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Antecedents to Relationship-Specific Investments in Cross-Border Marketing Channel Relationships

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Abstract

This study investigates antecedents to relationship-specific investments in marketing channel relationships. Product differentiation, competitive intensity, export market ethnocentricity, and export market knowledge are identified as possible antecedents to relationship-specific investments. The model and hypotheses are empirically tested on a sample of 160 international B2B relationships. The results show that all the suggested antecedents have significant impact on the level of specific investments. Furthermore, none of these variables have any direct effect on relationship governance, indicating that supplier-specific and buyer-specific investments transmit the effects of these variables to relationship governance. The results indicate important linkages between complementary theoretical perspectives and have useful managerial implications for exporters, especially in regard to the treatment of institutional factors in export markets and strategic positioning considerations for developing and maintaining international customer relationships.

INTRODUCTION

Williamson (1985) described asset specificity as, *"the big locomotive to which transaction cost economics owes much of its predictive content"* (p. 86). Indeed, the link between asset specificity, often termed as relationship-specific investments, and hierarchical governance has been extensively examined and often confirmed in empirical research (David and Han 2004; Rindfleisch and Heide 1997; Shelanski and Klein 1995). In most studies of inter-organizational relationships, the transaction attributes have been taken as given, i.e., one has investigated whether certain transaction attributes are associated with specific governance solutions, and treated the transaction attributes as exogenous variables in the statistical analyses.

When it comes to the factors that make firms undertake such investments, however, we are faced with a completely different picture; empirical contributions testing antecedents to relationship-specific investments are practically non-existent. Masten (1996) argued that the specificity of assets are themselves decision variables and should be treated as endogenous variables. This study responds to this call by explicitly testing a number of suggested antecedents to relationship-specific investments.

The purpose of the study is two-fold. First, the article investigates antecedents to relationship-specific investments in marketing channel relationships. Our point of departure is the arguments offered by Day and Klein (1987), who noted that transaction cost economics, *"affords a wealth of insights into the organization of vertical relationships – but only when the characteristics of the transaction are known. However, these characteristics reflect strategic choices made partially outside the confines of the model"* (p. 55). Our aim is to unpack the logic behind these strategic choices, and to do so we draw on insights from three different theoretical perspectives.

The first perspective is the strategic positioning perspective, which highlights the chosen product-market strategy and the market's competitive intensity (Porter 1985). We argue that such factors influence the characteristics of the transaction, which in turn influence relationship governance (e.g., Day and Klein 1987). The second perspective is institutional theory applied to international business. The international business literature emphasizes that some markets are more difficult to enter than others (Root 1994), due to, for example, institutional factors in the market (Yiu and Makino 2002). Foreign firms may face challenges in accommodating and conforming to specific normative expectations in the market, and can also be disadvantaged in a number of respects relative to local firms. We argue that such impediments influence a firm's decision to commit investments to a relationship to a local actor. The third perspective is the knowledge-based view. Research has shown that one key driver of market success lies in the ability to adapt product offerings to the requirements of the target market (e.g., Cavusgil and Zou 1994). We argue that such adaptation is facilitated by specific knowledge about the idiosyncrasies of the market in question. Morgan et al. (2003) showed that export market knowledge is an important element of the knowledge base of export ventures, because it provides insights into which value-adding activities the venture should undertake and in which ways. We posit that such market knowledge enables the decision maker to identify, evaluate, and implement more investment prospects in their customer relationships that support and enhance a given product strategy.

Second, we investigate whether specialized assets transmit the effect of these antecedents onto relationship governance. If this is case, the study provides a significant contribution to the literature because it shows how strategic, institutional, and knowledge-related factors indirectly impact the governance of the relationship by influencing the level of relationship-specific investments. This would also provide an empirical contribution to earlier conceptual and empirical studies that have focused on the complementarities of transaction cost economics to other perspectives such as institutional theory (Roberts and Greenwood 1997; Yiu and Makino 2002; Brouthers and Brouthers 2000), the knowledge-based view (Heiman and Nickerson 2002; 2004; Foss and Mahnke 2003; Nickerson and Zenger 2004), and the strategic positioning perspective (Teece 1984; Day and Klein 1987; Ghosh and John 1999, 2005; Nickerson 2000).

THEORY AND HYPOTHESES

Relationship-specific investments in marketing channel relationships

Relationship-specific investments refer to the level of unredeployable investments made in a relationship. In marketing channel relationships there may be investments dedicated to a particular partner in matters as diverse as equipment, personnel, production systems, internal routines, or distribution systems (e.g., Rokkan, Wathne, and Heide 2003; Heide and John 1990; Stump and Heide 1996). There is a large literature on the effects of such investments on governance (Rindfleisch and Heide 1997; Frazier 1999; David and Han 2004). However, there is a lack of explicit attention as to the reasons for undertaking such investments.

Among the few contributions that have paid more explicit attention to the considerations underlying the decision to invest in a particular relationship are Ghosh and John (1999, 2005), Nickerson (2000), and to a certain extent Gulati, Khanna, and Nohria (1994) and Joshi and Stump (1999). Of these, Ghosh and John (1999, 2005) and Nickerson (2000) argue in favor of a 'strategizing calculus', where an important aspect of relationship-specific investments is that such investments carry out a firm's product strategy. Gulati, Khanna, and Nohria (1994) and Joshi and Stump (1999) emphasize the sequential nature of such commitments; investments on one side of the relationship are often responded to by a similar reciprocal action by the counterpart.

In our attempt to go deeper into the question of possible antecedents to relationship-specific investments, we build on previous research arguing for a relationship between product strategy and specific investments, and point out the sequential nature of such investments. We extend these two considerations by including aspects related to competitive pressures, societal pressures, and knowledge. Our motivation for including these aspects can be found in the strategic positioning perspective, institutional theory, and the knowledge-based view.

Antecedents to relationship-specific investments in marketing channel relationships

Strategic positioning considerations

A product differentiation strategy refers to developing a unique image for a firm's product so that the value of the product is perceived to be higher compared to offerings of competitors (Porter 1985). We argue that such a strategy often requires that one or both sides of the relationship make specific investments.

From the perspective of the supplier, such investments may support and enhance crucial product attributes, increasing the value of the exchanged product (Ghosh and John 1999). This may, *"convey to the customer an image of quality and prestige that is congruent with overall product strategy"* (Lassar and Kerr 1996: 619). Successful implementation of a product differentiation strategy requires a 'well-orchestrated' marketing strategy and value chain (Myers and Harvey 2001). Investments in the customer interface may facilitate coordination across inter-firm boundaries, and one may better support just-in-time initiatives and improve delivery schedules. There may also be a psychological effect of such investments: the customer may be more convinced about the product's unique attributes and the honesty of the supplier's intentions to continue the relationship.

Taking the perspective of the buyer, these arguments can be mirrored. First, in order to make the best use of the product's features, the customer may find it necessary to support the transaction by making some investments. Second, such investments may result in better coordination with the supplier. And third, such relationship-specific investments may also convince the supplier about the customer's intentions to continue the relationship, and protect the buyer's position in the supplier market. For example, it may be more difficult for other buyers to appropriate some of the supplier's limited capacity to supply the buyer with high quality products in tight periods. We, therefore, propose the following hypothesis:

Hypothesis 1: Product differentiation will have positive effects on (a) supplier-specific investments and (b) buyer-specific investments.

A product market's competitive intensity refers to the degree of competition in a product market. Typical characteristics are strong price competition and the introduction of new competitive moves (Morgan, Kaleka, and Katsikeas 2004). Such conditions make the sellers' product advantage and market share more volatile, because the buyer has more choices when several suppliers compete for attention (Day and Wensley 1988).

In industries with a large number of similar actors, an individual actor cannot affect the overall competitive intensity. Instead, the actors must adapt their behavior to the workings of the market. This makes it vital for the supplier to strengthen its attractiveness. We suggest that one way of doing this is by making relationship-specific investments to satisfy a customer's idiosyncratic needs. This demonstrates commitment to the relationship and makes it less tempting for the customer to switch to other suppliers. Also, a strong competition for the buyer's attention gives the buyer a power advantage relative to the supplier. The buyer can extract concessions from the supplier, such as specific investments or adaptations to accommodate specific requirements. To ensure relationship continuity, the supplier is expected to comply with such requests and invest relatively more. Conversely, the buyer has no need to demonstrate commitment to the supplier. Ghosh and John (2005) found that the buyer's investments are higher in situations with few suppliers. When a large number of suppliers are fighting for the attention of a few buyers, the power advantage enables the buyer to force the supplier to make specific investments when needed. Hence, the buyer will invest less, and the supplier will invest more when the export market is characterized by intense competition. This allows the following hypothesis:

Hypothesis 2: The competitive intensity in the export market will have a) a positive effect on supplier-specific investments and b) a negative effect on buyer-specific investments.

Institutional considerations

Export market ethnocentricity describes normative institutional forces in the export market and refers to unequal treatment of foreign relative to native citizens, and the cultural confinement to the national culture (Yiu and Makino 2002). Intuitively, such normative impediments might influence the decision to make relationship-specific investments. Taking the perspective of the supplier (foreign firm), a natural response to such obstacles is to limit their exposure in the hostile environment. This simply means that the exporter is likely to make fewer investments than it otherwise would. If the exporter assumes that it will be disadvantaged relative to local firms, although it conforms to the local way of doing business, the likely gains of making specific investments in this market are inferior relative to a market that is not characterized by such impediments. In other words, the likely increase in value coming from such investments is curbed due to being disadvantaged in a socially restrictive environment. Hence, it is harder to justify the risks of committing potentially valuable, but vulnerable resources to a relationship with a customer that is operating in an ethnocentric market. Instead, such investments could be directed towards customers operating in markets that welcome foreign companies. Accordingly, the level of supplier-specific investments will be lower in relationships with customers operating in ethnocentric markets compared to customers not operating in such markets.

Taking the perspective of the buyer (local firm), both negative and positive influences of export market ethnocentricity are likely effects. A negatively-minded response would arguably be most obvious. The importer is embedded in an institutional context of societal norms and expectations that condones being hostile-minded towards foreigners. If the local firm is to be accepted as a legitimate entity in this institutional field, it needs to embrace similarly-minded behavior. Hence, it would be appropriate for the importer not to escalate its commitment towards foreign firms. On the other hand, this study samples data on cross-border relationships that have lasted three years or more, so relationships that have not survived these ethnocentric institutional pressures have most likely been selected out of the sample. If a relationship has lasted for some years, the importer may be more willing to risk sanctions from the local environment in order to reap future benefits. Furthermore, facing limited willingness on the part of the foreign firm to commit specific resources to the relationship, it is likely to consider it necessary to make such commitments itself in order to realize long-term benefits. Hence, we should expect that the level of buyer-specific investments should be higher in relationships that have survived the normative obstacles of the importer's local environment. This leads to the following hypothesis:

Hypothesis 3: Export market ethnocentricity will have a) a negative effect on supplier-specific investments and b) a positive effect on buyer-specific investments.

Knowledge-based considerations

Export market knowledge refers to the focal firm's knowledge regarding potential customers, competitors, and the broader environment in the target market (Morgan et al. 2003). This knowledge is what the resource-based view regards as typically "informational" or "know-what" (Kogut and Zander 1992, 1996; Grant 1996). Such knowledge has been identified as an important resource for exporters (e.g., Katsikeas and Morgan 1994), and the knowledge-based view considers it as an information input that impacts choices and the carrying out of tasks that a firm undertakes in order to accomplish its strategic goals (e.g., Grant 1996; Nonaka 1994).

A supplier possessing adequate knowledge regarding potential customers, competitors, and the broader environment in the export market should be in a position to identify, evaluate, and carry out investments that support its product strategy. In other words, given that the focal firm has a product strategy that demands relationship-specific investments, greater export market knowledge makes the supplier better able to reap all possible benefits of such investments. Conversely, a lack of such knowledge results in difficulties in identifying and evaluating any investment prospects, and the risks associated with making such investments are likely to loom greater relative to the upside, which may even be hard to identify. Hence, we propose that export market knowledge impacts the link between product strategy and supplier-specific investments. Thus we hypothesize:

Hypothesis 4: A positive effect of product differentiation on supplier-specific investments will be greater for higher levels of export market knowledge.

The sequential nature of specific investments

Gulati, Khanna, and Nohria (1994) and Joshi and Stump (1999) have emphasized the sequential nature of commitments to a relationship, and demonstrated that investments on one side of the relationship are likely to be responded to with a similar reciprocal action by the counterpart. When a buyer commits resources to a specific supplier, it signals an intention to cooperate and develop a long-term partnership. This unilateral commitment places the buyer in a lock-in situation which can be exploited by the counterpart. In this situation, the supplier may defect or cooperate. Gulati, Khanna, and Nohria (1994) argue that the payoff structure in such situations will make cooperation the preferred strategy for the supplier, because it gives the highest payoff in the long term. To signal willingness to develop bilateral cooperation, the supplier is likely to respond with a similar action and invest in the relationship[1] (Joshi and Stump 1999). Thus:

Hypothesis 5: Buyer-specific investments will have a positive effect on supplier-specific investments.

The direct and mediating roles of specific investments

Day and Klein (1987) emphasized how transaction cost economics provides, *"a wealth of insights into the organization of vertical relationships – but only when the characteristics of the transaction are known (p. 55)."* Williamson (1985) refers to asset specificity as the most important characteristic of the transaction, and the main driver behind more specialized forms of governance. Given that the level of investments in the transaction is

[1] Obviously, the reverse sequence is equally probable. With cross-sectional data it is not possible to rule out this possibility (Joshi and Stump 1999).

known (or taken as given), transaction cost economics can be applied to predict the governance form of the relationship. If a party tailors its investments to fit the idiosyncratic requirements of a trading partner, cost savings and/or value creation are likely to accrue (e.g., Nickerson 2000; Ghosh and John 2005). The downside of such investments is that it places the investor in a lock-in situation as the partner may act opportunistically and exploit these investments in order to appropriate a larger share of the 'pie' (Jap 2001), and thereby incur economic losses on the part of the investor. This threat induces the investor to safeguard its investments by adopting contracts where rules, fixed policies, and standard operating procedures are specified.

This logic is well-known, and the association between specialized assets and hierarchical governance has frequently been subjected to testing in earlier research (e.g., Rindfleisch and Heide 1997; David and Han 2004). Contrary to most empirical channel research, this study treats relationship-specific investments (on both sides) as a decision variable, and investigates the factors that impact the parties to make such investments. Specific investments are viewed as a mediating variable, which transmits the effects of the antecedents to relationship governance. As an example, we argue that a differentiation strategy does not represent an incentive in itself for the parties to establish hierarchical governance because such products do not represent exchange hazards on their own, but the strategy indirectly impacts governance through its effect on asset specificity. Similarly, it is claimed that export market ethnocentricity and competitive intensity affect the level of relationship-specific investments, which in turn impacts relationship governance. Hence, it is asserted that such normative impediments and competitive forces do not raise any motivation per se to establish a formal governance apparatus, but rather, influence governance indirectly by having some bearing on the level of investments made. The following hypotheses testing both the direct and mediating effects of specific investments are advanced:

Hypothesis 6a: Supplier-specific investments will have a positive effect on formal contracting.

Hypothesis 6b: Buyer-specific investments will have a positive effect on formal contracting.

Hypothesis 7: Supplier-specific and buyer-specific investments function as mediating variables between product differentiation, competitive intensity, and export market ethnocentricity on one side, and formal contracting on the other side.

The conceptual model in Figure 1 summarizes the hypotheses.

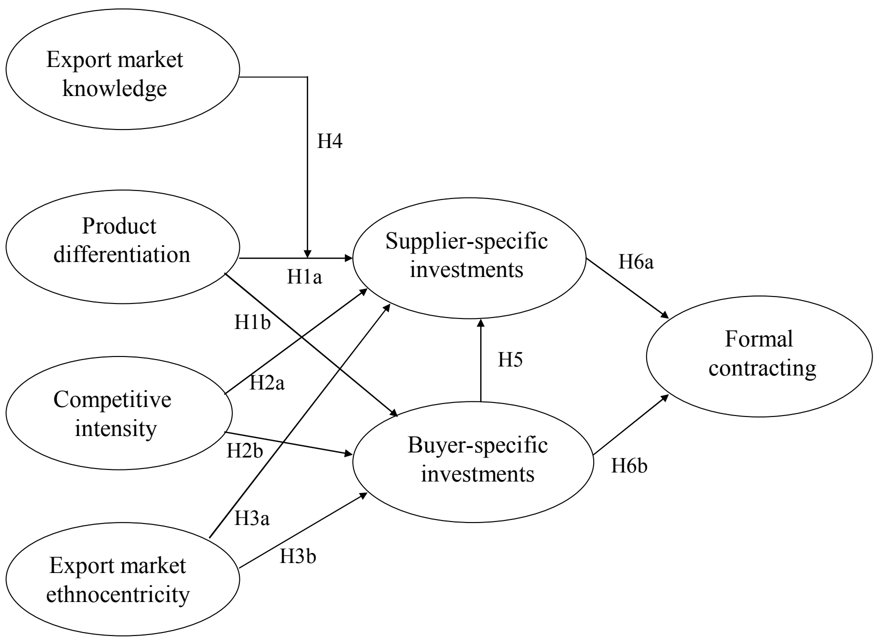

Figure 1: Conceptual model

RESEARCH METHOD

Research context and data collection procedures

The industries of Norwegian seafood exporters, and Norwegian, Swedish, and Finnish wood products exporters were chosen as the research context. The unit of analysis is the relationship between these exporters and their international customers. Three main criteria were used to select the empirical context. First, all theoretical variables have to manifest themselves in the setting. To assure that this requirement was met, we had interviews with industry experts and export managers, and consulted the trade literature. Also, reviews of the academic distribution channel literature suggested that the theoretical variables were likely to manifest themselves in this setting. Second, we needed to study the institutional environment in conjunction with the task environment for industries that demand both efficiency management and legitimacy management. Trade literature and interviews with academic and industry experts suggested that the chosen industries met this criterion. Third, we considered it critical that the exporter and the importer were independent companies (e.g., not vertically integrated, no equity cross-holdings). Interviews with industry experts and earlier experience with the setting made us confident that this was not a realistic threat; the exporters sold to a variety of international customers, such as distributors, supermarkets, and industrial firms.

Using different databases containing names of seafood and wood products companies we identified about 700 business units. This number was reduced to 390 by excluding firms that did not want to participate in the survey, firms that had ceased to operate, firms that did not export on a regular basis or only exported a minor share of their total sales, and firms that did not manage export activities with their own personnel. It should be noted that a small number of the business units in the sample (mostly Swedish and Finnish sawmills) belonged to the same multinational enterprise that had management offices and/or production units in several countries. In these cases, if the production unit had personnel that managed exporting from this unit, we collected data from each production unit (i.e. sawmill). This means that we treated these production units as independent 'firms' in regards to management of international customer relationships. However, when the production units in these companies shared a centralized sales unit that was responsible for export activities, we contacted one person with knowledge about the phenomena in the sales unit and asked her/him to complete the questionnaire with respect to one production unit s/he represented. The remaining production units represented by the centralized sales unit were excluded from the sample.

We used Campbell's (1955) criteria of being knowledgeable about the phenomena, and being able and willing to communicate this knowledge to the researcher as criteria to select key informants. To motivate the informants to participate, they were offered a summary report of the study. A packet containing a questionnaire, a prepaid envelope, and a cover letter was sent to the 390 recruited contacts. The informants were asked to choose one of their largest customers in one of their most important international markets for one of their major export products. All questions were to be answered in relation to this particular customer. The questions then pertained to dyadic relationships at specific product-market levels. By using this procedure we were sure that we had information about business-to-business relationships involving marketing of specific products in specific markets.

Several call-ups and e-mailing rounds were conducted in order to increase the response rate. In total, 170 questionnaires were returned. Of these, five were not included due to excessive missing data, two were eliminated because the firm was not in operation at the time of answering, and three were eliminated because the firm was considered too small (less than five persons). Hence, we had 160 usable questionnaires, making up a final response rate of 41%.

Measures

The recommendations of Churchill (1979) and Anderson and Gerbing (1988) were followed in the development of the scales. Construct item pools were developed on the basis of theory, operational definitions, and operationalizations in previous empirical studies. Items that obviously did not fit the chosen context were eliminated. The remaining items were subjected to a number of peer review iterations by using academic experts with knowledge of the field as well as four industry experts. During this process, ambiguous questions and inappropriate vocabulary were corrected, and irrelevant items were eliminated. Further, the questionnaire was pre-checked through in-depth interviews with three export sales managers in different companies. These interviews did not reveal any further need for corrections.

Formal contracting refers to the extent to which the relation is regulated by rules, procedures, and fixed policies. The chosen items are primarily based on the studies by Lusch and Brown (1996), Heide (2003), and Cannon, Achrol, and Gundlach (2000). The *supplier-specific* and *buyer-specific investments* scales describe the investments in physical equipment, procedures, and human assets made by the supplier and the buyer dedicated to the relationship. The two asset specificity scales focus on the same issues on each side of the relationship, and the chosen items are primarily based on items developed by Heide and John (1990) and Anderson (1985). *Product differentiation* refers to the extent to which the product was differentiated compared to products offered by competitors. The items are primarily based on Aulakh and Kotabe (1997), Aulakh, Kotabe, and Teegen (2000), and Myers and Harvey (2001). C*ompetitive intensity* refers to the degree of competition the focal firm meets in the export market. The chosen items are based on the scale used by Joshi and Stump (1999). *Export market ethnocentricity* refers to normative institutional forces in a host country. The two-item scale used by Yiu and Makino (2002) was replicated. The two items represent unequal treatment (the extent to which foreigners are treated unequally compared to native citizens) and cultural confinement (the extent to which national culture is closed towards foreign cultures). *Export market knowledge* refers to the focal firm's knowledge regarding potential customers, competitors, and the broader environment in the export market. Items developed by Morgan et al. (2003) were used.

Control variables. We also included a number of control variables in the model. The variables were industry (seafood or wood products), the length of the exchange relationship, and the exporter's export share. First, to account for any industry effects we included a binary variable of the industry, where seafood exporters were coded as one and wood products exporters were coded as two. Second, as it may take time for the companies to develop the relationship before committing specific investments, we included a measure of the length of the relationship. Third, exporters with a greater export share might to a larger extent see the necessity of committing relationship-specific investments than firms with less focus on export, and they may also select customers that are more prone to making such investments. Hence, we included a measure of the export share. All measures are reported in Table 1.

Table 1: Wording of items

Construct	Items
Formal contracting	• There is a written agreement that specifies the tasks and responsibilities of each party • How to handle the day-to-day management of the relationship is expressed in a written agreement • There are rules and procedures for most issues in this relationship • It is important for us to behave formally accurate as according to the agreement
Supplier-specific investments	• In order to deliver to this customer it has been necessary to make special investments or adaptations in equipment • It has been necessary to give employees who are working with this customer special training • In order to deliver to this customer we have made specific investments or adaptations in our distribution systems
Buyer-specific investments	• This customer has made significant investments in equipment dedicated to the relationship with us • This customer has given special training to employees that work towards our firm • This customer has made adaptations in their distribution systems towards our firm
Product differentiation	• Our product is different from products offered by our competitors in this foreign market • Our strategy can be best described as maintaining higher quality standards for our products • When buying this product, there are more factors than price of real importance
Competitive intensity	• The competition in this export market is tough • Anything that we can offer, others can match easily in this market • Price competition is a hallmark of this export market
Export market ethnocentricity	• Foreigners are often treated differently than local citizens in this market • In this market the national culture is closed towards other culture
Export market knowledge	• In this export market we have good customer knowledge • In this market we have good knowledge of competitors • We have access to information related to doing business in this market • We have adequate understanding of customer preferences in this market
Industry	• Seafood exporters coded 1, wood products exporters coded 2
Relationship age	• For how many years have your firm been selling to this customer?
Export share	• What was the export share of total annual sales in 2004?

Measurement model

Confirmatory factor analysis was conducted in LISREL 8.54. The constructs were allowed to freely correlate. The model diagnostics (Table 2) show a good overall model-to-data fit (e.g., Browne and Cudeck 1992; Hu and Bentler 1995). Composite reliability for construct η was calculated by the formula $CR_{\eta} = (\Sigma\lambda y_i)^2 / [(\Sigma\lambda y_i)^2 + (\Sigma\varepsilon_i)]$, where λy_i is the standardized loading for scale item y_i, and ε_i is the measurement error for scale item y_i (Fornell and Larcker 1981). Similarly, AVE was calculated by the following formula $V_{\eta} = \Sigma\lambda y_i^2 / (\Sigma\lambda y_i^2 + \Sigma\varepsilon_i)$ (Gerbing and Anderson 1988). Most of the scales show acceptable reliabilities. However, the scales for ethnocentricity and competitive intensity suffer from a somewhat low AVE. As the scales consist of only 2 and 3 items, we decided not to exclude any items. Further, all factor loadings are significant, and their parameter estimates and associated t-values are generally satisfactory.

Table 2: Confirmatory factor analysis

Construct	Indicator	Loading	*t* value	CR_M	AVE	Highest shared variance
Formal contracting	FC1	.78	11.13	.84	58%	.49
	FC2	.79	11.29			
	FC3	.76	10.76			
	FC4	.71	9.69			
Supplier-specific investments	SSINV1	.78	11.16	.86	67%	.49
	SSINV2	.80	11.52			
	SSINV3	.87	13.24			
Buyer-specific investments	BSINV1	.58	7.20	.70	44%	.38
	BSINV2	.77	9.85			
	BSINV3	.61	7.54			
Product differentiation	PDIFF1	.82	11.48	.80	58%	.38
	PDIFF2	.79	10.94			
	PDIFF3	.57	7.21			
Competitive intensity	CI1	.36	4.10	.63	38%	.37
	CI2	.86	9.32			
	CI3	.53	6.16			
Export market ethnocentricity	ETHNO1	.64	5.08	.57	45%	.09
	ETHNO2	.63	5.04			
Export market knowledge	MK1	.74	10.38	.86	52%	.08
	MK2	.69	9.41			
	MK3	.81	11.75			
	MK4	.86	12.76			
Industry	IND	1.00	17.83			
Relationship age	AGE	1.00	17.83			
Export share	SHARE	1.00	17.83			

Model diagnostics: $\chi^2_{(233)} = 297.91$, RMSEA=.042; CFI=.97; IFI=0.97; NNFI=.96

Discriminant validity was tested by Fornell and Larcker's (1981) test. We calculated the shared variance between all possible pairs of constructs, and none of the squared correlations were higher than the AVE for each construct. In addition, we calculated a 95% confidence interval around the correlation estimate for the latent constructs. No intervals included unity (Anderson and Gerbing 1988). Hence, both tests revealed satisfactory discriminant validity.

Table 3: Correlation among latent constructs

	Mean	Stand. dev.	1	2	3	4	5	6	7	8	9	10
Formal contracting	4.24	1.85	1.00									
Supplier-specific investments	3.40	1.79	.70**	1.00								
Buyer-specific investments	2.31	1.24	.43**	.62**	1.00							
Competitive intensity	5.51	1.06	-.35**	-.42**	-.46**	1.00						
Export market ethnocentricity	2.93	1.33	-.13	-.06	.30**	.13	1.00					
Product differentiation	4.60	1.38	.47**	.60**	.50**	-.61**	-.06	1.00				
Export market knowledge	5.30	1.00	.19*	.11	.06	-.09	-.01	.27**	1.00			
Industry	0.65	0.47	.37**	.07	-.30**	.09	-.15*	.03	.03	1.00		
Relationship age	10.28	7.08	-.04	.00	.09	.00	.13	-.14*	.08	-.31**	1.00	
Export share	69.8	60.2	.05	.02	-.03	.06	-.05	-.11	.08	-.16*	.15*	1.00

* p < .05; ** p < .01

RESULTS

The structural model was tested in LISREL 8.54 (Table 4) and reached $\chi^2_{(239)}$=302.44, RMSEA=.41, CFI=.97, IFI=.97, NNFI=.97. These values are only marginally different from those achieved in the confirmatory factor analysis. We checked whether this difference was significant by conducting a χ^2 difference test of the structural model [$\chi^2_{(239)}$=302.44] and the construct measurement model [$\chi^2_{(233)}$=297.91]. The χ^2 difference is 4.53 at *df*=6, which is not statistically significant (the corresponding value is 12.59). The initial structural model is thus accepted (Anderson and Gerbing 1988).

Table 4 shows that hypothesis one is supported; product differentiation is associated with supplier-specific investments (*t*=2.99, p<.01) and buyer-specific investments (*t*=2.21, p<.05). Hypothesis two is partially supported; competitive intensity is significantly associated with buyer-specific investments (*t*=-1.83 p<.05), but not with supplier-specific investments

(t=.61). Regarding hypothesis 3, the results show that export market ethnocentricity is negatively associated with supplier-specific investments (t=-2.06, $p<.05$), and positively associated with buyer-specific investments (t=2.05 $p<.05$). Both results are according to the hypothesis. Hypothesis five is also supported; buyer-specific investments are significantly related to supplier-specific investments (t=3.84, $p<.001$). Both supplier-specific investments (t=4.60, $p<.001$) and buyer-specific investments (t=1.70, $p<.05$) are positively related to formal contracting. This provides support for hypothesis six.

The moderating effect of export market knowledge on the relationship between product differentiation and supplier-specific investments was tested using latent variable scores. First, the latent variable scores were computed and appended to the PRELIS file. These scores are unbiased estimates of the latent variables, and the covariance matrix of these scores is equal to the estimated covariance matrix of the reference variable scores (Jöreskog 2000). We computed a product term between product differentiation and export market knowledge, and estimated a LISREL model using the latent variables scores directly. The product term was included in the model so that the effect of the product term on supplier-specific investments could be assessed. The results (see lower part of Table 4) show that the hypothesis is supported (t=3.45, $p<.001$). This means that export market knowledge strengthen the positive relationship between product differentiation and supplier-specific investments.

Table 4: Testing the structural model

Structural linkages in the model	Hypo theses	Sign	Para-meter	Theoretical model Estimate	t value
Exogenous - endogenous variables					
Product differentiation → supplier-specific investments	H1a	+	γ_{13}	.39	2.99**
Product differentiation → buyer-specific investments	H1b	+	γ_{23}	.33	2.21*
Competitive intensity → Supplier-specific investments	H2a	+	γ_{11}	.08	.61
Competitive intensity → Buyer-specific investments	H2b	–	γ_{21}	-.28	-1.83*
Export market ethnocentricity → supplier-spec investments	H3a	–	γ_{12}	-.23	-2.06*
Export market ethnocentricity → buyer-spec investments	H3b	+	γ_{22}	.25	2.05*
Endogenous - endogenous variables					
Buyer-specific investments → supplier-specific investments	H5	+	β_{12}	.60	3.84***
Supplier-specific investments → formal contracting	H6a	+	β_{31}	.55	4.60***
Buyer-specific investments → formal contracting	H6b	+	β_{32}	.21	1.70*
The Moderating effect of export market knowledge					
Prod-diff * market knowledge → supplier-spec investments	H4	+		.14	3.45***
Control variables – endogenous variables					
Industry → Formal contracting				.43	4.50**
Industry → Supplier-specific investments				.25	3.40***
Industry → Buyer-specific investments				-.23	-2.71**
Relationship age → Formal contracting				.06	.90
Relationship age → Supplier-specific investments				.10	1.30
Relationship age → Buyer-specific investments				.03	.34
Export share → Formal contracting				.10	1.59
Export share → Supplier-specific investments				.09	1.22
Export share → Buyer-specific investments				-.01	-.08

* $p < .05$; ** $p < .01$; *** $p < .001$ (one tailed)

	Sq. multiple correlations for structural equation	Sq. multiple correlations for reduced form
Supplier-specific investments	.64	.36
Buyer-specific investments	.61	.41
Formal contracting	.43	.43

Goodness-of-fit indices of direct effects structural model (included control variables): $\chi^2_{(239)}$=302.44; RMSEA= .041; CFI=.97; IFI=.97; NNFI=.97

Testing perfect mediation

In regards to hypothesis seven, note that there is only a trivial difference between the model diagnostics of the structural model and those of the measurement model. Hence, there is no statistically significant potential for improvements of the structural model. As expected, information from the modification indices reported that more structural paths would not improve model fit, lending support to the hypothesized mediating roles of supplier- and buyer-specific investments. To double-check this conclusion we estimated three alternative models where we sequentially freed the path from each of the three independent variables (product differentiation, competitive intensity, and export market ethnocentricity) to the dependent variables. The additional structural path resulted in the loss of one degree of freedom. If we could observe a significant difference in the chi-square of any of these three new structural models compared to the chi-square of the original structural model (at Δdf=1), this would mean that the effect of the independent variables are not perfectly mediated (Anderson and Gerbing 1988; Patterson, Johnson, and Spreng 1997). The largest chi-square difference observed was $\Delta\chi^2$=2.41, which is not significant at one degree of freedom (the cutoff value is 3.84). Also, the original structural paths from product differentiation, competitive intensity, and export market ethnocentricity to relationship-specific investments showed only trivial changes and maintained their levels of significance. Accordingly, perfect mediation holds, supporting the seventh hypothesis.

DISCUSSION AND IMPLICATIONS

The purpose of the study was to develop an understanding of the reasons behind specific investments in vertical relationships. We have examined the idea that relationship-specific investments link various facets of the business context to formal governance. Our results provide broad support for this idea. The findings explore some important factors that necessitate, facilitate, or inhibit investments on either side of international B2B relationships. The factors identified in this study are rooted in three different theoretical perspectives. First, taking a strategic positioning perspective, it was shown that product differentiation and competitive intensity were factors with significant impact. In regards to the supplier's product strategy, it was shown that differentiation is of importance for the degree to which relationship-specific investments are made by both the supplier and the buyer. Differentiated products need to be supported by investments on both sides of the relationship. It should be noted that these considerations have a value-maximizing spirit, thus meeting the critique that TCE's has primarily a cost minimizing focus (e.g., Zajac and Olsen 1993). The investments will only be made if the resulting increase in the joint value exceeds the costs of the investments. Not making such investments means inefficiency, because opportunities to realize value are not pursued. We claim that by treating asset specificity as a decision variable, the confusion regarding the cost-minimizing focus of TCE can be eliminated.

In situations when the supplier faces fierce competition, the buyer will have a power advantage. Faced with several suppliers fighting for attention, the buyer does not need to demonstrate commitment to a supplier by making specific investments. If the buyer sees the need for any specific relationship adaptations, it can demand such concessions from the supplier. The arguments developed in this respect are broader than the typical TCE arguments. This finding represents one important cross-paradigmatic link between competitive factors and relationship-specific investments which has been hitherto unexplored in the marketing channels literature.

Second, from an institutional perspective, the empirical evidence suggests two major points. First, if the exporter perceives the local market to be ethnocentric, it will hesitate to commit specific resources to a customer. Even by overcoming the cultural barrier and embracing local norms and values, the exporter will have problems in becoming socially acceptable in such markets. Given the threat of becoming disadvantaged in the future, the exporter may find it better to route these resources towards markets that are not characterized by such normative impediments. Also, faced with the supplier's limited willingness to make specific investments, our data suggests that the importer needs to compensate by increasing its own level of investments in order to realize the value creation potential and preserving the relationship for future transactions.

Third, from a knowledge-based view, the study suggests that the exporter's market knowledge has significant impact on the degree to which the supplier makes relationship-specific investments to support its product strategy. Researchers have argued that such informational "know-what" is an important information input for the decision maker in the choice and carrying out of specific tasks to reach the firm's strategic goals (e.g., Grant 1996; Nonaka 1994). Export market knowledge gives the supplier better abilities to identify, evaluate, and carry out investments that support the product strategy. We suggest that this link represents a contribution to the research focusing on the complementarities between the knowledge-based view and TCE.

Convincing evidence was also provided in regards to the second purpose of the article. It was demonstrated that buyer-specific and supplier-specific investments are likely to represent the generative mechanisms through which the antecedents to these investments affect formal governance. The antecedents do not have any direct bearing on relationship governance, but impact governance indirectly by affecting the level of specific investments.

Theoretical implications

Transaction cost economics is considered one of the most powerful and used theories for studying inter-firm relationships. Despite its popularity, the theory has been criticized for being too simplistic as it pays most attention to the structural alignment between the firms, and for having a cost minimization focus rather than a value creation focus (e.g., Ghosh and John 1999; Zajac and Olsen 1993). The core of the theory is on finding an optimal alignment between transactional attributes and governance structures. An efficient alignment will be cost saving while an inappropriate alignment will incur extra costs on one or both parties. The transactional attributes have theoretically and empirically been treated as given, and are thus outside the decision control of the parties.

We have in this study considered asset specificity as a decision variable, and investigated antecedents to specific investments. Our results are, in this respect, promising as we have found that our chosen factors influence a firm's decision to make specific investments. This enables us to more explicitly handle value creation in TCE, and opens up for developing better linkages between TCE and other perspectives, such as strategic positioning and the knowledge-based view. A firm's strategy is based on the potential to create value and capture rents, which in turn influences the decision to invest in specific assets. In order to exploit these values, it is not only necessary to have an efficient alignment between asset specificity and governance, but the chosen strategy needs to be aligned with an optimal level of specific investments. By extending TCE to include the double alignment logic, one can perhaps bridge the gap between TCE and the strategic management literature and provide new insight into the theory of the firm.

The impact of export market ethnocentricity on specific investments indicates that institutional factors also influence the decision to invest in specific assets. Although Williamson (1996) has suggested a link between institutional environment and governance, institutional factors have not explicitly become a part of the core TCE analysis. This is also the case for empirical studies. TCE has been used in empirical studies across a wide range of different institutional contexts, but the impact of contextual differences has not been a focus.

Our findings, therefore, suggest that efficient alignment of transactional attributes with governance may not necessarily be the same across different institutional contexts. This raises a question about the universality of TCE, and underlines the necessity of understanding how inter-firm relationships are contextually embedded. The initial theorizing by Williamson (1996) should thus be further developed.

Managerial implications

The trend towards forming closer customer relationships has been repeatedly highlighted in both academic and managerial journals. Emphasis has been on the criticality of forming such relationships for surviving in global, competitive markets (Houston and Johnson 2000). Such relationships are even considered a source of competitive advantage (Dyer and Singh 1998; Day 2000). Asset specificity is commonly regarded as the main driver away from arms-length relationships. A large number of studies have investigated the consequences of relationship-specific investments. There is less knowledge about the conditions under which firms are likely to make such investments. In this respect, this study provides a number of important insights for managers.

First, the successful implementation of a product differentiation strategy seems to be dependent on the support of specific investments. Willingness to commit specific resources in relation to equipment, distribution system, and training of sales personnel is important to realizing the value creation potential of a differentiation strategy. Further, the results also suggest that it is important to choose customers that are willing to commit specific resources for the same reason. Customers that are not willing to make specific adaptations may hamper the value creation potential of the relationship.

Second, the choice of export market is an important decision for exporters. The results showed that firms that export products to markets characterized by ethnocentric attitudes generally commit less specific investments, whereas the foreign buyers commit more specific investments. This implies that the importer takes a larger risk than the exporter and accepts an unbalanced situation. The exporter's lack of willingness to commit specific resources does not seem to hamper the value creation potential, if it is being compensated by larger investments by the importer. This result suggests that exporters should not try to avoid ethnocentric markets, but rather focus on identifying customers in such markets that are willing to invest in relationships.

Third, the degree of competitive strength in the local market is an important characteristic that export managers should take into account when selecting which export markets to target. Exporting products to such markets implies that the local customers are not willing to commit specific resources to the same degree as customers in export markets characterized by less intense competition. Carrying out a differentiation strategy that requires close and enduring relationships to local customers may thus be difficult in such markets, and the exporter may choose to stay away from such markets or enter the markets by establishing their own local sales units.

Fourth, detailed knowledge regarding potential customers, competitors, and the broader environment in the export market seems to be an essential element in the implementation of a differentiation strategy. New and relevant information may give new possibilities for how to develop and differentiate product and service offerings. Accordingly, managers should always try to absorb relevant market information and focus on how to use this information to further develop products, services, and relationships.

Finally, it is important to take into account the customers' signals and intentions to develop the relationship. Commitment of specific resources should be reciprocated to signal intention to cooperate rather than to defect, and thereby lessen the chances for opportunistic behavior and premature relationship breakdown.

Limitations and further research

Some limitations of this research should be noted. First, we have to forward the common requests for caution regarding interpretation of findings obtained in a cross-sectional design. The cross-sectional design disables the studying of the dynamic processes underlying the nature of elements in the model. Researchers have repeatedly raised awareness of the evolutionary nature of inter-firm relationships. Obviously, the constructs in question are likely to vary with the frequency, type, and history of interactions between the parties. Second, the cross-sectional design makes one incapable of statistically investigating the directionality of the relations in the hypotheses. Despite the fact that we cannot actually statistically test the directionality, we have chosen to formulate the hypotheses in a cause-and-effect language because of the logic, the chosen theoretical perspectives, and previous empirical findings.

Second, it would be desirable to have dyadic data, because such data would enable us to further explore other relevant antecedents to specific investments. We may speculate on possible effects on specific investments of institutional factors in the supply market. If, for example, this market is also closed towards foreign cultures, this closeness could balance the asymmetrical nature of the normative influences of the export market. Furthermore, the buyer’s knowledge about the supply market may have parallel effects on specific investments as the effect of the supplier’s export market knowledge. Such questions can only be explored by dyadic data, and future studies should take such considerations into account.

Third, we have to raise a flag of warning in regard to the low average variance extracted for competitive intensity and export market ethnocentricity. These scales suffer from rather low item reliabilities. Future research should emphasize developing better scales with more items. Considering the low average variance extracted together with the lack of earlier research on associating competitive and normative pressures with specific investments, we consider it to be important to replicate these findings in future research. Future research should also look for and empirically test potential additional drivers and inhibitors behind specific investments. Such research would potentially provide important contributions to the literature.

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