

# ASSESSING CONSUMER VANITY IN AUSTRALIA AND CHINA

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## Abstract

Given the unmistakable trend toward a more integrated global economy and the tremendous impact of vanity on consumer demand for countless goods and services, there exists a need for more cross-cultural research on the important psychological construct known as consumer vanity (Netemeyer, Burton, and Lichtenstein 1995). Survey data was collected from 400 university students in Australia and China. This study followed the comprehensive analytical framework proposed by Steenkamp and Baumgartner (1998) to assess measurement equivalence in cross-cultural consumer research through the use of multiple-group confirmatory factor analysis. The 21-item consumer vanity measure was found to possess adequate metric invariance and scalar invariance for factor mean comparisons across the countries. Several theoretical perspectives were used to generate research hypotheses regarding cultural differences in each component of the consumer vanity construct. Hypothesis testing results lent support to most of the research hypotheses.

## Introduction

The expansion of global mass communication, coupled with modern technology, has led to the increasing globalisation of world markets and the creation of a global consumer society. Marketers have greatly contributed to the development of global consumer culture with their advertising messages that appeal to physical beauty and achievement status. A fixation with physical appearance and achievement of personal goals are manifestations of an underlying consumer value orientation known as consumer vanity (Netemeyer, Burton, and Lichtenstein 1995). Western consumer culture is dominated by a preoccupation with both appearance and achievement related vanity. Very few consumer products are sold today without at least an allusion to physical beauty and achievement status. In response to calls for comparative studies on consumer vanity between Western and Eastern cultures, the current research attempts to investigate the cross-cultural applicability of the consumer vanity measure in Australia and China. In addition, it tests research hypotheses concerning cultural differences between the two countries in the four specific components of the vanity construct, namely appearance concern (APC), appearance perception (APP), achievement concern (ACC), and achievement perception (ACP).

## Theoretical Background

### *Individualism versus Collectivism*

The cultural dimension of *individualism versus collectivism* is commonly viewed as the most salient source of cultural differences in social behaviour. It has widely been used to explain general differences between Western views of self and Eastern perspectives on the concept of self (eg, Hofstede 1980). Markus and Kitayama (1991) have identified and explicated two concepts of the self: independent and interdependent views of self. They contend that people from Western individualist cultures tend to conceptualise the self as a

relatively independent and autonomous entity. The self has a unique configuration of personal attributes that governs the individual's behaviours. In contrast, people from Eastern collectivist cultures view the self not as detached from the surrounding context but as defined more by relationships with members of one's in-groups, such as family members, relatives, and co-workers. Social judgments, such as first impressions of others, are more likely to be based on group-related attributes such as family background, rather than personal characteristics such as physical attractiveness. Hofstede (1980) reported that the country scores on his individualism dimension were 90 for Australia and 20 for China. Given the markedly different scores, it can be predicted that people in Australia exhibit higher levels of appearance concern than people in China. In the case of achievement concern, a similar hypothesis can be developed.

#### *Human versus Nature Orientation*

The dimension of *human versus nature orientation* was another important source of cultural variations. In the Western world, having a socially desirable body has come to symbolise certain cherished cultural values such as self-discipline, internal control, and competitiveness. Women's struggle to achieve thin bodies is portrayed in Western advertising as liberating and empowering. In contrast, people living in Eastern societies traditionally regard human being as a part of nature and believe that human being should not try to master nature but has to learn how to adapt to it so as to reach harmony. Hence, they are likely to be more comfortable with the natural process of aging and gaining weight. The human versus nature orientation bears a very considerable resemblance to the locus of control construct. When a person perceives an event as a consequence of fate, luck, or chance, Rotter (1966) labels this a belief in external control. If the person perceives the event as a result of his or her own behaviour or effort, Rotter (1966) terms this a belief in internal control. According to Smith, Trompenaars, and Dugan (1995), the mean external control scores are 10.04 for China and 8.23 for Australia. Given the external control scores for the two countries, it can again be predicted that people in Australia exhibit higher levels of appearance concern than those in China. A similar hypothesis regarding concern for achievement can also be formulated. Past research has indicated that internally controlled people showed more overt striving for achievement than those who felt they had little control over their environment (Rotter 1966). From the above discussion, the following two research hypotheses are derived:

- H<sub>1</sub>:** Australians will exhibit higher levels of appearance concern (APC) than people in China.
- H<sub>2</sub>:** Australians will exhibit higher levels of achievement concern (ACC) than people in China.

An individual's perceptions of self are often referred to as self-concept. It is comprised of perceptions of one's abilities and personal attributes as well as perceptions of one's self in relation to the social and physical environments. Given the centrality of physical appearance to self-concept in individualist cultures such as Australia and the expected higher global self-esteem of Australians, it can be predicted that Australians will exhibit higher levels of appearance perception than people in China. In the case of achievement perception, a similar hypothesis can be formulated. Given the important role of personal achievement to self-esteem in the West and the higher general self-esteem of Australians, it can be predicted that Australians will exhibit higher levels of achievement perception than people in China. The foregoing discussion is summarised in the following two research hypotheses:

- H<sub>3</sub>:** Australians will exhibit higher levels of appearance perception (APP) than people in China.
- H<sub>4</sub>:** Australians will exhibit higher levels of achievement perception (ACP) than people in China.

## **Method**

### *Sample and Metric Equivalence*

In order to guard against possible sample selection bias, samples for this study are drawn from an identifiable subgroup of the general population. The data for this study comes from a personal survey conducted with students recruited from universities in Australia and China. In each country, students were asked to complete a survey administered during class time. A total of 400 usable questionnaires were obtained with each country contributed to half of the sample. In each country, males and females were equally distributed. Metric equivalence refers to equivalence in scale and scoring procedures used in cross-cultural research. This study uses the state of the art diagnostic techniques recommended by Steenkamp and Baumgartner (1998) for evaluating various forms of metric equivalence: (1) configural invariance, (2) factorial invariance, and (3) scalar invariance. Without evidence of at least partial cross-national scalar invariance, comparing factor means across countries is meaningless. This is because the observed mean differences might be due to either real factor mean differences or response bias and/or different scale metrics. In this study, the four components of the vanity measure have to exhibit at least partial scalar invariance across cultures before valid tests for cultural differences can be conducted. After establishing scalar invariance across cultures, the present study conducts research hypothesis testing of factor means via multiple group confirmatory factor analysis with mean structures. This approach is considered superior to the traditional MANOVA approach because it takes into account both the systematic response bias and random measurement errors.

## **Results**

Examination of exploratory factor analysis (EFA) results indicates that the 21-item vanity measure yielded four factors in both countries. The Cronbach's coefficient alpha values were all greater than 0.9, suggesting that the four vanity subscales were highly reliable. After EFA and reliability analysis, confirmatory factor analysis (CFA) was conducted for each country. The objective was to examine whether the vanity scales are psychometrically sound within each country. As shown in Table 1, the hypothesized four-factor measurement model representing the four vanity components appears to fit the data reasonably well across the two countries. Although the chi-square statistics were statistically significant, this is not unusual with large sample sizes. The Tucker-Lewis index (TLI), and comparative-fit index (CFI) all exceeded the recommended cut-off value of 0.90. The values of the root mean square error of approximation (RMSEA) were below the recommended value of 0.08. And the normed chi-square values ( $\chi^2/df$ ) were all less than 3. Taken together, the results suggest that the four-factor measurement model had a reasonable fit with the data. Table 1 also presented the average variance extracted (AVE) values. Since they ranged from 0.753 to 0.911 (larger than both 0.5 and maximum  $\phi^2$ ), the vanity scales appeared to have adequate convergent and discriminant validity. Multiple-group CFA results indicate that the data possessed adequate configural invariance, full factorial invariance, and partial scalar invariance across the two countries. Thus, we can conclude that valid test of factor means can now be conducted.

Multiple-group CFA with mean structures was used to test research hypotheses about the four factor means. To control the overall type I error, an overall test of mean differences is conducted first. Only when the overall test is statistically significant does one proceed with the tests of mean differences in each of the four components. The overall chi-square difference test was highly significant ( $\Delta\chi^2(4) = 137.54, p < 0.01$ ), suggesting that significant overall mean differences in consumer vanity existed between the two countries.

**Table 1: CFA Results Across the Two Countries**

<b>Model Fit Statistics</b>	<b>Australia (N = 200)</b>	<b>China (N = 200)</b>
Chi-square: $\chi^2$	367.78	290.60
Degree of freedom	183	183
p-value	0.000	0.000
TLI	0.954	0.978
CFI	0.960	0.981
RMSEA	0.071	0.054
Normed $\chi^2$	2.01	1.59
<b>Average Variance Extracted</b>		
AVE for APC	0.760	0.753
AVE for ACC	0.801	0.797
AVE for APP	0.834	0.911
AVE for ACP	0.804	0.908
Maximum $\phi^2$	0.118	0.248

Research hypothesis one pertains to expected cultural differences in appearance concern. Since the chi-square difference test was highly significant ( $\Delta\chi^2(1) = 17.66, p < 0.01$ ) and factor mean for the Australian sample (5.54) was larger than that for the Chinese sample (5.15), hypothesis one was supported. Research hypothesis two deals with expected differences in achievement concern. The chi-square difference test was again significant ( $\Delta\chi^2(1) = 19.95, p < 0.01$ ), however, the factor mean scores (4.50 for the Australian sample vs. 4.96 for the Chinese sample) suggested the opposite direction of mean differences. The remaining two research hypotheses are concerned with expected differences in physical appearance and achievement perceptions. Both hypotheses were supported by the data. For appearance perception, the chi-square difference test was highly significant ( $\Delta\chi^2(1) = 13.76, p < 0.01$ ) and the factor means for the Australian and Chinese samples were 4.18 and 3.73, respectively. With regard to achievement perception, the chi-square difference test was also highly significant ( $\Delta\chi^2(1) = 79.86, p < 0.01$ ) and factor means were in the hypothesized direction (4.45 and 3.38 for the Australian and Chinese samples, respectively).

## **Discussion and Conclusions**

As noted by Steenkamp and Baumgartner (1998), the measurement equivalence issue is still not yet well understood by researchers in spite of its importance to all cross-cultural

research. There are many examples of recent studies in the literature in which the measurement equivalence issue was either ignored or not addressed properly (eg, Dahlstrom and Nygaard 1995). Some recent studies did adopt the multiple-group CFA model to assess factorial invariance (eg, Styles 1998). However, they failed to test for scalar invariance because their CFA models did not incorporate mean structures. It is believed that the more rigorous testing procedures used here can be applied to other cross-cultural studies.

Comparisons of factor means on appearance concern showed as expected that Australians expressed higher levels of appearance concern than Chinese respondents. However, contrary to expectations, respondents in China were found to be more concerned about personal achievement than those in Australia. While there may exist many reasons, one possible explanation is that the one-child per couple system in China places enormous stress on children to be high achievers in order to fulfil their family's hopes and dreams. The fewer student positions available in Chinese universities lead to enormous competition for these positions, resulting in the Chinese students being more achievement-concerned than Australian students. Hypothesis testing on appearance perception and achievement perception indicated, as expected that Australians exhibited higher perception levels than their Chinese counterparts. These findings offered empirical support for differences in self-concept between the independent view of the self dominant in Western individualist cultures and the interdependent view of the self common in Eastern collectivist cultures.

To achieve sample comparability subject to resource constraint, the current study used university students from Australia and China. Future research could employ nationally representative samples in more countries to enhance the generalisability of the research findings. In addition, researchers in the future could examine the structural relationships among consumer vanity, its antecedents, and outcomes in various cultures. They may also consider incorporating economic development as a possible moderating or mediating variable in their cross-cultural consumer vanity research.

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