

# ***Investigating the Relationship between Brand Personality, Consumer Personality, and Consumer Satisfaction: An Empirical Research on Chinese Cell Phone Consumers***

**Haihui Lu<sup>1,a,\*</sup>**

<sup>1</sup>*Department of Psychology, The Pennsylvania State University, University Park, Pennsylvania, United States*

*a. luhaihui724@gmail.com*

*\*corresponding author*

**Abstract:** This study aims to determine the relationships between brand personality, consumer personality, and consumer satisfaction in the cell phone industry in China. This study measured consumers' perceived brand personality (competence, traditionalism, excitement, joyfulness, sophistication, and trendiness), their own personality (openness, conscientiousness, extroversion, agreeableness, neuroticism), and consumers' satisfaction. Regression analysis was applied to analyze the relationship between brand personality, consumer personality, and consumer satisfaction. Results showed that brand personality competence, traditionalism, excitement were positively influenced by consumer personality conscientiousness, agreeableness, extroversion, and brand personality joyfulness was negatively influenced by consumer personality neuroticism. Also, results showed that consumer personality conscientiousness has positive influence on consumer satisfaction, whereas openness has a negative influence on consumer satisfaction. Further, consumer satisfaction is positively related to brand personality competence, traditionalism, and joyfulness. Implications and limitations were discussed.

**Keywords:** Brand personality, Consumer personality, Consumer satisfaction

## **1. Introduction**

Nowadays, companies have put a tremendous effort on developing their distinctive brand image to make people aware of their products. Brand image is defined as consumers' understanding of brands based on the total set of brands related activities [1]. In other word, brand image is more about consumers' perception of the brand rather than what the brand perceives itself as. If a brand does not have a distinctive brand image, it cannot attract people's attention and build a connection with its consumers. Therefore, it is crucial for companies to identify what can help their brands to develop a distinctive brand image.

Brand personality, as an essential elements of brand image, has been widely discussed in recent years. For example, Lin noted that brand loyalty is significantly affected by brand personality [2]. Consumer attachment with brands was also actively and positively influenced by brand personalities [3]. Yao et al. also found that higher congruence of consumer personality and brand personality indicates stronger consumer attachment with brands [4].

Although brand personality has been widely studied by different researchers, most of these studies used brand personality scale that developed under a western cultural background. Even for those studies that took place in the Asian region, most of them are still based on westernized brand personality scales. Thus, the main motivation of this study is to fill this gap by investigating the relationships between consumer personality, brand personality, and consumer satisfaction based on a brand personality scale that developed in Chinese culture. In particular, there are three main objectives for this study. First, study the relationship between consumer personality and brand personality in China. Second, investigate the influence of consumer personality on Chinese consumers' satisfaction levels. Finally, explore the impact of brand personality on Chinese consumers' satisfaction levels.

## **2. Literature Review**

### **2.1. Consumer Personality: Big Five Personality Traits**

Personality is defined as the psychological factors that consistently affect people's patterns of thinking, feeling, and behaving [5]. Various researchers have developed different theories about personality. One of the most influential personality theories is the trait theory. There are two schools in trait theory. One school believes that people all have same personality traits and differences on the level of each trait cause people to have distinctive personalities [2]. The other one argues that people have different set of traits and differences in people's personalities are caused by different trait combinations [2].

Among all trait models, the big five personality model has been widely accepted and used as a personality taxonomy which suited for all age groups [6]. The idea of the five-factors model was introduced by Norman [7]. He proposed that there are five basic personality traits, which are conscientiousness, extroversion, agreeableness, neuroticism, and culture [7]. Later, McCrae et al. [8] modified the five-factors personality model into openness, conscientiousness, extroversion, agreeableness, and neuroticism, which is the big five personality model that has been empirically tested for many years of research.

### **2.2. Brand Personality**

Aaker formally defined brand personality as "the set of human characteristics associated with a brand" [9]. Lin noted three main sources for formation of brand personality: connection between consumers and brands, brand images that companies want to present to their consumers, and how the product attributed to different categories and channels [2]. Aaker believes that people endue characteristics of human personality to brands and take brands as a way to express themselves [9].

Inspired by concepts from the field of personality psychology, Aaker developed a 'brand personality scale', which have five brand personality traits, sincerity, excitement, competence, sophistication, and ruggedness [9]. However, brand personality traits work in different ways. Traits such as competence, excitement, and sincerity are more related to the inner part of the human personalities, whereas sophistication and ruggedness are more related to products that people desire but do not necessarily need [9].

Karande et al. pointed out that factors of brand personality may help companies from attracting more targeted consumers [10]. Kim et al. supported Karande et al.'s ideal by indicates that consumer personality conscientiousness, neuroticism, and extraversion significantly positively influence the selection of bands with ruggedness brand personality [11]. Villagra's et.al research also noted that brand personality can promote consumer willingness of consumption, brand trust, and brand loyalty [12].

However, researchers like Ekhlassi et al. noted that Aaker's brand personality scales could not accurately address the impact of culture differences [13]. Factors of brand personality varied in studies under different culture background [2][11]. Since this study is focusing on Chinese consumers, it is important to rule out the influence of culture differences. Yet, there is no widely accepted and used Chinese version brand personality scale. In order to fill this gap and avoid any potential cultural influences on this study, a six factors (competence, traditionalism, excitement, joyfulness, sophistication, and trendiness) brand personality scale, which is based on the brand personality dimensions in China, were used for this study [14].

### 2.3. Consumer Satisfaction

Consumer satisfaction is defined as consumers' evaluation of perceived products/services after their purchases [15]. Typically, consumer satisfaction could be described as a comparative process which influenced by three main factors, expectation, performance, and disconfirmation [15]. Many researchers have examined the relationship between brand personality and consumer satisfaction, and their studies revealed that consumer satisfaction is significantly influenced by brand personality. For example, Su pointed out that brand personality traits attractive, practical, and flexible have a positive impact on consumer satisfaction, whereas ruggedness is negatively related to consumer satisfaction [16].

However, there were little studies focused on the effects of brand personality on consumer satisfaction in China. Hence, one of the objectives for this study is to examine how Chinese brand personality traits influence Chinese consumer's satisfaction.

### 3. Hypotheses Development

Aaker developed the brand personality model by attributing a set of human personality traits on brands [9]. This indicated that personality trait theories like big five personality model and brand personality model is highly related, many studies have examined the connection between consumer personality and brand personality. For example, Ekhlassi et.al indicated brand personality activity is positively correlated with consumer personality extroversion, brand personality responsibility is positively correlated with consumer personality conscientiousness, and brand personality adventurousness is positively related to brand personality agreeableness [13]. Kim et al. also noted that consumer personality conscientiousness, agreeableness, extraversion, openness, and neuroticism significantly influence brand personality competence, ruggedness, excitement, sincerity, and sophistication [11]. Thus, the first hypothesis formulated as follows:

H1: Consumer personality and brand personality are significantly related

H1.1: *Brand personality competence and consumer personality conscientiousness is significantly related.*

H1.2: *Brand personality traditionalism and consumer personality agreeableness is significantly related.*

H1.3: *Brand personality excitement and consumer personality extraversion is significantly related.*

H1.4: *Brand personality trendiness and consumer personality openness is significantly related.*

H1.5: *Brand personality joyfulness and consumer personality neuroticism is significantly related.*

H1.6: *Brand personality sophistication and consumer personality neuroticism is significantly related.*

Studies have indicated that brand personality and consumer personality have a significant influence on consumer satisfaction. For example, Tsao and Chang found out consumer personality is a powerful predictor of consumer satisfaction, and the connection between consumer personality

and brands leads to an increase in consumer satisfaction, which indicates that people with certain personalities would be more likely to feel satisfied with a brand [17]. Further on, Marković has found that brand personality (sincerity, excitement, competence, sophistication, and strength) has a significant positive affect consumer satisfaction [18]. Hence, the second and third hypothesis are developed as follows:

H2: Some consumer personality traits and consumer satisfaction are significantly related.

H3: Some brand personality traits and consumer satisfaction are significantly related.

## 4. Method

### 4.1. Sample

A total of 110 questionnaires were distributed to the cell phone consumers in Changzhou Cell Phone Market, which is the largest cell phone market in Changzhou, China. One-hundred and one questionnaires were validly answered, which represents a response rate of 91.8 percent. Among all valid respondents, 43.6% were male and 56.4% female. Respondents' age varies from 18 to 65 years. Of them, 2 percent of them were under 20 years old, 38 percent of them were in the range between 20-30 years old, 21 percent of them were in the range between 30 to 40 years old, 15 percent of them were in the range between 40 to 50 years old, 19 percent of them were in the range between 50 to 60 years old, and 5 percent of them were over 60 years old.

### 4.2. Questionnaire

A four parts questionnaire (respondents' information, consumer personality, brand personality, and consumer satisfaction) was developed for this study.

The first part of the questionnaire required respondents to fill out their basic information such as gender and age. For the second part of the questionnaire, the IPIP Big Five Personality scale was selected to measure respondents' personality traits [19]. Considering the 50-items big five personality scale might be too time-consuming for respondents, 15 items were selected from the IPIP Big Five Personality scale for the current questionnaire. For the third part of the questionnaire, respondents were asked to measure brand personality traits for a set of cell phone brands based on a brand personality scale, which introduced by brand personality dimensions in China [14]. Finally, in the last section of the questionnaire, a satisfaction scale introduced by Barkus et al. was selected to measure respondents' level of satisfaction with brands [20].

## 5. Data Analysis

### 5.1. Reliability and Validity

Cronbach's  $\alpha$  coefficient was selected to evaluate the reliability of the questionnaire. The reliability is considered to be high for Cronbach's  $\alpha$  that higher than 0.7, the reliability is considered to be adequate for values ranging between 0.7 and 0.35, and the reliability is considered to be low for values lower than 0.35.

Results of Cronbach's  $\alpha$  analysis indicated that the consumer personality scale used in the questionnaire has a Cronbach's  $\alpha$  of .719. For the brand personality scale, Cronbach's  $\alpha$  is .822, and for the consumer satisfaction scale, Cronbach's  $\alpha$  is .681. The Cronbach's  $\alpha$  value of three scales proved that this questionnaire has high reliability.

Since scales that were used in the questionnaire have been tested and used by a variety of researchers, the content validity of the questionnaire would meet the requirement. The Kaiser-Meyer-Olkin (KMO) and Bartlett's tests were used to examine the structural validity of the

questionnaire. The KMO for the consumer personality scale is 0.712, the brand personality is 0.816, and the consumer satisfaction scale is 0.827. The result of Bartlett's test for the significance of all three scales is lower than 0.05. These results indicate that the questionnaire has adequate validity.

## 5.2. Correlation Analysis

In order to determine the correlation between consumer personality and brand personality, Pearson's correlation analysis was used in this study. The data in Table 1 indicates that competence and conscientiousness are significantly positively correlated, traditionalism and agreeableness are significantly positively correlated, excitement and extroversion are significantly positively correlated, trendiness and conscientiousness are positively correlated, and trendiness and neuroticism are negatively correlated.

## 5.3. Results of Hypotheses

### H1: Customer personality and brand personality are significantly related

The regression analysis was applied to measure the influence of independent variable consumer psychology on dependent variable brand personality. Based on the results, hypothesis 1 is partly supported. H1.1, 1.2, 1.3, 1.5 are supported by the test results. From data shown in Table 2, brand personality conscientiousness is significant positive related to consumer personality competence ( $p = 0.008 < 0.10$ ), brand personality traditionalism is significant positive related to consumer personality agreeableness ( $p = 0.035 < 0.10$ ), brand personality excitement is significant positive related to consumer personality extroversion ( $p = 0.050 < 0.10$ ), and brand personality joyfulness is significant negative related to consumer personality neuroticism ( $p = 0.073 < 0.10$ ).

Table 1: Pearson correlation analysis.

Variables	Mean	Standard deviation	1	2	3	4	5	6	7	8	9	10	11
1.Openness	3.47	0.564	1.000	-	-	-	-	-	-	-	-	-	-
2.Conscientiousness	4.17	0.594	.250*	1.000	-	-	-	-	-	-	-	-	-
3.Extroversion	3.36	0.778	.338**	.318**	1.000	-	-	-	-	-	-	-	-
4.Agreeableness	3.97	0.637	.430**	.374**	.444**	1.000	-	-	-	-	-	-	-
5.Neuroticism	2.46	0.860	-.201*	0.001	-.238*	-.290**	1.000	-	-	-	-	-	-
6.Competence	3.65	0.789	-.0057	.225*	-.005	0.043	-.122	1.000	-	-	-	-	-
7.Traditionalism	3.47	0.734	-.0063	-.0013	0.115	0.230*	-.023	.241*	1.000	-	-	-	-

Table 1: (continued).

8.Excitement	3.64	0.753	-0.078	0.107	0.199*	0.111	-0.083	.481**	.248*	1.000	-	-	-
9.Joyfulness	3.15	0.786	-0.019	0.194	0.058	0.057	-0.157	.601**	0.181**	.568**	1.000	-	-
10.Sophistication	3.63	0.681	-0.028	0.142	0.109	0.068	-0.023	.267**	0.143**	.491**	.333**	1.000	-
11.Trendiness	3.69	0.768	0.045	0.227*	0.164	0.187	-.214*	.469**	.245*	.623**	.475**	.508**	1.000

\*\*Correlation is significant at the 0.01 level (two-tailed). \*Correlation is significant at the 0.05 level (two-tailed).

Table 2: Regression analysis for brand personality and consumer personality.

Dependent variable	Independent variable	Standardized Coefficients $\beta$	t-value	Significance
Competence	Openness	-0.126	-1.135	0.259
	Conscientiousness	0.294	2.669	0.008
	Extroversion	-0.086	-0.758	0.450
	Agreeableness	-0.025	-0.209	0.835
	Neuroticism	-0.175	-1.678	0.097
Traditionalism	Openness	-0.084	-0.720	0.474
	Conscientiousness	0.147	1.363	0.176
	Extroversion	0.031	0.274	0.785
	Agreeableness	0.259	2.143	0.035
	Neuroticism	0.016	0.151	0.881
Excitement	Openness	-0.161	-1.417	0.160
	Conscientiousness	0.120	1.078	0.284
	Extroversion	0.218	1.985	0.050
	Agreeableness	0.145	1.164	0.247
	Neuroticism	-0.093	-0.871	0.386
Joyfulness	Openness	-0.095	-0.853	0.396
	Conscientiousness	0.237	2.159	0.033
	Extroversion	-0.012	-0.108	0.914
	Agreeableness	-0.041	-0.335	0.739
	Neuroticism	-0.191	-1.811	0.073

Table 2: (continued).

Sophistication	Openness	-0.103	-0.901	0.370
	Conscientiousness	0.132	1.178	0.242
	Extroversion	0.090	0.768	0.445
	Agreeableness	0.017	0.138	0.890
	Neuroticism	-0.017	-0.160	0.873
Trendiness	Openness	-0.095	-0.863	0.390
	Conscientiousness	0.209	1.938	0.056
	Extroversion	0.051	0.451	0.653
	Agreeableness	0.068	0.565	0.573
	Neuroticism	-0.201	-1.940	0.055

**H2:** *Some of consumer personality traits and Consumer satisfaction are significantly related.*

The regression analysis was applied to measure the influence of independent variable consumer psychology on dependent variable consumer satisfaction. Based on the results, hypothesis 2 is supported. From the data shown in Table 3, consumer satisfaction and consumer personality openness are significant negative related ( $p = 0.048 < 0.10$ ), and consumer satisfaction and consumer personality conscientiousness are significant positive related ( $p = 0.001 < 0.10$ ).

Table 3: Regression analysis for consumer satisfaction and consumer personality.

Dependent variable	Independent variable	Standardize d Coefficients $\beta$	t-value	Significance
Satisfaction	Openness	-0.217	-2.007	0.048
	Conscientiousness	.0362	3.406	0.001
	Extroversion	-0.069	-0.622	0.535
	Agreeableness	-0.035	-0.295	0.769
	Neuroticism	-0.135	-1.325	0.188

**H3:** *Some brand personality traits and consumer satisfaction are significantly related.*

The regression analysis was applied to measure the influence of independent variable brand psychology on dependent variable consumer satisfaction. Based on the results, hypothesis 3 is supported. Based data shown in Table 4, consumer satisfaction and brand personality competence are significant positive related ( $p = 0.001 < 0.10$ ), consumer satisfaction and brand personality traditionalism are significant positive related ( $p = 0.129 < 0.10$ ), and consumer satisfaction and brand personality joyfulness are significant positive related ( $p = 0.056 < 0.10$ ).



Table 4: Regression analysis for consumer satisfaction and brand personality.

Dependent variable	Independent variable	Standardized Coefficients $\beta$	t-value	Significance
Satisfaction	Competence	-0.356	3.552	0.001
	Traditionalism	0.123	1.533	0.129
	Excitement	0.241	2.179	0.032
	Joyfulness	0.203	1.939	0.056
	Sophistication	0.000	0.005	0.996
	Trendiness	-0.073	-0.684	0.496

## 6. Conclusion

### 6.1. Discussion

Findings of this study partially support the hypothesis that brand personality is significantly related to consumer personality. The data revealed that consumer personalities (conscientiousness, agreeableness, extroversion) and brand personalities (competence, traditionalism, excitement) are significant positive related, and consumer personality neuroticism and brand personality joyfulness are significantly negatively related. Most of these findings matched with the previous research, but due to the fact that this study applied a brand personality scale which was originally developed in China, traits like traditionalism, trendiness, and joyfulness are distinct from the brand personality scale used in previous research, which justifies the contribution of this study. The positive relationship between agreeableness and traditionalism and the negative relationship between joyfulness and neuroticism indicated how cultural factors influence Chinese cell phone consumers' perception of brand personality.

Many studies also examined how consumer personality and brand personality affect consumer experience and behavior. However, there is only a little research focusing on the influence of consumer personality and brand personality on Chinese consumers' satisfaction level. This study covered this gap and revealed that consumer satisfaction and brand personality competence, traditionalism, and joyfulness are positively related. These results also indicated that cell phone consumers with conscientious personality would be more likely to feel satisfied with the brand. This may be because cell phone consumers who have conscientiousness personality are more likely to avoid cell phone brands that would make them feel uncomfortable, which could allow them to feel more satisfied with the brand they chose. The negative relationship between consumer personality openness and consumer satisfaction may cause by the high expectation of new experiences that people with a high level of openness personality have, which could not be satisfied by the poor improvement that cell phone companies offered in recent years.

### 6.2. Managerial implications

This study suggested some possible managerial implications. Since the results of data analysis indicated that consumer personalities and brand personalities are positively related, marketers could use this to identify potential consumers that might be interested in their products. By identifying their own brand personality, marketers could find out consumers with what kind of personality would be more interested in their brands. The positive relationship between brand personality and consumer satisfaction also helps marketers in various aspects. Marketers could increase their



consumers' satisfaction level with their brands by modifying their brands' personalities towards competence, traditionalism, and joyfulness.

### 6.3. Limitations and Suggestions

This study's first limitation is that it only included data from cell phone consumers in Changzhou Cell Phone Market. Cell phone consumers in other Chinese cities were not covered in this study. The follow-up researchers should select other cities in China and tests the generality of the study results. Small sample size is also a limitation of this study. Later research should gather larger sample size to avoid potential biases. The last limitation is the lack of generalization since this study only examined the cell phone industry in China. The results of this study could not cover other markets in China. Further research on other industries is needed to apply the results of this study to other markets.

### References

- [1] Whan Park, C., Jaworski, B. J., & MacInnis, D. J. (1986). Strategic brand concept-image management. *Journal of Marketing*, 50(4), 135.
- [2] Long-Yi, L. (2010). The relationship of consumer personality trait, brand personality and brand loyalty: An empirical study of toys and video games buyers. *The Journal of Product and Brand Management*, 19(1), 4-17. doi:<https://doi.org/10.1108/10610421011018347>
- [3] Mann, B. J. S., & Rawat, J. (2016). The role of consumer personality trait and brand personality trait in creating customer experience. *IUP Journal of Brand Management*, 13(3), 23-42.
- [4] Yao, Q., Chen, R., & Xu, X. (2015). Consistency between consumer personality and brand personality influences brand attachment. *Social Behavior and Personality: An International Journal*, 43(9), 1419-1428. doi:<https://doi.org/10.2224/sbp.2015.43.9.1419>
- [5] Cervone, D., & Pervin, L. A. (2015). *Personality: Theory and research (13th ed)*. John Wiley & Sons.
- [6] De Pauw, S. (2017). Childhood personality and temperament. In T. A. Widiger (Ed.), *The Oxford handbook of the five factor model*. New York: Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199352487.013.21>
- [7] Norman, W. T. (1963). Toward an adequate taxonomy of personality attributes: Replicated factor structure in peer nomination personality ratings. *The journal of abnormal and social psychology*, 66(6), 574.
- [8] McCrae, R.R., Costa, P.T. Jr and Busch, C.M. (1986), "Evaluating comprehensiveness in personality systems: the California Q-set and the five-factor model", *Journal of Personality*, 54 (2), 430-46.
- [9] Aaker, J. (1997). Dimensions of brand personality. *Journal of Marketing Research*, 34(3), 347-356. doi:<https://doi.org/10.2307/3151897>
- [10] Karande, K., Zinkhan, G.M. and Lum, A.B. (1997), *Brand Personality and Self-Concept: A Replication and Extension*, American Marketing Association Summer Conference, 8, 165-71.
- [11] Kim, Y. E., Lee, J. W., & Lee, Y. K. (2008). Relationship between brand personality and the personality of consumers, and its application to corporate branding strategy. *Journal of Global Academy of Marketing Science*, 18(3), 27-57.
- [12] Villagra, N., Monfort, A., & Sánchez Herrera, J. (2021). The mediating role of brand trust in the relationship between brand personality and brand loyalty. *Journal of Consumer Behaviour*, doi:<https://doi.org/10.1002/cb.1922>
- [13] Ekhlassi, A., Nezhad, M. H., Far, S. A., & Rahmani, K. (2012). The relationship between brand personality and customer personality, gender and income: A case study of the cell phone market in iran. *Journal of Targeting, Measurement and Analysis for Marketing*, 20(3-4), 158-171. doi:<https://doi.org/10.1057/jt.2012.12>
- [14] Chu, S., & Sung, Y. (2011). Brand personality dimensions in China. *Journal of Marketing Communications*, 17(3), 163-181. doi:<https://doi.org/10.1080/13527260903387931>
- [15] Guido, G. (2015). Customer satisfaction. *Wiley encyclopedia of management*, 1-8.
- [16] Su, J., & Tong, X. (2016). Brand personality, consumer satisfaction, and loyalty: A perspective from denim jeans brands. *Family and Consumer Sciences Research Journal*, 44(4), 427-446. doi:<https://doi.org/10.1111/fcsr.12171>
- [17] Tsao, W. C. and Chang, H. R. (2010), "Exploring the Impact of Personality Traits on Online Shopping Behaviour", *African Journal of Business Management*, 4(9), 1800-1812.
- [18] Marković, I., Rabasović, B., & Stojanović, N. (2022). The Influence of the Brand Personality Concept on Consumer Satisfaction and Loyalty. *Management: Journal of Sustainable Business and Management Solutions in Emerging Economies*, 27(2), 13-24. doi:10.7595/management.fon.2022.0001

- [19] Goldberg, L. R. (1992). *The development of markers for the Big-Five factor structure*. *Psychological Assessment*, 4(1), 26-42. doi: 10.1037/1040-3590.4.1.26
- [20] Barkus J J, Schmitt B H and Zarantonello (2009), “*Brand Experience: What Is It? How Is It Measured? Does It Affect Loyalty?*”, *Journal of Marketing Science*, 73(3), 52-68.