

Assessing the fit of two brand personality scales in a Chinese context and revisiting the predictive validity of two methods of measuring self-congruity

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Abstract

In literature, Aaker *et al* created different brand personality scales (BPS). In this article the authors compared two brand personality scales, namely American BPS (USBPS) and Japanese BPS (JPBPS), to measure three brands in a Chinese context. We used them to measure both the brand personality and respondents' own personality (human personality). It was found that USPBS yielded better fit indices than JPBPS. In addition, after calculating the traditional self-congruity scores by using whole USBPS inventory, the authors compared the predictive validity of traditional measure and new measure of self-congruity, and confirmed the new way's predictive validity over and beyond the traditional method.

Keywords: brand personality, brand personality scales, self-congruity, international marketing

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Literature Review and Hypotheses Development

The symbolic effect of brands has often been studied mainly via two constructs: brand personality and self-congruity (Helgeson and Supphellen 2004). It is well argued that consumption symbols (such as brands) can serve as carriers of culture (Aaker, Martínez and Garolera 2001). Efforts have been paid to measure brand personality dimensions in East Asia culture context such as Japan, South Korea (Sung and Tinkham 2005) and Latin culture context such as Spain (Aaker, Martínez and Garolera 2001). Currently, it may be the US brand personality scale developed by Aaker (1997) that is most widely used by scholars (Austin, Siguaw and Mattila 2003; Driesener and Romaniuk 2006; Jamal and Al-Marri 2007; Opoku, Abratt and Pitt 2006; Romaniuk 2008; Supphellen and Grønhaug 2003). Despite this fact, when it comes to the measurement of brand personality in a foreign context like China, one question inevitably arises: should we follow the major trend in the usage of BPS by using American BPS, or should we use a Japanese BPS in a Chinese context? Or even is there a need to develop a brand personality scale for every nation and every specific culture? Geologically, Japan is much closer to China than US. Not only the history of goods and ideas exchange between the two countries dates back thousands of years, in terms of culture values, China also shares much more with Japan as both regard themselves as Confucian countries (Yeung and Tung 1996). These are grounds leading us to assume that the Japanese scale will be better than American scale in a Chinese context.

Another stream of research in extant literature concerns with self congruity. The crux of self congruity is that consumers prefer brands associated with a set of personality traits congruent with their own (Kassarjian 1971; Sirgy 1982). Sirgy et al. (1997) criticized the traditional measure (e.g. computing a discrepancy ratio for each personality trait, and then summing across all characteristics) for its use of discrepancy scores, the possible use of irrelevant images and the use of the compensatory decision rule. Instead, they proposed a new method, which is based on tapping the psychological experience of self-congruity directly and globally. One problem of their using traditional methods is the adoption of ad hoc scales. Ad hoc scales, which typically are composed 20-300 traits, tend to be atheoretical in nature. Furthermore, the traits that are selected often are chosen arbitrarily, which casts doubts on the scale's reliability and validity (Aaker 1997). Since the ad-hoc scales are developed for specific brand, they are also called idiographic scales, which contain only characteristics that are relevant to the brand in question (Helgeson and Supphellen 2004). After the invention of BPS, as Aaker (1997) asserts, practitioners have an alternative to the ad hoc scales currently used. In order to better compare the predictive validity of the traditional method and the new method of self-congruity measurement, we find it necessary to reexamine the traditional method by adopting a whole set of traits from Aaker's brand personality scale.

For marketing scholars and practitioners in China, this research not only provides them with reference as to which measurement tool they should adopt to measure brand personality, but also show reliable evidence as to which method should they choose in the measurement of self-congruity.

H1: The Japan brand personality scale (JPBPS) fits better in a Chinese context than the United States brand personality scale (USBPS).

H2: The new method and the traditional method have the same predictive power towards consumer attitudes and consumer behavior.

Methodology

Stimuli Selection

Two criteria guided the selection of commercial brands to serve as stimuli. First, we selected product categories that can serve both utilitarian and hedonic functions. Second, we selected well-known commercial brands. According to literature (Aaker 1997, Lim and Ang 2008), we select Crest toothpaste (utilitarian, N=164), Adidas shoes (utilitarian and hedonic, N=119) and Shiseido cosmetics (hedonic, N=160) as our target brands.

Sample

A sample of 841 students was drawn from one university. Students who participated in the preliminary test (N=68) were excluded from our questionnaire dissemination. A total of 443 completed and useful questionnaires were returned, producing a response rate of 57.3 percent. Among the respondents, 188 were men (42.4 percent) and 198 were women (44.7 percent) (Notice: some did not specify their sex).

Measures

There were 180 items in five parts of the survey instrument. Each items used a seven-point likert scale. Part One was designed to record the demographic profile of the respondents (Sex and Age) and check the product type manipulation.

Part Two was designed to measure self congruity by using a new method (five items), which is proposed by Sirgy et al. (1997) The new method of measuring self congruity can be exemplified as follows. Subjects are instructed to [Take a moment to think about Adidas athletic shoes. Think about the kind of person who typically uses Adidas athletic shoes. Imagine this person in your mind and then describe this person using one or more personal adjectives such as stylish, masculine, sexy, old, sporty, or whatever personal adjectives you can use to describe this typical user of Adidas athletic shoes. Once you've done this, indicate your agreement or disagreement to the following statement: Adidas athletic shoes are consistent with how I see myself in a casual situation.]

Part Three of the questionnaire was designed to measure typical product-user image of target brands. Part Four was designed to measure participants' own personality by asking them what they think of themselves in real life. Both Part Three and Part Four were administered by both USBPS and JPBPS. To anchor the meaning of product traits and reduce possible misunderstandings of those traits caused by linguistic differences, we administered Part Three and Part Four of our questionnaire in both Chinese and English. The order by which the attributes were presented in Part Three and Part Four was counterbalanced to reduce order effects.

Part Five was the dependent variables we wanted to examine, including brand preference, purchase motivation and customer satisfaction (post-purchase behavior variable) (Claiborne and Sirgy 1990; Sirgy 1982, 1985).

Results and Discussions

Manipulation checks

Participants were instructed to rate the products on four seven point disagree/agree items (Batra and Ahtola, 1990; Lim and Ang 2008). "Practical" and "rational" measured the utilitarian value of the products, while two others- "beauty" and "vanity" measured hedonism.

On a seven point scale, the result show that Crest toothpaste was perceived to be more utilitarian than Shisheido cosmetics (Mean=4.68 Vs 4.16; $t=4.00$, $p<0.001$). On the other hand, Shisheido cosmetics was reported to be used more for hedonic purposes compared to Crest toothpaste (Mean=4.01 Vs 3.81; $t=1.932$, $p=0.05$). We can see in this manipulation the P value is just around the accepted 0.05 level. So, we get a typical utilitarian product and typical hedonic product. In terms of Adidas, it's more utilitarian than Shisheido (Mean=4.49 Vs 4.16; $t=2.36$, $p<0.05$), but not less utilitarian than Crest (Mean=4.49 Vs 4.68; $t=-1.23$, $p=0.22$). And it is more hedonic than both Crest (Mean=4.52 Vs 4.01; $t= 3.9$, $p<0.001$) and Shisheido (Mean=4.52 Vs 3.81; $t=5.55$, $p<0.001$).

Hypotheses testing

What is the overall degree of content overlap between the JPBPS personality dimensions and USBPS personality dimensions in a Chinese context? To address this question, we first examined the correlations the conceptually related dimensions of the two scales. The validity correlations between the conceptually related dimensions were as follows: Sincerity (Japan) and Sincerity (United States) = 0.454; Excitement (Japan) and Excitement (United States) =0.591; Competence (Japan) and Competence (United States) =0.549; and Sophistication (Japan) and Sophistication (United States) =0.477. The size of these convergence correlations was ($M=0.52$), contrasted with the average off-diagonal discriminant correlations ($M=0.37$), suggesting both convergent and discriminant validity. The average correlation between culture specific dimension Ruggedness (United States) and all the Japanese personality dimensions was 0.31, while the average correlation between culture specific dimension Peacefulness (Japan) and all the US personality dimensions was 0.32. This means that when culture specific dimensions were used in a country outside the country where the dimension originated, they can still apply well and achieve their distinct discriminant validity.

One way to test H1 is to explore the latent structure of the variance shared by the culture specific dimension of USBPS (Ruggedness) and JPBPS (Peacefulness) through confirmatory joint factor analysis (CFA). We investigated the fit indices for two latent components respectively. To measure the brand personality, the latent Ruggedness yielded an adequate fit indices ($\chi^2_{\text{Ruggedness}} (5, N=443) = 115.5$, $p<0.001$; $GFI_{\text{Ruggedness}}=0.908$, $CFI_{\text{Ruggedness}}=0.902$), while the latent Peacefulness did not meet the criterion 0.9 ($\chi^2_{\text{peacefulness}} (9, N=443) = 195.42$, $p<0.001$; $GFI_{\text{Peacefulness}} = 0.861$, $CFI_{\text{Peacefulness}} = 0.816$). The same pattern occurred when we tried to measure human personality using the same inventory of attributes. Only the Ruggedness dimension had adequate fit indices ($\chi^2_{\text{Ruggedness}} (5, N=443)=33.3$, $p<0.001$; $GFI_{\text{Ruggedness}} = 0.970$, $CFI_{\text{Ruggedness}} = 0.978$), while dimension Peacefulness in JPBPS yielded unsatisfactory indices ($\chi^2_{\text{Peacefulness}} (9, N=443)=185.3$, $p<0.001$; $GFI_{\text{Peacefulness}}=0.869$, $CFI_{\text{Peacefulness}}=0.734$). These results showed that Dimension Ruggedness achieved better indices than Dimension Peacefulness. The fit indices of the Ruggedness dimension in USBPS were satisfactory ($GFI>0.9$, $CFI>0.9$) when the items were used to measure both brand personality and human personality. In contrast, the fit indices of the Peacefulness dimension in JPBPS were unsatisfactory ($GFI<0.9$, $CFI<0.9$) when used to measure both brand personality and human personality. So our H1 was accepted.

To test H2, We have three independent measures, namely new measure (hereafter DM), traditional measure calculated by USBPS (hereafter T_US) and traditional measure calculated by JPBPS (hereafter T_JP) (the traditional measure was calculated by $\sum_{i=1}^n |P_i - S_i|$, where P_i =rating of product-user image on characteristic i , and S_i =rating of self-concept on

characteristic i.). The correlation between DM and T_US was $-0.253(p<0.01)$; the correlation between DM and T_JP was $-0.216(p<0.01)$; the correlation between T_US and T_JP was $0.440(p<0.001)$. As the new measure and traditional measure were moderately correlated and the two traditional measures were highly correlated, we achieve the expected convergent validity.

Next, using T_US and T_JP as independent variables, we ran three standard regressions against three dependent variables- purchase motivation, brand preference and satisfaction respectively. At the significance of 0.01 level, none of the β s of independent variables is significant, and all R squares are small (ranging from 0.031 to 0.056). This means the traditional measure worked poorly in the prediction of customers' purchase motivation, brand preference and satisfaction.

We then ran a second set of regressions, using traditional measure and new measure as independent variables (here since two traditional measures were significantly correlated, we used T_US). When purchase motivation was the dependent variable, the result indicated a high and significant beta weight for the new measure ($\beta=0.490, p<0.001$), whereas the traditional measure did not achieve significance ($\beta=-0.024, p>0.1$). Likewise, when brand preference was treated as the dependent variable, the results showed a high and significant beta weight for the new measure ($\beta=0.591, p<0.001$), whereas the traditional measure was found to be considerably weaker but nevertheless achieved significance ($\beta=-0.080, p<0.05$). When customer satisfaction was treated as the dependent variable, the beta weight for the new measure was again significant ($\beta=0.547, p<0.001$) while the beta weight for the traditional measure is not significant ($\beta=-0.043, p>0.1$).

Finally, we took a more rigorous test of the differential predictiveness of the two measures involving the following a third set of regression analyses. Firstly, we treated purchase motivation as the dependent variable, entering the traditional measure we got a beta -0.148 with an R^2 of 0.022; then this was followed by the new measure ($R^2=0.247$). The R^2 change was found to be noticeably large and significant ($p<0.001$). In contrast, when we entered the new measure first ($R^2=0.246$), followed by the traditional measure ($R^2=0.247$), the R^2 change was nonsignificant ($p>0.1$). When we used brand preference and customer satisfaction as the dependent variable, we got exactly the same results.

All the above analyses provide support for the hypothesis that the new method of measuring self-congruity is more predictive of customers' purchase motivation, brand preference and satisfaction. Thus our H2 was rejected, meaning that using the Aaker's brand personality scale did not increase the traditional measure's predictive validity.

Conclusions, implications and limitations

In this study, firstly, we adopted two Brand Personality Scales developed by Aaker (1997) and Aaker *et al* (2001) in a Chinese context to calculate the correlations of the shared brand personality dimensions of the two scales (Sincerity, Excitement, Competence, and Sophistication), as well as the correlations of culture specific dimension (Ruggedness and Peacefulness) with dimensions from the other brand personality scale. We confirmed the convergent and discriminant validity of shared dimensions, and we also confirmed the discriminant validity of culture specific dimension in a Chinese context. Next, we calculated the fit indices of culture specific dimension of USBPS and JPBPS. Contrary to our prior belief, the JPBPS is not superior to USBPS in the measurement the brand personality, and

actually yielded lower fit indices in both the measurement of brand personality and the measurement of human personality. Finally, by using a full Aaker Brand Personality Scale to calculate self-congruity scores (traditional measure), our revisit of the traditional and new measures of self congruity confirmed Sirgy *et al* (1997) conclusion that the new measures predictive validity over and beyond that of traditional measure.

The above results provided several insights into the using of brand personality scales. We demonstrated that USBPS is actually better than JPBPS in the measurement of brand personality in China. The reason may be that the globalization has blurred the typical cultural dimensions in the mind of Chinese people, especially young Chinese students. Evidence showed that Chinese people have embraced some aspects of western culture quite openly (Rupke and Blank 2009), and globalization has imposed western values on Chinese young people's mind. For example, young people and college students in particular formed solid consumer base for US popular culture (Rupke and Blank 2009). Such forces of blurring the cultural identity of JPBPS (the Peacefulness Dimension) may explain the better fit indices of USBPS. In fact, unlike their parents' generation who emphasizes harmony a lot, nowadays the college students in China embrace values like cool and uniqueness, just like their peers in western society, typically the United States. Thus, our current research again confirmed USBPS's applicability in China.

Secondly, the adoption of Brand Personality Scales did not increase the traditional measure's predictive validity. Because the new measure of self-congruity is easier to administer than the traditional measure, it is therefore suggested by the authors that the new measure be used by researchers or practitioners if they try to measure self-congruity. However, in order to gain deep understanding of how self-congruity or self-incongruity occurred, we still need to resort to the Brand Personality Scale. To gain more insights into the mechanism of self-congruity, we suggest that future research needs to further examine the self-incongruity effect caused by different product types and different dimensions of brand personality. And one limitation of this study is that it only compares two brand personality scales, and it is thus advisable to develop a more culture specific Chinese brand personality scale and make some comparisons with the USBPS and JPBPS.

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