

# Improving Brand Loyalty Through Social Media Marketing: Is It Possible?

## An empirical study of S-O-R paradigm

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**Abstract**—In this study, a questionnaire survey was conducted by the consumers who purchasing Huawei mobile phones in China under the social media environment as the test subjects. At present, research on self-congruence with brands is still centered offline, so this research aims to broaden the scope of the self-concept exploration to consider the role of self-congruence with brands in the network, besides, to explore that how social media marketing affects the brand loyalty of customers, and whether it will be affected by self-congruence. At the same time, based on the S-O-R theory, a research framework containing six hypotheses was proposed through this study. All hypotheses were supported after data analysis by using SPSS 25, nevertheless, management implications were proposed based on the research conclusions.

## 1 INTRODUCTION

With the advent of Web 2.0, the speed of information exchange has become quite frequent with the intensification of competition among enterprises, the number of enterprises not only pays more and more attention to whether customers can participate in the circulation process of the enterprise value chain, but also continues to promote new ways of marketing to meet customer needs. Big data applications technology is becoming more and more mature with the continuous development of Web 2.0, the technological process would make social media easy to be accessed and easy to be used by the stakeholders, so that they can communicate with multiple channels. According to eMarketer (2019), the expenses of spending on social media advertising in 2018 was close to \$25 billion, and eMarketer predicts that the advertising budgets will grow to about \$34 billion by 2021, increasing companies have realized that the social media marketing plays a vital role in the corporate communication recently, thus, companies begin to allocate a large amount of budget for social media marketing to build a strong social media image [1]. Previous scholar researches have indicated that loyalty is an important factor of relationship quality [2] customers will make business benefits invisibly through their loyalty behaviors, and ensure companies to reduce costs, then to obtain their preferential competitive advantage [3]. Nowadays, research on self-congruence with brands is still centered offline, so this research aims to broaden the scope of self-concept exploration to consider the role of self-congruence with brands in the

network. Therefore, there are three research problems to be proposed:

- 1) Does social media marketing affect consumer loyalty?
- 2) The higher the self-congruence consistency between consumers and brands, are they being more likely to generate high brand identity?
- 3) The research problem shows that the higher the self-congruence consistency between consumers and brands, will they be more likely to generate high subjective well-being?

## 2 LITERATURE REVIEW

### 2.1 S-O-R Theory

This research aims to explore the relationship between social media marketing and brand loyalty. This research is based on the S-O-R theory. In this study, social media marketing as stimulus (that is “Stimuli” or “S”), regards subjective well-being and brand identity mediating roles as psychology (that is “Organism” or “O”), and counts outcome variables of brand loyalty as a response (that is “Response” or “R”) [4].

### 2.2 Impact of Experiential Marketing on the Outcome Variable

“Stimulus Organism Response” (S-O-R) model from the environmental psychology, which also explains the stimulation caused by different levels of the external environment (that is “Stimuli” or “S”) will affect individual psychology or internal state (that is

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“Organism” or “O”) [4]. Chi (2011) study of consumer social media marketing in Taiwan found that both consumer online social capital needs and subject well-being needs could be satisfied with the social media marketing [5]. Through carefully managed social media, the brand-related knowledge structure could be built in the minds of consumers and a strong brand identity [6]. In view of the above statements, the following hypotheses are suggested:

Hypothesis 1: The higher level of social media marketing has the greater subjective well-being for consumer.

Hypothesis 2: The higher level of social media marketing has the greater brand identity for consumer.

### 2.3 Moderating Roles of Self-congruence

Self-congruence is critical to understand the relationship between consumers, brands and brand outcomes. At the same time, it also referred in the literature as self-image congruence, self-congruity and image congruence [7]. Self-congruence is evident where the brand-user image (or personality) of a given product, brand or store matches consumer’s self-concept [8]. When consumers feel that their self-concepts are consistent with brand personality, they experience greater self-awareness, which can lead to positive results, such as enhanced brand loyalty [9], and favorable brand attitudes and greater purchase intention [10]. Yu, Assor and Liu (2015) research of psychology found that self-congruence has a positive impact on subjective well-being [11]. Need satisfaction theory believes that consumers can generate social well-being by participating actively in healthy and meaningful social activities [12]. Malär, Krohmer, Hoyer and Nyffenegger (2011) proved that if the brand image of the product is more consistent with the image of the consumer itself, it is easier for the consumer to have a sense of identity with the brand [13]. On account of the above statements, the following hypotheses are suggested:

Hypothesis 3: The higher the self-congruence, the more positive the impact of social media marketing on subjective well-being.

Hypothesis 4: The higher the self-congruence, the more positive the impact of social media marketing on brand identity.

### 2.4 Influence of Subjective Well-Being and Brand Identity on the Outcome Variable

Social exchange theory suggests that a positive customer experience may motivate customers to be rewarded by engaging in voluntary behavior [14]. Troebs, Wagner, and Heidemann (2018) Research on transformative retail services found that customer well-being will affect customer loyalty positively [15]. He, Li and Harris (2012) confirms that the pivotal role of brand identification in brand loyalty development, besides, it stresses the mediation effect of brand identification on the effects of brand identity and brand loyalty [16]. Based on the above statement, the following hypotheses are suggested:

Hypothesis 5: The higher level of subjective well-being has the greater brand loyalty for consumer.

Hypothesis 6: Brand identity has a positive influence on brand loyalty.

## 3 RESEARCH METHODOLOGY

### 3.1 Conceptual Framework

The study explores the relationships among social media marketing, subjective well-being, brand identity, brand loyalty and self-congruence, which are all based on the S-O-R paradigm. Figure 1 shows the conceptual model of this study in order to summarize the six hypotheses which has been proposed based on the literature review.

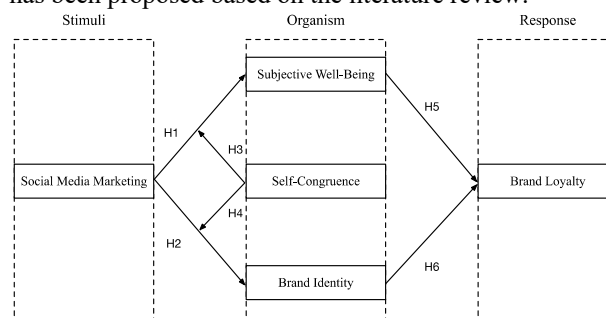


Figure 1. The conceptual framework of research.

### 3.2 Measurement

This study used 5-Point Likert scale to measure the multiple-item from 1 (strongly disagree) to 5 (strongly agree). Data were collected by using self-administered questionnaire, which included two parts, demographic factors and factors measurement. The multiple-item in the questionnaire were designed for the study which had included five variables for social media marketing, subjective well-being, brand identity, brand loyalty, and self-congruence.

- “Social media marketing” was measured with fifteen items adapted from Kim and Ko (2012) [17] and Godey et al. (2016) [18]. Respondents were shown their perception on the entertainment, interaction, trendiness, customization, word of mouth provided by Huawei 's social media.

- “Subjective well-being” was measured with eight items adapted from Diener, Emmons, Larsen and Griffin (1985) [19]. Respondents were asked to indicate the degree to which they think Huawei smartphone has enhanced their satisfaction in their life.

- “Brand identity” was measured with eight items adapted from He and Harris (2012) [20]. Respondents were asked to indicate the degree to which they think the distinctive and relatively enduring characteristics of Huawei. The products of Huawei tend to have a strong and attractive identity when the identity is more distinctive and more prestigious.

- “Self-congruence” was measured with four items adapted from Malär, Krohmer, Hoyer and Nyffenegger (2011) [13]. Respondents were asked to indicate the

degree of consistency between their personal perceptions and Huawei's brand image.

- “Brand loyalty” was measured with three items adapted from Veloutsou (2015) [21]. Respondents were asked to indicate the degree of willing for repeating the purchase action for buying Huawei's products or services, and regardless of any external influences or any factors that may cause consumers to transfer their behaviors, will not shake their willingness to purchase and people will continue to purchase Huawei's products and services.

## 4 RESEARCH FINDINGS AND DISCUSSION

### 4.1 Sample and Procedure

According to an empirical study of mobile social media users in China, approximately 46% (626 million) of Chinese people use social media actively every day to meet various demands [22]. Therefore, this research uses online questionnaires to distribute and retrieve the questionnaires via Weibo, Tencent QQ, WeChat online social media to consumers who like, share or share with Huawei social media. According to the sampling formula (1) proposed by Rea and Parker (1997), a 95% confidence level ( $\alpha = 0.5$ ,  $C_p = 0.05$ ) was adopted and  $p$  was calculated as 0.5. The results show that the number of samples obtained in this study should reach 384 [23].

$$n = \left[ \frac{Z_{\alpha} \sqrt{p(1-p)}}{C_p} \right]^2 \quad (1)$$

A total of 390 valid questionnaires were obtained after deleting invalid questionnaires with a response time of less than 1 minute.

### 4.2 Reliability and Validity Analysis

All items were measured on 5-Point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). These measurements demonstrated the following reliability estimates: the alpha reliability of social media marketing is 0.787; the alpha reliability of subjective well-being is 0.716; the alpha reliability of brand identity is 0.739; the alpha reliability of self-congruence is 0.712; the alpha reality of brand loyalty is 0.832. The alpha reality of all items are greater than 0.7. Thus, it indicated the measurements are with good reliability.

The questionnaire items in this research are compiled through literature research and the use of scales and items developed by scholars in related topics. Meanwhile, research questionnaires based on research hypotheses and variables, and issue an item-objective congruence (IOC) to experts and correct them to form a formal questionnaire. Consequently, the questionnaire of this study meets the requirements of content validity.

### 4.3 SMM, SWB and BL Testing Mediation with Regression Analysis

This part is to test whether the subject well-being plays a mediation effect in the relationship between social media marketing and brand loyal. Therefore, according to the four steps proposed by Baron and Kenny (1986) to test the mediation effect of subjective well-being by regression analysis [24]. Figure 2 shows that after using regression analysis, the relationship between social media marketing and subjective well-being was found to be statistically significant ( $\beta = 0.515$ ,  $p < 0.001$ ), so it supports Hypothesis 1. The relationship between subjective well-being and brand loyalty is statistically significant ( $\beta = 0.490$ ,  $p < 0.001$ ), hence supports Hypothesis 5. The social media marketing to brand loyalty path in Figure 2 and Figure 3 illustrates the causal relationship between social media marketing and brand loyalty. It can be found in Figure 3 that the social media marketing to brand loyalty path has dropped from 0.500 ( $p < 0.001$ ) to 0.252 ( $p < 0.001$ ). According to the mediating process proposed by Baron and Kenny (1986) [24], the partial mediation effect is validated which means that subjective well-being partially mediates the relationship between social media marketing and brand loyalty.

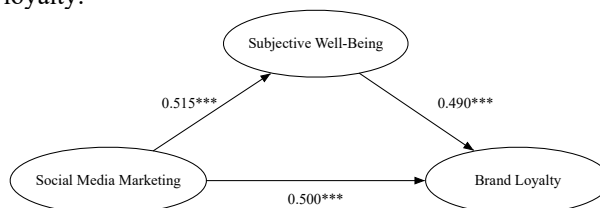


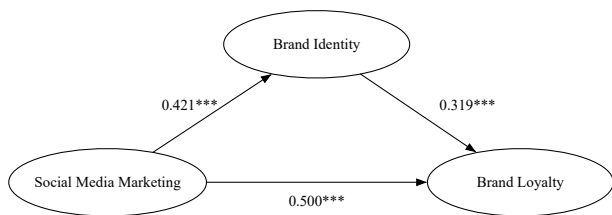
Figure 2. Mediation effect among SMM, SWB and BL.



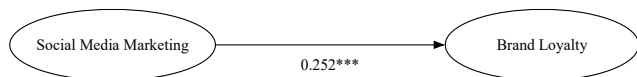
Figure 3. SMM to BL path I.

### 4.4 SMM, BI and BL Testing Mediation with Regression Analysis

Figure 4 shows that after using regression analysis, the relationship between social media marketing and subjective well-being was found to be statistically significant ( $\beta = 0.421$ ,  $p < 0.001$ ), so it supports Hypothesis 2. The relationship between brand identity and brand loyalty is statistically significant ( $\beta = 0.319$ ,  $p < 0.001$ ), and therefore supports Hypothesis 6. The social media marketing to brand loyalty path in Figure 4 and Figure 5 illustrates the causal relationship between social media marketing and brand loyalty. It can be found in Figure 5 that the social media marketing to brand loyalty path has dropped from 0.500 ( $p < 0.001$ ) to 0.453 ( $p < 0.001$ ). According to the mediating process proposed by Baron and Kenny (1986) [24], the partial mediation effect is validated which means that the brand identity partially mediates the connections between social media marketing and brand loyalty.



**Figure 4.** Mediation effect among SMM, BI and BL.

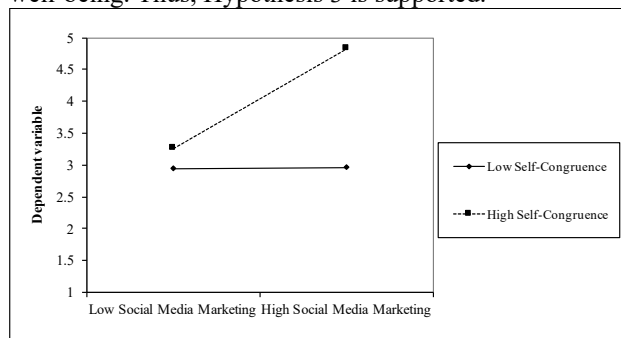


**Figure 5.** SMM to BL path II.

#### 4.5 The moderating effect of SC on the relationship between SMM and SWB

Firstly, the control variable, independent variable (social media marketing) and moderator variable (self-congruence) were put consecutively into the regression equations. Subsequently, the interactions of experiential marketing with self-congruence were added. On the basis of the results of the hierarchical regression analysis, social media marketing ( $\beta = 0.397, p < 0.001$ ) and self-congruence ( $\beta = 0.548, p < 0.001$ ) were significant predictors of subjective well-being. In regression equations, this research found that self-congruence improves the connection positively between the social media marketing and subjective well-being ( $\beta = 0.390, p < 0.001$ ). Finally, this research computed the variance inflation factors (VIFs) for all variables; the largest VIF is 1.779, suggesting that the multi-collinearity problem is not a serious concern.

Figure 6 manifests that under different degrees of self-congruence, the slopes of social media marketing to customer subjective well-being are with significant difference. The slope of high self-congruence is greater than that of low self-congruence. It indicates that self-congruence is with modulating effect on the relationship between social media marketing and customer subjective well-being. Thus, Hypothesis 3 is supported.



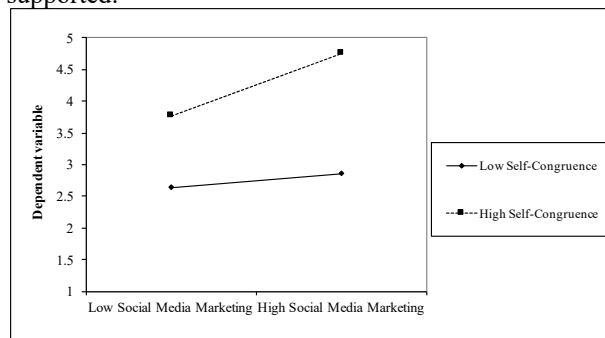
**Figure 6.** The moderating effect of SC on the relationship between SMM and SWB.

#### 4.6 The moderating effect of SC on the relationship between SMM and BI

Firstly, control variable, independent variable (social media marketing) and moderating variable (self-congruence) were put consecutively into the regression

equations. Besides, the interactions of social media marketing with self-congruence were added in. In accordance with the results of the hierarchical regression analysis, social media marketing ( $\beta = 0.299, p < 0.001$ ) and self-congruence ( $\beta = 0.753, p < 0.001$ ) were significant predictors of brand identity. In regression equations, this research found that self-congruence improves the causal relationship positively between the social media marketing and self-congruence ( $\beta = 0.193, p < 0.001$ ). The variance inflation factors (VIF) for all variables with the largest VIF being 1.812, suggests that the multi-collinearity is not a serious concern in this study.

Figure 7 illustrates that under different levels of self-congruence, the slopes of social media marketing to brand identity are with significant difference, and the slope of high self-congruence is greater than that of low self-congruence. Accordingly, dependent variable (brand identity) is being improved under this environment. The effect, then, self-congruence is with modulating effect on the relationship between social media marketing and customer subjective well-being. Thus, Hypothesis 4 is supported.



**Figure 7.** The moderating effect of SC on the relationship between SMM and BI.

## 5 CONCLUSIONS

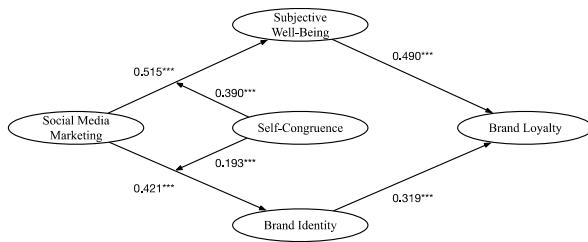
### 5.1 Discussion

Table I and Figure 8 show the hypotheses results of this study. Hypothesis 1 to Hypothesis 6 are supported among them, which means that the higher the degree of social media marketing, will be the higher the degree of consumer's subjective well-being, the higher the degree of consumer behavior identity, and the more important is that consumer loyalty to specific brands will also be increased.

**TABLE I.** SUMMARY RESULTS OF HYPOTHESES

Hypotheses	$\beta$	Results
H1 SMM→SWB	0.515***	Supported
H2 SMM→ BI	0.421***	Supported
H3 SC→SMM to SWB	0.390***	Supported
H4 SC→SMM to BI	0.193***	Supported
H5 SWB→ BL	0.490***	Supported
H6 BI→ BL	0.319***	Supported

a. \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$



**Figure 8.** Results of the computations.

If consumers are able to obtain a high degree of subject well-being and brand identity in social media marketing, they may become highly loyal customers of the brand and continue to purchase the company's products and services in the future.

According to the results of this research, the degree of consistency between consumers' personal views and brand image will affect the relationship between the social media marketing and subjective well-being. The degree of consistency between consumers' personal views and brand image will moderate the relationship between social media marketing, brand identity and subjective well-being. For consumers with a high degree of self-congruence, the experience on social media marketing will make it easier for consumers to obtain a high level of well-being and brand identity.

The higher degree of the consumers' identity of the brand, the more they are willing to buy the company's products and services repeatedly.

Besides, high degree of social marketing will promote high degree of subjective well-being or high degree of brand identity, then high degree of brand loyalty.

## 5.2 Managerial Implications

Marketers can use innovative marketing strategies to motivate customers to participate in the value chain cycle of company. For example, marketers can use social media, big data applications to enrich their customer's experience in products or services to enhance their brand loyalty of customer. More importantly, highly loyal customers can not only improve the performance of company, at the same time, it can also reduce the marketing costs to face the fierce market competition of company and the difficulty of expanding new customers.

## 5.3 Research Limitation and Future Works

First of all, questionnaires were only distributed by convenient sampling in this study. Furthermore, the research object of this study was only for Huawei consumers on Chinese social media and was not sufficient to represent all consumers in all regions. Therefore, future research can further study other consumers in other cities, other brands or industries. Last but not least, in general, there are still many variables that affect consumer loyalty to brands, but these variables are not considered in this study, so future studies may include other variables in the research framework for research.

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