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What Determines Strength of Ties? Organizational Cultures as Key Antecedents

This study examines the effects of organizational culture on the tie strength. We employ a framework comprised of five dimensions related to organizational culture in order to analyzing firms’ cultural characteristics and how their cultures impact tie strength (which may appear as strong or weak ties in the network). The empirical data was gathered through a survey of engineering company suppliers in the context of buyer and supplier relationships. The results of a survey indicate that firms with cultural characteristics such as femininity and long-term orientation are likely to have “strong” ties. Although other cultural dimensions such as uncertainty avoidance, collectivism, and power distance are not supported by our empirical test, they are valuable in analyzing the relationship between a firm’s culture and its network.

It is important for firms to consider the strength of their ties with partners in order to maintain their businesses. Since Granovetter (1973) defined “strength of ties” as a combination of time, mutual trust, emotional intensity, and reciprocal services (which have strong and weak levels), social network theories have received wide attention from a number of researchers. For example, research on structural holes, in which two separate clusters possess non-redundant information, has been actively performed in relation to the theory of tie strength (Burt, 2004). Also, research on social capital (Adler and Kwon, 2002) and network governance (Jones et al. 1997), as well as other studies crucially connected with strength of ties, have been widely discussed.

Beyond concerns with information flow with regard to strength of ties, a myriad of literature has focused on the critical reasons for firms’ varying strength of ties with channel partners. For instance, firms prefer to obtain weak ties in order to obtain new information, rather than achieving strong ties (McEvily and Zaheer 1999). Firms also show a preference for the amount of strength they desire to gain in their ties with partners, or how much strength of ties their partners want to have with others (Wuyts et al. 2004). Furthermore, firms may have different functional ties, such as embedded and arm’s length ties (Uzzi 1996). However, there has been scant research conducted by channel scholars with regard to the antecedent of strength of ties and the characteristics and cultures of firms. Antecedents of tie strength between firms is a significant line of study in business-to-business research, as we analyze a firm’s network by investigating its natural characteristic and culture, rather than its strategic choices (Koen 2005).

However, empirical research on such antecedents in marketing channels is still quite rare. Therefore, it is plausible to extend prior research on strength of ties by analyzing the effects of antecedents.

In this paper, we focus on the relationship between the supplier and manufacturer (buyer). In this network, the supplier or manufacturer may have their own firm-level characteristics that are somewhat different with regard to their product type, strategic decision, and other leadership visions. We propose that the firm-level organizational cultures are antecedent factors, which reveals the culture that drives the operation of the organization or firm (Wuyts and Geyskens 2005).

We investigate five elements of organizational cultures based on Hofstede’s cultural dimensions, as they are closely related to a business-to-business context and have been applied in various studies. For instance, Geletkanycz (1997) used these five elements to conceptualize executive commitment to the status quo. Another new dimension was formed in 2010: indulgence versus restraint, derived from the World Values Survey. However, few researches have accepted this new concept, and scholars continue to use the original five elements as the key factors of organizational cultures. Furthermore, these five existing elements are better able to explain a firm’s characteristics, particularly in the study of network theory. For these reasons, we aim to illustrate a firm’s characteristics using the following five elements: (i) uncertainty avoidance; (ii) collectivism-individualism; (iii) power distance; (iv) femininity; and (v) long-term orientation.

These dimensions are firm-level equivalents of Hofstede’s (2001) national-level dimensions. With regard to organizational cultures, as the antecedents of strength of
ties, we may hypothesize the effect of antecedents on the strength.

**Theoretical Background**

**Organizational Culture**

Since each firm has its own degree of tie strength with other firms, it is essential to contemplate what impacts the strength of such ties. Due to external factors such as type of industry, dependence on contracts or transactions, and period of relationship, firms may have varying strength of ties with others. Although the study of these external causes may be compelling in itself, we focus on more fundamental factors, namely the firm’s organizational culture.

Organizational culture is defined as a significant driving force behind all operating processes of organization or firms (Wuyts and Geyskens 2005). As Mintzberg (1979) upholds this concept, we accept this approach as a means of determining the impact of organizational culture on strength of ties. Understanding firm-level culture is critical as it is a practice and a value that cannot be easily altered. Hofstede (2001) suggests five national-level dimensions of organizational culture. The culture, which is characterized by values of broad tendency of preference, is not restricted to nations, but pertains to any type of organization (Wuyts and Geyskens 2005). The five cultural dimensions utilized in this study (uncertainty avoidance, collectivism, power distance, femininity and long-term orientation) are explained as follows:

First, Wuyts & Geyskens (2005) defines firms’ uncertainty avoidance “as the extent to which the firm feels threatened”. Firms seek to avoid uncertain, ambiguous, or undefined environments in inter-firm relationships (Hofstede 2001). Uncertainty avoidance expresses the degree to which individuals require set boundaries and clear structures: a high uncertainty culture allows individuals to cope better with risk and innovation; a low uncertainty culture emphasizes a higher level of standardization and greater job security (Hofstede 1980).

Second, the high side of this dimension, called individualism, can be defined as a preference for a loosely knit organizational framework in which individuals are expected to take care of themselves and their immediate members only (Hofstede 1980). Its opposite, collectivism, represents a preference for a tightly knit framework in a firm in which individuals can expect their relatives or members of a particular in-group to look after them in exchange for unquestioning loyalty (Hofstede 1980).

Third, power distance expresses the degree to which less powerful members of a firm accept and expect that power will be distributed unequally (Hofstede 1980). The fundamental issue is how a firm handles inequalities among people. Members with low power distance view channel partners as relatively equal with regard to distribution of power. On the other hand, high-power distance firms do not consider their channel partners as equal.

Forth, femininity represents a preference for cooperation, modesty, caring for the weak and quality of life (Hofstede 1980). By contrast, masculinity stands for a firm’s preference for achievement, heroism, assertiveness and material reward for success (Hofstede 1980).

Lastly, long-term orientation refers to a preference for a forward-looking versus historical perspective (Geletkanycz 1994). Firms that have culture of long-term orientation may tend to place the high value on gaining strength in the future, rather than on gaining short-term incentives. The long-term orientation dimension can be interpreted as dealing with a firm’s search for virtue. Long-term oriented societies attach more importance to the future. Firms with a short-term orientation are generally concerned with establishing the absolute Truth. They exhibit great respect for traditions, a relatively small propensity for saving for the future, and a focus on achieving quick results. In firms with a long-term orientation, people believe that truth depends very much on situation, context and time (Hofstede 2001).

**Hypotheses**

**Strength of ties and organizational culture**

As mentioned above, we investigate five elements of organizational culture, conceptualized by Hofstede’s (2001) national-level dimensions, as the antecedents of strength of ties. Some channel literature has already cited these national-level dimensions for firm-level dimensions, because these characteristics and definitions are likely to have similar concepts for firm-level circumstances (Wuyts and Geyskens 2005). Firms vary in their cultural dimensions in areas such as uncertainty avoidance, collectivism, power distance, femininity and long-term orientation.

We focus on the definition of tie strength that is composed of tie intensity and tie valence. Tie intensity consists of intensity itself and the frequency of interaction. This indicates that firms with strong ties may have intensive interaction and frequent transactions. Tie valence consists of the cooperative features of interaction. If firms have strong ties with other channels, they may be more cooperative and reciprocal than firms with weak ties.
Firms vary in their resistance of uncertainty. Firms that are strong in their uncertainty avoidance may need predictability and uniformity (Erramilli 1996). They are likely to prefer formal rules or codification as compared with firms that are low in uncertainty avoidance (Steensma et al. 2000).

Firms that are low in uncertainty avoidance maintain a more relaxed atmosphere and therefore tend to tolerate uncertainty without much discomfort (Hofstede 1980). For these reasons, firms that are strong in uncertainty avoidance may prefer standardization rather than flexibility, whereas firms low in uncertainty avoidance prefer flexibility to value (Erramilli 1996; Hofstede 2001). Because firms that are high in uncertainty avoidance may prefer explicit relationships over flexibility, they are likely to attain intensive and cooperative ties with suppliers.

In the case of manufacturer and supplier relationships, for instance, a manufacturer that is high in uncertainty avoidance may prepare for future uncertainty through a close relationship with suppliers (as they may want to deal with uncertainty in advance). Therefore, firms that are high in uncertainty avoidance prefer to have intensive and cooperative relationships with suppliers in advance. Thus:

H1: Strength of ties will be increased with uncertainty avoidance.

Whereas individualism refers to the extent to which firms emphasize individual goals, collectivism places more value on collective goals when working with partners (Steensma et al. 2000). Collectivist firms prefer a tightly knit social framework in which each firm is able to expect their interfirm relationship to treat them in exchange for loyalty (Hořámský 1980). Also, collectivist firms define their identity as “we” instead of “I”, and prefer to obtain intensive and cooperative ties, as opposed to individualist firms. For example, when collectivist firms try to maintain business with partners, they are likely to prefer targeting joint goals and common interest, rather than individualistic goals.

In addition, scholars have found that collectivist firms are generally more cooperative and therefore enjoy working together, care about business partners, and perform better in close cooperation (Hofstede 2001). Wager (1995) argues that more collectivist firms are more likely to have cooperative partnerships. For these reasons, collectivist firms prefer to attain intensive and cooperative ties. Thus:

H2: Strength of ties will be increased with collectivism.

In high power distance cultures, hierarchical structures and centralized decision making are the norm, partially because they help preserve the existing social order and its related distribution of power (Hofstede 1980). Therefore, they may not prefer relationships characterized by cooperative decision making because class divisions typify these organizational cultures, leading to the concentration of power and authority among groups (Hofstede 1980).

In contrast, firms that are low in power distance view channel partners as equal and engage in informal communication between entities at different hierarchical levels (Hofstede 1980). Because firms with low power distance are based on shared values or a sense of duty or obligation to

FIGURE 1
Model of the Antecedent of Strength of Tie: Five Elements of Organizational Cultures
others, low-power-distance firms tend to obtain close ties with partners (Wuyts and Geyskens 2005). For these reasons, firms with low power distance are likely to prefer intensive and cooperative ties, as opposed to high-power-distance firms that may not prefer reaching close ties. Thus:

H3: There is a negative relationship between power distance and the strength of ties.

Since firms with femininity have a preference for relationships, modesty, and caring for the weak, it is conceivable they may be more relationship-oriented than firms that emphasize masculinity (Hofstede 1980). According to Hofstede (1980), masculinity, contrary to femininity, strives for achievement, heroism, assertiveness, and material success.

In the case of masculinity, firms may not have much concern for relationships with channel partners, though they may have a desire to surpass other channel partners to strengthen their competitive advantage. For these reasons, firms with masculine characteristics may miss opportunities to gain close ties with channel partners. Tie strength between the supplier and manufacturer is affected by these cultural characteristics. Therefore, we argue that firms with high femininity are likely to prefer intensive and cooperative ties. Thus:

H4: Strength of ties will be increased with femininity.

It is plausible that firms with long-term orientation may emphasize relationships with channel members, since they tend to seek out human virtue and avoid short-term goals (Hofstede 2001). As outlined above, firms with long-term orientation are likely to have a longer relationship life cycle than those with short-term orientation. This tendency is closely linked with firms’ likelihood of having strength of ties. Firms with a culture of long-term orientation are likely to prefer intensive and cooperative ties more than firms with short-term orientation. Thus:

H5: Strength of ties will be increased with long-term orientation.

Method

Research Context
As discussed previously, the focus of this report is to demonstrate the effect of organizational cultures (conceptualized as uncertainty avoidance, collectivism, power distance, femininity, and long-term orientation) on strength of ties. In order to examine this effect, the suppliers were asked about their perceptions of their organizational cultures in the five different dimensions and the strength of ties in their networks.

The research context for this study is the network between supplier and buyers. The research target was suppliers of large Korean engineering companies (plant manufacturing companies). Thus, we expect that each supplier has its own cultural dimensions and characteristics that are likely to impact on the strength of ties between those suppliers and their buyers (engineering companies) or other suppliers.

The research was conducted through a mail survey distributed to the first suppliers of engineering companies. Contact information of the suppliers’ was obtained from engineering companies with the cooperation of their managers.

Whenever possible, we attempted to use multi-item measures that were developed and studied in extant studies. However, to enhance the respondents’ understanding of items questioned (and if necessary), the original questions established in previous studies were modified. After modifying the items, the questions were sent to some buyers to ensure that all issues and items were fully understood. The procedures were revised several times, and items were finalized.

The questionnaires were sent by mail, together with a cover letter explaining the purpose of the survey, to 500 companies; 154 (31%) companies returned the questionnaires. Among these, 6 questionnaires were eliminated due to an excessive number of missing answers. Therefore 148 samples were used for the analysis.

Measure Development

Uncertainty avoidance. As defined above, the measurement for uncertainty avoidance is adapted from the research of Wuyts & Geyskens (2005), and determines the extent to which firms strive to avoid uncertain and ambiguous circumstances in their networks.

Individualism – Collectivism. Like other dimensions of organizational cultures, collectivism is measured based on the scales of Wuyts & Geyskens (2005), determining the firm’s intrinsic belief in cooperation and the notion that firms in the network are collectively responsible for successes and failures.

Power distance. This term is defined as the degree to which less powerful members of a firm accept and expect that power be distributed unequally (Hofstede 1980). From this definition, we use the items of Wuyts & Geyskens (2005) that reflect the firm’s opinion that more powerful channel members should have more to say in their ties than their less powerful partners. The higher the firm’s response score, the more they think that class division is natural, and therefore may not prefer relationships characterized by cooperative decision making.

Femininity. As previously discussed, the femininity dimension represents a preference for cooperative relationships. Based on the definition of femininity, we expect that the concept of cooperation is properly matched with femininity. Cannon & Perreault (1999) describes cooperation as a will ingress to help each other and a preference to work together to achieve success.
FIGURE 2
The Result of Confirmatory Factor Analysis

- Uncertainty Avoidance
  - Uncertainty Avoidance 1
  - Uncertainty Avoidance 2
  - Uncertainty Avoidance 3

- Collectivism
  - Collectivism 1
  - Collectivism 2
  - Collectivism 3

- Power Distance
  - Power Distance 1
  - Power Distance 3

- Femininity
  - Femininity 1
  - Femininity 2
  - Femininity 3
  - Femininity 4

- Long-term Orientation
  - Long-term Orientation 1
  - Long-term Orientation 2
  - Long-term Orientation 3
  - Long-term Orientation 5
  - Long-term Orientation 6

- Strength of Ties
  - Strength of ties 1
  - Strength of ties 2
  - Strength of ties 3
  - Strength of ties 4
Long-term orientation. Lusch & Brown (1996) illustrate firms with long-term orientation through the use of several scales. It is plausible that such firms expect their relationships to continue for a long time. The suppliers were asked questions seeking to understand not only their relationships with their buyers, but also their suppliers (second suppliers of the network).

Strength of tie. In order to analyze how strong or weak a tie is, we use Levin & Cross’s (2004) four items of tie strength. These items incorporate the firm’s awareness of its tendency toward a preference for close relationships with channel partners or frequent communication. This construct is well-matched with the definition of tie strength, as discussed above.

Measurement
The six constructs of the current study are uncertainty avoidance, collectivism, power distance, femininity, long-term orientation, and strength of ties. All items used a sev-

<table>
<thead>
<tr>
<th>Construct, Items</th>
<th>AVE</th>
<th>CR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uncertainty Avoidance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Uncertain situations in our supply chain are a threat to our firm</td>
<td>.94</td>
<td>.98</td>
</tr>
<tr>
<td>* Our firm goes to great lengths to avoid uncertain situations in our supply chain</td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Our firm goes to great lengths to avoid unclear and ambiguous situations in our supply chain</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collectivism</td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Firms and their suppliers are always jointly responsible for the successes and failure of their working relationships</td>
<td>.72</td>
<td>.88</td>
</tr>
<tr>
<td>* Our firm considers it normal when firms in the supply chain seek to cooperate as much as possible</td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Close cooperation with other firms in our supply chain is preferred over working independently</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power distance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Firms in the supply chain that are in a powerful position should have more to say in their relationship than their partners</td>
<td>.88</td>
<td>.92</td>
</tr>
<tr>
<td>* In a supply chain, it is logical that firms in powerful positions have the last word</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Femininity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Our firm and the partner are willing to cooperate.</td>
<td>.67</td>
<td>.89</td>
</tr>
<tr>
<td>* Our firm and the partner work together to be successful.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Our firm and the partner try to accept each other’s opinions in our decision making.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Our firm and the partner search for new opportunities to work together.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long-term orientation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Our long-term relationship with this supplier is important a</td>
<td>.65</td>
<td>.90</td>
</tr>
<tr>
<td>* Our relationship with this supplier is enduring a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>* We expect our relationship with this supplier to continue for a long time a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Our long-term relationship with this supplier is important b</td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Our relationship with this supplier is enduring b</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strong of tie</td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Our firm has a very close working relationship with partners of this supplier</td>
<td>.58</td>
<td>.84</td>
</tr>
<tr>
<td>* Our firm frequently communicates with partners of this supplier</td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Our firm has enough interaction with partners of this supplier</td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Our firm frequently meets partners of this supplier</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* a : Networks with their suppliers
b : the networks with their buyers
en-point, Likert-type scale anchored by 1 = "strongly disagree" and 7 = "strongly agree".

In order to validate and purify the measures, a confirmatory factor analysis (CFA) model was used to assess construct validity (e.g. Grewal et al., 2010). The model fit was as follows: \( \chi^2 = 389.6; \) d.f. = 170; p-value = .00; Incremental fix index [IFI] = .935; Goodness fix index [GFI] = .802; Comparative Fix Index [CFI] = .934, Root Mean square Residual [RMR] = .058; Root Mean Square Error of Approximation [RMSEA] = .029. The value of GFI is slightly lower than .9; however CFI is higher than .9. Therefore, overall these values suggest that the measurement model is reasonably well-fitted.

FIGURE 2 presents the final relationship model of confirmatory factor analysis. By analyzing the validity of each (e.g. construct validity and average variance extracted), we eliminated several factors such as power distance 2, long-term orientation 4, 7, and 8. These factors significantly damage the validity, although the reliability of each construct is satisfied (Cronbach’s \( \alpha \geq .8 \)). In order to enhance the validity, we elaborate the model by excluding those items.

TABLE 1 shows each construct, as well as items, AVE value and factor loading. All factor loadings are above 0.7(p<0.01), providing convergent validity for each construct. For convergent validity, the average variance extracted (AVE) was calculated in addition to factor loadings.

According to TABLE 1, convergent validity is satisfied in the model since each item of convergent validity is higher than 0.7 and all average variances extracted are greater than 0.5.

The measurement of construct intercorrelation reveals that power distance does not have an intercorrelation rela-

<table>
<thead>
<tr>
<th>TABLE 2</th>
<th>Construct Intercorrelation</th>
</tr>
</thead>
<tbody>
<tr>
<td>UA</td>
<td>CO</td>
</tr>
<tr>
<td>Uncertainty Avoidance (UA)</td>
<td>1.0</td>
</tr>
<tr>
<td>Collectivism (CO)</td>
<td>.51**</td>
</tr>
<tr>
<td>Power distance (PD)</td>
<td>-.04</td>
</tr>
<tr>
<td>Femininity (FE)</td>
<td>.70**</td>
</tr>
<tr>
<td>Long-term orientation (LTO)</td>
<td>.62**</td>
</tr>
<tr>
<td>Strength of tie (SOT)</td>
<td>.63**</td>
</tr>
</tbody>
</table>

*\( p<0.1 \)

**\( p<0.05 \)

<table>
<thead>
<tr>
<th>TABLE 3</th>
<th>Interconstruct Correlations and Square Root</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interconstruct</td>
<td>R</td>
</tr>
<tr>
<td>UA ↔ CO</td>
<td>.51</td>
</tr>
<tr>
<td>UA ↔ PD</td>
<td>-.04</td>
</tr>
<tr>
<td>UA ↔ FE</td>
<td>.70</td>
</tr>
<tr>
<td>UA ↔ LTO</td>
<td>.62</td>
</tr>
<tr>
<td>UA ↔ SOT</td>
<td>.63</td>
</tr>
<tr>
<td>CO ↔ PD</td>
<td>-.04</td>
</tr>
<tr>
<td>CO ↔ FE</td>
<td>.54</td>
</tr>
<tr>
<td>CO ↔ LTO</td>
<td>.42</td>
</tr>
<tr>
<td>CO ↔ SOT</td>
<td>.39</td>
</tr>
<tr>
<td>PD ↔ FE</td>
<td>-.11</td>
</tr>
<tr>
<td>PD ↔ LTO</td>
<td>-.17</td>
</tr>
<tr>
<td>PD ↔ SOT</td>
<td>-.12</td>
</tr>
<tr>
<td>FE ↔ LTO</td>
<td>.67</td>
</tr>
<tr>
<td>FE ↔ SOT</td>
<td>.80</td>
</tr>
<tr>
<td>LTO ↔ SOT</td>
<td>.71</td>
</tr>
</tbody>
</table>
tion, the items of femininity and long-term orientation also demonstrate no intercorrelation. These results are illustrated in TABLE 2.

The AVE values of each construct ranged from .58 ~ .94, exceeding the minimum threshold of .50. All values meet the standard representing convergent validity of each construct.

Based on correlation, and following Fornell and Larcker's (1981) procedure, the square root of the extracted interconstruct correlations and average variance were compared for discriminant validity. The results range between .00 and .80. The highest square root (.80) is smaller than the lowest AVE (AVE_{strength-of-tie} = .58); therefore, discriminant validity is also satisfied. The results are shown in TABLE 3.

**Data Analysis and Results**

Statistically, the current research hypotheses investigate the effects of five variables (i.e. uncertainty avoidance, collectivism, power distance, femininity, and long-term orientation) on the perceived strength of ties. In order to test the hypotheses, structural equation modeling (SEM) was used.

As the results show in TABLE 4, among five independent variables only two constructs (e.g. femininity and long-term orientation) significantly affect the strength of ties (p<.001). We discuss this further in the general discussion section.

**Discussion**

Our analysis provides important contributions to this field. First, our research explores organizational cultures as the antecedents of tie strength. Scant existing literature applies the organizational cultures of each firm in the network between buyer and supplier in order to analyze the strength of ties. Although it is empirically proven that among five cultural dimensions only femininity and long-term orientation tendency are likely to affect tie strength positively.

More specifically, firms with femininity are likely to prefer intensive and cooperative ties, as firms with characteristics such as cooperative ability and concern for the weak are more relationship-oriented. This tendency to prefer relationships allows the firm to gain stronger ties with channel members; thus the characteristic of femininity increases strength of ties, as compared with masculinity. Also, long-term oriented firms, as compared with those of short-term orientation, pursue long-term goals, resulting in stable relationships with partners. Hofstede (2001) argues that long-term oriented societies attribute more importance to the future. This is closely connected with the likelihood of a firm having strong ties. As our results support this empirically, we can deduce that firms with a culture of long-term orientation are likely to promote intensive and cooperative networks.

Second, our research enhances understanding of the cultural characteristics of buyers and suppliers in the context of business-to-business relationships. The organizational cultures incorporate five dimensions, each of which was analyzed in order to demonstrate how firms take particular positions and make decisions based on their particular cultural aspects. The data used entails a supplier’s evaluation of five of its dimensional cultures, which reveals its level of uncertainty avoidance, tendency toward collectivism or individualism, its awareness of power distance, its femininity or masculinity, and its preference for long- or short-term relationships. These cultural characteristics allow us to compare these results with other firms in similar cultural contexts. Furthermore, managers or CEOs of other firms in the channel network can analyze the firm’s cultures as key factors in their strategic approach. We will discuss this further in the managerial implication section.

This study explores the strength of ties, which can prove extremely important to firms and other partners as it demonstrates the attributes of the channel network. The results suggest that strength of ties in a network can be increased (or possibly decreased) by cultural differences. Our empirical findings indicate that firms with feminine, cooperative cultures and a preference for long-term goals and relationships are generally likely to have strong ties. Therefore, regardless of the firm’s business type or industrial category, its cultural characteristics can impact its strength of ties.

Among our five hypotheses, three are unsupported by our empirical research. Firstly, uncertainty avoidance of organizational cultures may not crucially affect strength of ties in some circumstances. For example, firms with a high tendency to avoid uncertainty may consider strong ties with channel members not only as a means of reducing risk, but also a factor that can increase uncertainty. It is plausible that if firms are damaged by a channel member with a

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Hypotheses</th>
<th>Estimates</th>
<th>p-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main Effects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uncertainty Avoidance</td>
<td>H1</td>
<td>.038</td>
<td>.561</td>
</tr>
<tr>
<td>Collectivism</td>
<td>H2</td>
<td>-.018</td>
<td>.748</td>
</tr>
<tr>
<td>Power Distance</td>
<td>H3</td>
<td>-.037</td>
<td>.238</td>
</tr>
<tr>
<td>Femininity</td>
<td>H4</td>
<td>.652***</td>
<td>.000</td>
</tr>
<tr>
<td>Long-term Orientation</td>
<td>H5</td>
<td>.221***</td>
<td>.001</td>
</tr>
</tbody>
</table>

TABLE 4

Regression Results for Organizational Cultures on the strength of tie
strong tie, the firm’s risk may be greater than it would be in a relationship with a weaker tie. Second, although firms tend toward collectivism, this may not significantly impact on the tie strength. The characteristic of high or low power distance cultures may also have little impact on the strength of ties. Based on our hypotheses, these results are somewhat difficult to understand; however, there may be other limitations or strategic choices made by the firm that are more significant than the firm’s cultural dimensions (and therefore these three may not support our hypotheses).

However, as the hypotheses and two empirically supported dimensions illustrate the relationship between organizational cultures and strength of ties, it is important to focus on the firm’s cultures as antecedents of tie strength.

**Limitation and Future Research**

This study focuses on only one dimension of a network – namely, strength of ties. However, other network dimensions, such as network embeddedness (Uzzi 1996), may also have considerable effect on types of network ties. Whether it is derived naturally or through strategy, channel members have either strong or weak tie strength. We sought to reveal the natural cultures of firms, which can broadly influence the network.

Although firms in a network have other relational antecedent factors of tie strength, we did not empirically measure them. We developed our hypotheses on the assumption that organizational cultures are most efficiently explained by a firm’s characteristics. Therefore, as we will review shortly in the discussion section, other factors can affect firms’ network ties more significantly.

It is possible that this study will allow us to extend current research not only to finding other antecedent factors, but also in determining the strategic choices of managers or CEOs. For instance, conflicts may exist between the firm’s cultures and the strategic choices of the network. Therefore, we can further develop this study by analyzing the basis of organizational cultures. Determining the principle roots of a firm’s culture, such as its managerial personality, may indicate more fundamental motivations.

**Managerial Implications**

Firms planning to engage in business relationships through a variety of networks should recognize that the nature of other firms’ cultural dimensions varies in many ways. The strength of network ties is always a critical issue in decision making and positioning with regard to other members. Therefore, firms should analyze the organizational culture of each member in their network in order to determine the strength of their ties.

The first implication of our study is that managers and other decision makers should understand the cultures of other members as well as their own. A manager who understands that their firm’s culture is cooperative and tends to pursue long-term goals should focus on developing stronger network ties. In this case, managers should concentrate not only on cultural factors, but also strategic positions. An important contribution of our study is its consideration of the cultures that allow managers to take a broader view of the firms within their networks. Thus, revealing the antecedent cultural factors of a firm can reduce its risk within a network.

Although three of the dimensions in our hypotheses are not supported by the empirical data, their consideration does have value. As predicted in the hypotheses, high-uncertainty avoidance may impact upon the environment of the firm. Other cultural dimensions, such as collectivism and power distance, are also significant variables that influence networks. Managers within supplier firms should be aware that the cultures of their firms are reasonably related to the strength of their ties. Other firms within the channel should take into consideration the target firm’s characteristics.

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