
Information Credibility Evaluation in Presence of Users' Safety in New Retailing

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Abstract

Understanding users' safety perception of the credibility of web-based information has become increasingly important in the context of new retailing. This study extends the existing literature by exploring the factors influencing information credibility in the context of new retailing. Based on the technology acceptance model and the rational behavior theory, a theoretical model for the assessment of information credibility in new retailing was developed. We analyzed the factors influencing users' safety preference toward information communication procedures and information credibility in new retailing based on two aspects: perceived information quality and user judgment motivation. The reliability and validity of the model measure were analyzed, and structural equation modeling was used to test the model hypotheses. The following results were obtained: (1) Authenticity, accuracy, and practicability positively affected the perceived information quality of new retailing information; (2) User judgment motivation had a positive impact on information users' safety preference and information credibility; (3) Users' safety preference positively affected information credibility; (4) Information acquisition, social interaction, and self-identity positively affected the perceived credibility of new retailing information.

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1 Introduction

New retailing, through the use computers as an intermediary, enable individuals to easily and quickly conduct interactions such as social networking, contacts, collaboration, information creation, sharing, and communication, and thus form social networks. New retailing has the characteristics of being free from time and space constraints, enabling fast transmission of information with wide spread range, and involving large amounts of data, which provide important information in the era of big data, and provide individuals with an information communication platform of unprecedented scale. New retailing has become an important source of information [1]. A large amount of contents and user behavior recorded in new retailing can provide extensive, fresh, and rich data to study the credibility of information presented in this context, mode of diffusion and laws of communication, and impact on the behavior of users, which has increased the feasibility of this type of research.

Credibility is defined as the extent to which there is no ambiguity, bias, or inaccuracy so that information can be convincing [2]; credibility is relevant to the source of information, the content of information, the mode of diffusion, and the structure [3]. There have been relevant studies on information credibility assessment models and factors in new retailing. The study of the information credibility problem varies according to the research field and focus. Experts in the field of information technology believe that credibility is an objective manifestation of information, characterized and measured by indicators such as information quality and professionalism, machine learning, information retrieval, and other methods to evaluate and select highly reliable information [4–6]. On the other hand, social psychologists believe that credibility is a subjective manifestation of information, and have focused on the perception of information credibility by information recipients and its influencing factors [7]. From the perspective of social psychology, credibility is defined as the degree of truth in information perceived by individuals.

There are a steam of researches focusing on the factors influencing information credibility in new retailing, including the sender of information, the information content itself, and the receiver of information. Previous empirical research has rarely paid attention to the information recipient's motivation for information judgment. In order to meet these gap between existing researches and practical activities in new retailing, the first objective

is to determine the influence factors of the information credibility evaluation in new retailing. On the basis of previous studies, our study aimed to use the technology acceptance model (TAM) and rational behavior theory to be our fundamental research theory, and check whether the factors, such as perceived information quality, user judgment motivation, information users' safety preference, authenticity, accuracy, practicality, relationship strength, information acquisition, social interaction and self-identity, has significant influence on information credibility evaluation.

The second objective of our study is to reveal the information credibility evaluation procedures of the users in new retailing. Previous studies have conflict understanding in the information credibility evaluation procedures in different people. In our study, we have tested the procedures in the group of the university students in Guangzhou, China, in order to reveal the procedures of the university student. Further, it will provide the new understanding of the credibility evaluation behavior in university.

The third objective of our study is to provide the theoretical and practical implication for the parties in new retailing. It drew on the findings of previous research on network information communication, and explored the key role of perceived information quality and judgment motivation in relation to information credibility, which provides a reference for research in related fields such as user behavior and information credibility in social media. The results can be referred by the new retailing enterprises, users as well as government.

This paper is organized as follows. In Section 2, we review the literatures and propose the relevant hypotheses, as well as the research model. We measures the variables and collected sample data in Section 3. Further in Section 4, we analyse these sample data and verify the proposed hypotheses. In the last section, we conclude this paper and discuss the implications.

2 Literatures and Hypotheses

In new retailing information, besides perceived information quality, users' perception of trustworthiness and other factors affect users' safety preference and information credibility. Two factors from the TAM and rational behavior theory were combined in this paper to establish a basic model of new retailing credibility, and the relationship between these factors and other variables was examined. The TAM was proposed by Davis et al. [8] to study the acceptance of information systems by users, and includes five factors: perceived usefulness, perceived ease of use, users' safety preference,

usage intention, and practical use. Their study suggested that users' safety preferences had a positive effect on behavioral intention. At the same time, the hypothesis that perceived usefulness had a positive effect on using attitude and behavioral intention was verified. On the other hand, attitude is an important variable affecting behavior. Among the many theoretical models examining the relationship between users' safety preference and usage behavior, the most popular is the rational behavior theory [9], which mainly focuses on the determinants of conscious human behavior from the perspective of social psychology. It is one of the most basic and influential theories in research on human behavior. Followed the previous studies, we consider the perceived information quality, user judgment motivation, information users' safety preference, authenticity, accuracy, practicality, relationship strength, information acquisition, social interaction and self-identity be the factors of our study.

2.1 Perceived Information Quality

Yusriyah and Budiman [10] analyzed behavioral intention to use a sharia cooperative application based on the technology acceptance model and found that behavioral intention of using the application was positively affected by attitude toward usage. Attitude towards usage was positively affected by perceived ease of use and perceived usefulness. Perceived usefulness was not affected by perceived ease of use. Shareef et al. [11] aimed to reveal the sources of beliefs and their role in developing intentions to use the mGov system, and investigated cultural influence as a factor of consumer attitudes and intentions regarding mGov. They observed clear differences in sources of beliefs and their influence on attitudes leading to intention according to culture. Based on the above findings, the following hypotheses were proposed in this study:

H1a: Perceived information quality will have a positive impact on information users' safety preference in new retailing.

Some scholars have showed a strong relationship between information credibility and information quality, information usage, and assessment motivation [3]. Researchers have usually measured information quality according to authenticity, accuracy, practicality, source quality, etc. [12]. Clemons et al. [12] examined subjects' perceived risk associated with different treatments across different vendor types. The impact of treatment type and vendor reputation on consumers' trust varied across countries in unexpected ways.

Xiong et al. [13] proposed a constrained learning prediction of reliability based on a ranking approach for wireless sensor network (WSN) services according to past service usage experiences of other wireless sensor architectures (WSAs), which can achieve higher accuracy and improve performance by pruning candidate services. Chen and Wang [14] presented a channel choice model based on the fuzzy Technique for Order Preference by Similarity to Ideal Solution (TOPSIS) method, including perceived risk, information availability, service quality experience, and delivery service. Based on the above findings, the following hypotheses were proposed in this study:

H1b: Perceived information quality will have a positive impact on information credibility in new retailing.

Information quality involves a general evaluation of the information content based on users' demand, and can help to reduce uncertainty. In general, new retailing will publish higher-quality information to enhance the users' safety preference of users and reduce their negative evaluation. In new retailing, users will make a pre-judgement based on the obtained information. The perception of information quality will affect the acceptance and adoption behavior of users. Higher information quality will increase the adoption ability of users, and vice versa. The quality of new retailing information will definitely influence users' attitude regarding the use of the information [15]. Moreover, user judgement motivation is a key variable in the information credibility assessment; the higher judgement motivation of users, the higher their willingness to share the information [16]. Self-identity and social interaction also affect judgement motivation and information users' safety preference. Therefore, we proposed the following hypotheses:

H1c: Perceived information quality will have a moderating effect in information credibility assessment procedures.

2.2 User Judgment Motivation

Reliability judgment is driven by individuals' motivation. The factors that affect credibility judgment motivation include information involvement, information use, and environment [9, 17]. The higher the degree of information involvement, the stronger the relevance consciousness of the recipients, and the stronger motivation to carry out a credibility judgment [9, 18]. When the content of the information is closely related to individuals' interests, the motivation for judging credibility is also stronger [19]. Environmental differences sometimes affect credibility judgment motivation by limiting

resource selection and so on [20]. Based on the above findings, the following hypotheses were proposed in this study:

H2a: User judgment motivation will have a positive impact on information users' safety preference in new retailing.

Motivation is the internal driving force of behavior, and a large number of studies have shown that it directly affects individuals' will and behavior; however, different motivations have different effects on behavior intention. Sun and Li (2013) statistically analyzed the motivation to forward messages on Weibo with high frequency, and found that emotional needs were the psychological driving force of the forwarder, as users tended to realize self-expression and self-identification by forwarding Weibo messages, such as their life perceptions and opinions. In addition, users often chose friends to forward Weibo messages, which reflects the strong social motivation of users. Regarding information adoption, perceived information quality reflects the consumer's overall perception of information and has a direct impact on the use of information [21]. The quality of information has a significant impact on individuals' daily lives and determines users' behavior in the online community. Scholars believe that trust is a quality perceived by individuals, which enables confidence, that is to say, confidence is the main effect of trust. Based on previous studies, Gefen (2008) used two different research perspectives, namely ATM and trust, to study the process of trust-building in e-commerce. In general, for respondents who repeated online shopping experiences, consumer trust was widely accepted influencing factors. This is an important factor affecting the user's ultimate acceptance of the system.

Based on the above, the following hypotheses were proposed in the current study:

H2b: User judgment motivation will have a positive impact on information credibility in new retailing.

Potgieter and Naidoo (2017) investigated the usage of a South African Facebook page to understand user attitudes on users related to social norms and user loyalty. Chao and Yu (2016) examined the perceived benefits of Digital Opportunity Centers (DOCs) programs for remote area participants from the perspective of computer anxiety and personal information ability. Using the partial least-squares method in their empirical research model, they showed that information and communication technology ability influenced the perceived benefit of DOC programs; computer anxiety had a significantly

negative effect on package software use, internet use, and IT usefulness; and internet use and IT usefulness had positive effects on perceived benefits. Karlinsky-Shichor et al. (2016) proposed a model for predicting users' perceived benefits and user satisfaction in organizational knowledge management systems. Four constructs were theorized to influence the dependent variables: system quality, knowledge quality, user information system (IS) competence, and organizational attitude to knowledge management. A number of researchers have tried to carry out studies using the two theories. Davis [8] revised the TAM by adding three variables, namely behavior attitude, behavior intention, and actual behavior, and tested the revised model in relation to user acceptance of information technology. Venkatesh et al. [21] proposed an integrated TAM by adding the rational behavior theory to form a unique theoretical framework. Hsu et al. [22] carried out a study on the loyalty of online gaming players by combining the rational behavior theory and TAM, and showed that perceived enjoyment, preference, and social standards had a significant influence on loyalty. We followed the research approach of previous scholars, and combined the two theoretical models to design our research framework. Based on the above findings, the following hypotheses were proposed in this study:

H2c: User judgment motivation will have a moderating effect in information credibility assessment procedures.

2.3 Users' Safety Preference

Information usage includes but is not limited to factors such as information inference, information use type, information satisfaction, information participation degree, and information experience. These variables have often been used to assess information credibility in diverse studies. From a common-sense perspective, credibility is higher when the information is used frequently. Information that individuals are most likely to select as well as favorite information is given the highest credibility [23]. Moreover, motivation and mode of media use have a significant impact on information credibility. Asimakopoulos [24] inductively developed a substantive social engagement framework of the walking experience that appears to be simple and flexible. The primary characteristics of this framework, namely accuracy of social judgements, accountability of decisions and actions, enhancing self-esteem, and satisfying intrinsic motivation goals, are in line with social network user experience and show promise of being useful in ubiquitous

technologies, regardless of user activity. Based on the above findings, the following hypotheses were proposed in this study:

H3: Information users' safety preference will positively affect information credibility in new retailing.

2.4 Authenticity, Accuracy, Practicality

Taylor [25] suggested that information was needed to meet users' needs when they participated in a particular activity. Whether the audience believes information on the internet or not, the first factor to consider is whether the information itself is true. If the audience can readily discover that the information is not true, other credibility factors will no longer be considered. Kovacs et al. (2014) presented two studies to test a fundamental yet rarely examined assumption underlying the contemporary appeal of authenticity, namely, that consumers assign higher value ratings to organizations regarded as authentic. Authenticity was found to generate higher consumer value ratings of organizations; additionally, certain types of organizations were found to be more likely to receive authenticity attributions by consumers. Men and Tsai [26] conducted one of the earliest empirical analyses to explore how and why the public engages with corporate CEOs on social media and why such engagement matters. They tested a conceptual model linking CEO-public engagement to two interpersonal communicative variables, namely perceived authenticity and approachability, as well as organization-public relational outcomes. Novello and Murias [27] explored the relationship using survey data collected during the 2010 Holy Year in Santiago de Compostela. The results provided support for the effect of perceived event authenticity on event satisfaction, and also indicate that perceived event authenticity did not have a direct impact on event loyalty. Based on the above findings, the following hypotheses were proposed in this study:

H4a: Authenticity will have a positive impact on perceived information quality in new retailing.

Drawing on rational choice theory and information system success model, Liang et al. [28] developed a contextualized research model to explain how individuals' level of physical disability moderated the effects of object- and outcome-based beliefs. They found that physical disability weakened the effect of information quality on perceived risk, strengthened the effect of system quality on perceived risk, and strengthened the effect of perceived benefits on information use. Fezza et al. (2017) proposed a blind quality

assessment strategy for stereoscopic images based on the identification of the distortion type in order to select the most efficient impairment measure in addition to the determination of whether a stereo-pair was symmetrically or asymmetrically distorted to account for binocular fusion properties. Debbeler et al. (2018) conducted two studies to examine health-related beliefs and risk perceptions and their accuracy by implementing a combined product- and consumer-oriented approach. The consumer groups showed “polarized” ratings regarding perceived quality/hygiene, health risks, and taste of bottled and tap water, indicating that the two consumer groups substantially diverged in their beliefs. Based on the above findings, the following hypotheses were proposed in this study:

H4b: Accuracy will have a positive impact on perceived information quality in new retailing.

The quality of information has a decisive influence on the credibility of the information itself, which can be measured in terms of authenticity, objectivity, and practicality of the information. Duarte et al. (2015) developed a scale to measure the effectiveness of an academic information system, including system quality, information quality, service quality, and perceived usefulness as dimensions. Greenhalgh et al. (2018) synthesized this evidence by comparing the mechanisms and impact of patient-reported outcome measures and other performance data on quality improvement in different contexts. Based on these studies, we developed the following hypothesis:

H4c: Practicality will have a positive impact on perceived information quality in new retailing.

2.5 Relationship Strength

Relationship strength in the field of mass media is understood as the degree of similarity between the communicator and receiver in the entire information dissemination process, including work experience, education background, life experience, and life values. Wangenheim and Bayon [29] introduced the similarity theory in social comparison into the study of the effect of word-of-mouth communication, and suggested that it is easier to communicate between individuals who are relatively similar in many aspects. Gilly et al. (1998) suggested that individuals with similar attributes in a society were more likely to have similar needs. Thus, besides the characteristics of the information itself, a factor that can affect the willingness to communicate information is, more importantly, the strength of the relationship between the

information disseminator and the recipient of the information. This can be explained by the fact that willingness to communicate information depends not only on the value of the information, but also on the receiving population affected by the information, as the desire to experience specific social recognition is often one of the main motivations for individuals to receive or disseminate information. Choi [30] aimed to explore how color-based visual sensations affected individuals' judgment of others and their environment. Verma et al. (2018) extended big data analytics adoption research by examining the effects of system characteristics on the attitude of managers towards the usage of big data analytics systems using the TAM. Results of this survey confirmed that the characteristics of the big data analytics system had significant direct and indirect effects on belief in the benefits of big data analytics systems and perceived usefulness, attitude, and adoption. Suki [31] examined the effects of consumption values (i.e., functional value, social value, emotional value, conditional value, and epistemic value) on Malaysian consumers' environmental concern as expressed in their purchase of green products, and results confirmed that social value was of paramount impact on consumers' environmental concern, and that epistemic and functional value ranked behind. Functional value price, emotional value, and conditional value had no significant effects. Based on these studies, we developed the following hypothesis:

H5: Relationship strength will positively affect information users' safety preference in new retailing.

2.6 Information Acquisition, Social Interaction, Self-identity

Based on a literature review, five motives were put forward, namely information acquisition, leisure entertainment, social interaction, self-identification, and public expression, in order to explore what type of motivation triggered forwarding behavior. Motivation is the internal force pushing a person to decide to engage in certain activities and to continuously strive towards a goal. In the mass media field, the communicator's motivation can be understood as the intent of the communicator when releasing the information. In communication theory, it is suggested that when communicators are perceived as having too much interest in the dissemination of information, information receivers tend to be suspicious of their motives, adopt a precautionary state, and distrust the information they post. The receiver's assessment of the communicator's motivation is mainly based on whether the communicator's published information is objective, or whether there is

a subjective induction. Based on these studies, we developed the following hypothesis:

H6a: Information acquisition will positively affect user judgment motivation in new retailing.

Credibility research has been an attractive research field since the 1950s. In the initial step, researchers focused on the credibility of the information source; later, the information transmission channel was regarded as an important factor in the information credibility assessment. A large number of studies have examined information credibility factors in three dimensions: source credibility, message/content credibility, and channel/media credibility. Westley and Severin (1964) discussed the relationships between information credibility and factors such as demographic variables, political attributes, information usage, information inference, and social interchange, and pointed out the strong connection of education and information inference with information credibility. Based on factor analysis of survey questionnaire data, Ryan (1973) compared information from different channels and found that information on television had a higher credibility than that on newspapers. Flanagin and Metzger [32] explored the credibility of different types of information on various channels and showed that the network usage experience was a factor in the information credibility assessment. At the same time, information credibility has situational characteristics, and changes with the evaluation object, environment, situation, and other conditions. Therefore, two factors are decisive regarding the credibility of information, namely the audience and the situation, while the information content itself was not found to be a core factor of credibility. Based on these studies, we developed the following hypothesis:

H6b: Social interaction will positively affect user judgment motivation in new retailing.

A high number of theoretical models of credibility in traditional and social networks have been developed in the past few years. The elaboration likelihood model poses that individuals' attitude towards information credibility is affected by the quality of the information as well as opinions and peripheral clues, and the credibility of information is judged through a system judgment process. Because this model is positively regarded by many researchers [33, 34]. The two-process model emphasizes the important role of human motivation and ability in the judgment of information reliability, and confirms the elaboration likelihood model from a more in-depth perspective [17]. The information pre-judgment model describes how

individuals judge the quality and authority of network information, as well as the significant factors that influence judgment, and emphasizes the important role of information sources in the credibility decision process [35]. The three-stage model poses that individuals' credibility evaluation involves the three following stages: cognitive evaluation of credibility from the surface characteristics of reliability, professional reliability test based on the information source and the interaction of the display form and content, and final comprehensive evaluation [36]. Similar to the three-stage model, the building-heuristics-interaction model also divides the process of credibility judgment into three levels, namely construction, heuristics, and interaction, and considers that the environmental conditions have a significant impact on the three levels [20]. The MAIN model explains the process of credibility judgment considering four factors: mode, agent, interaction characteristics, and operability [34]. The social judgment model explains the social methods used by individuals in the process of judging the credibility of and sharing information, and proposes four social credibility evaluation methods adopted by users and five social enlightenment judgment rules [32]. All these models have laid a foundation for the research on network credibility, but there is no comprehensive model of information credibility in new retailing to date. Based on these studies, we developed the following hypothesis:

H6c: Self-identity will positively affect user judgment motivation in new retailing. The proposed concept model in this study is shown in Figure 1.

3 Materials and Methods

3.1 Measures

We developed a questionnaire to assess the study variables, and all the questionnaire items and their sources are shown in Table 1. The questionnaire design was mainly based on the existing literature. Respondents rated the questionnaire items using a 5-point Likert scale according to their actual visit on the website: 1 (strongly disagree), 2 (do not agree), 3 (not sure), 4 (agree), and 5 (strongly agree). The questionnaire items adopted the specific evaluation indicators of the various variables in the model. Additionally, participants' personal information, such as gender, age, and monthly income, was also collected.

In order to avoid semantic problems with the content of the questionnaire (causing respondents to misunderstand the questions and answer them

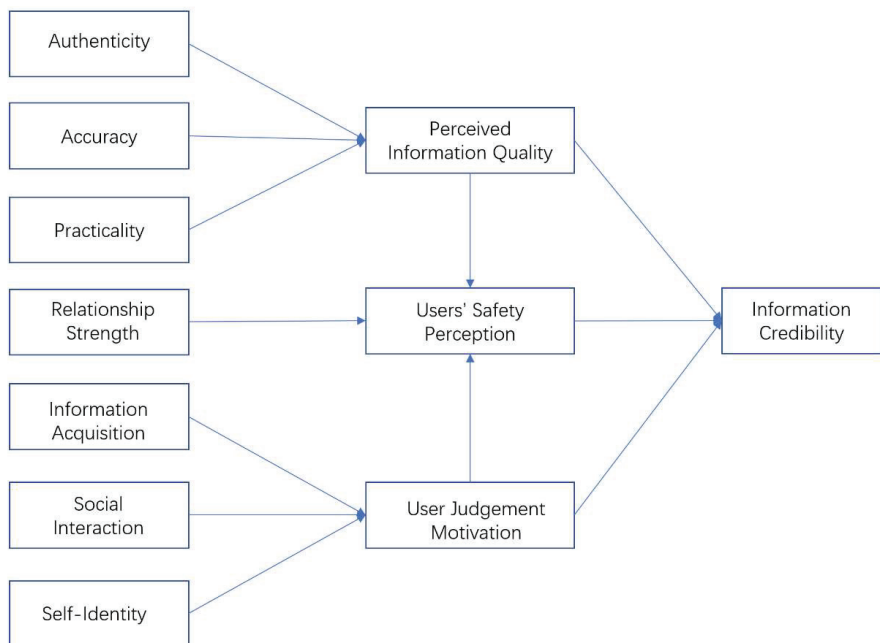


Figure 1 Research model.

incorrectly, affecting validity of the questionnaire), a pre-test method was used to check the contents of the questionnaire. The pre-test subjects were 20 teachers in the field of information systems and e-commerce research. They were asked to provide opinions regarding the meaning and grammatical expression of the questionnaire items, and the questionnaire was then revised based on their opinions.

3.2 Data Collection

Data were collected using a questionnaire survey. Questionnaires were distributed directly or by e-mail. Besides, we have provided the survey on website (<https://www.wjx.cn/m/10309728.aspx>). The respondents to the questionnaire were mainly students, teachers, and some white-collar workers, each of whom had experience in browsing information online. A total of 405 questionnaires were distributed. After the questionnaires were returned, those with significantly different or unreasonable data were excluded. A total of 326 valid questionnaires were included in the analysis, accounting for 80.5% of the total sample.

Table 1 Questionnaire items and sources

Variables	Items	Content of Items	Sources
Authenticity (AU)	AU1	The information in new retailing is true in accordance with the facts	Wang and Chen (2018) Verma et al. (2018)
	AU2	I can get in touch with true things in new retailing	
	AU3	The information in new retailing has the same function as traditional information	
Accuracy (AC)	AC1	The information in new retailing is presented in an accurate way	Kinosada and Usui (2016)
	AC2	The information in new retailing can be trusted	
	AC3	The information in new retailing is published by certified parties and is reliable	
Practicality (PR)	PR1	I think the information online is useful and helpful for enterprise practice.	Wang and Chen (2018) Verma et al. (2018)
	PR2	I can obtain the information online that I need in reality	
Perceived information quality (PIQ)	PIQ1	The information provided by the user is true	Sussman and Siegal (2003)
	PIQ2	The information content is based on objective evaluation	
	PIQ3	I think the information is helpful to me	
Users' safety preference (UA)	UA1	I like to use the internet to browse information	Fishbein and Ajzen (1975)
	UA2	I think browsing the internet is a good choice	
	UA3	Overall, my assessment of online information is positive	
Relationship strength (RS)	RS1	I often have similar views to those of the site communicators	Brown and Reigen (1987) Frenzen and Davis (1990)

(Continued)

Table 1 Continued

Variables	Items	Content of Items	Sources
Information acquisition (MI)	RS2	I have similar perspectives to those of the site communicators	Ducoffe (1996) Chen and Wells (1999)
	RS3	I have similar values to those of the site communicators	
	MI1	The site allows me to quickly and easily get a lot of information	
	MI2	This site can help me get information I am interested in	
	MI3	This site information allows me to understand what happened recently	
Self-identity (MS)	MS1	When I forward this information, I think I may be helpful to others	Lin (2006)
	MS2	When I forward this information, I feel that I have an important role in the dissemination of information	
	MS3	When I forward this information, I feel that I am valuable	
Social interaction (MC)	MC1	I can keep in touch with friends by posting messages	Park et al. (2009) Leung (2001)
	MC2	I can contact and get to know some people I am interested in by posting messages	
	MC3	Forwarding information makes me more active in social activities	
User Judgement Motivation (UM)	UM1	I believe that the information credibility can be judged by myself easily.	Brown and Reigen (1987)
	UM2	I think the more information I paid attention, the higher motivation in credibility I have.	
Information credibility (IC)	IC1	I believe the information provided by the user who posted the message is reliable	Ohanian (1991) Sussman and Siegal (2003)
	IC2	I believe that the user who posted the message is trustworthy on the topic in question	
	IC3	I believe the content of this user	

3.3 Ethics Statement

The committee for ethics in studies involving human participants aged over 16 years, assigned by the School of Management, Guangzhou University, China, approved this study on the basis of an extended review its methods, materials, and procedures. No participants were aged below 16. According to the Helsinki declaration, all participants signed a written informed consent form.

3.4 Data Analysis

The research model involved the measurement model and the structural model. First, the reliability and validity of the developed tool were investigated to assess the measurement model; subsequently, the structural model was analyzed by assessing its goodness of fit to the data and testing the study hypotheses.

The reliability and validity of the tool were assessed using SPSS. Validity included both convergent and discriminant validity. The former was assessed through the correlation between each index and its corresponding factor; the latter refers to whether the correlation between each factor and its index is greater than the correlation between this factor and other factors. Convergent validity was examined by comparing the square root of the AVE value of each factor and the factor correlation coefficient.

The goodness of fit of the model to the data was assessed using various indices: χ^2/df = ratio of chi-squared value to degrees of freedom; GFI = goodness-of-fitness index; AGFI = adjusted goodness-of-fitness index; CFI = comparative fit index; NFI = norm fitting index; RMSEA = root mean square error of approximation. Structural equation modeling was performed using SmartPLS 3.0 to test the hypotheses of the study.

4 Results

4.1 Reliability and Validity Analysis

The standard loadings for each factor, the average variance extracted (AVE), and the composite reliability (CR) value are listed in Table 2. The factor loadings were all greater than 0.7, all AVE values were greater than 0.5, and CR values were all greater than 0.7, indicating good convergence validity and reliability (Cronbach's alpha). Regarding convergent validity, as can be seen from Table 3, the square root of each factor's AVE value was greater than

Table 2 Reliability and convergence validity analysis

Factors	Items	Standard	Cronbach's Alpha	Composite	Average
		Loadings		Reliability (CR)	Variance Extracted (AVE)
Authenticity (AU)	AU1	0.864	0.836	0.895	0.678
	AU2	0.825			
	AU3	0.831			
Accuracy (AC)	AC1	0.793	0.785	0.812	0.621
	AC2	0.752			
	AC3	0.815			
Practicality (PR)	PR1	0.802	0.807	0.824	0.604
	PR2	0.814			
Perceived information quality (PIQ)	PIQ1	0.837	0.829	0.900	0.692
	PIQ2	0.871			
	PIQ3	0.798			
Users' safety preference (UA)	UA1	0.766	0.764	0.847	0.648
	UA2	0.779			
	UA3	0.867			
Relationship strength (RS)	RS1	0.839	0.818	0.910	0.772
	RS2	0.874			
	RS3	0.921			
Information acquisition (MI)	MI1	0.774	0.712	0.805	0.580
	MI2	0.797			
	MI3	0.710			
Self-identity (MS)	MS1	0.781	0.731	0.817	0.600
	MS2	0.816			
	MS3	0.722			
Social interaction (MC)	MC1	0.758	0.769	0.820	0.603
	MC2	0.823			
	MC3	0.746			
User Judgement Motivation (UM)	UM1	0.761	0.786	0.798	0.701
	UM2	0.802			
Information credibility (IC)	IC1	0.846	0.736	0.830	0.621
	IC2	0.727			
	IC3	0.786			

Table 3 Square root of factor AVE value (in bold) and factor correlation matrix

	AU	AC	PR	PIQ	UA	RS	MI	MS	MC	UM	IC
AU	0.831										
AC	0.315	0.811									
PR	0.301	0.321	0.798								
PIQ	0.284	0.287	0.338	0.828							
UA	0.261	0.254	0.313	0.331	0.878						
RS	0.237	0.232	0.263	0.205	0.302	0.902					
MI	0.201	0.213	0.221	0.241	0.287	0.330	0.717				
MS	0.186	0.192	0.199	0.175	0.267	0.381	0.236	0.734			
MC	0.148	0.131	0.167	0.105	0.278	0.209	0.167	0.202	0.785		
UM	0.179	0.146	0.152	0.133	0.241	0.221	0.154	0.186	0.334	0.702	
IC	0.173	0.164	0.142	0.169	0.184	0.215	0.148	0.135	0.160	0.132	0.756

Authenticity (AU); Accuracy (AC); Practicality (PR); Perceived information quality (PIQ); Users' safety preference (UA); Relationship strength (RS); Information acquisition (MI); Self-identity (MS); Social interaction (MC); and Information credibility (IC).

the correlation coefficient of this factor with other factors, indicating good discriminant validity.

4.2 Goodness of Fit

The recommended values of some common fitting indices and the actual values of the model are in Table 4. For each fit index, the actual value of the model was better than the recommended value, showing that the model had a good fit to the data.

4.3 Hypothesis Testing

The results of the structural model test are in Figure 2. Perceived quality of information positively influenced users' safety preference and information credibility in new retailing; thus, H1a and H1b were supported. User judgment motivation had a positive impact on users' safety preference and information credibility; thus, H2a and H2b were supported. Users' safety

Table 4 Recommended and actual fitting index values

Fitting index	i^2/df	GFI	AGFI	CFI	NFI	RMSEA
Recommended values	<3	>0.9	>0.8	>0.9	>0.9	<0.08
Actual values	1.85	0.906	0.873	0.960	0.927	0.053

Note: i^2/df = ratio of chi-squared value to degrees of freedom;
 GFI = goodness-of-fitness index; AGFI = adjusted goodness-of-fitness index;
 CFI = comparative fit index; NFI = norm fitting index; RMSEA = root mean square error of approximation.

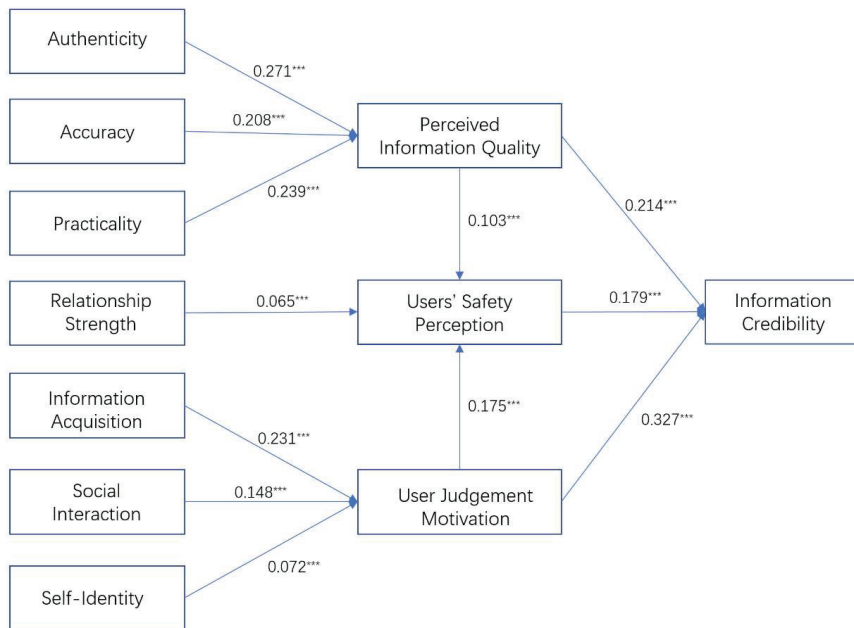


Figure 2 Model test results.

preference positively affected information credibility; thus, H3 was also supported. Authenticity, accuracy, and practicality positively affected perceived information quality; thus, H4a, H4b, and H4c were supported. Relationship strength positively affected users' safety preference; thus, H5 was supported. Information acquisition, social interaction, and self-identity positively affected user judgment motivation; thus, H6a, H6b, and H6c were supported.

4.4 Moderating Effect Test

We entered users' safety preference and the interaction term of perceived information quality and user judgment motivation into a regression model to test the impact of the independent variables, the moderating variable, and the interaction term on information credibility. After adding the interaction term, when the moderating variable was perceived information quality, the regression coefficient of users' safety preference to information credibility increased from 0.179 to 0.203; when the moderating variable was user judgement motivation, the regression coefficient of users' safety preference to information credibility increased from 0.179 to 0.181. These two results indicate that perceived information quality and user judgment motivation had a positive moderating effect on the relationship between users' safety preference and information credibility; thus, H1c and H2b were supported.

5 Conclusions and Implications

The social network platform can control the information disseminator during the information release, which requires more attribute tags on the information, such as sources, etc., on the one hand, to improve the integrity of the social network information to help users to better evaluate the credibility of information, and on the other hand, to help users to filter information more quickly so that they can more conveniently obtain the information they demand.

User judgment motivation had a positive impact on users' safety preference and credibility of information in new retailing. The impact of information acquisition, social interaction, and self-identity on user judgment motivation, users' safety preference, and credibility of the information was verified. New retailing information is a social tool for users, which is used to enhance their interaction with friends, as users interact with others when they judge the information to be credible. The development of information networks has turned every user into "self-media." Each user has his own home page content. The image of a user is largely shaped by his/her attention, forwarding, and original content. It is easier to gain users' trust with information that is consistent with their own image location; otherwise, the user will adopt an evasive attitude, and it will be difficult to gain their trust. Information acquisition plays a very important role in information credibility, and users can also obtain information from the network through browsing and collecting behavior.

5.1 Theoretical Implications

This paper has extended the literatures in both information credibility evaluation and new retailing scenario. First, opposite to the existing researches, social interaction, which is the key characteristic of new retailing, is significant for the user judgement motivation. We have to pay more attention for the social interaction in new retailing, and motivate the consumer to form a better consuming habits. Second, we have verified the relationship between consumers and firms is significant in new retailing. The relationship strength should be the critical factor in researching consumer activities in new retailing in future. Third, we extend the research model by combining TAM and rational behavior theory, and make contribution to the research of consumer activity.

5.2 Practical Implications

Some managing instructions can be obtained from this study. First, the new retailing firm should take necessary activities to enhance the perceived information quality of the consumer. In the online transaction, the consumer will understand the product from the image, text introduction and comments exchange forum. The firm must ensure the relevant information be true. Second, the new retailing firm could design versatile promotion in online and offline channel to build the better relationship with consumer. Thus, the demand of consumers are enlarged and the profits are as well.

Although the factors affecting the credibility of information have been explored comprehensively, and some conclusions with theoretical and practical significance have been reached, in account of time and personnel constraints, there are still some limitations to this study. When considering users' safety preference, only two indicators (perceived information quality and perceived trust) were chosen. Other characteristics that can affect the credibility of information, such as media, user's involvement with information, could not be included in the model in this study. In future research, a more appropriate model should be adopted by integrating these factors and investigating their impact on information credibility. Moreover, this study validates the moderating effect of users' safety preference on information credibility. However, users' personal characteristics such as gender, education level, income level, occupation, and other demographic characteristics may also have a regulatory role (e.g., female users may be more inclined than male users to read and share information), which can be investigated in the future.

Conflict of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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