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Consumer Decision-Making Styles of Young-Adult Chinese

The dimensions and profiles of consumer decision-making styles of young-adult Chinese are investigated using a modified model of consumer decision-making styles and data recently collected from five Chinese universities. The results are then compared with those of similar studies using American and Korean data. While the dimensions of consumer decision-making styles are similar in these three countries, differences in consumer purchasing power and maturity of the consumer market may contribute to the differences in consumer decision-making styles.

With China's rapid economic growth, more consumer products are becoming available, many of which are new and technologically complicated. The changing market structure of the transitional economy in China makes it very difficult for consumers to choose products. The coexistence of the old centrally planned economy and the emerging market economy causes the consumer commodity market to be neither perfectly competitive nor effectively regulated. Counterfeit products are quite common, and the system of consumer protection and services, although improving, is still primitive. *Caveat Emptor* is the rule of thumb for consumers to follow, especially because it is very difficult for a consumer to return a product once purchased. Given this unique market environment, how do Chinese consumers make purchasing decisions? How are the processes of consumer decision making different for Chinese consumers compared to consumers in other nations? Are these differences caused by

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situational or cultural differences? This study attempts to answer these questions.

LITERATURE REVIEW

Although the decision-making styles of Chinese consumers have not been studied in a scholarly context, literature on consumer decision-making styles using U.S. and Korean data can be found. According to Sproles and Kendall (1986), a consumer decision-making style is defined as a mental orientation characterizing a consumer's approach to making consumer choices. Broadly speaking, there are three types of approaches in studying consumer decision-making styles: the psychographic/lifestyle approach, which identifies hundreds of characteristics related to consumer behavior; the consumer typology approach, which classifies consumers into several types; and the consumer characteristics approach, which focuses on different cognitive dimensions of consumer decision making. For a review of these different approaches, see Sproles and Kendall (1986).

Building on the literature related to consumer decision making in the field of marketing and consumer studies (Maynes 1976; Miller 1981; Sproles 1979; Thorelli, Becker, and Engledow 1975), Sproles (1985) identified nine decision-making style traits and developed a 50-item instrument using the consumer characteristics approach. Using data collected from 111 undergraduate women in two classes at the University of Arizona and employing a factor analysis technique, Sproles (1985) found that six out of the nine traits were confirmed to be present. In a later study, Sproles and Kendall (1986) used a similar approach with a slightly revised model of consumer decision making with eight dimensions. An instrument of 48 items was developed. Each dimension of consumer decision making was represented by six questions. The questionnaire was administered to 482 students in 29 home economics classes in five high schools in the Tucson, Arizona area. The eight-factor model was confirmed by a factor analysis using the survey data, although not all questions were deemed to be useful in representing intended dimensions of a consumer styles inventory (CSI). The eight dimensions included in the CSI were (1) perfectionism or high-quality consciousness, (2) brand consciousness, (3) novelty-fashion consciousness, (4) recreational, hedonistic shopping consciousness, (5) price and "value for money" shopping consciousness, (6) impulsiveness, (7) confusion from overchoice, and (8) habitual, brand-loyal orientation toward consumption.

To verify Sproles and Kendall's (1986) results and to compare consumer decision-making styles between young consumers in Korea and the United States, Hafstrom, Chae and Chung (1992) collected data in Korea using a questionnaire similar to the one used by Sproles and Kendall (1986). The set of 44 items was administered to 310 randomly selected college students at four universities in Taegu, Korea, in 1989. Using the same eight-factor conceptual framework and analytical methods as those of Sproles and Kendall (1986), Hafstrom et al. (1992) confirmed seven of eight factors representing dimensions of consumer decision making. The only factor that was not confirmed was "novelty-fashion consciousness." Hafstrom et al. (1992) attributed this to the possible link between "brand consciousness" and "fashion consciousness" among young Korean consumers. On the other hand, an additional factor of "time-energy conserving" was identified for the Korean sample. Hafstrom et al. (1992) discussed the possible overlap of the "recreational-shopping consciousness" and "time-energy conserving" dimensions and indicated a need for further research to investigate these issues.

The assumption underlying the consumer characteristics approach is that consumers have several cognitive and affective orientations that determine their decision-making styles (Sproles and Kendall 1986). When making a purchasing decision, a consumer has several dimensions to consider simultaneously. For example, how much information should be collected about this product? How much time should be spent on searching? How much should be paid for the product? Which brand should be purchased? And how much attention should be paid to the quality of the product? These dimensions of consumer decision making are assumed to be independent of each other. A closer examination of the original dimensions reveals possible overlaps among the dimensions. These overlaps violate the assumption underlying this approach. Specifically, there are three concerns:

(1) The dimension "price-value consciousness" is a combination of "price" and "quality" dimensions, given that the term "value" implies "paying the lowest price possible for the highest quality."
(2) The dimension "impulsiveness" seems to overlap with "habitual, brand-loyal orientation toward shopping," as these two characteristics appear in opposition to each other. Consumers who are impulsive tend to buy many different brands without much thought, whereas consumers who are habitual tend to stick with certain products they like.

(3) The dimension "time-energy conserving" reported by Hafstrom et al. (1992) seems to overlap with the "recreational shopping consciousness" dimension, as they themselves suspected.

Thus, there is a need to rethink the dimensions included in the CSI. A more clear-cut model is needed to guide the investigation of consumer decision-making styles.

This study has several purposes: (1) to develop a modified model of CSI with modified dimensions, (2) to study the dimensions of consumer decision making of young-adult Chinese, (3) to establish a profile of consumer styles for young-adult Chinese, and (4) to compare the consumer decision-making styles of young-adult Chinese with those of young American and Korean consumers.

METHODS

Modified Model

Based on the results of previous studies, the authors of this study propose that the following dimensions be included in the CSI as the most basic mental characteristics of consumer decision making: (1) brand consciousness, (2) fashion consciousness, (3) quality consciousness, (4) price consciousness, (5) time consciousness, (6) impulsiveness, and (7) information utilization.

Dimensions (1) through (4) are characteristics related to the product a consumer purchases and are similar to dimensions (1), (2), (3) and (5) in the framework Sproles and Kendall (1986) proposed. "Value for quality" is not included in the "price consciousness" dimension for reasons discussed earlier. Dimensions (5) through (7) are related to the shopping process. "Time consciousness" includes both "time-energy conserving" and "recreational shopping" as two extremes of this dimension. "Impulsiveness" includes both "impulsiveness" and "habitual purchase" as two extremes of this dimension. Finally, the dimension of "information utilization" not only includes "confused by overchoice," but also includes "to be able to process and take advantage of information available" as the other extreme.

Data Collection

The data used in this study were collected in the summer of 1996 from five universities in Guangzhou, China. Guangzhou is a major city in

southern China, close to Hongkong. It is in one of the earliest "economic reform experimental zones," to which the Chinese government granted many special reform-policy privileges that were not allowed in other areas in the early years of the economic reform. However, at the time of the data collection, Guangzhou was probably quite representative of major cities in China, both politically and economically. Some inland areas, especially rural areas in China were, and still are, much less developed.

Before describing the universities selected in the sample, a brief introduction to the Chinese university system is needed. Most Chinese universities are public. At the time of data collection, public universities in China did not charge tuition or rent to students. Besides offering majors in mathematics, physics and chemistry, most universities specialize either in social sciences and humanities or in applied sciences, such as engineering. In addition, some universities specialize in very narrow fields, such as foreign language studies, economics and business, teacher training, and textile sciences.

The Chinese State Education Commission (similar to the Department of Education in the U.S.) administers a national entrance exam every summer to all high school graduates in the country who wish to attend a university. Because most major universities are located in large cities, such as Beijing, Shanghai, and Guangzhou, these universities usually attract students from all over the country.

College students were chosen for our sample for two reasons: One was convenience. Given our budget constraint, it was not feasible to collect information from a representative sample of Chinese consumers. The other reason was sample comparability because the decision-making styles of young Chinese consumers were to be compared with those of American and Korean consumers, investigated in two previous studies using student samples (Sproles and Kendall 1986; Hafstrom et al. 1992). Because college students in major Chinese cities, such as Ghangzhou, usually come from all over the country, the sample also has some representation of young-adult Chinese in the whole country.

The sampling method used was a combination of judgmental and convenience sampling. Because Chinese universities are designed to specialize, five universities in Guangzhou were chosen to increase the sample representativeness. The five universities vary in size and specialization. Zhongshan University specializes in social sciences and basic sciences with a student body of about 15,000. South China Normal University specializes in training school teachers and has an enrollment of about 17,000.

South China University of Technology specializes in applied sciences, such as engineering, and has about 13,000 students. Guangdong Commercial College has about 10,000 students and mainly offers majors related to economics and business. Jinan University, with about 12,000 students, offers a variety of majors.

Under the supervision of a professor in international economics, students in an upper-division economics class at Guangdong Commercial College went to campuses of the five universities to distribute and collect questionnaires. This part of the sampling was convenience sampling.

The items in the instrument were Likert-scaled items, originally developed by Sproles and Kendall (1986) and later used by Hafstrom et al. (1992). Items were on a scale of one to five, with ratings of "strongly disagree" and "strongly agree" as end points. Those items that loaded significantly on the factors identified in Hafstrom et al.'s study were retained. These items were translated into Chinese by one of the authors who is a native speaker of Chinese. Because the reliability and validity of the instrument were tested by Sproles and Kendall (1986), no such testing was done for this study.

The original plan was to distribute a total of 450 questionnaires, 90 to each university. A total of 407 questionnaires were returned. However, only 271 questionnaires were usable for this analysis. The rest of the questionnaires had missing values for at least one of the items asked. Among the students who returned usable questionnaires, 59 percent were males, 81 percent were from urban home towns, 54 percent majored in social sciences, 34 percent majored in sciences and engineering, and 11 percent majored in humanities. Students in the sample were between the ages of 18 and 25 with most of them being juniors (62 percent). Financially, only expenses other than tuition and rent were needed because tuition and rent were usually free. For these expenses, almost all students were supported by their parents. A comparison of these 271 students with the 136 students who did not fully complete the questionnaire shows no significant differences in demographic characteristics. Detailed descriptive statistics of the sample are presented in Table 1.

Analysis

The analytical methods used in this study were similar to Sproles and Kendall's (1986). First, factor analysis for a seven-factor model was performed in accordance with the modified conceptual model. The method of factor analysis used was principal component analysis with varimax

TABLE 1
Descriptive Statistics of the Sample (n=271)

Sample Characteristics	Frequency	Percentage
Gender:		
Male	160	59.0
Female	111	41.0
Hometown:		
Urban	220	81.2
Rural	51	18.8
Major:		
Social Science	147	54.2
Science/Engineering	91	33.6
Humanities	29	10.7
Missing	4	1.5
University:		
Zhongshan University	72	26.6
Jinan University	65	24.0
South China University of Science & Technology	34	12.5
South China Normal University	55	20.3
Guangdong Commercial College	41	15.1
Missing	4	1.5
Class:		
Freshmen	32	11.8
Sophomore	50	18.5
Junior	169	62.4
Senior	20	7.4
Income Source:		
Parents	262	96.7
Scholarship	1	0.4
Other	6	0.2
Missing	2	0.7

rotation (Kim and Mueller 1978). Cronbach alpha reliability tests (Carmines and Zeller 1979) were then conducted to test the reliability of the items. Because the Cronbach alpha reliability tests suggested that two out of the seven factors were unreliable, with alpha less than 0.5 (Sproles and Kendall 1986), a six-factor model and a five-factor model were estimated.

Descriptive analysis profiling consumer decision-making styles for young Chinese consumers was then carried out. For ease of comparison, the same approach as Sproles and Kendall (1986) was used. For computation of the profile of consumer styles, raw scores on the four top-loading items for each factor were added up (items worded negatively were reversely scored). This addition yielded a score of 4 to 20 for each subject on each factor identified.

TABLE 2
Cronbach Alpha Reliability Tests for Seven-Factor, Six-Factor and Five-Factor Models

	7-Factor Model	6-Factor Model	5-Factor Model
Brand	0.61	0.61	0.60
Time	0.63	0.59	0.62
Quality	0.54	0.55	0.59
Price	0.59	0.59	0.59
Information	0.55	0.59	0.55
Factor 6	0.36	0.21	NA
Factor 7	0.32	NA	NA

Finally, the consumer decision-making styles of young Chinese consumers were compared with those of the young Korean and American consumers. Comparisons were made in three areas: number of factors identified, item loadings, and profiles of consumer decision-making styles. Because Hafstrom et al. (1992) did not establish a profile of consumer decision-making styles for Korean consumers in their study, profiles were only compared between Chinese and American young consumers.

RESULTS AND DISCUSSION

Models with Different Numbers of Factors

A seven-factor model clearly identified five dimensions: (1) brand consciousness; (2) time consciousness; (3) price consciousness; (4) quality consciousness; and (5) information utilization. The last two dimensions were some combinations of "impulsiveness" and "information utilization." Cronbach alpha reliability tests were conducted using the four items loading the highest on each factor. The results of the reliability tests, presented in Table 2, show that the last two factors were unreliable (with Cronbach alpha < 0.5). A six-factor model confirms the first five dimensions in the seven-factor model, with a sixth factor being a combination of "time consciousness," "impulsiveness," and "information utilization." Again, Cronbach alpha reliability tests show the last factor to be unreliable. The results of the five-factor model further confirm the first five factors in the seven-factor and six-factor models, with all factors showing an acceptable level of reliability based on the Cronbach alpha statistics.

Given this specific data set, a five-factor model seemed to be the most appropriate. The five-factor model was also supported by the scree test.

TABLE 3
Characteristics of Young-Adult Chinese Consumer Decision-Making Styles: A Five-Factor Model with Loading .4 or Higher

Styles Characteristics and Items	Factor Loadings
Factor 1. Brand Consciousness	
Highly advertised brands are usually very good	0.64
A brand recommended in a consumer magazine is an excellent choice for me	0.55
The well-known national brands are the best for me	0.55
The higher the price of a product, the better its quality	0.53
I usually compare advertisements to buy fashionable products	0.46
Expensive brands are usually the best	0.44
All brands are the same in overall quality	0.42
The most expensive brands are usually my choices	0.41[a]
Factor 2. Time Consciousness	
I take the time to shop carefully for best buys	0.71
I enjoy shopping just for the fun of it	0.66
I keep my wardrobe up-to-date with the changing fashions	0.56
Shopping the stores wastes my time (–)	–0.50
I cannot choose products by myself (–)	–0.47
I make my shopping trips fast (–)	–0.46
I am impulsive when purchasing	0.45
Factor 3. Quality Consciousness	
My standards and expectations for products I buy are very high	0.69
I make a special effort to choose the very best quality products	0.60
I usually buy well-known, national, or designer brands	0.45[b]
When it comes to purchasing products, I try to get the very best or perfect choice	0.42
It's fun to buy something new and exciting	0.42
I should plan my shopping more carefully than I do	0.40
Factor 4. Price Consciousness	
I carefully watch how much I spend	0.68
I consider price first	0.56
The lower price products are usually my choices	0.54
I usually compare at least three brands before choosing	0.52
The most expensive brands are usually my choices (–)	–0.50[a]
I usually buy well-known, national, or designer brands (–)	–0.44[b]
Factor 5. Information Utilization	
All the information I get on different products confuses me	0.65
There are too many brands to choose from so that often I feel confused	0.57
Sometimes it's hard to choose which stores to shop	0.53
Often I made careless purchases I later wish I had not	0.48

[a]Item loads on factors 1 and 4.
[b]Item loads on factors 3 and 4.

The scree test directs one to examine the graph of eigenvalues and to stop factoring at the point where the eigenvalues begin to level off, forming a straight line with an almost horizontal slope (Kim and Mueller 1978). In our analysis, the eigenvalues started to level off after the fifth factor.

Results of the Five-Factor Model

The results of the five-factor model are presented in Table 3. Items loading 0.4 or higher on each factor are reported. The final communality total is 13.00, implying that the five factors explain 35 percent (13/37) of the variances.

Factor 1—Brand consciousness. This factor measures the brand dimension of consumer decision making for Chinese consumers in our sample. Consumers who score high on this dimension pay attention to the brand names of products and are interested in purchasing brand-name products that are highly advertised and well-known. High scorers on this factor also seem to think high prices signal high quality.

Factor 2—Time consciousness. This factor measures the time dimension of consumer decision making. Consumers who score high on this factor enjoy shopping and perceive shopping as a recreational activity. They also seem to be quite fashion conscious. On the other hand, low scorers on this factor spend less time and energy shopping.

Factor 3—Quality consciousness. This factor identifies a quality dimension of consumer decision making. Consumers who score high on this factor perceive the quality of a product to be very important and are willing to make special efforts to choose products with the very best quality. High scorers on this factor also seem to link high quality with well-known brand names.

Factor 4—Price consciousness. This factor identifies a price dimension. Consumers who score high on this factor are very price conscious. They carefully watch how much money they spend, compare prices of different brands at different stores before making a purchase, and tend to purchase products with low prices.

Factor 5—Information utilization. This factor identifies an information utilization dimension. Consumers who score high on this factor are overwhelmed by all the choices of products and stores available to them and do not know what to do about the information. On the opposite end of the continuum, consumers who score low on this factor can take advantage of the available information and make better choices.

Compared to the proposed conceptual framework with seven dimensions of consumer decision-making styles, two dimensions are not confirmed using our data set. These two dimensions are the "fashion consciousness" and the "impulsiveness" dimensions.

There are several possible causes for this discrepancy. First, the ques-

TABLE 4
Consumer Style Inventory for Young-Adult Chinese Consumers

Dimensions	Mean	Median	Percentage Scoring High (15-20)	Percentage Scoring Medium (10-14)	Percentage Scoring Low (4-9)	Quartile Score Ranges Upper	2nd	3rd	Lower
Brand	9.3	9.0	5.9	42.1	52.0	13-20	10-12	8- 9	4- 7
Time	11.7	12.0	25.1	45.0	29.9	16-20	13-15	10-12	4- 9
Quality	12.3	12.0	28.4	49.4	22.1	16-20	13-15	11-12	4-10
Price	12.6	13.0	24.0	61.6	14.4	15-20	14-14	11-13	4-10
Information	11.5	12.0	18.5	54.2	27.3	15-20	13-14	10-12	4- 9

tions asked in the questionnaire may not reflect all dimensions proposed in the seven-factor model. Second, the seven-factor model proposed may have overlaps among different dimensions, especially the fashion, brand and time dimensions (Sproles and Kendall 1986). Third, this particular sample may not exhibit certain consumer decision-making characteristics due to cultural and economic reasons. More discussion of these differences is provided in the next section when students in our sample are compared with students in the Korean and American samples.

Consumer Decision-Making Styles for Young-Adult Chinese Consumers

Following the same approach used by Sproles and Kendall (1986), a profile of consumer decision-making styles for young Chinese consumers was established, employing the four-item subscales. Table 4 presents the means and medians of each four-item subscale, the percentages of subjects scoring high to low on each subscale, and the quartile score ranges. These statistics can be used to calculate profiles of consumer style of individual consumers, as Sproles and Kendall did (1986).

The results show that a high percentage (52.0 percent) of students in our sample scored in the low range for the brand dimension, indicating that they were not very brand conscious. Also, a very low percentage (14.4 percent) scored low for the price dimension, indicating most of the students in the sample were quite price conscious. Except for the brand dimension, the median score for all other dimensions was in the medium range (10-14). The median score for the brand dimension was in the low range at 9. It seems that most of the students in our sample were neither very interested in recreational shopping nor very confused by the available product and shopping information. Quartile score ranges are provided so Chinese students can compare their own scores with the sample

average for the purpose of consumer education. More discussion about consumer decision-making styles is provided in a later section when Chinese students are compared with American students.

Comparison: China, Korea, and the United States

In this section, the results of this study are compared with the results of two previous studies: the study by Sproles and Kendall (1986) using an American student sample, and the study by Hafstrom et al. (1992) using a Korean student sample.

The U.S. sample was collected in Tucson, Arizona's second-largest city. The Korean sample was collected in Taegu, Korea's largest inland city after Seoul. Taegu's status in Korea is similar to Guangzhou's status in China. The Korean sample and the Chinese sample are similar to each other in terms of the sample representativeness, whereas the U.S. sample is less comparable.

The conceptual model used in this study is slightly different from the ones used by Sproles and Kendall (1986) and Hafstrom et al. (1992), and the number of questions is also slightly different. The same questions, when translated, may have subtle differences in their underlying meanings. For example, when translated into Chinese, the item "I usually compare at least three brands before choosing," may be interpreted as comparing the prices of the same brand in three different stores. Given these differences, a direct comparison of results of these studies is difficult, and the following discussion should be viewed as only suggestive.

Number of dimensions. Overall, the identified dimensions of consumer decision making are very similar for young-adult consumers in these three countries. Young consumers in the three countries all have these five dimensions: (1) brand consciousness, (2) quality consciousness, (3) price consciousness, (4) time consciousness, and (5) information utilization. The dimensions of "novelty-fashion consciousness," "impulsiveness," and "habitual-brand-loyal," identified for one or both of the Korean and the American samples, are not confirmed using the Chinese sample.

Some items loaded on the "fashion consciousness" dimension for the American sample have loaded on the "time consciousness" dimension in this study. Sproles and Kendall (1986) found their fashion-consciousness factor was significantly correlated with recreational consciousness factor and brand dimension. A high correlation of the "fashion consciousness" and "time consciousness" dimensions may exist among young Chinese

consumers. This correlation is quite intuitive because for most consumers to be fashion conscious, they have to spend time paying attention to changing fashions.

"Impulsiveness" is not identified as a dimension of consumer decision-making styles for the Chinese sample. Most questions representing the "impulsiveness" dimension, such as "I have favorite brands that I buy over and over again," "I change brands I buy regularly," and "Once I find a product or brand, I stick with it," which were loaded on the dimension "habitual, brand-loyal consumer" in Hafstrom et al. (1992), did not load highly on any of the five factors identified in this study. Among the four items loading on the factor "impulsive, careless consumer" in Hafstrom et al. (1992), three loaded on three different factors in this study: time consciousness, quality consciousness, and information utilization. It is possible that the dimension "impulsiveness" is a function of some or all of the five dimensions identified. For example, impulsive purchasing behavior is probably linked to recreational shopping with little brand, quality, or price consciousness.

On the other hand, it is also possible that this difference is a result of differences in purchasing power. Because these three countries are at different stages of economic development, the purchasing power of an average Chinese student is probably much lower than that of an average Korean or American student. Both impulsive shopping and its opposite, habitual shopping, can only be observed when consumers make many repeated purchases of similar commodities. This missing dimension of consumer decision-making styles may be identified with a non-student sample of Chinese consumers. Also, it may be identified later among Chinese students when China's economic growth achieves a certain level and students' purchasing power becomes greater.

Item loadings. The items loading on each dimension are quite similar, although not exactly the same. The item "A brand recommended in a consumer magazine is an excellent choice for me" has loaded on the "brand consciousness" dimension for the Chinese sample, but on the "time-energy conserving" dimension for the Korean sample, and did not load significantly on any of the factors identified for the American sample. This difference may be related to the status of consumer magazines in China. China does not yet have an independent consumer magazine, such as *Consumer Reports* in the United States. Magazines that claim to serve consumers also accept advertisements from companies and tend to recommend brand-name, expensive products. The high loading of

the items on the "brand" dimension may be situation-specific instead of culture-specific.

The item "I usually buy well-known, national or designer brands" has loaded positively on the "quality consciousness" dimension for the Chinese sample, but on the "brand consciousness" dimension for the Korean sample, and did not load significantly on any of the eight factors for the American sample.

It is our observation that two categories of products are considered brand-name products by Chinese consumers. One category is the well-established domestic brands, such as many products made in the area of Shanghai. These products were well-known for their quality even before the economic reform in 1978. The other category is products that are either newly imported or manufactured by joint-ventures (invested and operated jointly by foreign companies and Chinese companies) in China. Manufacturers of these products heavily advertise their products to establish a "yuppie product" image. The products are usually fashionable and expensive, yet the quality is not necessarily good. It is possible that the students in our sample have interpreted the first category of national brands as good-quality products and the second category of products as brand-name products.

The item "I usually compare at least three brands before choosing" loaded positively on the "price consciousness" dimension for the Chinese sample, but loaded on the "recreational shopping" dimension for the Korean sample, and did not load significantly on any factor for the American sample. This may be caused by differences in the interpretation of the question asked in different languages. As noted earlier, this item may be interpreted as comparing prices in different stores in Chinese, whereas in English this item is more likely to be interpreted as comparing brands, not prices. However, it is also possible that Chinese students are more price conscious because of their lower levels of purchasing power.

The item "Often I made careless purchases I later wish I had not" loaded positively on the "information utilization" dimension for the Chinese sample, but loaded on the "impulsive, careless" dimension for the Korean and the American samples. "Careless purchases" may be interpreted as "I have not gathered enough information for this product before I purchase" in Chinese. The content of information may be quite different in these three countries. In the U.S. and Korea, quality information is the most important, whereas in China the most important piece of product information is whether this product is counterfeit. Because China is in

transition from a planned central economy to a market economy, market regulation by the government and business self-regulation are much less refined compared to the more developed countries. How to differentiate and avoid buying counterfeit products is one of the most salient consumer issues in China. Many famous brands, both domestic and foreign, are being counterfeited and sold in the market, and these counterfeit products are usually of poor quality yet have high prices. Even though consumer associations at various levels and other government regulatory agencies in China have made great efforts to fight against the sources of counterfeit and poor-quality products, and many consumer educational activities and materials sponsored by government agencies have been developed to teach consumers how to identify counterfeit products, many consumers are still victimized. Thus, the consequences of buying the wrong products for Chinese consumers may be different from those for American or Korean consumers when they make careless purchases. The careless purchases by American or Korean consumers may result in a waste of money. For Chinese consumers, the products bought carelessly may not only be counterfeit and expensive, but also unable to perform basic functions, and may sometimes be unsafe and even fatal (examples are some food and electronic products).

Profiles of consumer decision-making styles. Because Hafstrom et al. (1992) did not report a profile of consumer decision-making styles for their Korean sample, no comparison can be made between the Chinese sample and the Korean sample in this respect. This part of the comparison is only between the Chinese sample and the U.S. sample.

Sproles and Kendall (1986) calculated scores of three-item subscales for the identified dimensions based on data from a sample of American high school students. The same method was used in this study to calculate scores of four-item subscales for identified dimensions based on our sample of Chinese college students (Table 4). However, because four-item subscales were used in this study, the range of the scores calculated is between 4 and 20, whereas in Sproles and Kendall's study (1986), the range of scores is between 3 and 15. Keeping this difference in mind, the two sets of scores present some interesting variations. Most American consumers are high scorers in all dimensions. For example, only 15 percent of American students in the sample are in the "low" category of scoring for the dimension "brand consciousness." By contrast, 52 percent of Chinese students in the sample ranked in the "low" category of scoring for the same dimension. The difference may reflect the greater maturity

of young American consumers because they have greater familiarity with market exchange. American consumers, even as young as high school students, may be more advanced in the consumer socialization process than the Chinese consumers who are college students in our sample. This is understandable considering the stage of economic development and transitional economy status in China. On the other hand, this difference may also reflect a difference in advertising or longevity of brands in the two countries.

Another difference between the American sample and the Chinese sample is that American consumers are more likely to be confused by overchoice. In the dimension "information utilization" (labeled as "confused by overchoice" in Sproles and Kendall [1986]), the sample mean of Chinese consumers is less than the expected mean, 11.5 versus 12.0, but the sample mean of American consumers is greater than the expected one, 9.7 versus 9.0. The difference may result from different levels of market development in these two countries. Even though the consumer commodity market in China has been developing rapidly, the actual level of economic development is still much lower than in the United States, and the problem of information overload is not nearly as serious as in the United States.

CONCLUSIONS, LIMITATIONS, AND IMPLICATIONS

This study modifies the dimensions of the CSI, originally developed by Sproles and Kendall in 1986. A seven-factor model is proposed. Five of the seven dimensions have been confirmed with the use of data recently collected from students in five Chinese universities. These five dimensions are brand, time, quality, price consciousness, and information utilization.

In addition, this study shows that the average Chinese student in our sample was not very brand conscious, but quite price and quality conscious. The student was neither very time conscious nor overwhelmed by information.

However, because the sample used for this study is not representative of all Chinese consumers, issues of generalizability of the results need to be addressed. Younger generations of Chinese consumers have grown up in a very different economic environment compared with older generations. Before the economic reform in 1978, the consumer commodity market had uniform prices and limited choices of products. Older generations of consumers never had to worry about getting the lowest price for

the same product before the economic reform (so price consciousness was not a concern). There was not much product information available (so an information overload was not a concern). In addition, most people had to wait in line to get the products they wanted (so time consciousness was not a choice). The economic reform in 1978 rapidly changed the structure of the consumer market. Younger generations, to which our sample of Chinese students belong, have grown up in a market environment similar to the current one. Anecdotal evidence suggests that older generations may be more price conscious and less brand and fashion conscious than the younger generations because of differences in their experiences as consumers. A study on Chinese consumer types indicated that younger consumers are more likely to seek advertised and brand name products but that older consumers are more likely to pursue practical aspects of consumer products and ignore the advertisement and brand names (Li and Xiao in press).

While the major dimensions and item loadings are similar in these three studies, comparisons of these studies indicate several differences among young Chinese, American, and Korean consumers. Our analysis does not confirm two dimensions proposed, "impulsiveness" and "fashion consciousness," yet these two dimensions were reported in one or both of the previous studies using American and Korean data. The comparisons also indicate that a larger percentage of Chinese consumers scored lower in all confirmed dimensions than their American counterparts. Differences of item loadings also have been found. Several reasons have been suggested for these differences: (1) The underlying meanings of some questions may be interpreted differently by consumers in different countries; (2) Different stages of economic development imply different levels of consumer purchasing power in these three countries, and these differences are reflected in consumer decision-making styles; and (3) The consumer commodity market in China is quite different from that in the United States and in Korea. Because the comparisons are indirect, the above summaries are suggestive rather than conclusive.

This study has several limitations. First, a modified conceptual model is used in this study but questions asked were based on previous studies using a slightly different conceptual model. Thus, some questions that should have been asked based on the modified conceptual model were not asked. For example, in the dimension of "information utilization," questions regarding "making use of available information" were not asked. In future studies, additional questions should be developed to represent all

the dimensions proposed in the model. In addition, given that consumers are more and more aware of the importance of being environmentally friendly, future research also should consider the possibility of adding an "environmental consciousness" dimension.

Second, several methodological issues related to international comparison should be improved in future research. The first area for improvement is data collection time. The findings would be much more powerful if data were collected simultaneously from randomly selected consumers of all age groups in several countries. In this study, only indirect comparisons were made because of data limitations. The Chinese sample used in this study was a sample of college students, whereas the U.S. sample was high school students who attended a home economics class. The age difference and the selective nature of the U.S. sample may have played a role in the differences found. Another issue that needs improvement in an international comparison research is to identify items that can be used in different countries or cultures without misperception or misinterpretation. Some suggestions given by Thorelli (1988) can be incorporated in future research designs. The third improvement issue is the comparability of samples from different countries. For example, part of the American sample was from home economics classes in high schools, and the Chinese sample was from several universities. The demographic and psychological characteristics of the two samples could be different, and such differences could influence the validity of the findings. Future research should collect data from comparable samples in different countries. The fourth improvement issue relates to the validity of the instrument in different languages. It is unavoidable to use instruments in different languages in international comparison studies. The same sentence in different languages could have different subtleties in meaning and possible translation errors could further aggravate the actual differences when the instrument was administered in different cultures. More careful translation procedures, such as "decentered" translation (Werner and Campbell 1970) or "back translation" (Triandis 1972), should be adapted in future research to ensure the validity of the instrument used in different languages.

The findings of this study have implications for consumer education. The study confirmed five dimensions of consumer decision making styles with a Chinese sample and added more evidence to this framework that can be used to develop better consumer decision-making guidelines in consumer education. The similarities and differences between Chinese

and American young consumers found in this study can be used to help students in Consumer Economics and Marketing to better understand commonalities and differences of consumer behaviors from different cultures.

The results of this study also have implications for developing consumer education in China. China is moving from a planned economy to a market economy. Chinese consumers are experiencing rapid changes on a daily basis (Xiao 1997). The dramatic changes in the economic system and consumer markets lead Chinese consumers to learn quickly to be competent consumers to avoid economic, physical, and psychological damages caused by rampant market frauds. There is great potential for developing consumer education in current China (Xiao1998) The findings from this study and other similar studies (Fan, Xiao and Xu, in press; Li and Xiao 1998) can be used as references to provide background information in understanding consumer behavior in modern China and in developing appropriate and effective consumer educational materials for Chinese consumers.

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