Relationship functions and customer trust as value creators in relationships: A conceptual model and empirical findings for the creation of customer value

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The main reason for an organization to engage in business relationships is the aim to create value. Different important functions of business relationships that create value for the involved parties are discussed in literature. However, only few empirical studies have so far investigated these functions as a conceptual definition of value creation is missing. The authors of this study use the customer perspective to model value creation as the interaction of direct and indirect functions in supplier relationships. The functions are characterized with respect to the activities and employed resources of the customer firm. The results of an empirical study of more than 300 companies show that both direct and indirect functions of supplier relationships influence the creation of customer trust in the relationship and the relationship value for the customer. The results of this study have important consequences for the management of inter-organizational relationships and networks in industrial markets.

Introduction

The value concept in industrial markets has only for some time received attention from researchers and practitioners. Since then, it has been discussed controversly in the marketing discipline (Anderson, Jain and Chintagunta 1992; Parasuraman 1997; Wilson and Jantrania 1994). The basic notion is that industrial markets can only be understood by applying the concept of value. Anderson and Narus (1999, p. 5) see customer value "as the cornerstone of business market management because of the predominant role that functionality or performance plays in business markets." Here, customer value can either be seen as the value of an organization's product or service offering or the value of all relationships of the organization. "The secret to success is maintaining a profitable relationship with the customer, regardless of what products are involved"(Rust, Zeithaml and Lemon 2000, p 6).

Considering the theory behind supplier relationships as part of an organization's value creation, we found some severe deficits. Most of the literature available on the market focuses on profitable purchasing strategies as the only value creating function of a supplier

relationship (Anderson, Jain and Chintagunta 1993; Anderson and Narus 1999). Here, the main focus is to receive high quality products in the right quantity for the right price at the right time. Other value creating functions of supplier relationship as e.g., a continuous know-how transfer are so far not discussed in research or only looked at in isolation. Up to now a comprehensive evaluation of value creation is almost impossible due to a lack of systematic studies. Even less developed is the understanding of how a focal customer-supplier relationship creates value for other connected relationships of the partner firms.

The value a customer sees in a supplier relationship can not only be explained by the optimal fulfilment of the purchasing functions. Many relationships fail although there are quite some time, quality, and price advantages. The failure rate of relationships is estimated to be over 50% (Spekman, Isabella and MacAvoy 2000). A similar result can be found in the study of Gemünden/Helfert/Walter (1996) who looked at 578 cross-European business relationships. An important reason for unsuccessful relationships is often explained by the lack of trust development between the partners. The creation of trust is seen from both, researchers and practitioners, as the basic reason for long-term successful relationships. Moreover, if any customer requirements that go beyond straightforward purchasing are not fulfilled, we expect most relationships to fail. Today, organizations face global competition and will on the long run only be successful if they can successfully exploit the value creating potential of the relationships with their suppliers.

The shown lack of existing literature on value creation has motivated us to further investigate the value creation in business relationships. Our study aims to provide some answers on the above discussed questions. We will develop a model for functions of supplier relationships in business markets. Moreover, we will analyse the impact of these functions on the creation and maintenance of trust and relationship value in a focal relationship. In addition to the fulfilment of customer-centric purchasing functions, we will show that especially network functions of a supplier relationship increase the relationship value perceived by the customer. We expect that the influence of the relationship functions on the relationship value and the customer trust is moderated by the procurement alternatives of the customer. The developed model is tested empirically with a study of more than 300 German companies. Finally, the paper concludes with a discussion of the limitations of our study as well as theoretical and managerial implications.

Research Model

Figure 1 shows the conceptual model and the expected relationships between the relevant components of the model. The main variable of the model is the customer's perceived value of the supplier relationship, which we will call relationship value for the proceeding of this article. Several large scale empirical studies have already shown that customers' relationship value is a major determinant in business markets. It contributes to the stability and further development of customer-supplier relationships (Gemünden, Helfert and Walter 1996; Werani 1998).

Building on the results of the sociological and psychological trust research, the importance of trust in relationships has received increased attention over the last twenty years (Andaleeb 1992). Consequently, trust has become one of the major determinants of models explaining business relationships (Wilson 1995). Therefore, this study explicitly studies the influence of customer trust on relationship value.

Several conceptual models and theories on relationship functions have been developed over the past two decades (Anderson, Håkansson and Johanson 1994; Cunningham and Homse 1986; Håkansson and Johanson 1993; Walter, Ritter and Gemünden 2001). The term function is used with different meaning in the functionalism theory but it is widely accepted that the contribution of one element to the generic system is called a function (Abrahamson 1978). In this study, the functions of a supplier relationship are defined as the supplier's contribution to the value increase in the customer's organization and in the whole network. These functions can be divided into direct functions and indirect functions (Håkansson and Johanson 1993; Walter, Ritter and Gemünden 2001). Direct functions of a supplier relationship, which we will call here purchasing functions, have an immediate effect on the economic goals of the customer firm. The indirect functions, here called network functions, have an indirect influence as their value increasing effects are connected to the effective management of other relationships. Their economic effects might also develop later in the focal relationship.

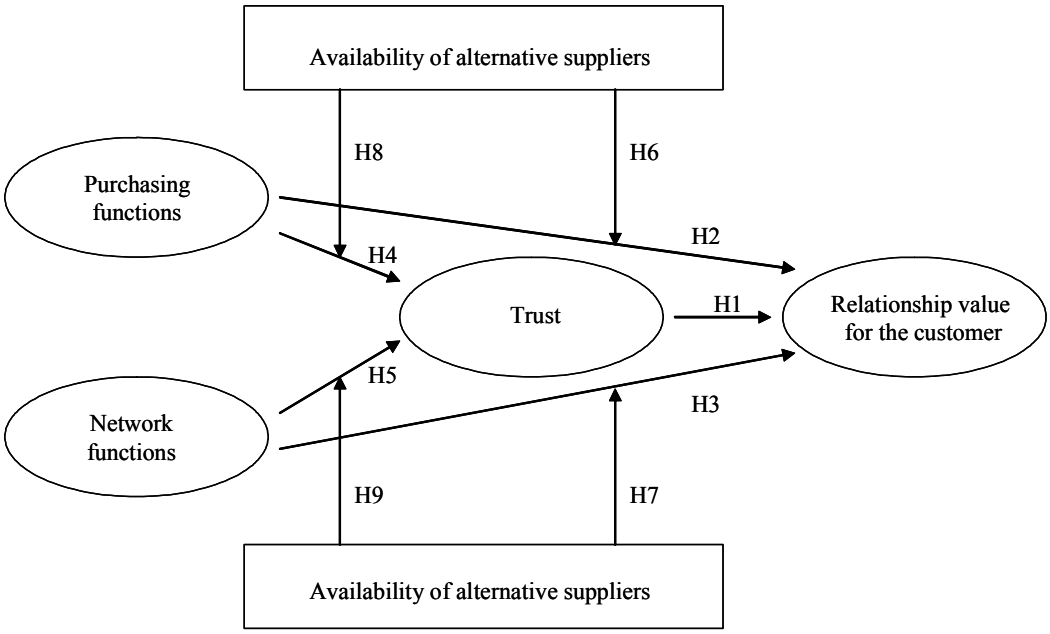

Figure 1: Hypotheses of the study

Customer and relationship value

There is no common definition of customer value in the marketing literature. The description of customer value focuses either on the product exchange level or on the relationship exchange level. In most cases the definition of customer value is based on the quality and costs of a focal product exchange (Monroe 1990, p. 46; Zeithaml 1988, p. 14). The understanding of customer value is therefore more than the well-known construct of customer satisfaction. In contrast to customer satisfaction, customer value explicitly considers in addition to the product and service quality measured on attribute or global level the material and immaterial costs of the product exchange.

In the literature, customer value has been discussed from two perspectives: the supplier and customer perspective (Ulaga and Eggert 2001). The supplier perspective defines customer value as the – mostly monetarily – assessed contribution of a customer, a customer group or all customer relationships of a firm to the supplier firm's results. The customer perspective focuses on the value perceived by the customer and here specifically on his/her motives to continue or stop the relationship with the supplier. In this study, we will focus on the customer perspective.

For the determination of customer value we find two fundamental different methods in the existing literature: Some authors define value as the relation of all relevant benefits and

sacrifices (Monroe 1990). Others assess the perceived trade-off between these two main components (Flint, Woodruff and Fisher Gardial 1997; Rust and Oliver 1994). Both approaches have in common that benefits and sacrifices are seen as multidimensional concepts. They do not only include financial measurements as for example cost savings, the price of the product and/or the costs of service but also the non-monetary revenues such as knowledge transfer, market position or market image (e.g. Biong, Wathne and Parvatiyar 1997; Wilson and Jantrania 1994). Anderson and Narus propose to summarize customer value in a financial measurement: "(...) value in business markets is the worth in monetary terms of the economic, technical, service, and social benefits a customer firm receives in exchange for the price it pays for a market offering" (1999, p. 5). However, this approach is in most cases not applicable because of valuation problems. Consequently, the measurement of the perceived customer value is mostly done on basis of multi-attributive approaches and/or decompositionary measurements (Anderson, Jain and Chintagunta 1993).

As we will focus in the context of this study on customer value in a given supplier relationship, we will talk about relationship value. We define relationship value as the trade-off between the multiple benefits and sacrifices of a supplier relationship perceived by the customer. These benefits and sacrifices can result from the relationship under question as well from connected relationships on which the focal relationship has an impact or is affected by.

Our definition of relationship value is, as most definitions on perceived customer value, based on the considerations of the social exchange theory. Focal point of the social exchange theory is the programmatic approach of Georg C. Homans in 1958 on "Social Behavior as Exchange". Homans (1958) sees the social behavior between parties as exchange of valuable activities. The involved parties are either rewarded or punished in a reciprocal process based on the value one party sees in the other party's behavior. However, it is only partly true that "(...) the reward each gets from the behavior of the other is relatively direct and immediate" (Homans 1961, p. 7). The value of the exchanged activities is probably more determined by (higher or long-term) goals of the partners and often also by involved third parties. In order to determine the value of an exchange relationship, we need to consider indirect transaction between the exchange partners and involved other parties as well (Blau 1964, p. 91 ff.). Consequently, our definition is appropriate for the research questions of this study.

Customer Trust

Moorman/Zaltman/Deshpandé (1992, p. 315) define trust as "(...) a willingness to rely on an exchange partner in whom one has confidence". Generally, trust involves not only the belief in the benevolence in the partner's actions but also the vulnerability against the partner (Morgan and Hunt 1994, p. 23). An organization that trusts their partners expects "(…) that another company will perform actions that will result in positive outcomes for the firm, as well as not take unexpected actions that would result in negative outcomes for the firm" (Anderson and Narus 1990, p. 45). Trust involves the capability to delegate responsibility so that the own area of responsibility is reduced hereby creating free capacities for other tasks.

A trusting partner feels less risk with regard to (investment) decisions and other relationship relevant actions as he sees a lower probability of negative consequences (Ring and Van de Ven 1994, p. 101). The study of 204 distributor-manufacturer relationships of Morgan and Hunt (1994, p. 30) showed that distributors felt less uncertainty the more they trusted their suppliers. Other possible consequences of trust are a reduced control of activities and agreements in a relationship and an increased flexibility of the partners (Dwyer, Schur and Oh 1987), which leads to decreased transaction costs (Ganesan 1994; Gulati and Singh 1998). Consequently, we assume the following:

H1: The more the customer trusts a supplier, the higher he or she values the relationship with this supplier.

Purchasing functions of supplier relationships

We assume in our study the cost reduction, quality, and volume functions to be the most important purchasing functions of a supplier relationship and detail them as follows:

- Cost reduction function: Major determinants of an organization's profitability are the overall costs for goods and services. This importance has increased dramatically over the past few years due to a trend towards outsourcing. Consequently, a customers' major focus is on low purchasing costs with reasonable quality. The initiation and maintenance of long-term relationships is one possibility to decrease procurement costs. When a relationship provides a platform for low purchasing prices the cost reduction function is fulfilled.

- Quality function: But customers are not only interested in price. In many cases the supplied product is an important part of the customer's offering (like the microprocessor to a computer or the seat module to a car) and as such contributes (or reduces in negative cases) the quality the customer produces for his/her customers. Furthermore, taking a view inside the customer's operations, the product might support operations by being reliable (manufacturing machinery), easy to use (low handling costs) or easy to maintain – issues which directly impact the processes and the profitability of the customer. We term the issues around the benefits from offerings quality function.

- Volume function: In addition to cost reduction and quality, customers do benefit from buying large quantities. Firms move from wide supplier bases with fragmented purchasing power to smaller supplier bases if not even single source arrangements. Obviously, volume and price are related, as suppliers normally offer discounts for higher numbers. Besides price impacts allocating larger purchases to selected suppliers allow customers to influence the suppliers more, to gain consistency within the supply (no variations between suppliers) and to reduce communication costs by focusing on one rather than on many suppliers. Overall the customer will have a "peace of mind" by knowing that a substantial amount of material is provided by a supplier with whom a good working relationship exists. This benefit is termed volume function.

All three purchasing functions are direct relationship functions as they directly influence the economic goals of the customer. The results lead to a positive development of the relationship value by fulfilling the quantitative goals of the customer and exploiting potential procurement rationalization potentials. We assume the following:

H2: The better a supplier relationship fulfils the purchasing functions the higher the relationship value for the customer.

A supplier justifies customer's trust with a continuous and complete fulfilment of these functions and consequently reduces the uncertainty of the partner. The customer will trust the

supplier in future if he knows that this supplier will deliver exactly what he wants (Ganesan 1994; Geyskens, Steenkamp and Kumar 1999). We also assume that the customer sees the completion of all three purchasing functions as a supplier's investment in their relationship. The realization of customer's quality requirements with reasonable prices and the supply of larger quantities usually require customer specific adaptations on the supplier's side. We therefore propose the following:

H3: The more a supplier fulfils the purchasing functions the more the customer will trust the supplier.

Network functions of supplier relationships

The market, information, and innovation development function are the most important network functions of a supplier relationship (Sheth and Sharma 1997). In contrast to the purchasing functions explained above, network functions influence the economic goals of the customer indirectly. Here, the gain for the customer will only develop in other relationships or in the future. We distinguish three different network functions:

- Market function: A supplier fulfils a market function when he helps the customer to establish contacts with new, potential exchange partners. These contacts can be with other suppliers but also with e.g., customers, industry associations or governmental institutions. Hereby, the supplier can take an active role by bringing the customer together with potential partners. However, customers can also use relationships with prestigious suppliers as reference and thus, the supplier plays a more passive role

- Scout function: Suppliers can also fulfil a scout function by passing on relevant technical or market-related information. This is especially of interest because firms need information about their environment and sense their markets in order to maneuver successfully. Suppliers usually have particular knowledge about their customers' industry and competitive situation as they also supply other firms in these markets.

- Innovation development function: Suppliers can be valuable partners for their customers for the development of innovative products and processes. The support of

innovation development can have many faces: Passing on innovative ideas, supplying innovative components and production facilities or engaging in a collaborative development project. By using suppliers' resources, customers can speed up their development process, engage in larger, riskier and long-term oriented projects and also have more technological input.

The economic effects of the market function are predominantly determined by the quality of the new contacts and relationships. The new partners can for example show a large procurement volume, offer reasonable prices, be future innovation partner or themselves have a large network in the industry. If a supplier fulfils the scout function, the customer can realize a time advantage compared to competitors and eventually decrease market research costs. The involvement of a supplier in customer's innovation development can lead to faster development processes, decreased development costs and better solutions compared to competitors. We therefore formulate hypothesis 4:

H4: The better a supplier relationship fulfils the network functions the higher the relationship value for the customer.

The fulfilment of the three network functions can also be seen as a trusting behavior of the supplier. Smith and Barclay (1997, p. 6) define trusting behavior as "(...) actions that reflect a willingness to accept vulnerability in the face of uncertainty". The finding of additional partners, passing of information and the engagement in development processes of the customers involve upfront risks and efforts on the part of the supplier while he cannot be sure to receive anything in return immediately. Social exchange theory argues that trusting behavior between partners leads to mutual trust (Blau 1964, p. 97 ff.). Leuthesser and Kohli (1995, p. 228) could show with their study of 454 supplier-customer relationships that trusting behavior of the supplier significantly influences customer satisfaction with the relationship. By fulfilling the network functions, the supplier also shows his transfer ability and willingness and therefore justifies the customer trust in the relationship. Hence, we argues as follows:

H5: The more a supplier fulfils the network functions the more the customer will trust the supplier.

Availability of alternative suppliers

Relationships are very complex and are directly influenced by the external factors of the exchange processes between the partners (Håkansson 1982). Therefore, we expect the importance of the relationship functions on customer trust and relationship value to vary according to different market and situational factors. Although a variety of supply market factors can influence the development and output of relationships, the availability of procurement alternatives (replaceability) and in this context the comparison level of alternatives is cited widely across different streams of marketing literature (Anderson and Narus 1990; Cannon and Perreault 1999). The availability of alternative suppliers is the degree to which a customer firm has alternative sources of its needed resources. Missing a readily available source of supply may be a source of uncertainty and dependence (Pfeffer and Salancik 1978).

In the context of this study we therefore argue that the customers will likely to place greater importance on the purchasing and network functions when the availability of alternative suppliers is relatively high. When many suppliers compete to sell goods to a customer it is easier to get reasonable prices, quality, know-how, and market information. At the same time these resources are especially important for the customer organisation in order to maintain and/or increase their competitive advantage as their competitors can also benefit from multiple sources of supply. Therefore, the linkages between purchasing and network functions and relationship value are likely to be stronger when the customer has more alternative suppliers. Stated formally:

H6: The impact of purchasing functions on the customer's relationship value is stronger when the customer has alternative sources of supply.

H7: The impact of network functions on the customer's relationship value is stronger when the customer has alternative sources of supply.

We expect the linkage between the relationship functions of a supplier relationship and customer trust to be stronger when the customer has several sources of supply. In a supplier relationship that fulfils the purchasing and network functions to a high degree, the customer

will have sound reasons for the development of his trust. When a company can choose between several suppliers with comparable offerings, past experiences with a supplier become the focal point for decision. Moreover, a systematic evaluation (e.g., trust building factors as quality certificates or recommendations) of all possible suppliers would be very time and cost consuming. Trusting a partner without knowing him always involve the risk of betraying while trust based on experience is seen as justified and economic sensible. Therefore, we suppose the following:

H8: The impact of purchasing functions on the customer trust is stronger when the customer has alternative sources of supply.

H9: The impact of network functions on customer trust is stronger when the customer has alternative sources of supply.

Empirical Study

Data Collection and Sample

The level of analysis of this study is a specific supplier-customer relationship. According to the research questions we chose to seek data from the customer's vantage point. We prepared a six-page questionnaire to be completed by a purchasing professional. Almost all questions focused on the relationship between the customer firm and a specific supplier. The questionnaire directions explained that the questions should be answered with respect to a supplier who was sufficiently important to warrant relational exchange behaviors. The directions also noted that the respondents should not be concerned if their firm is more or less satisfied by this supplier. The respondents should directly and continuously be involved in the supplier relationships for at least one year.

The study questionnaire was mailed to 745 appropriate informants that were initially called by phone and motivated to complete the questionnaire. The telephone contacts were also made to ensure that the person we selected was the most knowledgeable one in the company to report on the constructs being investigated. The identified key informants typically held the title of purchasing manager or purchasing agent. Follow-up reminders were mailed to each informant

three weeks after the primary mailing. We sampled a broad range of industries using a commercial list, including both consumer and industrial goods manufacturers.

A total of 303 usable questionnaires were obtained that represent a 40.7 % response rate. Most of the customers came from the sectors mechanical engineering (18.8 %), vehicle manufacturing (17.8 %), electronics industry (10.4 %), chemical industry (10.1 %), and metal-processing industry (7.4 %). The suppliers of these respondents were all manufacturers and mainly stemmed from electronics industry (42.4 %), mechanical engineering (19.4 %), and chemical industry (8.6 %). The average number of employees on the part of the customers was 15.913 (median = 500). The supplier companies employed 744 persons on average (median = 300).

Measures

The scales employed in the present study were either developed specifically for this study or adapted from existing scales to suit the context of the present study. We started by developing an initial pool of scale items based on a thorough review of literature and five extended interviews with marketing and purchasing personnel who were responsible for the management of supplier-customer relationships. The wording of the scale items was refined on the basis of a pilot study with eight purchasing managers (three of them participated already in the extended interviews). We conducted personal interviews that lasted 50 minutes on average. All scales were pre-tested in three successive rounds. In each round two to three interviewees were asked to complete the questionnaire. The managers answered the questionnaire and verbalized any thoughts that came to mind. The items were revised following each interview round. At the end of round three the feedback from the respondents indicated that the scale items were clear, meaningful, and relevant.

All constructs were measured using seven point multiple-item scales. A complete listing of the scales used in the study is provided in Appendix A. We used traditional and advanced psychometric approaches to evaluate scale properties. Assessing their reliability and uni-dimensionality purified the proposed reflective measures. Measurement development followed procedures recommended by (Anderson and Gerbing 1988). First, item-to-total correlation was examined in each of the proposed scales and items with low correlation were deleted if they tapped no additional domain of interest. To help ensure uni-dimensionality, items in each multi-item scale were factor analyzed separately. In all cases, a single factor

emerged. One single factor was extracted for relationship value and customer trust respectively. The analysis of the items for both the purchasing functions as well as the network functions identified three factors.

Building on the conceptual research on relationship value we decided to measure this construct with 4 items. We included value of supplier relationships building on our definition as perceived trade-off between benefits and sacrifices (Walter, Ritter and Gemünden 2001), value depending on role perceptions of the respondents, value as a measure relative to the offerings of competitors (Anderson and Narus 1999) and value as a multi-attribute concept (Wilson 1995).

The customer's trust in the supplier was measured by 5 items. All items were scored on a 7-point scale, ranging from "strongly disagree" to "strongly agree". Adapted from scales of Kumar, Scheer, and Steenkamp (1995) and Ganesan (1994), these items were related to honesty, benevolence, and competence of the supplier.

For the purchasing functions we used 7 items following the research of Håkansson and Turnbull (1982) and Sheth and Sharma (1997). These items assessed several key features of direct value creation in supplier relationships: A cost reduction function (2 items), a volume function (2 items), and the quality function (3 items). Only a second-order factor analysis could show whether a three-factor structure of the purchasing function with the purchasing function itself as higher level construct would be adequate. The proposed model could be confirmed by a corresponding analysis. All found global and detailed criteria are significant (see Appendix B).

The network functions were measured following the research of Anderson, Håkansson, and Johanson (1994) and Håkansson and Snehota (1995) with 12 items: A market function (4 items), the scout function (4 items), and the innovation development function (4 items). A second-order factor analysis confirmed the theoretically conceptualized structure of the construct. All first-order and second-order factor loadings were significant. All parameter estimates fulfilled the recommendations in the literature (see Appendix C).

The moderator variable availability of alternative suppliers was measured using one single item. The respondents were asked about the degree to which they agreed that the supplier

could be replaced easily on a 7-point scale ranging from "strongly disagree" to "strongly agree". When replacing a supplier is difficult, the potential procurement alternatives are few and dependence is increased. This notion of replaceability of a focal partner as a measurement of dependence has been used in several empirical studies of marketing channels (e.g. Heide and John 1988).

As a more rigorous test for the construct measurement quality, confirmatory factor analysis was then conducted with all five factors simultaneously using LISREL 8. For the operationalization of the purchasing and network functions we used the arithmetic average of their according functions. The parameter estimates were done using the Maximum-Likelihood method (ML) with covariance matrix as the input. The results of the analyses show that the measurement models satisfy all reliability and validity requirements of existing marketing literature (Anderson and Gerbing 1988; Baumgartner and Homburg 1996). Not only the global fit criteria of the developed scales but also their detailed are more than satisfactory (see Appendix D). Discriminant validity between the five factors is also given applying the criterion suggested by Fornell and Larcker (1981) (see Appendix E).

Results

Table 1 and 2 show the results of the regression analyses. We present the results in a hierarchical fashion to better depict the variance explained by the different sets of predictor variables. A moderating effect would be supported by a significant change in the multiple squared correlation coefficient (R^2) when an interaction term is included in the model.

All of the relationships predicted in the structural model were found to be in the hypothesized direction. Furthermore, the model explains a substantial portion of the variance of the dependent variable relationship value (49 %). As we expected the three influencing factors customer trust, purchasing functions, and network functions were found to be significant predictors of relationship value of the supplier relationship (H1, H2, and H3 supported). A moderate proportion of variance of the variable customer trust is explained by the relationship functions (22 %). The coefficients of the purchasing functions and the network functions are statistically significant (H4 and H5 supported).

The moderating variable availability of alternative suppliers showed negative effects on relationship value and customer trust. The negative influence on customer trust can be

explained that customers will more likely cooperate with their suppliers if they have none or only a few alternatives and therefore are more dependent on their suppliers (Cannon and Perreault 1999). Moreover, if a customer has several available alternatives he will be less likely to develop trust based on the fulfilment of the relationship functions as these functions can be satisfied by multiple suppliers. Consequently, the customer will trust the supplier more, the more he receives special attention by this supplier.

This holds also true for the negative effect of availability of alternative suppliers on relationship value. The easier a supplier can be replaced (especially in case of commodities or c-rated products) the less the realized advantages will be different from competitors' offerings. In these relationships, an important potential of value judgment is lost and no additional, substantial value can be created. We assume that in cases of easy replaceability value is only created through cost reduction – the typical "price war" in the industry.

Independent Variable	**Model 1**	**Model 2**	**Model 3**
Main effects:			
Customer Trust (H1)		.31***	.29***
Purchasing functions (H2)		.28***	.26***
Network functions (H3)		.17***	.16***
Interaction effects:			
Availability of alternative suppliers X			
Purchasing functions (H6)			.07†
Network functions (H7)			.08*
Moderating variable:			
Availability of alternative suppliers	-.41***	-.27***	-.26***
R^2 (adjusted R^2)	.17 (.16)	.47 (.47)	.49 (.48)
ΔR^2	.17***	.30***	.02*
F	59.88***	66.56***	46.54***

n = 303; *** p < .001; ** p < .01; * p < .05; † p < .10 (one-tailed test)

Table 1: Regression results on relationship value of the customer

Independent Variable	Model 1	Model 2	Model 3
Main effects:			
Purchasing functions (H4)		.31***	.30***
Network functions (H5)		.18***	.16**
Interaction effects:			
Availability of alternative suppliers X			
Purchasing functions (H8)			.14**
Network functions (H9)			-.02
Moderating variable:			
Availability of alternative suppliers	-.23***	-.15**	-.14**
R^2 (adjusted R^2)	.05 (.05)	.20 (.20)	.22 (.21)
ΔR^2	.05***	.16***	.02*
F	16.27***	25.94***	17.04***

n = 303; *** p < .001; ** p < .01; * p < .05; † p < .10 (one-tailed test)

Table 2: Regression results on customer trust

The results of the hierarchical regression analysis for relationship value as dependent variable (Table 1) show the expected positive significant interaction effects of *availability of alternative suppliers* and *purchasing functions* as well as *availability of alternative suppliers* and *network functions* (H6 and H7 supported). Moreover, the results in table 2 show a positive significant interaction effect of *availability of alternative suppliers* and *purchasing functions* on *customer trust* (H8 supported). The expected interaction effect between *availability of alternative suppliers* and *network functions* on *customer trust* is not significant (H9 not supported).

Discussion

The creation of value through business relationships has become one of hottest and most discussed topics in marketing research. We define relationship value as the estimated trade-off between the multiple benefits and sacrifices as seen by the customer. The aim of this paper was to explain value creation by a given supplier relationship as seen from the customer. Our analysis shows that the relationship functions and customer trust explain a considerable amount of the customer's value perception of a given supplier relationship. We can consequently assume that we have considered the major aspects of value creation. In particular, we obtained the following results:

- The main value creation of a supplier relationship for a customer stems from the optimization of the purchasing functions. Supplier relationships that fulfil the cost reduction function have low purchasing costs and therefore contribute directly to the customer firm's profitability. If the quality function is fulfilled the customer can substantially reduce their costs for quality controls. The successful implementation of the volume function helps the customer to realize cost savings based on single sourcing or just-in-time concepts.
- The other important value creators of a supplier relationship are the three network functions. If the supplier fulfils the market function, he helps the customer to develop new markets and suppliers. The scout function contains the creation of knowledge about new markets, suppliers and/or competitors. With the innovation development function, the customer supports and enhances his new product development with technological know-how and creative ideas from the supplier.
- Apart from these relationship functions, customer trust significantly increases the customer's perception of relationship value. This effect can mainly be explained by decreased transaction costs. In a trusting relationship conflicts are resolved more easily and do not lead to stagnation or even resignation. Difficult decisions are made more efficiently as there is no lengthy and cost-worthy information process.
- Our further analysis shows that the relevance of purchasing and network functions for the customer is even higher if he can choose from several alternative suppliers. This supports the notion that differentiation is crucial for suppliers in competition intensive markets. The better fulfilment of the relationship functions contributes to more trust and relationship value which in turn leads to higher customer commitment (Walter, Müller and Helfert 2000). If a supplier cannot differentiate himself based on the fulfilment of relationship functions, he can only try and compete on price. However, this price leadership strategy might be to short-sighted as customers – as we showed in the beginning – expect a growing value contribution of their relationships. This is another proof that companies in industrial markets should focus on long-term, cooperative exchange relationships and not on the optimization of one-time transactions.

There is no empirical study without certain limitations. We gathered our data by interviewing a single person in the purchasing department which might not be able to judge all aspects of

the supplier relationship. However, the respondents were selected very carefully and usually the purchasing person has the most comprehensive view on given supplier relationships in the organization (Cannon and Perreault 1999). In order to gain a more complex view and be able to consider further influences, marketing research demands to question more persons involved in the relationship and from different departments. This is in most cases not feasible as most companies are not willing to invest more time and resources for such a method.

With our model we have explained a considerable amount of variance of the relationship value for the customer and customer trust. Nevertheless, the model didn't account for the total variances of these constructs. Relationship value is a very complex matter, which is definitely influenced by the costs of the relationships which we didn't model and measure in this study. A more comprehensive explanation of customer trust could have been obtained by measuring for example the customer-specific investments or the influencing factors of relationship management by the supplier.

Managerial Implications

We have seen that supplier relationships represent through the fulfilment of several value-creating functions and the creation of trust a considerable value for a customer's organization. An understanding of these functions is of paramount importance for the customer in order to gain the most out of his supplier relationships. Moreover, the supplier will only trust the partner and invest in the relationship when he can gain benefits of his own out of the relationship. An understanding of the relationship functions will help both partners to clearly define their requirements and develop strategies to create trust and mutual value creation in the relationship.

Supplier relationships have the tremendous potential to expand from pure product purchasing and short-term oriented transactions to long-term, trustworthy, and valuable relationships. With our concept of relationship functions we provide a basic tool with which companies can judge their established supplier relationships and their future potential. However, not all relationships can and should become trustworthy relationships. It is important for an organization to develop value-relationships with selected, important suppliers.

Trust can only develop over time. This process can be accelerated by joint training and role playing of the partners as well as fostering organizational similarities, particularly in terms of goals, exchange behaviors, control procedures, and strategic horizons (Smith and Barclay 1993).

In figure 2 we used the two dimensions, purchasing functions and network functions, to develop a 2 x 2 matrix, useful to categorizing value creation through supplier relationships.

Value creation through purchasing functions		Value creation through network functions: Low	Value creation through network functions: High
	High	Highway	Dream Road
	Low	Dead-end	Junction

Figure 2: Classifying value creation through supplier relationships

Due to our findings managers concerned with relationship and network management tasks within a customer firms have to be aware of these four types of supplier relationships. In the following we discuss the four different groups of supplier relationships and their management implications in more detail.

- Dead-end: We see three different subgroups of these relationships. First, there can be fairly new relationships which have not yet developed a clear pattern of functions. As relationship development and maintenance is an investment process in the sense that costs and revenues appear in different time periods, these relationships should be observed over different time periods. It is, however, of major importance to have a clear vision on what this relationship will contribute in the future. Second, formerly better performing relationships, which have changed in the meantime due to various reasons, can be in this box. These relationships are either near dissolution or there might be a chance to renew their potential. Finally, dead-end relationships may have been and will be ineffective regardless of time. Sometimes those relationships exist due to other reasons (e.g., non-rational, non-economic reasons) or have simply not been analyzed so far. If a relationship fulfils neither purchasing nor network functions and therefore does not create any value for the customer firm then there is a question why this relationship pertains. Regardless of the reasons, a critical analysis needs to be performed in order to evaluate the future potential of this relationship. If a supplier

relationship proves to be ineffective in the long run, customers should not waste any resources by maintaining those relationships.

- Highway: We name relationships which mainly fulfil purchasing functions, highway functions as both partners in this relationships are on the fast and straight way to profitability. The benefit for the buyer is possibility to buy large quantities for a profitable price and/or have the security that the quality of the purchased goods fulfils his requirements. The value is hereby created directly through a given supplier relationship based on cost savings and/or economies of scale.
- Junction: These supplier relationships have a strong impact on future value creation and value creation in connected relationships, therefore symbolizing a junction where every way is possible and bears potential. Within some relationships valuable resources are gathered and/or created (e.g., know-how, market information, and new products) that can be of importance for other relationships. It is the customer's task to transform these resources into value by facilitating them into connected relationships. As such the success of networking relationships depends upon the customer's ability to transform the relationship's outcome into results elsewhere in the network (Anderson, Håkansson and Johanson 1994).
- Dream Road: This group of relationships fulfils purchasing as well as network functions. A full range of functions is exploited. This represents the "dream road" for both partners in the relationship. If a full variety of value-creating functions are or should be fulfilled in a relationship, the relationship itself and its management become highly complex. Various inputs are needed in order to exploit the relationship to its full potential for the organization. Different departments and functions of the customer's firm have to interact with the strategic important supplier. Therefore, relationship teams composed of personnel out of different departments may be best prepared to handle this relationship (Deeter-Schmelz and Ramsey 1995; Helfert and Vith 1999).

We have seen that relationship management is influenced by what functions are fulfilled in a given relationship. Companies need to analyze their supplier relationships in order to allocate their resources accordingly. These are mainly personal and financial resources. Nevertheless, additional resources for the relationship-specific adjustments of both partners need also to be considered with respect to the fulfilment of the relationship functions.

Research Implications

The aim of our study has been the empirical identification of relationship functions and an analysis of the relationship between the functions and creation of trust and value in a relationship. But the present study not only provides answers to important questions concerning value creation through relationships, it also raises questions for further research. To understand the value concept, the opposite side of benefits (i.e., the sacrifices) need to be considered in more detail. Several costs of supplier relationships have been discussed in literature, such as handling costs (e.g., personnel, travel, communication), relationship-specific investments (e.g., product modifications, organizational adaptations), and opportunity costs as well as non-monetary costs as searching costs and emotional costs. Although, so far a model of relationship costs is missing. Here, we suggest a similar approach to the one presented in this study in order to develop an according measurement tool.

Furthermore, research on the preconditions and antecedents for the development of different functions is missing. Is there a relation between the development stage of a relationship and value creation? In addition, there is the important question of *value sharing* (Anderson 1995; Wilson 1995). When value is created in a relationship both partners would like to benefit from this situation. Potentials and resources are provided from one partner to the other but what, in turn, is received (e.g., supplier's innovation development function balanced buy customer's profit function?). The functions can very between the partners. While the customer values the purchasing functions, the supplier might prefer network functions. So what does the provider of a certain function receive? Are there typical combinations of value creating functions in a relationship? The process of sharing required an effective management; we have pointed out some issues in the previous sections. But for a deeper understanding of value creation, more research efforts are needed.

Direct and indirect value-creating functions also suggest implications for reward systems. Short-term oriented reward systems may work for purchasing functions because results can be seen in a short period of time. Nevertheless, a short term orientation fails in motivating personnel to exploit network functions of relationships because of a time gap between input and outcome. New reward systems need to be developed and implemented in order to foster network functions of relationships which are vital for the future survival of the company. More research needs to be done in terms of reward systems in order to motivate personnel in fulfilling network functions.

Literature

Abrahamson, M. (1978): Functionalism. Englewood Cliffs, NJ: Prentice-Hall.

Andaleeb, Syed Saad (1992): "The Trust Concept: Research Issues for Channels of Distribution." Research in Marketing, 11: S. 1-34.

Anderson, James C. (1995): "Relationships in Business Markets: Exchange Episodes, Value Creation, and Their Empirical Assessment." Journal of the Academy of Marketing Science, 23(4): S. 346-350.

Anderson, James C. and Gerbing, David W. (1988): "Structural Equation Modeling in Practice: A Review and Recommended Two-Step Approach." Psychological Bulletin, 103(3): S. 411-423.

Anderson, James C., Håkansson, Håkan and Johanson, Jan (1994): "Dyadic Business Relationships Within a Business Network Context." Journal of Marketing, 58(4): S. 1-15.

Anderson, James C., Jain, Dipak C. and Chintagunta, Pradeep K. (1992): "Customer Value Assessment in Business Markets: A State-of-Practice Study." Journal of Business-to-Business Marketing, 1(1): S. 3-29.

Anderson, James C., Jain, Dipak C. and Chintagunta, Pradeep K. (1993): "Customer Value Assessment in Business Markets: A State-of-Practice Study." Journal of Business-to-Business Marketing, 1(1): S. 3-29.

Anderson, James C. and Narus, James A. (1990): "A Model of Distributor Firm and Manufacturing Firm Working Partnerships." Journal of Marketing, 54(1): S. 42-58.

Anderson, James C. and Narus, James A. (1999): Business Markets Management. Understanding, Creating, and Delivering Value. Upper Saddle River, New Jersey: Prentice Hall.

Baumgartner, Hans and Homburg, Christian (1996): "Applications of Structural equation Modelling in Marketing and consumer research: A Review." International Journal of Research in Marketing, 13(April): S. 139-161.

Biong, Harald, Wathne, Kenneth and Parvatiyar, Atul (1997): "Why Do Some Companies not Want to Engage in Partnering Relationships?" In: Gemünden, Hans Georg, Ritter,

Thomas and Walter, Achim (Hrsg.): Relationships and Networks in International Markets, S. 91-107. : Redwood Books Ltd.

Blau, Peter M. (1964): Exchange and Power in Social Life. New York: Wiley.

Cannon, Joseph P. and Perreault, William D. Jr. (1999): "Buyer-Seller Relationships in Business Markets." Journal of Marketing Research, 36(November): S. 439-460.

Cunningham, Malcom T. and Homse, E. (1986): "Contolling the Marketing-Purchaising Interface: Resource Development and Organisational Implications." Industrial Marketing and Purchasing, 1(2): S. 3-27.

Deeter-Schmelz, Dawn R. and Ramsey, Rosemary (1995): "A Conceptualization of the Functions and Roles of Formalized Selling and Buying Teams." Journal of Personal Selling & Sales Management, 15(2): S. 47-60.

Dwyer, F. Robert, Schur, Paul H. and Oh, Sejo (1987): "Developing Buyer-Seller Relationships." Journal of Marketing, 51(April): S. 11-27.

Flint, Daniel J., Woodruff, Robert B. and Fisher Gardial, Sarah (1997): "Customer Value Change in Industrial Marketing Relationships: A Call for New Strategies and Research." Industrial Marketing Management, 26(2): S. 163-175.

Fornell, Claes and Larcker, David F. (1981): "Evaluating Structural Equation Models with Unobservable Variables and Measurement Error." Journal of Marketing Research, 18(February): S. 39-50.

Ganesan, Shankar (1994): "Determinants of Long-Term Orientation in Buyer-Seller Relationships." Journal of Marketing, 58(April): S. 1-19.

Gemünden, Hans Georg, Helfert, Gabi and Walter, Achim (1996): "Geschäftsbeziehungen in Europa." absatzwirtschaft, 39(10): S. 104-114.

Geyskens, Inge, Steenkamp, Jan-Benedict and Kumar, Nirmalya (1999): "A Meta-Analysis of Satisfaction in Marketing Channel Relationships." Hounal of Marketing Research, 36(2): S. 223-238.

Gulati, Ranjay and Singh, Harbir (1998): "The Architecture of Cooperation: Managing Coordination Costs and Appropriation Concerns in Strategic Alliances." Administrative Science Quarterly, 43(4): S. 781-814.

Håkansson, Håkan (1982): “An Interaction Approach.” In: Håkansson, Håkan (Hrsg.): International Marketing and Purchasing of Industrial Goods, S. 10-27. Chichester: Wiley.

Håkansson, Håkan and Johanson, Jan (1993): “Industrial Functions of Business Relationships.” Advances in International Marketing, 5: S. 13-29.

Håkansson, Håkan and Snehota, Ivan (1995): Developing relationships in business networks. Boston: International Thomson Press.

Håkansson, Håkan and Turnbull, Peter W. (1982): “Inter-Company Relationships: An Analytical Framework.” in Department of Business Administration. Uppsala: University of Uppsala.

Heide, Jan B. and John, George (1988): “The Role of Dependence Balancing in Safeguarding Transaction-Specific Assets in Conventional Channels.” Journal of Marketing, 52(January): S. 20-35.

Helfert, Gabriele and Vith, Katharina (1999): “Relationship Marketing Teams: Improving the Utilization of Customer Relationship Potentials Through a High Team Design Quality.” Industrial Marketing Management, 28(5): S. 553-564.

Homans, George C. (1958): “Social Behavior as Exchange.” American Journal of Sociology, 63(6): S. 597-606.

Homans, George C. (1961): Social Behavior. Its Elementary Forms. London: Routledge & Kegan Paul.

Kumar, Nirmalya, Scheer, Lisa K. and Steenkamp, Jan-Benedict E. M. (1995): “The Effects of Perceived Interdependence on Dealer Attitudes.” Journal of Marketing Research, 32(August): S. 348-356.

Leuthesser, Lance and Kohli, Ajay K. (1995): “Relational Behavior in Business Markets: Implications for Relationship Management.” Journal of Business Research, 34(3): S. 221-233.

Monroe, Kent B. (1990): Pricing: Making Profitable Decisions. New York: McGraw Hill.

Moorman, Christine, Zaltman, Gerald and Deshpandé, Rohit (1992): “Relationships Between Providers and Users of Market Research: The Dynamics of Trust Within and Between Organisations.” Journal of Research in Marketing, 29(August): S. 314-328.

Morgan, Robert M. and Hunt, Shelby D. (1994): "The Commitment-Trust Theory of Relationship Marketing." Journal of Marketing, 3(58): S. 20-44.

Parasuraman, A. (1997): "Reflections on Gaining Competitive Advantage Through Customer Value." Academy of Marketing Science Journal, 25(2): S. 154-161.

Pfeffer, Jeffrey and Salancik, Gerald R. (1978): The External Control of Organizations: A Resource Dependence Perspective. New York: Harper & Row.

Ring, Peter Smith and Van de Ven, Andrew H. (1994): "Developmental Processes of Cooperative Interorganizational Relationships." Academy of Management Review, 19(1): S. 90-118.

Rust, Roland T. and Oliver, Richard L. (1994): Service Quality: New Directions in Theory and Practice. Thousand Oaks: Sage Publications.

Rust, Roland T., Zeithaml, Valerie A. and Lemon, Katherine N. (2000): Driving Customer Equity: How Customer Lifetime Value is Reshaping Corporate Strategy. New York: The Free Press.

Sheth, Jagdish N. and Sharma, Arun (1997): "Supplier Relationships: Emerging Issues and Challenges." Industrial Marketing Management, 26(2): S. 91-100.

Smith, J. Brock and Barclay, Donald W. (1993): "Team Selling Effectiveness: A Small Group Perspective." Journal of Business-to-Business Marketing, 1(2): S. 3-32.

Smith, J. Brock and Barclay, Donald W. (1997): "The Effects of Organizational Differences and Trust on the Effectiveness of Selling Partner Relationships." Journal of Marketing, 61(January): S. 3-21.

Spekman, Robert E., Isabella, Lynn A. and MacAvoy, Thomas C. (2000): Alliance Competence: Maximizing the Value of Your Partnerships. New York: John Wiley.

Ulaga, Wolfgang and Eggert, Andreas (2001): "Developing a Standard Scale of Relationship Value in Business Markets." S. 18 in 17th Annual IMP Conference, edited by Hakansson, Hakan. Oslo: BI Norwegian Business School.

Walter, Achim, Müller, Thilo Andreas and Helfert, Gabriele (2000): "The Impact of Satisfaction, Trust, and Relationship Value on Commitment: Theoretical Considerations and Empirical Results." in Interaction and Relationships. Proceedings of the 16th IMP Conference, edited by Ford, David, Leek, Sheena, Naudé, Pete, Ritter,

Thomas and Turnbull, Peter W. Bath, September 7-9: Bath, School of Management, UK.

Walter, Achim, Ritter, Thomas and Gemünden, Hans Georg (2001): "Value Creation in Buyer-Seller Relationships: Theoretical Considerations and Empirical Results from a Supplier's Perspective." Industrial Marketing Management, 30(4): S. 365-377.

Werani, Thomas (1998): Der Wert von kooperativen Geschäftsbeziehungen. Linz: Universitätsverlag Trauner.

Wilson, David T. (1995): "An Integrated Model of Buyer-Seller Relationships." Journal of the Academy of Marketing Science, 23(4): S. 335-345.

Wilson, David T. and Jantrania, Swati (1994): "Understanding the Value of a Relationship." Asia-Australian Marketing Journal, 2(1): S. 55-66.

Zeithaml, Valerie A. (1988): "Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Synthesis of Evidence." Journal of Marketing, 52(July): S. 2-22.

Appendix

A: Indicators

Relationship functions
Suppliers can provide different benefits to their customers, e.g. covering a large demand volume, supplying innovative products and/or deliver information on the procurement market. How do you rate the following potential functions regarding your benefit of this supplier relationship? (1 = very little, 7 = very strong)

Cost reduction function
Products that are good value for money.
Low purchasing prices.

Volume function
Long-term delivery promises for the products delivered.
Complete coverage of your total demand for the products.

Quality function
Functionality of the products delivered.
Reliability of the products delivered.
Realization of our product requirements.

Market function
Intermediation of contacts to prospective customers of your company.
Intermediation of contacts to prospective other suppliers of your.
Intermediation of contacts to relevant third parties (e.g. technology companies, consultants, marketing service providers...).
Direct reference with possible business partners.

Scout function
Information on your procurement market.
Information on your competitors.
Information on relevant third parties (e.g. technology companies, consultants, marketing service providers...).
Information on developments in your market.

Innovation development function
Ideas for new products/services of your company.
Development of your products/services.
Development of your manufacturing processes.
New technological know-how for your company.

Relationship Value
Considering all benefits and sacrifices associated with this supplier relationship, how would you assess its value? (1 = very low, 7 = very high)
The value of the relationship with this supplier is in comparison with alternative supplier relations very high. (1 = strongly disagree, 7 = strongly agree)
All in this entire supplier relationship has a high value for our firm. (1 = strongly disagree, 7 = strongly agree)
How do you rate the value of all performance contributions that your company gains from this supplier (e.g., volume, market information, technologies)? (1 = very low, 7 = very high)

Trust (1 = strongly disagree, 7 = strongly agree)
When making important decisions, the supplier is concerned about our welfare.
When we have an important requirement, we can depend on the supplier's support.
We are convinced that this customer performs its tasks professionally.
The supplier is not always honest to us. (reverse scored)
We can count on the supplier's promises made to our firm.

B: Results of the model purchasing functions

Construct	Indicator	Standardized factor loading (CFA)	Item to total-correla-tion	Cron-Bach's Alpha	Explained variance (EFA)	Construct reliability	Variance extracted
Cost reduction function	CRF 1	0.88***	0.74	0.85	86.7	0.86	75.5
	CRF 2	0.84***	0.74				
Volume function	VF 1	0.86***	0.51	0.67	75.7	0.70	54.7
	VF 2	0.60***	0.51				
Quality function	QF 1	0.81***	0.69	0.82	73.8	0.83	61.3
	QF 2	0.83***	0.72				
	QF 3	0.71***	0.62				
Purcahsing functions	PF 1	0.66***	0.46	0.67	61.1	0.77	53.2
	PF 2	0.83***	0.50				
	PF 3	0.69***	0.51				

***: $p < 0.001$

$\chi^2_{(11)} = 28.92$; $p = 0.002$; GFI = 0.973; AGFI = 0.932; CFI = 0.978; RMSEA = 0.073

C: Results of the model network functions

Construct	Indicator	Standardized factor loading (CFA)	Item to total-correla-tion	Cron-Bach's Alpha	Explained variance (EFA)	Construct reliability	Variance extracted
Market function	MF 1	0.85***	0.80	0.90	77.5	0.90	69.9
	MF 2	0.80***	0.76				
	MF 3	0.83***	0.77				
	MF 4	0.86***	0.80				
Scout function	SF 1	0.77***	0.71	0.85	69.5	0.85	59.0
	SF 2	0.72***	0.67				
	SF 3	0.79***	0.70				
	SF 4	0.79*	0.71				
Innovation development function	IDF 1	0.78***	0.73	0.89	75.2	0.89	66.8
	IDF 2	0.83***	0.77				
	IDF 3	0.83***	0.77				
	IDF 4	0.83***	0.76				
Network functions	NWF 1	0.83***	0.62	0.74	66.3	0.80	57.8
	NWF 2	0.84***	0.61				
	NWF 3	0.59***	0.48				

***: $p < 0.001$

$\chi^2_{(51)} = 107.96$; $p = 0.000$; GFI = 0.945; AGFI = 0.916; CFI = 0.974; RMSEA = 0.060

D: Results of the model

Construct	Indicator	Standardized factor loading (CFA)	Item to total-correla-tion	Cron-Bach's Alpha	Explained variance (EFA)	Construct reliability	Variance extracted
Relationship value fort he customer (C1)	RV 1	0.89***	0.85	0.93	82.5	0.93	76.6
	RV 2	0.83***	0.80				
	RV 3	0.93***	0.87				
	RV 4	0.85***	0.82				
Customer trust (C2)	CT 1	0.71***	0.65	0.85	62.6	0.85	53.0
	CT 2	0.72***	0.63				
	CT 3	0.74***	0.66				
	CT 4	0.70***	0.65				
	CT 5	0.77***	0.71				
Purchasing functions (C3)	PF 1	0.57***	0.46	0.67	61.1	0.68	41.6
	PF 2	0.65***	0.50				
	PF 3	0.72***	0.51				
Network functions(C4)	NWF 1	0.76***	0.62	0.74	66.3	0.75	50.5
	NWF 2	0.76***	0.61				
	NWF 3	0.60***	0.48				
Availability of alternative suppliers (C5)	AAS 1	0.92[a]	--	--	--	0.85	85.0

***: $p < 0.001$

a: Variance of error term was fixed at 15 %

$\chi^2_{(95)} = 182.87$; $p = 0.000$; GFI = 0.928; AGFI = 0.897; CFI = 0.961; RMSEA = 0.057

E: Discriminant validity of constructs

		C1	C2	C3	C4	C5
	Variance extracted	0.77	0.53	0.42	0.51	0.85
C1	0,77	Squared correlation of constructs				
C2	0,53	0.34				
C3	0,42	0.41	0.29			
K4	0,51	0.16	0.11	0.12		
C5	0,85	0.20	0.07	0.06	0.01	