measure of the preferability of a particular alternative in a specific decision situation. This raises the question how to operationalize this

measure adequately. Since from the perspective of a firm acting on the basis of the economic principle any alternative that comes into consideration in a decision situation has to be judged with regard to resources employed and resulting benefits (Löffelholz 1967), the decision theoretic value can be defined as follows (Mühleder 1996):

$$\text{Value} = \frac{\text{Benefits}}{\text{Sacrifice}} \quad (1).$$

Thus, out of a set of alternatives the one will be preferable that results in the relatively largest ratio of benefits over sacrifice. Proceeding on the simplistic assumption that benefits and sacrifice can be measured in equal units, it becomes clear that in absolute terms only alternatives with a value equal to or greater than one will be of economic relevance.

It has to be noticed that several authors (e.g. Mellerowicz 1952; Löffelholz 1967) consider benefits and sacrifice to be constituent for a firm's value creation without reasoning on the basis of the decision theoretic approach. Therefore, this approach needs not necessarily to be present, if value is defined according to formula (1). On the other hand, it becomes apparent that defining value as ratio or difference between benefits and sacrifice³ is an appropriate, but not the only possible proceeding.

Ultimately, the usefulness of the decision theoretic value concept can be attributed to the following reasons (Roeb 1994). For one thing it is compatible with the fact that because of the economic principle firms cannot act completely irrationally but will at least strive for bounded rationality. For another, by taking individual goals into consideration, it integrates a subjective element that is typical of any business decision. With reference to the decision theoretic approach, our general understanding of the value of a business relationship can be defined as follows:

The value of a business relationship is a measure of its preferability in a specific decision situation. It has its origin in buyer-seller interaction and results from the difference between estimated relationship benefits and sacrifice.

Three aspects of this definition have to be considered in detail. First, the neutral formulation of value as measure of preferability enables both monetary and non-monetary valuation. Second, the value of a business relationship is regarded as multidimensional construct comprising relationship benefits that are reflected in the positive value components of enrichment and relief, and relationship sacrifice mirrored in the negative value components

of burden and loss of benefits (Plinke 1995). Third, in contrast to some authors (e.g. Naumann 1995; Ravald and Grönroos 1996) value is not operationalized on the basis of perceived but estimated benefits and sacrifice. This is because the decision theoretic value concept is not compatible with a purely subjective valuation implied by the term “perceived”, but aims at a rational calculation of the valuing person, which is reflected by the term “estimated”.

In analogy to the argument that a cooperative business relationship differs from the general understanding of a business relationship by the specific quality of the interaction process and based on our general understanding of the value of a business relationship, the value of a cooperative business relationship can be defined as follows:

The value of a cooperative business relationship has its origin in cooperative buyer-seller interaction and results from the difference between estimated relationship benefits and sacrifice.

The difference between our understanding of relationship value and a number of alternative approaches focused on industrial markets (Wilson and Jantrania 1994; Biong, Parvatiyar, and Wathne 1996; Ford and McDowell 1997) especially is that the latter disregard relationship sacrifice (negative value components). Therefore, these approaches only conceptualize relationship benefits, but not relationship value.

RESEARCH DESIGN

Our empirical study on the value of cooperative business relationships was conducted for the case of Austrian industrial markets and restricted to relationships between buyers and sellers acting predominantly as manufacturers. Furthermore, we abstracted from specific types of cooperative relationships and did not focus on particular industries. This was especially important from a research technique point of view, since confirmatory factor analyses used for data analysis require sample sizes that, at least in Austria, cannot be achieved by concentrating on particular types of cooperation and/or industries. In order to answer the question for the value of cooperative business relationships from both buyer and seller perspective independent samples were used, because for reasons of research economy it was not possible to obtain a number of buyer-seller dyads large enough for confirmatory factor analysis. However, it should be possible to approximate the results of a dyadic research design by representative structures being reflected in independent buyer-seller samples.

The empirical research was conducted in three steps. In the first one the relationship value concept was pre-structured by field interviews with managers. Based on the results of the interviews, study 1 was conducted with the objective to operationalize the concept of relationship value step by step from both buyer and seller perspective using state-of-the-art reliability and validity assessment methods. Study 2 as the third research step was based on the relationship value concepts resulting from study 1 and aimed at measuring the value of cooperative business relationships from buyer and seller perspective by conjoint analysis.

FIELD INTERVIEWS

Field interviews were conducted with 15 managers of Upper Austrian manufacturers of industrial goods, who held marketing or procurement positions. The interviews were based on a semi-structured interview guide, and in order to avoid any conceptual irritation, pre-structuring the relationship value concept at no stage was mentioned as research objective. Rather, the intention was to approach this concept indirectly based on our definition of relationship value by dealing with benefits and sacrifice of cooperative buyer-seller relationships.

A first major finding from the field interviews was that respondents associated both benefits and sacrifice with cooperative business relationships, which supports the chosen definition of relationship value. However, the interviewees actively dealt mainly with benefit facets. Sacrifice aspects often were considered to be relevant only on aided questioning and, therefore, according to tendency have latent character. Second, the field interviews led to a comprehensive list of items, which formed the basis to operationalize the concept of relationship value in the subsequent quantitative study. Since there were clear clues that the identified items did not directly operationalize the two main relationship value dimensions of benefits and sacrifice, but a number of corresponding subdimensions, the question for the respective dimensional structure came up. While on the basis of the complexity of the benefit dimension, reflected by a large number of items, the determination of the relevant structure of subdimensions seemed to be appropriate within the scope of the subsequent quantitative study, two subdimensions could be defined with regard to relationship sacrifice: direct costs of relationship management (RM) and opportunity costs, that is benefits forgone as compared to an alternative use of resources.

[INSERT FIGURE 1 HERE]

The results of the field interviews are summarized in Figure 1. The preliminary structure of the relationship value concept had to be tested and refined by a stepwise approach using quantitative criteria for reliability and validity assessment. It has to be mentioned that the 45 benefit and sacrifice items were significant for both the interviewed procurement and marketing managers. Thus, the identical starting point allowed to compare buyer and seller perspectives of the relationship value concept.

STUDY 1

Data Collection and Sample

Data collection was done through a completely standardized mail survey. While according to our research design buyers and sellers in industrial markets, who are predominantly acting as manufacturers, were chosen as unit of analysis, single key informants were the unit of measurement. Therefore, information on each cooperative business relationship under consideration comes from a single respondent, who does not provide his or her subjective opinion, but gives generalizable judgements as an expert (Heide and John 1995). In order to ensure adequacy of the key informants, only respondents were chosen who held procurement/purchasing or marketing/sales positions on the basis of the *Hoppenstedt Company-Database Austria (Hoppenstedt Firmen-Datenbank Österreich)*. In all these cases it can be expected that regular dealing with the management of cooperative business relationships takes place. Respondents were asked to select a cooperative relationship for judgement in which the respective buyer or seller is predominantly acting as manufacturer, too. Furthermore, to avoid that every respondent chose his or her favorite business partner, respondents were randomly assigned to one of three groups. The groups were asked to assess a business relationship with which they are highly, on average, and less satisfied, respectively.

After sending a follow-up questionnaire to those informants who had not responded within three weeks, an effective sample of 696 usable questionnaires was obtained. Four hundred and twenty-nine questionnaires were sent back by managers holding marketing

positions (seller survey) and 267 by managers holding procurement positions (buyer survey). This results in an adjusted response rate of 41.3% for the seller survey and 43.1% for the buyer survey. Altogether, study 1 mainly deals with cooperative business relationships of small and medium-sized enterprises and gives a representative picture of Austrian manufacturers of industrial goods.

Tests of Hypotheses

Testing of the five hypotheses on characteristics of cooperative vs. non-cooperative business relationships was carried out via paired t-tests. Table 1 summarizes the results. Since for each hypothesis the means, that are based on a 7-point rating scale, differ significantly in the expected direction, all formulated hypotheses are confirmed. Thus, both from buyer and seller perspective cooperative as compared with non-cooperative business relationships are characterized by a higher degree of long-term orientation, higher relationship-specific investments, lower importance of contractual safeguarding, higher frequency of interaction, and less frequently changing contact persons.

[INSERT TABLE 1 HERE]

Relationship Value Concept: Buyer Perspective

Measure Development. In order to develop a reliable as well as valid relationship value concept on the basis of the preliminary structure depicted in Figure 1, we applied a four-stage procedure following Homburg and Giering (1996).

Step A dealt with the benefit dimension of the relationship value concept, for which no structure of subdimensions had been specified so far. All items pertaining to the benefit dimension were submitted to an exploratory factor analysis. The solution was subjected to oblique rotation to allow for factor intercorrelations. Items with low loadings ($< .45$) on all factors or high cross-loadings were eliminated. As a result of this procedure the dimensional structure of relationship benefits was revealed.

Subsequently, in step B items were separately analyzed for all first-order dimensions of the relationship value concept. For this within-bloc analysis (Anderson, Gerbing, and Hunter

1987) the following procedures were applied: For one thing, Cronbach alpha was computed and, in case it was smaller than .7 (Bagozzi 1994), the items with the smallest corrected item-to-total correlations step-by-step were removed until the .7 requirement was met (Churchill 1979). Next, an exploratory factor analysis was used to check whether on the basis of the Kaiser (1974) criterion only one factor was extracted. This was considered to be a basic requirement for convergent validity. In addition, the extracted factor had to explain at least 50% of the items' variance. If necessary, items with factor loadings below .45 were eliminated step-by-step. A confirmatory factor analysis with one underlying factor was performed for the remaining items of a first-order dimension.⁴ There were the following requirements for an item to be retained: An individual item reliability of at least .4 (e.g. Bagozzi and Baumgartner 1994), a composite reliability of at least .6 (e.g. Bagozzi and Yi 1988), an average variance extracted of at least .5 (e.g. Bagozzi and Yi 1988), and a factor loading which is significant at the .05 level (e.g. Anderson and Gerbing 1988). In addition to the fit of the internal structure of the confirmatory factor analysis model the overall model fit was evaluated as well. In detail, we required a value of the ratio of chi-square over degrees of freedom (Jöreskog and Sörbom 1982) smaller than 3 (e.g. Homburg and Giering 1996) and a lower limit of .9 for the goodness-of-fit measures GFI, AGFI and CFI (e.g. Bagozzi and Yi 1988; Mueller 1996). Furthermore, RMSEA (Browne and Cudeck 1993) values of up to .08 were considered to indicate a reasonable overall model fit. As a more rigorous criterion it was also tested whether a nonsignificant *p*-value was achieved for the test of close fit ($RMSEA \leq .05$). If the majority of the mentioned criteria of model fit were not met, the corresponding dimension's items with insufficient individual reliabilities were eliminated. As a result of step B, for all first-order dimensions of the relationship value concept an item pool was retained that was adjusted according to the criteria of reliability and convergent validity.

In step C for each second-order dimension of the relationship value concept that comprised more than one subdimension all items were collectively analyzed. First, an exploratory factor analysis was performed that was aimed at identifying the respective hypothesized structure of first-order dimensions without any assumptions. Next, items were submitted to a confirmatory factor analysis with the hypothesized structure of underlying factors, and the factor model was evaluated by means of the criteria of model fit discussed above. If necessary, both procedures led to further elimination of items. Step C was finished

by pairwise analysis of the discriminant validity of the subdimensions of each second-order dimension, using the criterion suggested by Fornell and Larcker (1981).

Step D as last stage dealt with the totality of all remaining items of the relationship value concept. First, again an exploratory factor analysis was used to examine whether the hypothesized total structure of first-order dimensions of the relationship value concept could be identified without any assumptions. Thereafter, another confirmatory factor analysis was performed to evaluate the specified multi-factor model on the basis of the aforementioned criteria of model fit. After having analyzed discriminant validity in the context of all first-order dimensions by means of the criterion suggested by Fornell and Larcker (1981), the dimensionality of the relationship value concept was tested as a whole. For that purpose a second-order confirmatory factor analysis and again the Fornell and Larcker (1981) criterion were used.

Measure Assessment. For the buyer sample, the gradual test and refinement of the preliminary structure of the relationship value concept in step D led to the confirmatory factor analysis results summarized in Table 2. The criteria applied indicate an adequate fit of the factor model. Furthermore, all squared pairwise correlations between factors are smaller than the average variances extracted of the respective factors (Fornell and Larcker 1981), which suggests a high degree of discriminant validity for the first-order dimensions of the relationship value concept.

[INSERT TABLE 2 HERE]

The model to be analyzed by means of second-order confirmatory factor analysis introduced relationship benefits and relationship sacrifice as second-order factors, which are directly linked to the five first-order factors but not to any of the items. Since second-order confirmatory factor analysis is nested within first-order confirmatory factor analysis (Homburg 1998), results for overall model fit are presented in difference statistics: $\Delta\chi^2 = 36.68$ ($\Delta df = 5$), $\Delta RMSEA = .00$, $\Delta CFI = .01$, $\Delta GFI = .01$, $\Delta AGFI = .01$. Second-order composite reliability and average variance extracted exceed .88 and .66, respectively. All these measures of model fit are considered to be satisfactory. Furthermore, according to the Fornell and Larcker (1981) criterion discriminant validity is given for the second-order dimensions of the relationship value concept, too.

In summary, for the buyer sample measure assessment resulted in the final structure of the relationship value concept depicted in Figure 2. Apart from the reduced number of items and the operationalization of the benefit dimension, the final structure differs from the preliminary structure especially with regard to the dimension of opportunity costs, which had to be dropped due to reliability and validity considerations. This corresponds with the results of our field interviews, which revealed that within the scope of cooperative business relationships sacrifice aspects often have latent character, with opportunity costs certainly being the fuzziest category.

[INSERT FIGURE 2 HERE]

Relationship Value Concept: Seller Perspective

Measure Development. For the seller sample, the same four-stage procedure was used for measure development as described for the case of the buyer sample.

Measure Assessment. Table 3 shows the results of the first-order confirmatory factor analysis of step D. The criteria of model fit indicate an adequate factor model, and the Fornell and Larcker (1981) criterion supports discriminant validity since all squared pairwise factor correlations are smaller than the average variances extracted of the respective factors.

[INSERT TABLE 3 HERE]

As compared with first-order analysis, second-order confirmatory factor analysis, which introduced relationship benefits and relationship sacrifice as higher-order constructs, resulted in the following difference statistics of overall model fit: $\Delta\chi^2 = 9.82$ ($\Delta df = 2$), $\Delta RMSEA = .00$, $\Delta CFI = .01$, $\Delta GFI = .00$, $\Delta AGFI = .00$. Second-order composite reliability and average variance extracted exceed .75 and .52, respectively. Altogether, measures of model fit are satisfactory. Moreover, the Fornell and Larcker (1981) criterion indicates discriminant validity for the second-order dimensions of the relationship value concept, too.

In all, for the seller sample measure assessment led to the final structure of the relationship value concept shown in Figure 3. Besides the reduced number of items and the operationalization of the benefit dimension, the final structure differs from the preliminary

structure analogous to the buyer sample especially with regard to the dimensionality of relationship sacrifice. Furthermore, during the process of reliability and validity assessment the initially separate factors “personal interaction” and “building of strategic competencies” collapsed in a factor labeled “building of strategic competencies through personal interaction”. This seems to be plausible in the light of our field interviews conducted with marketing managers. They more than once pointed out that in cooperative relationships with buyers personal interaction fulfills a strategic role.

[INSERT FIGURE 3 HERE]

Relationship Value Concept: Buyer vs. Seller Perspective

Starting from a common set of items, reliability and validity assessment resulted in different relationship value concepts for the buyer and the seller sample. With regard to relationship value measurement in study 2 it is of crucial importance whether this dichotomy holds water. Therefore, we investigated by means of *LISREL* multi-sample analysis (Jöreskog and Sörbom 1996; Bagozzi and Foxall 1996) whether first-order factor structures of the relationship value concept from buyer perspective are valid for the seller sample, too, and vice versa. Table 4 shows the results of testing the generalizability of relationship value concepts. Since the GFI falls below .9 and chi-square differences without exception are highly significant all specified models have to be rejected. This indicates that neither of the relationship value concepts is generalizable. Thus, differences in the concepts are not purely accidental but necessary to adequately represent value perceptions of buyers and sellers.

[INSERT TABLE 4 HERE]

STUDY 2

Data Collection and Sample

As in study 1, data collection was done through a completely standardized mail survey. The questionnaire was sent to all respondents of study 1 who had agreed to participate in a

follow-up study. Informants again were asked to judge a cooperative relationship in which the business partner is predominantly acting as manufacturer, too. Moreover, respondents once more were randomly assigned to one of three groups and had to report on a business relationship with which they are highly, on average, and less satisfied, respectively.

After sending a second copy of the questionnaire to those informants who had not responded within three weeks, an effective sample of 309 usable questionnaires resulted. Two hundred and eight responses came from managers holding marketing positions and 101 from managers holding procurement positions. This corresponds to an adjusted response rate of 67.1% and 58.4%, respectively.

Methodology of Value Measurement

To measure the value of cooperative business relationships from both buyer and seller perspective conjoint analysis was used. According to Anderson, Jain, and Chintagunta (1993) conjoint analysis has received the most research by marketing academics of any value assessment method. Furthermore, this approach is compatible with the decision theoretic value concept since it is based on the notion of preference and preferability, respectively.

It has to be mentioned that conjoint analysis measures value on a non-monetary basis. This is an important point since monetary assessment of business relationships would quickly reach its limits because of the extent of qualitative value aspects inherent in the relationship value concepts we developed.

Measurement of Relationship Value: Buyer Perspective

The relationship value concept from buyer perspective elaborated in study 1 was the starting point for the development of relationship scenarios, which reflect different constellations of cooperative business relationships with sellers. Our proceeding was to work out relevant relationship attributes on the basis of the first-order dimensions and/or items with high individual reliabilities, shown in Table 2, and to define adequate attribute levels afterwards. Using the *Orthoplan* module in *SPSS*[®], twenty-five relationship scenarios were generated. Group results of conjoint analysis for the buyer sample, which are based on the respondents' preferences for the relationship scenarios, are summarized in Table 5.

[INSERT TABLE 5 HERE]

The utilities indicate that from buyer perspective the value of a cooperative business relationship reaches its maximum if the relationship is characterized by strong increase of competitiveness of the own company, technology and know-how transfer through joint product development that happens relatively often, strong economic effects, increased mutual trust, and medium coordination costs. In this context it has to be pointed out that the relation between attribute levels and relationship value does not always follow a linear pattern. In detail it turns out that the scenarios of very strong mutual trust and permanent transfer of technology and know-how obviously involve too strong bonds, with the consequence of a decrease in relationship value. Furthermore, buyers prefer a medium level of coordination costs.

The importance scores show that the extent of coordination costs changes relationship value least, which corresponds with the finding of our field interviews that within the scope of cooperative business relationships sacrifice aspects often have latent character.⁵

Measurement of Relationship Value: Seller Perspective

For the seller sample the development of relationship scenarios, which reflect different constellations of cooperative business relationships with buyers, was done analogously to the proceeding for the buyer sample. Starting out from the relationship value concept from seller perspective sixteen relationship scenarios were generated, which had to be ranked by the respondents. Table 6 presents group results of conjoint analysis for the seller sample.

[INSERT TABLE 6 HERE]

The utilities show that from seller perspective the value of a cooperative business relationship is maximized if it is characterized by strong strengthening of the strategic position in the industry through trusting relations, strong economic effects, joint development of ideas and products that happens relatively often, and small coordination costs. Again, the relation between attribute levels and relationship value does not always follow a linear pattern: The

scenario of permanent joint development of ideas and products apparently entails too strong bonds, leading to a decrease in relationship value.

Just as in the buyer survey, the importance scores indicate that relationship value is least influenced by the extent of coordination costs.

Measurement of Relationship Value: Buyer vs. Seller Perspective

Since the relationship scenarios underlying relationship value measurement from buyer and seller perspective, respectively, originate from different value concepts, it is difficult to compare the results of relationship value measurement directly. Nevertheless, two aspects have to be pointed out.

First, both from buyer and seller perspective the highest potential to change the value of a cooperative business relationship comes from relationship attributes that relate to the relationship value dimensions “building of strategic competencies”, “personal interaction” (or “building of strategic competencies through personal interaction”), and “economic effects”. Therefore, relationship value is essentially determined by actively managing these dimensions.

Second, in the buyer as well as in the seller sample the lowest relative importance is assigned to coordination costs within own company and between own company and the partner. This corresponds with the result of our field interviews that the value of cooperative buyer-seller relationships in particular is determined by relationship benefits.

SUMMARY AND IMPLICATIONS

The focus of interest of this paper was to deal empirically with the value of cooperative buyer-seller relationships in industrial markets. From a research point of view, the relationship value concepts from buyer and seller perspective, which are based on the decision theoretic value approach, should make an important contribution to the discussion on the management of cooperative business relationships since they represent a first attempt to clarify the notion of relationship value in substance by means of a representative study. Furthermore, research results point out that it is problematic to start out from a single relationship value concept that is applicable to both industrial buyers and sellers (e.g. Wilson and Jantrania 1994).

In addition, empirical results lead to several conclusions for management practice. First, the field interviews as well as the quantitative research steps demonstrated that the value of cooperative buyer-seller relationships mainly is determined by relationship benefits (i.e. positive value components of enrichment and relief) and less by relationship sacrifice (i.e. negative value components of burden and loss of benefits). While the minor importance of relationship costs may be explained by the fact that the realization of relationship management concepts, at least in Austria, is still in its early and “euphoric” stages, attention should be drawn to the notion of relationships as investments (Plinke 1989): Within the scope of relationship controlling any (cooperative) business relationship should be evaluated on the basis of its benefit-cost ratio.

Second, it follows from the finding that the differences in the relationship value concepts from buyer and seller perspective are not purely accidental but necessary to adequately represent divergent value perceptions that it is problematic to infer the value expectations of the relationship partner from the own ones. Indeed, sometimes the issue may be shared value, but often the reciprocal support to realize individual value is to the fore. Thus, mutual knowledge of the partner’s value expectations becomes crucial. Value-based management of cooperative business relationships therefore requires an intensive and open communication of the relationship partners and may necessitate a revision of current management practice.

NOTES

1. One has to mention the studies of Biong, Parvatiyar, and Wathne (1996) and Ford and McDowell (1997), which deal with the concept of relationship value in industrial markets using in-depth interviews and case studies, respectively. We will criticize the view of relationship value taken in these studies later in this paper.

2. The characteristics “autonomy of buyer and seller” and “non-accidental interaction process”, which are part of the general definition of a business relationship, are not explicitly taken into account in the definition of a cooperative business relationship, since these are constituent characteristics of any cooperation (minimum autonomy and consciously accepted minimum interdependence; Tröndle 1987).

3. As compared to formula (1), the value quantity changes mathematically but not in substance by looking at the difference between benefits and sacrifice.

4. For all confirmatory factor analysis models the ML (Maximum Likelihood) approach in *LISREL*[®] 8 (Jöreskog and Sörbom 1996) was used for parameter estimation.

5. Because of the correspondence of qualitative and quantitative research results it is unlikely that the low importance of the cost factor is caused by the difference in the number of attribute levels (e.g. Wittink, Krishnamurthi, and Reibstein 1989) in our conjoint design.

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FIGURE 1. Preliminary Structure of the Relationship Value Concept

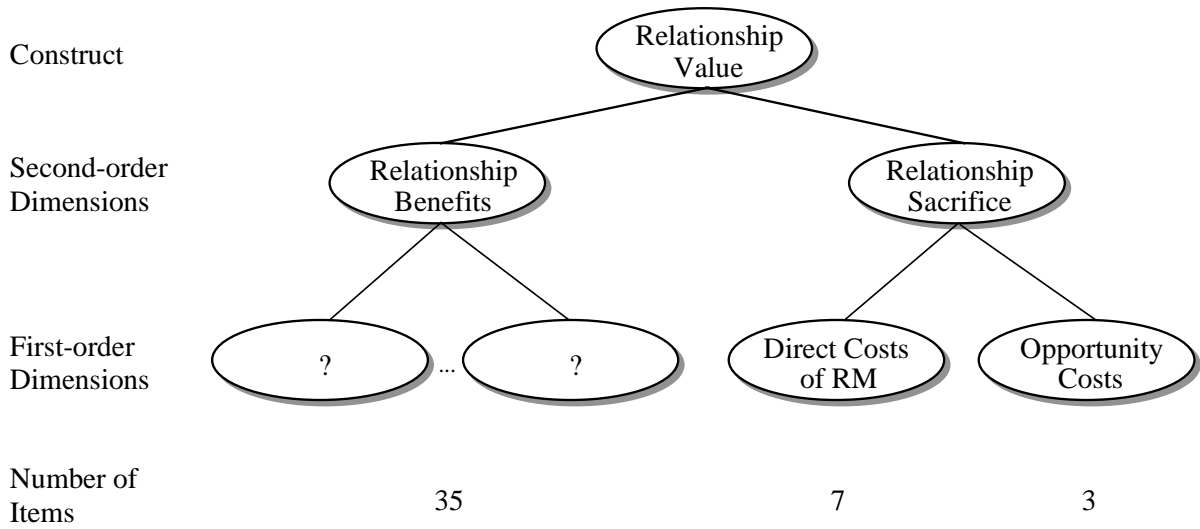


FIGURE 2. Final Structure of the Relationship Value Concept from Buyer Perspective

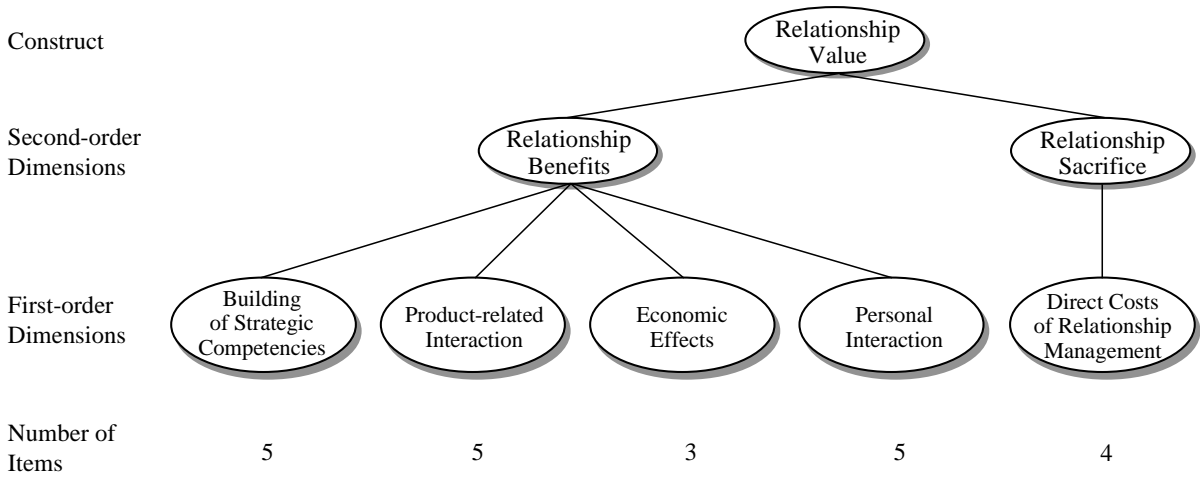


FIGURE 3. Final Structure of the Relationship Value Concept from Seller Perspective

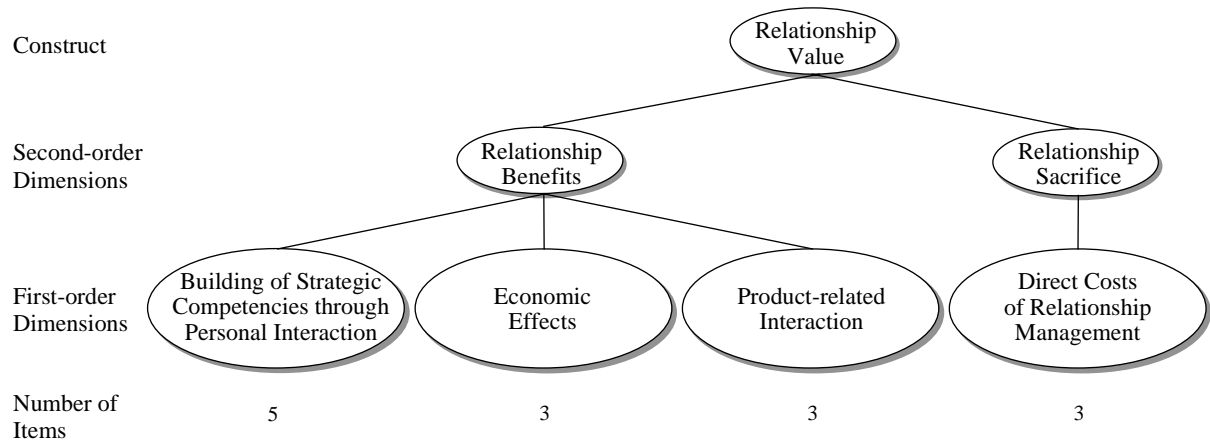


TABLE 1. Characteristics of Cooperative Business Relationships

Characteristic (Hypothesis)		Mean		t-Value	One-sided Significance
		Cooperative vs. Non-cooperative Business Relationship			
Long-term orientation (H ₁)	(B)	5.42	2.53	16.99	**
	(S)	5.68	2.58	30.34	**
Relationship-specific investments (H ₂)	(B)	4.27	3.21	5.73	**
	(S)	4.80	3.08	13.14	**
Contractual safeguarding (H ₃)	(B)	4.46	4.93	-2.39	**
	(S)	4.17	4.84	-4.47	**
Frequency of interaction (H ₄)	(B)	4.47	3.74	4.46	**
	(S)	4.94	3.42	12.61	**
Change of contact persons (H ₅)	(B)	2.36	5.64	-22.87	**
	(S)	2.71	5.34	-23.59	**

(B) = Buyer survey; (S) = Seller survey; ** = $p < .01$

TABLE 2. Confirmatory Factor Analysis Results – Buyer Sample

Factor (First-order Dimension)/Item ^a	Individual Item Reliability	t-Value of Factor Loading	Composite Reliability	Average Variance Extracted
Building of Strategic Competencies (F ₁)			.90	.65
1	.77	17.38		
2	.77	17.51		
3	.67	15.72		
4	.57	13.89		
5	.48	12.26		
Product-related Interaction (F ₂)			.87	.57
6	.67	15.44		
7	.47	11.96		
8	.64	14.92		
9	.47	12.02		
10	.58	13.88		
Economic Effects (F ₃)			.85	.65
11	.80	17.22		
12	.63	14.53		
13	.52	12.77		
Personal Interaction (F ₄)			.89	.62
14	.60	14.23		
15	.69	15.88		
16	.66	15.31		
17	.61	14.34		
18	.53	13.11		
Direct Costs of Relationship Management (F ₅)			.85	.58
19	.70	15.45		
20	.59	13.72		
21	.59	13.68		
22	.45	11.39		

Overall Model Fit: $\chi^2/df = 1.80$, RMSEA = .06, p (RMSEA \leq .05) = .14, CFI = .95, GFI = .89, AGFI = .86.

a: Wording of items is shown in Appendix 1.

TABLE 3. Confirmatory Factor Analysis Results – Seller Sample

Factor (First-order Dimension)/Item ^a	Individual Item Reliability	t-Value of Factor Loading	Composite Reliability	Average Variance Extracted
Building of Strategic Competencies through Personal Interaction (F ₁)			.83	.49
1	.49	13.89		
2	.56	15.35		
3	.52	14.61		
4	.45	13.13		
5	.42	12.57		
Economic Effects (F ₂)			.77	.52
6	.53	13.31		
7	.50	12.96		
8	.54	13.46		
Product-related Interaction (F ₃)			.77	.54
9	.57	14.83		
10	.42	12.39		
11	.62	15.58		
Direct Costs of Relationship Management (F ₄)			.78	.55
12	.62	14.69		
13	.50	13.13		
14	.52	13.43		
Overall Model Fit: $\chi^2/df = 2.70$, RMSEA = .07, p (RMSEA ≤ .05) = .00, CFI = .93, GFI = .93, AGFI = .90.				

a: Wording of items is shown in Appendix 2.

TABLE 4. Results of Testing the Generalizability of Relationship Value Concepts

Model		Goodness-of-Fit	Tests of Hypotheses
M ₁ : Factor patterns invariant (Baseline)	(B) (S)	GFI = .87 GFI = .87	- -
M ₂ : Factor loadings invariant	(B) (S)	- -	M ₂ – M ₁ : $\chi^2_d(22) = 69.31$, p < .001 M ₂ – M ₁ : $\chi^2_d(14) = 36.72$, p < .001
M ₃ : Factor loadings and error variances invariant	(B) (S)	- -	M ₃ – M ₂ : $\chi^2_d(22) = 83.95$, p < .001 M ₃ – M ₂ : $\chi^2_d(14) = 94.14$, p < .001
M ₄ : Factor loadings, error variances, and factor covariances invariant	(B) (S)	- -	M ₄ – M ₃ : $\chi^2_d(10) = 98.04$, p < .001 M ₄ – M ₃ : $\chi^2_d(6) = 23.57$, p < .001

(B) = Generalization of relationship value concept/buyer perspective

(S) = Generalization of relationship value concept/seller perspective

TABLE 5. Results of Relationship Value Measurement – Buyer Sample

Relationship Attribute/Attribute Level	Utility	Relative Importance
<i>Increase of Competitiveness of Own Company</i>		32.96%
no increase	-4.06	
small increase	-1.11	
medium increase	1.57	
strong increase	3.60	
<i>Transfer of Technology and Know-how through Joint Product Development</i>		10.40%
happens never	-1.54	
happens from time to time	.10	
happens relatively often	.88	
happens permanently	.56	
<i>Economic Effects (Like Increase in Productivity, etc.) for Own Company</i>		20.29%
no effects	-2.53	
weak effects	-.59	
medium effects	.93	
strong effects	2.19	
<i>Relations with Seller</i>		26.20%
no mutual trust	-3.62	
little mutual trust	-1.06	
increased mutual trust	2.47	
very strong mutual trust	2.21	
<i>Coordination Costs within Own Company and between Own Company and the Partner</i>		10.15%
small costs	.71	
medium costs	.82	
high costs	-1.53	

Kendall's tau = .95 (p = .00)

TABLE 6. Results of Relationship Value Measurement – Seller Sample

Relationship Attribute/Attribute Level	Utility	Relative Importance
<i>Strengthening of Strategic Position in the Industry through Trusting Relations</i>		35.75%
no strengthening	-3.15	
small strengthening	-.90	
medium strengthening	1.27	
strong strengthening	2.78	
<i>Economic Effects (Like Increase in Productivity, etc.) for Own Company</i>		23.63%
no effects	-2.02	
weak effects	-.91	
medium effects	1.03	
strong effects	1.90	
<i>Joint Development of Ideas and Products</i>		22.12%
happens never	-2.57	
happens from time to time	.43	
happens relatively often	1.10	
happens permanently	1.04	
<i>Coordination Costs within Own Company and between Own Company and the Partner</i>		18.50%
small costs	1.30	
medium costs	.46	
high costs	-1.76	

Kendall's tau = .98 (p = .00)

APPENDIX 1

Relationship Value Concept: Final Items Buyer Sample^a

Building of Strategic Competencies (F₁)

The selected relationship with a seller ...

1. ... leads to competitive advantage.
2. ... increases the competitiveness of our company.
3. ... strengthens our strategic position in the industry.
4. ... helps to fulfill customer requirements better.
5. ... increases profitability.

Product-related Interaction (F₂)

The selected relationship with a seller ...

6. ... enables an improved technology transfer.
7. ... leads to new product ideas.
8. ... enables an improved access to know-how.
9. ... enables to acquire new core competencies.
10. ... serves the purpose of joint product development.

Economic Effects (F₃)

The selected relationship with a seller ...

11. ... increases productivity.
12. ... enables to reduce our production costs.
13. ... enables the optimization of our operating processes.

Personal Interaction (F₄)

The selected relationship with a seller ...

14. ... promotes informal, personal contacts.
15. ... creates mutual trust.
16. ... leads to increased loyalty of our partner.
17. ... leads to joint problem solutions.
18. ... enables better conflict resolution.

Direct Costs of Relationship Management (F₅)

The selected relationship with a seller ...

19. ... means additional expenditure of time.
 20. ... causes additional coordination costs within our company.
 21. ... causes additional coordination costs between our company and the partner.
 22. ... leads to increased costs of relationship maintenance.
-

a: For all items 7-point rating scales anchored by “completely disagree” (1) and “completely agree” (7) with no verbal statements for scale points 2 through 6 were used.

APPENDIX 2

Relationship Value Concept: Final Items Seller Sample^a

Building of Strategic Competencies through Personal Interaction (F₁)

The selected relationship with a buyer ...

1. ... leads to competitive advantage.
2. ... strengthens our strategic position in the industry.
3. ... creates mutual trust.
4. ... leads to increased loyalty of our partner.
5. ... is characterized by an open information exchange.

Economic Effects (F₂)

The selected relationship with a buyer ...

6. ... enables to reduce our production costs.
7. ... enables the optimization of our operating processes.
8. ... increases productivity.

Product-related Interaction (F₃)

The selected relationship with a buyer ...

9. ... leads to new product ideas.
10. ... enables an improved technology transfer.
11. ... serves the purpose of joint product development.

Direct Costs of Relationship Management (F₄)

The selected relationship with a buyer ...

12. ... causes additional coordination costs between our company and the partner.
 13. ... means additional expenditure of time.
 14. ... causes additional coordination costs within our company.
-

a: For all items 7-point rating scales anchored by “completely disagree” (1) and “completely agree” (7) with no verbal statements for scale points 2 through 6 were used.