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### **Cross-Cultural Differences in Consumer Decision-Making Styles**

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# **Cross-Cultural Differences in Consumer Decision-Making Styles**

## **ABSTRACT**

This article compares consumer decision-making styles between Singaporeans and Australians. Utilizing Hofstede's framework, the paper argues that cultural dimensions influence consumer decision-making styles. It is essential that managers understand cross-cultural consumer decision-making styles to make strategic decisions or effectively handle members of these nationalities. Marked differences were found between the two populations for: brand consciousness, innovativeness and confused by overchoice. The results suggest that some consumer decision-making styles differ due to consumers' cultural values. Managerial implications and future research directions are discussed.

## **INTRODUCTION**

The domain of management refers to the organization of people, processes, products and markets. In this era of globalisation, part of the debate in management is whether regional markets should be considered as unique and requiring customized management tools and techniques or whether the same management tools and techniques can be applied across different marketplaces. One way that scholars have sought to address these questions is through the study of cross-cultural consumer decision-making styles.

Consumer decision-making style refers to the mental orientation or approach a consumer has towards making choices. Although, consumer decision-making style represents a relatively consistent pattern of cognitive and affective responses (Bennett & Kassarian, 1972), national culture has been proven to significantly impact on individual values and attitudes (Hofstede, 1980), thus culture is expected to have a significant influence on consumer decision-making style. This paper will adopt consumer research into decision-making styles to enhance understanding of differing decision-making styles between cultures traditionally regarded as contrasting, i.e. East and West. In particular, this paper examines and adds evidence to the specific cultures of Singapore and Australia.

To date, little research examines cross-cultural differences in consumer decision-making. There is evidence of cultural differences in consumer decision-making styles for fashion, (Fan & Xiao, 1998; Hiu, Siu, Wang & Chang, 2001; Lysonski, Durvasula & Zotos, 1996), although, no study has examined whether this effect extends to the purchase of goods in general. In an increasingly globalized business environment, it is imperative that marketing management learn about differences in consumer decision-making. The success of an organization in a culturally different market place may be largely affected by how well the decision-makers grasp the consumers' buying behaviors, and how well they are able to incorporate such understanding into their marketing plan and strategies. We address this gap with a cross-cultural study of

consumer decision-making styles in the context of goods purchases using the Consumer Styles Index (CSI) (Sproles & Kendall, 1986).

The choice of Singapore and Australia as the cultures for this study was made for two reasons; first, they are significant trading partners in the Asia Pacific region (East & Lloyd, 2001). Second, these countries have a dominant culture based on the cultural heritage, Australia is Anglo-Saxon and Singapore is Chinese. Thus, the objective of this research to compare the decision-making styles of two important trading partners in the Asia-Pacific region with different cultural heritages.

Thus this paper aims to demonstrate that consumer decision-making styles for goods differs according to consumers' cultural orientation and that consumer behaviour can be predicted from an understanding of the cultural personality of consumers. We integrate the concept of consumer decision-making style inventories (CSI) with Hofstede's typology of culture and empirically test predictions from the framework on a sample of consumers from Australia and Singapore.

The paper begins with a discussion of CSI followed by a justification of the use of Hofstede's typology as a cultural framework. Then we present our rationale for using consumer samples drawn from Singapore and Australia, followed by development of hypotheses, method and results. Finally, the implications of the findings are discussed.

## **LITERATURE REVIEW**

### **Consumer Decision-Making Styles**

Previous literature has identified three ways to characterize consumer decision-making styles: the consumer typology approach, the psychographics/lifestyle approach, and the consumer characteristics approach (Sproles & Kendall, 1986). The consumer typology approach seeks to categorize consumers into groups or types that are related to retail patronage (Bellenger & Korgaonkar, 1980; Darden & Ashton, 1974; Darden & Reynolds, 1971). Such studies have typically focused on specific products, product groups or on the general retail marketplace (Westbrook & Black, 1985).

The psychographics / lifestyle approach identifies over a hundred characteristics related to consumer behavior based on general personality traits, or general needs and values associated with the consumer's general activities interests or lifestyles (Lastovicka, 1982; Wells, 1974). Lastly, the consumer characteristic approach emphasizes the cognitive and affective orientations towards purchasing in consumer decision-making (Westbrook & Black, 1985). This approach holds the assumption that consumers possess cognitive and affective orientations to determine their consumer decision-making styles (Fan & Xiao, 1998; Sproles & Kendall, 1986).

The three approaches provide for a unified theme that consumers approach the market with basic decision-making styles (Sproles & Kendall, 1986). However, the consumer characteristics approach has been perceived to be more powerful and explanatory than the consumer typology or psychographics approaches due to its focus on consumers' mental orientation (Lysonski, Durvasula & Zotos, 1996). Therefore, the characteristics approach will be used in this paper.

Consumer characteristics in decision-making can be measured via an examination of consumer styles. The CSI contains eight consumer decision-making styles and has been used to investigate consumers in cultures of China, South Korea, U.S., New Zealand, Greece, United Kingdom and Germany (Fan & Xiao, 1998; Hafstrom, Chae & Chung, 1992; Hiu, Siu, Wang & Chang, 2001; Lysonski, Durvasula & Zotos, 1996; Mitchell & Bates, 1998; Shim & Gehrt, 1996). These styles are: quality conscious, brand conscious, innovation/fashion conscious, recreation conscious, price conscious, impulsive, confused by overchoice and brand loyalty. Each of these will be discussed later, in the development of the hypotheses.

### **Hofstede's Typology of Culture**

While the world becomes increasingly globalized some have posed that homogenization of consumer behavior is also occurring, however there is little empirical evidence for this view (see Argrawal 1995 for a review). In her classic article on international consumer behavior, de Mooij (2000, p105) points out that "although there is evidence of convergence of economic systems, there is no evidence of convergence of peoples' value systems"

Cultural assumptions underlie our thoughts (Hoppe, 2004) and ultimately our decisions. Culture refers to the dynamic process that occurs within a given society group and which creates the cognitive map of beliefs, values, meaning and attitudes that drive perception, thoughts, reasoning, actions, responses and interactions (Tung, 1995). Thus culture impacts on what is seen as most important within a country (Hoppe, 2004). Unsurprisingly then, major cultural differences in cognition, emotion and motivation have been identified (Markus & Kitayama, 1991).

Hofstede's seminal typology of cultural dimensions debuted in 1980 and continues to dominate in studies of management and marketing scholars (Furrer, Liu, Sudharshan, 2000). It characterized culture with five dimensions: power distance or the degree of equality among people in society, the dimension labelled uncertainty avoidance refers to the degree to which people are able to tolerate ambiguity, countries which score high on this dimension have low tolerance for ambiguity, are highly formalised and tend to resist innovation. The dimension of masculinity/femininity or the degree to which masculine and feminine values are distinct, individualism/collectivism or the degree to which people act as a group or as individual, and long-term orientation or the degree to which people delay gratification of their material, social and emotional needs. Although these dimensions are statistically independent and occur in all possible combinations, some combinations are more common than others (Hofstede, 1980).

Hofstede (2001) undertook research on 72 countries that demonstrates cultural differences on the basis of his five dimensions. The results for Australia and Singapore are reproduced in Table I.

#### **'Take in Table 1'**

In one of the first marketing studies to apply Hofstede's typology to consumer behavior, de Mooij (2000) found consumption of mineral water, cars and the internet varied across Hofstede's dimensions. In a further study, de Mooij collaborated with

Hofstede (de Mooij & Hofstede, 2002) to identify differences in consumption of a range of products for each dimension. Thus this research builds on de Mooij's research by providing empirical evidence of how consumer-behavior styles vary.

Culture, thus underlies the way consumers think and is understandably highly important in the decision-making process. We explore this through a study of cross-cultural consumer decision-making styles. An important issue to note here is that "people do not carry separate mental programs for work and non-work situations" (Hofstede, 1980, p. 92). This means that individual's behavior in a consumer setting provides insight into their overall cross-cultural behavior, and any patterns or trends are likely to be seen in other aspects of their life such as work-life. Subsequently, the study, of cross-cultural consumer decision-making will be highly beneficial for management.

## **Hypotheses Development**

### **How Cultural Background Affects Consumer Decision-Making Styles**

There are eight different decision-making styles as proposed by Sproles and Kendall (1986): quality-conscious, brand-conscious, innovative/fashion-conscious, recreation-conscious, price-conscious, impulsive, confused by overchoice and brand-loyal. Based on the above discussion of culture, we next discuss how cultural background might influence these consumer decision-making styles. The theoretical framework proposed by this paper is outlined in Table II which shows the expected decision-making styles for Singapore and Australia based on Hofstede's typology of culture.

### **'Take in Table II'**

#### ***Quality Conscious Decision-Making Style***

A significant factor in consumer decision-making is quality. Quality conscious consumers search for the best quality products by shopping systematically and carefully (Sproles & Kendall, 1986). Quality-conscious decision-making implies the perception of a hierarchy of quality levels. Hofstede's (2001) cultural dimension of power distance deals with inequality in prestige, wealth and power. Therefore, cultures with higher power distance would be more likely to engage in the quality conscious decision-making style as it refers to hierarchy vs equality. Previous research supports this assertion. For instance, Chinese immigrants have been found to exhibit more extensive search behavior than Americans in a supermarket environment due to quality seeking (Ackerman & Tellis, 2001).

The seeking of quality also implies a desire for a product that will last. Empirical research indicates support for this proposition. Specifically, Chinese consumers devoted more time towards searching for products of high quality and performance because they expect products to last (Doran, 2002). Hofstede's (2001) scores for the dimension are Singapore a scored high with 74 (out of 100) for power distance and Australia scored 36. These scores for power distance indicate that Singaporeans are more concerned with hierarchy among people in society and this may translate into a perception of hierarchy amongst products of varying quality, particularly if high

quality is associated with people who hold higher positions in society. For example, quality circles have been implemented more effectively in Japan than they have in the US as 'quality' has more meaning for the Japanese (Ghosh & Lim, 1991). Specifically:

**H<sub>1</sub>:** *“there will be a significant difference in quality consciousness between Australians and Singaporeans. Singaporeans are expected to be more quality Conscious”.*

### Brand Conscious Decision-Making Style

Brand conscious decision-making refers to a consumer's orientation towards the purchase of expensive and well-known brands. There are two dimensions of Hofstede that have relevance for this decision-making style; individualism/collectivism and uncertainty avoidance. Brands are symbols of status and prestige and Eastern cultures, having high power distance, perceive social status and prestige as important (Hofstede, 2001). As Eastern cultures are higher power distance and collectivism. Which is associated with the concept of 'face' and social harmony, consumers in Eastern cultures are expected to have a higher need to maintain prestige and status (Ho, 1976), and thus a higher level of brand conscious decision-making.

Following this line of argument, it would be expected that Singaporeans would be more brand conscious than Australians. However, brands are used to convey fashion consciousness for individualistic cultures (Manrai, Lascus, Manrai & Babb, 2001). Brands are symbols that convey meanings to consumers, some brands such as BMW convey meanings of prestige and quality however there are also brands that convey meanings relating to low price such as Virgin Airlines. Brands assist consumers in effort minimisation and provide a sense of familiarity, this reduces the risk involved in purchasing (Lehmenn & Winer, 1997) and appeals to consumers who have high uncertainty avoidance. Bao, Zhou and Su (2003) research offers support for this in their study on Chinese and American decision-making styles. Their results indicated that Chinese were less brand conscious despite being a culture that places high emphasis on 'saving face'. Hofstede's (2001) scores indicate that Australia is high in uncertainty avoidance (with a score of 51) compared to Singapore (8). Thus, on the basis of these scores we hypothesize that:

**H<sub>2</sub>:** *“there will be a significant difference in brand consciousness between Australians and Singaporean. Australians are expected to be less brand consciousness”.*

### Innovative Decision-Making Style

An innovative decision-making style refers to consumers that seek variety and novelty in their purchase decisions (McAlister & Pessemier, 1982). There appears to be conflict in the literature in terms of the likelihood of Australians and Singaporeans being innovative. The two contrasting approaches will be addressed and then the hypothesized position outlined. According to Hofstede, the predisposition to purchase new and different products and brands is related to two cultural characteristics, namely, high individualism and future orientation (long-term orientation) (Hofstede,

1980). These characteristics are present predominantly in Western cultures, as compared to Eastern cultures (Hofstede, 2001).

Consumer innovativeness was found to be more prevalent in cultures that are more individualistic, masculine and lower in uncertainty avoidance (Steenkamp, Hofstede & Wedel, 1999). For instance, consumers with individualist and masculine values are less likely to be concerned with the image they portray to others and they value new things. Alternatively, consumers that are high in uncertainty avoidance and past time orientation tend to resist novelty or change. They possess variety-seeking tendencies due to the cultural assumption that choice is indicative of an act of self-expression (Kim & Droplet, 2003).

Spears, Lin and Mowen (2001) also reported that the future time orientation of a U.S. sample served as a strong predictor of innovative purchases as opposed to the past time orientation of the Chinese, which focused on tradition and continuity. Further, support of the difference between Eastern and Western innovation decision-making styles collies from Burns and Brady (1992) in their study of need for uniqueness found that an U.S. student sample was considerably less concerned with others' reactions to one's ideas and actions than a Malaysian sample.

So far, the research presented provides support for the Hofstede approach which would predict Australians to be more innovative than Singapore based on their cultural heritage. However, Singaporeans scored low and Australians high on the uncertainty avoidance dimension, thus contradicting the expected behavior of Eastern and Western consumers. Nakata and Sivakumar (1996) proposed that low levels of uncertainty avoidance facilitate the phase of new product development. The context of new product development and Singapore's distinctively low level of uncertainty avoidance suggests the notion that innovativeness is acceptable to Singaporean consumers.

Singapore arguably is unusual among Asian countries in its economic traditions. Its economy has been based on high technology adoption and government strategies have focussed on pushing advanced technology and related skill development (Ebner, 2004). Similarly, Australia can be viewed as somewhat unique among Western countries in its economic traditions. Often referred to as the 'Lucky Country' because of its abundance of natural resources, the Australian economy still relies largely on revenue from raw materials. Although Australians possess higher scores for individualism and are more long term orientated, which are features of an innovative culture they are also risk averse and higher in uncertainty avoidance. It is therefore reasonable to posit that due to Singaporeans low level of uncertainty avoidance, combined with the innovative policies of Singapore, Singaporean consumers are likely to be more innovative focused in their decision-making.

**H<sub>3</sub>** *“there will be a significant difference in innovativeness between Australians and Singaporeans. Hofstede's work and the economic traditions of Singapore and Australia suggest that Singaporeans would be more Innovative”.*

### Recreation Conscious Decision-Making Style

Recreation conscious and hedonistic shopping refers to the extent to which shopping is considered pleasurable and fun (Sproles & Kendall, 1986). Pleasure and fun are internal states and thus are unlikely to be effected by cultural display rules. Display rules refer to prescribed norms for verbal and nonverbal displays and people modify their expressions on the basis of these cultural display rules (Ekman & Friesen, 1969).

Thus, cultural display rules are societal prescribed norms for verbal and nonverbal expression. As such, culture is not expected to influence the experienced pleasure of shopping but rather the types of shopping pursued. Therefore, no differences between Eastern and Western cultures are predicted for this dimension. It should be noted, however, that some empirical evidence exists to support cultural differences. For example, Doran (2002) reported that Chinese found more enjoyment in searching and shopping as compared to North Americans.

**H<sub>4</sub>:** *“there will be no significant difference in recreation consciousness between Australians and Singaporeans”.*

### Price Conscious Decision-Making Style

Price conscious has been defined as a buyer’s “unwillingness” to pay a higher price for a product and/or “the exclusive focus” on paying low prices (Lichtenstein, Ridgway & Netemeyer, 1993, p. 235). Similar to brand conscious decision-making, collectivist cultures are expected to be more concerned with the status attributed to a given brand and more sensitive to maintaining prestige and status (Ho, 1976; Zhou & Nakamoto, 2001).

Given the masculine orientation of Western cultures which places emphasis on ego-goals such as careers and money (Hofstede, 2001), price-conscious decision-making means that items are bought for less and thus, more material goods can be accumulated. Similarly, Gong (2003) postulates that Chinese consumers have a lower price limit for value, compared to Westerners. Based on this, Australians are expected to record higher values on this dimension than Singaporeans. As price is often an indicator of quality, and quality is proposed to be more important to Singaporeans than Australians, we propose that,

**H<sub>5</sub>:** *“there will be a significant difference in price-consciousness between Australians and Singaporeans. Australians are expected to be more price-conscious”*

### Impulse Buying Decision-Making Style

Impulse buying is defined as an unplanned purchase (Rook & Hoch, 1985). Cultures such as Australians high in uncertainty avoidance (UAI) would be expected to be less inclined to impulse buy. They tend to require more information before acting and resist innovation and change. However Australians are also high in individualism where the interests of the individual take priority with the pleasure gained by the purchase and would be supportive of impulse buying. Kacen and Lee (2002) found

that consumers from collectivist societies engaged in less impulse buying than individualists consumers.

Furthermore, the Japanese exhibited more action control than Americans (Abe, Bagozzi & Sadarangani, 1996) and impulse buying was reported to be more prevalent in North Americans than Chinese consumers (Doran, 2002). However, Singaporeans have a distinctively low UAI (8) score and thus are tolerant of ambiguity and are likely to impulse buy as compared to Australians that have a high UAI score (51). In support, Li, Zhou, Nicholls and Zhuang and Kranendonk (2004) found the same number of unplanned purchases for both U.S. and Chinese shoppers, and a higher number of planned purchases for U.S. shoppers. Hence, on the basis of these scores we propose

**H<sub>6</sub>:** *Australians “there will be a significant difference in impulse-buying between Australians and Singaporeans. Singaporeans are expected to be more impulsive”.*

#### Confused By Overchoice Decision-Making Style

Consumers are confused by overchoice when they experience information overload. It is expected that Singaporeans will be less cognitively overloaded in purchase decisions than Australians because of the type of cues they use to make choices. For instance, Eastern consumers have been found to make more effective inter-comparison between brands and attributes, as opposed to Western consumers who made more effective evaluations based on individual attributes of a single brand (Cowley, 2002). Further. Western consumers are less likely to avoid uncertainty and more open to innovation and change, they are likely to consider a greater range of product information and alternatives. People from Western cultures have also been shown to be more focused on specific objects compared to people from Eastern cultures, who took on a broader contextual view (Nisbett, 2003). Similarly, Cowley (2002) found that Western consumers based their evaluations on individual attributes of a single brand in comparison to Eastern consumers who took a more holistic view of products (Cowley, 2002).

Furthermore, people of Chinese background, due to their collectivistic nature, searched more and relied on social networks for information as compared to the North Americans, whom used a variety of information sources (Doran, 2002; Hofstede, 2001). Cultures that score highly on the Hofstede (2001) dimension of uncertainty avoidance may feel stressed by the ambiguity that too many choices present. Thus Australians, who are exposed to a wide variety of product choices, may feel overloaded due to their need low tolerance of uncertainty. We therefore hypothesize that:

**H<sub>7</sub>:** *“there will be a significant difference in confused by over-choice between Australians and Singaporeans. Australians are expected to be more confused by Overchoice”.*

## Brand Loyal Decision-Making Style

Brand loyalty measures the extent to which consumers form habitual purchases and remain with their favourite brands or stores (Sproles & Kendall, 1986). Brand loyalty is a risk reduction strategy, which is consistent with Hofstede's (2001) cultural dimension of uncertainty avoidance (UAI) as uncertainty avoidance increases risk aversion (Yau, 1988). Consumers high in UAI such as Australians prefer to avoid uncertainty and are likely to use the familiarity of brands to reduce ambiguity.

This is supported by the following studies. One study showed a stronger perceived risk and brand loyalty relationship in the United States than in Thailand (Verhage, Yavas, Green & Borak, 1990). The other study showed that Australians made more habitual purchases than PRC Chinese (Lowe & Corkindale, 1998). We therefore hypothesize that:

**H<sub>8</sub>:** *“there will be a significant difference in brand loyalty between Australians and Singaporeans. Australians are expected to be more brand loyal”.*

## **METHODOLOGY**

Awareness of the importance of cross-cultural research has increased for both researchers and practitioners and is likely to continue growing (Malhotra, Argarwal & Peterson, 1996). A key issue when undertaking cross-cultural research is the comparability of the phenomenon and the meaning attached to survey items in each culture (Malhotra, Argarwal & Peterson, 1996). The selection of two countries where English is a primary language assists in overcoming this difficulty as well as the research team comprising individuals who are citizens of both countries. As such the survey was issued in English in both countries.

Data were collected through a mail questionnaire in English (while Chinese is an official language of Singapore, people are educated and day-to-day communication occurs in English). This study compares and examines the differences on Consumer Style Index (CSI) between Anglo-Saxon Australians and Singaporean Chinese residents in Singapore and Australia. Anglo-Saxon and Chinese are the dominant racial cultures in these countries. Furthermore, both countries are considered developed economies and have economic links in importing and exporting goods and services because Australia is part of the ASEAN free trade area (East & Lloyd, 2001).

### Sample

An intrinsic case study design was the research strategy adopted for the study. This research focused on only two cases (samples) as the purpose was analytic theoretical generalization and not statistical generalization and so the number of case studies employed was sufficient for the purpose required (Yin, 1994). In addition real life samples were used instead of student samples which are dominant in the previous studies of the CSI. The use of real life samples increases the validity of the findings for real business life as the respondents are real consumers (Ulijn, 2000).

Berg (1998) identifies four types of sampling strategies for research — purposive, systematic, stratified and random. Random sampling is where every unit in the population has the same probability of being chosen. The intention is to produce a representative sample. This sampling technique was employed as the purpose of the research was to compare two cultures at a broad level.

A random sample was drawn from residents of Australia and Singapore. The response rates were 24.8% for Singapore and 30.3% for Australia, this included all returned surveys. After deleting incomplete surveys and responses from non-Anglo-Saxon (Australia) and non-Chinese residents (Singapore), the useable sample consisted of 352 for Singapore and 182 for Australia. Anecdotal comments regarding consumer attitudes in Singapore influenced the decision to double the amount issued in Singapore, however this proved unnecessary as the response rate from Singapore was reasonable and within acceptable limits. The data were tested for non-response bias using the method recommended by Armstrong and Overton (1977) where key demographics of waves of early and late respondents are compared. There were no significant differences and thus non-response bias appears to not be a concern.

The majority of respondents in both samples were females with 54.83% of the Singaporean and 64.29% of the Australian sample. The mean age range was 32 – 36 years for the Singaporean sample and 27-31 for the Australian sample. The Australian respondents were relatively equally distributed between married, never married and de facto categories however there were no de facto relationships indicated by the Singaporeans and most (73.86%) were married. The currency was in local denominations, but when converted, the mean income range for Singaporeans was Aud\$26, 000 - \$30, 249 and Aud\$26,000 - \$31,199 for the Australian sample. These differences were tested for significance with the results indicating the differences in gender, marital status, and age was significant. An ANCOVA test was conducted and revealed there were no significant relationships between these potential covariates and the dependent variables.

## Measures

The questionnaire consisted of demographic questions and items for the consumer decision-making index (Sproles & Kendall, 1986). Respondents were asked to indicate their cultural background. For the purposes of this research, only the responses from Singaporeans with Chinese backgrounds and Australian's with Anglo-Saxon backgrounds were used.

Each of the eight factors in the Consumer Styles Index (Sproles & Kendall, 1986) consisted of a range of items (see table III). To recap, these factors are quality conscious, brand conscious, innovative/fashion conscious, recreation conscious, price conscious, impulse buying, confused by overchoice and brand loyal decision-making styles. The items for the innovativeness factor were altered as the original scale was only concerned with fashion and the statements were heavily skewed towards this product type. In this research we sought a more general approach to purchasing goods rather than a specific product type and thus the items were adapted from Raju's (1980) scale of innovativeness in shopping. The respondents were presented with the items in Likert-style format with a five-point scale ranging from strongly disagree (1)

to strongly agree (5). The higher the score the higher the respondent rated on that factor.

### **“Take in Table III”**

The sequence of the questions were randomly arranged to avoid bias (Judd, Smith & Kidder, 1991). Instrumental and functional equivalence for the cross-cultural study was attained as both countries utilise English as first language and possess similar levels of economic development. Items that were not reliable or valid across both cultures were removed to ensure measurement equivalency. Consistent with previous research on consumer decision-making styles, this study investigates the decision-making styles of adult consumers (Fan & Xiao, 1998; Hiu, Siew, Wang & Chang, 2000). In Australia and Singapore an adult is legally defined as anyone aged above 18 years (Interpol, 2002; Urbas, 2000). A screening question was included to ensure that the respondent was aged over 18 to allow for comparison of adult perspectives. Respondents who completed the questionnaire but were under 18 were deleted from the sample.

The statistics of Cronbach alpha and item-to-total correlations was undertaken to assess the internal consistency of the instrument (Nunnally & Bernstein, 1994). Reliability tests were conducted on all 46 items and items that were below the thresholds of 0.6 for Cronbach’s alpha and 0.3 for item-to-total correlation (Nunnally & Bernstein, 1994) were removed from further analyses. These reliability tests were performed as “any summated scale should be analyzed for reliability to ensure its appropriateness before proceeding to an assessment of its validity” (Hair et al., 1998, p. 118). Factor Analysis is used to test the validity of the items and to determine the dimensionality of a scale. It was used in this study to see if the same factor structure (same makeup and number of dimensions) applied across the countries studied. Factor Analysis via Principal Component Analysis was conducted on the 46 items to examine the suitability of the 8-factor model in each country (Singapore and Australia). Items that had factor loadings lower than 0.30 were deemed to be poor indicators of the construct and were removed from the analysis and hypotheses testing.

### **“Take in Table IV & V”**

## **METHOD OF ANALYSIS**

The demographic data were analysed to provide frequencies and measures of central tendencies. For each respondent, an aggregate score for each decision-making styles was calculated from the item score (items for each style are detailed in table III). Mean scores were then compared for each style using ANCOVA to test the hypotheses. ANCOVA is used to compare means while adjusting for covariates such as age, gender and income.

The initial item-to-total correlations, Cronbach alphas and factor loadings are presented in Table IV along with the statistics for the final items in Table V. It is evident from these tables that the removal of poor performing items for price conscious left only one item and only two for impulse buying, this is an insufficient number of items to establish reliability and validity and thus these factors were not

able to be tested further using ANOVA. Reliability indicates the stability of a measure in a given context, if a measure is not stable then even when significant differences are detected one cannot be confident of the direction or the significance of the findings shown (see Nunnally & Bernstein 1994). Even if factor loadings indicate validity, without reliability (particularly when comparing across cultures) the findings cannot be interpreted as anything but artefact.

## **RESULTS**

### **Cultural Differences in Consumer Decision-Making Styles**

The ANOVA results are presented in Table VI with four of the six hypotheses supported. Hypothesis 1 “there will be a significant difference in quality consciousness between Australians and Singaporeans. Singaporeans are expected to be more quality conscious” was not supported as there were no significant differences between the countries. Hypothesis 2 “there will be a significant difference in brand consciousness between Australians and Singaporeans. Australians are expected to be more brand consciousness” was supported with a significant difference.

Hypothesis 3 “there will be a significant difference in innovativeness between Australians and Singaporeans. Singaporeans are expected to be more innovative” was supported. The direction of the results supported the prediction based on economic traditions, that is, Singaporeans were more innovation focussed than Australians.

Hypothesis 4 “there will be no significant difference in recreation consciousness between Australians and Singaporeans”. The results indicated no difference and so the hypothesis was supported. Hypothesis 5 “there will be a significant difference in price-consciousness between Australians and Singaporeans. Australians are expected to be more price-conscious” was not tested due to a lack of reliability amongst the items. Hypothesis 6 “there will be a significant difference in impulse-buying between Australians and Singaporeans. Singaporeans are expected to be more impulsive” was also not tested due to a lack of reliability. Hypothesis 7 “there will be a significant difference in confused by overchoice between Australians and Singaporeans. Australians are expected to be more confused by overchoice” was supported by the results. A significant difference was found in the hypothesized direction.

Finally, hypothesis 8 “there will be a significant difference in brand loyalty between Australians and Singaporeans. Australians are expected to be more brand loyal” was not supported. There were no significant differences between the countries.

These findings indicate that there were significant country differences for the decision-making styles of brand consciousness, innovativeness and confused by overchoice, with the magnitude of the differences the greatest for innovativeness. There were no significant differences between consumers from Singapore and Australia for quality consciousness, recreation consciousness and brand loyalty decision-making styles.

## **‘Take in Table VI’**

As seen in Table VI, Hypotheses 2 to 7 were fully supported. The support found for Hypotheses 2 and 3 demonstrated that the economic tradition explanation prevailed over an explanation based on Hofstede’s cultural dimensions. Finally, there was no support for Hypotheses 1 and 8 indicating no cultural differences in quality conscious and brand loyalty, and hypotheses 5 and 6 were not able to be tested as the items were not reliable.

## **DISCUSSION**

The findings indicate mixed evidence for the application of Hofstede’s cultural dimension to Australian and Singaporean consumer decision-making styles. In particular it appears that while a culture may be classified according to several of the dimensions, they do not all interact consistently with each other. For instance Australians high on individualism and one would then expect they would be less concerned with making mistakes in front of others and thus be more willing to take a risk compared to Singapore who are a more collectivist concerned and concerned with the opinions of the community.

However, Australians scored higher on uncertainty avoidance with means they are risk averse, thus conflicting with their score on the individualism dimension. It would be interesting to conduct a study that investigates the relative influence and interplay of each dimension on the consumer decision-making styles to identify dimensions that may take precedence over others.

People from Singapore, with a culture dominated by an Eastern cultural heritage (Hofstede, 2001), were expected to be more quality conscious and innovative. While they were found to be more innovative the results found no differences in quality conscious and the mean score (2.19) demonstrated that the consumers from Singapore made low quality conscious decisions.

In contrast, Australians, with a culture dominated by Western cultural heritage, were expected to be more brand conscious, confused by overchoice and more brand loyal. In support of expectations, Australians were more brand conscious and confused by overchoice, although not extremely so (mean of 3.24). However, the findings indicated that there were no significant differences in brand loyalty levels.

There were no cultural differences in quality consciousness, recreation consciousness and brand loyalty decision-making styles. This means that the results show both consistency and conflict with previous research. In particular, the participants from Singapore had unexpectedly low levels of quality consciousness compared to Chinese consumers who had moderately high levels (Fan & Xiao, 1998). One explanation for this difference may be the stage of economic development in each country and the standard of quality of available goods. In China, the quality of goods is not consistent (Fan & Xiao, 1998), thus quality would be an important purchase criteria. However in Singapore, which is a more developed country, quality standards are relatively high and comparable to Australia and so product quality may

be a basic assumption of both Australian and Singaporean consumers and not an essential part of the decision-making process.

Brand conscious decision-making was higher for Australian consumers than for Singaporean consumers, which contrasts with Ahuvia and Wong's (1998) proposition that goods serve as status symbols for Eastern consumers and provides support for Bao, Zhou and Su (2003). It appears that Australian consumers buy symbolic goods that are expensive and reputable to convey a brand personality that satisfies their individual self-concepts. Thus the research suggests that individualism dimension may have more impact on decision-making styles than the power distance dimension. Brands may be used to express individualism rather than to reflect a level of hierarchy in society.

Innovative shopping behavior was higher in the sample from Singapore than the sample from Australia. The results correspond with the argument that that Singaporeans would be more innovative seeking due to a lower level of uncertainty avoidance (Hofstede, 2001; Lowe & Corkindale, 1998; Spears et al., 2001). The results indicate that Singaporean consumers appear to be more concerned with the future than the past in terms of time orientation (Spears et al., 2001). Singaporean economic culture is more based on technology and information libraries than the Australian economic culture, which historically has been based more around natural resources. Hence, the economic traditions of Singapore with their Innovation Policy (Ebner, 2004) may account for the consumer decision-making style coupled with their high tolerance for ambiguity (scored 8 for the uncertainty avoidance dimension). Thus this decision-making style seems to be influence by the cultural dimension of uncertainty avoidance and also government economic policy.

As expected, there was no difference in recreation conscious decision-making for both cultures and contributes towards the mixed evidence in the literature for this style. The results are consist with the view that shopping is perceived as a task rather than leisure, and consumers attribute their disinterest to shopping as being a waste of time (Ackerman & Tellis, 2001; Doran, 2002). Alternatively the results contrast with literature that proposed American consumers are less receptive towards leisure shopping than Eastern consumers (Ackerman & Tellis, 2001; Doran, 2002).

Australians were more confused by overchoice as expected. This is consistent with the literature that proposes Eastern and Western consumers possess different cognitive and decision-making processes and Eastern consumers are better able to recognize and process information integratively (Cowley, 2002; Doran, 2002). These findings possibly explain the lower rating of consumer innovativeness of Australian consumers as compared to Singaporean consumers. Accordingly, 'innovation overload' could occur because increased information and options impedes the diffusion of future innovations. Thus, the limited choice of mass media in Singapore (Tai & Tarn, 1996) could reduce the amount of information that consumers face.

Finally, there were no differences in brand loyalty, which was an unexpected finding. This is inconsistent with the literature, which indicates that cultures with high aversion to uncertainty (such as Australians) prefer familiarity and are risk adverse (Yau, 1988). A possible explanation could be due to Singaporeans being less inclined to adhere to group norms and are more individualistic than assumed. This perspective

is consistent with the proposition that innovativeness requires individuals to initiate behaviors different from group norms (Midgley & Dowling, 1978) and that individualism increases with the economic development (Hofstede, 2001).

The objective of this research was to compare the decision-making styles of Singaporeans and Australians as two important trading partners in the Asia-Pacific region with different cultural heritages. The results demonstrate that most of the expected relationships were present in the data. Further research is required on how and why some cultural dimensions are prevalent in consumer behavior and others are not.

## **LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH**

This study contributes to practical and theoretical research on cross-cultural differences in consumer decision-making styles by testing and providing empirical support regarding consumer marketing choices in Australia and Singapore. Nonetheless, as with all research, the current study has a number of limitations which need to be recognized. These limitations may also prove valuable as outlets for future research.

First, the research participants were randomly selected to allow for objective evaluation of the results (Malhotra et al., 2004). Alternative sampling techniques for future studies may look at stratified or purposive sampling depending on the nature of the study and whether it is aimed at generalization. For instance, stratification could be used to differentiate between the ethnic groups of Chinese, Malays, Indians and Eurasians in Singapore. However, for the purpose of this study, random selection was deemed appropriate. Future research could use stratified sampling to where the researcher ensures that segments of interest in the identified population are represented.

Second, was the study done at one point in time as is cross-sectional. This is a limitation and also an avenue for future research as future studies may look at a longitudinal study.

Third, as the aim of this study was to examine one case study in-depth, the results are not intended to be generalizable. To gain a better and more general overview of this research area, future studies may expand the sample to include other nations with similar economic conditions such as Japan, Taiwan and Hong-Kong.

Fourth, were there are variables which were not studied? Future research could examine specific demographic variables on each decision-making style such as gender, age and income. Integrating different variables could provide more reliable information and a more in-depth analysis of the different demographic segments of future cross cultural studies. This research was concerned primarily with inter-country differences and thus the research focused solely on the primary research question. However, future studies may incorporate these variables to examine different aspects of demographic cross-cultural differences in consumer decision-making styles.

Fifth, there were two factors that did not have significant differences. It would be useful to conduct a future study that contained both quantitative and qualitative studies to report on differences and to explain why these occur/not occur. Including

both methods would also improve the validity and reliability of the research (Ulijn 2000).

Lastly, there is potential to investigate the influence of different product type on decision-making styles for different countries. Previous CSI research has a focus on general shopping orientation and a different approach would further enhance both theoretic and practitioners' understanding of shopping behavior in different cultures.

## **MANAGERIAL IMPLICATIONS**

In this paper, we argued that cross-cultural differences in consumer decision-making styles would extend to the purchase of goods. We integrated the concept of consumer decision-making style with Hofstede's typology of culture and empirically tested predictions from the framework on a sample of consumers from Australia and Singapore.

There are a number of managerial implications flowing from the research. First, the theoretical analysis provides insight on how cultural background affects consumer decision-making styles. Second, the research indicates that managers and practitioners need to consider cultural background in recruiting, selecting and training workers dealing with consumers of goods. Similarly, the findings provide insight on how organizations should position themselves with respect to their markets in different cultural settings. As noted by Hoppe (2004, p. 74), the study of cultural values is essential to effective globalization and management strategy as it enables the improvement of the quality of products and services.

Third, it can be inferred from the findings that organizations need to modify their messages and communications in different cultures to accord with differences in consumer decision-making styles. This is particularly relevant for multi-national corporations (MNCs), which manage across national boundaries.

Fourth, organizations need to be careful about creating generalizations and stereotyping consumer behaviors on the basis of Hofstede's typology. While Singapore and Australia reflected traditional Eastern and Western typologies (Hofstede, 2001) these dimensions did not always have the expected results in predicted behavior. Finally, the findings have implications for performance management in that they suggest that criteria for goods service and quality need to be tailored to the cultural setting.

In conclusion, we have shown that consumer decision-making styles for goods differs according to consumers' cultural orientation and that consumer behavior can be predicted from an understanding of the cultural personality of consumers. Thus, products and services can be better designed to meet consumer needs, consumer behavior can be better predicted decreasing uncertainty for organizations, managers can hold more confidence in organizational strategies, and greater insight into consumer behavior can facilitate economic stability.

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<b>Table 1 scores on Hofstede's Dimensions for Australia and Singapore</b>										
	<b>Power Distance</b>		<b>Uncertainty Avoidance</b>		<b>Individualism/Collectivism</b>		<b>Masculinity/Femininity</b>		<b>Long /short Term Orientation</b>	
	Index	Rank	Index	Rank	Index	Rank	Index	Rank	Index	Rank
Australia	36	41	<b>51</b>	37	<b>90</b>	2	<b>61</b>	16	31	22-24
Singapore	<b>74</b>	13	8	53	20	39-41	48	28	<b>48</b>	9

Hofstede (2001, p500)



**Table 11**  
**Implications of Hofstede's Typology for Consumer Decision –Making**

	<b>Power distance</b>	<b>Uncertainty avoidance</b>	<b>Individualism</b>	<b>Masculine orientation</b>	<b>Long term orientation</b>
<b>Definition</b>	Inequality in prestige, wealth and power	Tolerance for ambiguity	Emphasis is on the individual rather than the group	Emphasis is on ego-goals such as careers and money	Stability, persistence and respect for tradition
<b>Hofstede's Singapore Score</b>	High	Low	Low	Low	High
<b>Hofstede's Australian Score</b>	Low	High	High	High	Low
<b>Quality conscious</b>	Power distance involves a hierarchy of quality rather than equality				
<b>Brand conscious</b>	Status and prestige can be reflected through brands		Lack of need for approval from the group for particular brands. Brands express the individual		
<b>Innovative</b>		High risk propensity and low resistance to change	Less concerned with making mistakes in front of others	Greater emphasis on material goods and increases propensity to purchase new things	Tradition outweighs the need for variety or innovation
<b>Recreation conscious</b>	–	–	–	–	–
<b>Price conscious</b>			Individualist cultures are more price sensitive and don't care about how being perceived as 'cheap'. Low price often means low quality	Price-conscious behaviour results in items bought for less, more goods can be accumulated	

<b>Impulse-buying</b>		Require little information before acting, resist innovation and change			
<b>Confused by</b>		Less likely to consider	Tend to rely more on own sources		
<b>Overchoice</b>		A greater range of product information and alternatives	Of information rather than social networks		
<b>Brand loyal</b>		Brand loyalty is a risk reduction strategy and thus less likely	Brands used to express individual identify		Long-term orientation promotes continuity

\* Note the comments in the table relate to high levels of the dimension

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**Table 111.**  
**Measures for the Eight Decision-Making Styles**

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**Quality conscious Decision-Making Style (8 items)**

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- 1) Getting very good quality goods/services is very important to me
  - 2) When it comes to purchasing goods/services, I try to get the very best or perfect choice
  - 3) In general, I usually try to buy the best overall quality for goods/services.
  - 4) I make special effort to choose the very best quality goods/services.
  - 5) I really don't give my goods/services purchases much thought or care.
  - 6) My standard and expectations for goods/services I buy are very high
  - 7) I shop quickly, buying the first good/service I find that seems good enough
  - 8) A good/service doesn't have perfect, or the best to satisfy me
- 

**Brand conscious Decision-Making Style (7 items)**

---

- 1) The well-known national brands of goods/services are best for me
  - 2) The more expensive brands of goods/services are usually my choice
  - 3) The higher the price of a good/service, the better its quality
  - 4) Nice department and speciality stores offer me the best goods/Up-market or speciality hotels offer me the best services.
  - 5) I prefer buying the best selling brands of goods/services.
  - 6) The most advertised brands of goods/services are usually very good choices.
  - 7) A good/service doesn't have to look perfect or the best, to satisfy me.
- 

**Innovative in shopping decision-Making Style (10 items)**

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- 1) When I see a new or different brand of good/service, I often buy it just to see what it is like
  - 2) I am the kind of person who would try any new good/service once.
  - 3) A new store or restaurant is not something I would be eager to find out about.
  - 4) I am very cautious in trying new goods/services.
  - 5) For an important date or dinner, I would be wary of trying new foods/restaurant.
  - 6) I would rather wait for others to try a new store selling goods/services than try it myself
  - 7) When I see a new brand of good/service somewhat different from usual, I investigate it
  - 8) Investigating new brands of goods/services is generally a waste of time
  - 9) When I hear of a new store/service provider selling the goods /services I want to purchase, I take advantage of the first opportunity to find out more about it.
  - 10) I enjoy taking chances in buying unfamiliar brands of goods/services just to get some variety in my purchases.
- 

**Recreation Conscious Decision-Making Style (5 items)**

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- 1) Shopping for goods/services is not a pleasant activity to me.
  - 2) Shopping for goods/services is one of the most enjoyable activities of my life.
  - 3) Shopping the stores for goods/services waste my time.
  - 4) I enjoy shopping for goods/services just for the fun of it.
  - 5) I make my goods/services shopping trips fast.
- 

**Price Conscious Decision-making Style (3 items)**

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- 1) I buy goods/services at sale prices.
  - 2) The lower price goods/services are usually my choice
  - 3) I look carefully to find the best value for the money goods/services
-

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### Impulse Buying Decision making Style (5 items)

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- 1) I should plan my shopping for goods/services more carefully than I do
  - 2) I am impulsive when purchasing goods/services
  - 3) Often I make careless goods or services purchases I later wish I had not bought them
  - 4) I take the time to shop carefully for the best buys for goods/services
  - 5) I carefully watch how much I spend on goods/services
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### Confused by Overchoice Decision-Making Style (4 items)

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- 1) There are so many brands of goods/services to choose from that I often feel confused
  - 2) Sometimes it's hard to choose which stores to shop for goods/services provider to go to.
  - 3) The more I learn about goods/services, the harder it seems to choose the best
  - 4) All the information I get on different goods/services confuses me.
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### Brand Loyal Consumer Decision-Making Style (4 items)

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- 1) I have favourite brands of goods/services I buy again and again.
  - 2) Once I find good/service brand I like, I stick with it.
  - 3) I go to the same stores each time I shop for goods/service provider each time I shop
  - 4) I regularly change the brands of goods/services I buy.
-

**Table IV**  
**Initial Reliability Results (Item-to-Total Correlations and Cronbach Alpha)**

	Singapore Goods		Australia Goods	
	Item-to-total correlation	Factor loadings	Item-to-total correlation	Factor loadings
Quality 1	.57	.765	.59	.770
Quality 2	.59	.781	.54	.740
Quality 3	.48	.669	.52	.697
Quality4	.61	.785	.72	<b>.852</b>
<b>Quality 5</b>	<b>.24</b>	.332	.34	.405
Quality 6	.46	.648	.61	.750
<b>Quality 7</b>	<b>.23</b>	.312	.30	.372
<b>Quality 8</b>	<b>.19</b>	.318	<b>.23</b>	.343
<i>Cronbach's Alpha</i>	.72		.77	
Brand 1	.47	.632	.43	.580
Brand 2	.52	.679	.64	.780
Brand 3	.60	.763	.56	.717
Brand 4	.43	.600	.48	.640
Brand 5	.55	.711	.65	.791
Brand 6	.60	.757	.55	.705
<i>Cronbach's Alpha</i>	.78		.80	
Innovative 1	.39	.624	.50	.691
Innovative 2	.37	.584	.45	.631
Innovative 3	.39	.637	.38	.559
<b>Innovative 4</b>	<b>.29</b>	.372	.50	.592
<b>Innovative 5</b>	<b>.15</b>	.207	<b>.18</b>	<b>.224</b>
<b>Innovative 6</b>	<b>.26</b>	.317	.33	.413
<b>Innovative 7</b>	<b>.29</b>	.531	.48	.676
<b>Innovative 8</b>	<b>.28</b>	.423	.45	.598
Innovative 9	.42	.635	.42	.613
<b>Innovative 10</b>	<b>.29</b>	.499	.35	.463
<i>Cronbach's Alpha</i>	.64		.73	
Recreation 1	.59	.809	.72	.853
Recreation 2	.62	.804	.64	.794
Recreation 3	.39	.627	.37	.545
Recreation 4	.31	.516	.56	.734
Recreation 5	.41	.632	.56	.738
<i>Cronbach's Alpha</i>	.70		.79	
<b>Price 1</b>	<b>.28</b>	.725	.42	.623
Price 2	.32	.670	.30	.430
<b>Price 3</b>	<b>.22</b>	.636	.35	.525
<i>Cronbach's Alpha</i>	.42		.55	
<b>Impulse 1</b>	<b>.29</b>	.556	.44	.708
Impulse 2	.58	.829	.47	.732
Impulse 3	.43	.726	.48	.747
<b>Impulse 4</b>	<b>.28</b>	.495	<b>.26</b>	.449
<b>Impulse 5</b>	<b>.25</b>	.468	<b>.32</b>	.534

<i>Cronbach's Alpha</i>	.61		.64	
Confused 1	.69	.872	.57	.800
Confused 2	.39	.587	.42	.646
Confused 3	.44	.669	.47	.703
Confused 4	.067	.858	.55	.787
<i>Cronbach's Alpha</i>	.74		.71	
Loyal 1	.50	.793	.40	.775
Loyal 2	.64	.866	.45	.801
Loyal 3	.45	.721	.32	.587
<b>Loyal 4</b>	<b>.22</b>	.406	<b>.23</b>	.443
<i>Cronbach's Alpha</i>				

**Note:** **Bold** indicates items with values less than 0.30 threshold (Nunally and Bernstein)

**Table V**  
**Reliability and Validity for Final items**

	Singapore Goods		Australia Goods	
	Item-to-total correlation	Factor loadings	Item-to-total correlation	Factor loadings
Quality 1	.62	.782	.67	.804
Quality 2	.64	.796	.65	.784
Quality 3	.52	.685	.57	.723
Quality4	.63	.791	.75	.857
Quality 6	.49	.662	.59	.738
<b>Cronbach's Alpha</b>	<b>.80</b>		<b>.84</b>	
Brand 1	.47	.632	.43	.580
Brand 2	.52	.679	.64	.780
Brand 3	.60	.763	.56	.717
Brand 4	.43	.600	.48	.640
Brand 5	.55	.711	.65	.791
Brand 6	.60	.757	.55	.705
<b>Cronbach's Alpha</b>	<b>.72</b>		<b>.77</b>	
Innovative 1	.43	.710	.53	.601
Innovative 2	.40	.682	.45	.485
Innovative 3	.47	.726	.40	.422
Innovative 9	.35	.626	.54	.590
<b>Cronbach's Alpha</b>	<b>.63</b>		<b>.70</b>	
Recreation 1	.59	.809	.72	.853
Recreation 2	.62	.804	.64	.794
Recreation 3	.39	.627	.37	.545
Recreation 4	.31	.516	.56	.734
Recreation 5	.41	.632	.56	.738
<b>Cronbach's Alpha</b>	<b>.70</b>		<b>.79</b>	
Confused 1				
Confused 2				
Confused 3				
Confused 4				
<b>Cronbach's Alpha</b>	<b>.74</b>		<b>.71</b>	
Loyal 1	.57	.829	.46	.835
Loyal 2	.63	.862	.49	.847
Loyal 3	.47	.736	.30	.523
<b>Cronbach's Alpha</b>	<b>.73</b>		<b>.60</b>	

<b>Table VI</b>					
<b>Cross-cultural differences in decision-making styles</b>					
<b>CSI Styles</b>	<b>F-stat</b>	<b>Singapore Mean</b>	<b>Australia Mean</b>	<b>Hypothesis</b>	<b>Support for hypotheses</b>
Quality Conscious	1.35	2.19	2.26	H <sub>1</sub>	No
<b>Brand Conscious</b>	<b>4.31*</b>	<b>3.24</b>	<b>3.37</b>	<b>H<sub>2</sub></b>	<b>Yes</b>
<b>Innovative</b>	<b>8.63**</b>	<b>2.73</b>	<b>2.54</b>	<b>H<sub>3</sub></b>	<b>Yes</b>
Recreation Conscious	<b>1.18</b>	<b>2.62</b>	<b>2.70</b>	<b>H<sub>4</sub></b>	<b>Yes</b>
<b>Confused by Overchoice</b>	<b>18.43***</b>	<b>2.91</b>	<b>3.20</b>	<b>H<sub>7</sub></b>	<b>Yes</b>
Brand Loyal	0.91	2.42	2.35	H <sub>8</sub>	No

\*p<.05, \*\*p<.01, \*\*\*p<.001

Note: two of the eight decision-making styles could not be tested due to lack of reliability amongst the items. These were price conscious and impulse buying.

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