"Buyer-supplier relationships in a period of recession: the role of satisfaction in repeat patronage and the propensity to initiate price negotiation"

AUTHORS	Per Servais Jan Møller Jensen
ARTICLE INFO	Per Servais and Jan Møller Jensen (2012). Buyer-supplier relationships in a period of recession: the role of satisfaction in repeat patronage and the propensity to initiate price negotiation. *Innovative Marketing* , *8*(4)
RELEASED ON	Monday, 25 February 2013
JOURNAL	"Innovative Marketing "
FOUNDER	LLC "Consulting Publishing Company "Business Perspectives"

NUMBER OF REFERENCES

0

NUMBER OF FIGURES

0

NUMBER OF TABLES

0

Per Servais (Denmark), Jan Møller Jensen (Denmark)

Buyer-supplier relationships in a period of recession: the role of satisfaction in repeat patronage and the propensity to initiate price negotiation

Abstract

This article examines buyer-supplier relationships in a period of economic recession. More specifically, the article investigates the role of buyer-supplier cooperation, conflict and trust in customer satisfaction by using data collected in a period of recession. Furthermore, the article explores the influence of satisfaction on repeat patronage and customers' propensity to initiate price negotiation. The authors propose and test a model of the buyer-supplier relationship. Quantitative data gathered from 300 Danish firms are used to analyze the hypothesized relationships via structural equation modeling. A cross-sectional design was used. Future research might use a longitudinal design to explore developments in buyer-supplier relationships. The data regarding the buyer-supplier relationship were collected from a single informant. The results support several of the stated hypotheses. Buyer-supplier cooperation enhances customer satisfaction, partly by reducing conflict and building trust. Furthermore, satisfied customers are inclined toward repeat patronage and are less likely to launch price negotiations when facing a financial crisis. For industrial suppliers, this study clearly indicates that cooperation, through its positive relationship with trust and its ability to reduce conflict, has a positive impact on satisfaction, which in turn increases repeat patronage and reduces the tendency of customers toward price negotiation. Future studies might include more informants from the customer firm and/or from the supplier firm to improve the validity of the measures and better assess the reliability of the results.

Keywords: firm, relationship management, business administration.

Introduction

During the last 4-5 years, a large part of the industrialized world has experienced a serious financial crisis that has resulted in lay-offs, downsizing and other negative consequences in both the public and the private sector. Empirical research on the impact of the financial crisis on industrial markets has been limited thus far. Ellegaard (2009) stresses that the current economic situation favors the industrial buyer and makes it possible for buyers to exercise buying power. For example, a buyer may use the financial crisis as an argument for switching to a supplier that offers lower prices or to negotiate prices with his or her current supplier. Nevertheless, Ellegaard also warns against short-sighted solutions and notes that even in times of crisis, industrial customers can benefit from attempting to be attractive customers. Ellegaard argues that it may be preferable for customers to solve potential future problems through cooperative supplier-customer relationships instead of commencing price negotiations. Similarly, Walter, Helfert and Ritter (2003) stress that in industrial markets, customers are enhancing their efforts to maintain long-term relationships with their suppliers to reduce transactions costs.

In the academic literature, buyer-supplier relationships are commonly accepted as a multidimensional construct (e.g., Nyaga, Whipple and Lynch, 2010; Vidal, 2012; Walter et al., 2003), and over the years,

several dimensions have been suggested as cornerstones of buyer-seller relationships. Among the most commonly noted dimensions are conflict, satisfaction, cooperation and trust (e.g., Anderson and Narus, 1990; Crosby, Evans and Cowles, 1990). Jap (2001) defines relationship quality as a higher-order concept that involves satisfaction, fair results and the propensity to continue to collaborate. Jap emphasizes that the creation of quality and value in a relationship may result in a more sustainable relationship. Investigating business relationship value as a function of benefits and costs, Ulaga and Eggert (2005) provide empirical evidence for the existence of five benefit-related and two cost-related dimensions of business relationships. Of particular value to the present study is the finding that the price paid for a market offering is the most significant sacrifice made to promote relationship value. During a period of recession, one may expect price to be even more important to the customer.

This article investigates the role of the buyer-supplier relationship in a period of recession. Inspired by Vidal (2012), who investigates the potential buffering effect of relationship quality on customer responses to negative incidents within business relationships, we examine how relationship quality may act as a buffer against external forces during a financial crisis. More specifically, we examine how the buyer-supplier relationship influences customer satisfaction during a period of recession and show how the latter, in turn, affects repeat patronage and the propensity toward price negotiation. The remainder of this paper is organized as follows. First, drawing on the existing

literature on supplier relationships and customer satisfaction, a number of hypothesized relationships are suggested and summarized in a conceptual model. Second, the research methodology is described followed by research results. Third, research findings, contributions and limitations are discussed. Finally, a section on implication for business marketing practice concludes the paper.

1. Conceptual model and research hypotheses

Figure 1 presents the conceptual model to be used in the present study. Based on an exhaustive literature review (e.g., Anderson and Narus, 1990; Crosby et al., 1990; Jap, 2001; Nyaga et al., 2010; Ulaga and Eggert,

2005; Vidal, 2012; Walter et al., 2003), we identified six important constructs to be included in our model: cooperation, conflict, trust, satisfaction, repeat patronage and price sensitivity. Central to the model is the construct of satisfaction, which is commonly accepted and empirically documented as affecting buyers' propensity to continue relationships (Selnes, 1998; Svensson and Payan, 2009) and their likelihood of exiting from relationships (Singh, 1988). In this study, it is suggested that cooperation, conflict and trust will affect customer satisfaction, which in turn will lead to repeat patronage and reduce the likelihood of price negotiation. Each construct and the hypothesized relationships are discussed below.
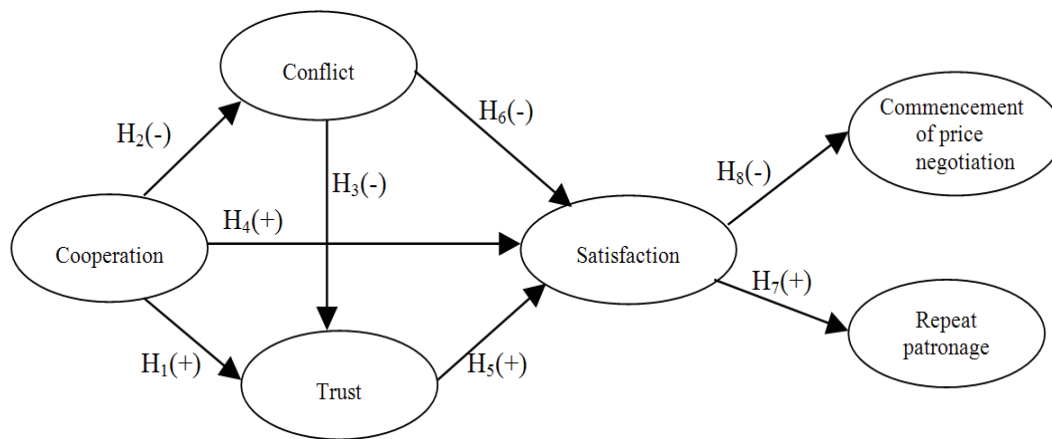
Fig. 1. Conceptual model and hypotheses

Narayandas and Rangan (2004) stress that relationships between industrial customers and suppliers develop over time. They also note that trust between individuals facilitates the development of commitment between firms. Individuals who build trust in each other will transfer this bond to the firm level. The cumulative effect of several such transfers is an increase in inter-firm commitment. Several researchers (e.g., Anderson and Narus, 1990; Vidal, 2012) have proposed models of cooperation that incorporate aspects of relationships that facilitate the creation and maintenance of interdependence or loyalty.

Wilson and Mummalaneni (1986) propose a model of dyadic sales that explains long-term relationships and cooperation as a function of trust and structural and social bonds. Anderson and Narus (1990) suggest that conflict, satisfaction, cooperation and trust are important factors in relationships. Han, Wilson and Dant (1993) suggest that perceived mutual trust and satisfactory role performance are the two principal factors in good relationships.

Researchers have found that cooperative relationships deepen over time, beginning with small exchanges and moving toward higher levels of

exchange as the partners fulfill their obligations (Kranton, 1996). Both partners make investments in the relationship (Wilson and Jantrania, 1996). These investments range from physical investments to training investments that may not be recovered if the relationship ends. However, such physical investments or structural bonds are insufficient to maintain a relationship because opportunism may develop in the presence of weak social bonds (Madhok, 1995; Seabright, Levinthal and Fichman, 1992). Affective bonds reduce risk by carrying the expectation of trust and abstention from opportunism (Gundlach, Achrol and Mentzer, 1995), lowering conflict and coordination costs (Madhok, 1995), and encouraging product resource exchange, which promotes innovation (Tsai and Ghoshal, 1998). For example, negotiated economic or strategic transactions may not lead to cooperation if they are not supported by an affective bond that reduces risk during such exchanges (Kollock, 1994; Madhok, 1995; McAllister, 1995). Similarly, Mysen and Svensson (2010) argue that cooperation is a broader, more overarching concept than coordination. In their view, cooperation is not only a matter of coordinating specific joint activities; it also requires a cooperative working orientation or spirit.

Thus, it would appear that information sharing is an important element of the buyer-supplier relationship (Anderson and Weitz, 1992; Ruyter, Moorman and Lemmink, 2001; Cheng and Wu, 2005). Information sharing is essential to the trust-building process because the sharing of information enables each firm to better understand the routines of the other and to develop conflict resolution mechanisms (Anderson and Narus, 1990; Kwon and Zuh, 2004). Anderson and Narus (1990, p. 45) define trust in a working relationship as "the firm's belief 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". Consistent with this definition and based on various comments on the definition of trust (Geyskens et al., 1996; Moorman, Zaltmann and Deshpande, 1992; Mysen and Svensson, 2010), we define customer trust as the extent to which a firm expects that a supplier can be relied upon to fulfill its obligations and will act and negotiate fairly even given the potential for opportunism.

Anderson and Narus (1990) argue that the customer perception of cooperation in a relationship reflects *past* behavior, whereas the customer trust is based on the *present behavior*. We, therefore, hypothesize the following.

H₁: Cooperation is positively related to trust.

As mentioned above, in addition to building trust, buyer-supplier cooperation is also believed to develop conflict resolution mechanisms, which in turn may reduce conflict (Anderson and Narus, 1990; Kwon and Zuh, 2004). Conflict in a working relationship prevents the parties involved from gaining resources or pursuing an activity for their advancement (Anderson and Narus, 1990). Conflict usually involves disagreements, tension and frustration between sellers and buyers caused by structural factors (e.g., competition for the same resources, the need to maintain autonomy in the relationship and the pursuit of different or even opposing goals) and/or attitudinal factors. According to Dwyer, Schurr and Oh (1987) conflict is unavoidable in relational exchanges. Although some conflict can be productive (or functional), especially when it yields new solutions to problems (Leonidou, Talias and Leonidou, 2008), uncontrolled conflict can lead to direct confrontation, hostile actions and bitter feelings (Lusch, 1976). The trust between the interacting parties will subsequently be eroded, mainly because such aggressive behavior will prevent each partner from believing that the other is dependable, honest and fair. Consistent with Leonidou et al. (2008), we propose the following:

H₂: Cooperation is negatively related to conflict.

H₃: Conflict is negatively related to trust.

Customer satisfaction has been discussed extensively as a central element of firm marketing during the past two decades (e.g., Anderson and Narus, 1990; Anderson and Srinivasan, 2003; Anderson and Sullivan, 1993; Fornell, 1992; Geyskens et al., 1999; Parasuraman and Grewal 2000; Spiteri and Dion, 2004). Anderson and Narus (1990, p. 46) define satisfaction as "a positive affective state resulting from the appraisal of all aspects of a firm's working relationship with another firm". Geyskens et al. (1999) define satisfaction as the positive affective state that results from the appraisal of all aspects of the working relationship between two firms. Satisfaction is typically positioned as an important construct in inter-organizational research (Mysen and Svensson 2010), as recommended by the empirical findings (Svensson and Payan, 2009). These studies suggest that as organizations experience success with joint activities, they will subsequently experience satisfaction, partly because of their perceived compatibility with the other organization. Svensson and Payan (2009) argue that satisfaction mediates trust and other important outcomes. We, therefore, hypothesize the following.

H₄: Cooperation is positively related to satisfaction.

H₅: Trust is positively related to satisfaction.

H₆: Conflict is negatively related to satisfaction.

Customer loyalty is a multifaceted concept that has evolved over the years (e.g., Dickand Basu, 1994; Jacoby and Chestnut, 1978; Oliver, 1999). The initial research on customer loyalty mostly emphasized the behavioral dimension of loyalty (e.g., repeat patronage), although attitudinal dimensions of loyalty were addressed in later research. The oft-quoted conceptualization of customer loyalty proposed by Dick and Basu (1994) includes both attitudinal and behavioral elements. In Dick and Basu's (1994) framework, customer loyalty is conceptualized as the strength of the relationship between the customer's relative attitude toward an entity and repeat patronage. According to Dick and Basu (1994), the role of relative attitude is crucial because a positive previous attitude is required for re-patronage to be considered 'true' loyalty. True loyalty not only leads to repurchasing or re-patronage but is also more likely to make customers more immune to the competitor offers, less price-sensitive and more willing to spread positive worth-of-mouth (Dick and Basu, 1994; Ball, Coelho and Machas, 2004). A strict behavioral view of customer loyalty is likely to focus on isolated transactions and, therefore, to

neglect the importance creating customer value through a favorable supplier-customer relationship. True customer loyalty includes both repeat patronage and an affective appraisal of the supplier.

In this article, we suggest that this type of affective appraisal is synonymous with or at least indicated by customer satisfaction. This view is consistent with that of other researchers (e.g., Johnson and Fornell, 1991; Gustafsson, Johnson and Roos, 2005; Oliver, 1999) who define satisfaction as an overall evaluation that develops over time and in a service context is similar to overall evaluations of service quality (Čater and Čater, 2009; Gustafsson et al., 2005; Hennig-Thurau, 2004; Zeithamal, Leonard and Parasuraman, 1996). In the literature, it is frequently suggested that satisfaction increases a customer's likelihood of repeat patronage and/or decreases customer switching intentions (e.g., Dick and Basu, 1994; Fornell, 1992; Fornell et al., 1996; McDougall and Levesque, 2000). We, therefore, expect the following.

H₇: Satisfaction is positively related to repeat patronage.

H₈: Satisfaction is negatively related to commencement of price negotiation.

2. Research methods

2.1. Measurement scales. Appendix shows the questions used to measure each of the constructs included in the model displayed in Figure 1. Cooperation, conflict, trust, satisfaction and repeat patronage are assessed based on four items as indicators for each construct. All of the items for these five constructs were inspired by previous research (e.g., Čater and Čater, 2010; Mysen and Svensson, 2010; Nyaga et al., 2010). Intention to commence price negotiation is based on two items that were developed for this particular study. To assess the face validity of the items, the draft questionnaire was evaluated by two experts who were familiar with the literature. The answers to all of the items were provided using a five-point Likert-type scale from "strongly disagree" (= 1) to "strongly agree" (= 5).

2.2. Data collection. The research instrument employed in this study was an Internet survey based on a questionnaire with closed-ended questions. The data were gathered from purchasing managers or other persons with knowledge of the firm's relationships with its major supplier(s). The respondents were instructed to provide answers that indicated the firm's relationship with the main supplier of its key materials. The population is comprised of Danish industrial firms with more than five employees and at least one supplier relationship. The Danish business directory "CD-direct", which contains information on all of the business entities in Denmark, was used as the sample frame for the survey. The population was not limited to any particular industry; however, due to the collection method, only firms with e-mail addresses were selected from the sample frame. Based on the abovementioned criteria, a total of 2535 firms were selected and subsequently sent e-mail invitations that contained a link to the questionnaire. Immediately after the dispatch of the e-mails, some 575 responses were received that indicated that the addresses used were incorrect or no longer existed. Thus, we had obtained a sample of approximately 1960 potential respondents. To enhance the response rate, we sent a 'reminder' mail three days before the stated deadline. By the end of the data gathering process, which took place between December 2009 and the end of January 2010, a total of 300 firms had adequately completed the questionnaire. Thus, we obtained a response rate of approximately 15 percent.

2.3. Sample description. In the interest of assessing generalizability and internal validity, this section takes a closer look of some of the relevant sample characteristics of the firms, respondents and supplier relationships examined in this study. The statistics for the selected sample are listed in Table 1 and are discussed in further detail below. Comparing our sample statistics with those of our sample frame (CD-direct) and other empirical studies of Danish industries (e.g., Knudsen and Eriksen, 2003; Rasmussen, Jensen and Servais, 2011) does not raise questions regarding the generalizability of our study to buyer-supplier relationships in Denmark.

Table 1. Sample characteristics

Panel A		
Firm		
	N	%
Number of employees		
5-25	62	20.6
26-50	97	32.3
51-100	56	18.7
101-200	41	13.7
201-500	20	6.7
> 500	19	6.3
No answer	5	1.7
Total	300	100.0
Industry		
Manufacturing	182	60.7
Construction	67	22.3
Others[a]	51	17.0
Total	300	100.0
Panel B		
Respondents		
	N	%
Gender		
Male	264	88.0
Female	36	12.0
Total	300	100.0
Respondents age		
21-30 years	8	2.7
31-40 years	58	19.3
41-50 years	130	43.3
51-60 years	74	24.7
60-70 years	28	9.3
> 70 years	2	0.7
Total	300	100.0
Panel C		
Supplier relationship		
	N	%
Duration of relationship		
< 1 year	4	1.3
1-4 years	41	13.6
5-8 years	65	21.7
9 years or longer	190	63.4
Total	300	100.0
Number of persons within the firm involved in the relationship		
1 person (solely the respondent)	14	4.7
2-5 persons	215	72.6
> 5 persons	71	23.7
Total	300	100.0

Note: [a] Primary Industry, Transportation, IT and R&D service etc.

The firms included in the sample range from small businesses to large enterprises; the most common firm size was 26-50 employees (32.3%), followed by 5-25 employees (20.6%) and 51-100 employees (18.6%). Firms with 101-200 employees and firms with more than 200 employees each constituted approximately 13% of the sample. The majority of the firms were in the manufacturing (60.7%) or construction (22.3%) sectors.

The respondents were 88.0% male and 12.0% female. With respect to age, the respondents were relatively uniform: 87.3% of the respondents were between 31 and 60 years old, with the majority (43.3%) in the 41-50 year range. It is noteworthy that 44.7% of the respondents were CEOs and 52.0% indicated that they were the main person responsible for purchasing. According to their self-assessments, the respondents have very good knowledge of the supplier relationships in question. In addition, 82.8% of the respondents indicated that they had had at least some degree of personal contact with the supplier, and 99.0% reported having at least some knowledge of the buyer-supplier relationship. Given the abovementioned characteristics of the respondents, it is reasonable to assume that the respondents have in-depth insight into the buyer-supplier relationship.

Regarding the buyer-supplier relationships themselves, two characteristics of the sample are noteworthy. First, a large majority (85.1%) of the buyer-supplier relationships have lasted for more than 5 years. Given the important role of cooperation in our conceptual model, it is obviously helpful that the relationships partners have had the time to establish cooperative relationships, as this improves the quality of the data. Second, in 95.3% of the relationships, the respondent is not the sole person within the firm who is involved in the buyer-supplier relationship. This fact is clearly a drawback because it decreases the reliability of data based on just one key informant.

3. Analysis and results

The model in Figure 1 was translated into a SEM model that included a measurement portion (confirmatory factor analysis) and a structural equation portion (simultaneous linear regression). The relationships between the variables were estimated using maximum likelihood estimation. A two-stage approach (see Anderson and Gerbing, 1988) was used to test the proposed model. First, we conducted a confirmatory factor analysis of the multi-item scales to develop the measurement model. Next, the measurement model and the structural equation paths were estimated simultaneously to test the proposed model (the overall model).

3.1. The measurement model. Table 2 shows the results of the confirmatory factor analysis (CFA). The aim of CFA is to verify the proposed factor structure. χ^2 ($df = 195$) = 357.47 is significant ($p < 0.01$), which indicates that the model fails to fit the data in an absolute sense. However, because the χ^2-test

is very powerful for large sample sizes, even a good measurement model can be rejected. Thus, several authors (e.g., Byrne, 2001; Hair et al., 2010) recommend that researchers employ other fit indices that are not as heavily influenced by sample size. Byrne (2001) recommends that researchers specify the χ^2 value and degrees of freedom (normally expressed as the χ^2/df ratio), the comparative fit index (CFI) and the root mean square error of approximation (RMSEA) using a 90% confidence interval. Hair et al. (2010) also argue that these indices usually provide sufficient information to evaluate a model.

Table 2. Confirmatory factor analysis ($n = 300$)

Construct/indicator	Standardized factor loading[a] error	Standard value	t-value	Construct reliability[b] extracted[c]	Variance
η1 Cooperation				0.907	0.711
COO1	0.838	-	-		
COO2	0.593	0.058	17.576		
COO3	0.758	0.077	14.137		
COO4	0.644	0.072	13.426		
η2 Trust				0.801	0.517
TRU1	0.832	-	-		
TRU2	0.686	0.084	8.167		
TRU3	0.526	0.088	9.090		
TRU4	0.769	0.070	14.344		
η3 Conflict				0.853	0.595
CON1	0.831	-	-		
CON2	0.593	0.072	9.934		
CON3	0.758	0.069	12.794		
CON4	0.644	0.067	10.865		
η4 Satisfaction				0.938	0.792
SAT1	0.870	-	-		
SAT2	0.887	0.049	21.088		
SAT3	0.825	0.053	18.438		
SAT4	0.853	0.051	19.582		
η5 Repeat patronage				0.948	0.820
REP1	0.892	-	-		
REP2	0.863	0.048	21.086		
REP3	0.889	0.043	22.486		
REP4	0.847	0.050	20.317		
η6 Commencement of price negotiation				0.745	0.607
CPN1	0.582	-	-		
CPN2	0.935	0.164	11.131		

Note: $\chi^2 = 357.47$; $p < 0.001$; $\chi^2/df = 1.83$; $CFI = 0.96$; $RMSEA = 0.05$; $HI(90) = 0.06$. [a] The first item for each construct was set to 1.
[b] Calculated as $\dfrac{\sum (Std.\ Loadings)^2}{\sum (Std.\ Loadings)^2 + \sum \xi_j}$ [c] Calculated as $\dfrac{\sum Std.\ Loadings^2}{\sum Std.\ Loadings^2 + \sum \xi_j}$.

The χ^2/df ratio of 1.83 indicates that the measurement model fits the data quite well. As a rule of thumb, Figure 2 below is viewed as indicating a good fit, whereas a ratio in the 2-3 range is seen as indicating an acceptable fit (Byrne, 2001; Hair et al., 2010). In addition, the CFI value of 0.96 indicates a good fit compared to the commonly used minimum standard of 0.90 (Bollen and Long, 1993). Browne and Cudeck (1993) suggest that an RMSEA of less than or equal to 0.05 indicates a good fit, an RMSEA between 0.05 and 0.08 indicates a fair fit, and values in the 0.08-0.10 range indicate a mediocre fit. The RMSEA for the measurement model is 0.05, which is well below the 0.08 threshold level and thus indicates a good fit (Browne and Cudeck, 1993; Hair et al., 2010). $HI(90) = 0.06$ showing the upper bound of the 90% confidence interval for the RMSEA is also below the recommended 0.08 threshold. Overall, the results indicate a reasonable fit between the model and the observed data.
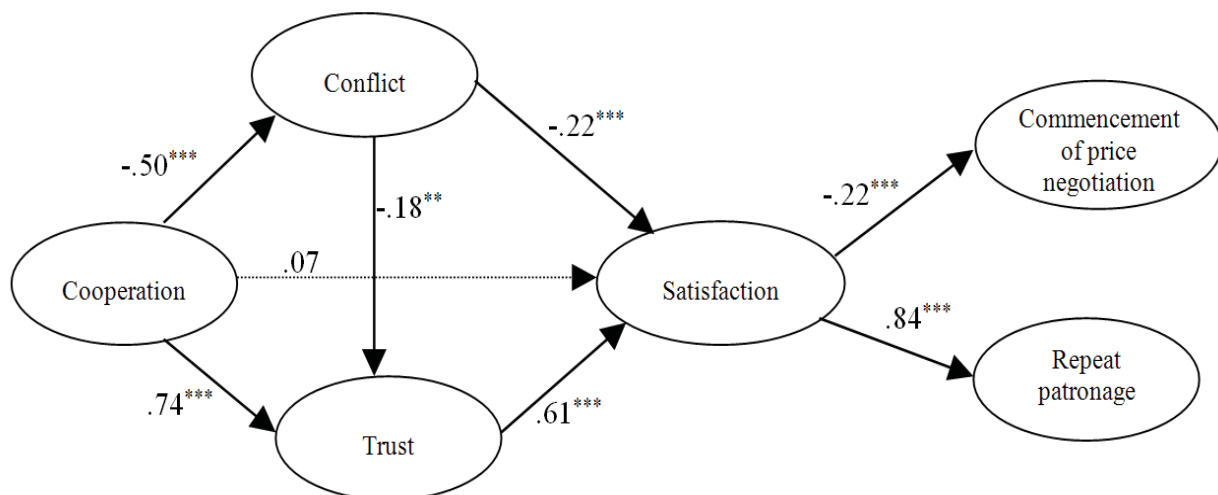
The results also indicate the convergent validity of each of the latent variables. The indicators' regression weights (factor loadings) were all highly significant (t-value > 2.64; $p < 0.01$), which demonstrates that the chosen generic questions for each latent variable reflect a single underlying construct with convergent validity (Fornell and Lacker, 1981; Byrne, 2001).

The reliabilities and the variance extracted were computed using standardized loadings and measurement errors (Hair et al., 2010). The reliability of all of the latent constructs was above or equal to the recommended lower level of 0.70 (Nunnally, 1978). All of the constructs have an extracted variance above or equal to 0.50 threshold suggested by Fornell and Lacker (1981). Overall, the composite reliabilities and variance extracted for each latent variable indicate that the measurement model is reliable and appropriate for use in evaluating the proposed structural model.

The discriminant validity of the constructs was tested using the approach suggested by Fornell and Lacker (1981). In Table 3, the diagonals for each construct represented the variance extracted as reported in Table 2. The other entries represent the squares of the correlations among constructs (i.e., the shared variance for the constructs). The matrix in Table 3 shows the acceptable level of discriminant validity of constructs. The variance extracted for each construct (as displayed by the diagonal entries) is greater than or equal to the shared variance explained by the constructs (as displayed by the non-diagonals). The only exception is trust, which shares a relatively high amount of variance with cooperation and satisfaction (with values of 0.68 and 0.58, respectively). However, these correlations are below the suggested threshold of 0.85 (see Frambach et al., 1998). Additionally, given the hypothesized paths from trust to both cooperation and satisfaction, these relatively high correlations are not surprising.

Table 3. Discriminant validity of constructs

		$\eta1$	$\eta2$	$\eta3$	$\eta4$	$\eta5$	$\eta6$
$\eta1$	Cooperation	0.71					
$\eta2$	Trust	0.68	0.52				
$\eta3$	Conflict	0.25	0.30	0.60			
$\eta4$	Satisfaction	0.43	0.58	0.36	0.79		
$\eta5$	Repeat patronage	0.45	0.51	0.19	0.56	0.82	
$\eta6$	Commence price negotiation	0.04	0.08	0.06	0.08	0.04	0.61

Note: The diagonals represent the average amount of variance extracted for each construct; the non-diagonals represent the variance shared by the constructs (calculated as the squares of the correlations between the constructs).

Because of the cross-sectional nature of the present survey, it was deemed necessary to test for common method variance in the data. We used Harman's one-factor test (Harman, 1967; Podsakoff and Organ, 1986), the most widely used test of common method variance. All of the items for the constructs were used in the principal component analyses. As a rule, common method variance is present if either a single factor emerges from the analysis or one of the factors account for most of the variance. Instead, the results of the analysis indicate the existence of six factors with eigenvalues greater than one that accounted for 71% of the variance, and none of the factors accounted for more than 21% of the total variance. Thus, common method variance does not seem to be a problem.

3.2. Structural model and hypotheses testing. Figure 2 depicts the results for the final structural model, including the significant standardized path coefficients. Table 4 displays the results obtained by testing the proposed structural model and the hypotheses. The fit indices for the structural model suggest that the model has an adequate fit ($\chi^2/df = 1.91$; $CFI = .96$; $RMSEA = .05$; $HI(90) = .06$).

Note: The dotted arrow represents a non-significant causal path ($t < 1.96$, $p > .05$). All other coefficients from normal arrows are significant at the .01 (**) or .001(***) level.

Fig. 2. Standardized multiple regressions coefficients for the structural model

Table 4. Results of the structural equation model; hypothesis testing ($n = 300$)

H_x	Construct relationships	Estimates	Std. error	t-value
H_1	Cooperation → Trust	0.77	0.07	10.80***
H_2	Cooperation → Conflict	- 0.63	0.08	- 7.55***
H_3	Conflict → Trust	- 0.15	0.05	- 2.90**
H_4	Cooperation → Satisfaction	0.08	0.12	0.68
H_5	Trust → Satisfaction	0.65	0.13	5.08***
H_6	Conflict → Satisfaction	- 0.20	0.05	- 3.70***
H_7	Satisfaction → Repeat patronage	0.91	0.06	16.21***
H_8	Satisfaction → Commence price negotiation	0.24	0.06	-4.34***

Note: $\chi^2 = 384.51$; $p < 0.001$; $\chi^2/df = 1.91$; $CFI = 0.96$; $RMSEA = 0.05$; $HI(90) = 0.06$. *Significant at the $p < 0.05$ level. ** Significant at the $p < 0.01$ level. ***Significant at the $p < 0.001$ level.

Hypotheses 1, 2 and 3 address the influence of cooperation on conflict and trust. The results strongly supported Hypothesis 1 and 2, providing evidence of a positive relationship between cooperation and trust ($\beta = 0.74$; $t = 10.80$) and a negative relationship between cooperation and conflict ($\beta = -0.50$; $t = - 7.55$). Hypothesis 3 proposed a negatively relationship between conflict and trust. This proposition was also confirmed ($\beta = -0.18$; $t = - 2.90$), indicating the additional indirect effect of cooperation on trust through its influence on conflict (-0.50 [*Cooperation →Conflict*] x -0.18 [*Conflict → Trust*] = 0.09). Hypothesis 4 was concerned with the relationship between cooperation and satisfaction. The hypothesis was not supported ($\beta = .07$; $t = 0.68$). The weak direct relationship between cooperation and satisfaction suggests that cooperation does not independently result in greater satisfaction. Interestingly, the results reflect the expected positive relationship between trust and satisfaction (H_5) ($\beta = 0.61$; $t = 5.08$) and the expected negative relationship between conflict and satisfaction (H_6) ($\beta = -0.22$; $t = - 3.70$). This evidence suggests that cooperation may have an indirect positive effect on satisfaction to the extent that it succeeds in building trust (0.74 [*Cooperation → Trust*] x 0.60 [*Conflict → Satisfaction*] = 0.44) and reducing the prevalence of conflict (-0.50 [*Cooperation → Conflict*] x -.22 [*Conflict → Satisfaction*] = 0.11).

The remaining two hypotheses address the consequences of satisfaction. Hypothesis 7 proposed a positive relationship between satisfaction and repeat patronage. This suggestion was strongly confirmed ($\beta = 0.84$; $t = 16.21$). The negative relationship between satisfaction and price negotiation (H_8) was also confirmed ($\beta = -0.22$; $t = - 4.34$).

The results for the structural model indicate its high degree of predictive power (see Table 5). For instance, 66% of the variance in satisfaction is explained by the antecedents suggested in the model. Cooperation explains 25% of the variance in conflict and more than

60% of the variance in trust when we consider both the direct effect on trust and the indirect effect on trust through reduced conflict. Satisfaction explains 70% of the variance in repeat patronage and almost five percent of customer intention to commence price negotiations.

Table 5. Proportion of variance explained ($n = 300$)

Construct	R^2
Conflict	0.25
Trust	0.70
Satisfaction	0.66
Repeat patronage	0.70
Commence price negotiation	0.05

Note: $\chi^2 = 384.51$; $p < 0.001$; $\chi^2/df = 1.91$; $CFI = 0.96$; $RMSEA = 0.05$; $HI(90) = 0.06$.

Conclusion

The major aim of this paper was to investigate the buyer-supplier relationship during a period of recession. The results have both theoretical and managerial implications. Overall, the results of the study provide strong support for the hypothesized model (refer to Figure 1). The relationships that have been identified here are largely consistent with the existing literature and prior research on buyer-supplier relationships (as well with recent data supporting the proposed model for periods of recession). Thus, the study reinforces the extant knowledge on buyer-supplier relationships. Although the results do not indicate that a direct positive relationship exists between cooperation and satisfaction, they do indicate that cooperation has an indirect positive effect on satisfaction through its significant negative relationship with conflict and its positive influence on trust. This result is consistent with the findings of previous studies and suggests that although cooperation does not produce satisfaction *per se*, cooperation may reduce the prevalence of conflict and build trust, thereby increasing satisfaction. The results encourage future studies of customer-supplier relationships that could incorporate cooperation as an important factor in satisfaction and customer loyalty.

Limitations and suggestions for further research. Like the findings of any study of this nature, the results of this research need to be viewed in the light of its limitations. These limitations also suggest directions for further research. Danish firms were recruited for this study. Although the size of the sample and its variety in terms of firm size and industry enabled us to make generalizations, our results may not hold across different national contexts. Similar studies in other countries would be helpful. In addition, in this study, only cooperation, trust and conflict were included as antecedents to satisfaction. Future studies might expand the list of antecedents to include other constructs that reflect relationship quality. Additionally, this study only considered repeat patronage and to the likelihood of initiating price negotiations as consequences of relationship value and satisfaction. Future studies might also incorporate other factors such as proneness to recommend a supplier to other companies.

Three matters related to the data collection method problems must be mentioned. First, the cross-sectional design employed makes it difficult to be precise regarding the direction of causation between concepts, e.g., between satisfaction and proneness to commence price negotiation. Longitudinal research designs would be required to examine this and other causal-direction issues more rigorously. Given that a more valid measurement could be achieved through a longitudinal approach, thus enabling an assessment of the actual re-patronage and prevalence of price negotiation, we encourage future research to apply such an approach. Second, the study examines only the buyer's side of the relationship. Consequently, the seller's perception of trust, commitment and other factors of the relationship are not addressed. Future studies may incorporate data from both sides of the supplier-buyer relationship. Finally, in this study, the data were collected using only a single informant to assess the buyer-supplier relationship. Although our test for common method variance showed an absence of mono-method variance, there is no doubt that a firm's decision to continue a buyer-supplier relationship in most cases relies on more than just one person. Future studies may include more informants from the customer firm and/or from the supplier firm to improve the measurement validity and to permit the assessment of reliability. The present study has implications for both suppliers and buyers in business relationships. For industrial suppliers, it is significant that, as this study clearly shows, cooperation has a positive impact on satisfaction, which in turn increases repeat patronage and reduces the tendency for the customer

to commence price negotiation. Needless to say, the current financial crisis reinforces the importance of price. Thus, industrial suppliers are encouraged to reduce the propensity of customers to commence price negotiations by developing more cooperative relationships with their customers. Although the results do not indicate that there is a direct positive relationship between cooperation and satisfaction, they do show that cooperation has an indirect positive effect on satisfaction through its significant negative relationship with conflict and its positive influence on trust. This finding is consistent with those of previous studies and suggests that although cooperation does not produce satisfaction *per se*, cooperation may reduce the prevalence of conflict and build trust and may thereby increase satisfaction indirectly. However, it is important to note that the cooperation only has an indirect effect on satisfaction through its positive relationship with trust and its capacity to reduce conflict. Because cooperation only explains 25% of the variance in conflict, it is important that suppliers steadily monitor the prevalence of conflict and, if necessary, respond promptly and adequately to decrease conflict.

When industrial buyers are confronted with external pressure – as, for example, during a financial crisis – they may begin to be more focused on the issue of price in their buying behavior and may instinctively seek ways to lower prices. Inspired by Vidal's (2012) focus on the potential buffering effect of relationship quality on customer responses to negative incidents within business relationships, we examined whether relationship quality acts as a buffer against external forces such as the financial crisis. The results indicate that customer satisfaction decreases the propensity of customers to commence price negotiation, even in a period of recession. In a period of recession, it is therefore of vital importance for suppliers to understand how to optimize their relationships with customers to generate customer satisfaction.

As mentioned in the section above, this study examines only the buyer's side of the customer relationship and therefore does not consider seller-perceived trust, commitment and other factors. Despite this limitation, insights and implications for industrial buyers may be derived from the results. The overall conclusion is that buyer-supplier cooperation leads to customer satisfaction, which in turn benefits the supplier by generating a more sustainable relationship with less price-sensitive customers. Nevertheless, as emphasized by Nyaga et al. (2010), collaborative relationships offer benefits to both suppliers and buyers. In a period of

recession, suppliers may be more interested in cooperating with their customers, and industrial buyers should, therefore, take action to encourage this process.

Commitment in a buyer supplier-relationship implies that both the supplier and the buyer are willing to devote the necessary human resources to the relationship. Both partners must be very willing to "open up," both attitudinally and behaviorally, with their counterparts to strengthen the quality of their relationship and subsequently to receive the anticipated benefits. The personnel from both the supplier and the buyer side must establish high levels of trust and commitment toward each other. Of course, these attitudes do not develop overnight; they are developed over time during a series of successful business interactions. In addition, personnel from both sides must be willing to share information openly to a degree that may be discomforting and is certainly inconsistent with interacting in the traditional "arms-length" method of supplier interaction. This effort must be expended over an extended period to establish the requisite levels of trust, commitment and familiarity.

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Appendix

Table 1A. Constructs and scale items

	Cooperation
COO1	Our relationship with this supplier is cooperative.
COO2	We and this supplier share a cooperative attitude.
COO3	My firm's cooperative relationship with this supplier is a priority.
COO4	We coordinate our work with this supplier to identify solutions to problems.
	Trust
TRU1	This supplier is trustworthy.
TRU2	We do not hesitate to do business with this supplier even when the situation is unclear.
TRU3	This supplier does not take advantage of opportunities to profit at our expense.
TRU4	This supplier is fair in its negotiations with us.
	Conflict
CON1	We often have disagreements with this supplier.
CON2	We often have differences of opinion when dealing with this supplier.
CON3	There is a great deal of conflict in our relationship with this supplier.
CON4	Employees of our firm often become angry when dealing with this supplier.
	Satisfaction
SAT1	Our relationship with this supplier is satisfying.
SAT2	This supplier meets our expectations of the relationship.
SAT3	Our firm is content about its relationship with this supplier.
SAT4	The service that this supplier delivers suits our needs and wishes.
	Repeat patronage
REP1	Continuing our relationship with this supplier is a high priority for us.
REP2	We intend to do business with this supplier in the future.
REP3	We intend to continue our cooperation with this supplier in the future.
REP4	Our relationship with this supplier is lasting.
	Commencement of price negotiation
CPN1	The financial crisis has led to increasing attempts to pressure this supplier with regard to price to increase our own revenues.
CPN2	The financial crisis has led to increasing attempts to pressure this supplier with regard to price without considering the consequences for our suppliers.

Note: 5-point Likert scale with 1 = strongly disagree and 5 = strongly agree.