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The Link between Salespeople's Job Satis- faction and Customer Satisfaction in a Business-to-Business Context

A Dvadic Analysis

Mannheim 2003

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Abstract

Although it has frequently been argued that the job satisfaction of a company's employees is an important driver of customer satisfaction, systematic research exploring this link is scarce. The present study investigates this relationship for salespeople in a business-to-business context. The theoretical justification for a positive impact of salespeople's job satisfaction on customer satisfaction is based on the concept of emotional contagion. The analysis is based on a dyadic data set which involves judgments provided by salespeople and their customers collected across multiple manufacturing and services industries. Results indicate the presence of a positive relationship between salespeople's job satisfaction and customer satisfaction. Furthermore, the relationship between salespeople's job satisfaction and customer satisfaction is found to be particularly strong in the case of high frequency of customer interaction, high intensity of customer integration into the value creating process, and high product/service innovativeness.

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1. INTRODUCTION

In recent years, many companies have invested considerable resources into programs for measuring and increasing employees' job satisfaction (e. g., Heskett, Sasser, and Schlesinger 1997). The implicit assumption underlying these activities is that increased employee satisfaction ultimately leads to increased customer satisfaction. Indeed, the link between employee satisfaction and customer satisfaction is a central element of a conceptual framework referred to as the service profit chain (e. g., Heskett, Sasser, and Schlesinger 1997). This model suggests a causal chain linking employee satisfaction to financial performance through the mediating constructs of employee loyalty, customer satisfaction and customer loyalty. However, the suggested link between employee satisfaction and customer satisfaction is based on limited and anecdotal evidence. A similar logic is provided by Reichheld (1996) who suggests a "loyalty-based cycle of growth" which contains a positive impact of employee loyalty on customer loyalty.

With respect to the academic domain, it is worth noting that customer satisfaction (e. g., Fornell et al. 1996; Oliver 1996) and employees' job satisfaction (e. g., Brown and Peterson 1993; Churchill et al. 1985) are two of the most widely studied constructs in marketing research. However, there is little systematic research relating the two constructs to each other. The existing studies mostly provide support for a positive link between employee and customer satisfaction in several industries such as fast-food restaurants (Bernhardt, Donthu, and Kennett 2000), the insurance sector (Schlesinger and Zornitsky 1991), the software industry (Tornow and Wiley 1991), and retailing (Wiley 1991). Another study, conducted by Loveman (1998) within the banking sector, does not provide empirical support for the suggested positive impact of employee satisfaction on customer satisfaction. The existing empirical research on this link, however, is subject to numerous limitations.

First, several studies have collected data exclusively from employees (e. g., Schlesinger and Zornitsky 1991) rather than using data from both sides of the dyad. Like many of the classical PIMS based studies (Buzzell and Gale 1987), this research has used managers' assessment of customers' perceptions. The problem with such an approach is that highly satisfied employees might rate customer satisfaction higher than dissatisfied employees based on their generally positive perception of the company (common method bias). Second, studies that have been based on dyadic data have typically been restricted to a single company (e. g., Bernhardt,

Donthu, and Kennett 2000; Loveman 1998; Tornow and Wiley 1991; Wiley 1991). Such a design may restrict the generalizability of the findings. Third, data analysis has typically been based on bivariate approaches (e. g., Loveman 1998; Schlesinger and Zornitsky 1991; Tornow and Wiley 1991; Wiley 1991). A main concern with bivariate analysis is that it is not possible to account for other factors that may affect the dependent variable which may lead to erroneous conclusions concerning the relationship of interest (omitted variables bias). Furthermore, simple bivariate analysis does not allow for a distinction between different mechanisms through which the independent variable influences the dependent variable. This issue is highly relevant in the context of our study, because one might argue that salespeople's job satisfaction affects customer satisfaction directly as well as indirectly (i. e., through some mediating variables related to salespeople's behavior). Simple bivariate analysis does not allow for distinguishing direct and indirect effects.

Fourth, to the best of our knowledge, no empirical study has examined factors that influence the strength of the link between employees' job satisfaction and customer satisfaction. We consider this to be a serious limitation because it seems highly plausible that there are conditions under which the impact of employees' job satisfaction on customer satisfaction is particularly strong. As an example, one might argue that the relationship between the two constructs is much stronger if the interaction with customers is more frequent as opposed to situations with very limited customer interaction.

Fifth, previous empirical research has almost exclusively studied consumer services (e. g., Bernhardt, Donthu, and Kennett 2000; Loveman 1998; Schlesinger and Zornitsky 1991; Tornow and Wiley 1991; Wiley 1991). Thus, the question whether there is a positive relationship between employees' job satisfaction and customer satisfaction in a B2B-context remains essentially unexplored. This question is interesting since, based on previous work in B2B marketing, different predictions can be made. On the one hand, one might argue that interpersonal interaction between the supplier and the customer company is highly relevant in B2B settings (e. g., Weitz and Bradford 1999), so that a positive link between the two constructs would seem plausible also in this context. On the other hand, one might argue that transactions in B2B marketing are often highly technical in nature and driven by highly rational decisions on the customer side (e. g., Eckles 1990; Webster 1991), so that the relevance of customer contact employees' satisfaction may be low, if not neglectable in this context.¹

Against this background, this paper aims at providing insight into the relationship between employees' job satisfaction and customer satisfaction in a B2B-context. While, in B2B marketing, there are typically several people from the supplier organization interacting with customers (e. g., salespeople, customer service people, technical experts), we focus on salespeople in studying employees' job satisfaction. This approach is based on evidence that, despite the growing importance of customer service in B2B marketing (e. g., Anderson and Narus 1995; Webster 1991), the sales person is still the primary point of contact for the customer (e. g., Anderson and Narus 1999; Weitz and Bradford 1999). As an example, Weitz and Bradford (1999, p. 241) highlight the important role of salespeople in a B2B-context: "As the primary link between the buying and selling firms, they have considerable influence on the buyer's perceptions of the seller's reliability and the value of the seller's services and consequently the buyer's interest in continuing the relationship". In this study, we address two research questions, the first of which focuses on the main effect between the two constructs:

Is there a positive relationship between salespeople's job satisfaction and customer satisfaction?

The second research question addresses moderators of the relationship under consideration. Our basic theoretical reasoning in the context of moderator effects is that the suggested direct effect of the sales person's job satisfaction on customer satisfaction depends on the visibility of the sales person's job satisfaction to the customers. We therefore chose three moderator variables which presumably affect the extent to which a sales person's job satisfaction is visible to customers. They include frequency of customer interaction, intensity of customer integration into the value creating process, and product/service innovativeness. Against this background, the second research question of our study is:

Do frequency of customer interaction, intensity of customer integration into the value creating process, and product/service innovativeness moderate the link between salespeople's job satisfaction and customer satisfaction?

Our analysis is based on dyadic data, i. e., data involving judgments by employees (i. e., salespeople) and their customers, ruling out the risk of a common method bias in the data. In

order to enhance the generalizability of our findings, we use data collected from multiple companies in different manufacturing and services industries in a B2B-context. Moreover, the link between employee satisfaction and customer satisfaction is not studied with a simple bivariate approach. Rather, we analyze a causal model which distinguishes between a (rather obvious) indirect effect of salespeople's job satisfaction on customer satisfaction (through the mediating construct of quality of customer interaction) and a direct effect. The interesting question, then is, whether the effect of job satisfaction on customer satisfaction is totally mediated by quality of customer interaction. Our model also controls for other important antecedents of customer satisfaction. Finally, as is obvious from the second research question, we analyze moderators of the link between employees' job satisfaction and customer satisfaction. Thus, our research design allows us to overcome the five major limitations of previous research.

Research of this type is relevant from both a theoretical and a managerial perspective. From a theoretical perspective, this research can contribute to an improved understanding of the antecedents of customer satisfaction. While previous research has identified numerous drivers of customer satisfaction, such as product/service quality (e. g., Anderson, Fornell, and Lehmann 1994; Gotlieb, Grewal, and Brown 1994) and quality of customer related processes (e. g., Banting 1984; Homburg and Rudolph 2001), the potential role of salespeople's job satisfaction as an antecedent of customer satisfaction has not been systematically analyzed in previous research (as discussed above). Also, our research can contribute to an improved understanding of the role of customer contact personnel in B2B settings. From a managerial perspective, our research provides guidance for managers concerning the appropriateness of investments into employee satisfaction. More specifically, if our study reveals a positive impact of salespeople's job satisfaction on customer satisfaction, this result should encourage managers in business-to-business companies to strive for a high level of salespeople's job satisfaction in order to secure customer satisfaction. Additionally, the moderator analysis helps managers determine situations in which the link between employees' job satisfaction and customer satisfaction is particularly strong. In these situations, investments into high levels of salespeople's job satisfaction are particularly promising in terms of customer satisfaction.

2. FRAMEWORK AND HYPOTHESES

Our unit of analysis is a specific sales person in a B2B setting and the customer base for which this sales person is responsible. We thus analyze how this sales person's job satisfaction affects customer satisfaction. We conceptualize employees' *job satisfaction* in accordance with previous research (e. g., Locke 1976) as an attitude which results from an evaluative process, where some comparison standard about the work environment is compared to the actually perceived work environment. *Customer satisfaction* refers to an affective state that is the emotional reaction to an experience or a sequence of experiences with a supplier. It is produced by the customer's assessment of the degree to which a supplier's performance is perceived to have met or exceeded some comparison standard. This conceptualization of customer satisfaction is consistent with previous research (e. g., Cadotte, Woodruff, and Jenkins 1987; Spreng, MacKenzie, and Olshavsky 1996).

Figure 1 shows the basic framework underlying the study. As mentioned above, the sales person's job satisfaction is supposed to influence customer satisfaction not only in a direct way, but also indirectly through the mediating construct of the quality of customer interaction.

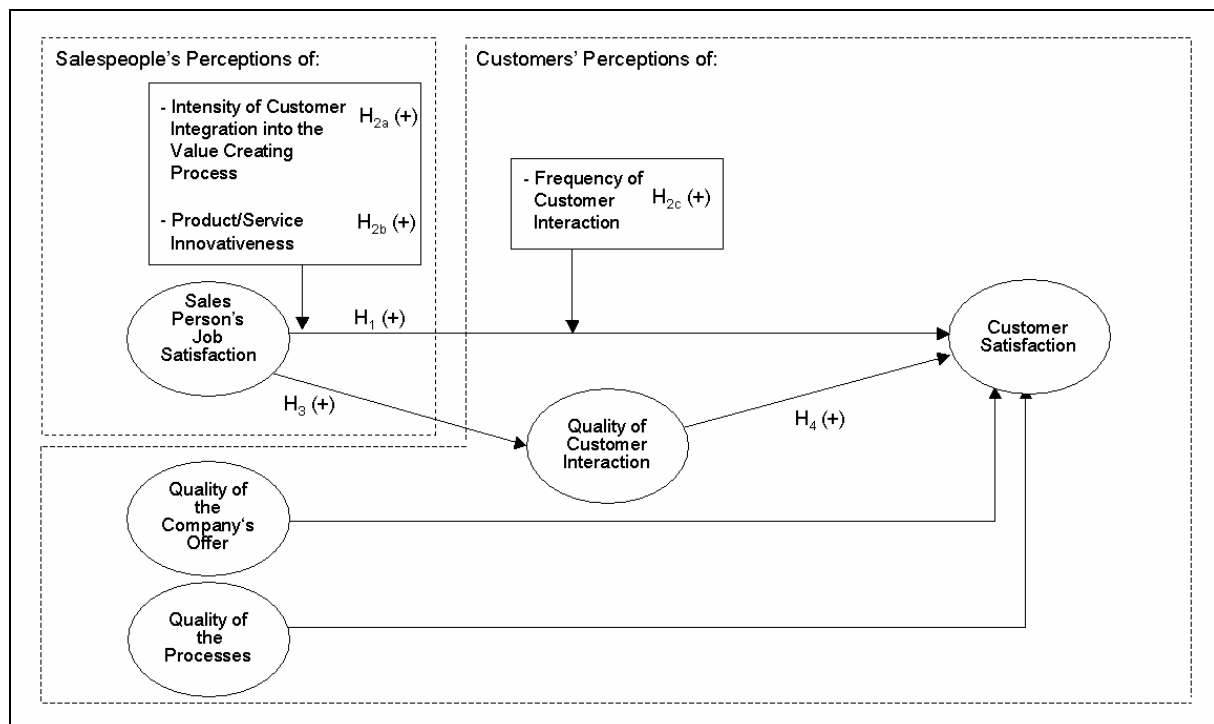


Fig. 1: Relationship Between Sales Personnel's Job Satisfaction and Customer Satisfaction: A Conceptual Model

The framework also includes two additional predictors of customer satisfaction referred to as “quality of the company’s offer” and “quality of customer related business processes”. The first of these constructs captures aspects of product and service quality, which have been identified as key antecedents of customer satisfaction in numerous studies (e. g., Gotlieb, Grewal, and Brown 1994). The second construct refers to processes such as order handling and invoicing, the quality of which has also been identified as an important driver of customer satisfaction in B2B settings (e. g., Homburg and Rudolph 2001). The inclusion of these control variables is particularly important because it is highly plausible that they may be positively correlated with both, salespeople’s job satisfaction and customer satisfaction. Including these constructs as additional predictors of customer satisfaction allows us to find out whether salespeople’s job satisfaction has a significant impact on customer satisfaction after accounting for the variance explained by the quality of the company’s offer and the quality of customer related business processes.

In the following, we develop hypotheses within this framework. We first focus on our basic hypothesis related to the effect of the sales person’s job satisfaction on customer satisfaction. After that we develop hypotheses related to moderator effects on this relationship. Finally, we suggest hypotheses concerning the remaining effects within our model.

2.1. Basic Hypothesis

To justify the main effect in our model, we draw upon the concept of “emotional contagion” (Chartrand and Bargh 1999; Gump and Kulik 1997; Hatfield et al. 1992, 1994). This concept is rooted in the field of social psychology. According to Howard and Gengler (2001, p. 189), emotional contagion “refers to someone (hereafter the receiver) catching the emotion being experienced by another (hereafter the sender), wherein the emotion of the receiver converges with that of the sender”. Besides other fields of interpersonal interaction, the concept of emotional contagion has also been studied in the context of company employees interacting with customers (e. g., Pugh 2001; Verbeke 1997). In general, these studies provide support for the presence of emotional contagion effects between customer contact employees (e. g., salespeople) and customers. For example, Howard and Gengler (2001) found that product attitudes were positively influenced when customers “caught” a positive emotion from the customer contact employees. Additional conceptual and empirical support for the phenomenon that

emotions displayed by a sales person transfer to the customer is provided by Pugh (2001) and Verbeke (1997).

To make the mechanism driving emotional contagion more concrete, we argue that a customer will directly perceive certain emotional states of an employee that are associated with job satisfaction. As is typical in the phenomenon of emotional contagion (Pugh 2001), these emotional correlates of job satisfaction are typically not consciously controlled by the employee. As an example, the level of experienced job stress has been shown to be a negative correlate of job satisfaction (e. g., Sullivan and Bhagat 1992). Thus, a highly dissatisfied sales person will exhibit a significant level of emotional tension that will be felt by the customer (e. g., Singh, Goolsby, and Rhoads 1994) and affect the customer's satisfaction via the process of emotional contagion. This, in turn, will create cognitive tension for the customer, thus reducing customer satisfaction (e. g., Oshikawa 1968; Parkington and Schneider 1979; Russo, Meloy, and Medvec 1998). On the other hand, employees with a high level of job satisfaction will appear to the customer more balanced and pleased with their environment. In this case, the process of emotional contagion will lead to a positive influence on the level of customer satisfaction. In summary, the process of emotional contagion can be described as follows (Pugh 2001, p. 1020): "... customers, when exposed to the emotional displays of employees, experience corresponding changes in their own affective states". Following this, we propose

H₁: The greater the sales person's job satisfaction, the greater the customer satisfaction.

2.2. Hypotheses on Moderating Effects

Frequency of Customer Interaction: This construct relates to the frequency of interaction between a company's employees and customers (Murray, Kotabe, and Wildt 1995). We argue that the level of salespeople's job satisfaction will be more visible to customers in relationships with frequent interactions. Therefore, the link between job satisfaction and customer satisfaction is supposed to be stronger, the higher the frequency of customer interaction is. In other words, in the case of high frequency of customer interaction a change in job satisfaction will lead to a higher change in customer satisfaction than in the case of low frequency of customer interaction. We hypothesize

H_{2a}: The higher the frequency of customer interaction, the stronger is the relationship between the sales person's job satisfaction and customer satisfaction.

Intensity of Customer Integration into the Value Creating Process: This construct relates to the degree to which customers are involved into a company's value creating process. This level of integration is particularly high in a services context due to the "inseparability of production and consumption" which is a key characteristic of services (Zeithaml, Parasuraman, and Berry 1985, p. 33). As a consequence of this characteristic, the customer must be present during the production of many services. However, customer integration is not restricted to the services sector. As an example, customer integration can encompass such things as customers' participation in the new product development process (e. g., von Hippel 1988). In the case of high customer integration salespeople play an important role for the customer because of their role as boundary spanners (e. g., Singh 1988). In relationships with high customer integration the level of salespeople's job satisfaction will be more visible to customers and thus, the link between job satisfaction and customer satisfaction will be stronger. We hypothesize,

H_{2b}: The higher the intensity of customer integration into the value creating process, the stronger is the relationship between the sales person's job satisfaction and customer satisfaction.

Product/Service Innovativeness: This construct refers to the rate of change in the products or services themselves and the changes around the products or services (e. g., Murray, Kotabe, and Wildt 1995). A lot of research in recent years has emphasized the important role of sales personnel in the context of highly innovative products (e. g., Kleinschmidt and Cooper 1991; Kotabe and Swan 1995; Olson, Walker, and Ruekert 1995). Olson, Walker, and Ruekert (1995) point out that when the product is new to customers, customers are not able to use prior experiences with a product. We argue that customers tend to place greater emphasis on the sales person in charge of them when a product is highly innovative. Support by salespeople is needed by the customer in order to track and understand the changes of a product. Thus, a sales person's job satisfaction will be more visible for customers in the context of highly innovative products/services. Thus, we suggest

H_{2c}: The higher the product/service innovativeness, the stronger is the relationship between the sales person's job satisfaction and customer satisfaction.

2.3. Additional Hypotheses

In addition to the direct effect of the sales person's job satisfaction on customer satisfaction we also hypothesize an indirect effect through the mediating construct of the quality of customer interaction. This construct is defined as the extent to which customer interaction is open, flexible, and customer oriented. It is conceptually rooted in the B2B marketing literature (e. g., Cannon and Homburg 2001; Homburg 1998) and captures key aspects of customer interaction behavior that have been identified in the relevant literature.

We argue that salespeople's job satisfaction will have a positive effect on the quality of customer interaction. This reasoning is in line with a research stream revealing favorable behavioral outcomes of salespeople's job satisfaction (e. g., Bhagat 1981, 1982; Brown and Peterson 1993, 1994). As an example, job satisfaction has been shown to be positively related to prosocial behaviors, including helping behaviors, in organizations (e. g., MacKenzie, Podsakoff, and Ahearne 1998; Smith, Organ, and Near 1983). Moreover, studies by Behrman and Perreault (1984) and Singh, Verbeke, and Rhoads (1996) reveal links between industrial salespeople's job satisfaction and those aspects covered in our construct of quality of customer interaction (i. e., openness, flexibility, and customer orientation). Based on the results of these studies we hypothesize,

H₃: The higher the sales person's job satisfaction, the higher the quality of customer interaction.

We further argue that the quality of customer interaction will be positively related to customer satisfaction. This hypothesis is consistent with previous research exploring the antecedents of customer satisfaction in B2B relationships (e. g., Anderson and Narus 1990; Cannon and Perreault 1999). Thus, we hypothesize,

H₄: The higher the quality of customer interaction, the higher the customer satisfaction.

3. METHODOLOGY

3.1. Sample and Data Collection

Data were obtained from salespeople and their customers. Data collection was organized in several steps. In the first step, 1,305 salespeople were randomly selected from a listing maintained by a commercial address provider. The selected salespeople had clearly defined re-

sponsibility (by regions or industries) for a specific customer base. In the case that a company had business customers as well as consumer customers, the process of respondent identification made sure that the selected respondent was responsible for business customers. About two thirds of these salespeople represented manufacturing industries such as the machinery, electronic and automotive industry. The remaining third represented the service sector, i. e., banking and insurance services.

The salespeople were contacted by telephone and asked to participate in the study. Depending on their readiness to participate, telephone interviews were carried out either immediately or at a later time. Five weeks later, this process yielded 221 telephone interviews (giving a response rate of 16.9 %). Salespeople were asked about their own level of job satisfaction. During the interviews the salespeople were asked for about five addresses of customers they are responsible for. 115 of the 221 salespeople agreed to give names and addresses of their customers. These 115 salespeople provided a total of 488 customers.

In the second step, these customers were contacted in a telephone survey. The goal was to obtain two customer assessments per sales person and we stopped collecting data related to a dyad after having completed two customer observations. Respondents were essentially asked about their satisfaction with the supplier who had identified them. A total of 222 usable customer responses were received (giving a response rate of 45.5 %). The procedure led us to a total of 111 dyadic cases consisting of a sales person response and two related customer responses.

In order to further increase our sample size we collected additional dyadic data using the same procedure and the same respondent basis as in the first wave of data collection. We conducted a telephone based follow-up activity among those salespeople who could not be reached by telephone in the first wave or had refused to participate because of time constraints. By this procedure we received 53 additional usable dyadic cases. Thus, our data base consists of 164 dyadic cases consisting of a sales person response and two related customer responses. Table 1 provides information on sample characteristics. For subsequent data analysis the two customer responses were averaged, as suggested in the literature (e. g., Deshpandé, Farley, and Webster 1993; Morgan and Piercy 1998).

We acknowledge that our approach for obtaining dyadic data may bring about a systematic bias in the level of customer satisfaction since salespeople are likely to select customers

whom they know well and with whom they have good relationships. It is important to note, though, that such a positive bias would only lead to a generally higher level of the dependent variable in our study (i. e., customer satisfaction). Since the causal modeling approach we will use for data analysis is entirely based on covariances between measured variables, such a positive bias would not affect the findings of our study (i. e., strength and significance of relationships between constructs).

		Salespeople	%
Industry	Chemical Industry		14.6
	Machinery Industry		19.5
	Electronic Industry		7.9
	Automotive Industry		14.6
	Plastics Industry		12.2
	Banking Services		26.3
	Insurance Services		4.9
Firm Size (Number of Employees)	less than 50		1.8
	50 to 100		6.1
	100 to 200		25.0
	200 to 400		23.2
	400 to 600		9.8
	600 to 1.000		6.1
	1.000 to 2.500		14.0
	more than 2.500		14.0
		Customers	
Industry	Distributors		24.7
	Machinery Industry		15.2
	Chemical Industry		12.4
	Automotive Industry		11.5
	Services		21.3
	Building Materials		8.3
	Other Manufacturing Industries		6.6
Firm Size (Number of Employees)	less than 50		15.4
	50 to 100		13.3
	100 to 200		10.0
	200 to 400		10.9
	400 to 600		20.5
	600 to 1.000		7.9
	1.000 to 2.500		6.0
	more than 2.500		16.0

Table 1: Sample Characteristics

As mentioned before, different constructs in our framework are measured with data obtained from different sides of the dyad (see Figure 1). While the sales person's job satisfaction was measured on the basis of the salespeople's responses, customer satisfaction, quality of customer interaction, quality of the company's offer, and quality of customer related business processes was based on data collected from the customers.

3.2. Measure Development and Assessment

The constructs used in our study were measured by multiple items with the exception of frequency of customer interaction and return on sales. Items were generated based on interviews with selected salespeople and a review of the extant literature. Six items adapted from Babin and Boles (1998) and Brayfield and Rothe (1951) were used to assess the *sales person's job satisfaction*. Consistent with our conceptualization of this construct, the items reflect overall satisfaction rather than any specific dimension of satisfaction.

The construct *quality of customer interaction* is measured from the customer's perspective in our study (see Figure 1). The four-item scale we use includes a number of aspects that have been used to capture the quality of interaction in business relationships in previous studies (e. g., Cannon and Homburg 2001; Homburg 1998). They include open information exchange between two exchange parties and flexibility.

Concerning the conceptualization of *customer satisfaction* two things are worth mentioning. First, we refer to overall satisfaction rather than to any specific facet of the offer (e. g., Boulding et al. 1993; Johnson and Fornell 1991). Second, we use a cumulative conceptualization of this construct. This means that we look at the satisfaction level that has developed over time within the supplier-customer relationship rather than satisfaction with a specific transaction/interaction. The construct was assessed using adapted items developed by Cannon and Perreault (1999).

The two control variables, *quality of the company's offer* and *quality of customer related business processes*, are also measured from the customer's perspective in our study (see Figure 1). With respect to the first construct, we use two items which directly ask respondents for an evaluation of the supplier's product and service quality, respectively. Similar items have been used by Fornell et al. (1996). The second construct is measured through a single item.

The first moderator variable used in our study is *frequency of customer interaction*. It was measured by a single item adopted from Murray, Kotabe, and Wildt (1995). Some previous studies which have analyzed this construct used a multi-item measurement approach for it. However, the key reason for this multi-item scale is the intention to capture the use of different communication modes (written communication, personal communication etc.). Such an approach has for example been used in the studies by Cannon and Homburg (2001) and Mohr, Fisher, and Nevin (1996). Since different communication modes are not an issue studied in

our research, we feel that a single item measurement for frequency of customer interaction is appropriate in this study.

A four-item scale was used to measure the construct of *intensity of customer integration into the value creating process*. Items capturing the domain of this construct were generated based upon previous research (e. g., Kelley, Donnelly, and Skinner 1990; Zeithaml, Parasuraman, and Berry 1985). The scale for measuring our third moderator, *product/service innovativeness*, is adapted from Murray, Kotabe, and Wildt (1995). It includes six items and refers to such issues as updating products/services with new features or adding new products/services to the company's offer.

In order to assess measurement validity, a confirmatory factor analysis containing all the constructs in our framework was run with LISREL VIII (Jöreskog and Sörbom 1993). Confirmatory factor analysis is considered superior to more traditional criteria (such as Cronbach's Alpha) in the context of scale validation because of its less restrictive assumptions (Bagozzi, Yi, and Phillips 1991; Gerbing and Anderson 1988). The overall fit indices (GFI = .99; AGFI = .98; CFI = .99; RMSEA = .03) provide support for this model. Furthermore, the ratio of $\chi^2 = 356.44$ over $df = 243$ is 1.4, which also indicates a good fit of the model (Baumgartner and Homburg 1996). Table 2 shows the confirmatory factor analysis results together with additional reliability information for the individual constructs. A complete list of items with their individual reliabilities is shown in the Appendix.

As can be seen in the Appendix, the individual item reliabilities of a small number of items are below the critical value of .4 which is suggested by Bagozzi and Baumgartner (1994). These items were retained because we felt that they cover important facets of the underlying constructs. This approach is consistent with the perspective of Bagozzi and Baumgartner (1994, p. 402): "Although small individual item reliabilities may point to inadequate measurement of a construct by a given indicator, it is usually more important that the construct be measured adequately by all indicators of the construct jointly. This can be assessed by computing an index of composite reliability."

Factor	No. of Items	Cronbach's Alpha (standardized)	Composite Reliability	Average Variance Extracted
Sales Person's Job Satisfaction	6	.97	.98	.66
Quality of Customer Interaction	4	.83	.84	.50
Quality of the Company's Offer	2	.73	.81	.50
Quality of Customer Related Business Processes	1	--	--	--
Customer Satisfaction	5	.91	.92	.55
Frequency of Customer Interaction	1	--	--	--
Intensity of Customer Integration into the Value Creating Process	4	.88	.90	.57
Product/Service Innovativeness	6	.87	.90	.43

Table 2: Measurement Information

Composite reliability represents the shared variance among a set of observed variables measuring an underlying construct (Fornell and Larcker 1981). Generally, a composite reliability of at least .6 is considered desirable (Bagozzi and Yi 1988, p. 82). This requirement is met for every factor. The values of average variance extracted also provide satisfactory results with the exception of product/service innovativeness, which has an average variance extracted slightly below .5. Furthermore, as can be seen from Table 2, Coefficient Alpha values are all over .8.

LISREL VIII was also used to test discriminant validity as suggested by Fornell and Larcker (1981). The results support discriminant validity because, for every pair of factors, the squared correlation between them is below the two values of average variance extracted. A factor correlation matrix is shown in Table 3.

	SJS	CS	QCI	QCO	QCPr	Frequ CI	CIntegrat	P/S Innov
SJS	1.00							
CS	.28*	1.00						
QCI	.21*	.64*	1.00					
QCO	.06	.72*	.60*	1.00				
QCPr	.17	.49*	.29*	.19*	1.00			
Frequ CI	.02	.02	-.01	.05	-.01	1.00		
CIntegrat	.05	.05	.22*	.27*	.22*	.14	1.00	
P/S Innov	.53*	.16	.01	.08	.01	-.07	.27*	1.00

SJS = Sales Person's Job Satisfaction
 CS = Customer Satisfaction
 QCI = Quality of Customer Interaction
 QCO = Quality of the Company's Offer
 QCPr = Quality of Customer Related Business Processes
 Frequ CI = Frequency of Customer Interaction
 CIntegrat = Intensity of Customer Integration into the Value Creating Process
 P/S Innov = Product/Service Innovativeness
 * = p < .05

Table 3: Factor Correlation Matrix

3.3. Data Analysis Procedure

First, the main effects shown in Figure 1 were estimated via causal analysis via LISREL VIII. The key benefit of this methodology in the context of our study is that it allows for a distinction between direct and indirect effects (Jöreskog and Sörbom 1982, 1993). Next, we assessed the influence of the three moderator variables shown in Figure 1. We conducted separate median splits in our sample based on the values of an individual moderator variable. Subsequently, Multiple Group LISREL was performed comparing the two sub-samples (high versus low values of the moderator variable). More specifically, we compared two models that are different only with respect to the effect of the sales person's job satisfaction on customer satisfaction. One model restricts this parameter to be equal across sub-samples while the more general model allows this parameter to vary across groups. Since these are nested models with the general model having one degree of freedom less than the restricted model, the χ^2 -value will always be lower for the general model than for the restricted model. The question is whether the improvement in χ^2 when moving from the restricted to the more general model is significant. This would indicate differential effects of job satisfaction on customer satisfaction in the two sub-samples, thus supporting the hypothesis of a moderator effect.

4. RESULTS

4.1. Main Effects

The overall fit measures suggest that the model shown in Figure 1 is a plausible representation of the structures underlying the empirical data. The goodness-of-fit index, adjusted goodness-of-fit index, comparative-fit index, and chi-square to degrees of freedom ratio (GFI = .91; AGFI = .90; CFI = .91) clearly exceed the threshold values recommended in the literature (Bagozzi and Yi 1988; Baumgartner and Homburg 1996). Furthermore, the ratio of $\chi^2 = 434.27$ over $df = 210$ is 2.07, which also indicates a good fit of the model (Baumgartner and Homburg 1996). Thus, we conclude that the model fits the data well. The results concerning the main effects are shown in Figure 2.

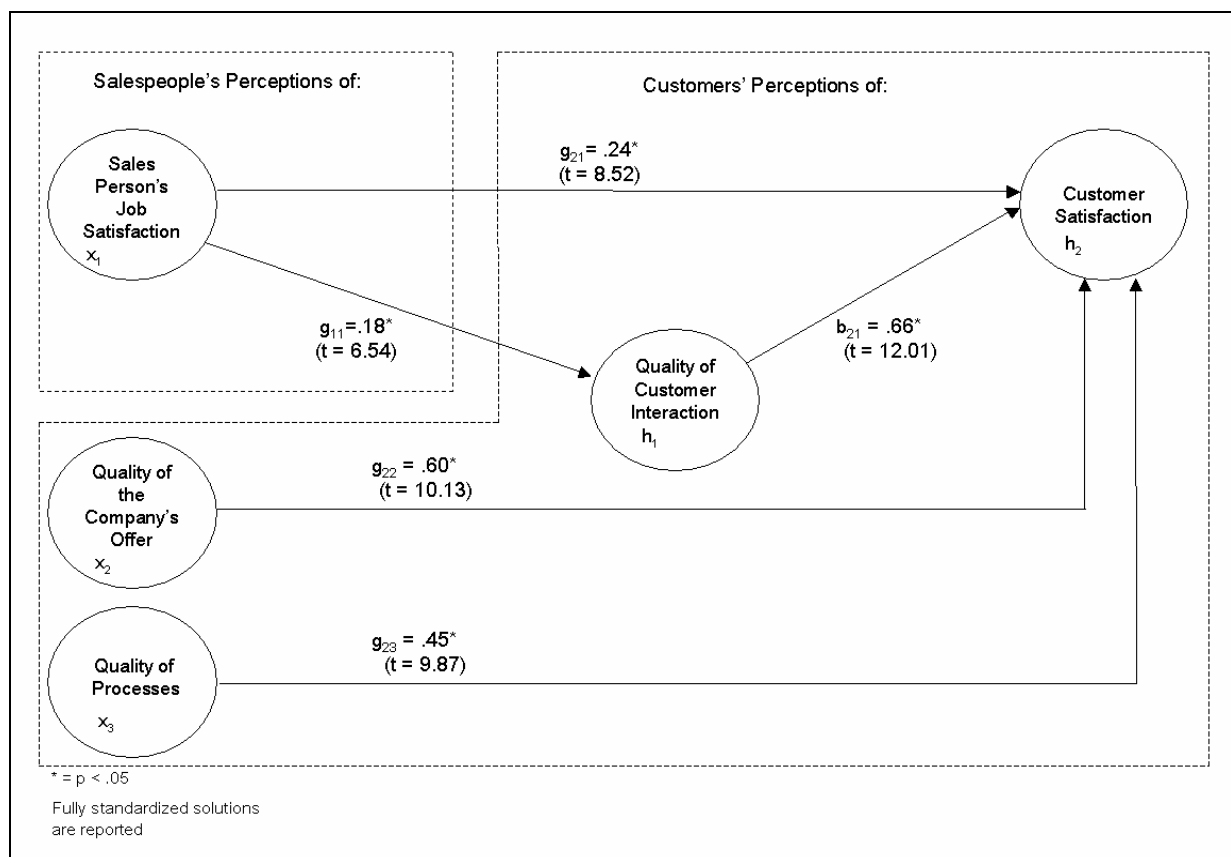


Figure 2: Results of Main Effects

Hypotheses related to the main effects in our model were supported with parameter estimates being significant on the 5 % level in every case. H_1 which suggested a positive link between

salespeople's job satisfaction and customer satisfaction was supported by the data ($\gamma_{21} = .24$). Also, the indirect effect of salespeople's job satisfaction on customer satisfaction, mediated by the quality of customer interaction, was supported ($\gamma_{11} = .18$, $\beta_{21} = .66$). This finding is particularly important, since this causal link is supported by data collected from different sides of the dyad. While job satisfaction was evaluated by the salespeople, customer satisfaction and the quality of customer interaction was evaluated by the customers. Furthermore, both control variables, i. e., quality of the company's offer ($\gamma_{22} = .60$) and quality of customer related business processes ($\gamma_{23} = .45$) exhibit positive significant effects on customer satisfaction.

4.2. Moderating Effects

After having found support for the main effects, we examined the hypothesized moderator effects in order to gain deeper insights into the relationship between a sales person's job satisfaction and the customer satisfaction. The corresponding results are shown in Table 4.

Moderator Variable	Low Value of Moderator	High Value of Moderator	Hypothesized Moderator Effect	Chi-Square Difference ($\Delta df = 1$)
Frequency of Customer Interaction (H _{2a})	$\gamma_{21} = .09$ (t = 2.95)	$\gamma_{21} = .19$ (t = 3.97)	γ_{21} low < γ_{21} high	$\Delta\chi^2=12.33^*$
Intensity of Customer Integration into the Value Creating Process (H _{2b})	$\gamma_{21} = .10$ (t = 1.38)	$\gamma_{21} = .29$ (t = 5.24)	γ_{21} low < γ_{21} high	$\Delta\chi^2=4.02^*$
Product/Service Innovativeness (H _{2c})	$\gamma_{21} = .11$ (t = 2.24)	$\gamma_{21} = .22$ (t = 4.94)	γ_{21} low < γ_{21} high	$\Delta\chi^2=32.44^*$
* chi-square difference is significant p < .05				

Table 4: Results of Multiple Group Causal Analysis

A positive moderating effect of the frequency of customer interaction on the link between the sales person's job satisfaction and customer satisfaction was suggested in hypothesis H_{2a}. As can be seen in Table 4, in case of low frequency of interaction, the effect of job satisfaction on customer satisfaction is weaker ($\gamma_{21, \text{low}} = .09$; $p < .05$) than in situations where interaction happens frequently ($\gamma_{21, \text{high}} = .19$; $p < .05$). Also, the chi-square difference ($\Delta\chi^2 = 12.33$; $p < .05$) indicates the presence of a significant moderator effect. Thus, H_{2a} is confirmed.

H_{2b} considered the positive moderating effect of the intensity of customer integration into the value creating process on the link between job satisfaction and customer satisfaction. As can be seen from Table 4, we observe a strong impact of job satisfaction on customer satisfaction in the case of high intensity of customer integration ($\gamma_{21, \text{high}} = .29$; $p < .05$). That means that, in the presence of intensive customer integration, job satisfaction is an important driver of customer satisfaction. On the other hand, we do not observe a significant effect in the case of low intensity of customer integration ($\gamma_{21, \text{low}} = .10$; $p > .05$). Again, the chi-square difference indicates significance ($\Delta\chi^2 = 4.03$; $p < .05$). Thus, H_{2b} is also supported by our findings.

Similarly, we do find support for H_{2c} which suggested a positive moderating effect of product/service innovativeness. That means that, in the case of low product/service innovativeness, the effect of job satisfaction on customer satisfaction is weaker ($\gamma_{21, \text{low}} = .11$; $p < .05$) as opposed to products/services which are more innovative ($\gamma_{21, \text{high}} = .22$; $p < .05$). The chi-square difference is highly significant in the case of this moderator ($\Delta\chi^2 = 32.44$; $p < .05$).

In summary, we find support for each of the three suggested moderating effects. In each case, the χ^2 -difference between the model that restricts the job satisfaction-customer satisfaction link to be equal across sub-groups and the unrestricted model is significant. Moreover, the link between the sales person's job satisfaction and customer satisfaction is consistently higher in the sub-samples with high values of the moderator variables. Thus, H_{2a}, H_{2b}, and H_{2c} are supported by our empirical analysis.

4.3. Tests of Stability

A critical issue in studying complex causal models relates to the stability of the parameter estimates. It depends largely on the relationship between the sample size and the number of parameters to be estimated (Baumgartner and Homburg 1996). In order to analyze the stability of our results and to make sure that removing of a few observations would not radically

change our findings, we conducted a number of stability tests. In these tests we randomly eliminated 10 % of the observations and re-ran the analysis (including both, the tests of main effects and of moderator effects) based on the reduced sample. We carried out 10 independent tests.

The results of our hypotheses testing were confirmed in every case with only very minor changes in the estimated parameters. The standardized coefficients (see Figure 2) referring to γ_{21} varied from .20 to .26. Significance on the one percent level was observed in each of the ten analyses. Also, there was limited variance for γ_{11} (from .17 to .22; $p < .05$), β_{21} (from .62 to .67, $p < .05$), γ_{22} (from .59 to .62; $p < .05$), and γ_{32} (from .42 to .47; $p < .05$). In summary, these tests provide strong support for the stability of our findings concerning the main effects shown in Figure 2.

Similar findings were observed for the stability tests concerning the moderating effects. More specifically, in each case, the χ^2 -difference between the model that restricts the job satisfaction-customer satisfaction link to be equal across sub-groups and the unrestricted model was significant. Moreover, the link between job satisfaction and customer satisfaction was consistently higher in the sub-samples with high values of the moderator variables. Thus, our findings concerning the moderating effects are also stable against minor changes of the database.

5. DISCUSSION

5.1. Research Issues

Although a positive link between employees' job satisfaction and customer satisfaction has frequently been suggested, systematic theory driven research based on sound empirical analysis exploring this link is scarce. This study focuses on the link between job satisfaction and customer satisfaction in a B2B-context. Consistent with previous literature, we argue that salespeople are the primary boundary spanners towards customers in the B2B-context. Based on this reasoning we argued that a sales person's job satisfaction would positively affect the customer satisfaction for which this sales person is responsible.

Our research provides new insights into the relationship between employees' job satisfaction and customer satisfaction. More specifically, our findings show that a sales person's job satisfaction does have an impact on customer satisfaction. It is particularly important that our study has demonstrated the presence of this relationship based on dyadic data because this approach rules out the possibility of a common method bias.

Moreover, our study reveals a positive impact of salespeople's job satisfaction on customer satisfaction in a model where an indirect effect through the mediating construct of quality of customer interaction is controlled for. Thus, our findings indicate that salespeople's job satisfaction influences customer satisfaction in two different ways, i. e., directly (through the process of emotional contagion) and indirectly (through the way salespeople interact with their customers). We feel that this distinction between direct and indirect effects is an important contribution of our study which provides a deeper understanding of the link between the two constructs than previous research.

Our study also shows that there are contingency factors which systematically strengthen or weaken the relationship between job satisfaction and customer satisfaction. To the best of our knowledge, our study is the first to address the issue that the link between job satisfaction and customer satisfaction may not be equally strong in every situation. More specifically, our research shows that this relationship is particularly strong in the case of high frequency of customer interaction, high intensity of customer integration into the value creating process, and high product/service innovativeness.

An interesting research issue of our study relates to the concept of emotional contagion which has attracted limited attention in marketing research so far. In this study, we find support for our theoretical reasoning that emotional contagion leads to a positive impact of salespeople's job satisfaction on customer satisfaction. We feel that this finding underlines the importance of this concept for studying interpersonal interaction in marketing research.

It is also worth emphasizing that we find a positive link between salespeople's job satisfaction and customer satisfaction in a B2B-context. Literature in B2B marketing tends to suggest that transactions in business-to-business marketing are often highly technical in nature and driven by highly rational decisions on the customer side (e. g., Eckles 1990; Webster 1991) so that the relevance of customer contact employees' satisfaction may be low, if not neglectable in

this context. However, our study reveals that employee satisfaction does play an important role in driving customer satisfaction in B2B settings.

Several limitations of our study need to be mentioned. First, the customers which were surveyed in our empirical study had been identified by salespeople which may produce a selection bias. Although we feel, as mentioned before, that the key consequence of this would be a positive bias in the mean value of customer satisfaction which would not affect the results of our analyses, we cannot totally rule out the possibility that the selection bias also has other consequences. Certainly, dyadic data with no influence of salespeople on customer selection would have been a superior database for our study. Second, our approach to studying moderator effects based on median splits of the data, while allowing us to do the moderator analysis in the framework of a causal model distinguishing direct and indirect effects, constitutes a limitation of our study because this involves a reduction of the scale level (from ordinal to high/low) and therefore a loss of information. Moderated regression analysis (Sharma, Durand, and Gur-Arie 1981; Stone 1988) would have been an alternative method which avoids median splits but requires a more simple basic model (i. e., a model which does not contain indirect effects) than the framework which our study is based upon. Finally, the use of two single-item measures may be mentioned as a limitation.

Based on our research, several avenues for future research in this area can be suggested. First, future research might look at the relationship between salespeople's job satisfaction and customer satisfaction in a more comprehensive framework including additional organizational constructs. As an example, one could argue that organizational effectiveness might have an impact on both, employees' job satisfaction and customer satisfaction. If this was the case, it would be interesting to find out whether the impact of job satisfaction on customer satisfaction is still significant after accounting for this common predictor variable. While our finding that this relationship is subject to systematic moderation of third variables suggests that the relationship cannot totally be attributed to common predictors of the two constructs, exploring the link between job satisfaction and customer satisfaction in a more comprehensive framework is certainly an interesting area for future research.

Second, future research could consider additional moderator variables which strengthen or weaken the link between job satisfaction and customer satisfaction. For example, the link between job satisfaction and customer satisfaction might be moderated by characteristics of the

exchange (e. g., intensity, age of relationship, level of mutual trust), the customer (e. g., level of commitment, dependence, price sensitivity), the employee (e. g., empathy, job experience, expertise, reliability), and the industry (e. g., market dynamism, competitive intensity) in which the relationship is embedded.

Third, future research could theoretically and empirically analyze to which extent behavioral consequences of salespeople's job satisfaction are subject to moderator effects. Research of this type could, for example, study salespeople's interaction behavior as a dependent construct. Finally, it would be interesting to study the effect of salespeople's job satisfaction on customer satisfaction within a dynamic setting. An interesting research question in this context would be how quickly changes in salespeople's job satisfaction lead to changes in customer satisfaction.

5.2. Managerial Issues

Besides the high relevance of our study for research, our work also has managerial implications. In the last years, many companies have invested considerable resources into programs to enhance the satisfaction of their employees (e. g., Heskett et al. 1994; Heskett, Sasser, and Schlesinger 1997). The implicit proposition underlying these activities is that a high level of employee satisfaction actually does lead to highly satisfied customers.

Our results tell managers in B2B firms that high job satisfaction of salespeople leads to a higher level of the quality of customer interaction. Thus, programs to increase job satisfaction of the sales force are an important way to achieve a more favorable perception of the firm in the eyes of the customer. Additionally, job satisfaction increases customer satisfaction in a direct way. Thus, on an overall basis, managers can be encouraged to invest into salespeople's job satisfaction in order to increase customer satisfaction.

Furthermore, our study tells managers that increasing salespeople's job satisfaction is especially fruitful in terms of customer satisfaction under certain circumstances. First, this is the case if customer interaction is frequent. Second, the relationship between salespeople's job satisfaction and customer satisfaction is stronger the more the customers are integrated into the value creating process. This finding is particularly relevant for managers in many service industries where customer integration is high due to the "inseparability of production and consumption" (Zeithaml, Parasuraman, and Berry 1985, p. 33). Examples of B2B services where customer integration is high include management consulting, financial services, and many

other professional services. Finally, salespeople's job satisfaction becomes more important as a driver of customer satisfaction if the product/service is highly innovative. Thus, managers in highly innovative companies and industries (such as high-tech machinery, software, telecommunication) can be encouraged to invest into salespeople's job satisfaction.

6. CONCLUSION

Much academic research has focused on providing a better understanding of the factors that drive customer satisfaction in B2B marketing. Our research shows that, besides the characteristics of the firm's offer, salespeople's job satisfaction has an effect on its own on customer satisfaction. Thus, our study provides further evidence of the high relevance of salespeople as boundary spanners in B2B settings.

7. ENDNOTE

At this point, a research stream in the services marketing discipline which has analyzed the link between employee attitudes/perceptions and customer attitudes/perceptions is worth mentioning. Studies in this stream include Parkington and Schneider (1979), Schmit and Allscheid (1995), Schneider (1973), Schneider and Bowen (1985, 1993), Schneider, Parkington, and Buxton (1980), and Schneider, White, and Paul (1998). While some of these studies do overcome the limitations mentioned in the text (e. g., through the use of dyadic data or the analysis of a complex causal network through causal modeling), it is important to realize that each of these studies uses different employee attitudes/perceptions and/or customer attitudes/perceptions compared to our study. On the employee side, these studies focus on constructs such as human resources practices and procedures (Schneider and Bowen 1985, 1993), service climate (Schneider, White, and Paul 1998), and organizational variables to improve the operation of the business (Schmit and Allscheid 1995). On the customer side, these studies focus on constructs such as customers' service quality perception (Parkington and Schneider 1979; Schneider and Bowen 1985, 1993; Schneider, Parkington, and Buxton 1980) and switching intentions of customers (Schneider 1973). While two of these studies use job satisfaction as an independent construct (Parkington and Schneider 1979; Schneider, Parkington, and Buxton 1980) and one of them uses customer satisfaction as a dependent construct (Schmit and Allscheid 1995), none of these studies relates the two constructs to each other. Against this background, our literature review focuses on those studies which explicitly relate employee's job satisfaction to customer satisfaction.

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Appendix

Measures and Items

(Mean/SD/Item Reliability)

Salespeople's Job Satisfaction ^{*a)}

Overall, I am quite satisfied with my job.	(4.51/.64/.88)
I do not intend to work for a different company.	(4.59/.79/.93)
I like my job.	(4.65/.61/.97)
There are no fundamental things I dislike about my job.	(4.10/.85/.79)
I like my job more than many employees of other companies.	(4.25/.75/.76)
I consider this employer as first choice.	(4.39/.83/.89)

Customer Satisfaction ^{*b)}

We are very pleased with the products and services which this company delivers.	(3.98/.61/.74)
We enjoy collaborating with this company.	(4.31/.54/.71)
On an overall basis our experience with this company has been positive.	(4.28/.56/.84)
This company is first choice for us for the purchase of these products and services.	(4.12/.67/.53)
On an overall basis we are satisfied with this company.	(4.15/.57/.85)

Quality of Customer Interaction ^{**b)}

Relative to other suppliers, please evaluate the interaction with respect to ...

▪ Salespeople's customer orientation.	(3.91/.68/.61)
▪ Flexibility of the employees in dealing with customers.	(3.83/.72/.73)
▪ Openness in providing information to customers.	(3.85/.67/.67)
▪ Openness to suggestions from customers.	(3.68/.64/.34)

Quality of Company's Offer **b)

Relative to other suppliers, please evaluate the performance of this supplier with respect to ...

- Product quality. (3.90/.59/--)
- Service quality. (3.87/.64/--)

Quality of Customer Related Business Processes **b)

Relative to other suppliers, please evaluate the performance of this supplier with respect to ...

- Quality of customer-related business processes. (3.81/.69/.70)

Moderator Variables

Frequency of Customer Interaction b)

How often do you interact with this company on average? (3.20/.93/--)

(1 = daily; 2 = once per week; 3 = once per month; 4 = several times a year; 5 = once per year)

Intensity of Customer Integration into the Value Creating Process *a)

- Our products/services require the integration of the customer into the value creating process. (3.64/1.06/.61)
- Our products/services are strongly influenced through customers during their production. (3.62/1.10/.74)
- Our products/services require regular discussions with the customers during the production process. (3.49/1.22/.63)
- Our customers are involved into the value creating process right from the start. (3.59/1.18/.82)

Product/Service Innovativeness *a)

- Our products/services are highly innovative. (3.51/.96/.47)
- Our product/service offer is continuously updated with new products or services. (4.11/.96/.64)
- Our products/services are state of the art. (4.11/.81/.28)
- Our products/services are continuously supplemented with new features. (3.98/.93/.84)
- Our products/services are subject to permanent innovations. (4.01/.92/.76)
- On an overall basis our product/service offer is highly innovative. (3.79/.85/.62)

* = 5-point Likert-type scales with "strongly agree" and "strongly disagree" as anchors were employed

** = 5-point Likert-type scales with "much better" and "much worse" as anchors were employed

a) measured on the basis of employee survey

b) measured on the basis of customer survey