The Influence of Sharer Factors on Internet Sharing Behavior: Moderating Effect of Virtual Benefits

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ABSTRACT: The purpose of present study is to examine the influence of 4 sharer factors (empathy, moral judgment, self-esteem and prior experience) on internet sharing behavior, the study is designed to construct a new theoretical model in which virtual benefits acts as moderator variable, and 564 people are assessed through questionnaire. The empirical result indicates: (1) there are significant positive correlations between 2 variables (moral judgment, prior experience) and internet sharing; (2) virtual benefits has a significant moderating effect on relationship between sharer factors and internet sharing; (3) virtual benefits has significant moderating effects on associations between moral judgment, self-esteem and internet sharing, however it can't adjust significantly associations between empathy, prior experience and internet sharing.

KEY WORDS: Sharer factors; Internet sharing behavior; Virtual benefits; Moderating effect; Positive correlation

INTRODUCTION

Internet changed greatly the people's lifestyles, the behavior in virtual world has become many scholars' research hotspot. Internet behavior includes both positive behavior and negative behavior, but the current research on internet behavior tends to focus on negative behavior (such as internet pornography, internet violence, internet addiction etc.); there are few studies on internet positive behavior at present [1].

For active and positive behavior on internet, scholars have proposed some concepts: "network pro-social behavior", "online volunteering", "network altruistic behavior" and so on, and divided the behavior into some dimensions: internet helping, internet sharing, emotion support etc [1-6]. The extension of internet sharing is small, in this paper, it is defined as: individual spontaneous behavior of providing resources or information to others in internet context, it can be divided into three parts: resources upload or download, information sharing and internet warning.

Previous studies about internet sharing behavior, focused on influence factors of behavior; research results showed that all variables influencing internet sharing behavior can be grouped into two categories: sharer factors and situational factors. However, current research in this area is very fragmented, lacks especially corresponding empirical research and quantitative research, also lacks consideration for internet situational factors.

SHARER FACTORS

Sharer factors are those variables related to sharer (person of providing resources or information to others), this study refers to research results of sharing behavior in the real-life society, extracts 4 variables: empathy, moral judgment, self-esteem and prior experience. However, whether these variables still apply to the virtual world, needs further empirical testing.

Empathy, it is defined by Titchener as: the process of object humane [7]. Hoffman (1975) believed that empathy is an important motivation for pro-social behavior, high empathy level individual will be more motivated to help others than low empathy level individual [8]; Hudec (2002) found that empathy level can predict personal willingness to participate in volunteer activities [9]; Song (2005), Zheng (2012) also pointed out a positive correlation between empathy level and internet positive behavior [2, 10].

Thus, we hypothesize H1: empathy has a positive impact on internet sharing behavior.

Moral judgment is individual psychological process of using moral awareness and evaluating social phenomena. Rushton (1976) found that high moral judgment level child will show more altruistic behavior [11]; Wei (2007), Jiang

(2010) also believed that the high level of moral judgment has a positive impact on network pro-social behavior [3, 12].

Thus, we hypothesize H2: moral judgment has a positive impact on internet sharing behavior.

Self-esteem is the extent that a person loves oneself, it is the self-evaluation result of individual social roles and values [13]. Benson (1978) found that low self-esteem individuals will produce more pro-social behavior [4]. But many researchers had different views on this, they considered that high self-esteem individuals are more prone to helping others [3, 10, 12].

Thus, we hypothesize H3: self-esteem has a positive impact on internet sharing behavior.

Prior experience is something that individual encountered or done, in this paper, it refers to online experience to provide resources and information to others, or be provided by others; it includes two parts: experience of sharing and experience of receiving share. Hamilton (1988) found, young people who had volunteer experience will show more actions of volunteer service; Hudec (2002) believed that the prior experience has a great positive impact on volunteering behavior [9, 14]. Wei (2007) pointed out, people who had received help from others in the internet will be grateful for the love, they would be more willing to help others [3].

Thus, we hypothesize H4: prior experience has a positive impact on internet sharing behavior.

VIRTUAL BENEFITS VARIABLE AND MODEL CONSTRUCTING

Empathy, moral judgment, self-esteem and prior experience all have impacts on sharing behavior, but it should be noted that, the occurrence of behavior is not only affected by personal factors, but also is affected by situational factors. Latane (1970) believed that situational factors of positive behavior are very important; Krebs (1982) also noted that the same individual in different contexts will make completely different actions, before making action, the individual will first observe the context [15, 16].

Virtual world is different from real environment, and internet situational variables will also be different from real environment variables; but, what variables are included in internet situational variables? what are effects of these variables on internet sharing behavior? Previous studies about these questions are few, so in this respect, more in-depth study is necessary.

The virtual benefits is a special network situational variable, it refers to individual non-material interests provided by the online environment after an individual implements sharing behavior, it reflects indirectly the degree of encouraging or rewarding positive behavior, and approving extent of members about positive behavior in the current network situation. In some network organizations, each member has certain, virtual and intangible benefits (such as grades, points, virtual equipments, etc.), as the own status or ability identification in the organization; after a member implements sharing behavior, the organization can give him corresponding virtual benefits (such as acquisition of praise, grade rating, points increase, etc.), as the reward for sharing behavior.

In the view of social exchange theory, the occurrence of behavior is determined by the relationship between costs and rewards, in fact, internet sharing is a kind of tool behavior of expecting to get future recognition or reward: sharer pays labor, he also can obtain corresponding virtual benefits as spiritual rewards; higher level of virtual benefits in network organizations, will be more likely to induce members to produce internet sharing behavior. Situational variables tend to act as moderator variables, thus we hypothesize H5: in the course of influence sharer factors on internet sharing behavior, virtual benefits plays a positive regulatory role [17].

Based on hypothesis H5, we can draw out the following sub-hypothesis:

H5a: virtual benefits has a significant moderating effect on relationship between empathy and internet sharing behavior, with the enhancement of virtual benefits level, positive impact of empathy on internet sharing behavior is increasingly strong;

H5b: virtual benefits has a significant moderating effect on relationship between moral judgment and internet sharing behavior, with the enhancement of virtual benefits level, positive impact of moral judgment on internet sharing behavior is increasingly strong;

H5c: virtual benefits has a significant moderating effect on relationship between self-esteem and internet sharing behavior, with the enhancement of virtual benefits level, positive impact of self-esteem on internet sharing behavior is increasingly strong;

H5d: virtual benefits has a significant moderating effect on relationship between prior experience and internet sharing behavior, with the enhancement of virtual benefits level, positive impact of prior experience on internet sharing behavior is increasingly strong.

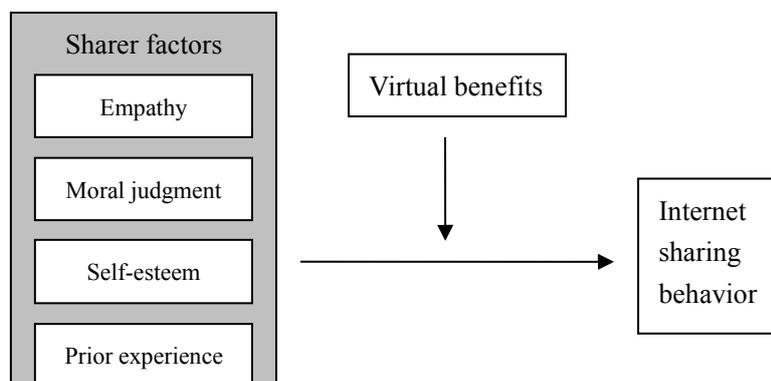The theoretical model diagram of study is shown in Figure 1.

Figure 1. Theoretical model.

RESEARCH DESIGN AND DATA

Access to research data

To obtain the data, this study conducted a survey, and mainly used Likert five-point scale to measure all variables. Investigation was started in June 2012, and was completed in August 2012.

In order to ensure the quality of the survey, investigation used electronic questionnaires and paper questionnaires. Distribution and recovery of electronic questionnaires were done through QQ or Email; and paper questionnaires were distributed to subjects in campus, internet cafes or other public places, then were recovered after subjects completed questionnaires. 925 questionnaires were distributed and 612 questionnaires were recovered in the survey, questionnaires recovery rate is 66.2%; 564 valid questionnaires, questionnaires validity rate is 92.2%, the number of valid samples exceeds greatly sample size which Nunnally's standard suggested [18]. In addition, the male is 308, female is 256; 352 people are between 18 and 25 years old, young people accounted for 62.4% of the total number of valid samples.

Measurement and Calculation of variables

The theoretical model includes six variables: empathy, moral judgment, self-esteem, prior experience, virtual benefits, internet sharing behavior, the following text describes measurement of each variable.

This study measures empathy through interpersonal reactivity index scale (IRI-C) revised by Wu et al, each question scores from 1 to 5 points, the scale has good reliability and validity in the Chinese context [19].

The measurement of moral judgment is carried out through Lind's moral judgment test (MJT), the result of MJT is moral judgment C score, but the scoring style of this study is five-point scale, so C score must be converted to five-point score, the assignment rule of this study is: C score less than 10 points, value of 1; C score 50 points or more, value of 5; C score is between 10 and 50 points, value of C/10 [20].

Self-esteem is measured through Rosenburg's self-esteem scale (SES), each question scores from 1 to 5 points, the mean of all questions scores is treated as self-esteem level [21].

This study refers to the network altruistic behavior scale, uses the self-made questionnaire to measure prior experience [4]. each question scores from 1 to 5 points, from "strongly disagree" to "strongly agree", the mean of all questions scores is treated as level of prior experience, as shown in table 1.

Table 1. Measurement items of prior experience.

Codes	Measurement items
PE1	I shared ever resources or knowledge to others on the internet.
PE2	I downloaded free electronic data uploaded by others on the internet.
PE3	I browsed insights on life, lessons and online shopping evaluation etc. of others on the internet.
PE4	No one provided valuable resources and information to me on the internet. (reverse scoring)
PE5	I was warned not to believe fraudulent information and network traps on the internet.
PE6	I ever forwarded valuable information to others on the internet.

Virtual benefits is measured through self-made questionnaire, each question scores from 1 to 5 points, from "strongly disagree" to "strongly agree", the mean of all questions scores is treated as level of virtual benefits, as shown in table 2.

Table 2. Measurement items of virtual benefits.

Codes	Measurement items
VB1	In my network organization (BBS forum, QQ group etc. logined actively) , members have some kind of virtual value of interests (such as grade, points, virtual currency, etc.).
VB2	In my network organization, the member of implementing internet sharing behavior can get some virtual reward (such as grade rating, points increase, etc.).
VB3	Virtual value of interests can't circulate in the real world, and hasn't practical utility in my network organization.
VB4	In my network organization, with the increase of virtual reward of a member, his organizational status will rise, and he can get more convenience or privilege.
VB5	In my network organization, the member of implementing internet sharing behavior can get others recognition, gratitude or praise.

This study refers to the network altruistic behavior scale, uses self-made questionnaire to measure internet sharing behavior, it should be pointed out that sharing behavior is a dimension of internet positive behavior, it doesn't include other dimensions of internet positive behavior in this study [4]. Each question scores from 1 to 5 points, from "never" to "always", the mean of all questions scores is treated as level of internet sharing, as shown in table 3.

Table 3. Measurement items of internet sharing behavior.

Codes	Measurement items
Is1	I set up shared folders in computer, allow others to enter and access some files.
Is2	I uploaded electronic resources online for others to view or download for free.
Is3	I sent pictures, books or data to others by way of email blasts.
Is4	I published online photos, movie or book reviews, shopping evaluations etc. for sharing them with netizens.
Is5	I posted on the internet, shared own opinions or life experiences.

Is6	I published or forwarded timely, valuable information or knowledge.
Is7	I recommended good articles, music or videos etc. to others on the internet.
Is8	I exposed some cybercrimes or network traps on the internet.
Is9	I warned others to beware of some illegal information of scams, pornography etc.

RELIABILITY AND VALIDITY TESTING

Reliability analysis

The research uses the Cronbach α coefficient to measure reliability, the α value above 0.7 means high reliability [18]. In this paper, the reliability of each variable is tested, results show good reliability of each variable, as shown in table 4.

Table 4. Reliability analysis of sample data.

Variables	Codes	α
Empathy	EL	0.851
Moral judgment	MJ	0.862
Self-esteem	SE	0.905
Prior experience	PE	0.786
Virtual benefits	VB	0.721
Internet sharing	Is	0.843

Validity analysis

Validity analysis mainly includes two aspects: content validity and structure validity.

In terms of content validity, researchers need to control strictly it in the process of acquiring data, in addition, this paper refers to Hau's suggestion, and trys to select mature scale items to ensure good content validity of questionnaire [22].

In terms of structure validity, the study uses exploratory factor analysis, and ensures high construct validity through the KMO value, Bartlett ball test, the cumulative contribution rate and the factor loading values, among them, the KMO value should be greater than 0.5, the Sig. value should be less than 0.05, the cumulative contribution rate of over 50% is acceptable, the factor loading value above 0.4 is significant.

Mature scales are used in the variable measurement process of empathy, moral judgment and self-esteem, so this study only needs to analyze three variables: prior experience, virtual benefits and internet sharing behavior in the structure validity test, as shown in table 5. The results show that the questionnaire used meet validity requirements.

Table 5. Structure validity analysis of measurement indicators.

Variables	Item codes			Validity
Prior experience	PE1	0.593		
	PE2		0.865	
	PE3		0.629	KMO:0.746
	PE4		0.796	Cumulative contribution rate: 66.548%
	PE5		0.791	
	PE6	0.547		
Virtual benefits	VB1		0.591	
	VB2	0.778		KMO:0.672
	VB3		0.583	Cumulative contribution rate: 59.856%
	VB4		0.701	

	VB5	0.715		
	Is1	0.747		
	Is2	0.892		
	Is3	0.604		
	Is4		0.853	
Internet sharing	Is5		0.725	KMO:0.796
	Is6		0.818	Cumulative contribution rate: 73.543%
	Is7		0.639	
	Is8			0.841
	Is9			0.716

RESULTS AND DISCUSSION

According to the research model and hypotheses, hierarchical regression analysis of SPSS16.0 software is used in this paper to verify the moderating effect of virtual benefits on relationship sharer variables with internet sharing behavior. Test results of moderating effect on virtual benefits are shown in table 6.

Table 6. Test results of moderating effect of virtual benefits on relationship between sharer variables and internet sharing behavior.

Steps	Variable codes	Equation 1			Equation 2			Equation 3		
		B	Std.B	Sig.	B	Std.B	Sig.	B	Std.B	Sig.
	(Constant)	0.862		0.022	0.530		0.174	0.565		0.150
	EL	0.068	0.056	0.645	0.054	0.044	0.538	0.052	0.043	0.558
	MJ	0.041	0.030	0.098	0.049	0.036	0.081	0.078	0.057	0.024
	SE	0.067	0.054	0.688	0.034	0.028	0.718	-0.002	-0.002	0.783
1	PE	0.318	0.264	0.000	0.298	0.247	0.000	0.313	0.260	0.000
2	VB				0.175	0.169	0.007	0.159	0.154	0.018
	EL * VB							-0.075	-0.049	0.546
	MJ * VB							0.312	0.165	0.041
	SE * VB							-0.182	-0.105	0.086
3	PE * VB							0.021	0.013	0.851
	R^2		0.111			0.138			0.155	
	ΔR^2		0.111			0.027			0.017	
	Sig. of ΔF		0.000			0.012			0.046	
	F		7.411			7.573			4.735	
	Sig. of Model		0.000			0.000			0.000	

In the third step of hierarchical regression analysis in table 6, product terms of virtual benefits and each variable are joined, the ΔR^2 is 0.017, the significance of equation 3 is: sig.=.046, equation 3 passed significance test(sig.< 0.05), according to results, the research can draw the conclusion: virtual benefits has a significant moderating effect on relationship between sharer factors and internet sharing behavior. Hypothesis H5 has been verified.

In Table 6, the coefficients of two variables (moral judgment and prior experience) are both positive, and both pass the significance test (sig.< 0.1); therefore, the two variables are both significantly positively related to internet sharing behavior. Hypotheses H2, H4 have been verified. However, it can also be seen from the table, the other two variables (empathy and self-esteem) don't pass significance test, hypotheses H1, H3 haven't been verified. This result shows: as the real world, the positive influence of some sharer factors also exists partly even in the virtual world.

In addition, coefficient of virtual benefits is positive, and also passes the significance test (sig.< 0.1); therefore, virtual benefits is significantly positively related to internet sharing behavior, it has positive impact on internet sharing behavior. The result shows: in the network context of existing virtual incentives, people will be more prone to internet sharing behavior.

In order to further clarify moderating effect of virtual benefits on relationship between each independent variable and internet sharing behavior, the study analyzes specific regression analysis equations. It can be seen in table 6, in equation 3, moderating effects of virtual benefits on relationships between empathy, prior experience and internet sharing behavior are not significant. Therefore, hypotheses H5a, H5d have not been verified.

However, the moderating effects of virtual benefits on relationships between moral judgment, self-esteem and internet sharing behavior are significant (sig.< 0.1). The coefficient value of MJ*VB is positive, so it can be believed that with the increasing of virtual benefits level, the recognition and encourage degree of sharing behavior will be higher in network organization, the relationship between moral judgment and internet sharing behavior will become more and more strong, the positive influence of moral judgment on internet sharing behavior will be increasingly strong, hypothesis H5b has been verified; in addition, coefficient values of SE and SE*VB are both negative in equation 3, it can be believed that with the increasing of virtual benefits level, the relationship between self-esteem and internet sharing behavior will become negative association, virtual benefits has a negative moderating effect on negative relationship between self-esteem and internet sharing behavior, so the negative influence of self-esteem on internet sharing behavior will be increasingly strong. Hypothesis H5c has only been verified partially.

According to these empirical results, it can be seen that we should make a concrete analysis for specific questions. In terms of network management, if only for the purpose of creating favorable environment in order to stimulate more internet sharing behavior, to a certain extent, the implementation of virtual benefits or reward is reasonable. Especially when there are a large number of individuals with different moral judgment levels in the network organization, it is more necessary for the network organization to carry out virtual reward. But, when there are a large number of individuals with higher self-esteem level in the network organization, the increase of virtual benefits or reward may lead to reduction of internet sharing behavior conversely.

CONCLUSION AND FUTURE RESEARCH

Based on the research perspective of influence factors on internet sharing behavior, this paper argues that there is a moderator variable (namely virtual benefits) between four sharer variables (namely empathy, moral judgment, self-esteem and prior experience) and internet sharing behavior, moreover conducts a empirical research through multi-linear regression analysis, and draws the following conclusions:

(1) Moral judgment and prior experience, the two variables significantly positively correlated with internet sharing behavior, they have both positive effects on internet sharing behavior.

(2) Virtual benefits is a situational variable reflecting the degree of encouraging or rewarding sharing behavior, and approving extent of members about sharing behavior in the current network organization; it has a positive impact on internet sharing behavior, moreover has a significant moderating effect on relationship between sharer variables and internet sharing behavior.

(3) Specifically, moderating effects of Virtual benefits on relationships between empathy, prior experience and internet sharing behavior are not significant; but Virtual benefits has significant moderating effects on relationships between moral judgment, self-esteem and internet sharing behavior: with the enhancement of virtual benefits level, positive impact of moral judgment on internet sharing behavior is increasingly strong, and negative impact of self-esteem on internet sharing behavior is increasingly strong.

In this study, the attention focus of independent variables is sharer factors, so those receiver factors (namely those variables related to receivers) are not considered; and the one of situational factors involved, virtual benefits is considered as a moderating variable. But in fact, the receiver factors and some other situational factors also can affect internet sharing behavior, the relationships between they and internet sharing behavior need to be studied further, in the follow-up study, more new variables should be added into the theoretical model in order to improve the research.

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