The Influence of Culture on Industrial Buying Selection Criteria in Taiwan and Mainland China

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This study investigated the effects of culture on two industrial vendor selection criteria, price and delivery schedule. Hofstede's dimensions and Chinese Culture Connection's Chinese value survey (CVS), two instruments based on different constructs, were used together to represent the cultural characteristics of industrial buyers from Taiwan and Mainland China. The findings indicated that the CVS was more suitable for detecting cultural differences between these two areas and that masculinity, integration, and moral discipline had significant effects on price awards.

INTRODUCTION

The influence of culture on marketing has been the subject of previous studies [7, 16, 19]. In the Herbig and Kramer [14] study, different cultural systems produced divergent negotiating styles—styles shaped by each nation's culture, geography, history, and political system. Previous studies [3, 12, 13, 24, 28] indicated that personal psychological factors like risk and the need for certainty by industrial buyers affected buying decisions. Perceived personal consequences and expectation of reward also had significant effects on organizational buying [2, 18, 20, 21]. Because the industrial buying process was influenced by a variety of interpersonal, organizational, and environmental factors [1, 12, 18, 23], social influences such as culture might be important in determining buying behavior. Chang and Ding [4] investigated the influence of national character
National character and Chinese value survey are used to represent the cultural characteristics of industrial buyers.

on selection criteria in industrial buying. However, comparative research of the influence of culture on industrial buying between different countries (areas) is not seen in the literature. The purpose of this study is to compare this type of influence between Taiwan and Mainland China (P.R.C.). Both of these areas are influenced by Chinese culture, but their societies have been separated and developing independently since 1949. Their living environments and philosophies are very different because of their dissimilar political and economic systems. It then becomes interesting to investigate the present cultural differences and compare the effects of culture on industrial buying behavior.

The PRC has executed her self-developed economic system since 1979 and established four special economic zones for foreign investment. The implementation of this new policy has led to a significant economic growth. The trade was up to $104 billion U.S. import payments and $196 billion U.S. export proceeds in 1993. Industrial products are growing significantly both on export and import [5]. We believe that the potential industrial market in the PRC will be extremely attractive. On the other hand, Taiwan created $88 billion U.S. foreign exchange export proceeds and $74 billion U.S. import payments in 1993 [9]. Her electronic products and electronic parts and components have already taken an important position in the world. Both of two areas are apparently major markets for industrial products.

Although people in Taiwan and Mainland China use the same language, they sometimes use the same expression with different connotations. For example, people in Mainland China say "no problem" frequently. This actually means there is a bit of a problem, but it is not too serious. However, when they say "there is a little bit of a problem," this implies that a task will not be completed at all unless special action is taken. To people in Taiwan, on the other hand, "no problem" means there really is no problem, and "there is a bit of a problem" means just that—there is a small, relatively insignificant problem. This difference in usage disturbs Taiwanese people as much as non-Chinese when negotiating business with mainlanders. The separation of Taiwan and Mainland China provides us an opportunity to better understand the effects of culture on industrial buying behavior and perhaps the degree to which this behavior reflects various cultural elements. In this study, Hofstede's [15] dimensions for national character and Chinese Culture Connection's [6] Chinese value survey (CVS) are used to represent the cultural characteristics of industrial buyers. The differences of each of the cultural attributes of industrial buyers between the two areas will be examined. Particular attention will be given to a comparison of influence of culture on vendor selection criteria between the two areas.

INSTRUMENTS FOR MEASURING CULTURAL CHARACTERISTICS: NATIONAL CHARACTER AND CHINESE VALUE SURVEY

Economically and legally, Taiwan has developed more or less according to the Western model of a free-market state, while retaining traditional Chinese values. On the other hand, Mainland China has long been socialist, but processes inherent in its economic development and industrialization are leading to more universal attitudes, values, and beliefs [22]. Because we are dealing here with a mix of Chinese and Western cultures and capitalistic and socialist economies, it may be appropriate to use two instru-
The differences of integration and Confucian work dynamism between Chinese and Taiwanese industrial buyers are significant.

ments, national character and the CVS, to measure the cultural characteristics of industrial buyers in Taiwan and Mainland China. One of these instruments was developed by using Western constructs, and the other was developed to reflect Chinese values.

Clark [7] suggested that the study of culture could be undertaken by two approaches, a culture-centered approach and a personality-centered approach. The first approach employs data about collective behavior, such as wealth distribution, the divorce rate, or average hours spent watching television. The second approach surveys a representative random sample of individuals and identifies their patterns of values and beliefs. This type of research provides us with dimensions of culture with which we can develop hypotheses about a specific industrial buying decision such as vendor selection. Employing this approach, Hofstede [15] empirically obtained four dimensions of national character: power distance, individualism-collectivism, masculinity-femininity, and uncertainty avoidance.

Power distance refers to the less powerful members of organizations accepting and expecting an unequal distribution of power. Most industrial buying involves large volume purchases and many prospective suppliers. Industrial buyers are therefore in a more powerful situation than suppliers. Power distance may affect buying decisions for people in a society that always requires the use of hierarchic authority to carry out a task. For example, the people in Mainland China are used to getting approval from above for business affairs. They may be inclined to be more strict during negotiation with a relatively smaller company.

Individualism versus collectivism refers to the degree to which individuals are integrated into groups. As industrial buyers, persons with a high degree of individualism do not think they have to consider the opinions of others when they make a decision. Individuals with a high degree of collectivism are inclined to listen to others' opinions and take interpersonal relationships into account when making buying decisions. The strictness with which selection criteria are applied may be adjusted based on whether the buyer favors individualism or collectivism. The people in Mainland China like to deal with business after they are familiar with you. Their buying decision may be affected by the interpersonal relationship. This is quite different from the rule of “business is business” followed by Western people.

The dimension of masculinity versus femininity deals with sex roles. The common pattern for men is assertiveness, aggressiveness, self-reliance, and competitiveness. Common female traits are modesty, humility, nurturing, and responsibility. High masculinity buyers are more concerned about personal achievement. They may make adjustments to purchase requirements when taking personal consequences into account. Low masculinity buyers have a stronger sense of responsibility, so they are more concerned about executing the original purchase requirements precisely. Male purchasing managers are thought to be more likely to adjust the purchasing requirements than female managers during negotiation.

Uncertainty about the future is something with which people in all cultures must cope. Tolerance for uncertainty varies considerably among people in different culture systems. As industrial buyers, individuals with high uncertainty avoidance tend to be more resistant to modifying purchase requirements. Individuals with low uncertainty avoidance tend to be more flexible and confident in negotiating purchase requirements. People may have more uncertainty avoidance tendency under unstable policy and society. Selection criteria might then be strictly fixed to avoid the risk.

Hofstede's dimensions are richly suggestive of psychological processes. However, his work was based solely on evaluative instruments developed in the West and may be
An industrial buyer's masculinity characteristic positively affects price award.

culturally limited. In responding to this concern, Chinese Culture Connection [6] developed an instrument called the Chinese value survey. In their study of 22 countries, they identified four dimensions within the CVS instrument. These dimensions are: integration, which concerns integrative social stability; Confucian work dynamism, which reflects the Confucian work ethic; human heartedness, which deals with gentleness and compassion; and moral discipline, which concerns moral restraint. Although the CVS was developed solely as a measure of the basic values held by Chinese people, it has proved to be valuable in identifying significant differences in values among managers in the United States, P.R.C., and Hong Kong [25].

The integration dimension focuses on integrative social stability. Stability in the context of the CVS means not emphasizing competition but maintaining harmony with oneself, one's family, and other associates. This dimension reflects buyer's attitudes when working with others in their organization. Individuals with high integration would be more cooperative with their colleagues and not insist on their own opinions during decision-making. It is suspected that higher integration would lead to the flexibility of selection criteria.

Confucian work dynamism can be positively characterized by ordering relationships, thrift, persistence, and having a sense of shame, which stresses social hierarchy and personal virtue, and negatively characterized by reciprocation, personal steadiness, protecting one's face, and respect for tradition, which advocated checks and distractions at the personal, interpersonal, and social levels. High scores in this dimension imply that individuals are more responsive to obligations of duty and receptive to orders from superiors. Therefore, buyers with a high tendency toward Confucian work dynamism would consider the firm before personal advantage when making buying decisions. For example, buyers strongly influenced by Confucian teachings might insist on corporate profits and not change the predetermined levels of selection criteria during negotiating industrial buying.

Human heartedness deals with a person's social awareness and can be characterized by a felt need to be kind and courteous to others. Three positively loaded values (kindness, patience, and courtesy) suggest gentleness and compassion; two negatively loaded values are patriotism and sense of righteousness. This dimension may be viewed as a contrast between being more business-oriented or being more relationship-oriented when making buying decisions. It is suspected that industrial buyers with more human heartedness might be more flexible to selection criteria.

Moral discipline focuses on personal control. Three positively loaded values (moderation, keeping oneself disinterested and pure, and having few desires) reflect moral restraint, which contrasts with negatively loaded values (adaptability and prudence) reflecting a tendency toward flexibility. This dimension relates to whether one would adapt buying decisions according to personal considerations and expectations. Traditional Chinese education required that people have few desires and that self-control be obeyed. The group benefits should be placed ahead of personal benefits for organizational survival and success. Strong moral discipline could limit the buyers' flexibility during negotiation.

The CVS dimensions were compared with Western-based survey measures [6]. Three CVS dimensions showed a high level of correlation with three of Hofstede's four dimensions. Hofstede's individualism and power distance were significantly correlated with integration and moral discipline. Also a significant relationship existed between Hofstede's masculinity and human heartedness. Hofstede's uncertainty avoidance, which could be used to measure risk aversion, did not significantly correlate with the dimensions of the CVS. Confucian work dynamism is a truly Asian-oriented factor and is unrelated to any of Hofstede's dimensions. Because using either of these instruments alone may lose some important cultural characteristics of industrial buyers, both of them should be considered.

VENDOR SELECTION CRITERIA: PRICE AND DELIVERY SCHEDULE

When selecting suppliers, the industrial purchaser based his decision on various decision variables, which could be
Observing buyers' cultural characteristics helps in planning a suitable price strategy.

divided into two groups: supplier characteristics (such as reputation and size) and bid characteristics (such as price and quality) [11]. Purchasers placed varying degrees of importance on these variables, depending upon the purchasing situation [3, 17]. Dickson [8] evaluated quality and delivery schedule as being of extreme importance and price as being of considerable importance among 23 selection criteria. Giunipero, Crittenden, and Crittenden [10] found that buyers tended to select suppliers based on three major criteria: quality, price, and delivery. Weber, Current, and Benton [27] reviewed and classified 74 related articles since 1966 and ranked price (61 articles), delivery (44 articles), and quality (40 articles) as the three most important variables. Because quality levels are strictly fixed by most electronics, computer, and telecommunication manufacturers, from which we are going to collect data for analysis, we chose price and delivery schedule as our only vendor selection criteria.

RESEARCH METHODS

The data were collected through mail questionnaires. A hypothetical procurement task (see Appendix A) was designed and subjects were asked to indicate the price and delivery schedule they would be willing to accept under a specific set of purchase conditions. The dimensions of national character were measured by having subjects answer four purchase-related questions (see Appendix B) adapted from the questionnaires on individual modernity by Yang and Cheng [29]. The subjects' responses to question 1, 2, 3, and 4 reflected the degree of power distance, uncertainty avoidance, individualism-collectivism, and masculinity-femininity, respectively. In addition, the CVS, including 40 items [6], was also used to identify values indigenous to the Chinese culture. Each item was measured on a nine-point Likert scale that ranged from extreme importance (9) to no importance (1). Four dimensions described previously were identified from 35 items. Items that were negatively weighted in the factor model were reversed before averaging. The scores of four dimensions were obtained by calculating the means of their corresponding items. The questionnaires, after successful pretest, were mailed to personnel of purchasing departments of 40 electronics, computer, and telecommunications companies (representing high-tech industries) in four cities in Mainland China: Gangzhou, Fuzhou, Hangzhou, and Shenyang. These cities are chosen because all of them are largely supported by vast capital investment from overseas Chinese and have economic development and industrialization achievements. Thirty of Taiwan's electronics, computer, and telecommunication companies selected from Taiwan's top 1,000 enterprises, as listed in the June 1994 issue of CommonWealth magazine, were also surveyed. A total of 200 questionnaires were mailed, and 72 usable responses were obtained. The response rates from Mainland China and Taiwan were 33% (46 out of 140) and 43% (26 out of 60), respectively.

Two multivariate multiple regression models were used to compare the influence of culture on industrial buying selection criteria between Taiwan and Mainland China. The response variables included price and delivery schedule. The independent variables included four dimensions of national character (or the CVS), a dummy variable representing the two areas, and their interaction terms. The backward elimination procedure with the multivariate F-test was used to determine an appropriate final model. In addition, the t-test was used to detect the differences between Taiwan and Mainland China on the dimensions of national character and the Chinese value survey.

RESULTS

The dummy variable (area) and the interaction terms were not retained in the final regression models. This meant the relationship between national character (or the CVS) and selection criteria was not affected by the area factor. It was further determined that the masculinity dimension of national character and the integration and moral discipline dimensions of the CVS should be retained in the final regression models for price selection criterion. The corresponding parameter estimates and P-values are reported in Table 281.
Integration has a positive effect on price award, but moral discipline has a negative effect.

1. The CVS has a better fit ($R^2 = 0.3106$) than national character ($R^2 = 0.0888$) in explaining the variation in price. It was also found that neither national character nor CVS would have influence on delivery schedule. Delivery schedule is essential for production process in manufacturing company. It may be related to other variables such as demographic background instead of cultural characteristics. The final results imply the following points:

1. In Taiwan and in Mainland China, an industrial buyer's masculinity characteristic positively affects the manner in which price-based awards are made.
2. In Taiwan and in Mainland China, the integration and moral discipline dimensions affect price-base awards. Integration has a positive effect, but moral discipline has a negative effect.
3. There is no significant difference in national character between Chinese and Taiwanese industrial buyers. However, the dimensions of integration and Confucian work dynamism of the CVS show significant differences (see Tables 2 and 3).

**MANAGERIAL IMPLICATIONS**

The results of our study present several notable points. Industrial buyers in Mainland China and Taiwan show a nonsignificant difference in culture as measured by Hofstede's dimensions, but a significant difference in the integration and Confucian work dynamism dimensions measured by the CVS. Because the societies of Mainland China and Taiwan are separated and have been developing independently under different economic and political systems for more than 40 years, people from these two areas are likely to have some differences in culture. We suggest that the CVS is a better instrument for detecting the cultural differences between Mainland China and Taiwan. Integration score of Taiwan industrial buyers are significantly higher than those of buyers from Mainland China (Table 2). The reason is that social stability was disrupted by the Mainland China Cultural Revolution in the 1960s. This historical event affected working attitude to cooperate with others in the organization. In addition, industrial buyers from Taiwan have higher scores in Confucian work dynamism than industrial buyers from Mainland China. Individuals with higher scores in this dimension are more responsive to obligations of duty and more receptive to orders from superiors. The Cultural Revolution in Mainland China denounced the philosophy of Confucius stressing social hierarchy and personal virtue. In contrast, people in Taiwan are still keeping the philosophy of Confucius and traditional Chinese culture. Due to the effects of lower integration and Confucian work dynamism scores, the U.S. company should have patience in cooperation with the P.R.C. company and provide more training for locally hired employees to strengthen their responsibility and loyalty. Integration and Confucian work dynamism were also found highly correlated with gross national product and average gross national growth, respectively [6]. The cultural differ-

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<th>TABLE 1</th>
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<td><strong>The Effects of the Chinese Value Survey and National Character on the Price Selection Criterion</strong></td>
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<th>Regression Coefficient</th>
<th>P Value</th>
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<tr>
<td>Chinese value survey</td>
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<tr>
<td>Integration</td>
<td>10.280</td>
</tr>
<tr>
<td>Moral discipline</td>
<td>-10.548</td>
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<tr>
<td>National character</td>
<td></td>
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<tr>
<td>Masculinity</td>
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<th>TABLE 2</th>
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<td><strong>t-Test Comparisons of Differences (Mainland China–Taiwan) on Integration and Confucian Work Dynamism of Chinese Value Survey</strong></td>
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<tr>
<th>t Value</th>
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<tbody>
<tr>
<td>Integration</td>
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</tr>
<tr>
<td>Confucian work dynamism</td>
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Spending money in private relationships is useless for setting a higher price award.

TABLE 3
Mean Scores and Standard Deviations on Integration and Confucian Work Dynamism of Chinese Value Survey

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<th>Integration</th>
<th>Confucian Work Dynamism</th>
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<tbody>
<tr>
<td>Taiwan</td>
<td>5.42</td>
<td>5.65</td>
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<tr>
<td></td>
<td>(0.58)</td>
<td>(0.55)</td>
</tr>
<tr>
<td>Mainland China</td>
<td>5.04</td>
<td>5.23</td>
</tr>
<tr>
<td></td>
<td>(0.49)</td>
<td>(0.68)</td>
</tr>
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ence in these two dimensions may be part of factors resulting in the different economic growth between two areas.

Power distance does not affect any of the selection criteria of price and delivery schedule. Industrial consumer, as compared with personal consumers, are more familiar with product characteristics, supplier conditions, and market situations. Therefore, larger companies are not necessarily in a dominant position when negotiating with Chinese industrial buyers. Nor does uncertainty avoidance affect selection criteria. This implies that the U.S. salespersons should not hesitate to negotiate with newly contacted buyers about purchase requirements if they have qualified products (UL, JIS, or ISO certificate etc.).

It is strange to find that individualism-collectivism has no effect on selection criteria. In a sense, it is thought that Chinese are more likely to do business with friends. People in Mainland China always hesitate to negotiate unless they have better knowledge about the individuals with whom they are contemplating doing business [25]. From our finding, however, collectivism does not contribute to negotiating price award, although it might be helpful to start running business. This implies that spending much money in private relationships is useless for setting a higher price award. For the U.S. company doing business in the P.R.C., if your customers ask you to build up personal relationships to facilitate your business, you had better find out what they really want.

The effect of masculinity is critical in determining the buyer's flexibility concerning price. This result is consistent with those of previous studies on the influence of personal consequences and rewards on industrial buying decisions. In other words, industrial buyers in the P.R.C. and Taiwan with strong masculinity are also aggressive in pursuing personal benefits.

Industrial buyers with higher integration scores are more willing to cooperate with people and award a higher price to suppliers. In contrast, the moral discipline has a negative effect on price award, which implies industrial buyers with higher scores in this dimension will be more conservative in pursuing personal benefits. In the Sharma and Lambert [26] study, the accuracy of salesperson's perceptions of their customers can have a significant effect on corporate profitability. During negotiating purchase requirements in the P.R.C. and Taiwan, suppliers can attempt to observe the extent to which a particular buyer exhibits the charac-

APPENDIX A
Hypothetical Procurement Scenario

You are in charge of a material parts purchase contract for 50,000 pieces of an item that is used in your firm's production process. The preset price is NT $5 million (U.S. $192,000) and delivery schedule is 60 days. A newly contacted company is able to produce a qualified product. The company is smaller than your firm, and the company owner is a good friend of yours. He finds your contract requirements to be stricter than those of his other customers and asks you to make some adjustments. If the deal is concluded successfully, he promises to give you some money in return. Suppose the price he requests is NT $5 million to $5.5 million and the delivery schedule is 60 days to 80 days, and that these two conditions are permitted to be awarded under company regulations and your authority.

What price would you agree to?  
What delivery schedule would you accept?  

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teristics of having few desires (the element representing moral discipline) and maintaining harmony with others (the element representing integration) so as to plan a suitable price strategy.

It should be noted that neither human heartedness nor Confucian work dynamism has influence on the price criterion. In our opinion, human heartedness is, from the viewpoint of buying decision, consistent with individualism-collectivism. As mentioned before, it would not affect price award. Confucian work dynamism reflects mostly a personal inner world irrelevant to buying decision.

**APPENDIX B**

**Measurements of National Character**

Please mark each of the following statements with the number that best indicates how strongly you agree or disagree with the statement.


1. Products produced by a large company are more reliable than those produced by a small company. ______
2. It is better to do business with a familiar company in order to avoid unnecessary trouble. ______
3. For the sake of friendship, it is better to do business with a friend's company even when it is slightly less convenient to do so. ______
4. It is a person's right to pursue personal advantage as long as he or she does not violate company regulations. ______

**REFERENCES**