

Study on the Impact of Customer Loyalty and Experiential Value on Value Co-creation Based on Sharing Economy

Haihua WANG, Lijun XIONG

School of Management, Shanghai University, P.R.China.

fjlydxlj@163.com

Abstract The study goes along the idea from the customer perception to the establishment of emotional and behavioral tendencies, to analyze the value co-creation mechanism in sharing economy for realizing the value maximum provide guidance for maximizing the value in the process of business management. It finds that the customer loyalty positively mediates the relationship between experiential value and value co-creation. The self-efficacy and proactive personality positively moderate the relationship between customer loyalty and customer participation behavior.

Keywords Value co-creation; Customer loyalty; Experiential value; Sharing economy¹

1 Introduction

Value creation is the central process of matching based on the supply of enterprise and the needs of customers and is one of the key factors to improve the core competitiveness of the enterprise ^[1]. The theory of value co-creation shows that customer has opportunity to create value together with enterprise through customized, co-produced offerings, and the integration of customer's viewpoint which makes the product more in line with the customer's needs ^[2]. Therefore, value co-creation helps enterprise breaks the bottleneck of innovation ^[3], promotes innovation and relationship management capabilities, and is a new approach of enterprise to create competitive advantage. In particular, with the continuous development of Internet and information technology, business can break through the space-time boundary and provide more diversified channels for customers to participate in the product creation process in sharing economy. Thus, the value co-creation mechanism will change in the integration of new economic ideas based on sharing economy ^[4]. According to the Chinese report on sharing economic development (2018), there were 700 million people participated in the sharing economic activities in 2017, and 51.7% of the Unicorns in China has a typical shared economic attribute ^[5]. It is particularly important to explore the behavior and influence factors of value co-creation in the sharing economy for business management.

The original idea of value co-creation originated from the 19th century and shows that value co-creation determined by the cooperation of customers and producers ^[6]. In fact, the study of value co-creation from the customer's perspective has been concerned by the management field. Prahalad et al. studied that the essence of value co-creation between enterprise and customer is to create consumers' product experience value ^[7]. Ojasalo believes that the consumption experience is the foundation of value co-creation. In addition, the realization of value co-creation also depends on the customer readiness ^[2], customers with high loyalty will become more recognized for enterprise and products, and more willing to work together with enterprise to enhance the value of the product ^[8]. Simultaneously, customer participate in the value co-creation is also influenced by personality trait. Xiao et al. found that personal self-efficacy is an important determinant of customer participation ^[9]. The proactive personality determines the initiative of customer in the process of participating in the value co-creation ^[10]. How to promote customer value co-creation is a hot topic, but there is less systematic research on the influence factors of value co-creation based on the sharing economy ^[4]. With the increasing proportion of sharing economy in economic activities, this economic mode brings new sharing environment and new requirements for customer in value co-creation. This study explores the impact of customer loyalty and experiential value on value co-creation in sharing economy aims to expand the theoretical research of value co-creation and provide guidance for the realization of maximum value in business management.

2 Hypotheses Development

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2.1 Influence of experiential value on value co-creation

The systematic study on the consumption experience was first started by Holbrook, and proposed that the result of customer experience in the product is an important source of value ^[11]. Mathwick et al. found that customer can obtain value from the consumption experience ^[12]. Value co-creation in this study based on two dimensions which are participation behavior and citizenship behavior. Customer participation behavior refers to the necessary activities in order to obtain higher value, such as searching for product information and the customer citizenship behavior refers to the voluntary extra effort such as providing feedback ^[13]. Combined with value co-creation, Jiang and Li found that product experience of customer through sharing platform can effectively promote the realization of value co-creation ^[14]. This study believes that the customers with higher experiential value will actively search for all kinds of product information, give more constructive suggestions, greater patience for service remedies of enterprises and other value co-creation activities in the sharing economy. Hence, put forward the following hypothesis:

H1 Experiential value has a significant positive impact on customer participation behavior.

H2 Experiential value has a significant positive impact on customer citizenship behavior.

2.2 Mediating role of customer loyalty

Oliver believes that customer loyalty refers to repeated purchases and consumption in the future ^[15]. The customer's experience and feeling to the product is the memory and judgment basis for the recognition of the product and the decision whether to buy again. Cui and Shin proposed that the level of customer's experiential value will directly affect the customer's subjective cognition of the product ^[16]. Vitae also found that the experiential value can predict purchase intention ^[17]. When customer's own preference related experience is better, they will be more willing to repeat the product purchase to form loyalty behavior. Hence, put forward the following hypothesis:

H3 Experiential value has a significant positive impact on customer loyalty.

Yang et al. suggested that customer loyalty has a significant positive impact on value co-creation and found that the loyal customers have rich experience in product consumption ^[8]. Furthermore, Cossío-Silva et al. proposed that loyal customers are willing to initiate and actively evaluate the product and recommend to the potential customers of the product ^[18]. Therefore, on the one hand, loyal customer has more clear demand preference in the process of repeated purchase and provides more accurate product demand information to realize the customer participation behavior. On the other hand, loyal customer has more in-depth information about products and has more opportunities to provide more constructive advice to realize the customer citizenship behavior. Especially in the sharing economy, customers can use Internet platform to search product information and give feedback efficiently. Hence, put forward the following hypothesis:

H4 Customer loyalty has a significant positive impact on customer participation behavior.

H5 Customer loyalty has a significant positive impact on customer citizenship behavior.

According to the above analysis, the experiential value has a positive impact on customer loyalty in the sharing economy and customer loyalty has a significant positive impact on the value co-creation. This study makes the further research on the relationship among experiential value, customer loyalty and value co-creation, and believes that the customer loyalty mediates the relationship between experiential value and value co-creation. Therefore, put forward the following hypothesis:

H6 Customer loyalty mediates the relationship between experiential value and customer participation behavior.

H7 Customer loyalty mediates the relationship between experiential value and customer citizenship behavior.

2.3 Moderating role of self-efficacy

Self-efficacy can provide some basis for customers to form loyalty, not easily affected by the surrounding negative product information, and customer has more bases to ensure the effectiveness of customer loyalty behavior. In addition, self-efficacy have an important influence on the process of thinking, behavior and emotion of a person ^[9]. Customers have higher self-efficacy, the more confident they will be involved in the value creation activities of enterprises. Especially in the context of sharing economy, the loyal customers with high self-efficacy are more confident in understanding product information and more convenient interacting with the enterprise in value co-creation, and it is difficult for the customers with low self-efficacy to voluntarily and resolutely participate in value co-creation because they are more easily influenced by others infection in the public participation characteristic of sharing economy. Hence, put forward the following hypothesis:

H8 Self-efficacy significantly moderates the positive relationship between customer loyalty and customer participation behavior.

H9 Self-efficacy significantly moderates the positive relationship between customer loyalty and customer citizenship behavior.

2.4 Moderating role of proactive personality

Bateman and Crant put forward the initiative personality for the first time and believed that proactive individuals will voluntarily change the unsatisfied current environment and conduct a series of proactive behaviors to achieve their goals ^[19]. Zhang et al. found that individuals with high proactive personality will more actively search and exchange the necessary information and tend to look for companions for knowledge sharing ^[10]. Especially under the background of sharing economy, the channels and platforms of information circulation are more flexible. When loyal customers have high proactive personality, they tend to share their positive views of their products with other customers. This study believes that the loyal customer with high proactive personality will participate in value co-creation activities more active such as searching information and give feedbacks. Hence, put forward the following hypothesis:

H10 Proactive personality significantly moderates the positive relationship between customer loyalty and customer participation behavior.

H11 Proactive personality significantly moderates the positive relationship between customer loyalty and customer citizenship behavior.

The overall framework of this paper is shown in Figure 1.

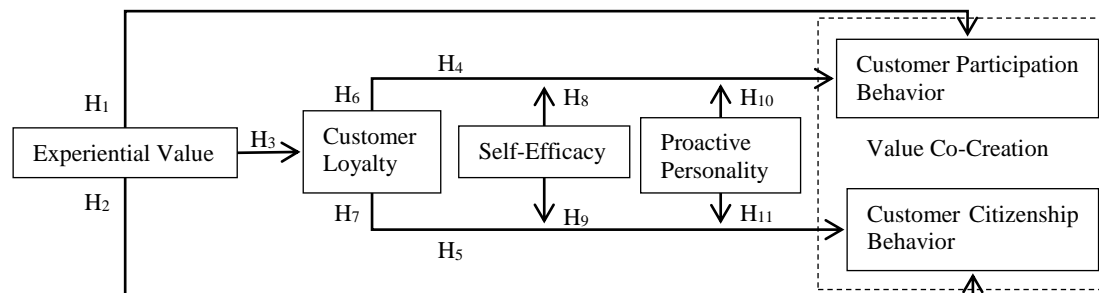


Figure 1 Conceptual model

3 Sample and Data Collection

This study selects the bike-sharing users as the research object, and the data research mainly concentrates on the Yangtze River Delta economic region. The item of each variable is a mature scale Value co-creation used 29 items designed by Yi et al., including two dimensions which are customer participation behavior and customer citizenship behavior ^[13]. Experiential value used 11 items designed by Wu et al. ^[20], including 11 items. Customer loyalty used 7 items designed by Wang and Wan ^[21]. Self-efficacy used 10 items designed by Schwarzer and Arisi ^[22]. Proactive personality used 11 items compiled by Bateman and Crant ^[19] and revised by Shang and Gan ^[23]. This paper summarizes previous research achievements of scholars in related academic fields, and chooses the gender, age, education level and working experience of respondents as control variables. There are 714 questionnaires were distributed, including 300 paper questionnaires and 414 online questionnaires. After screening out questionnaires with incomplete or obvious regular answers, 606 valid questionnaires were obtained, the effective recovery rate was 86.7%, and there are 51.98% females, 94.88% younger than 30 years old, 81.02% has got bachelor, 30.53% has work experience and 60.73% person use sharing bike once two weeks at least.

4 Data Analysis and Result

4.1 Measurement Model

The Cronbach's alpha coefficients of each variable ranges from 0.838 to 0.928, all higher than 0.8 (Total scale: Alpha=0.962) and shows that the scale had good reliability. The exploratory factor analysis shows that the variance variation in factor accumulative interpretation of each variable was greater than 50%, the

contribution rate of the total variance was 66.66%, and the factor loading of all items were higher than 0.5, indicating that the content validity of the scale is ideal. In summary, the reliability and validity of the scale is better, and it meets the requirements of the analysis. Table 1 shows that the average, standard deviation and a significant correlation between the variables, which are consistent with the expected relationship of the theory, and provides preliminary support for the hypothesis.

Table 1 Correlations from constructs

Constructs	1	2	3	4	5	6	7	8	9	10
1.Gender	1									
2.Age	-0.137*	1								
3.Education	-0.033*	-0.158*	1							
4.Workexperience	0.083*	-0.222*	0.069	1						
5.Experiential value	0.040	0.155**	-0.034	-0.153*	(0.838)					
6.Customer loyalty	0.027	0.132**	-0.030	-0.091*	0.520*	(0.863)				
7.Customer participation behavior	0.052	0.098**	-0.010	-0.021	0.347*	0.411*	(0.894)			
8.Customer citizenship behavior	0.057	0.106**	-0.007	-0.080*	0.411*	0.417*	0.508*	(0.928)		
9.Self-efficacy	-0.123*	0.108**	0.020	-0.056	0.268*	0.255*	0.272*	0.349*	(0.920)	
10.Protective personality	-0.049	0.099**	0.033	-0.045	0.258*	0.235*	0.294*	0.334*	0.614*	(0.918)
Mean	0.520	0.142	1.810	3.744	3.409	3.267	3.478	3.551	3.736	3.864
Standard deviation	0.500	0.578	0.672	2.060	0.684	0.920	0.697	0.786	0.684	0.680

Note: $N=606$; *significant at $p < 0.01$; * significant at $p < 0.05$; the same below. The data in parentheses are Cronbach's alpha values

4.2 Structural Model

Data analysis was conducted by using Mplus7, as shown in Table 2, the confidence interval not including 0 refers to the significance. It can be seen that the experiential value has a positive influence on customer participation behavior ($r=0.200$, [0.106, 0.300]), H1 was supported; Experiential value has a positive influence on customer citizenship behavior ($r=0.368$, [0.250, 0.484]), H2 was supported; Experiential value has a positive influence on customer loyalty ($r=0.936$, [0.859, 1.005]), H3 was supported; Customer loyalty has a significant influence on customer participation behavior ($r=0.322$, [0.254, 0.391]), H4 was supported. Customer loyalty has a positive impact on customer citizenship behavior ($r=0.291$, [0.209, 0.384]), H5 was supported. According to the method of Bootstrap proposed by Hayes and Preacher, the result shows that within the 95% confidence interval, the mediating test result of customer loyalty between experiential value and customer participation behavior without 0 (Indirect effect is 0.302, [0.232, 0.374]), H6 was supported. The mediating test result of customer loyalty between experiential value and customer citizenship behavior without 0 (Indirect effect is 0.272, [0.192, 0.365]), H7 was supported.

Table 2 Mediating effect of customer loyalty

Independent variable	Dependent variable: Customer loyalty				Dependent variable: Value co-creation							
	M1				M2 (Customer participation behavior)				M3 (Customer citizenship behavior)			
	β	S.E.	LLCI	ULCI	β	S.E.	LLCI	ULCI	β	S.E.	LLCI	ULCI
Gender	0.002	0.057	-0.110	0.114	0.067	0.049	-0.025	0.168	0.081	0.052	-0.025	0.185
Age	0.030	0.051	-0.074	0.124	0.074*	0.037	-0.008	0.140	0.035	0.046	-0.062	0.123
Education	-0.005	0.050	-0.110	0.092	0.025	0.034	-0.043	0.093	0.048	0.042	-0.039	0.131
Workexperience	0.007	0.014	-0.023	0.032	0.021	0.011	0.000	0.044	-0.002	0.013	-0.026	0.026
Experiential value	0.936**	0.037	0.859	1.005	0.200**	0.052	0.106	0.300	0.368**	0.060	0.250	0.484

Table 2, cont.

Customer loyalty		0.322**	0.036	0.254	0.391	0.291**	0.043	0.209	0.384
Indirect effect		0.302**	0.036	0.232	0.374	0.272**	0.044	0.192	0.365
R^2	0.485**	0.351**				0.383**			

The moderating effect analysis result shows in Table 3. Self-efficacy plays a positive moderating role in the significant positive correlation between customer loyalty and customer participation behavior ($r=0.073$, $p<0.01$, [0.008, 0.137] in M3), H8 was supposed. Self-efficacy does not play a moderating role in the relationship between customer loyalty and customer citizenship behavior ($r=0.041$, $p>0.05$, [-0.020, 0.120] in M8), H9 was not supposed. Proactive personality plays a positive moderating role in the significant positive correlation between customer loyalty and customer participation behavior ($r=0.069$, $p<0.01$, [0.010, 0.130] in M5), H10 was supposed. Proactive personality does not play a moderating role in the relationship between customer loyalty and customer citizenship behavior ($r=0.026$, $p>0.05$, [-0.040, 0.100] in Model 10), H11 was not supposed. The moderating effect diagram shows in Figure 2.

Table 3 Multilevel regression of moderating effect

Variable	Customer participation behavior					Customer citizenship behavior				
	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10
Gender	0.060	0.080*	0.080*	0.070*	0.070*	0.060	0.11*0*	0.100**	0.080*	0.080*
Age	0.080*	0.060	0.060	0.060	0.060	0.050	0.030	0.030	0.030	0.030
Education	0.020	0.010	0.010	0.010	0.010	0.040	0.020	0.020	0.020	0.020
Workexperience	0.050	0.040	0.050	0.040	0.050	-0.03	-0.04	-0.03	-0.04	-0.04
Customer loyalty	0.560**	0.480**	0.470**	0.470**	0.460**	0.560**	0.440**	0.440**	0.450**	0.440**
Self-efficacy		0.220**	0.220**				0.340**	0.340**		
Proactive personality				0.260**	0.270**				0.340**	0.340**
Customer loyalty X Self-efficacy			0.073*					0.041		
Customer loyalty X Proactive personality					0.069*					0.026
R^2	0.333	0.373	0.378	0.392	0.397	0.331	0.429	0.430	0.429	0.430
ΔR^2	0.333**	0.04**	0.005**	0.059**	0.005**	0.331**	0.098**	0.001	0.098**	0.001
F	59.87**	59.27**	51.84**	64.39**	56.15**	59.45**	74.86**	64.49**	75.14**	64.47**

Notes: N=606. **significant at $p<0.01$; * significant at $p<0.05$. Variables were centralization before the regression analysis in order to reduce the multi collinearity among variables in the regression equation.

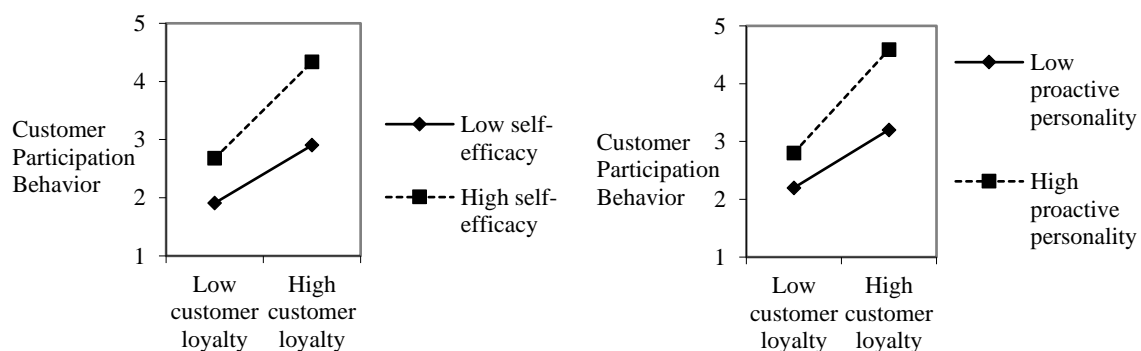


Figure 2 Moderating effect of self-efficacy and proactive personality

5 Conclusion

This study focus on the empirical research on the influencing factors of customer participation in value co-creation based on the sharing economy background and has three main implications. First, the improvement of value co-creation can start from the perspective of how to strengthen customer loyalty and experiential value. The improvement of customer loyalty is the effective way to increase the value

co-creation, enterprises should increase the customer's trust and recognition of the product in trading activities, only based on the trust, customer loyalty will be formed and then customers have a willingness to participate in supporting enterprise and the value co-creation. The enterprise can increase the interaction between the customer and the enterprise in the process of product production and trade, and then promote the customer to participate in the value co-creation. Second, enterprises can take different ways to strengthen customer participation in value co-creation based on the different level of customer self-efficacy. In order to stimulate customers with high self-efficacy in value co-creation, enterprise needs to cultivate customers' loyalty to the products, and should create an atmosphere of self-efficacy to play an important role. For customers with a low sense of self-efficacy, the enterprise needs to focus on increasing the customer's interest and confidence in the ability to participate in value co-creation. Third, the identification of customers with high proactive personality is an effective way to improve customer participation in value co-creation. Enterprise needs to further create an atmosphere of value co-creation when cultivating the customer loyalty in order to promote the value co-creation. In this way, it can motivate customers with high proactive personality to better play the proactive actions of participating in value co-creation. In conclusion, this study verifies the effectiveness of experiential value, customer loyalty, proactive personality and self-efficacy in improving value co-creation, enriching and expanding the research of value co-creation.

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