Antecedents, Consequences, and Mediating Roles of Trust in Relationships between Buyers and Suppliers: A Comparison among North America, Japan, and South Korea

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Abstract
Building on previous research studies, we proposed an extended model of trust in business-to-business relationships. In addition to the antecedents of trust, the consequences and mediating roles of trust were incorporated in the model. In the context of the adoption of a new product or a brand by professional buyers of retail food stores, a series of formal hypotheses was empirically tested. Data collected in North America, Japan, and South Korea indicated that trust in suppliers remained unchanged in instances of sharing more confidential information with buyers. However, the development of a distribution system meeting the specific needs of the buyer had a favorable impact on trust in North America and South Korea. The power of the salesperson and the frequency of informal contacts with buyers were found to have a strong impact on trust in all three countries. The salesperson was also found to be a strong mediator of trust in the supplier. The consequence of more trust in the supplier was also found significantly related to a better performance of the new product in Japan and South Korea. Finally, more trust in the supplier was shown to reduce conflicts between supplier and buyers only in North America. Managerial contributions, limits, and further research propositions were formulated at the end of the article.

Introduction
Models of business-to-business relationships have recently used the central concept of trust. It is therefore valuable to consider an extension of previous theoretical research efforts using trust as focal construct. Previous studies were limited to the nature and antecedents of trust and overlooked the importance of including the operational consequences of trust useful to managers. Our perspective takes into account the interest of managers of acting upon antecedents of trust to influence sales performance and to reduce conflicts in business relationships. Since marketing managers are now much more likely to be involved in global business relationships across borders, our study tests and compares the extent of empirical confirmation of our model across the North American and Asian business cultures.

The paradigm of relationship marketing
Since trust is the focus of our model and a central construct of relationship marketing, we will briefly review the paradigm of relationship marketing. Relationship
marketing has been described as essential in the new global economy where being a trusted partner within a network is a condition of success (Morgan and Hunt, 1994). As opposed to a pure discrete transaction, a relationship transaction occurs over time and includes a multidimensional exchange process imbedded in a “social matrix” (Macneil, 1978, 1980). As soon as relationship marketing occurs, dependence increases and there is more motivation for communication, cooperative planning, and management of potential conflicts (Dwyer, Schurr, and Oh, 1987). According to Morgan and Hunt (1994), relationship marketing includes all marketing activities aimed at initiating, developing, and maintaining efficient exchange relationships. Relationship marketing is the new challenge for companies facing fiercely competitive marketplaces where the focus of marketing managers is on “share of customers” and customer lifetime value (Kotler and Armstrong, 2001, p. 667).

Prior research on trust in business-to-business relationships

The construct and dimensions of trust

Empirical research studies on marketing relationships within channels of distribution have used constructs such as: conflicts, satisfaction, opportunism, use of power, and more recently, trust and commitment. Satisfaction and its antecedents has been the object of 71 studies between 1970 and 1996 as reported in a metanalysis by Geyskens, Steenkamp, and Kumar in 1999. However few studies have looked at the impact of the antecedents of satisfaction on trust (Garbarino and Johnson, 1999).

The importance of trust in relationship marketing is revealed by a large number of studies focusing on the construct of trust (Dwyer, Schurr, and Oh, 1987; Anderson and Weitz, 1989; Moorman, Zaltman and Deshpandé, 1992; Moorman, Despandé, and Zaltman, 1993). Ganesan (1994) shows that trust is a key factor in long-term relationships between department stores and their suppliers. Trust and commitment of department stores are more central to their attitudes when they have long term relationships with their suppliers.

Trust is defined by Morgan and Hunt (1994) as the conviction of the reliability and the integrity of a relationship partner. This definition is limited to the cognitive dimension of trust and, according to the authors, does not require an explicit behavioral dimension. Previous research studies have treated the construct of trust as unidimensional, however, a formal multidimensional definition of trust was more recently suggested by Smith and Barclay (1997). Following recent empirical research studies (Doney and Cannon, 1997; Siguaw, Simpson, and Baker, 1998), our model used the two following distinct dimensions of trust:

Credibility, defined as the belief that the relationship partner is able to perform his or her part of the transaction effectively and efficiently.

Benevolence, defined as the belief that the relationship partner has beneficial intentions and motivations towards the other party when conditions of the trans-
action are changing.

Credibility is related to the expertise and the reliability of the relationship partner, and to the fact that it is possible to rely on his or her oral or written commitments (Lindskold, 1978). Benevolence is related to qualities, intentions, and characteristics attributed to the relationship partner rather than his or her specific behavior (Rempel, Holmes, and Zanna, 1985). The two dimensions are distinct since one partner may perceive the other as benevolent even though his or her credibility is low (Ganesan, 1994). Both dimensions are also relevant in business marketing, since when buyers perceive some risk in a transaction, they are more likely to choose a supplier who is both credible and benevolent (Doney and Cannon, 1997).

The antecedents of trust
Several antecedents of trust have been identified in previous research studies. A brief review of these antecedents is valuable both from a theoretical and from a practical viewpoint. This will help us to structure our theoretical framework and since trust is an abstract construct of which managers have no direct control it will allow us to suggest more meaningful managerial recommendations. In all the studies previously cited, the following ten antecedents of trust have been suggested: 1) Reputation of the supplier, 2) Size of the supplier, 3) Specific investments such as a production and shipping system adapted to the needs of the buyer, 3) Sharing of information, 4) Length of the relationship, 5) Expertise of the salesperson, 6) Power of the salesperson such as importance and authority, 7) Friendliness of the salesperson, 8) Similarity between the salesperson and the buyer, such as for example, age group, gender, ethnicity, 9) Formal contacts between the salesperson and the buyer, 10) Informal contacts between the salesperson and the buyer.

The consequences of trust
Because trust is not an end in itself, consequences of trust are both useful from a theoretical point of view and for managerial purposes. Trust is in fact one of the ways to improve the performance of relationships among businesses. The inclusion of the consequences of trust in our model is therefore useful to formally test its positive impact on business relationship performance. The inclusion of consequences of trust in our model is also required because we are also interested to test its mediating role. The following four consequences of trust have been suggested in previous studies: 1) Cooperation, 2) Conflicts, 3) Commitment and 4) Performance.

Our conceptual framework, presented in a subsequent section, will use those antecedents and consequences for which a clear empirical effect on trust was found in previous studies. It will also be limited to those antecedents and consequences that were measured at an acceptable level of reliability in all the three countries of our empirical study.
The mediation effects of trust on performance

Previous studies have shown that trust is important to the extent that there is a risk of opportunistic behavior of a partner in a business relationship (Bradach and Eccles, 1989). For example, one partner in a business relationship may take advantage of the dependent situation created by specific investments made by the other partner in the relationship. Aulak, Kotabe, and Sahay (1996) have empirically found a mediating role of trust on the relationship between specific investments and performance. Thus, the manifestation of trust requires the existence of uncertainty and importance in buying decisions (Moorman, Zaltman, and Deshpandé, 1992). In distribution channels, vulnerability is the result of a high level of dependency, and trust is therefore more important (Madhok, 1995). However, in their empirical study, Aulak, Katobe, and Sahay (1996) did not find a mediating role of trust between market uncertainty and performance in a business relationship.

The mediation effects of trust in the salesperson and in the supplier

The origin of trust lies among individuals and since individuals conduct inter-organization relationships, trust may be extended to organizations (Hosmer, 1995). The salesperson and the company are two sources of trust and have been studied previously. Doney and Cannon (1997) have suggested that the salesperson is a central interface between the buyer and the supplier. The first mission of the salesperson is to persuade potential buyers to buy the products of his or her company. However, when businesses start to develop a partnership, the salesperson’s role is modified to facilitate the development of trust (Swan and Nolan, 1985). According to Doney and Cannon (1997), trust in the salesperson and trust in the supplier are two related but distinct constructs.

The influence of a salesperson on trust in the supplier is important. Kelly and Schine (1992) gave an example that a long-term relationship with a supplier may be jeopardized by a corrupt and unreliable salesperson. Further, Schiller (1992) indicated that a trustworthy salesperson may be able to keep a buyer committed even if the supplier does not offer acceptable conditions in the short-term. When a supplier is little known to the buyer, the behavior of the salesperson serves as an indication of the values and ways of doing business of the supplier. Thus, trust in the salesperson is a condition for the buyer to develop trust in the supplier (Chow and Holden, 1997). Trust is transferred from a well-known group or individual to a related less well-known group or individual (Strub and Priest, 1976). The process of transfer of trust or distrust may occur both ways; trust or distrust in the salesperson may be transferred to or from the supplier.

Conceptual framework

Trust has been systematically included in academic research as a key construct of relationship marketing; it was therefore placed at the center of our model. Further,
theoretical and empirical research results on the construct have also shown its relevance. Research efforts have included additional antecedent variables that could help to create and develop trust in relationship marketing. However, since trust in itself is not the final objective of managers, researchers have also included marketing effects resulting from trust. Easier and more efficient exchanges are the marketing effects that have been studied. However, different researchers have different views of the relevant antecedent and consequent variables of trust. Our proposed model shown in Figure 1 is based on results of empirical tests published in previous research articles. Constructs related to previous empirical results that were inconclusive were not included in our model. The model was finalized after checking the reliability of the construct measurements in all three countries of our empirical research study.

Figure 1. Conceptual framework and research hypotheses.

Specific investments of the supplier as a determinant of the buyer’s trust in the supplier
Investments in specific manufacturing equipment by suppliers to meet the demand of buyers have been shown by Ganesan (1994) to increase confidence in the manufacturer. Doney and Cannon (1997) indicate that buyers perceive an increasing opportunity cost for the manufacturer when higher specific investments are involved. Buyers perceive a lower risk of opportunistic behavior and an evidence of benevolence on the part of the supplier. Further, the decision of the supplier to engage in specific investments is an important managerial variable that supports its inclusion in our model.

H1: The buyer’s trust in the supplier is positively related to specific investments.
Information sharing as a determinant of the buyer's trust in the supplier
The willingness of the supplier to share confidential information with the buyer is a tangible indication of goodwill. This cooperative behavior goes further than a perceived or expected trust of the buyer in the supplier. When sharing confidential information with the buyer, the supplier is at risk of being more vulnerable. This action is a strong signal of goodwill on the part of the supplier (Strub and Priest, 1976). Auklah, Kotabe, and Sahay (1996) conducted an empirically successful test of this relation. The inclusion of this variable in our model is also relevant from a managerial point of view, since sharing information with buyers is a strategic marketing decision of suppliers.

H2: The buyer's trust in the supplier is positively related to information sharing.

Relationship between the expertise of the salesperson and trust in the salesperson
The degree of expertise of the salesperson is related to his or her knowledge about the allowable conditions of the sales transactions. From the buyer's point of view, this expertise is related to the salesperson's credibility to deliver promises and to be diligent and professional. This relation was both empirically tested in situations of final consumer and in business-to-business markets (Doney and Cannon, 1997; Siguaw, Simpson, and Baker, 1998). This construct is potentially useful for the marketing decisions of suppliers. By improving the expertise of the sales force, a supplier may improve the buyer's degree of trust in the salesperson. The supplier may also increase the buyer's trust in the salesperson by implementing a corporate communication program focused on the expertise of the salesforce.

H3: The buyer's trust in the salesperson is positively related to the expertise of the salesperson.

Relationship between the power of and trust in the salesperson
The salesperson's power and expertise are conceptually related. With more authority within his or her organization, the salesperson will more easily deliver his or her promises. A more powerful salesperson is likely to be perceived to be more credible by the buyer. The development of trust as operating in a similar fashion for both expertise and power was demonstrated in the literature (Doney and Cannon, 1997). As for expertise, power is controllable by the supplier. Sales policies of the supplier may objectively increase the power of the sales force by allowing salespersons to make more independent decisions. The supplier may also increase the buyer's trust in the salesperson by developing a communication program focused on the power of the salesforce.

H4: The buyer's trust in the salesperson is positively related to the power of the salesperson.

Relationship between frequency of formal contacts and trust in the salesperson
According to Doney and Cannon (1997), formal contacts between salespersons and
buyers within the professional framework should have an impact on trust. The underlying theory involved is a progressive process of trust building based on the formation of expectancies. The more frequent the contacts between a buyer and a salesperson, the more the buyer will know the salesperson and the more he or she will be able to predict the salesperson's behavior and therefore develop more trust in the salesperson. This relation was empirically confirmed in the literature by the previously cited authors. Allocating resources is a major responsibility of managers and the frequency of formal contacts between salespersons and the buyers is also a key decision-making variable in the management of the sales force. Therefore, the frequency of formal contacts between salespersons and buyers may not only have a short-term effect on sales but may also contribute to building trust in the salesperson.

**H5:** The buyer's trust in the salesperson is positively related to the frequency of formal contacts.

**Relationship between frequency of informal contacts and trust in the salesperson**

Through a process of development of expectancies, formal contacts as well as informal contacts (social meetings outside the office) should have a positive effect on trust of the buyer in the salesperson (Doney and Cannon, 1997). However, this relationship was not found statistically significant in a previous empirical study. In the absence of empirical confirmation, the role of this variable is therefore still uncertain. From a managerial viewpoint, it is potentially useful for a supplier to know if supporting informal relationships between salespersons and buyers is valuable. The construct of frequency of informal contacts is, therefore, included in our model as a determinant of trust of the buyer in the salesperson.

**H6:** The buyer's trust in the salesperson is positively related to the frequency of informal contacts.

**Relationship between trust in the salesperson and trust in the supplier**

Our review of the literature indicated that the construct of trust in the salesperson and the construct of trust in the supplier have each been studied previously. However, both constructs were seldom included together in the same study. We suggest that that the two constructs are distinct and that both should be included in our model. Trust is first developing between individuals and the salesperson is the contact point between the supplier and the buyer. The salesperson is therefore an important source of trust for the buyer. In addition, through its management policies, activities and employees, the supplier's organization is also an important source of trust (Doney and Cannon, 1997). Trust in the salesperson is likely to be more personalized than trust in the supplier's organization. We expect the two sources to be related, and we suggest that they both should be included in the model. In our empirical context of the adoption of a new product, the buyer will be shown samples and receive detailed information from the salesperson, we therefore expect that trust
in the salesperson will be a determinant of trust in the supplier.

H7: The buyer's trust in the supplier is positively related to the buyer's trust in the salesperson.

Relationship between trust in the supplier and performance

The role of trust as an antecedent of the performance of a partnership has been empirically confirmed in various contexts. The various possible measures of the performance of a partnership are however different from the context of our study. We are concerned in our empirical study by the performance of new products or new brands frequently offered by suppliers to buyers. Performance measures are of interest to managers who would like to know the effects of their decisions on the economic performance of their company. Further, the high frequency of new product offers justifies the study of the impact of trust on this measure of success. The performance of the new product is, therefore, included in our model as a consequence of trust of the buyer in the supplier.

H8: The buyer's trust in the supplier is positively related to the performance of the adopted product.

Relationship between trust in the supplier and conflicts

The degree of trust between suppliers and buyers is related to the level or degree of conflict of interests or lack of coordination (Anderson and Narus, 1990). Even though the direction of the causal relationship between trust in the supplier and conflicts is debated, we propose that a higher level of trust may first reduce conflicts and then increase trust through a feedback process. The level of conflicts is important to managers, since a moderate level of conflicts may have positive effects, but a high level of conflicts may be detrimental to the performance of a supplier-buyer partnership. Further, when new product decisions are involved, more attention is required from managers and less effort is available to solve conflicts. The construct of conflicts is included in the model as a consequence of trust in the supplier.

H9: The buyer's trust in the supplier is negatively related to the level of conflicts between the buyer and the supplier.

Our parsimonious conceptual framework in Figure 1 includes trust, using both credibility and benevolence, as a central construct and proposes a series of antecedent and consequent constructs. Our model discriminates between the construct of trust in the supplier and the construct of trust in the salesperson. Since the tangible contact of the professional buyer with the supplier is occurring through the salesperson, we suggest that trust in the salesperson will be antecedent to trust in the supplier. We have also proposed the constructs of specific investments of the supplier and of information sharing as two antecedents of trust in the supplier. Antecedents of trust in the salesperson are: the expertise and the power of the salesperson together with the frequency of formal and informal contacts. Two consequences of trust in the sup-
plier are included in our model: the performance of the newly adopted product and the level of conflicts between the supplier and the buyer. Finally our model proposes to test the mediating role of the two aspects of trust (in the supplier and in the salesperson).

H10: The buyer's trust in the salesperson mediates the relation between the salesperson antecedent constructs and the buyer's trust in the supplier.
H11: The buyer's trust in the supplier mediates the relation between the supplier antecedent and consequent constructs.
H12 The buyer's trust in the supplier mediates the relation between the salesperson and consequent constructs.

Research objectives and empirical application

This study dealt with the role of trust on business-to-business relationships between suppliers and buyers. Our prime objective was to study the role of trust as a mediating construct between a parsimonious number of antecedents and consequences. To shed more light on the mediating role of trust, we separately conceptualized the constructs of trust in the supplier and trust in the salesperson. The mediating role of the two constructs of trust in the salesperson and trust in the supplier were not studied separately in previous research efforts.

We also aimed at improving decisions of marketing managers supplying the retail sector. Understanding of the role of trust in business-to-business relationships is not of itself sufficient. Therefore, our model looked in turn at the effects of specific constructs on trust and at the consequences of trust on performance and conflicts. Our model was tested using empirical data on business relationships between supplier manufacturers and buyers of supermarkets, convenience stores and discount stores. The participant professional buyers were asked to refer to the same buying situation: a recent adoption of a new product or brand. We also compared data collected in Japan, North America, and South Korea. With the increasing importance of global retailing (Keegan and Green, 2000, p. 474) a better understanding of professional retail buyers in different parts of the world by marketing managers is very useful. This comparison allowed us to point out similarities and differences of relationships between suppliers and retailers among the three countries and to formulate specific differentiated managerial recommendations.

Research method

To test our theoretical framework, quantitative data collected from parts of a larger international survey on professional buyer behavior were used. The larger survey was sponsored by Dentsu Advertising in Tokyo, Japan and conducted in North America (the USA and Canada), Japan, and South Korea. Comparing the role of trust in business-to-business relationships among these three areas was considered useful from both a theoretical and managerial point of view. Japan was perceived as
requiring a higher level of trust in business-to-business relationships, whereas in less risk-averse North America it was perceived as less necessary (Dyer and Chu, 2000). South Korea, as a newly industrialized Asian country, was seen closer to Japan in terms of business culture but readier to accept more drastic changes in its retailing structure under the influence of western business practices. It was thus found interesting to compare the degree of similarity of professional business relationships in Japan, North America, and South Korea.

Measures
After conducting face-to-face qualitative interviews with retail buyers, a team of four multilingual academic researchers prepared the three versions of the questionnaires used in the survey. Extensive discussions and pretests were conducted to finalize the survey instrument. Since the theory related to our model was mostly drawn from the literature published in the USA, the questionnaire was first prepared in English. The English version was then decentered and adapted to the Japanese and Korean versions of the questionnaire. Problems of translation equivalence were not found as difficult as with consumer behavior studies, since the information required in the survey was related to more objective business activities of professional retail buyers.

The complete survey questionnaire, of which only a few sections were used in this study, consisted of the following six parts: 1) General information on the buyer, 2) General information on the buyer’s organization, 3) General information on the supplier of a new product or brand adopted within the last year, 4) Information on the adopted product or brand, 5) Adoption process and relationship between the salesperson and the buyer, 6) Performance of the adopted product or brand. The complete final version of the questionnaire consisted of 9 pages. Parts 3, 5, and 6 of the questionnaire contained the constructs used in our theoretical framework. All constructs were measured on five-point Likert scales (1 strongly disagree—5 strongly agree). Items used to measure the constructs of the model and their sources are listed in Appendix A. Constructs included in the model had reliabilities measured by Cronbach alpha above .60 for all three countries. The construct reliabilities for each country and associated descriptive statistics are shown in Appendix B.

Sample and survey procedures
The population of the study was defined as all professional buyers of retail food stores in direct contact with representatives of suppliers. Sample units consisted of buyers within selected food retail stores having received or been solicited in person to complete the survey questionnaire. The survey method in Japan used the “Japan Supermarket Directory 99” as a sampling frame. All chain stores of more than five stores were listed in this directory. With the exclusion of drugstores, hardware, and fashion stores, all 588 chains distributing packaged goods and groceries were select-
Two questionnaires intended for both food and nonfood retail buyers were mailed to directors of supply of each retail chain. Out of a total of 1176 questionnaires, 183 usable were returned for a response rate of 15.6%.

The survey method in the USA used two sampling frames, the “National Directory of Addresses and Telephone Numbers” (1998), and the “D & B Million Dollar Directory” (1999). All listed grocery stores (245); convenience stores (86) and warehouse stores (4) with annual sales exceeding $20 million were selected in the first sample frame. The second sample frame was used to select 465 grocery stores. A grand total of 800 companies were retained and two questionnaires were mailed to each for a total of 1600. A total of 32 were returned and 29 were usable. This low rate of return may have been the result of the intense activity of mergers and acquisitions occurring in the retail sector, the length of the questionnaire, and the data collection taking place too close to the end of the year retail rush.

With this low rate of return in mind the survey method in Canada was designed to improve response rate using telephone prenotifications of retail management to secure support for the survey and telephone follow-ups and recalls after the mailing. The sample frame in Canada was built using the “Who’s Who, Canadian Grocer Magazine’s Annual Directory of Chains & Groups in Canada” (1999-2000) and the “Blue Book, A Sanford Evans Publication of Food Stores Operators and Wholesalers” (1999-2000). According to the food industry associations, all the 68 corporations and operators included without duplications in those two directories accounted for more than 90% of all Canadian food stores. To check names and addresses, lists of members in the directories of the “Canadian Council of Grocery Distributors” and the “Canadian Federation of Independent Grocers” were also consulted. The mail survey approach was used in order to cover a wide geographical area and to remove the pressure on respondents to answer immediately. A total of 236 questionnaires were sent to respondents willing to respond to the survey and 51 were returned for a response rate of 21%. Although not including smaller retailers such as coops and warehouse stores, the final Canadian sample was adequately representative in terms of the latest published market shares of the largest retailers (Grammond, 1999).

In South Korea, since no directory was available, an expert of the local retail sector designed the survey. The sample frame used a list of 51 chains of retailing format. However, smaller players, with less sophisticated supply management or merchandising system, were not willing to participate in the survey and the final list consisted of 24 chains (9 out of 13 department stores, 7 out of 15 discount stores, 2 out of 7 supermarket chains, 4 out of 8 convenience store chains, and 2 out of 8 major players in the nonstore retailing area). The fieldwork was contracted to a team of 14 interviewers working for Hyundai research, a professional research company.
Interviewers were requested to arrange appointments with qualified buyers and to conduct face-to-face data collection or later pick-up of the questionnaire. To ensure a good coverage of retail format, a maximum of five interviews were allowed per chain of retailing format and no more than two interviews in the same buying section. A total of 116 questionnaires were collected, of which 114 were usable. This procedure was effective and resulted in a very good number of usable completed questionnaires.

Data from the USA and Canada were examined in relation to the data from Japan and from Korea. We conducted a stepwise multivariate discriminant analysis using the ten constructs of our model in Figure 1 as independent variables. The Mahalanobis multivariate distance between all pairs of the four countries was computed and the respective F values and associated significance were as shown below the main diagonal in Table 1.

To check that the nonsignificant multivariate distance between the USA and Canada was not the result of smaller sample sizes (respectively 29 and 51) we randomly selected 29 Japanese, Canadian, and South Korean cases. The resulting F values and associated significance were as shown above the main diagonal in Table 1. In addition, the Euclidean distances computed using the centroids coordinates of each country in the first two significant discriminant functions were as shown in Table 1. Since a much smaller Euclidean and an insignificant multivariate distance was found between the USA and Canada, it was decided to pool the USA and Canadian samples. In spite of some market differences between the USA and Canada, data in relation to our model show that similar business relationships have developed with the integration of the North American economy within the North American Free Trade Agreement.

Data analyses
Mean values and univariate descriptive statistics were first used to compare results across regions. To test the hypotheses, a path analysis using multiple linear regressions was performed to estimate the relationships in our theoretical model. A more powerful approach using structural equation modeling would have required a larger sample size of 150 to 200 per region which was not met by our data. A recent study by Grapentine (2000) indicated that path analysis and structural equation modeling provide similar but not identical results. When the theoretical model is not too complex, both methods will identify similar variables as being the most important.

To test the differential effects of trust in each of the three different countries, two dummy variables for North America (1, 0) and for South Korea were introduced in a multiple regression using pooled data across countries as suggested by Craig and Douglas (2000, p. 306). Japan was chosen as the eliminated category because it had
Finally, to test the mediating role of trust, the approach proposed by Baron and Kenny (1986) was used. The following three regressions were examined: 1) Regression of the mediator on the independent variable, 2) Regression of the dependent variable on the independent variable, and 3) Regression of the dependent variable on both the independent variable and the mediator. To establish mediation, the first two equations must each show a significant effect of the independent variable on the mediator and on the dependent variable. In the third equation, the mediator must affect the dependent variable. When all conditions are met, the effect of the independent variable on the dependent variable must be less in the third equation than in the second. Perfect mediation occurs if the independent variable has no effect in the third equation. Since multicollinearity is likely to exist in the third equation, not only the significance of the coefficients but also their absolute size should be examined.

Results

Descriptive overview of the construct variables

Mean values of each construct of the model appear in appendix B. Differences among countries were statistically significant for all constructs except for trust using both credibility and benevolence. When trust in the supplier or in the salesperson was measured by credibility only, the mean values were significantly higher for

Table 1. Multivariate F values and Euclidean distances between all pairs of the four countries.

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<td>USA</td>
<td>5.60a</td>
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<td>South Korea</td>
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a, b: Mahalanobis multivariate distance F value and associated probability.

c: Euclidean distance using the coordinates of country centroids in the significant discriminant functions.

Numbers below the main diagonal are computed on all cases available in each country.

Numbers above the main diagonal are computed on 29 cases in each country.
North America as compared to Japan and South Korea. Concerning the relationships between the supplier and the retailer, multiple paired comparisons indicated that in Japan specific investments by the supplier were perceived to be lower than in North America and South Korea. Further, North American buyers perceived that information sharing with the supplier was higher than in either Japan or South Korea. With respect to relationships between the salesperson and the buyer, expertise was perceived highest in North America and power was perceived higher both in North America and South Korea than in Japan. Informal contacts between salespersons and buyers were perceived higher both in North America and Korea than in Japan. South Korean and North American buyers perceived a higher performance of the adopted product or brand than Japanese buyers. Finally, Korean buyers perceived the highest level of conflicts between the supplier and the retailer in relation to the adoption of the product or brand.

Test of the model
The first seven hypotheses related to our model of relationships among antecedents of trust in the supplier and trust in the salesperson are presented in Table 2 for each of the three countries. As can be seen in Table 2, H1 (The buyer’s trust in the supplier is positively related to specific investments) was confirmed for North America and South Korea but not for Japan. Further, a regression with dummy variables using all the data indicated that the strength of the relationship was not statistically different between North America and South Korea. H2 (The buyer’s trust in the supplier is positively related to information sharing) was not confirmed for any region. The relationship between information sharing and trust may not apply in the context of adoption of a new product or brand. Trust in the supplier must exist before information sharing occurs (Dwyer, Schurr, and Oh, 1987; Anderson, Lodish, and Weitz, 1987). Alternatively, as suggested by Anderson and Narus (1990) and Chow and Holden (1997) information sharing and trust interact in an iterative process that has not developed for a new product.

H3 (The buyer’s trust in the salesperson is positively related to the expertise of the salesperson) was confirmed for South Korea only. H4 (The buyer’s trust in the salesperson is positively related to the power of the salesperson) was confirmed for all countries. The strength of this relationship was found statistically higher for North America according to the regression with dummy variables using all data. H5 (The buyer’s trust in the salesperson is positively related to the frequency of formal contacts) was confirmed for Japan only. H6 (The buyer’s trust in the salesperson is positively related to the frequency of informal contacts) was confirmed for all countries and was found statistically strongest for North America. Finally, H7 (The buyer’s trust in the supplier is positively related to the buyer’s trust in the salesperson) is confirmed, and of similar strength, for all countries.
Table 2. Estimated coefficients and indirect effects for hypothesized relationships among antecedents and trust variables.

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<th>Trust in the salesperson</th>
<th>Trust in the supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Japan</td>
<td>NA</td>
</tr>
<tr>
<td>Supplier’s specific investments (H1)</td>
<td>NS</td>
<td>.25**</td>
</tr>
<tr>
<td>Information sharing (H2)</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>NS</td>
<td>.06</td>
</tr>
<tr>
<td>Salesperson’s:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Expertise (H3)</td>
<td>NS</td>
<td>.33**</td>
</tr>
<tr>
<td>- Power (H4)</td>
<td>.22**</td>
<td>.24**</td>
</tr>
<tr>
<td>- Formal contacts (H5)</td>
<td>.33**</td>
<td>NS</td>
</tr>
<tr>
<td>- Informal contacts (H6)</td>
<td>.20**</td>
<td>.30**</td>
</tr>
<tr>
<td>Trust in salesperson (H7)</td>
<td>.56**</td>
<td>.56**</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>.32</td>
<td>.49</td>
</tr>
</tbody>
</table>

**: Significant at level 0.01; *: significant at level 0.05; NS: nonsignificant.
#: The same letter is used when the difference between a pair of countries is not statistically different according to two-dummy variables introduced in a regression using all observations. Underlined italics refer to the indirect effects to test H10: The buyer’s trust in the salesperson mediates the relation between the salesperson antecedent constructs and the buyer’s trust in the supplier. See Appendix C for an example of calculation of the indirect effect.

With respect to the mediating roles of trust in the salesperson, the indirect effects are indicated in underlined italics in Table 2. For example, in the case of Japan, trust in the salesperson mediates the relation between the salesperson expertise and trust in the supplier. The indirect effect, computed according to the method proposed by Baron and Kenny (1986) discussed in the section on data analyses, was: .36 x .56 = .20 (See Appendix C). In North America only, trust in the salesperson was not found a mediator of the relationship between formal and informal contacts and trust in the supplier. As far as expertise and power of the salesperson were concerned, the mediating role of trust in the salesperson on trust in the supplier was confirmed for all the three countries. Thus, the development of trust in the supplier through trust in the salesperson suggested by Doney and Cannon (1997) was also found valid both in the Japanese and the South Korean business environment. In North America, contacts with salespersons occur as normal business practice and trust in the salesperson may not mediate trust in the supplier (Nicholson, Compeau, and Sethi, 2001). In Japan and Korea, more frequent formal and informal contacts with salespersons...
may have a special meaning allowing trust in the salesperson to mediate trust in the supplier.

The hypotheses related to the consequences of trust in the supplier appear in Table 3. H8 (The buyer's trust in the supplier is positively related to the performance of the adopted product) was confirmed for Japan and South Korea only. This relationship was found statistically stronger for South Korea than for Japan. H9 (The buyer's trust in the supplier is negatively related to the level of conflicts between the buyer and the supplier) is confirmed for North America only.

Table 3. Estimated coefficients and indirect effects for hypothesized relationships among trust in supplier and consequences.

<table>
<thead>
<tr>
<th></th>
<th>Performance</th>
<th>Conflicts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Japan</td>
<td>NA</td>
</tr>
<tr>
<td>Trust in supplier (H8, H9)</td>
<td>.16**</td>
<td>NS</td>
</tr>
<tr>
<td>Adjusted R^2</td>
<td>.02</td>
<td>NS</td>
</tr>
</tbody>
</table>

Indirect effects

<table>
<thead>
<tr>
<th></th>
<th>Performance</th>
<th>Conflicts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supplier's specific investments (H11)</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Information sharing (H11)</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Trust in salesperson (H12)</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

** : Significant at level 0.01; * : significant at level 0.05; NS: nonsignificant.
# : The same letter is used when the difference between a pair of countries is not statistically different according to two-dummy variables introduced in a regression using all observations.
Underlined italics refer to the indirect effects to test H11 and H12. See Appendix C for examples of calculation of indirect effects.

Indirect effects related to the mediating role of the retail buyer's trust in the supplier are indicated in underlined italics in Table 3. Data revealed almost no empirical support for the mediating role of trust in the supplier. Researchers are unanimous in support of the benefits of trust in the supplier in business-to-business relationships. However, trust in the supplier may operate through a more complex model. The choice of our measures of performance and conflicts as consequences of trust in the supplier for the adoption of a new product or a brand may explain the lack of empirical support. With respect to conflicts, they have negative as well as positive aspects. Some level of conflicts may be beneficial, since when they are solved they may help to avoid stagnation and contribute to the development of a business relationship (Deutsch, 1960; Anderson and Narus, 1990). Thus, reduction of conflicts may not always be appropriate and therefore this construct may not be adequately
modeled as a linear consequence of trust in the supplier.

Discussion and conclusion

Theoretical contributions

A business-to-business model of trust in the supplier and of trust in the salesperson in relation to antecedent and consequent variables was proposed and tested empirically in three countries of the world. Trust was found to be empirically related to some antecedent variables.

Specific investments by the supplier were related to trust in the supplier in North America and South Korea, but not in Japan. Since specific investments by the supplier were perceived lower in Japan (see Appendix B), they may not be relevant to influence trust in the supplier. The effect of information sharing on trust in the supplier was found nonsignificant for all countries. In spite of support for this relationship in previous studies, some authors suggest that sharing information starts only when trust is established and that the process is iterative.

Trust in the salesperson was found empirically related to the expertise of the salesperson in South Korea only. However, the power of the salesperson was found related to trust in the salesperson in all countries. Over all the countries of the study, the power of the salesperson seemed to be more important to generate a retail buyer's trust in the salesperson. Power has been less often the object of an antecedent of trust in previous studies. The expertise of the salesperson may be more concrete and easier to detect by the buyer than power. Expertise and power both have an impact on the credibility dimension of trust in the salesperson. However, expertise can be seen as a necessary but not a sufficient condition for the development of the retail buyer's trust in the salesperson. The power of the salesperson may be seen as a necessary and a sufficient condition. The frequency of informal contacts had an impact on trust in the salesperson in all countries and the frequency of formal contacts had an effect on trust in the salesperson only in Japan. In Japan, both formal and informal business relationships have an impact on trust. When a business relationship is established in Japan, formal contacts may be seen as given and informal contacts appear very important to generate trust in the salesperson.

The relationship between trust in the salesperson and trust in the supplier was confirmed as anticipated. This relationship is the strongest of our model and was found remarkably similar in each country. In spite of the strong relation between the two constructs, the mediating role of trust in the salesperson was confirmed by our data in Table 2. Therefore, we think as do Doney and Cannon (1997) that trust in the salesperson and trust in the supplier are theoretically different, are perceived as distinct by buyers, and should be kept apart in our framework.
The impact of trust in the supplier on performance and conflicts was confirmed only in some countries. Trust in the supplier had an effect on performance in Japan and South Korea whereas its impact on conflicts was observed only in North America. Although Anderson and Narus (1990) advocated the benefits of trust in the supplier, our results indicated that this was not the case for all countries of our study.

The mediating roles of trust in the salesperson and of trust in the supplier were formally tested. Trust in the salesperson was found to be a mediator of trust in the supplier for expertise and for power in all countries. Concerning formal and informal contacts, the mediating roles of trust in the supplier were confirmed in Japan and South Korea but not in North America. The less formal North American business culture may explain why the frequency of contacts did not affect trust. Antecedents of trust in the salesperson appeared to influence trust in the supplier through the mediating role of trust in the salesperson. From a theoretical standpoint, this shows that salesperson characteristics and behavior are important in the development of trust in the supplier.

However, the mediating role of trust in the supplier is uncertain. For all three countries, trust in the supplier is never a mediator of the four relationships between its two antecedents (specific investments and information sharing) and two consequences (performance and conflicts). Since direct relationships were often nonsignificant, it was not surprising to find no mediating effect. The mediating role of trust in the supplier was observed for two countries in the specific case where trust in the salesperson was the antecedent. When performance of the new product was the consequence, trust in the supplier was found a significant mediator in South Korea. When conflicts between the supplier and the retailer were the consequences, trust in the supplier was a significant mediator in North America (see Table 3).

Overall, our empirical results supported the mediating role of trust in the salesperson much more than the mediating role of trust in the supplier. However, even if trust in the supplier had no mediating role between its antecedents and consequences, strong direct relationships were found between trust in the salesperson and trust in the supplier. The benefits of trust in the supplier may be observed on more long-term consequences such as the efficiency and length of the business relationship.

Managerial contributions
Beyond our theoretical objective, our empirical results suggest practical recommendations for marketing managers of companies selling to supermarkets, convenience stores, and discount stores of the three countries of the study. From a managerial point of view, sharing confidential information is not recommended to increase trust in the supplier, but may be appropriate for other reasons. However, investments in equipment or development of a distribution system to meet the specific needs of the
buyer are recommended since they are likely to increase trust in the supplier in North America and South Korea.

Our empirical results have shown that the power of the salesperson has a strong impact on the retail buyer's trust in the salesperson in all three countries. This suggests that, without neglecting the necessary skills and expertise of salespersons, sales managers could help develop trust of buyers in salespersons by increasing the empowerment of their salespeople. This may be less intuitive than traditional training of a salesforce based on developing expertise and may have a stronger impact on trust as shown by our empirical results. Concerning formal and informal contacts, our empirical data revealed that the frequency of informal contacts was more important in all three countries and determinant in North America and South Korea. This means that sales managers, aiming at developing retail buyers trust in salespeople, may misallocate resources by placing too much emphasis on formal contacts. Managers may perceive that informal contacts are too expensive and useless. However, our recommendation to sales managers of the three countries is that actively supporting informal contacts between salespeople and buyers is likely to increase trust in the salesperson. Since trust in the salesperson is strongly transferred to trust in the supplier, investments in informal contacts are beneficial for the supplier. Further, this transfer of trust may also be beneficial to other and new salespersons.

Finally, even if not observed for all countries of our study, increasing trust in the supplier has the benefit of increasing the performance of the adopted product (in Japan and South Korea) and can reduce conflicts (in North America) between the supplier and the buyer. These final beneficial effects of increasing trust in the supplier support our preceding managerial recommendations on the antecedents of trust.

Limits and future research
Our objective was to propose a parsimonious model. We only used variables most often included in previous research studies for possible generalization. Limitation of variables was required to be able test the importance and the role of trust in business-to-business relationships and to compare over several countries.

Our measures included two dimensions of trust. However, our specific measures may not have captured all the multidimensional aspects of trust. Further, our specific measures of performance of the new product and of conflicts may have limited our conclusions related to the consequences of trust. Additional variables not accounted for in our model may have influenced the strength of the relationships that were found. A measure of reputation of the supplier was included in our survey but turned out to be unreliable in Japan (Cronbach alpha = .46). Disregarding the reliability problem for Japan, average reputation of the supplier was found similar and
not significantly different among Japan (3.63), North America (3.77), and South Korea (3.58).

An additional limit was that our model did not account for the dynamic aspect of trust development. According to Geyskens, Steenkamp, and Kumar (1999), conflicts and satisfaction occur before the development of trust and commitment. The role of trust may be only important for short-term relationships (Grayson and Ambler, 1999). In our samples, the length of the relationship with the supplier of the new product was often more than 10 years. However, our empirical measures of performance and conflicts referred to a new product or brand adopted by the retailer within the last year as the results of negotiations with a specific supplier (see appendices A and B). We think that the role of trust is important in the more uncertain situation of the adoption of a new product. For regular transactions, the role of trust may be different.

Our empirical results were related to the specific context of business-to-business relationships involving suppliers and retail buyers of supermarkets, convenience, and discount stores. Further, they were limited to the three North American and Asian countries of the study. Thus, generalization is limited to the specific context of the study and universal parameters are rarely available in practice (Farley and Lehmann, 1994).

From a methodological point of view, the statistical test of our model was limited to linear multiple regressions and did not allow us to formally account for measurement errors and possible two-way relationships. Therefore, our results were strongly dependent on the strength of our theoretical framework. All our data reflected the perceptions of retail buyers and did not include the perceptions of suppliers. We further assumed that no systematic response bias was involved. Using a drop and pick up method to collect data in South Korea and a mail procedure elsewhere may have improved the quality of the South Korean data. Examination of the distribution of answers on the five-point scales across countries did not show any apparent systematic bias. For instance, the well-known tendency of Asian consumers as compared to North American consumers to avoid the extreme points of a scale was not observed in our samples of professional buyers.

Finally, one important methodological limit is related to the difficulty of achieving comparability in sampling by balancing the relative importance of representativity and comparability of international data (Craig and Douglas, 2000, p. 241). The exclusion of small players in the South Korean sample may mean some bias towards larger retail formats. However, both in North America and Japan, smaller players tended also to be more difficult to survey. This common bias may mean that our comparison was limited to larger retailers in the three countries. Since the overall
retail structures in Japan, North America, and South Korea tend to be somewhat different this lack of representativeness within country may in fact improve the validity of the comparison across countries.

Overall, our results confirmed previous research results conducted in North America and indicated that the role of trust in business-to-business relationships is also important in Japan and South Korea. Future research studies could consider using different measures of performance to better understand the consequences of trust. Additional antecedent variables could also be included such as the length of the business relationship. A future conceptual framework could also examine separately the relative importance of the two dimensions (credibility and benevolence) of the construct of trust. Future studies could use different methodological approaches to capture the dynamic perspective of a business-to-business relationship. To give more weight to our generalizations, we also suggest conducting future empirical replications outside the retail sector and in different regions such as Europe and Latin America.

References


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Appendix A. List of items used to measure the constructs of the theoretical framework.

Please circle your response to the following statements concerning the supplier.*

<table>
<thead>
<tr>
<th>Relationships between the supplier and the buyer</th>
<th>Source of scale item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Their physical distribution system is customized for my company.</td>
<td>Doney and Cannon (1997)</td>
</tr>
<tr>
<td>Their production system is customized for my company.</td>
<td>Idem</td>
</tr>
<tr>
<td>They provide my company with confidential information.</td>
<td>Idem</td>
</tr>
<tr>
<td>My company provides them with confidential information.</td>
<td>Idem</td>
</tr>
</tbody>
</table>

*Trust in the supplier (credibility and benevolence)*

<table>
<thead>
<tr>
<th>Relationships between the supplier and the buyer</th>
<th>Source of scale item</th>
</tr>
</thead>
<tbody>
<tr>
<td>They have been forthright in dealing with my company.</td>
<td>Doney and Cannon (1997), Siguaw, Simpson, and Baker (1998)</td>
</tr>
<tr>
<td>Their promises are reliable.</td>
<td>Siguaw, Simpson, and Baker (1998)</td>
</tr>
<tr>
<td>They have made sacrifices for my company in the past.</td>
<td>Idem</td>
</tr>
<tr>
<td>They care about my company.</td>
<td>Idem</td>
</tr>
</tbody>
</table>

Please circle your response to the following statements concerning this salesperson.*

<table>
<thead>
<tr>
<th>Relationships between the salesperson and the buyer</th>
<th>Source of scale item</th>
</tr>
</thead>
<tbody>
<tr>
<td>He/she is very knowledgeable.</td>
<td>Doney and Cannon (1997).</td>
</tr>
<tr>
<td>He/she knows his/her product line very well.</td>
<td>Idem</td>
</tr>
<tr>
<td>He/she is one of this supplier's most important salespeople.</td>
<td>Idem</td>
</tr>
<tr>
<td>He/she has authority within his/her firm.</td>
<td>Idem</td>
</tr>
<tr>
<td>I often meet with him/her for negotiation purposes.</td>
<td>Idem</td>
</tr>
<tr>
<td>We discuss our companies's strategies.</td>
<td>Idem</td>
</tr>
<tr>
<td>I often meet him/her outside the workplace.</td>
<td>Idem</td>
</tr>
<tr>
<td>I have common interests to talk about with him/her outside of work.</td>
<td>Idem</td>
</tr>
</tbody>
</table>

*Trust in the salesperson (credibility and benevolence)*

<table>
<thead>
<tr>
<th>Relationships between the salesperson and the buyer</th>
<th>Source of scale item</th>
</tr>
</thead>
<tbody>
<tr>
<td>He/she has been forthright in dealing with me.</td>
<td>Adapted from measures used for the supplier in Siguaw, Simpson, and Baker (1998).</td>
</tr>
<tr>
<td>Promises he/she makes are reliable.</td>
<td></td>
</tr>
<tr>
<td>He/she has made sacrifices for me in the past.</td>
<td></td>
</tr>
<tr>
<td>He/she cares about me.</td>
<td></td>
</tr>
</tbody>
</table>
How do the following statements describe the performance or results of the product after adoption? Please circle the appropriate answer.*

The performance of the adopted product or brand within the last year
The product increased store traffic. Developed by the authors.
The product accelerated the growth of the product category. Idem
The product achieved a high volume of sales. Idem

Conflicts between the supplier and the retailer
There was a conflict of interests between my company Mohr, Fisher, and Nevin and the supplier up until the time of adoption. (1996).
There was difficult coordination between my company and the supplier up until the time of adoption. Idem

*Degree of agreement on a scale of 1 (Strongly Disagree) to 5 (Strongly Agree).
Appendix B. Mean values and univariate analyses of the constructs of the model with a Cronbach Alpha value of .60 or higher for all three regions.

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Japan 183</th>
<th>North America 80</th>
<th>South Korea 114</th>
<th>Univ. F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationships between the supplier and the buyer</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific investments by the supplier (0.76J, 0.64NA, 0.67SK)</td>
<td>2.10\textsuperscript{a}</td>
<td>2.83\textsuperscript{b}</td>
<td>2.75\textsuperscript{b}</td>
<td>28.87**</td>
</tr>
<tr>
<td>Information sharing (0.76, 0.85, 0.81)</td>
<td>2.26\textsuperscript{a}</td>
<td>2.69\textsuperscript{b}</td>
<td>2.21\textsuperscript{b}</td>
<td>7.87**</td>
</tr>
<tr>
<td>Trust in the supplier: credibility and benevolence (0.77, 0.71, 0.78)</td>
<td>3.47\textsuperscript{a}</td>
<td>3.56\textsuperscript{a}</td>
<td>3.44\textsuperscript{a}</td>
<td>1.08NS</td>
</tr>
<tr>
<td>Relationships between the salesperson and the buyer</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salesperson expertise (0.76, 0.84, 0.77)</td>
<td>3.43\textsuperscript{a}</td>
<td>4.01\textsuperscript{b}</td>
<td>3.38\textsuperscript{a}</td>
<td>26.03**</td>
</tr>
<tr>
<td>Salesperson power (0.72, 0.72, 0.71)</td>
<td>3.20\textsuperscript{a}</td>
<td>3.53\textsuperscript{b}</td>
<td>3.43\textsuperscript{b}</td>
<td>7.20**</td>
</tr>
<tr>
<td>Formal contacts between the salesperson and the buyer (0.66, 0.80, 0.69)</td>
<td>3.01\textsuperscript{a}</td>
<td>3.29\textsuperscript{b}</td>
<td>3.30\textsuperscript{b}</td>
<td>5.88**</td>
</tr>
<tr>
<td>Informal contacts between the salesperson and the buyer (0.77, 0.77, 0.75)</td>
<td>2.09\textsuperscript{a}</td>
<td>2.15\textsuperscript{ab}</td>
<td>2.39\textsuperscript{b}</td>
<td>4.55*</td>
</tr>
<tr>
<td>Trust in the salesperson: credibility and benevolence (0.79, 0.75, 0.78)</td>
<td>3.35\textsuperscript{a}</td>
<td>3.41\textsuperscript{a}</td>
<td>3.31\textsuperscript{a}</td>
<td>0.60NS</td>
</tr>
<tr>
<td>The performance of the adopted product or brand within the last year</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance of the product or brand (0.77, 0.77, 0.74)</td>
<td>3.18\textsuperscript{a}</td>
<td>3.38\textsuperscript{ab}</td>
<td>3.39\textsuperscript{b}</td>
<td>4.86**</td>
</tr>
<tr>
<td>Conflicts</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conflicts between the supplier and the retailer (adoption) (0.89, 0.85, 0.86)</td>
<td>2.24\textsuperscript{a}</td>
<td>2.15\textsuperscript{a}</td>
<td>2.52\textsuperscript{b}</td>
<td>5.38**</td>
</tr>
</tbody>
</table>

J, NA, SK: Cronbach alpha values, respectively for Japan, North America and South Korea. **: Significant at level 0.01; *: significant at level 0.05; NS: nonsignificant. #: The same superscript letter is used when a pair of means is not statistically different according to both the Scheffe and the Bonferroni multiple paired comparison tests.
Appendix C. Examples of calculations of indirect effects.

For Japan, trust in the salesperson is a perfect mediator of the relation between the salesperson expertise and trust in the supplier. When both salesperson's expertise and trust in the salesperson are included as independent variables, salesperson's expertise has no significant effect. The indirect effect of the mediator is: \(0.36 \times 0.56 = 0.20\). See Table 2.

For Japan, trust in the supplier is not a mediator of the relation between specific investments and performance of the new adopted product or brand. See Table 3.

For South Korea, trust in the supplier is a perfect mediator of the relationship between trust in the salesperson and performance. When both trust in the salesperson and trust in the supplier are included as independent variables, trust in the salesperson has no significant effect. The indirect effect of the mediator is: \(0.57 \times 0.25 = 0.14\). See Table 3.