The effects of trust and interdependence on relationship commitment: A trans-Atlantic study

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Abstract

In recent years, interorganizational relationship management has become of paramount interest in marketing channels research. Marketing managers and researchers have identified mutual commitment among exchange partners in a marketing channel as central to successful relationship marketing and as key to producing significant benefits for firms. We consider two types of commitment that may characterize interfirm relationships. Affective commitment expresses the extent to which channel members *like* to maintain their relationship with specific partners. Calculative commitment measures the degree to which channel members experience the *need* to maintain a relationship. After conceptualizing commitment, we offer a set of hypotheses concerning the joint impact of trust and interdependence on both affective and calculative commitment. Testing our hypotheses in a field study involving two countries, we find strong evidence that total interdependence enhances both affective and calculative commitment. Which type of commitment develops depends on trust. The unexpected positive effect of interdependence asymmetry on affective commitment seems to be in line with a stream of research that has emphasized the positive role of power differences in promoting the effective coordination of channel relationships.

1. Introduction

Relationship commitment has recently emerged in the marketing channels literature as a critically important element for channel survival (e.g., Anderson and Weitz, 1992; Morgan and Hunt, 1994) and per-

formance (Kumar et al., 1994; Noordewier et al., 1990). Channel member commitment connotes solidarity and cohesion (Dwyer et al., 1987), encouraging the channel partner firms to resist apparently attractive short-term alternatives in favor of the expected long-term benefits of staying with existing partners (Anderson et al., 1994; Morgan and Hunt, 1994).

The recognition that commitment is central to successful relationship marketing has triggered re-

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search on the factors that contribute to developing, maintaining and increasing commitment. Recent studies suggest that both structural elements of the channel relationship and channel firm attitudes can impact relationship commitment. We focus on one structural element, the channel interdependence structure, and one attitudinal factor, trust in one's channel partner, that have been identified as having an impact on commitment. Whereas considerable evidence indicates that trust positively affects commitment (Anderson and Weitz, 1989; Morgan and Hunt, 1994), the effects of channel firm interdependence on commitment are less clear, in part because different researchers have examined different aspects of channel firm dependence or interdependence.

In this paper, we argue that the effects of trust and interdependence on relationship commitment are more complex than revealed by previous findings. First, although recent social science research has found commitment to be a multi-faceted construct (e.g., Allen and Meyer, 1991; Mathieu and Zajac, 1990), channel studies have almost exclusively focused on a more affective kind of commitment, neglecting a second, more instrumental type of commitment, viz. calculative commitment. Recognition of this second type of commitment generates the possibility that trust and interdependence could have different impacts on affective commitment versus calculative commitment. Secondly, we propose that trust and interdependence will have an interactive effect on affective commitment. Finally, marketing theories frequently have been tested only in a single country, often the United States. It is not clear to what extent research findings and insights obtained in one particular country are applicable to other countries. As Cunningham and Green (1984), (p. 9) pointedly observe: "This is essentially a question of external validity and research should be encouraged to determine which marketing principles can be universally applied and which are basically ethnocentric". Therefore, we test the cross-national validity of our hypotheses with data from two countries, the United States and the Netherlands.

The structure of the paper is as follows. First, we discuss the construct of commitment, distinguishing between affective and calculative commitment. Next, we develop hypotheses about the impact of the channel interdependence structure and trust on commit-

ment. Then, we describe the research methodology and test our hypotheses on data collected from automobile dealers in the United States and the Netherlands. Finally, we discuss the limitations of our research and the implications of our findings.

2. The nature of commitment – affective commitment and calculative commitment

Commitment typically has been defined as a channel member's intention to continue the relationship (e.g., Anderson and Weitz, 1989; Dwyer et al., 1987). Organizational researchers have noted, however, that several different motivations can underlie this intention, and thus have identified various different types of commitment (Allen and Meyer, 1991). Of these, affective commitment and calculative commitment appear most frequently and also seem to be the most relevant for interorganizational relationships (Mathieu and Zajac, 1990). Both affective and calculative commitment are psychological states, i.e., relatively stable attitudes and beliefs about the relationship that arise, at least in part, out of interaction (Huston and Robins, 1982), but they clearly arise from different *motivations* for maintaining a relationship.

Past channel studies, however, have usually focused solely on affectively motivated commitment (e.g., Anderson and Weitz, 1992; Kumar et al., 1995a; Kumar et al., 1995b; Morgan and Hunt, 1994) where the underlying motive to maintain a channel relationship is a "generalized sense of positive regard for, and attachment to, the organization" (Konovsky and Cropanzano, 1991, p. 699). According to this view, an affectively committed channel member *desires* to continue its relationship because it likes the partner and enjoys the partnership (Buchanan, 1974). It experiences a sense of loyalty and belongingness (Jaros et al., 1993; Porter et al., 1974).

Calculative commitment, in contrast, is the extent to which channel members perceive the *need* to maintain a relationship given the significant anticipated termination or switching costs associated with leaving. It results from a 'cold' calculation of costs and benefits, including an assessment of the investments made in the relationship and the availability of

alternatives to replace or make up for the foregone investments (Allen and Meyer, 1991). As calculative commitment is based in the perceived structural constraints that bind the firm to its channel partner, it reflects a rather negative motivation for continuing the relationship. [1] Despite the attention paid to the construct of calculative commitment in industrial/organizational psychology and organizational behavior research (e.g., Mathieu and Zajac, 1990; McGee and Ford, 1987), it has been virtually ignored in the channels literature. Although Ganesan (1994) examines 'commitment', his operationalization is dominated by items reflecting the buyer's economic utility derived from a long relationship with its vendor. Buchanan (1992), on the other hand, does not empirically examine calculative commitment, but she suggests that a channel firm may have an incentive to make a commitment to the relationship because of the inherent value of its partner's resources. Only Kumar et al. (1994) in a working paper have explicitly distinguished between affective and calculative commitment in both theory and measures.

The organizational behavior literature has typically conceptualized affective commitment and calculative commitment as being independent; the extent to which one is affectively committed does not affect the degree of calculative commitment, and vice versa (e.g., Allen and Meyer, 1991; McGee and Ford, 1987). If this is true, the use of global commitment measures — which measure intention to continue a relationship without consideration of the underlying motivation — could confound or mask different, and possibly even opposite effects on affective commitment versus calculative commitment.

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[1] Calculative commitment is an attitudinal phenomenon as it measures the degree to which a firm *experiences* a need to continue a channel relationship due to the high costs of leaving. As such, calculative commitment distinctly differs from dependence, which refers to the structure of the relationship. Whereas dependence measures structural elements that bind the firm to the partner, calculative commitment measures to what extent the firm's *motivation* to continue the relationship with that partner is based on these structural ties. Our data provide evidence that a firm's calculative commitment and its dependence on the channel partner are distinct constructs; correlations between these constructs were 0.338 (the Netherlands) and 0.263 (the United States).

Furthermore, the use of the more general term 'commitment' to describe either of these two very different facets creates considerable confusion in the interpretation of commitment theories, models and empirical findings. As calculative and affective commitment are distinctly different in nature, interdependence structure and trust could have differential effects on these facets.

3. The effects of interdependence on affective and calculative commitment

Since marketing channels are defined as sets of interdependent organizations involved in the process of making a product or service available for use or consumption (Stern and El-Ansary, 1992), interdependence is a crucial concept in marketing channels research. Channels researchers have often derived their definitions of dependence from the Emerson (1962) conceptualization of power-dependence theory; each party's dependence on its partner is determined by (1) its motivational investment in the relationship, and (2) the replaceability of the partner. Motivational investment refers to the value of the resources or outcomes mediated by the other party. This aspect of dependence has often been operationalized via the 'sales and profits' approach (El-Ansary and Stern, 1972); the greater the sales and profits that the channel partner accounts for, the greater the channel member's dependence on its partner (e.g., Frazier et al., 1989; Frazier and Rody, 1991). The replaceability component of dependence refers to the difficulty of replacing one's channel partner because of switching costs or the lack of alternative partners (e.g., Buchanan, 1992); the more difficult it is to replace a partner, the greater is the channel member's dependence on that partner. Following Emerson's conceptualization, an assessment of a firm's dependence should encompass both motivational investment and replaceability.

In contrast to early research on channel dependence that focused on the effects of a firm's absolute dependence on its partner without reference to its partner's dependence, recent studies have incorporated both firms' dependence (e.g., Buchanan, 1992; Gundlach and Cadotte, 1994; Kumar et al., 1995b).

Various researchers have recently argued that a comprehensive view of the channel interdependence structure must include both total interdependence and interdependence asymmetry (Gundlach and Cadotte, 1994; Kumar et al., 1995b). Total interdependence refers to the sum of each firm's dependence on its partner; this value is an assessment of what Emerson (1972) terms 'relational cohesion'. Interdependence asymmetry refers to the difference between the firm's dependence on its partner and the partner's dependence on the firm. Symmetric interdependence exists when the parties are equally dependent on each other.

The various elements of the channel interdependence structure can have diverse effects on the channel members' attitudes and behavior (Gundlach and Cadotte, 1994; Kumar et al., 1995b). We posit that total interdependence and interdependence asymmetry will have divergent effects on affective and calculative commitment.

3.1. Total interdependence

The Dwyer et al. (1987) model of relationship development highlights a process of gradual expansion of interdependence between buyer and seller. To arrive at a state of high interdependence, i.e., a state in which both buyer and seller dependence are high, partners must go through a number of relationship development phases in which they continually enlarge the investments they make in one another, in order to demonstrate and signal their good faith (Anderson and Weitz, 1992; Johanson and Mattson, 1985). If one of the channel members is not satisfied with the relationship, it will not have its own position 'weakened' by investing in the other partner. Therefore, all else being equal, increasing total interdependence demonstrates to a channel member that efforts to maintain the relationship are reciprocated by its partner (Anderson and Weitz, 1992), that partners adapt to fit each other better (Hallén et al., 1991), that the proportion of common to competitive interests increases (Kumar et al., 1995b), and that customer/seller loyalty is achieved (Dwyer et al., 1987). These converging interests lead us to propose that high total interdependence causes channel members to prefer their relationship to continue for affective reasons. Evidence for the effect of total interde-

pendence on affective commitment has been provided by Kumar et al. (1995b) for dependence conceptualized as replaceability. We seek to corroborate their findings for a broader conceptualization of dependence, encompassing both motivational investment and replaceability, and hypothesize: [2]

H1. Greater total interdependence leads to higher affective commitment for both channel firms.

Ties of total interdependence provide each party in the relationship with the opportunity to facilitate the other's goal attainment. More highly interdependent firms have more to lose if the partnership ends, as they have made a lot of idiosyncratic investments in the relationship (Dwyer et al., 1987). Hence, it would be contrary to the self-interest of those channel members to end their relationship, as they have much to lose. We expect, therefore, that when total interdependence increases, each firm's necessity to continue the relationship will increase too, because firms have created mutual exit barriers (Anderson and Weitz, 1992). Therefore:

H2. Greater total interdependence leads to higher calculative commitment for both channel firms.

3.2. Interdependence asymmetry

Recently, the consequences of interdependence asymmetry have become a major theme of research in the marketing channels literature (e.g., Anderson and Weitz, 1989; Kumar et al., 1995b). These researchers have consistently argued that channel relationships with more asymmetric interdependence are more dysfunctional because of the exploitation opportunities that result from the imbalance. Essentially the same rationale explains the negative effect of interdependence asymmetry on affective commitment. Greater interdependence asymmetry is likely to reduce each firm's affective commitment, because the disparity in their dependence will tend to put their interests in conflict. A deeper understanding of

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[2] All stated hypotheses are based on the assumption of 'all else being equal'.

this negative relationship requires distinguishing between the more and the less dependent channel member.

For the less dependent partner, having relative power over its weaker partner makes it likely this power will be used to achieve the partner's cooperation and to obtain valuable outcomes. The stronger firm has little structural motivation to identify with or become attached to the weaker partner (Kumar et al., 1995b; Robicheaux and El-Ansary, 1975). For the more dependent party, its fear of exploitation reduces its satisfaction with the relationship (Anderson and Narus, 1984) and consequently also its motivation to continue the relationship for affective reasons (Anderson and Weitz, 1989). In line with these studies, we hypothesize:

H3. Greater interdependence asymmetry decreases affective commitment for both channel firms.

For calculative commitment, the picture is different. Calculative commitment is based on an economic rationale; a firm is motivated to stay with its partner because it needs to from an economic point of view. For the less dependent channel member, as interdependence asymmetry increases, its power advantage over its partner increases. The less dependent firm thus has lower need to continue the relationship, although it may well intend to do so because of its ability to achieve its goals through its dominance over the partner. Thus the less dependent firm's calculative commitment will be reduced as the interdependence asymmetry increases.

On the other hand, the more dependent firm's calculative commitment is expected to increase as the interdependence asymmetry increases. As its relative dependence on the more powerful partner becomes greater, the less dependent firm is in an increasingly vulnerable position. Hence, we expect that the weaker firm will be motivated to continue the relationship because it is the *necessary* thing to do, given the high perceived switching costs. We thus propose a positive relationship between interdependence asymmetry and calculative commitment for the more dependent firm and hypothesize:

H4. Greater interdependence asymmetry increases calculative commitment for the more dependent

channel partner, but decreases calculative commitment for the less dependent firm.

4. The effects of trust on affective and calculative commitment

The centrality of trust in developing long-term relationships has been emphasized repeatedly in the marketing channels literature (e.g., Anderson and Weitz, 1989; Dwyer et al., 1987; Morgan and Hunt, 1994). In social psychology, a consensus seems to be emerging that trust encompasses two essential elements – trust in the partner's honesty and trust in the partner's benevolence (e.g., Larzelere and Huston, 1980; Rempel et al., 1985). Each of these dimensions has been examined at times by channels researchers. Honesty refers to the belief that one's partner stands by its word, fulfills promised role obligations, and is sincere (Morgan and Hunt, 1994; Scheer and Stern, 1992); benevolence reflects the belief that one's partner is interested in the firm's welfare and will not take unexpected actions which will negatively impact the firm (Anderson and Narus, 1990; Anderson and Weitz, 1989). Trust, therefore, exists to the extent that the channel member believes its partner to be honest and benevolent.

In examining the effects of trust on commitment, we extend previous research by (1) exploring the differential effects of trust on affective and calculative commitment, and (2) considering how the effects of dependence asymmetry on commitment are moderated by trust.

4.1. The main effects of trust

Trust, as well as the process of interfirm adaptations and interorganizational learning by which trust is built, are so highly valued in interfirm relationships that parties will strongly desire to continue these relationships (Granovetter, 1985; Hallén et al., 1991). Empirical support for the positive main effect of trust on affective commitment has been provided in marketing channels by Anderson and Weitz (1989) and Morgan and Hunt (1994). Although these studies both refer to global 'commitment', their operationalizations reflect primarily affective commitment. Consistent with these studies, we hypothesize that the higher a firm's trust in its partner, the higher its

motivation to continue the relationship for affective reasons:

H5. Higher trust increases affective commitment for both channel partners.

Trust reflects a firm's confidence, positive expectations and attributions that its partner is honest and responsive to the firm's needs (Rempel et al., 1985). Holmes and Rempel (1989) report that high-trust parties maintained positive feelings toward their partners by discounting negative elements in ways that confirmed their positive trusting attitudes. Trusting individuals did not naively ignore negative elements in relationship issues, but they made fewer negative attributions.

The tenor of a distrusting relationship is quite different. When trust is low, firms are more likely to carefully scrutinize and monitor the other partner's behavior, to guard against the partner's opportunism, and to incur various costs of such vigilance. When trust is low, therefore, decisions as to whether to maintain the relationship are more likely to be based on a calculation of immediate benefits versus costs. A channel member who intends to continue the relationship is more likely to be motivated to do so because it *cannot* easily replace its current partner and obtain the same resources and outcomes outside its current relationship. We therefore posit that as a firm's trust in its partner decreases, it is more likely to perceive that it needs to continue the relationship rather than that it wants to maintain the relationship. We hypothesize:

H6. Higher trust decreases calculative commitment for both channel partners.

4.2. Interactive effect of trust and interdependence asymmetry on affective commitment

In the channels literature, the potential exploitation of the more dependent partner by the less dependent partner has consistently been advanced as the primary reason for the anticipated negative effects of interdependence asymmetry on affective commitment. When faced with an asymmetric relationship, negative feelings toward the partner are likely to prevail and, consequently, affective commitment de-

creases (Anderson and Weitz, 1989; Anderson and Narus, 1990; Kumar et al., 1995b).

We agree that exploitation, when it occurs, has a devastating effect on affective commitment. However, we do not concur with the implicit assumption that exploitation is an inherent human characteristic, surfacing whenever it is unchecked by governance modes. A state of high interdependence asymmetry certainly creates the potential for exploitation, as the less dependent partner faces *temptation* to exploit its power advantage while the relatively dependent partner endures the *fear* of being exploited. But interdependence asymmetry does not, in and of itself, inevitably result in the realization of exploitation. We submit that trust can impede such exploitation and consequently moderate the negative effect of interdependence asymmetry on affective commitment.

The relatively powerful (less dependent) channel member could use coercive, negative types of power to achieve immediate compliance or, alternatively, could exercise more positive, constructive types of influence to build and deepen the relationship with the objective of greater long term cooperation. When the relatively powerful firm refrains from exploiting its structural power advantage, the relatively dependent channel member may interpret this as a signal that its dominant partner intends to work together to promote joint goals over the long run (Anderson and Weitz, 1989; Molm, 1981). By disdaining negative power use in favor of more constructive power use, the more powerful firm can both convey its trust in the weaker partner and also attempt to build the partner's trust in the firm.

When the relatively dependent firm trusts in the dominant partner's honesty and benevolence (Larzelere and Huston, 1980; Rempel et al., 1985), it attributes cooperative and sincere intentions to its partner. Consequently, its fear of exploitation and the resulting feelings of uncertainty are reduced. The weak channel member is most likely to trust the relatively powerful partner when it perceives that the dominant partner uses its power constructively to promote joint interests and collective goals (Dwyer et al., 1987) and to improve channel performance and satisfaction for both partners (Robicheaux and El-Ansary, 1975). When a relatively powerful firm can trust its weaker partner's honesty and cooperative intentions, it has ample reason to forsake the

opportunity to exploit this weaker partner (Molm, 1981). Trust results in lower conflict and higher satisfaction (Anderson and Narus, 1990), better personal relations (Håkansson and Johanson, 1988), and a beneficial reputation (Granovetter, 1985), as compared to the use of coercive and exploitative practices to achieve desired outcomes.

Consequently, for both the less dependent firm and the more dependent firm, higher trust will reduce the negative impact of interdependence asymmetry on affective commitment. We therefore propose an interaction effect between trust and dependence asymmetry.

H7. For both channel partners, the negative effects of interdependence asymmetry on affective commitment are mitigated by trust.

5. Method

5.1. Sample and data collection procedure

As firms grow increasingly international in character, the need to establish cross-cultural validity of theoretical models of marketing channel relationships becomes more germane (Cunningham and Green, 1984; Frazier et al., 1989). We collected data from two different countries, namely the United States and the Netherlands. We concentrated on *dealers'* commitment to their supplier and the role of their perceptions of interdependence structure and trust in shaping this commitment. The samples were drawn from lists of automobile dealers that were purchased from commercial sources in the two countries.

In the United States the list of 2100 new car dealers was reduced by deleting duplicate listings and those dealers for whom no contact name was available. Surveys with personalized cover letters were mailed to 1640 automobile dealers with follow-up letters to nonrespondents four weeks later. Questionnaires were received from 453 automobile dealers, a response rate of 28%. After elimination of questionnaires from which excessive amounts of data were missing, the final U.S. sample consisted of 417 dealers.

In the Netherlands, the questionnaire was mailed to a random sample of 1600 dealers drawn from a list 4000 new car dealers representing the entire country. As no contact name was available for these dealers, cover letters were not personalized. Furthermore, because of resource limitations, no follow-up letters to nonrespondents were mailed. These factors lowered our response to 19% with 309 questionnaires returned. After elimination of questionnaires from which excessive amounts of data were missing, the final Dutch sample consisted of 289 dealers. Our response rates of 28 and 19 percent are within the range typically reported for channel studies. Using the Armstrong and Overton (1977) procedure, no significant differences ($p > 0.10$) were found between early and late respondents on any of our constructs, nor on other variables such as the number of makes of new cars carried by the dealer. Thus, nonresponse bias appears not to be a problem.

Dealers in both countries were asked to report on the automobile supplier (usually the manufacturer for the U.S. dealers and an automobile importer for the Dutch dealers) whose product line accounted for the largest share of their firm's sales. Telephone calls were made to a subset of the dealers to ensure that the informant was the person in the organization who most frequently interacted with the supplier and consequently was the most knowledgeable about the relationship with the supplier. These confirmations and an examination of the titles held by the informants (President, Owner, General Manager, or some combination thereof) suggest that our informants were competent.

5.2. Measure development

Commitment. Affective and calculative commitment were each measured by three items based on the construct definitions and scales from Kumar et al. (1994). The measures use a seven-point Likert type response format. Affective commitment items tap the degree to which a dealer is motivated to continue the relationship with its supplier out of affective reasons. The set of calculative commitment items reflect the extent to which a dealer's motivation to continue the relationship is based on high perceived losses in case the relationship would end. Both affective commitment (*ACOM*) and calculative commitment (*CCOM*) construct scores were computed by averaging the item scores, hence ensuring that both construct scores range between 1 and 7.

Trust. Trust exists when a firm believes its partner is honest and benevolent (Larzelere and Huston, 1980; Rempel et al., 1985). Trust in the supplier's honesty was measured by five items assessing the extent to which the supplier is honest, truthful, and keeps its promises. A five item supplier benevolence scale captured the dealer's belief that the supplier considers the dealer's interests or welfare. The lower-level constructs of honesty and benevolence were equally weighted to create a composite score for trust (*TRUST*) ranging between 1 and 7.

Interdependence. Dealer dependence and dealer's perception of supplier dependence were measured by six items each. Measuring the *dealer's* perception of the interdependence structure was consistent with our examination of the antecedents of the dealer's commitment to the relationship, which is affected by how the dealer perceives the interdependence structure.

Conforming to the Emerson (1962) conceptualization of dependence, we included both motivational investment and replaceability. The reseller's motivational investment was measured using three items which assessed the percentage of sales and profits the supplier's line provides and how important the relationship is to achievement of the reseller's goals. The dealer's perception of the supplier's motivational investment was similarly measured by three items except that, following Frazier and Rody (1991), the profit item was replaced by an item assessing how important the supplier considers the reseller's territory. Thus, our motivational investment facet scales combined adaptations of the Frazier and Rody (1991) sales and profit index with the El-Ansary and Stern (1972) measure. The items that assessed *percentages* of sales and/or profits accounted for by the partner, were converted to seven-point scales (cfr. Frazier and Rody, 1991). The dealer's perception of its own replaceability and its supplier's replaceability each were measured using three parallel items adapted from the Heide and John (1988) replaceability scale. These items capture the opportunity costs of the value that would be lost if the relationship ended and the switching costs associated with termination and replacement.

Following precedent (Frazier et al., 1989; Frazier and Rody, 1991) as well as the argument of Heide and John (1988) that different measures of depen-

dence such as concentration of exchange and replaceability may not covary because they assess different aspects of dependence, we conceptualized dependence as a multidimensional composite index (Bollen and Lennox, 1991; Howell, 1987). Consistent with how such formative indicators are interpreted (Bollen and Lennox, 1991), it is posited that our dependence items result in dependence rather than vice versa. For example, we assert that dependence is high when it is difficult to replace the sales from a relationship and/or when a high percentage of sales are accounted for by the relationship, but we do not expect the converse (e.g., that an increase in dependence causes a high percentage of sales to be accounted for by the relationship). Because dependence can be created in various alternative ways that are captured by our items, we do not anticipate that an increase in dependence will require a simultaneous increase in all items. As Bollen and Lennox (1991) note, internal consistency is not a criterion for assessing the validity of such multi-dimensional composites, but rather "to assess validity we need to examine other variables that are effects of the latent construct" (p. 312). Support for our hypotheses or nomological validity will provide substantial evidence of the validity of our dependence measures. Supplier dependence and dealer dependence scores were computed by averaging the corresponding motivational investment and availability of alternatives scores, again ensuring that all construct scores ranged between 1 and 7.

Our measure of total interdependence (*INTERDEP*) was constructed by summing dealer dependence and supplier dependence scores. Interdependence asymmetry (*ASYMTRY*) was calculated as the absolute value of the difference between supplier and dealer dependence.

Table 1 shows sample items for all the measures used in the study, as well as the Cronbach alpha reliabilities of the measures in both countries.

5.3. Measure validation

Consistent with our conceptualization, trust was specified as a two-factor model. The fit for each country was good. The overall fit indices for the Netherlands were: $\chi^2(34) = 73.24$, Comparative Fit Index (*CFI*) = 0.972, Tucker–Lewis Index (*TLI*) =

Table 1
Summary of measures

Construct	Sample items [a]	Number of items	Cronbach's α [b]	
			Netherlands	U.S.
Commitment				
Affective commitment	We want to remain a member of the supplier's network because we genuinely enjoy our relationship with them.	3	0.81	0.85
Calculative commitment	It would be too expensive for us to terminate our relationship with the supplier.	3	0.80	0.81
Trust				
Honesty	Our organization can count on the supplier to be sincere.	5	0.81	0.85
Benevolence	When making important decisions, the supplier is concerned about our welfare.	5	0.90	0.93
Dependence				
Dealer's motivational investment	Over time, we expect this supplier to account for an increasing percentage of our firm's profits and sales.	3	n.a.	n.a.
Dealer's replaceability	There are other suppliers who could provide us with comparable product lines.	3	n.a.	n.a.
Supplier's motivational investment	The supplier's relationship with us is very important to the supplier's achievement of their organizational goals.	3	n.a.	n.a.
Supplier's replaceability	In our trade area, there are other firms who could provide the supplier with comparable distribution.	3	n.a.	n.a.

[a] With three exceptions, all items were measured on seven-point scales, with 'strongly disagree' and 'strongly agree' as the anchors. The exceptions were three motivational investment items (two for the dealer, one for the supplier), which were measured as percentages of sales and/or profits.
[b] n.a. = not applicable.

Table 2
Regression results for calculative commitment

Independent variables	Netherlands		United States	
	b (t-value)	β	b (t-value)	β
Intercept	4.300 (50.085) [a]	0.000	4.349 (56.373) [a]	0.000
INTERDEP	0.358 (5.358) [a]	0.325	0.212 (4.112) [a]	0.193
ASYMTRY * D1	-0.478 (-2.314) [b]	-0.129	-0.434 (-2.099) [b]	-0.093
ASYMTRY * D2	0.342 (2.150) [b]	0.120	0.356 (3.761) [a]	0.170
TRUST	-0.173 (-1.970) [b]	-0.120	-0.547 (-8.737) [a]	-0.407
R^2	0.12		0.21	
$F(n, m)$	$(4, 284) = 9.458$		$(4, 412) = 26.591$	

[a] Significant at $p < 0.01$ (one-tailed test).
[b] Significant at $p < 0.05$ (one-tailed test).
[c] Significant at $p < 0.10$ (one-tailed test).

0.962, root mean square error of approximation ($RMSEA$) = 0.063, and for the United States were: $\chi^2(34)$ = 159.58, CFI = 0.954, TLI = 0.940, $RMSEA$ = 0.094. All factor loadings were highly significant (minimum t-value was 6.9) and exceeded the 0.4 level commonly considered meaningful in factor-analytic investigations (Ford et al., 1986). These findings support the convergent validity of the items (Anderson and Gerbing, 1988). For both countries, the correlation coefficient between benevolence and honesty was significantly below unity ($p < 0.0001$) which supports the discriminant validity of the two factors. The cross-national equivalence was further tested by specifying a two-country model in which the pattern of fixed and free parameters is the same in both countries (Bagozzi and Yi, 1988). The fit of this model was also very good: $\chi^2(68)$ = 232.85, CFI = 0.933, TLI = 0.947, $RMSEA$ = 0.059.

To provide a stringent test of our measurement models for affective and calculative commitment, all six commitment items were evaluated in a single two-factor model. The national-level analysis indicated a good fit for each country; the Netherlands: $\chi^2(8)$ = 16.86, CFI = 0.985, TLI = 0.971, $RMSEA$ = 0.062, United States: $\chi^2(8)$ = 24.22, CFI = 0.984, TLI = 0.970, $RMSEA$ = 0.070. All items loaded significantly on their hypothesized factor (minimum t-value was 10.1), and all loadings exceeded 0.6. The correlation between affective and calculative commitment was significantly below unity ($p < 0.0001$)

in both countries. The two-country model, specifying the same pattern in both countries also yielded a good fit: $\chi^2(16)$ = 41.08, CFI = 0.984, TLI = 0.971, $RMSEA$ = 0.047. In sum, the national-level and cross-national level analyses indicate a high level of cross-national equivalence at the measurement level for trust, affective commitment and calculative commitment. Hence, we can examine relations among them in cross-cultural research (Triandis, 1982).

5.4. Results

The effects of dependence structure and trust on calculative and affective commitment were tested by estimating the following two equations:

$$CCOM = a_0 + a_1 INTERDEP + a_2 ASYMTRY * D1$$
$$+ a_3 ASYMTRY * D2 + a_4 TRUST,$$
$$ACOM = b_0 + b_1 INTERDEP + b_2 ASYMTRY$$
$$+ b_3 TRUST + b_4 ASYMTRY * TRUST,$$

where $D1$ = 1, if supplier dependence exceeds dealer dependence; 0, otherwise. $D2$ = 1, if dealer dependence exceeds supplier dependence; 0, otherwise.

The dummy variables $D1$ and $D2$ differentiate between those asymmetric relationships where the supplier is in a position of relative dependence ($D1$ = 1) versus those where the dealer is relatively

Table 3
Regression results for affective commitment

Independent variables	Netherlands		United States	
	b (t-value)	β	b (t-value)	β
Intercept	5.039 (94.035) [a]	0.000	5.207 (117.728) [a]	0.000
INTERDEP	0.085 (2.039) [b]	0.096	0.109 (3.601) [b]	0.120
ASYMTRY	0.067 (0.881)	0.038	0.097 (1.969) [b]	0.064
TRUST	0.712 (12.916) [a]	0.610	0.811 (21.774) [a]	0.728
*ASYMTRY * TRUST*	0.223 (3.237) [a]	0.142	0.047 (1.343) [c]	0.043
R^2	0.47		0.60	
$F(n, m)$	$(4, 284) = 62.628$		$(4, 412) = 153.304$	

[a] Significant at $p < 0.01$ (one-tailed test).
[b] Significant at $p < 0.05$ (one-tailed test).
[c] Significant at $p < 0.10$ (one-tailed test).

dependent on the supplier ($D2 = 1$). [3] As error residuals from separate OLS regressions were found to be uncorrelated, each equation was estimated separately, using OLS. [4] The data from the United States and the Netherlands were kept separate to examine the cross-cultural generalizability of our findings. The results are reported in Table 2 for calculative commitment and in Table 3 for affective commitment.

The results for calculative commitment indicate support for all of our hypotheses concerning the effects of trust and interdependence structure on calculative commitment for both countries. Calculative commitment is greater when total interdepen-

dence is higher, supporting H2. When asymmetry increases, calculative commitment decreases for the less dependent party, and increases for the more dependent channel member (H4). Further, trust in the supplier negatively impacts a dealer's calculative commitment (H6). [5]

The results also indicate that affective commitment is higher when total interdependence is greater, consistent with H1. Increasing trust positively impacts affective commitment (H5). Whereas the significant positive interaction effect between interdependence asymmetry and trust supports H7, contrary to H3 no negative effect of dependence asymmetry on affective commitment is observed. Though interdependence asymmetry was significantly related to affective commitment in the United States, the result was opposite the predicted direction ($b = 0.097$; $p = 0.025$). Also for the Netherlands, a small positive, though not significant, effect of asymmetry on affective commitment was found ($b = 0.067$; $p = 0.19$).

6. Discussion

This study examined the joint impact of the dealer's perceptions of the channel interdependence

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[3] Note that in the equation for affective commitment, the dummy variables *D1* and *D2* do not appear. Since asymmetry is operationalized as the *absolute value* of the difference between supplier and dealer dependence, this implies that we assume that the effects of *ASYMTRY* and *ASYMTRY * TRUST* on affective commitment do not differ between relatively dependent and relatively powerful dealers. This is consistent with the theory section in which no differential relations are hypothesized. To examine whether this assumption held true, we estimated a model in which we analyzed the effect of interdependence asymmetry for relatively dependent versus relatively powerful dealers. Four new variables were created by multiplying *ASYMTRY* and *ASYMTRY * TRUST* by *D1* and *D2*. No significant difference ($p > 0.20$) was found between the regression coefficients for *D1 * ASYMTRY* and *D2 * ASYMTRY* nor between *D1 * ASYMTRY * TRUST* and *D2 * ASYMTRY * TRUST*.

[4] The data were mean centered to reduce multicollinearity (Jaccard et al., 1991).

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[5] For calculative commitment, no interaction effect between trust and interdependence asymmetry was hypothesized. An additional model was estimated including this interaction effect. Consistent with our expectations, no significant interaction was found in either country.

structure and its trust in the supplier on affective and calculative commitment. Previous research suggests that a channel member's commitment increases when total interdependence and trust increase and when interdependence asymmetry decreases (Anderson and Weitz, 1989; Ganesan, 1994; Kumar et al., 1995b). Our results confirm that these are major factors affecting relationship commitment. However, we advance this literature and extend previous research by demonstrating that, depending on the type of commitment examined, the magnitude and the direction of the effects of trust and interdependence structure differ. Calculative commitment is affected more strongly by the interdependence structure of the relationship than is affective commitment, while trust has a stronger effect on affective commitment than on calculative commitment.

Theoretical implications. Our findings suggest that deepening interdependence within a channel relationship will, by its very nature, tend to increase the calculative commitment of both parties. The extent to which this preoccupation with the somewhat negative, calculative motivation for relationship continuation is supplanted by the more positively oriented affective commitment depends on whether or not trust exists between the parties. Trust can lead even highly interdependent firms to focus less on calculative motivations and emphasize the *desire* to maintain the relationship because of identification with and attachment to the partner. In the absence of trust, affective commitment is highly unlikely, but whether or not calculative commitment develops depends on the interdependence structure.

In relationships characterized by asymmetric interdependence, greater asymmetry is associated with increased calculative commitment by the more dependent partner and less calculative commitment by the less dependent firm. As a firm's relative dependence increases, it has greater *need* to maintain the relationship; as a firm's relative power increases, this necessity is lower. So, in the absence of trust, the relatively powerful firm in a highly asymmetric channel relationship would be expected to exhibit relatively low levels of both affective commitment and calculative commitment. This implies that this less dependent firm has other motivations for its continuance of the relationship such as, for example, the awareness that it can use its relative power to

achieve its strategic goals. Other researchers have argued that additional types of commitment beyond affective and calculative commitment exist (e.g., Allen and Meyer, 1991; Kumar et al., 1994). Future research could examine what other types of motivation, if any, come into play when neither calculative commitment nor affective commitment is strong.

Our most surprising finding is that, contrary to our expectation, interdependence asymmetry did *not* have a negative impact on affective commitment. Our findings suggest that asymmetry can have a small positive effect on affective commitment; also, asymmetry and trust have a positive interactive effect on affective commitment. This positive relationship between interdependence asymmetry and affective commitment seems somewhat curious, but it may be indirect evidence that interfirm power can play a positive role in promoting the effective coordination of channel relationships (e.g., Frazier and Rody, 1991; Scheer and Stern, 1992) for both the relatively powerful and the relatively dependent channel member (Blau, 1964). Frazier et al. (1989) argue that the more powerful partner does not need coercive strategies to obtain cooperation, but instead will rely on noncoercive strategies whenever possible. As these are perceived as fairer by the weaker partner (Blau, 1964), a supportive exchange atmosphere leads to increased communication, greater agreement and value congruence (Tedeschi et al., 1973) and, consequently, a sense of identification that contributes in important ways to a partner's motivation to continue the relationship for affective reasons (Kumar et al., 1994). Furthermore, Williamson (1975) has argued that in an imbalanced situation, ideology is often used as a unifying and cooperation-inducing force by the more powerful party. Future research is needed to examine the extent to which the more powerful firm's use of, or reluctance to use, various types of power function as mediating mechanisms through which interdependence asymmetry has a positive effect on affective commitment.

We advance the external validity of commitment studies by testing our hypotheses with data gathered from automobile dealers in two different countries and find strong evidence for the cross-national validity of our measures and results. Despite the cultural differences and variations in sample composition,

competitive conditions, and legal environment between the Netherlands and the United States, the effects of trust and interdependence structure on commitment are quite similar and always in the same direction for the two countries. This attests to the generalizability of our dyadic hypotheses over different external political economic structures.

Managerial implications. When managers focus on altering the interdependence structure of their relationship, should they strive for affective commitment or for calculative commitment? Should they focus on managing the interdependence structure of their relationship, on increasing trust, or on both? Kumar et al. (1994) have argued that the consequences of affective commitment are superior to those for calculative commitment; affectively committed channel members will invest more in the relationship, will perform at a significantly higher level and will be more resistant to opportunistic behavior. Therefore, given the choice between developing closeness through affective versus through calculative commitment, those managing channel relationships should strongly cultivate the former over the latter. Building trust should therefore be of higher importance than altering the dependence structure.

Admittedly, trust is more easily developed in more highly interdependent, symmetric relationships (Kumar et al., 1995b), but our research suggests that working to develop trust, and actually achieving a trusting relationship, can pay handsome dividends regardless of the interdependence structure. Managers may worry too much about being dependent on another company. Provided they focus on developing trust, even asymmetrical relationships can be successful without being scary for the more dependent party. This is good news for all those in highly asymmetrical relationships. Dependence imbalances are of relatively minor importance *if* trust can be developed.

Future research. Future research on the effects of trust and interdependence on commitment might advance in several ways. First, consistent with the political economy approach, we focused on the dyadic relationship. However, network theorists (e.g., Johanson and Mattson, 1985; Hallén et al., 1991) argue that it is useful to examine the position of firms in networks of exchange relationships in addition to analyzing dyads. Future research could extend

the present work on the effects of interdependence and trust on commitment to networks. Two potentially useful constructs that might be added as antecedents of commitment in networks are anticipated constructive effects on network identity and anticipated deleterious effects on network identity (Anderson et al., 1994). Second, we found that compared to affective commitment, trust and interdependence structure predict less variance in calculative commitment. Previous research indicated that trust and interdependence are two major antecedents of affective commitment. However, these variables predict less variance in calculative commitment, a construct which has hardly been researched in a channels context. This suggests that calculative commitment is also affected by other and, as yet, unknown variables. Future research could explore other antecedent conditions of calculative commitment. Third, as there are two sides to a dyad, supplier commitment also deserves attention (Anderson and Weitz, 1992). In the future, researchers could address the extent to which dealer commitment and supplier commitment converge, and – in case of divergence – investigate the factors that cause the two channel members to be differentially committed to their relationship. Fourth, measures of total interdependence and interdependence asymmetry were obtained from the dealer's side only. The supplier might have a different opinion regarding the interdependence structure of the relationship. While using dealer perceptions of interdependence is consistent with our goal to shed light on the dealer's motivation and commitment, additional insight could be gained by exploring dyadic data.

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