

Research on Influencing Factors of Weibo Users' Intention to Use "Visitor Record" Function Based on UTAUT Model

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Abstract: The purpose of this paper is to explore the influencing factors of users' use of "visitor record" function from the two dimensions of technology itself and users' social media use psychology. Based on the integrated information technology acceptance and use Model (UTAUT), and based on the perspective of users' social media use, two factors of "self-disclosure degree" and "missing anxiety" were introduced, and the Weibo user group was taken as the research object through questionnaire survey method. Based on the 313 questionnaires obtained by screening, the analysis was conducted by hypothesis testing and multiple linear regression methods. The effects of integrated technology acceptance model factors and two newly introduced factors on user intention and behavior were explored. Performance expectancy, effort expectancy, social influence and facilitating factors have significant positive effects on users' intention to use the "visitor record" function of Weibo. The facilitating factors have a negative influence on the user's use behavior of the "visitor record" function of microblog. The introduction of new perspectives, including fear of missing out and degree of self-disclosure, provides new ideas for further understanding of social media user behavior and subsequent related research.

Keywords: Privacy tool, Passive social network use, Peep culture

1. Introduction

The "Visitor record" function is a social right of SVIP users, users can clearly see who has visited their home page, the frequency of visits, but also according to the classification of all, attention, fans, non-fans and certified users, and can also enter the visitor's home page to view all their information. In addition, the visitor log feature allows users to delete their browsing footprints to other people's home pages. After the accumulation of a huge pool of users, Weibo relies on selling user data privacy to make profits in disguise. Many users have issued complaints, and a large number of users have chosen to log out of Weibo and seek a more hidden social place.

2. Literature Review

UATAU model is one of the commonly used theoretical models in the field of user acceptance research.[1] The same is true in the field of social media. The children's socioeconomic status and

community influence significantly affect the elderly's intention to use wechat moments, while risk perception and intention to use have a negative effect.[2] Gender and age play a moderating role in the influence of performance expectation and other factors on college students' willingness to use wechat.[3]

Privacy protection is an important issue in the development of the Internet, which is directly reflected in the protection of network user privacy data. [4]At present, the academic circles have discussed the issues related to user data information privacy, most of which are to distinguish the user side from the platform side, and examine the interests of the two from the perspective of absolute opposition. For example, we only pay attention to users' active self-disclosure and secondary communication [5], or pay more attention to the collection, mining and utilization of users' personal information by platforms and platform-based third-party institutions .[6] The introduction of the Weibo visitor record function is not only an update of privacy Settings, but also an agreement between some users and the platform in terms of paid privacy transfer, and the contradiction is thrown to users who are labeled by the platform as different classes.

3. Methodology

3.1. Study design

The UTAUT model is used as the model basis in this study. Fear of error provides intrinsic motivation for users' covert surveillance in cyberspace.[7] Therefore, one of the new independent variables of this research model is fear of error. The higher the degree of self-disclosure, the greater the pressure in the background, and the higher the risk of privacy information disclosure. Therefore, the degree of self-disclosure is also included as a new independent variable in this research model. Figure1 for the final model. In order to ensure the filling quality of questionnaires issued to a wide range of user groups, the formal questionnaires are collected in a "snowball" way by relying on platforms such as Questionnaire star and wechat community. From March 15 to March 30, 2024, a total of 344 questionnaires were released, excluding those with too short filling time, inconsistent answers or regularity, and the final valid questionnaires were 313.

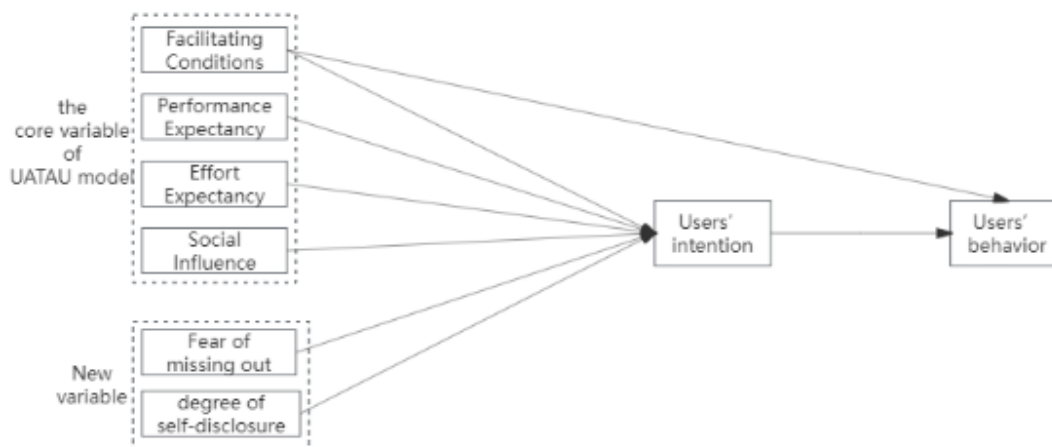


Figure 1: The theoretical model of this study

3.2. Study Procedure and Instrumentation

The data were collected through the UTAUT model based research scale on influencing factors of users' use of Weibo visitor record function, which included six parts: introduction of Weibo "visitor

record" function, demographic information, integration technology acceptance and use scale, Fear of missing out scale, self-disclosure degree scale and use intention and behavior scale.

The scale of the third part includes four dimensions: Performance Expectancy, Effort Expectancy, Social Influence and Facilitating Conditions. Two items of Performance Expectancy measure the extent to which users perceive the use of Weibo's "visitor record" function to protect users' privacy. The four items of Effort Expectancy measure users' perceived difficulty of using the "visitor record" function of Weibo. The four items of Social Influence measure the extent to which users are influenced by the surrounding groups and environment when using the "visitor record" function of Weibo. Facilitating Conditions mainly refer to the use environment. The four items measured the objective conditions that the user thought could support the use of the "visitor record" function of Weibo.

The fourth part of the scale has only one dimension, Fear of missing out, including four items mainly used to measure the anxiety caused by microblog users not getting the information they want to know in the event they are not present. The scale in the fifth part also has only one dimension, that is, the degree of self-disclosure, including six items to measure the willingness and actual situation of Weibo users to publish information closely related to themselves on their personal homepage. The items in the core part of the scale above are all 5-point Likert scale, ranging from "1= I completely disagree" to "5= I strongly agree".

3.3. Data Analysis

SPSS 27 and SPSS AMOS 28 were used to first evaluate the reliability and validity of the model established in this study through the results and models of confirmatory factor analysis, and then calculate the result path of the structural equation model. Finally, correlation test and linear regression method were used to analyze the influence of six factors on the intention to use.

4. Findings

4.1. Demographic characteristics of participants

The demographic characteristics of the participants are shown in Table 1. The proportion of men and women in this survey was equal, with 134 males, accounting for 42.8% of the total valid samples. There were 179 women, accounting for 57.2% of the total valid samples. Age showed that young people aged 18 to 25 and 26 to 30 were the most, the sum of valid samples was 234, accounting for 74.7% of the total valid samples; The sample of other degrees accounted for 23.7%. The total number of valid samples of undergraduate and junior college was 239, accounting for 76.3% of the total number of valid samples. The sample of other degrees accounted for 23.7%.

Table 1: Demographic characteristics of participants

Variable	Options	Frequency	Percentage (%)
Gender	Male	134	42.8%
	Female	179	57.2%
Age	Under 18 years old	23	7.3%
	18 -- 25 years old	100	31.9%
	26 -- 30 years old	134	42.8%
	Over 30 years old	56	17.9%
Study program	High school or technical secondary education or below	39	12.5%

Table 1: (continued)

Junior college degree	129	41.2 %
Bachelor degree	110	35.1 %
Master degree or above	35	11.2 %

4.2. Reliability and validity test

After testing with SPSS, the KMO value is 0.914, X² value is 5708.631, Sig value is 0.000, and df value is 630, indicating that the data set used is suitable for factor analysis. In the factor extraction stage, the maximum variance method was used to carry out orthogonal rotation, and the principal components with eigenvalue greater than 1 were extracted, and the cumulative variance contribution rate reached 67.193%. In addition, the factor load of each measurement item is tested, and the results are all greater than 0.7 as shown in Table 2, indicating that this scale has good convergence validity and discriminant validity, thus providing a reliable basis for subsequent data analysis. In terms of the results of confirmatory factor analysis and model evaluation, the average extraction variance (AVE) of the model is greater than 0.5, which indicates that each measurement index has a high degree of explanation for its potential variables, and thus reflects the model has a good convergence validity. In addition, the combined reliability (CR) and Cronbach's Alpha coefficient were used for reliability test, and the combined reliability and Cronbach's Alpha values of each latent variable were all higher than 0.7, which further verified that the model had good internal consistency. Finally, as shown in Table 3, the square root of AVE value of each latent variable is also greater than the correlation coefficient between potential variables and other potential variables, which indicates that the model has good discriminant validity, that is, each measurement index can effectively distinguish different potential variables.

Table 2: Standardized factor load, CR, AVE, and Cronbach's Alpha values were measured for the model

Latent variables	Observed variables	Standardized Factor loading	CR	AVE	Cronbach's Alpha
Performance	PE1	0.819	0.787	0.649	0.791
Expectancy	PE2	0.792			
Effort	EE1	0.734	0.861	0.607	0.862
Expectancy	EE2	0.792			
	EE3	0.786			
	EE4	0.803			
Social	SI1	0.813	0.837	0.631	0.840
Influence	SI2	0.767			
	SI3	0.803			
Facilitating	FC1	0.808	0.854	0.594	0.856
Conditions	FC2	0.774			
	FC3	0.753			
	FC4	0.748			
Fear of missing out	FM1	0.805	0.870	0.627	0.871
	FM2	0.751			
	FM3	0.826			
	FM4	0.782			

Table 2: (continued)

degree of self-disclosure	SD1	0.804	0.913	0.636	0.911
	SD2	0.825			
	SD3	0.804			
	SD4	0.792			
	SD5	0.787			
	SD6	0.771			
Users' intention	UI1	0.705	0.791	0.558	0.835
	UI2	0.779			
	UI3	0.755			
Users' behavior	UB1	0.711	0.714	0.520	0.893
	UB2	0.731			

Table 3: AVE square root of latent variables and correlation coefficient between latent variables

	FM	FC	SI	EE	PE	SD	UI	UB
FM	0.791							
FC	0.341	0.771						
SI	0.308	0.297	0.794					
EE	0.333	0.322	0.291	0.779				
PE	0.341	0.33	0.298	0.323	0.805			
SD	0.209	0.202	0.183	0.198	0.203	0.797		
UI	0.215	0.208	0.188	0.204	0.208	0.131	0.747	
UB1	0.204	0.197	0.178	0.193	0.197	0.307	0.299	0.721

4.3. Model path data analysis

The results of the structural equation model calculated by AMOS are shown in Table 4 and Figure 2. Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, Fear of missing out, degree of self-disclosure positively affects Users' intention; Users' intention positively affects Users' behavior; The influence of Facilitating Conditions on Users' behavior passed the significant test, but according to the standard regression coefficient, its coefficient was negative. Facilitating Conditions had a negative impact on users' behavior using the "Visitor record" function of Weibo.

Table 4: Route data analysis result statistics Estimate

			Estimate	S.E.	C.R.	P
UI	<---	PE	0.166	0.039	4.234	***
UI	<---	EE	0.213	0.036	5.915	***
UI	<---	SI	0.269	0.04	6.719	***
UI	<---	FC	0.273	0.044	6.189	***

Table 4: (continued)

UI	<---	FM	0.279	0.042	6.61	***
UI	<---	SD	0.197	0.036	5.428	***
UB	<---	UI	0.998	0.145	6.887	***
UB	<---	FC	-0.244	0.081	-2.992	0.003

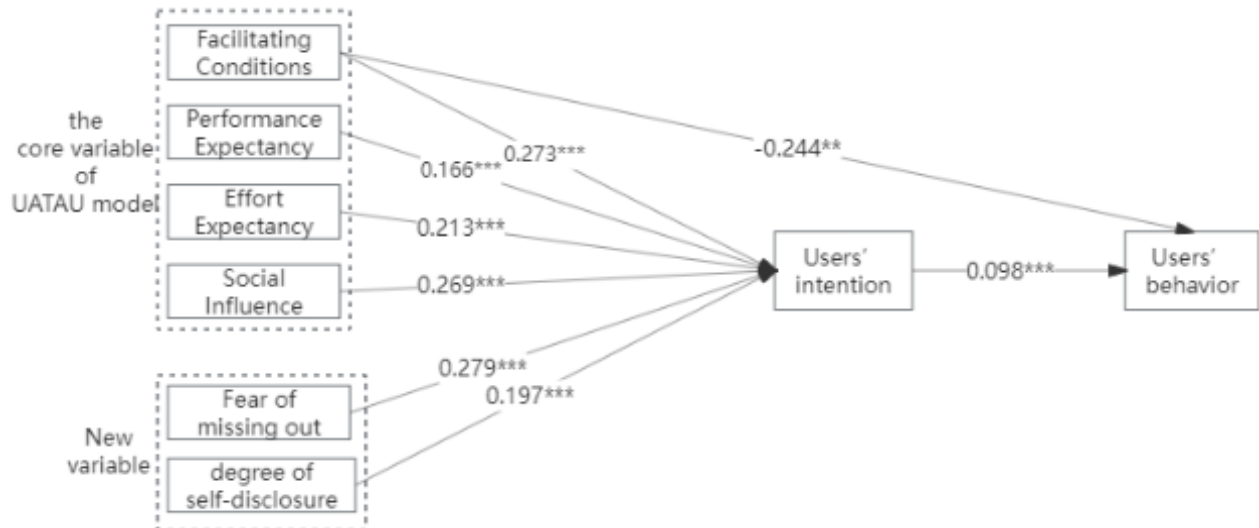


Figure 2: Model test result

4.4. Multivariate regression analysis

In this study, the influence of six factors on usage intention was analyzed by linear regression method. First, the correlation test between the intention to use and the six factors is conducted, and the test results are shown in Table 5. The results show that there is a significant correlation between these factors and the intention to use, so they can be used as independent variables in subsequent regression analysis. In particular, it is pointed out that there is a significant correlation between intention to use, effort expectation factor and fear of error factor, which indicates that effort expectation and fear of error factor may play an important role in explaining intention to use.

Table 5: The correlation coefficient between users' intention and each factor

	UI	EE	PE	SI	SI	FM
UI						
EE	0.096					
PE	-0.151**	0.003				
SI	-0.036	0.012	-0.008			
SI	-0.023	0.004	0.001	0.002		

Table 5: (continued)

FM	-0.168**	-0.001	0.006	0.015	0.0018	
SD	-0.09	0.002	-0.002	-0.001	-0.0014	0.001

Users' intention as dependent variable and six factors as independent variable for linear regression analysis. As shown in Table 6, the regression equation is significant ($F=44.448$, $p<0.001$). Performance expectation ($\beta=0.120$, $P=0.013$), effort expectation ($\beta=0.138$, $p=0.006$), community influence ($\beta=0.179$, $p<0.001$), contributing factors ($\beta=0.211$, $p<0.001$), fear of missing out ($\beta=0.200$, $p<0.001$), the degree of self-disclosure ($\beta=0.175$, $p<0.001$) showed significant positive prediction intention. Together, these variables explained 45.50% of the variation in users' intention.

Table 6: Linear regression results for each variable users' intention

	B	β	t	p	F	Adjust R2
EE	0.119	0.12	2.498	0.013	44.448***	0.455
PE	0.146	0.138	2.768	0.006		
SI	0.216	0.179	3.695	***		
SI	0.273	0.211	4.427	***		
FM	0.218	0.2	4.157	***		
SD	0.186	0.175	3.591	***		

5. Discussion

The four latent variables in the original integrated technology acceptance model have significant positive effects on users' willingness to use the "visitor record" function. It can be seen that the role of Weibo "visitor record" function in protecting users' privacy, its learning cost, external feedback from users' social relations, and additional services and convenience provided by Weibo are all positively correlated with users' willingness to use. In addition, the two new hypothesis variables, fear of error and self-disclosure degree, also show that they have a positive and significant impact on users' willingness to use the "visitor record" function. It can be seen that the less users know about the life dynamics of others in the relationship network and the more content strongly related to personal information they publish on the Weibo platform, the stronger their intention to use the "visitor record" function of Weibo. This shows that Weibo is an important platform for users to show their true emotions and a channel for insight into their friends' status. It is worth noting that contributing factors have a negative impact on users' use behavior of Weibo "visitor record" function. The reason may be that the "visitor record" function of Weibo has a special attribute, which is one of the rights and interests of Weibo social members. When Weibo provides more additional convenience rights and interests services, these services do not directly serve the core needs of user privacy protection. Meanwhile, the emergence of these additional services may cause service premium. As a result, the cost of registering and using Weibo social members will increase, and the cost of using

privacy tools on Weibo platform will eventually increase. Therefore, providing a more pure and immediate privacy protection service can meet the needs of users.

6. Conclusion and recommendation

This study also has some limitations. First of all, the scale method used in this study has certain limitations. Although the use of scales to conduct hypothetical research can provide a certain degree of convenience and efficiency, it relies on the existing indicator measurement and scale framework established by predecessors, which may limit the full understanding of the research object. Therefore, future studies can consider designing experiments, combining a variety of research indicators, and collecting longitudinal time data to verify the universality and reliability of the conclusions. Secondly, the integration technology adopted in this paper accepts the theoretical model as a reasonable choice of research framework, but there are still some shortcomings. In the future, efforts should be made to build a more complete and comprehensive research model, and more independent variables should be considered to better explain users' privacy tool use behavior. Finally, it should be pointed out that this paper has not differentiated analysis of different users' age, gender, occupation and other factors, which often have an impact on users' privacy tool use behavior. Therefore, from this perspective, future studies can further explore the differences among different user groups, so as to more comprehensively understand the motivation and influencing factors of user privacy protection behavior.

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