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The Influence of Customer Co-creation Experience Value on Brand Equity in the context of Social Media

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Full Research Paper**The Influence of Customer Co-creation Experience Value on Brand****Equity in the context of Social Media***Yunjun Jiang¹, Hong Zhang^{1*}, Guiming Lian², Siqian Wang¹*¹College of Management, Wuhan University of Science and Technology, Wuhan, 430065, China²College of Automation, Guangdong University of Technology, Guangzhou, 510006, China

Abstract: In recent years, with the widespread application of mobile internet and the rapid development of social media, the interaction between customers and enterprises has become another important way of brand operation. The concept of brand equity based on customer-brand relationship has been boldly put forward and concerned by scholars and industry. Although there are many empirical studies on its pre-influencing factors in the field of brand equity research, the relevant research based on social media situation combined with customer co-creation experience is rare. This study takes Club of huawei, an online community of fan communication set up by Huawei, as the research object. Through empirical testing, this study explores the impact of customer co-creation experience value (spiritual value, enabling value, practical value, hedonistic value) on brand equity based on social media environment. Through the empirical analysis of 245 sample data, it is found that the spiritual value, enabling value and hedonistic value of customer co-creation experience value have a significant positive impact on brand equity based on customer-brand relationship. However, the practical value obtained by customers in the process of interaction in the social media environment has no significant impact on brand equity based on customer-brand relationship. The research provides practical inspiration for brand community builders on social media how to improve brand equity by catering to the needs of customers to create experience value.

Keywords: Customer co-creation experience value, Brand equity, Social Media

1. INTRODUCTION

With the emergence of service-oriented business model, the traditional model dominated by product value has been greatly challenged. In the service-oriented business model, consumers are no longer only regarded as users of products, but also participate in the whole process of providing products and services, and become important value creation partners of producers. With the rapid development of social media platform, value co-creating has attracted more and more attention in industries other than service-oriented enterprises. More and more enterprises also begin to establish brand communities on social media, build direct interaction with customers and work with customers to create the market value of the brand^[1]. For example, Haier Community, Xiaomi Community and Club of Huawei. Customers can keep abreast of the latest developments of the enterprise, exchange product experience and participate in the design and evaluation of new products in these brand social media sites. At the same time, enterprises can also get customer feedback in real time, make reasonable adjustments, and make more targeted marketing plans and management decisions. On the other hand, according to The Special Research report on China's New consumption in 2018, people's consumption concept is changing with the rapid economic development and experiencing a phased evolution from "quantity" to "quality" to "experience"^[2]. Customers expect to gain diversified experiences in the process of consumption, and the popularity of social media has led to new changes in customer experience. The high degree of interconnection of social media not only enables isolated customers to carry out real-time, multi-channel and personalized social interaction, but also makes social interaction become the core realization path of value

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co-creation between customers and enterprises in the social media environment. Based on this situation, the experience value of customers in the process of customer-enterprise interaction, that is, customer co-creation experience value, has been endowed with a new connotation. By building interactive channels between customers and enterprises on social media, customer rights and dominance are enhanced. Therefore, customers begin to actively participate in the interaction of brand social media sites, so as to achieve co-creation value.

As one of the sources of economic benefits and the most valuable assets of enterprises, brand equity has been the focus of academia and other circles since the concept was put forward. Among them, the CPC Central Committee with Comrade Xi Jinping as the core shows that it attaches great importance to brand building, such as the establishment of "China Brand Day", the launch of the "Brand Power Plan for the New era", the establishment of brand power strategic alliances and other major actions. China's brand building work presents a new normal. Academia holds that the essence of brand operation lies not in products but in customers. As the relationship between customers and enterprises changes as a result of value co-creation activities, brand equity based on the perspective of customer-brand relationship has been put forward and concerned by scholars. Stepping into the era of experience economy, enterprises pay more and more attention to meeting the needs of customer experience. Meanwhile, people also pay more attention to obtaining experience value from the process of product and service co-creation and interaction. This makes the promotion of customer co-creation experience value to become the inevitable choice to build the competitive advantage of enterprise brand^[3]. Therefore, in the process of interactive co-creation, how to cater to the needs of customer co-creation experience to promote customer-brand relationship and enhance brand equity is an urgent problem for social media platforms and brand builders.

Although there are many empirical studies on the pre-influencing factors in the field of brand equity research, there are few related studies in the field of social media context and value co-creation. In other words, the "black box" of the influence mechanism of customer co-creation experience value on brand equity from the perspective of customer-brand relationship in the context of social media has not been opened. Therefore, this study focuses on the current situation of social media, attempts to refine the measurement dimension of customer co-creation experience value, and discusses its impact on brand equity from the perspective of customer-brand relationship. Data were collected through questionnaires and verified by structural equation model. The research enriches the empirical study of brand equity from the perspective of customer-brand relationship in the field of brand equity, and analyzes the new connotation of customer co-creation experience value combined with social media situation. In the meantime, it also provides practical inspiration for brand community builders on social media how to improve brand equity by catering to the needs of customers to create experience value.

2. THEORETICAL BASIS AND RESEARCH MODEL

2.1 Customer co-creation of experience value

Value co-creation theories based on customer experience, service-leading logic and service ecosystem all emphasize that customer experience value is the intrinsic driving force of value co-creation. Research on the value of customer co-creation experience originates from the value co-creation theory based on customer experience proposed by Prahalad and Ramaswamy^[4]. These two scholars believe that co-creation of consumption experience is the core of customer and enterprise co-creation value. On the other hand, the service-oriented logic proposed by Vargo and Lusch^[5] also emphasizes that the value co-creation between customers and enterprises is based on the interactive experience of the two. From the perspective of service ecosystem, Lusch and Nambisan^[6] emphasized again that the core of value co-creation is to create experience value together between service providers and beneficiaries. Therefore, the author believes that customers

co-creation experience value is derived from the customer's evaluation of co-creation interaction experience, and is a new kind of experience value brought by the co-creation interaction behavior of both parties. It embodies the customer's satisfaction with the process of interaction, and is formed by changing situation as people consumption of a new type of consumption values.

For customers co-creation experience value dimensions, Holbrook^[7], a representative scholar, constructed the customer value classification framework according to three dimensions of experiential value. At the same time, he divides the customer value into efficiency value, superior value, status value, respect value, game value, aesthetic value, ethical value and soul value, which provides reference and thinking for the division of customer co-creation experience value. In the context of modern intelligent interconnection, two scholars, Novak and Hoffman^[8], regard intelligent products as independent ontology innovatively. They analyze customer co-creation experience from the perspective of ability empowerment, and divide customer co-creation experience into self-extension, self-expansion, self-limitation and self-reduction according to the two roles of customers and intelligent products. There are various ways to classify the value dimension of customer co-creation experience. Wang Xinxin and Wan Wenhai^[9] divided co-creation value into two dimensions: co-creation value in the field of production (rational cognitive value) and co-creation value in the field of consumption (emotional experience value) according to the different fields in which co-creation value occurs and the different roles played by customers. On the basis of Zhang Mingli and Tu Jianbo et al.^[10], Bu Qingjuan et al.^[11] proposed a three-dimensional division method to divide the customer experience value in the process of value co-creation into practical value, social value and entertainment value. Later, some scholars divided the experience value in co-creation into four dimensions. Wu Wenzhen and Chen Qijie^[12] divided the customer experience value into economic value, relationship value, enjoyment value and learning value based on the "use and satisfaction theory".

To sum up, the academic community has not formed a unified standard for the dimension division of customer co-creation experience value. Based on the analysis and conciseness of the existing literature and the Grounded theory research results of the author's team on the social media platform, according to the customer value classification criteria put forward by Holbrook (2006): external value and intrinsic value and Maslow's demand hierarchy theory, 11 main category theories are abstracted into four kinds of value themes: spiritual value, enabling value, practical value and hedonic value. Spiritual value comes from the intrinsic motivation of customers. It is a pure psychological and spiritual demand, which belongs to the intrinsic and transcendent value demand, including psychic value, emotional value and altruistic value; Empowering value stems from customers with enhanced control and self-awareness, high personalization needs, empowerment, and strong value together, belongs to external, high demand level value, including knowledge empowerment value, ability empowerment value; Practical value stems from the external motivation of the customer's participation in the value of economic benefits, social interests and function value, belongs to the value of external low demand, including social value, economic value; Hedonic value originates from customers' pursuit of pleasure, aesthetic enjoyment and novelty, which belongs to the high-level value of heart and id, including hedonistic, aesthetic value and novelty value.

2.2 Brand Equity

Brand Equity has been recognized as an important factor in building competitive advantage and differentiated marketing strategies. The definition of brand equity in existing studies mainly focuses on four perspectives: financial market output, product market output, customer perception and customer-brand relationship^[13]. Among them, brand equity research based on the perspective of customer-brand relationship holds that brand equity in essence does not come from customers' one-way perception and attitude towards the brand, but from the two-way interactive relationship between customers and the brand^[14]. In the first part of

brand equity based on the perspective of customer-brand relationship, the meaning of brand equity is defined: brand equity is created by the interaction between customers' attitude towards brand and brand's attitude towards customers^[15].

As brand equity is a multi-dimensional concept, the measurement methods of brand equity based on the perspective of customer-brand relationship also show a diversified trend: Fournier and Susan^[16] point out that brand equity comes from the quality of brand relationship and reflects the strength and development ability of the continuous connection between customers and brands. Xu Zhengliang and Gu Anwei^[13] believe that brand equity from the perspective of customer-brand relationship refers to customers' differentiated responses to brand marketing activities due to their relationship quality in the process of contact with brands, which includes six constructs: brand experience, brand function, brand symbol, brand attachment, brand trust and brand loyalty. And on this basis, Zhong Shuai and Zhang Qiyu^[14] further interpreted brand equity from the perspective of relationship interaction. Based on the theory of social psychology of interpersonal relations, it is defined as the differentiation effect of customers' response to marketing activities caused by the interaction perception of brand relationship. Hence, a five-dimension brand equity measurement scale based on relationship interaction is developed (brand personality, brand reciprocity, brand courtesy, relationship status, relationship energy). Because of its wide applicability, this scale has been widely adopted by scholars.

Based on the strength of these research, this study quotes Zhong Shuai et al. 's definition and scale of brand equity from the perspective of customer-brand relationship. Among them, brand personality is the customer's perception of the individual characteristics of the brand in the brand relationship, brand reciprocity refers to customers' perception of benefit exchange in the brand relationship, brand courtesy refers to customers' perception of emotional communication in the brand relationship, relationship status reflects customers' previous closeness to the brand, and relationship energy reflects customers' willingness to maintain relationship with the brand in the future^[14].

2.3 Research Models and Hypotheses

2.3.1 Relationship between spiritual value and brand equity

Spiritual value comes from the experience of satisfying spiritual needs such as belief identification, altruistic sense of achievement and emotional support obtained by customers' participation in social media interaction, including psychic value, altruistic value and emotional value. Based on the social media environment, customers gain spiritual value by interacting and exchanging ideas within the brand community, helping others solve problems and seeking emotional comfort. Through the co-creation and interaction within the brand community, customers' positive spiritual beliefs will be recognized and supported by others, and their spiritual needs will be satisfied, so as to deepen their brand cognition and further affect their perception of the brand. In addition, the spiritual value gained by customers encourages customers to continue to interact in the brand community, and the continuous positive interaction will make customers appreciate, love and rely on the brand, thus promoting the relationship between customers and the brand^[17]. Based on this, this study puts forward the following hypotheses:

Hypothesis 1(H1): The spiritual value acquired by customers in the process of co-creating interaction has a positive impact on brand equity based on the customer-brand relationship.

2.3.2 Relationship between enabling value and brand equity

Enabling value refers to the self-ability enhancement value gained by customers in the process of co-creating interaction on social media platforms, including knowledge enabling value and ability enabling value. Customers participate in the co-creation and interaction within the brand community through social media, and in the process of interaction, they improve their own abilities by acquiring information and knowledge, exchanging innovative ideas and expanding their own skills, so as to obtain enabling value. Research has found

that when customers receive guidance or educational knowledge from a certain brand, their cognition of brand products will have a positive effect^[18]. As the most critical element of brand equity, brand knowledge acquired by customers is affected by all aspects of the environment in the purchase process of customers, and has an impact on brand equity from the individual level of customers. Therefore, based on the social media platform, the knowledge gained by customers in the process of consulting product issues to brand enterprises in the brand community or participating in the interaction of brand marketing enriches their cognition of the brand, thus affecting their perception of the brand. On the other hand, when customers achieve self-improvement through co-creation and interaction, their sense of self-efficacy will be improved accordingly, thus creating emotional dependence on the brand and improving the quality of the relationship between customers and the brand. Based on this, this study proposes the following hypotheses:

Hypothesis 2(H2): The enabling value acquired by customers in the process of co-creating interaction has a positive impact on brand equity based on the customer-brand relationship.

2.3.3 Relationship between practical value and brand equity

Practical value is derived from the experience of customers achieving important goals through co-creating interaction in social media, including social value and economic value. By participating in the co-creating interaction in the brand community on the social media platform, customers are more closely connected with the members of the community, their social network can be rapidly extended, and the time cost of acquiring information and knowledge and the cost of perceived risk can be effectively reduced, thus obtaining practical value. Knox and Walker^[19] found that social value can influence the change of customers' cognitive attitude, thus influencing brand loyalty. Jin Yufang et al.^[20] verified the positive influence of customers' economic value on brand trust through empirical research. Brakus et al.^[21] put forward that brand owners can make customers rely on and feel affection for the brand by meeting customers' practical needs, and ultimately enhance brand equity. Based on the co-creating interaction within the brand community, the expansion of customers' social network promotes the integration of a variety of cognitive viewpoints. Therefore, customers' cognition of the brand is richer and more comprehensive, thus affecting their perception of the brand. In addition, in the process of interaction, the close connection with community members enhances the sense of belonging of customers, and the reduction of information acquisition cost also meets the needs of customers' actual interests, thus making customers have positive feelings towards the brand, and finally promoting the relationship between customers and the brand. Based on this, this study puts forward the following hypotheses:

Hypothesis 3(H3): The practical value acquired by customers in the process of co-creating interaction has a positive impact on brand equity based on the customer-brand relationship.

2.3.4 Relationship between hedonistic value and brand equity

The hedonistic value derives from the spiritual enjoyment, entertainment and pleasure experience gained by customers in the process of co-creating interaction with social media, including hedonistic value, aesthetic value and novelty value. In the process of co-creating interaction, the aesthetic visual design of the interface and the creative ideas burst out when communicating with others can bring enjoyment and pleasure to customers, thus enabling them to obtain the hedonistic value. Wang Xinxin and Fang Wenhai^[9] defined customer co-creation experience value as the customer aesthetic value composed of sensory pleasure, meaning of life and reconstruction experience. Through empirical research, they found that the customer aesthetic value created by consumers through consumption interaction in brand communities can improve brand loyalty. Zhang Mingli and Tu Jianbo^[10] found in their empirical study that satisfaction of hedonistic value has a significant positive impact on customers' cognitive behavior and attitude. Customers get fun and pleasure in the process of co-creating and interacting within the brand community, which satisfies their entertainment needs, promotes their attachment and affection to the brand, and enhances the relationship between customers and the brand. On the other hand,

the satisfaction of hedonistic value motivates the interaction enthusiasm of customers, and frequent interaction promotes the further cognition of customers to the brand, and then makes them have a good impression on the brand. Based on this, this study proposes the following hypotheses:

Hypothesis 4(H4): The hedonistic value acquired by customers in the process of co-creating interaction has a positive impact on brand equity based on the customer-brand relationship.

3. RESEARCH DESIGN

3.1 Questionnaire design

The questionnaire designed in this paper mainly covers three sections. The first part contains the basic personal information and relevant experience of the respondents. The second part mainly asks targeted questions about the real co-creation experience of the respondents. The third part evaluates the subjective perception of respondents by focusing on brand equity based on customer-brand relationship.

In the second part of the questionnaire, most of the variables used to measure the value of customer co-creation experience are from existing literature, and then reasonable modifications are made according to the research situation of social media in this study. The measurement items in this part are mainly from the scales used in 8 studies by scholars such as Kumar.M^[22], Nambisan et al^[23]. Subsequently, combined with reference to the measurement items in the existing scale and the questions reasonably supplemented by the author according to the research situation and practice, the scale of customer co-creation experience value based on the social media environment is finally organized and formed. In the third part of the questionnaire, the brand equity scale developed by Zhong Shuai et al was reasonably used for the measurement of brand equity based on the customer-brand relationship. The specific reasons for the selection have been explained in the previous section and will not be repeated here.

In order to measure whether the measurement items in the scale can reflect the problems that need to be investigated, two professional scholars in the field of value co-creation were invited to review the scale, and according to the feedback opinions, the scale was revised, finally forming the preliminary draft of the questionnaire of this research. Subsequently, 15 Club of huawei users were invited to participate in the pre-survey of the questionnaire in this study, and the initial questionnaire was supplemented and modified according to the questions and shortcomings of the respondents. Finally, the formal questionnaire of this study was formed after many improvements, as shown in Table 1.

Table 1. Questionnaire

Second-order Construct	First-order Subconstruct	Item
Spiritual Value (SPI)	Spirituality value (SPV)	SPV1. Participate in the interaction, seeing the incredible creativity and design of others, I have a positive belief in dealing with the problems of innovation.
		SPV2. Participate in the interaction, I feel very open-minded.
		SPV3. Participate in the interaction, I feel the optimistic atmosphere.
		SPV4. Participating in the interaction, I was inspired by a positive attitude towards life.
		SPV5. Participating in the interaction, I firmly adhere to the fairness, transparent and fair belief.
	Emotional value (EMV)	EMV1. When I pour out my difficulties in the Club of huawei, someone comfort and encourage me.
		EMV2. When I describe my predicament in the Club of huawei, someone accompany me to face it.
		EMV3. When I talk about my troubles in the Club of huawei, someone care me.
		EMV4. When I post my question in the Club of huawei, someone respond to me quickly.
	Altruistic value	ALV1. Participating in the interaction makes me feel that I am fulfilling my social responsibility.
ALV2. Participating in the interaction makes me feel like I'm helping others.		

	(ALV)	ALV3. Participating in the interaction makes me feel that I am contributing to the society.
Enabling Value (ENP)	Knowledge empowering value (KEV)	KEV1. Participating in the interaction, I have increased my knowledge about Huawei's products / services. KEV2. Participate in interaction, help me get solutions to product / service use related issues. KEV3. Participate in the interaction, so that I can have a deeper understanding of Huawei, Huawei products/services and technical improvements.
	Capability empowers value (AEV)	AEV1. Participating in interaction has improved my reputation in the Club of huawei. AEV2. Participate in interaction has improved my product use skills. AEV3. Participating in interaction has improved my ability to discern product performance. AEV4. Participate in the interaction can help me understand new ideas in Huawei products/services. AEV5. Participating in interaction can inspire me to come up with new ideas. AEV6. Participate in the interaction, I can better meet my preferences. AEV7. Participating in the interaction, I have professional skills related to product/service development. AEV8. Participating in the interaction, I gain a sense of accomplishment. AEV9. Participating in the interaction, I feel that I can influence the design and development of Huawei's new products/services (for example, the optimization of EMUI system functions, the appearance design of Huawei's new mobile phones).
Pragmatic Value (FUNC)	Social value (SOV)	SOV1. Participating in the interaction has enabled me to expand my social circle. SOV2. Participating in the interaction enhanced my sense of belonging to the Club of huawei. SOV3. Participating in interaction has strengthened my relationship with Huawei Club customer base. SOV4. Participating in the interaction gave me a sense of identity with the Club of huawei. SOV5. In the process of participating in the interaction, I feel like I'm a member of the Club of huawei.
	Economic value (ECV)	ECV1. Participate in the interaction, I can buy products/services at a more favorable price. ECV2. Participate in the interaction, I am likely to win prizes. ECV3. In return for participating in the interaction, I got a gift. ECV4. Because of participating in the interaction, I received virtual rewards (such as points and coins). ECV5. For participating in the interaction, I received a monetary reward.
Enjoyment Value (ENJ)	Hedonic value (HEV)	HEV1. Participate in the interaction, I get happiness. HEV2. Participate in interaction to solve problems and generate creativity, which makes me have fun. HEV3. Participating in interaction to solve problems and generate ideas makes me feel excited. HEV4. In the process of participating in the interaction, I felt joy and happiness.
	Aesthetic value (AV)	AV1. Various customer designs in the Club of huawei are visually attractive. AV2. I admire the aesthetic art of customer design in the Club of huawei. AV3. The customer design in the Club of huawei gave me visual enjoyment.
	Novelty value (NOV)	NOV1. Participate in the interaction and satisfy my curiosity. NOV2. I appreciate the creativity and design proposed by customers in the Club of huawei. NOV3. Participate in interaction and help me understand new trends. NOV4. Participation in interaction is an exploratory experience for me.
Brand Personality		BRA1. Huawei is an outstanding brand. BRA2. Huawei is a reliable brand.
Brand Discount		BRA3. Relative to the cost paid, Huawei is worth the money. BRA4. Buying Huawei is more cost-effective than other brands.
Brand Courtesy	/	BRA5. Huawei is very consumer friendly. BRA6. Huawei respects consumers.
Relationship Status		BRA7. The Huawei brand makes me feel safe and assured. BRA8. I think Huawei is trustworthy.
Relationship Energy		BRA9. I would rather spend some setbacks to buy Huawei. BRA10. I will always use Huawei in the future.

3.2 Data sources

In this study, the Club of huawei was selected as the research situation, and the users of the Club of huawei were the respondents of the questionnaire. Club of huawei has over 100 million users and is one of the most active platforms for brand fans to interact with each other in China. Users in Club of huawei can freely communicate and interact with others, publish ideas, share product related knowledge and experience, provide suggestions or opinions to customers and enterprises in the same industry, and answer customers' inquiries about products in the same industry, etc. Through the frequent interaction of Club of huawei, users will have a change in their cognition and emotion towards Huawei, thus promoting the relationship between users and Huawei. Therefore, the Club of huawei is consistent with the research content of this study.

In this study, the 4-week questionnaire data collection was started on April 15, 2019. The online questionnaire was mainly released through various channels such as the app of Club of huawei, related QQ groups and the comment area under the official Weibo. Members of Club of huawei were encouraged to fill in the questionnaire carefully by giving red envelopes to ensure the validity of the questionnaire data. In this study, after excluding incomplete and invalid questionnaires, there are 245 valid questionnaires to continue the next empirical test.

4. DATA ANALYSIS AND RESULTS

4.1 Reliability and validity test

In this paper, exploratory factor analysis(EFA) and confirmatory factor analysis(CFA) were used to evaluate the reliability and validity of the scale items in this study using SPSS17.0 and AMOS22.0 software respectively. The analysis results are shown in Table 2. Firstly, the reliability level of the scale was evaluated by Cronbach's α and Composite Reliability(CR). The results show that the Cronbach's α value and the CR value of each variable are in the range of 0.933-0.973, which are greater than the minimum acceptable standard 0.7, indicating that the internal consistency of the measurement items is good.

Secondly, the validity level of the scale was determined by content validity and construction validity, of which the latter was divided into Convergent Validity and Discriminant Validity. As the scale items in this study are extracted and summarized from a large number of existing literatures, and revised after expert review and feedback, it can be considered that this scale has certain content validity. Since the variables in this scale were constructed by combining the research context and literature analysis, the overall construction validity of the scale was first verified in this study. The indexes of the first-order model: $\chi^2=1820.66$, $df=886$, $RMSEA=0.066$, $TLI=0.924$, $CFI=0.932$, all of which meet the standard suggested by Bentley^[25], showing that the model has good goodness of fit. Since the value of customer co-experience proposed in this study (spiritual value, enabling value, practical value, hedonistic value) is a second-order variable, the goodness of fit of the second-order model is further tested in this study. The results showed that the estimated values of various fitting indexes in the second-order model were not significantly different from those in the first-order model ($\chi^2=1846.96$, $df=915$, $RMSEA=0.065$, $TLI=0.926$, $CFI=0.932$), which indicated that the setting of higher-order variables in this study did not affect the relationship between the first-order variables and the measured variables. Moreover, the second-order model was more simple and more convenient for theoretical research.

Subsequently, this study tested the aggregation validity of the scale by combining the factor load of each variable and Average variance Extracted(AVE). The results showed that the standard load of all the measurement items ranged from 0.757 to 0.991 (all greater than 0.7), and the AVE of each variable was greater than the minimum standard 0.5, indicating that the scale had good aggregation validity.

Finally, this study tested the discriminative validity of the scale by comparing the square root of AVE of each variable and the size of correlation coefficient between variables. The square root of AVE of each latent

variable in Table 2 is greater than the correlation coefficient with other latent variables, so the scale has good discriminative validity.

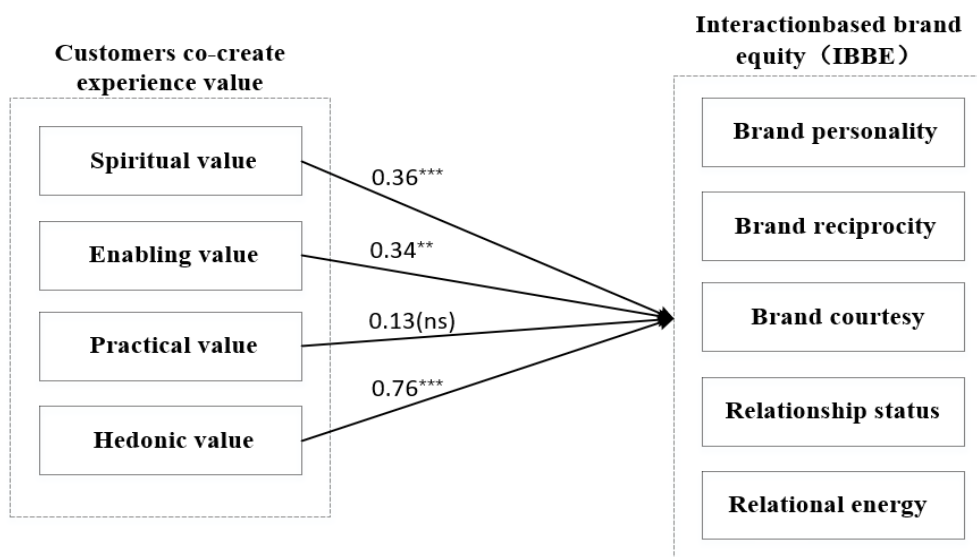
Table 2. Factor analysis results

	α	CR	AVE	1	2	3	4	5	6	7	8	9	10
SPV	0.965	0.955	0.812	0.901									
EMV	0.973	0.961	0.892	0.376	0.944								
ALV	0.953	0.954	0.873	0.373	0.491	0.934							
KEV	0.952	0.935	0.827	0.189	0.249	0.247	0.909						
AEV	0.933	0.947	0.668	0.051	0.067	0.067	0.290	0.817					
SOV	0.957	0.954	0.807	0.226	0.298	0.295	0.205	0.055	0.898				
ECV	0.955	0.955	0.811	0.235	0.310	0.307	0.213	0.057	0.259	0.900			
HEV	0.944	0.944	0.809	0.093	0.123	0.122	0.129	0.035	0.151	0.157	0.899		
AV	0.943	0.945	0.852	0.110	0.144	0.143	0.152	0.041	0.178	0.185	0.149	0.923	
NOV	0.940	0.936	0.785	0.102	0.135	0.134	0.142	0.038	0.166	0.173	0.139	0.163	0.886

4.2 Common method deviation

The sameness of data source or measurement environment and other anthropogenic covariation can easily lead to common method deviation and affect the final results of the research. In order to test whether there is serious common method variation in the data, this paper uses Harman's single factor test method to test the sample data. Among them, 10 factors with characteristic roots greater than 1 were extracted from the unrotated exploratory factor analysis results, and the maximum factor variance interpretation rate was 24.733%, lower than the critical value of 40%, so there was no serious common method bias in the sample data of this study.

4.3 Results of hypothesis testing



Note: ***P<0.01; **P<0.05; *P<0.1; Ns: Not significant at 0.01 level

Figure.1 Results of hypothesis testing

In this study, AMOS 22.0 structural equation model analysis tool was used to test the model and research hypothesis proposed in the previous paper. As shown in figure 1, the spiritual value, enabling value and hedonistic value of customer co-creation value obtained by customers in co-creation interaction process have significant positive influence on brand equity from the perspective of customer-brand relationship. H1, H2 and H4 are supported. However, there is no significant relationship between the practical value gained by customers

in the process of co-creation and brand equity from the perspective of customer-brand relationship. H3 is not supported.

5. CONCLUSIONS

5.1 Research conclusion

This study takes Club of huawei as the research object and explores the influence of customer co-creation experience value acquired by customers in the co-creation interaction process on brand equity based on the customer-brand relationship from the perspective of social media context.

Research results show that the spirit value, can assign a value and hedonic value is based on the customer - brand relationship between effective predictors of brand equity (H1, H2, H4 hypothesis supported), suggests that customers through social media participation in the process of brand community to create interactive spirit value, can assign a value and hedonic value can significantly positive effect on customer perception of the brand, so as to promote the relationship between the customer and brand, enhance brand equity based on the customer - brand relationship.

Secondly, it is proved that utility value has no significant positive effect on brand equity based on customer-brand relationship (H3 hypothesis does not support this). The reasons for this result may have two kinds: first, with improvement of material life level, people demand for social contact and price sensitivity decreases, most respondents may result in the aspect of practical value, social value and economic value to create the experience of relatively thin, is not conducive to the research on the practical value of the measurement; secondly, it is understood that the members of Club of huawei set up by Glory pay more attention to product evaluation and other contents, the number of posts with group consciousness is less, and the community managers have less interaction with customers on the level of belonging and fans' welfare, which may have an impact on the evaluation of practical value in this study.

5.2 Research contribution

Based on the context perspective of social media, this study refines the new connotation of customer co-created experience value, explores the relationship between customer co-created experience value and brand equity in brand communities, and constructs the corresponding influence model for empirical test. The main theoretical contributions of this paper are as follows:

First, this paper builds a second-order factor model of customer co-created experience value based on the context of social media and existing literature. To a large extent, different from existing researches, scholars mostly focus on the emotional value/altruistic value/practical value/hedonistic value itself. This study further refines the customer co-created experience value as a second-order factor, and further improves the measurement of customer co-created experience value by existing scales.

Secondly, from the perspective of social media context, this paper explores the antecedent variables of brand equity by introducing the characteristics of interaction and co-creation of social media. Although previous studies have discussed the pre-influencing factors of brand equity, scholars mainly focus on indicators such as customer loyalty, while this paper considers the influence of customer co-creation experience value on brand equity based on the interactive co-creation characteristics of existing situations. Among them, the study shows that obtained in the process of creating the practical value to customers based on the customer - brand relationship there is no significant impact on brand equity, with general cognitive differences, this shows that the formation of new research situation for customers to create the experience value provides a new conclusion and view, enrich the existing research experience for customers to create value and brand equity related to explore.

This study has certain enlightening significance for the practitioners of brand building based on social media platforms.

First of all, brand community managers should provide customers with satisfactory experience value based on the interactive environment of social media. The results of this study show that brand equity based on the customer-brand relationship is not only affected by the spiritual value acquired by customers in the process of co-creating interaction, but also affected by the positive effects of empowering value and hedonistic value acquired in the interaction. In other words, brand community managers should also make full use of the technical enablement of social media platforms to meet customers' potential demands for enabling value and hedonistic value. For example, the managers of Club of huawei can set up a selection and recommendation mechanism on the home page, increase the exposure of more posts of higher quality, and optimize the visual design of the interactive interface.

Secondly, brand community managers should actively encourage customers to interact with other members and managers in a positive way, so as to increase their sense of brand identity and trust, thus driving the improvement of performance. And in the process of the customer to carry on the positive interaction with others, managers have access to the customer for the product novel ideas and Suggestions, which is advantageous to the enterprise new product development and improvement, such as millet can through the way of cultivating key opinion leaders to encourage the rice noodles are actively involved in the interaction in the millet community, express themselves for millet various ideas of new products, and millet can managers to collect back the value of information to the headquarters for the new product research and development.

5.3 Research limitations and prospects

The deficiencies of this study are as follows: First, due to the limitations of the survey environment and time and the large number of questionnaire questions, only 245 sample data were effectively collected in the end. Although the sample size reached the minimum requirement of the questionnaire survey, the number of respondents still needs to be increased in order to improve the reliability of the sample data. Second, this study draws on domestic and foreign scholars developed and verified the measurement scale, in order to combine in this paper, the research situation, the author in the customer to create the experience value and brand equity measurement item made reasonable modification, and because the domestic foreign language habits is different, in order to make respondents are more likely to understand the translated item, the author of the original item with the localization of the words change, so the questionnaire survey results of this study may with the original item is the error of measurement.

Based on the above shortcomings, the future research can be improved in a more scientific and reasonable way, and this study only consider based on social media perspective to create the customers experience value based on the customer - brand relationship between the influence of brand equity, future research can also from more diverse perspective to explore the customers to create the experience value to the brand influence, in theory reference and guidance for the industry to provide more.

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