

## Research on the Business Model of E-commerce Platform based on Value Co-creation Theory

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### Abstract

*With the rapid development of social media and electronic commerce, the number of people using online shopping is increasing; this trend has promoted the emergence and development of social business. The value of social business is created by users and enterprises, so that value co-creation theory has great significance for the study of social business. In this paper, we analyze interactive process of value co-creation and study the influencing factors. Using empirical analysis, the result shows that website quality, reciprocity and altruism has a positive correlation with customer value creating behavior, however, incentive mechanism doesn't influence value co-creation behavior. On this basis, we put forward some concrete suggestions to the social business.*

**Keywords:** *Social business; e-commerce platform; experience value; value co-creation*

### 1. Introduction

Along with the rapid development of social media and electronic commerce, the social business of SNS and e-commerce is becoming more and more popular. Social business can meet the marketing needs of businesses. The value of social business is created by users and enterprises, and the user plays an important role in this process. How to meet the needs of users of social business experience, to achieve a user to create value, will become the focus of the study of the future of social commerce[1]. On the one hand, use the number of social media and spend time are increasing, the United States nearly 80% adults use online social networking, spend on social networks and blogs time accounts for about 23% of Internet time and 70% of the social network users have online shopping behavior[2], a trend promoted the emergence and development of social commerce; on the other hand, enterprises use social commerce to better locate the target users, increase sales revenue, so all kinds of enterprises began to social commerce as part of brand marketing and product promotion, under the influence of social environment, market camp pin combined with the advantage of easy and quick network and improve the efficiency of enterprise marketing.

Although at present on the user as the creators of value have been studied by many, but social commerce has its particularity, with traditional user participation is very different, so does not will its generalizations. As a new thing, the academic community still lacks a complete and systematic research. Currently academic research about social commerce mainly from the perspective of user behavior, focus on user satisfaction and user behavior, from the user experience value creation from the point of view of the research and analysis of the relatively scarce. At the same time, the creation of user experience value is the fundamental guarantee of social commerce development. Therefore, the study

of user experience value creation mechanism and influencing factors is particularly important; this research can provide some theoretical support for the follow-up study. In recent years in academia and industry to society of Commerce, experience value, create value theory conducted a lot of research and practice, the socialization of the business can meet the marketing needs of businesses, is the future direction of development of electronic commerce. At the same time, because of the business community is based on user independent share product information, to guide the user or consumer purchase behavior, user participation is vital. Therefore, the study of social commerce user experience value create theory has important significance.

## **2. Literature Review**

### **2.1 Social Business**

Social business is developed in the context of social media development, therefore, in the study of social business, the need for social media to sort out. Social media is allows people to writing, sharing, evaluation, discussion, communication etc. the website and the technology, it is used to share views and experiences and views of tools and platforms, including social networking sites, micro channel, micro blog, blog, forums and other, which depends on the development of Web2.0. As of December 2015, China's Micro blog users reached, Internet users use rate of 38.4%. Due to the strong interaction and timely communication, social media has been widely popular with Internet users and become an indispensable part of the Internet. The use of social media continues to increase, becoming an important part of the internet. With the social media and e-commerce business between the mutual penetrations, social media and electronic commerce gradually blurred boundaries, which also for the social media innovation has played a role in promoting. Now, this is based on social media extends out of the social business change has become the outbreak of the Internet industry.

Social commerce is also called social commerce, social shopping, first proposed by Yahoo, Yahoo for promotional, on the site launched pick list function, allowing users to list their favorite merchandise, and show the pick list in the page Shop sphere. Through the page the user can enter a friend or even a stranger listed favorite catalog. This provides the basic embryonic form for the later social business. As a new field of social commerce, both in practice and academia, there is no unified understanding of its concept, many are refined according to their own understanding. Michel (2012) put forward consumer virtual community is a virtual community group, which is a center of interest and hobby related to consumption[3]. Consumer oriented virtual community has a consumption feature of social business. Huang (2013) pointed out the social business is defined as: the use of Web2.0 technology, such as social networking and user generated content, such as the promotion of the user to buy products and services[4]. He believes that social business is in the business environment, the use of social media for product marketing and services. Although the various experts and scholars on social commerce definition of each are not identical, but they all have a common point of view, social commerce is a special form of electronic commerce, consumers are increasingly convinced that and turn to other consumers to understand the truth of the goods or services. Overall, social commerce is the emergence and development of dual drive social media and e-commerce under.

### **2.2 Experience Value**

With the increasing competition of enterprises, customer value has gradually become the focus of marketing scholars and enterprises. In 1954, Peter Deruk in the management practice, pointed out that the user when considering what he wants to buy, which has a value is important. Anand(2010) consider that the customer value is the benefit of the

customer and the cost of the product[5] , or service in the process of the cost of the product, the overall evaluation of the effectiveness of the product or service. Niklas (2003) think individual episodes of gains and the relationship between profits and with a single scene and failure[6], failure and the relationship between profit loss and the ratio of the value of the whole process, he thinks gains and loss of trade-off can not only limited to a single scene, but should be extended to the balance of the value of the whole process, is the customer on the overall perceived income and perceived loss balance after the form of the utility of a product and a general opinion. Experience value is a new customer value in the experience economy age, and it is a study of customer value from the perspective of customer experience. Many scholars from different perspectives on the concept and connotation of the interpretation, Kim (2009) believe that the experience of consumer value is the consumer experience in the process will lead to such as symbols, pleasure or beauty of the value [7].

Jutla (1999) defines experience as an interactive, relative, and preferred experience [8]. Louis (2005) pointed out that experience value is cognitive benefits (including the quality and benefit) and cognitive sacrifice (including price and sacrifice) offset results, here cognitive preference is not an assumption consumers in full consultation to make rational behavior, but will vary depending on its assessment of a product or service[9]. In summary, scholars mainly from the perceived benefits and costs, direct perceived benefits, target reached evaluation, cognitive preference and emotional satisfaction, to experience value is defined. This study suggests that experience value is customer in formed in the interaction of a product or service cognition and preference perception participation, including external utility of the product function to bring practical value perception, including internal mental customer demand is satisfied and get emotional pleasure psychological feeling value, and pay more attention to customer's psychological value perception

### 2.3 Value Co-Creation

Traditional value creation theory, many customers are as a bystander, and now information technology, more and more application in the enterprise and customer communication, business environment and customer roles are in the event of great changes, customer has more and more influence on the enterprise, a business can not alone again design and execution without intervention of customer production or marketing process, so customers gradually changing from a bystander to participants in each enterprise value creation process, customers expanding the scope of participation, involvement also continues to deepen. Customers in order to better get their own satisfaction with the product want to interact with the enterprise, participate in product development and production. The traditional values of enterprises and products as the center are being replaced by customer participation as the center of the value concept. At present, due to the increasing importance of the consumer to the operation of the enterprise, the mode of value creation has been changed significantly: the value of the consumer to create value together with the enterprise. Prahalad (2004) from the angle of enterprise competition revealed due to the change of the role of enterprises and consumers [10], resulting in the enterprise management concept and management mode also change, enterprises and consumers together to create value is the enterprise new strategic capital and core competence. The main points are: consumers and enterprises to create value at the core is to create a common consumer experience, the basic realization of the value of the value of the network is a member of the interaction between the interactive. Vargo (2008) proposed service dominant logic is value to create a system as a unit [11], construct the value to create a system prototype, they think in a service dominant logic. Customers are no longer tangible resources, but more important intangible resources

Nader (2013) pointed out that the enterprise and the customer to create value is the competitive advantage of a new source, he found that customer participation in value

creation can improve enterprise flexibility [12]. Key value creating activities can enhance their service capacity, accelerate the speed of service, influence enterprise customization ability; it will influence enterprise's new core competitiveness. Based on the above scholars research found that create value can enrich the knowledge of the enterprise, influence enterprise service ability, for the enterprise has a crucial role; customer in order to better meet their demand for products or services, willing to join to create the value of the enterprise [13]. The core of value creation is to create the customer's experience value, which is generated in the interaction between the user and the enterprise, through the process of production, research and development and sales.

### 3. Research Design and Assumptions

#### 3.1 Hypothesis

From a value perspective, the enterprise does not sell experience, but provides the user experience of environmental conditions and interpersonal factors, the user to use the platform resources provided by enterprises and enterprises to create a personalized experience. As a result, the quality of the website of social commerce as the environmental conditions affect the user's experience value to create; in addition to the quality of the website, the incentive mechanism of social commerce will also affect the enthusiasm of the user participation. So, in the social business provided conditions, site quality and incentive mechanism as the impact of user participation experience to create the value of the antecedent factors. Website quality as a user to participate in creating the environment is an important factor affecting the value of the user to participate in the community to create an important factor, based on the assumption that H1:

**H1:** website quality has a positive correlation with social business value co-create.

The research shows that the good incentive mechanism is the guarantee of the success of the virtual community, the degree of interaction between the users directly affects the use of social business. How to encourage the frequent interaction between users is one of the key factors for the success of social business, through the incentive mechanism to enhance the participation of users, and ultimately establish the user's loyalty to the social business. Therefore, this article from the incentive mechanism, sharing rules and other dimensions to measure the incentive mechanism, as one of the factors that affect the value of the user to participate in one of the factors, and put forward the assumption that H2:

**H2:** Incentive has a positive correlation with social business value co-create

If you think you can get help from others when you need help and support, you will be willing to help and support others. Reciprocity preference has a significant impact on the willingness of knowledge sharing, therefore, in the social business, it will be the influence factors that affect the user's participation in value, and put forward the following hypothesis:

**H3:** Reciprocity has a positive correlation with social business value co-create.

Altruism is in a particular time and space conditions, the individual sacrifice their own adaptability to improve the performance of other individual adaptability, namely, to sacrifice their own interests for the interests of others. The socialization of the business platform, if the user has the mentality of altruism, so users will be very willing to to share with others their own shopping experience, to help them carry out commodity recommendation, so as to enrich the commodity information platform, attract more users to join. Therefore, as a result of the influence of altruism on the value of user participation, the following assumptions are put forward:

**H4:** Altruism has a positive correlation with social business value co-create.

In this paper, the value of social business experience is the user participation in the process of product information sharing, and social business platform, and other users of the formation of the interaction of services and the perception of the service. Product information sharing in the user, can convenient other users a comprehensive understanding of the commodity information, to bring practical value, but to share product information to the user, and no to the concrete and practical value, the participation in the value creation process, the user is inherent psychological demand is satisfied and happy feelings of emotional value. Based on this, the hypothesis H5:

**H5:** User participation has a positive correlation with social business value co-create.

### 3.2 Variables Selection

In the research model, we reference the related domestic and foreign literature; design a questionnaire first draft by complementing revise the existing mature scale. Then we discussed with teachers and students, and revise the questionnaire measurement items, make the items more accurate, targeted. The final completion of the questionnaire design, Questionnaire using Likert 7 scale measurement table: the "7" means "totally agree", "6, 5, 4, 3, 2" represents the degree decreased. "4" means "not sure" and "1" means "totally disagree". We describes the variables and definitions as shown in Table 1

**Table 1. Variable Selection and Definition Description**

Variable		Content
Website quality	Usability	ease and convenience of the website use
	Content	website design, function and layout are reasonable
	Security	Information security and protection of users' rights
	Interactivity	communication tools convenience, timeliness, accuracy
Excitation mechanism		The incentive mechanism of social commerce to share information and share the norm
Reciprocity		Users to share information with each other to help support the feelings
Altruism		Users believe that it is necessary to carry out product information to help others to help others.
Value co-creation	Active participation	Users active participate social commerce and share information
	Passive participation	Users share the information passively
	Shallow participation	Users occasionally use social commerce
	Deep involvement	Users frequently use social commerce
Experience value		Users share the pleasure, sense of achievement, sense of identity.

## 4. Empirical Analysis

### 4.1 Descriptive Analysis

Before the issuance of the questionnaire, we need to determine the object of investigation, the research object of this paper is of the business community, and so typical social commerce site is selected as the research object. Through an online questionnaire, 351 questionnaires were recovered, excluding consistent filling answer and check, the problems associated with the paradoxical or not carefully fill out the invalid questionnaires, 333 valid questionnaires, and the effective rate was 94.8%. In this study, the gender, age, educational background were statistically analyzed, and the results were shown in table 2

**Table 2. Survey Results of Sample Characteristics**

Index	Classification	Number	Population (%)
Gender	Male	142	42.64
	female	191	57.36
Age	Less than 18	1	0.3
	18~25	66	19.82
	26~35	140	42.07
	more than 35	126	37.81
Education	high school	22	7.02
	undergraduate	232	69.67
	graduate	81	24.31

#### 4.2 Reliability Analysis

The questionnaire reliability is the reliability of the questionnaire survey, that is, the degree of internal consistency of the measurement results. Internal consistency coefficient is used to test the same or similar characteristics of each measurement item in each factor, and the reliability index is Cronbach's  $\alpha$ . Then we use SPSS measure scale reliability, the results show that the consistency coefficient of the index variables are above 0.785, greater than 0.7 and overall questionnaire internal consistency coefficient was 0.969, in that the questionnaire has very good reliability, reliability is very high. The specific Cronbach's  $\alpha$  value is shown in table 3.

**Table 3. Reliability Analysis of Variable**

Variable	Cronbach's $\alpha$	Index number
Usability	0.815	3
Content	0.787	3
Security	0.856	3
Interactivity	0.785	3
Excitation mechanism	0.819	3
Reciprocity	0.882	4
Altruism	0.840	4
Value co-creation	0.795	4
Experience value	0.919	6

#### 4.3 Validity Analysis

Validity refers to the measurement tools can be measured correctly to measurement problems, namely, the correctness of the measurement; validity analysis is to confirm the collected data can be to get the conclusion and reflect on the issues to be discussed, and identify latent variables to determine whether it is reasonable. The better results of the validity analysis, the higher the accuracy of the measurement, the closer the research facts. The most commonly used validity analysis usually consists of two levels: one is content validity; the other is construct validity. Content validity mainly refers to whether the measurement indicators can be representative and comprehensive, can meet the requirements of the measurement objectives. Construct validity means that the content of the measuring tool can reflect or measure the degree of the abstract concept. If the results of the questionnaire are consistent with the expectations theory, the survey data can be considered to have certain construct validity. The fitness of each measurement variable is shown in Table 4

**Table 4. Results of Adaptation Index**

Fitness index	Website quality	Reciprocity	altruism	Value co-creation	Experience value	Reference index
$\chi^2/df$	3.04	0.57	0.72	4.841	2.10	<5
SRMR	0.053	0.004	0.009	0.016	0.015	<0.08
RMSEA	0.078	0.000	0.000	0.079	0.058	<0.08
GFI	0.931	0.999	0.998	0.992	0.986	>0.9
AGFI	0.888	0.991	0.989	0.920	0.958	>0.8
IFI	0.955	1.001	1.001	0.990	0.994	>0.9
TLI	0.937	1.003	1.003	0.939	0.998	>0.9
CFI	0.954	1.000	1.000	0.990	0.994	>0.9

After fitting degree evaluation, for each of the variables of confirmatory factor analysis, each measure in the latent variable factor loading values in the [0.605, 0.990] interval in the, are in line with the factor loading value is greater than 0.5 standard; combined reliability of each of the variables in the [0.786, 0.928] range, all with composite reliability in 0.6 above standard; the measurement variables of average variance extracted in [0.508, 0.766] range, all with average variance extracted above 0.5 standard. Therefore, according to the results of the indicators can be judged: the measurement indicators of each variable has a good internal consistency, the scale of the overall convergence validity is good.

**Table 5. Discriminant Validity of each Variable**

	Website quality	Incentive	Reciprocity	Altruism	Value co-creation	Experience value
Website quality	0.875					
Incentive	0.521	0.780				
Reciprocity	0.491	0.665	0.807			
Altruism	0.38	0.441	0.476	0.752		
Value co-creation	0.466	0.566	0.605	0.559	0.713	
Experience value	0.469	0.748	0.643	0.545	0.702	0.810

#### 4.4 Structural Equation Model

Based on the analysis of the influencing factors of the value of the social business experience, this paper constructs the model of the factors that affect the value of the user participation in the social business experience. The antecedent variables include the website quality, incentive mechanism, reciprocity and altruism, process variables is creating behavior and outcome variables is experiential value. The research model has been proved to have good reliability and validity. The following paper uses Amos 20 to carry out structural model path analysis, test research model and hypothesis.

**Table 6. Path Analysis Results of Model**

Serial	hypothesis	path coefficient	(S.E.)	(C.R.)	Significant level	conclusion
H1	Value co-creation <-- Website quality	.141	.036	3.903	***	significant
H2	Value co-creation <--Incentive	.012	.030	-.390	.696	Not significant
H3	Value co-creation	.424	.039	10.747	***	significant

	<--Reciprocity					
H4	Value co-creation <--Altruism	.531	.049	10.864	***	significant
H5	Experience value<-- -Value co-creation	.918	.088	10.375	***	significant

**Table 7. The Fitness Index of the Initial Structural Equation Model**

	$\chi^2/df$	SRMR	RMSEA	GFI	AGFI	IFI	TLI	CFI
Result	4.305	0.235	0.100	0.736	0.693	0.796	0.777	0.795
Reference standard	<5	<0.08	<0.08	>0.9	>0.8	>0.9	>0.9	>0.9

The result of path analysis, website quality, reciprocity and altruism has significant influence on the behavior of a significant level, P is less than 0.001, the path coefficient were 0.141, 0.424 and 0.531, indicating that the website quality, reciprocity and altruism has significant positive effect on a behavior, to support the hypothesis of H1 and H3 and H4; a behavior has significant influence on the experience value, the significance level is less than 0.001 P, the path coefficient was 0.918, indicating that a behavior has a positive effect on the value of experience, to support the hypothesis H5; incentive mechanism to create the standardized path coefficient is significant at the 0.696 level and not through the significant test, which shows no significant effect of incentive mechanism to create the user's behavior, research hypothesis H2 does not set up. According to the above hypothesis verification results, website quality, mutual and altruism to the user to create a behavior has a significant positive effect, which support the hypothesis H1, H3, H4; incentive mechanism for the user to create a behavior is not significant intention, the hypothesis H2 is not supported; creating behavior on experiential value has significant positive influence, which support the hypothesis H5, namely website quality, reciprocity and altruism to the user to create behavior has a significant positive effect, the user to create a behavior and the value of experience have a significant positive impact.

## 5. Conclusion

This study through social commerce experience create value process and influencing factors of the model are discussed and get the conclusion of the study are as follows, users in the participation of the business community experience create value when, in different time stage, different users and socialization of the business interaction, different period user participation psychology will change. Therefore, social commerce platform in different periods of development strategy should be changed. Because of the particularity of the social business enterprise, the value of the user is very important to the social business enterprise. The enterprise provides the environment condition of the user experience, which is created by the user using the platform resource and the enterprise. For the socialization of the business, website quality is provided the most direct to create a platform, website ease of use degree, beautiful, content arrangement rationality, safety and provide the interactive conditions etc. will affect the user's participation behavior. Incentive mechanism has no significant impact on the user's behavior, which is different from the previous research conclusions. This shows that the material reward of the online shopping platform or businesses cannot be significantly increased user participation in product information sharing behavior; incentive mechanism on the user's product information sharing will have certain effect, but not enough to significantly change the user's product information sharing behavior.

According to the conclusions of this study, social commerce website quality, users' reciprocal altruism and affect the user's creating behavior and affect the experience value,

create behavior on experiential value by the significantly positive effect. So the user's behavior is very important for the social business platform. As users and social business the main interactive environment, site quality is good or bad directly affect the user's intention, that is, the influence of users to create value of participation and the promotion of website quality mainly include ease of use, content, security and interaction of four aspects. Reciprocity and altruism users of social business experience to create value in that social commerce platform can be to the commodity information share of users choose to bring the practical value of publicity, guide the user of product information sharing mutual aid, the efficiency of the users perception to self creating behavior for other users, and give full play to its user reciprocity and altruism.

## Acknowledgments

This study was financially supported by the National Natural Science Foundation of China "Customer oriented supply chain coordination and the research on the coordination of the network and the mutation" (No. 71371061); Siping City Social Science Fund Project "The stage of industrial competitiveness of Siping City e-commerce" (No.201599).

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