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The impact of channel function performance on buyer–seller relationships in marketing channels

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Abstract

This paper addresses the question of how distributors' channel function performance affects their relationships with organizational customers and how the impact of these actions on relationship quality is influenced by the interdependence structure of the relationship. We test our hypotheses using survey data collected from informants in the Netherlands and Belgium. Our primary finding is that the level of channel function performance by a distributor is a significant driver of customer perceptions of relationship quality. This relationship is moderated by the interdependence structure of the customer–distributor dyad, both in terms of total interdependence as well as relative customer dependence.
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1. Introduction

High-quality relationships with customers are important for distributors because they result in increased customer retention, act as a source of new leads and ideas, and facilitate operational planning. Additionally, increases in the quality of relationships with customers yield positive externalities for the distributor, e.g., a strengthened position for dealing with upstream suppliers. This paper addresses the question of how the performance of channel functions by distributors affects the quality of their relationships with their organizational customers (as perceived by these customers) and how this impact is moderated by the interdependence structure in these relationships.

Heide and John (1988) found that intermediaries who bonded more closely with their customers became less dependent on their suppliers and improved their financial performance. They view an agent's offsetting specific investments in key customers as a device for strengthening customer bonds and increasing their switching costs, thereby safeguarding the agent's specific assets in its exchange relationships with manufacturers. We believe that it is possible for intermediaries to achieve these benefits without necessarily making specific investments. How should

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an intermediary go about strengthening bonds and improving the quality of its relationship with its customers? Should the intermediary undertake these relationship quality-enhancing actions for all customers and relationships or selectively target a subset of customers? In the event of the latter being the appropriate course of action, which customers should be targeted? These are some of the key questions we address in our study.

The marketing channel literature has paid extensive attention to factors that affect relationships between buyers and sellers (e.g., Dwyer, Schurr, & Oh, 1987). For example, research on relationship quality has focused on the impact of the interdependence structure of the relationship on its quality (e.g. Brown, Lusch, & Nicholson, 1995; Gundlach, & Cadotte, 1994; Kumar, Scheer, & Steenkamp, 1995, 1998). Although the interdependence structure influences the quality of the relationship, Kumar et al. (1995) and Li and Dant (2001) found this effect to be relatively small. This suggests a need to identify other antecedents of relationship quality. We focus on the role of channel services and functions performed by the distributor for its customers. We report the results of a study of 317 industrial distributor–organizational customer relationships. In our study, we take the perspective of the organizational customer (i.e., a professional painting services provider) and its relationship with its most important supplying industrial distributor. In the remainder of the paper, we first present theory and hypotheses with respect to the impact of channel function performance and interdependence structure on relationship quality. We then describe our data collection and construct development procedures. Subsequently, we present our results. We conclude our paper with a discussion of our findings and their implications.

2. Theory and hypotheses

The relationship marketing literature describes a continuum of relationships ranging from discrete transactions to relational exchanges (Dwyer et al., 1987; Noordewier, John, & Nevin, 1990). Long-term, high-quality relationships, characterized by frequent interactions between different members of a distribution channel, offer advantages for both sellers and buyers. For sellers, they offer the benefits of creating exit barriers for their customers, leveraging limited resources through joint efforts with customers, gaining benefits from customer ideas and experiences (Anderson & Narus, 1991), and improving capacity planning (Han, Wilson, & Dant, 1993). For the customer, a long-term relationship with a supplier reduces stress and risks, solves initial problems, and leads to the accommodation of special needs. The customer learns what to expect and the reliability of supply increases (Han et al., 1993).

Although there is no general consensus on the definition of relationship quality, extant research has found high levels of satisfaction, trust, and commitment, and low levels of conflict to be important characteristics of long-term, high-quality relationships (e.g., Jap & Ganesan, 2000; Morgan & Hunt, 1994). In fact, a number of recent empirical studies have viewed relationship quality as a combination of some or all of these constructs (e.g., Hibbard, Kumar, & Stern, 2001; Jap, 2001; Kumar et al., 1995). In keeping with this approach, we view relationship quality as a higher-order construct composed of satisfaction, commitment, trust, and conflict.

Satisfaction is typically defined as "a positive affective state resulting from the appraisal of all aspects of a firm's working relationship with another firm" (Geyskens, Steenkamp, & Kumar, 1999, p. 224). Satisfaction plays an important role in relationships and has been found to be instrumental in increasing cooperation between channel partners, and leading to fewer terminations of relationships (Ganesan, 1994).

Trust is widely recognized as a key dimension of relationship quality (Geyskens, Steenkamp, & Kumar, 1998; Morgan & Hunt, 1994). It reduces decision-making uncertainty and enhances cooperation (Morgan & Hunt, 1994), continuity (Anderson & Weitz, 1989), and long-term orientation (Ganesan, 1994) in the relationship. A frequently used definition of trust is the perceived credibility and benevolence of the partner (Ganesan, 1994; Kumar et al., 1995). Trust in the partner's credibility is the belief that the partner stands by its word, fulfills promised role obligations, and is sincere. Trust in the partner's benevolence is the belief that the partner is interested in the firm's welfare and will not take unexpected actions that will negatively affect the firm (Kumar et al., 1995).

Commitment is also viewed as an essential indicator of relationship quality (Geyskens et al., 1999; Morgan & Hunt, 1994). Anderson and Weitz (1992, p. 19) define commitment as "a desire to develop a stable relationship, a willingness to make short-term sacrifices to maintain the relationship, and a confidence in the stability of the relationship." It is enduring and reflects a positive valuation of the relationship. Commitment is an important indicator of a long-term orientation in the relationship. It leads to greater relational social norms and lower opportunistic tendencies (Gundlach, Achrol, & Mentzer, 1995) and, ultimately, increased relationship benefits (Morgan & Hunt, 1994).

Finally, *Conflict* implies a level of tension, frustration, and disagreement in the relationship due to one party obstructing the other party in reaching its goal (Geyskens et al., 1999). Although channel conflicts can be functional (Coughlan, Anderson, Stern, & El-Ansary, 2001), in general, higher levels of conflict will decrease relationship quality.

2.1. Antecedents of relationship quality

Given the importance of long-term, high-quality relationships, it is not surprising that much research has been conducted on the antecedents of such relationships. Of the many previously identified antecedents of relationship quality, interdependence is one of the most extensively researched ones (e.g., Anderson & Narus, 1990; Geyskens, Steenkamp, Scheer & Kumar, 1996; Gundlach & Cadotte, 1994; Kumar et al., 1995). Recent research has found that dependence asymmetry between channel partners is detrimental for relationship quality while higher total interdependence enhances relationship quality. However, as noted by Kumar et al. (1995), these two interdependence constructs explain only a small percentage of variance in the dimensions of relationship quality studied by them—namely, trust, commitment, and conflict. Li and Dant (2001) also found only a small proportion of the variance of their dependent variable (trust) explained by these interdependence constructs (for both additive and multiplicative conceptualizations of interdependence). Therefore, Kumar et al. (1995) call for the identification of additional antecedents to fully explain variations in relationship quality.

We propose a functional antecedent, in the form of distributor channel function performance, to explain relationship quality. The impact of such a variable has received substantially less attention than the corresponding influence of interdependence constructs, even though the existence of resellers is primarily justified by the performance of marketing channel functions (Alderson, 1954; Bucklin, 1966; Bucklin, Ramaswamy, & Majumdar, 1996; Rangan, Menezes, & Maier, 1992). The need for more empirical research on channel function allocation and performance has been emphasized by Frazier (1999). We propose that, by performing marketing functions in a superior manner, a reseller can significantly improve the quality of relationships with its customers. In this study, we investigate the impact of functional variables as well as interdependence on customer perceptions of relationship quality. Our research framework is graphically presented in Fig. 1.

2.2. The distributor's role: performing marketing channel functions

Channel intermediaries are independent businesses that assist producers in the process of making their products or services available for use or consumption (Coughlan et al., 2001). They exist because, as specialists in the performance of distribution tasks, they operate at higher levels of effectiveness and efficiency than manufacturers or end-users. Rosenbloom (1987) identifies six distribution tasks that an intermediary performs for customers—(a) making the product available; (b) delivering customer service; (c) providing credit and financial assistance; (d) assortment convenience; (e) breaking bulk; and (f) giving advice and technical support.

The effective performance of marketing channel functions by the distributor should yield beneficial performance outcomes for the customer. Extant research has shown such favorable outcomes to have a positive impact on trust and satisfaction (Scheer & Stern, 1992). The provision of high levels of marketing channel functions and services reduces goal incompatibility between the organizational customer and the distributor, thereby lowering the potential for conflict (Etgar, 1976). Frazier (1983) found manufacturer role performance to be positively related to dealer satisfaction while Frazier, Gill, and Kale (1989) ascertained it to have a negative impact on perceived conflict. Relationship marketing theory also contends that organizations that deliver superior benefits will be

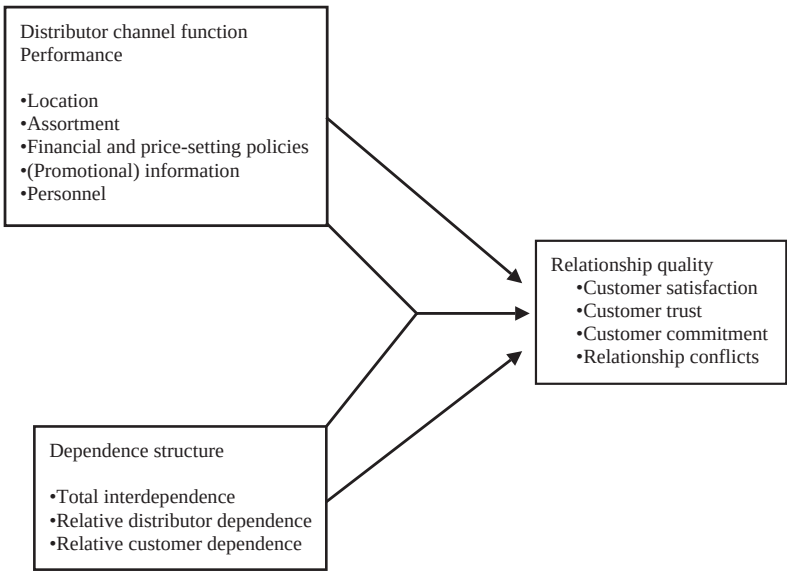

Fig. 1. Research framework.

highly valued and that partners will commit themselves to establishing, developing, and maintaining relationships with such parties (Morgan & Hunt, 1994).

It is logical to assume that the quality of the performance of marketing channel functions by the distributor will be positively related to relationship quality. Organizational customers will be satisfied with good financial terms, large and varied assortments, a convenient location, clear information, and helpful personnel. They will be motivated to develop trust and increase commitment as well as to avoid getting engaged in dysfunctional conflicts, in order to build and sustain a long-term relationship with the reseller. Conversely, when the performance of marketing functions is inadequate, customers will experience a decline in relationship quality.

We hypothesize:

H1. As the level of marketing channel functions performed by the distributor increases, the quality of the relationship as perceived by the organizational customer will increase.

2.3. Interdependence structure

The interdependence structure of a dyadic relationship refers to the magnitude and structure of the dependence of the two parties on each other (Gundlach & Cadotte, 1994; Kumar et al., 1995). Two dimensions of dependence can be distinguished. Using an additive approach, as recommended by Li and Dant (2001) as well as Kim and Hsieh (2003), we define total interdependence as the sum of both parties' dependencies on each other while interdependence asymmetry refers to the difference between each party's dependence on the other. This difference is viewed as the more dependent party's relative dependence on the less dependent party. Exchange relationships characterized by low levels of total interdependence do not require high levels of trust and commitment for their functioning. As total interdependence increases (keeping asymmetry constant), each party's stake in ensuring successful relationship outcomes rises (Buchanan, 1992). In exchange relationships characterized by high levels of total interdependence, both parties face relatively high exit barriers and their interests converge, so they have a strong motivation to eschew opportunistic behavior and instead build, maintain, and strengthen the relationship. This often results in greater trust (Kumar et al., 1995) and commitment (Geyskens et al., 1996; Kumar et al., 1995). The ensuing cooperation and joint action between the partners should result in greater satisfaction with the relationship.

Gundlach and Cadotte (1994) note that the potential for conflict increases as the magnitude of interdependence grows, since each party has greater opportunities to interfere with the other's goal attainment. However, the prospective gains from the relationship result in each partner's embrace of adaptive problem-solving behavior, leading to low levels of manifest conflict. Similarly, bilateral deterrence theory (Bacharach & Lawler, 1981) indicates that as total interdependence increases (keeping asymmetry constant), each partner recognizes the high costs of conflict and retaliation. This is subsequently reflected in a diminished inclination to use punitive actions or engage in conflict (Kumar et al., 1998). Instead, the partners develop flexible adjustment processes (Heide, 1994). Thus, higher total interdependence will lead to higher customer satisfaction, trust, and commitment and lower conflict. We hypothesize:

H2. As the total interdependence between the distributor and its organizational customer increases, the quality of the relationship as perceived by the organizational customer will increase.

Kumar et al. (1995) note that increases in interdependence help create an intra-channel environment where both parties are motivated to develop, maintain, and improve the relationship. We posit that the presence of these incentives will magnify the positive impact of effective marketing channel function performance by the distributor on relationship quality. These actions taken by the distributor to improve relationship quality will produce rapid reciprocation from the customer. Because of the importance of the customer goals that are affected by the distributor's channel function performance, the customer would have even less reason to engage in conflict. Thus, the performance of marketing functions by the distributor will have a stronger positive impact on relationship quality when the total interdependence is higher. We hypothesize:

H3. The positive impact of the distributor's marketing channel function performance on the quality of the relationship as perceived by the organizational customer will be stronger when the total interdependence between distributor and customer is higher.

There has been debate on the implications of dependence asymmetry for relationship quality. Some researchers believe that the presence of asymmetry allows for the relatively less dependent firm to emerge as a constructive 'channel leader' who will coordinate exchange relationships in a purposive and constructive manner (Stern & Heskett, 1969). Dwyer and Gassenheimer (1992) find a positive association between the dyad leader's power and the degree of relationalism in that dyadic relationship. There is a negative association between relationalism and the frequency of use of threats (Boyle, Dwyer, Robicheaux & Simpson, 1992). Therefore, in relational environments, the relatively less dependent firm has a lower need to use coercion (Frazier & Rody, 1991; Frazier & Summers, 1986; Ganesan, 1993). The relatively dependent channel members tend to be more compliant (Anderson & Robertson, 1995) and willing to adapt (Hallen, Johanson, & Seyed-Mohamed, 1991). Better performance outcomes occur for all parties and, consequently, relationship quality is enhanced (Frazier, 1999).

A more recent stream of research in marketing channels, drawing largely on bilateral deterrence theory, concludes that relationships that are asymmetrical in dependence and power (keeping total interdependence constant) are characterized by relatively higher levels of aggression and conflict for all parties. The relatively less dependent firm has few incentives to suppress conflict. The relatively more dependent firm consequently anticipates attacks regardless of its own behavior and is just as likely to initiate conflict through a preemptive strike (Lawler, Ford, & Blegen, 1988). Extant research has found these asymmetrical relationships to be positively associated with the use of coercive influence strategies (Frazier et al., 1989), aggressive, distributive conflict resolution strategies (Dant & Schul, 1992), and severe contract enforcement (Antia & Frazier, 2001).

When channel members see their partners as being relatively dependent on them, they have little motivation to develop long-term relationships (Ganesan, 1994; Lusch & Brown, 1996). Kumar et al. (1995) note that the presence of dependence asymmetry precipitates a divergence in interests of the partners and weakens incentives for the development of trust and commitment in the relationship. The relatively less dependent channel member does not need to develop a high-quality relationship, because it can use its partner's dependence to obtain its cooperation.

Furthermore, the relatively more dependent channel member will not expect any of its relationship-building actions to be reciprocated and is therefore unlikely to trust or be committed to the partner or feel much satisfaction with the relationship. Gundlach and Cadotte (1994) find the use of non-coercive influence strategies (which can facilitate relationship building) to be negatively related to interdependence asymmetry. Relationships with an asymmetrical dependence structure are characterized by unidirectional, direct, formal, lower-frequency patterns of communications (Mohr & Nevin, 1990). Such patterns of communication are not collaborative and, therefore, unlikely to enhance satisfaction or commitment (Mohr, Fisher, & Nevin, 1996). It is not surprising that comparatively asymmetric relationships tend to be less stable, less trusting, and more dysfunctional (Anderson & Weitz, 1989). Therefore, we hypothesize:

H4. As the relative distributor dependence on its organizational customer increases, the quality of the relationship as perceived by the organizational customer will decrease.

H5. As the relative customer dependence on its distributor increases, the quality of the relationship as perceived by the organizational customer will decrease.

It is important to note that we adopt the approach of Kumar et al. (1998) to determine 'relative dependence'. Specifically, 'relative distributor dependence' refers to dependence asymmetry only in situations where the distributor is more dependent on the customer than the customer is on the distributor. Similarly, 'relative customer dependence' reflects dependence asymmetry only in dyads where the customer is more dependent on the distributor than the latter is on the former. This approach is in contrast to other perspectives where relative dependence is viewed in terms of the concept of Emerson (1962) of 'power advantage' and is measured as the simple difference between each exchange partner's dependence on the other (e.g., Anderson & Narus, 1990).

As noted earlier, the presence of relative dependence asymmetries often gives rise to channel conflicts and inhibits the emergence of a climate conducive for building trust and commitment (Kumar et al., 1995). When the distributor is relatively dependent on the customer, the latter may view the effective performance of channel functions by the distributor as nothing more than routine compliance with its influence attempts. The relatively less dependent customer will attribute the favorable outcomes to itself and not view its supplier as particularly productive (Gundlach & Cadotte, 1994; Lusch & Brown, 1996). Consequently, the positive impact of channel function performance on relationship quality will be diminished.

When the customer is relatively dependent on the distributor, its stakes in the relationship are higher. Therefore, the effective performance of channel functions by the distributor has a bigger impact on the customer's objectives and moves it substantially closer to the attainment of its own goals, leading to a more favorable assessment of relationship quality by the latter.[1] Moreover, the distributor has weakened incentives to improve the relationship since it has lower stakes in the outcomes from the relationship. It is expected to do little to avoid conflict or increase trust, commitment, and customer satisfaction. Therefore, the effective performance of channel functions by a relatively less dependent distributor is unlikely to be expected by the customer. When this does occur, the customer may view it as a signal that the distributor wants to improve relationship quality. The customer may disengage from any of its own conflict-inducing activities and be prepared to reciprocate with its own attempts to enhance relationship quality. Under these circumstances, the positive impact of channel function performance on relationship quality will be magnified.

Therefore, we hypothesize:

H6. The positive impact of the distributor's marketing channel function performance on the quality of the relationship as perceived by the organizational customer will be weaker when the relative distributor dependence is higher.

H7. The positive impact of the distributor's marketing channel function performance on the quality of the relationship as perceived by the organizational customer will be stronger when the relative customer dependence is higher.

[1] We are grateful to one of the anonymous reviewers for offering this insight.

3. Methodology

To test our hypotheses, we conducted a mail survey among 1000 professional painters (organizational customers) in the Netherlands and 500 professional painters in the Dutch-speaking part of Belgium. A questionnaire consisting of multiple-item scales was developed to measure the informants' scores on a set of constructs. Our informants were the owners/heads of the painting companies. Our final sample consisted of 317 informants (233 Dutch and 94 Flemish). This meant a response rate of 21.1%, which is consistent with response rates typically found in this stream of research. The response rate for the Netherlands (23.3%) was somewhat higher than that for Belgium (18.8%). This may have been due to our sending the questionnaire from a paint manufacturer's office located in the Netherlands. Informants could, from the postal stamp on the envelope, identify the country from which the survey was sent. Furthermore, the respondents returned the filled-out questionnaires to a postal mailbox in the Netherlands. The questionnaire was sent in a blank envelope and did not contain any information about the specific manufacturer. Moreover, no opportunities were allowed for the customer to make reference to distributors of the manufacturer's products. We assured the informants that their responses would be treated confidentially and that the researchers would report only aggregated, summarized results.

We tested for a possible non-response bias by applying the extrapolation method of Armstrong and Overton (1977). We compared early and late responders on the key constructs and found no significant differences between them. Therefore, there is evidence that non-response bias was not a problem with these data.

Before responding to the multiple-item scales, informants were requested to identify their most important distributor (seller). This was the distributor where the customer bought most of its paints (in terms of the monetary value of purchases). These relationships were likely to be the ones in which the customer had a high level of involvement. We expected this to have a positive impact on the quality of the responses to our questions. No control was imposed on the selection of the specific distributor. Although our approach might potentially have decreased the amount of variation of the interdependencies in the relationships in our data, analyses showed that our data on the interdependence constructs still contained substantial variation.

3.1. Measures

Our research model consists of three sets of constructs: (1) distributor marketing channel function performance, (2) interdependence magnitude and asymmetry, and (3) relationship quality. We measured these constructs using multiple-item scales. The exact wording of the items used in these scales can be found in the Appendix.

3.1.1. Marketing channel function performance

We measured how distributors performed marketing channel functions by using customer ratings on five dimensions. These dimensions were determined by applying a two-step procedure. First, we took the taxonomy of Rosenbloom (1987) of distributor functions and determined which ones were relevant and applicable in the specific channel in which we collected our data (i.e., the channel for paint products). This was done based on discussions with experts within the channel. Next, we developed a list of specific items reflecting the important functions performed by paint distributors. Applying a principal-component factor analysis, we uncovered the following five key functions performed by distributors for their customers:

(a) *Location*: spatial convenience and accessibility of the distributor's outlet.
(b) *Assortment*: the depth and breadth of the distributor's assortment.
(c) *Financial and Price-Setting Policies*: price setting policies, financial conditions and credit arrangements as offered by the distributor.
(d) *(Promotional) Information*: promotional information and information about products and how to use them.
(e) *Personnel Services*: the quality and competency of distributor personnel and the quality of the services they deliver.

Next, we used LISREL 8.3 (Jöreskög & Sörbom, 1993) to assess the quality of the five channel

function constructs. The average value of the factor loadings was 0.74 while all t-statistics exceeded the value of 9, indicating that the factor loadings were highly significant. These findings support the convergent validity of the items. The correlations between the five dimensions were moderate (between 0.50 and 0.69) but significantly different from 1. The Cronbach alpha reliabilities of the first-order factors range from 0.69 to 0.89. Since the correlation between the five dimensions was relatively high, we also specified a second-order factor model with the five dimensions discussed above as the first-order factors and 'channel function performance' as second-order factor. The chi-square for this model is 344.43 ($p<0.001$). The comparative fit index is 0.92, above the generally accepted level of 0.90. All first-order and second-order factor loadings are highly significant (minimum t-value is 6.90, $p<0.001$ and most t-values are above 9.00) and larger than 0.57. The average value of the second-order factor loadings was 0.77. Given the quality of this model, we developed one channel function performance construct by first developing scores for the five separate dimensions (through the computation of the arithmetic mean of individual item scores) and, next, by computing an unweighted average of the scores on the five dimensions. The mean score for this construct was 7.78 (1.02). This shows that, on average, the customers perceived the distributors to perform their channel functions well.

3.1.2. Interdependence structure

The interdependence structure in the relationship between the distributor and the organizational customer (in terms of total interdependence and dependence asymmetry) was operationalized using the additive approach of Kumar et al. (1995; 1998). In order to develop the values for these constructs, we measured distributor and customer dependence using the scales of Lusch and Brown (1996). Distributor Dependence refers to the dependence of the distributor on the informant's organization and how it would hurt profits to lose this organization as a customer. Customer Dependence refers to the dependence of the informant's organization (the organizational customer) on the distributor and how it would hurt profits not being able to do business any longer with this distributor.

3.1.2.1. Measure validation. We specified a two-factor model with one factor representing the distributor's dependence construct and the other representing the organizational customer's dependence construct. Both constructs were measured using three items. The chi-square of this model was 50.58 ($p<0.001$). The comparative fit index was 0.94. All factor loadings were significant (minimum t-value was 10.03, $p<0.001$ and most t-values were above 12.00) and larger than 0.59. The average factor loading was 0.81 for the distributor dependence construct and 0.72 for the customer dependence construct. These findings support the convergent validity of the items. Distributor dependence and customer dependence were then determined by computing the arithmetic means of the item scores. The average distributor dependence score on a 5-point scale was 2.17 (1.11), while the corresponding average customer dependence score was 2.24 (1.03).

Following the approach employed in extant research (e.g., Kumar et al., 1995, 1998), we computed total interdependence by adding the distributor's and the customer' dependence scores. The average total interdependence score was 4.40 (1.69) on a scale that ranged from 2 to 10. A comparison of this score with corresponding averages in previous studies of total interdependence (Table 1) indicates that, on average, the level of total interdependence in the relationships investigated by us was relatively low. In keeping with the approach of Kumar et al. (1995, 1998), we used spline regression (Marsh & Cormier, 2001) to operationalize relative dependence asymmetry. We first computed the absolute asymmetry of dependence as the absolute value of the difference between the distributor dependence score and the customer dependence score. Next, we created two dummy variables:

Dummy 1, = 1 if customer dependence < distributor dependence and 0 if else
Dummy 2, = 1 if customer dependence > distributor dependence and 0 if else

Then, we developed two variables—'relative distributor dependence' (the product of Dummy 1 and Absolute Asymmetry) and 'relative customer dependence' (the product of Dummy 2 and Absolute Asymmetry). These two new variables allow us to examine the effects of an increase in relative asymme-

Table 1
Average interdependence scores

Source	Average interdependence score	Scale range	Standardized average interdependence score (on a 2–10 scale)
This study	4.40	2–10	4.40
Kumar et al. (1995)	8.43	2–14	6.29
Jap and Ganesan (2000)[a]	8.37	2–14	6.25
Li and Dant (2001)	6.01	2–10	6.01
Kim and Hsieh (2003)	8.12	2–14	6.08

[a] Jap and Ganesan (2000) used the multiplicative approach to operationalize interdependence magnitude. However, the average interdependence magnitude score presented here is calculated using the additive approach.

try and to determine whether this effect is different in case the distributor is more dependent relative to the case where the customer is more dependent.

The average dependence asymmetry score, when the distributor was the relatively dependent party (i.e., Dummy 1 = 1–47% of the relationships), was 1.31 (0.91). When the customer was the relatively dependent party (Dummy 2 = 1–49.8% of the relationships), the average dependence asymmetry score was 1.22 (0.76). Overall, the relationships in our sample can be characterized as displaying (a) low to medium total interdependence and (b) relatively moderate asymmetry.

We wanted to correct for a possible relationship between channel function performance and the customer dependence and distributor dependence constructs. Some extant research (e.g., Frazier, 1983) has viewed role performance to impact the interdependence structure of a relationship. In the context of our study, this would imply that customers depend more on the distributors that perform best and that high-performing distributors depend less on any single customer. To correct for the possible presence of these relationships, we separately regressed the customer dependence and the distributor dependence constructs on the channel function performance construct. Subsequently, we used the residuals of these two regression analyses as corrected estimates of customer and distributor dependence. For the purpose of our analyses, we computed total interdependence (as explained above) by summing the corrected scores for distributor and customer dependence. Similarly, in calculating 'relative distributor dependence' and 'relative customer dependence,' we computed the absolute asymmetry of dependence as the absolute value of the difference between the corrected distributor dependence score and the corrected customer dependence score.[2] From here onwards, we use total interdependence and relative dependence scores that are based on the corrected distributor and customer dependence scores.

3.1.3. Relationship quality

The quality of the relationship between the distributor and the organizational customer was measured as the customer's satisfaction with, trust in, and commitment to the relationship, and the level of conflict in the relationship. In measuring these constructs, we used items from existing and established scales if they were appropriate and relevant to the context in which we conducted our study. In some instances, we developed additional items to ensure that constructs were measured as we had defined them. We have included information on the sources of the various scale items in the Appendix.

Satisfaction was measured as the customer's overall affective state resulting from the appraisal of all aspects of the painter's working relationship with the distributor. We used items from the scales used by MacIntosh and Lockshin (1997) as well as two items that we developed ourselves.

Trust was measured as the customer's belief in the distributor's honesty and reliability. Our scale was composed of items from scales used by Siguaw, Simpson, and Baker (1998) and by Doney and Cannon (1997).

[2] We are very grateful to one of the anonymous reviewers for suggesting this procedure.

Table 2
Descriptives and correlation coefficients (two-tailed significances)

	Mean (S.D.)	(2)	(3)	(4)	(5)	(6)	(7)
(1) Channel function performance	7.78 (1.02)	0.00 (1.00)	0.00 (1.00)	−0.01 (0.86)	0.01 (0.93)	−0.02 (0.76)	0.57 (0.00)
(2) Distributor dependence*	0.00 (1.11)		0.30 (0.00)	0.83 (0.00)	0.66 (0.00)	−0.40 (0.00)	−0.14 (0.01)
(3) Customer dependence	0.00 (1.00)			0.78 (0.00)	−0.34 (0.00)	0.55 (0.00)	0.13 (0.02)
(4) Total interdependence	−0.01 (1.70)				0.24 (0.00)	0.07 (0.22)	−0.03 (0.64)
(5) Relative distributor dependence	0.45 (0.79)					−0.36 (0.00)	−0.12 (0.03)
(6) Relative customer dependence	0.44 (0.70)						0.26 (0.00)
(7) Relationship quality	4.16 (0.56)						

* Descriptives and correlation coefficients are based on the corrected distributor and customer dependence scores.

Commitment was measured as the customer's willingness to keep buying and stay a customer for the distributor. To measure this construct, we used items from scales used by Siguaw et al. (1998), Sirohi, McLaughlin, and Wittink (1998), and Kumar et al. (1995).

Conflict was measured as the amount of antagonism in the relationship between the customer and the distributor. This construct was measured using items from the scales used by Frazier et al. (1989) and Kumar et al. (1995).

3.1.3.1. Measure validation. We specified a model for the higher-order construct of relationship quality with four factors representing the four relationship dimensions—satisfaction, trust, commitment, and conflict. Each of these four dimensions was measured using multiple items. This model showed a good fit. The chi-square model was 155.62 ($p<0.001$) and the comparative fit index was 0.96. All factor loadings were (highly) significant (the minimum t-value was 2.07, $p<0.001$ and most t-values were above 5.00) and larger than 0.50, except for two which were 0.40 and 0.45, respectively. These results support the convergent validity of our relationship quality construct. The correlations between the (absolute) values of the four relationship dimensions ranged from 0.45 (correlation between conflict and commitment) to 0.87 (correlation between trust and satisfaction). We computed the relationship quality construct score by first computing scores for each of the four dimensions (satisfaction, trust, commitment and conflict). These scores were computed as the arithmetic means of the item scores. Next, the relationship quality score was computed as the unweighted average of the scores on satisfaction, trust, commitment, and conflict. The average relationship quality score was 4.16.

Table 2 contains the descriptives for the various constructs in our study and the correlations between these constructs.

4. Results

We tested our hypotheses by performing regression analyses.[3] Eq. (1) presents the framework we

[3] As stated earlier, this analysis used data based on the corrected customer and distributor dependence scores. We conducted a corresponding regression analysis with the uncorrected dependence scores and obtained very similar results. This is not surprising, given the relatively low values of the correlations between the dependence and channel function performance constructs. However, the correction is helpful in that the subsequent analyses lead to a purer estimate of the separate effects of the two distinct constructs of dependence and channel function performance.

Table 3
Results of regression analyses, regression coefficients (significance)

	Relationship quality
Constant	1.024 (0.000)
Distributor channel function performance	0.390 (0.000)
Total interdependence	−0.418 (0.001)
Relative distributor dependence	0.413 (0.103)
Relative customer dependence	0.905 (0.000)
Interaction 1 (Channel function * Interdependence)	0.051 (0.001)
Interaction 2 (Channel function * Relative distributor dependence)	−0.052 (0.105)
Interaction 3 (Channel function * Relative customer dependence)	−0.088 (0.000)
Adj. R^2	0.414
F (Sig)	32.031 (0.000)

applied for our analysis. Results are presented in Table 3.[4]

$$\begin{aligned} &\textit{Relationship Quality} \\ &= \beta_0 + \beta_1 * \textit{Channel Function Performance} \\ &\quad + \beta_2 * \textit{Total Interdependence} \\ &\quad + \beta_3 * \textit{Relative Distributor Dependence} \\ &\quad + \beta_4 * \textit{Relative Customer Dependence} \\ &\quad + \beta_5 * \textit{Interaction } 1(\textit{Channel Function Performance} \\ &\quad * \textit{Total Interdependence}) \\ &\quad + \beta_6 * \textit{Interaction } 2(\textit{Channel Function Performance} \\ &\quad * \textit{Relative Distributor Dependence}) \\ &\quad + \beta_7 * \textit{Interaction } 3(\textit{Channel Function Performance} \\ &\quad * \textit{Relative Customer Dependence}) + \varepsilon \end{aligned} \tag{1}$$

We present the results for the sample that was pooled across the two countries. We considered pooling the two country samples as justifiable after performing a Chow test (Chow, 1960), which tests for the existence of structural differences between the two countries. The test results indicated that we did not need to reject the hypothesis that coefficient vectors are the same in the two countries.

The results in Table 3 show that the organizational customer perceives the quality of the relationship as being higher in relationships in which the distributor effectively performs marketing channel functions ($b = 0.390$, $p = 0.000$). This finding confirms H1. Indeed, the inclusion of this construct as an explanatory variable dramatically increases the proportion of variance in customer perceptions of relationship quality explained by our model (Adjusted $R^2 = 0.414$) compared to similar studies that had ignored this construct.

The precise effect of channel function performance on customer perceptions of relationship quality depends on the magnitude of total interdependence and the nature and extent of dependence asymmetry in the exchange relationship. In Fig. 2, we plot the effect of channel function performance on relationship quality within the actual range of total interdependence scores (Schoonhoven, 1981). From Fig. 2 (as well as Table 3) we observe that the positive impact of the distributor's marketing channel function performance on relationship quality depends on the level of interdependence and is thus greater in the case of medium levels of interdependence than in the case of low interdependence ($b = 0.051$, $p = 0.001$). This finding is in accordance with the relationship hypothesized in H3.

No significant interaction effect between channel function performance and dependence asymmetry was found for the relationships in which the distributor was relatively more dependent ($b = -0.052$, $p = 0.105$). This finding does not support H6—the impact of channel function performance on relationship quality is not affected by dependence asymmetry when the distributor is relatively dependent. We do observe a significant negative interaction effect between dependence asymmetry and channel

[4] We also undertook the regression analysis using mean-centered data to check whether multicollinearity problems affected our results. This procedure ensures that the scores on these constructs become uncorrelated with the mutual interaction terms (Jaccard, Turrisi, & Wan, 1990). The results of this regression analysis (using the raw data) and those obtained with mean-centered data were very similar. For reasons of interpretability we present only the results of the analysis for the raw data.

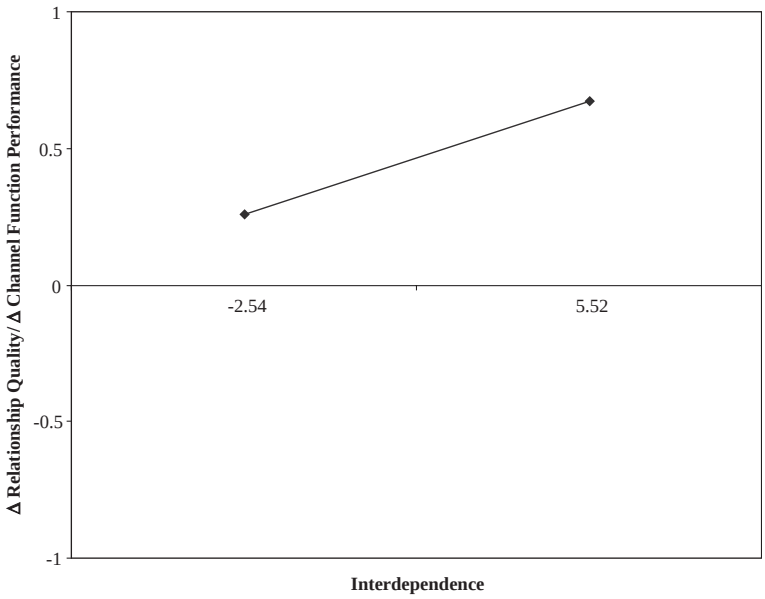

Fig. 2. The effect of interdependence on the relationship between channel function performance and relationship quality.

function performance for those relationships where the customer is relatively more dependent ($b=-0.088$, $p=0.000$) (see Fig. 3). This result is contrary to the effect we hypothesized in H7. It indicates that the positive effect of channel function performance on relationship quality is not that strong when the customer is relatively dependent on the distributor. An explanation for this finding may lie in the presence of a 'ceiling effect' for customer perceptions of relationship quality. Anecdotal evidence from our interviews with experts in the channel indicates that the strong (and relatively less depend-

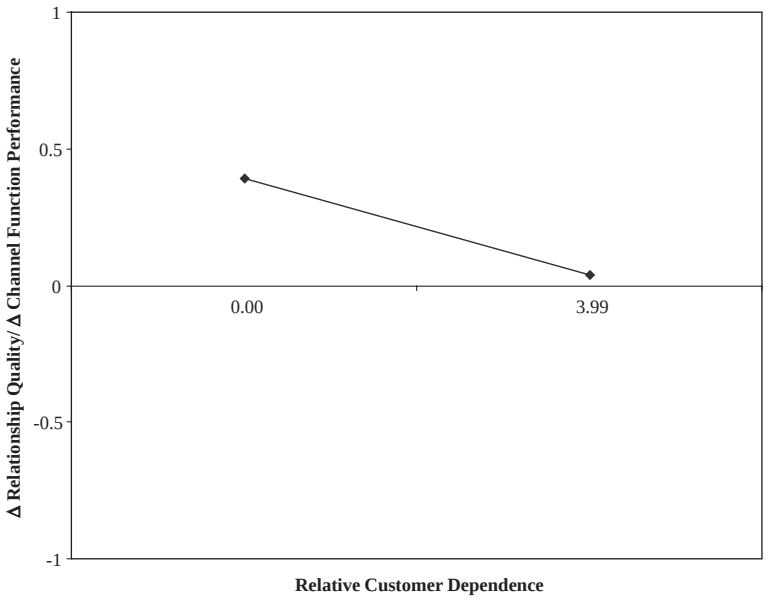

Fig. 3. The effect of relative customer dependence on the relationship between channel function performance and relationship quality.

ent) distributors were the larger and more professional ones. Relationships with these distributors were already greatly appreciated by customers. The performance of additional channel functions by these distributors had less impact, since customer perceptions of relationship quality were already as high as they could be.

Surprisingly, and unlike what we hypothesized in H2, relationships in which the distributor and the customer are more interdependent, on average, are not perceived as having higher quality. In fact, we seem to find an opposite relationship ($b = -0.418$, $p = 0.001$). On average, relationships in which the two channel partners are moderately interdependent seem to be perceived less favorably than relationships characterized by low interdependence. Digging a little deeper, we find that when channel function performance is relatively low, medium interdependent relationships show a lower level of relationship quality than those characterized by low interdependence. However, when channel function performance is relatively high, customers evaluate low and moderately interdependent relationships similarly. The negative relationship between interdependence and relationship quality could thus be attributed to the customers in medium interdependent relationships not receiving the level of distributor's channel function performance they may have expected.

We find that in relationships in which the distributor is relatively more dependent, dependence asymmetry does not significantly affect the overall relationship quality score ($b = 0.413$, $p = 0.103$). This finding does not support H4. Dependence asymmetry does affect the quality of relationships in which the customer is the relatively more dependent partner. We find that customers perceive asymmetric relationships more favorably when they are the relatively more dependent partner ($b = 0.905$, $p = 0.000$). Although this result is contrary to what was hypothesized in H5, the absence of a negative effect of relative customer dependence on relationship quality has also been found in previous studies. Increases in interdependence asymmetry have not been found to impact dimensions of relationship quality such as manufacturer perceptions of channel conflict (Gundlach & Cadotte, 1994), distributor commitment (Kim & Hsieh, 2003) or the use of punitive actions (Kumar et al., 1998).

The customers we investigated apparently preferred relationships with strong distributors, where these customers were relatively dependent on the distributors. This is consistent with Lewis and Lambert (1991) who found a positive relationship between franchisee dependence on their exchange partner (the franchisor) and franchisee performance. In addition, they found that, when franchisee performance outcomes were good, franchisees attributed a greater share of these performance outcomes to contributions of their partner and were therefore more satisfied with the focal relationship.

Our results for the effect of relative customer dependence on customer perceptions of relationship quality also appear to be consistent with the 'channel leadership' school of thought that believes interdependence asymmetry can have a positive impact on channel performance and relationship quality if the relatively less dependent party assumes a constructive leadership role and purposively coordinates exchange relations in a channel (Frazier, 1999; Stern & Heskett, 1969). Ganesan (1993) found that powerful retailers were less likely to use an active aggressive negotiation strategy and were more likely to use problem-solving negotiation strategies. Powerful channel members are often able to coordinate and manage channels using non-coercive influence strategies and therefore do not have to resort to coercive strategies (Frazier & Rody, 1991; Frazier & Summers, 1986). Hunt and Nevin (1974) found that franchisee satisfaction increased when a franchisor used non-coercive sources of power while Lusch (1976) observed that the use of non-coercive sources of power reduced channel conflict. Therefore, it is not entirely surprising that interdependence asymmetry has been previously found to have a positive impact on affective commitment (Geyskens et al., 1996) while it is negatively related to conflict levels (Jap & Ganesan, 2000).

5. Discussion

In this paper, we have studied the impact of distributor channel function performance on relationship quality, as perceived by the customer, in the distributor–customer dyad. Using a rigorous methodological approach (characterized by the measurement of both channel function performance and

relationship quality as multi-faceted, high order constructs and the use of multiple-item scales to measure each facet), we find that the effective performance of channel functions by a distributor can significantly enhance customer perceptions of relationship quality. Compared to the often-investigated construct of interdependence structure, the impact of marketing channel function performance in explaining variations in relationship quality is significant and substantial. Indeed, we find it to be one of the primary drivers of relationship quality. In addition, we find that the impact of channel function performance on relationship quality is moderated by the interdependence structure of the distributor–customer dyad.

5.1. Managerial implications

Marketing channel functions and services are managerially actionable variables that are central to channel structure and coordination decisions. Our results show that distributors can improve their relationships with organizational customers by performing their channel functions effectively. A clear managerial implication of our study is that distributors should focus on effectively performing channel functions, as a means of salvaging and strengthening relationships with their customers. These efforts should be concentrated on customer relationships where superior channel function performance has the greatest impact on relationship quality. Based on our results, a distributor can get the greatest "bang for its buck" by focusing on customer relationships characterized by relatively higher levels of interdependence (Fig. 2) as well as those in which the customer is relatively dependent on the distributor but the degree of relative dependence is low (Fig. 3).

5.2. Theoretical implications

Our examination of the impact of the performance of marketing channel functions and services on relationship quality addresses two notable gaps in the marketing channels literature:

(a) While there is a substantial body of empirical research that looks at the implications of channel function performance on channel structure (e.g., Bucklin et al., 1996; Rangan et al., 1992), little is known about the impact of channel function performance on important dimensions of channel management, necessitating calls for more empirical research on channel function issues (Frazier, 1999). We make a contribution to filling this void by examining the impact of the performance of marketing channel functions and services on relationship quality.

(b) Considerable research effort has gone into understanding antecedents of relationship quality. However, key antecedents like interdependence explain only a small degree of the variation in each of the different dimensions of relationship quality (Kumar et al., 1995; Li & Dant, 2001). What factors could account for the unexplained variation in relationship quality? We address this question and advance the literature on the antecedents of relationship quality.

We provide evidence of the difference between dependence and channel function performance. Our channel function performance construct shows similarities with the relatively simpler but also more often investigated 'role performance' construct (Frazier et al., 1989), which has been viewed as an indicator of dependence. We realize that relationships between these constructs may exist and we have corrected for it in our analyses. Indeed, the presence of significant effects of the different interdependence constructs on relationship quality (using the corrected data) confirms that channel function performance and interdependence are distinct constructs. We further enrich this stream of literature by showing how these two key antecedents of relationship quality–channel function performance and interdependence structure—interact in affecting relationship quality. The positive impact of channel function performance on relationship quality is magnified when total interdependence increases (Fig. 2) and diminished as relative customer dependence on the distributor increases in those relationships where the customer is the dependent party (Fig. 3).

Marketing channels researchers (e.g., Frazier, 1999; Stern & Weitz, 1997) have called for more

research that looks at marketing channels issues and decisions from the perspective of an intermediary, rather than from the viewpoint of an upstream manufacturer. We take a step in this direction, by examining how a distributor can strengthen relationships with its customers. Frazier and Rody (1991) note that, prior to their paper, much of the research on dependence used institutional contexts characterized by very high levels of downstream dependence. The interdependence stream of literature (focusing on both total interdependence as well as interdependence asymmetries) that emerged in the mid-1990s also consists of a number of empirical studies that deal with medium to very high levels of total interdependence and dependence asymmetries. Our study features an institutional setting characterized by low to medium levels of both interdependence and dependence asymmetry. Although these levels of dependence are typical of most economic exchanges (arms-length interactions in which neither party is very dependent on the other), there are very few extant studies that have examined such dependence structures.[5] Thus, our study further contributes to the marketing channels literature by focusing on firms as well as interdependence structures that are an important part of the institutional environment but have hitherto not received commensurate attention from researchers.

5.3. Limitations and future research

Like all studies, our study also has its limitations. An important limitation is that we collected our data from customers only. This gives only one perspective on the quality of the relationship. The perceptions of the distributor on relationship quality can of course be different. What the customer sees as good is not necessarily good from the viewpoint of the distributor. However, the customer's perceptions of the relationship ultimately drive its actions and therefore, tend to be more important for the distributor's performance outcomes. In future research it would be interesting to include the perspectives of other parties as well. It would especially be useful to study how manufacturers' views on their relationships with distributors vary as a function of the quality of these distributors' relationships with their end-customers.

Relationships between interdependence and relationship quality found in previous research studies (e.g., Kumar et al., 1995) did not hold in our study, where the average levels of both interdependence and dependence asymmetry were much lower. Kim and Hsieh (2003) note the presence of nonlinear relationships between different dimensions of interdependence and relationship quality and call for research that enhances our understanding of these non-linearities. Our results, when taken together with prior research in this domain, reinforce the need for further investigation of variables that moderate the relationship between interdependence and relationship quality. This could include variables from TCA, such as the magnitude and nature of relationship-specific investments made by each party, as well as constructs like the punitive capabilities of each party (Kumar et al., 1998), the extent to which coercive influence strategies are used (Gundlach & Cadotte, 1994), cognitions and attributions about each party's actions (Hibbard et al., 2001), pie-sharing principles (Jap, 2001), or the structure of the buyer–seller relationship (Cannon & Perreault, 1999). All of these topics present excellent opportunities for future research.

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Appendix A. Measurement Scales

Marketing channel function performance (very bad 0-1-2-3-4-5-6-7-8-9-10 very good).

Location

1. Location, accessibility
2. Parking facilities
3. Opening hours

$\alpha = 0.69$

[5] We are grateful to an anonymous reviewer for highlighting this issue.

Assortment

1. The number of brands
2. The number of painting products per brand
3. The number of non-paint products
   $\alpha = 0.76$

Financial and price-setting policies

1. Price level
2. Price–quality relationship
3. Financial conditions, credit arrangements, discounts
   $\alpha = 0.81$

(Promotional) information

1. Special offers
2. Instructional information with new products
3. Technical information and brochures
   $\alpha = 0.85$

Personnel

1. Expertise, competency
2. Correctness of deliveries
3. Speed of in-store services
4. Customer friendliness
5. Relationship management reputation
6. Continuity of personnel occupation
   $\alpha = 0.89$

Mean overall scale = 7.78 (1.02)

Dependence of industrial distributor (completely disagree 1-2-3-4-5 completely agree)

1. This distributor is dependent on us
2. It is difficult for this distributor to replace us
3. It would be costly for this distributor to lose us as a customer
   $\alpha = 0.85$, Mean = 2.17 (1.11)

Dependence of organizational customer (completely disagree 1-2-3-4-5 completely agree)

1. We are dependent on this distributor
2. It is difficult to replace this distributor
3. It would be costly to lose this distributor
   $\alpha = 0.75$, Mean = 2.24 (1.03)

Customer satisfaction with industrial distributor (completely disagree 1-2-3-4-5 completely agree)

1. When I leave this distributor's outlet, I am satisfied (MacIntosh & Lockshin, 1997)
2. This distributor can improve a lot (*R*)
3. Generally, I feel satisfied with this distributor (MacIntosh & Lockshin, 1997)
   $\alpha = 0.63$, Mean = 3.86 (0.70)

Customer trust (completely disagree 1-2-3-4-5 completely agree)

1. This distributor is open and honest with us (Siguaw et al., 1998)
2. This distributor is knowledgeable about its products (Siguaw et al., 1998)
3. In difficult times this distributor will support us (Siguaw et al., 1998)
4. This distributor is trustworthy (Doney & Cannon, 1997)
   $\alpha = 0.81$, Mean = 4.18 (0.66)

Customer commitment (completely disagree 1-2-3-4-5 completely agree)

1. We are constantly looking for another distributor to buy our materials from (*R*) (Siguaw et al., 1998)
2. We have a good relationship with this distributor and want to keep buying from them (Kumar et al., 1995)
3. We will continue buying our paints from this distributor (Sirohi et al., 1998)
4. The quantity of paints we buy from this distributor will grow in the coming years
   $\alpha = 0.66$, Mean = 4.19 (0.63)

Channel conflicts (completely disagree 1-2-3-4-5 completely agree)

1. The relationship with this distributor is full of conflicts (Kumar et al., 1995)
2. Negotiations with this distributor are always rough
3. We often differ in opinion with this distributor
4. We get frustrated with the way this distributor works (Frazier et al., 1989)
   $\alpha = 0.92$, Mean = 1.56 (0.82)

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