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# Electronic word-of-mouth and consumer purchase intentions in social e-commerce

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ABSTRACT

With the rise of social commerce, electronic word-of-mouth (eWOM) has become an important reference for users to make purchase decisions. However, the quality of information communicated by eWOM on all major platforms is uneven, which seriously affects user trust in eWOM, and in the reputation of the platform. Therefore, from the perspective of information quality, this study adds the social psychological distance of consumers to research the effects of WOM on trust, and its further influence on purchase intentions. This research adopts a questionnaire survey method to collect data from users of Xiaohongshu. Through path analysis, the following conclusions are obtained: (1) information quality is positively associated with social psychological distance and trust; (2) social psychological distance is positively associated with trust; (3) social psychological distance mediates the relationship between information quality and trust; and (4) trust is positively associated with purchase intention. Finally, based on the research conclusions, we put forward suggestions for social e-commerce platforms. The limitations of the study and direction of future research are analyzed.

## 1. Introduction

With the rise of social media and the continuous development of Internet technology, the concomitant development of Chinese e-commerce has contributed to this emergence. Since 2011, social e-commerce platforms such as Xiaohongshu, Mogujie, and Meilishuo have sprung up. This type of platform employs user-generated content as a key tool to assist online shoppers (Zhu, 2014). Thus, electronic word-of-mouth (eWOM) has become an important part of social commerce. Information communicated by eWOM consists of the stated personal experiences, evaluations, discussions, and recommendations of users, as these relate to information about products, services, enterprise brands, and so on. All are disseminated by online consumers through online media (Zhang and Dong, 2011). The use of eWOM for marketing has become an important measure, used by enterprises to promote purchases and thus increase market share.

However, the quality of information communicated by eWOM is inconsistent. Due to a lack of editorial oversight, issues of information quality, false information, and online “trolling” are not uncommon. Low-quality information may induce consumers to make unfavorable purchasing decisions—which in the aggregate leads to consumer mistrust. Hence, a variety of “favorable comments and returns,” and other forms of bill-brushing launched by e-commerce merchants are like double-edged swords, making it more difficult for consumers to safeguard their rights–and forcing retailers to pay a huge reputational price for engaging in speculation. A more serious ethical problem is that some of these retailers violate applicable laws. Among other things, they manipulate text on commodity-purchase experience, organize large-scale “network navies,” harass or ceaselessly threaten buyers who give bad reviews, and manufacture false. Consequently, a complete black-industry chain of consumer-reputation operation is formed, which causes great damage to the otherwise healthy environment of e-commerce. Therefore, it now seems an inevitable choice for e-commerce to build a robust community characterized by fair, transparent, and open relationships. There is much to be gained. Social e-commerce can: exploit the advantages of the Internet scene by linking consumers, big data, virtual community, and local life; accelerate the three-dimensional dissemination of information; reduce the problem of asymmetric commentary information; and more generally enhance consumers' online shopping experiences. In other words, social e-commerce offers a new pathway for the future development of e-commerce. Put another way, our study is predicated on the conviction that information quality–and the credibility of information sources–are two promising avenues in terms of information adoption. Of these, information quality is the more

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crucial path, and plays a decisive role in generating trust in consumers.

This paper explores the influence of information quality on trust and purchase intention. We base our analysis on the social psychological distance of consumers, a notion that assists in understanding the mechanism of consumer reviews in the social e-commerce environment.

The study is driven by two general research questions:

(1) What influence does the information quality or otherwise of eWOM have on consumer purchase intention? In addition, how is that intention mediated by trust in information communicated by eWOM and social psychological distance?
(2) From the perspective of information adoption, how does a consumer's sense of power relate to the nexus between the quality of information provided in eWOM, and subsequent purchase intention?

The main contributions of this paper are as follows: we offer an analytical framework by which WOM in e-commerce might be made a more effective tool in consumer purchasing decisions. By means of a questionnaire survey of Chinese Xiaohongshu app users, the relationship between information quality, social psychological distance, trust, and purchase intention is analyzed. Our results help develop a theory of consumer online-shopping behavior based on the integration of social media and e-commerce. The framework model can assist businesses using social e-commerce platforms to formulate appropriate customer-relationship management strategies.

## 2. Literature review and hypothesis presentation

### 2.1. Information quality and social psychological distance

Scholars plausibly derive information quality by means of a content analysis. Eppler (2006) maintains that factual, high-quality information is sufficient for user needs. Park et al. (2007) also measures the quality of information communicated by eWOM from its content. He suggests four measures of information quality: relevance; understandability; sufficiency; and objectivity. Wu and Liu (2017) believes that high-quality information in eWOM is both comprehensive and representative. When the contents of information are rich and of high quality, the more useful information becomes. Mudambi and Schuff (2010) use the length of information to judge its utility.

According to Park (1950), social distance is the space one perceives between oneself and others: it is a measurement of the degree to which one feels subjectively close to a group. Social distance expresses how much one distinguishes oneself from others, or similar individuals from different individuals, or individuals as belonging within or outside specific groups (Trope et al., 2007). Individuals whose social psychological distance is felt to be less vis-à-vis others, are more likely to establish close interaction with them than individuals who perceive greater social psychological distance. This calculation is made possible because individuals are able to observe behavior, thereby assimilating information about thoughts, feelings, and personalities (Andersen et al., 1998).

eWOM is distinctive in that there is no interaction between the two sides: the identity of the information source is unknown to the recipient (Cheng and Ho, 2015). Therefore, in this context it is meaningless to speak of close or long-term interpersonal relationships (Xu, 2014). Recent studies have explored the influence of text information communicated by WOM in e-commerce platforms, but they have not examined how such information determines the relationship between recipients and publishers; nor have they analyzed the psychological mechanisms inherent to these relationships so as to explain information-recipient response. On the other hand, research by Hernández-Ortega (2017) suggests that when eWOM provides relevant product information to recipients, the latter will come to perceive more or less social and psychological distance between themselves and the source. This perception affects the recipient's evaluation of and response to information publishers. The research also proves that information content in eWOM affects consumers' social and psychological distance, and has a significant impact on their trust in eWOM, their purchase intentions, and their perceptions of information utility and of quality of service.

Most research on information quality in eWOM focuses on information content. Based on the above literature review, we offer the following hypotheses:

**Hypothesis 1a (***The Information Quality and Social Psychological Distance Hypothesis***).** Information quality is positively associated with social psychological distance.

### 2.2. Information quality and trust

Based on the information adoption model (Sussman and Siegal, 2003), consumers usually consider both the credibility of the information source, and the quality of information itself, in the process of judging WOM recommendations (Greene, 2001). Of the two considerations, information quality plays a more critical and lasting role. Information quality refers to the recipient's subjective perception of what constitutes persuasive information or sufficient evidence. This in turn plays a crucial role as a sort of central clue in the persuasion process (Wu et al., 2016). In the network environment, the quality of information in eWOM (in terms of product appraisal) affects consumer perceptions of its reliability (Cheung et al., 2009), in turn informing the level of trust in eWOM. This was corroborated by Fang (2014) in his study of the adoption of online WOM by social network users. High-quality information has persuasive power; it generates consumer interest in the reviewed products, trust in information, and belief that a satisfactory purchase decision can be made on the basis of the information provided (McCroskey et al., 2006). In judging how effective and comprehensive information might be, consumers tend to focus on information related to the product in eWOM. If information communicated by eWOM is supported by strong evidence, consumers come to associate this with quality. This is to say that information that helps consumers form a clearer, deeper understanding of product and brand, tends also to build trust in the quality of information. Cheung et al. (2012) look explicitly at the quality of information as an important investigative dimension in the study of factors affecting consumer perceptions of the credibility of online comments. They conclude that the quality of information is an important influence in consumers trust in eWOM. We then assert:

**Hypothesis 1b (***The Information Quality and Trust Hypothesis***).** Information quality is positively associated with trust.

### 2.3. Social psychological distance and trust

Construal level theory refers to different psychological representations formed by individuals of the same object, event, or other person. Such representations are a function of the perceived psychological distance between individuals, who regard themselves as reference points, and the more-or-less distant objects of their perception (Trope and Liberman, 2010). The theory asserts that an object is psychologically distant, does not belong to a part of the individual's direct experience here and now, and therefore must be explained (Liviatan et al., 2008). When perceived psychological distance increases, individuals use a higher level of interpretation to characterize more abstract, simple, and non-contextualized features. As that same distance decreases, individuals use lower levels of interpretation to characterize more complex and detailed information (Liberman and Trope, 2008). In this study, we highlight the importance of solving the relationship between participants established during eWOM communication from the perspective of proximity in social relationships. We use construal level

theory to study the influence of social psychological distance on trust.

Social psychological distance is an individual's perception of the degree of proximity or distance between the self and things or objects (Li et al., 2009). From the relationship between social psychological distance and construal level, we know that consumers' perception of psychological distance will affect their construal level of information in eWOM. Social psychological proximity enables individuals to perceive that others belong to the same group as themselves (Charness and Gneezy, 2008). Here, consumers make simple purchase decisions by attending to information related to emotion and sensibility. As social psychological distance increases, consumers need to make complex decisions, using the greatest range of information available to them, about any particular thing. This is to say that in order to optimize their decisions, consumers must collect more relevant information through different channels, and decide by repeatedly comparing information and investing more in the way of cognitive resources (Li et al., 2016).

When the social psychological distance between consumers and eWOM publishers is minimal, consumers feel a closer identity with these people, raising the probability that they perceive themselves as belonging to the same group. In this case, consumers are more likely to trust information based on emotional connections. From this, we know that social psychological distance will have a positive impact on consumer trust in eWOM.

In sum, we propose:

**Hypothesis 2** (*The Social Psychological Distance and Trust Hypothesis*). Social psychological distance is positively associated with trust.

We integrate H1a, H1b and H2, and maintain:

**Hypothesis 3** (*The Social Psychological Distance Mediation of Information Quality and Trust Hypothesis*). Social psychological distance mediates the relationship between information quality and trust.

### 2.4. Trust and purchase intention

On social e-commerce platforms, communication and interaction between users is made easier and more convenient. In the process, each side engages in exchange and confirmation of information in eWOM. Due to information asymmetries however, consumers face risks, particularly in terms of the degree of confidence that they are willing to extend to the eWOM source. This all relates to trust, the presence of which helps form a positive impression by reducing perceived risk and uncertainty (Mayer et al., 1995; Mishra, 1996). Trust can be divided into cognition-based and emotion-based variants (Cheung et al., 2009). These variants come together to form the basis of and motivation for consumers' purchase intention (Peck and Childers, 2006). In turn, intention is generated through subjective feelings of need or desire, as these derive from stimuli such as information in eWOM. (Adolphs et al., 2003). Here, consumer *cognitive* trust rests on confidence in the ability and responsibility of the source (Cook and Wall, 1980). The more powerful and authoritative the provider of information, the more likely consumers are to defer to the published information to make purchase decisions. On the other hand, *emotional* trust alerts or primes consumers to interpersonal relationships and emotional information (Johnson-George and Swap, 1982). The closer one feels to the publisher, the more likely one is to rely on eWOM to make purchase decisions. Previous studies have confirmed that consumers' emotional and cognitive reactions have significant positive effects on their perceptions of product quality (Compeau et al., 1998). For online consumers, strong emotional and cognitive reactions can enhance consumers' purchase intention (Gao et al., 2017). Therefore, it is believed that trust in eWOM helps consumers to make purchase decisions.

In conclusion, we propose that:

**Hypothesis 4** (*The Trust and Purchase Intention Hypothesis*). Trust is positively associated with purchase intention.

### 2.5. The moderating effect of the sense of power

Power is a ubiquitous presence that affects people's cognition, emotion, and behavior (Jiang et al., 2018). As such, it has received close attention from scholars in many disciplines. With respect to how sense of power influences consumer behavior, scholars have extensively examined consumer psychology, values and behavioral tendencies, information processing, and persuasion (Jiang et al., 2018). These studies have chiefly focused on the influence of sense of power as it relates to persuasiveness of and trust in consumer information. Min and Kim (2013) found that the sense of power affects consumers' persuasion vis-à-vis information. On identifying a target product, responses differ according to levels of power. A high sense of power consumer is more likely to process information; a low sense of power consumer much less so. In this case, high-power consumers are more likely to trust information if and when the information is of high quality.

Therefore, we suggest that the sense of power plays a moderating role in the effect of information quality on trust. Our assumption is:

**Hypothesis 5** (*The Sense of Power Positive Moderation of Information Quality and Trust Hypothesis*). Sense of power moderates the relationship between information quality and trust.

We establish a research model as shown in Fig. 1.

## 3. Research method

### 3.1. Questionnaire design

The questionnaire variables in this study are measured on the Likert

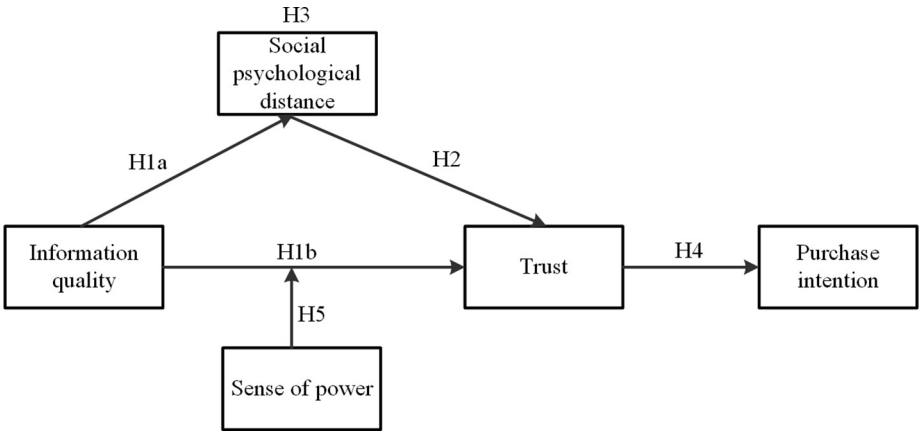


**Fig.1.** Research model.

7-point scale. There are 8 questions about demographic variables. The continuous-variable measurement scale and its sources are shown in Table 1. Information quality has 4 items. The scale refers to research by Park and Kim (2009), and measures the relevance, timeliness, and comprehensiveness of information communicated by eWOM. Trust consists of 4 items, and is divided into cognitive and emotional trust. This scale refers to Mcallister (1995). There are 3 items about social psychological distance. Reference is made to the scale compiled by Hernández-Ortega (2017). There are 3 items about purchase intention. The scale refers to the purchase-intention scale developed by Pavlou and Fygenson (2006), which includes 3 items: reference comments, changing attitudes, and influencing decision-making. The sense of power has 8 items. The scale directly mimics the scale developed by Anderson and Berdahl (2002) to measure the level of consumers' sense of power.

### 3.2. Respondents and data collection

The subjects of this study are users of Xiaohongshu who have made purchasing decisions with reference to Xiaohongshu notes. Xiaohongshu is one of the largest social commerce websites in China.

Questionnaires were issued in two main stages. The first stage was a pre-test. After the questionnaire was designed, 40 users were selected to conduct a small-range survey; the results confirmed questionnaire reliability and validity. In the second stage, the questionnaire was formally issued. Because respondents were Xiaohongshu users, questionnaire issuance and sample selection were more narrowly targeted. The questionnaire survey took both electronic and paper-based forms. To encourage more users to respond, there was a 5-yuan reward for completing the survey.

Since the app promotes rapid growth and reading traffic for Xiaohongshu UGC, we used snowball-style non-probability sampling (Browne, 2005) to obtain the WeChat, QQ, and email address information of participants. An electronic questionnaire was then created by Wenjuanxing, a website for conducting surveys.

Regarding the operation and management background of the questionnaire system, we first set the relevant parameters of access control. We: (1), disallowed repeated participation; (2), issued a verification code to access the questionnaire; (3), employed a speed test, to eliminate careless or gratuitous responses; (4), generated a participation code to prevent computer-generated and other automatic means of response; (5), responders were required to match all appropriate answer options in the quota environment to complete the questionnaire; failure to do so resulted in immediate suspension, and closure of the conversation mode; (6), installed a reminder function (when response time limits were exceeded, the system sent automatic email reminders to questionnaire recipients).

After setting access control parameters, the online questionnaire was enabled, the list of recipient email addresses was imported into the Wenjuanxing system, and the questionnaire was sent out. Those who did not complete the questionnaire after receiving the first invitation letter were prompted by email. At the same time, questionnaire links and token were sent out via WeChat, Friendship Group Expansion, Mobile Two-Dimensional Code Push, QQ Social Tool, and Email. Through automated prompting and tracking, the system ensured that only one questionnaire could be submitted by each recipient.

In addition, the paper questionnaire was distributed by random sampling survey, mainly targeting college students and company workers.

The questionnaire was distributed from May 6, 2018 to May 21, 2018 (15 days). A total of 209 questionnaires were collected in the study, and then screened according to the following conditions:

(1) No questionnaires from users of Xiaohongshu;
(2) Incomplete answers and missing items questionnaires;
(3) Each answer was assigned a specific value; more than 80% of the responses were identical in terms of this value.

After screening, 183 valid questionnaires were obtained, with a recovery rate of 87.56%. Among them, male users (15.8%) were outnumbered by female users (84.2%). User age was mainly in the 18–24 year range (91.3%). Bachelor's degree was the most common education level (84.2%). The bell curve for number of years of online shopping peaked at 4–6 (45.9%). Presumably due to the number of college students, the monthly income curve peaked at 1001–1500 yuan (38.3%); the remaining monthly income categories were evenly distributed. Monthly online shopping expenditure peaked at 201–500 yuan (42.6%). Nearly half the monthly online shopping frequency was in the 3–5 times range (49.2%); other ranges were evenly distributed, as shown in Table 2.

Up to July 2019, the number of Xiaohongshu users totaled more than 300 million, 70% of these were born between 1990 and 1999[1]. Female users accounted for about 80%[2]. The structure of the sample was similar with Xiaohongshu user demographics. Overall, our sample mirrors Xiaohongshu user distribution.

Considering that the common method bias may have reduced study validity, we statistically tested for bias. Harman's single factor test (Greene and Organ, 1973) was used to determine the existence or otherwise of common method bias. The unrotated factor solution indicated that there is more than one factor, and the variance contribution rate of the first factor is < 40%. We are thus confident that any common method bias is insignificant.

## 4. Data analysis and research results

### 4.1. Reliability and validity analysis

In order to further test the reliability of each component table and total table after deleting inappropriate items, we analyzed the reliability of each component table and total table respectively. As can be seen from Table 3, the α value of each variable scale is greater than 0.7. Results indicate that each scale has high reliability.

In addition, four variables were analyzed by confirmatory factor analysis using AMOS. As shown in Table 4, the four-factor model fitting index is the highest and meets the acceptable standard. This shows that the four variables have good discriminatory validity, and can be analyzed in the next step.

### 4.2. Correlation analysis

Pearson correlation analysis was carried out on the independent variables, dependent variables, and moderator of this study–and preliminary tests were carried out on the research assumptions. Results are shown in Table 5. Information quality, social psychological distance, trust, and purchase intention are significantly and positively correlated, and the correlation coefficient is greater than 0.5. This shows that there is a positive correlation between information quality, social psychological distance, trust, and purchase intention.

### 4.3. Hypothesis testing

#### 4.3.1. Path analysis

By analyzing the hypothetical model in AMOS, the model is corrected with the correction index as a reference after the results were obtained. The normalized coefficients of the modified paths are shown in Fig. 2.

The fitting indices of the modified basic model are shown in Table 6. All indices have reached a standard level, which shows that the fitting

[1] Data from: http://www.xiaohongshu.com.
[2] Data from: https://www.iimedia.cn.

**Table 1**
Variable measurement scale and its source.

| Variable | Measuring project | Source |
|---|---|---|
| Information quality | 1. On Xiaohongshu platform, notes are usually real-time.<br>2. The notes on the Xiaohongshu platform can meet my all-round information needs.<br>3. The notes on the Xiaohongshu platform contain all the information about the commodities I want to buy.<br>4. I think the notes on the Xiaohongshu platform are very professional and have both depth and breadth. | Park and Kim (2009) |
| Trust | 1. I think the note is trustworthy.<br>2. I think the note is true and reliable.<br>3. I think the note provider is trustworthy.<br>4. I think the behavior of the note provider is a real experience sharing. | McAllister (1995) |
| Social psychological distance | 1. Their relationship with me is close.<br>2. I belong to the same group as them (example: after 90s, photography lovers …).<br>3. I am similar to them. | Hernández-Ortega (2017) |
| Purchase Intentions | 1. Notes will be referred to when purchasing.<br>2. The information in the notes can change my thoughts and attitudes.<br>3. Notes can influence my purchasing decision. | Pavlou and Fygenson (2006) |
| Sense of power | 1. The people around you listen to me.<br>2. My words carry a lot of weight.<br>3. I can ask others to do what I want.<br>4. I think I have a lot of power.<br>5. As long as I think, I can make a decision.<br>6. Even if I say what I think, it doesn't help much.<br>7. My opinions or suggestions are often ignored.<br>8. No matter how hard I try, I can't get what I want. | Anderson and Berdahl (2002) |

**Table 2**
Analysis of demographic variables.

| Variable | Category | Frequency | Percent |
|---|---|---|---|
| Gender | Male | 29 | 15.8% |
| | Female | 154 | 84.2% |
| Age | 18–24 | 167 | 91.3% |
| | 25–30 | 11 | 6.0% |
| | 31–40 | 2 | 1.1% |
| | 40–50 | 1 | 0.5% |
| | Over 50 years old | 2 | 1.1% |
| Education Background | Senior high school and specialty | 14 | 7.7% |
| | Undergraduate degree | 154 | 84.2% |
| | Master's | 15 | 8.2% |
| | PhD | 0 | 0.0% |
| Purchased in CY | < 4 years | 70 | 38.3% |
| | 4–6 years | 84 | 45.9% |
| | 6–8 years | 21 | 11.5% |
| | 8–10 years | 6 | 3.3% |
| | More than 10 years | 2 | 1.1% |
| Monthly income | Below 1000 yuan | 24 | 13.1% |
| | 1001–1500 yuan | 71 | 38.3% |
| | 1501–2000 yuan | 36 | 19.7% |
| | 2001–2500 yuan | 13 | 7.1% |
| | More than 2500 yuan | 39 | 21.3% |
| Monthly online shopping amount | Below 100 yuan | 11 | 6.0% |
| | 101–200 yuan | 24 | 13.1% |
| | 201–500 yuan | 78 | 42.6% |
| | 501–1000 yuan | 42 | 23.0% |
| | Above 1000 yuan | 28 | 15.3% |
| Monthly online shopping | 2 times | 30 | 16.4% |
| | 3–5 times | 90 | 49.2% |
| | 6–8 times | 35 | 19.1% |
| | More than 8 times | 28 | 15.3% |

**Table 3**
Sample reliability analysis.

| Variable (factor) | Number of questions | α value |
|---|---|---|
| Information quality | 4 | 0.894 |
| Social psychological distance | 3 | 0.781 |
| Trust | 4 | 0.924 |
| Purchase Intentions | 3 | 0.900 |
| Sense of power | 8 | 0.810 |

**Table 4**
Confirmatory factor analysis of conceptual discriminant validity.

| Model | Factor | $\chi^2$/df | CFI | TLI | RMSEA | RMR |
|---|---|---|---|---|---|---|
| Four-factor | IQ; SD; T; PI | 1.183 | 0.958 | 0.937 | 0.032 | 0.080 |
| Three-factor | IQ + T; SD; PI | 5.620 | 0.832 | 0.782 | 0.159 | 0.135 |
| Two-factor | IQ; SD + T + PI | 6.194 | 0.795 | 0.755 | 0.169 | 0.155 |
| Single factor | IQ + SD + T + PI | 8.805 | 0.688 | 0.632 | 0.207 | 0.171 |

Notes: IQ indicates Information quality; T indicates trust; SD indicates social psychological distance; PI indicates purchase intentions.

**Table 5**
Correlation analysis.

| | M | SD | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|---|
| 1. SP (B) | 36.49 | 6.72 | 1 | | | | |
| 2. IQ | 18.10 | 4.62 | 0.163* | 1 | | | |
| 3. SD | 12.48 | 3.30 | 0.178* | 0.586** | 1 | | |
| 4. T | 19.02 | 4.09 | 0.096 | 0.630** | 0.532** | 1 | |
| 5. PI | 15.17 | 3.33 | 0.182 | 0.526** | 0.383** | 0.647** | 1 |

*Notes*: * $p < 0.05$, ** $p < 0.01$; N = 183; IQ indicates information quality; T indicates trust; SD indicates social psychological distance; PI indicates purchase intentions.

indicies of the model are good.

As can be seen from Table 7, the standardized path coefficient of information quality to social psychological distance is 0.68, $p < 0.001$, which shows that information quality has a significant positive influence on consumers' psychological distance. The coefficient of information quality, trust is 0.593, $p < 0.001$, which indicates that information quality has a significant positive effect on consumer trust. The standardized path coefficient of social psychological distance to trust is 0.192, $p < 0.05$; this indicates that the social psychological distance of consumers has a positive and significant influence on trust. The standardized path coefficient of trust to purchase intention is 0.802, $p < 0.001$, which suggests that trust has a significant positive effect on consumers' purchase intention. Therefore, H1a, H1b, H2, H4 are supported.

#### 4.3.2. Analysis of mediating effect

To determine the mediating effect as shown in Fig. 3, this study uses the mediating effect test method proposed by Wen et al. (2004).

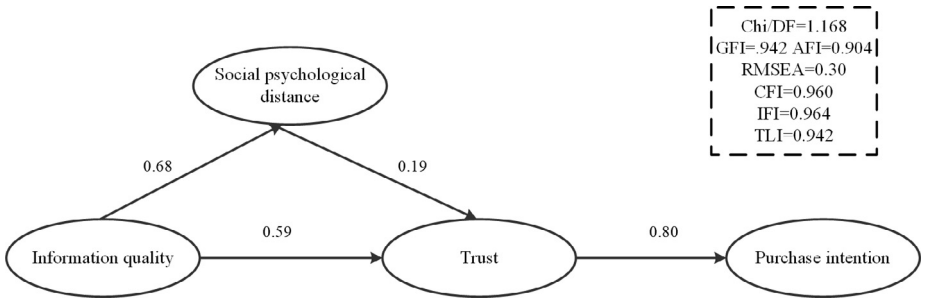


**Fig. 2.** Basic model testing results.

**Table 6**
Basic model fitting index table.

| Exponential fit | $\chi^2$/df | GFI | CFI | IFI | TLI | RMSEA |
|---|---|---|---|---|---|---|
| Result | 1.168 | 0.942 | 0.960 | 0.964 | 0.942 | 0.030 |

**Table 7**
Path analysis of basic model.

| Path | | | Coefficient regression | S.E. | C.R. | P | Standard coefficient regression |
|---|---|---|---|---|---|---|---|
| SD | < – | IQ | 0.781 | 0.111 | 7.029 | *** | 0.680 |
| T | < – | IQ | 0.733 | 0.099 | 5.935 | *** | 0.593 |
| T | < – | SD | 0.207 | 0.124 | 2.083 | * | 0.192 |
| PI | < – | T | 0.701 | 0.076 | 9.278 | *** | 0.802 |

*Notes*: * p < 0.05, **p < 0.01, *** p < 0.001; N = 183; IQ indicates information quality; T indicates trust; SD indicates social psychological distance; PI indicates purchase intentions.

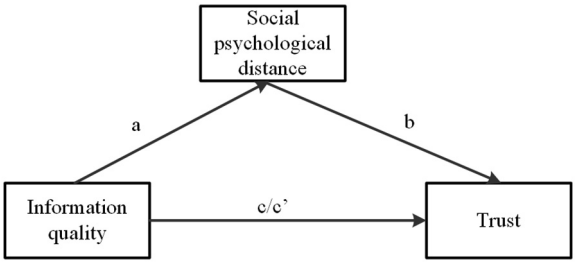


**Fig. 3.** Mediation model.

**Table 8**
Mediation model fitting index table.

| Exponential Fit | $\chi^2$/df | GFI | CFI | IFI | TLI | RMSEA |
|---|---|---|---|---|---|---|
| Result | 1.452 | 0.945 | 0.987 | 0.987 | 0.982 | 0.050 |

In this study, AMOS was used to carry out mediation analysis. The mediation model illustrated above was built in AMOS, and bootstrap (2000 times of self-sampling) was used for calculation. As shown in Table 8, the fitting index of the model is good.

The following shows the path analysis result of the mediation model. Among them, the p value of each path is < 0.05, and each path of the model is significant. Generally speaking, the fitting degree of the model is ideal. Further, as can be seen from Table 9, coefficients a, b, c, and c' are all significant; mediating effects exist, and H3 is supported.

As can be seen from Table 10 below, the value of coefficient c is 0.68, while as can be seen from Table 9, the values of coefficients a and b are 0.657 and 0.247, respectively. Therefore, it can be concluded that the ratio of mediating effect to total effect is: a * b/c = 0.657 * 0.247/0.68 = 0.24.

**Table 9**
Path analysis of mediation model.

| Path | | | Coefficient regression | S.E. | C.R. | P | Standard coefficient regression |
|---|---|---|---|---|---|---|---|
| SD | < — | IQ | 0.628 | 0.107 | 5.872 | *** | 0.657 |
| T | < — | SD | 0.298 | 0.112 | 2.660 | ** | 0.247 |
| T | < — | IQ | 0.597 | 0.113 | 5.218 | *** | 0.517 |

*Notes*: *p < 0.05, **p < 0.01, *** < 0.001; N = 183; IQ indicates information quality; T indicates trust; SD indicates social psychological distance; PI indicates purchase intentions.

#### 4.3.3. Analysis of moderating effect

To establish the moderating effect of sense of power, we used AMOS to conduct multiple group analysis. Based on the total score of sense of power, the samples were divided into two groups—high sense of power and low sense of power (Cureton, 1957). In addition, we conducted two models: (1) default model—all parameters of two groups were freely estimated; (2) test model—the corresponding regression weights of both groups were equal. If the p-value of chi-square value difference is significant in the corresponding difference of degrees of freedom, there exists significant moderating effect (Byrne and Erlbaums, 2009). We observed no significant difference between the two models in the comparison of sense of power ($\Delta\chi^2/\Delta df = 0.806$, $P > 0.5$), suggesting that the sense of power has no moderating effect on the effect of information quality on trust. As shown in Table 11, the fitting indices of the default model and test model did not change significantly, and both passed the goodness of fit test. Hence, H5 is not supported.

## 5. Discussion

Our research has solved the problem of how information quality affects consumer purchase intention in social e-commerce—and we explore the relevant mechanisms. From the perspective of consumer information adoption, we have confirmed the important role of social psychological distance and trust in explaining consumer purchase intention.

The results show that consumer perception of high quality information reduces the social psychological distance between consumers and information publishers, thereby increasing trust in information. Social psychological distance mediates the relationship between information quality and trust. It also verifies the importance of building close social relationship in evaluating information process (Hernández-Ortega, 2017). The source and recipient of information are unknown to one another, and the perceived social psychological distance between the two is important in explaining the level of trust the consumer has in eWOM. When the information recipient perceives the relationship between him/herself and the information publisher as being close (in some instances, close enough to amount to a sense of shared group identity), trust in information increases. This kind of trust is based on emotion and cognition. Information itself in eWOM stimulates the cognitive and emotional responses of the recipient (Parboteeah et al.,

**Table 10**
Analysis of mediating effect.

| | Information quality | Social psychological distance | Trust |
|---|---|---|---|
| Social psychological distance | 0.657 | – | – |
| Trust | 0.680 | 0.247 | – |

**Table 11**
Multiple group analysis of moderating effect.

| Model | $\chi^2$/df | GFI | CFI | IFI | TLI | RMSEA |
|---|---|---|---|---|---|---|
| Default model (No constraint) | 1.853 | 0.891 | 0.960 | 0.961 | 0.941 | 0.080 |
| Test model (Regression weights equality constraint) | 1.826 | 0.892 | 0.960 | 0.961 | 0.943 | 0.079 |

2009). Similarly, high quality information tends to lessen the social psychological distance between the recipient and the source, thus influencing the recipient's response.

Our study confirms the role of trust in user purchase intentions. Users' cognitive trust in information communicated by eWOM mainly relates to the utility and relevance of information: they make purchase decisions based on authoritative claims. On the other hand, users' emotional trust is based on interpersonal matters. The closer the relationship between the user and the source of information in eWOM, the more likely it is for the user to make purchase decisions based on information content. This result is reasonably consistent with previous studies. For example, Gao et al. (2017) believe that for consumers, strong emotional and cognitive reactions can enhance their purchase intention. Moreover, according to relevant theories of consumer behavior, consumer cognition and emotion are influential factors in consumer purchase intention (Peck and Childers, 2006).

### 5.1. Theoretical contributions

One of the major shortcomings of previous studies is that the implications of eWOM communications have not been fully teased out. The quality of information that consumer communicate in WOM in traditional online shopping platforms has always been a research challenge, resulting in studies of eWOM that focus on revealing the influence of online shoppers' comment information on shopping decisions—but ignoring the formation mechanism of comment content, and the influence of comment quality on purchasing decision. On the one hand, entrepreneurs create highly desirable commodities that attract consumer attention; on the other hand, they engage in a series of high-risk measures to attract more "onlookers" in online shopping. For example, the "reputable cash back," which is widely used by merchants, is contrary to business ethics, and there are also falsely hyped reviews by merchants, and even large-scale billing, making it difficult for consumers to distinguish between fact and fiction. Heretofore and partially as a consequence, scholars have confined research into online shopping behavior and intention to the number, length, integrity, credibility, and emotional dimension of online consumer reviews (Thomas et al., 2019). It has been difficult to extend thinking beyond the impact of the inherent comment mode of e-commerce platforms, to examine suppressed or hidden information about consumer opinions. To overcome this, we attempt to reveal how information quality and social psychological distance affect consumer purchasing intentions in eWOM. Our findings show that information quality has a significant positive predictive effect on social psychological distance and trust. This provides additional support for a theory of motivation as applied to eWOM behavior, and extends previous research that portrays online shopping experiences and social values as influencing customer eWOM behavior (Zhang et al., 2019).

Social media is becoming increasingly influential in spreading and filtering topics, shaping personal decisions, and serving as a moral environment for eWOM. It potentially improves the credibility and utility of social e-commerce information (Hajli, 2018), in turn increasing consumers' willingness to share their shopping experiences. This further facilitates a multi-dimensional motivation in WOM behavior through eWOM, including such elements as impression management, emotional regulation, information acquisition, social contact, and persuasion (Berger, 2014). We demonstrate that social psychological distance positively affects consumers' trust, thereby corroborating and extending findings in Berger's (2014) research.

Moreover, in order to verify the moderating effect of sense of power on information quality and trust, we conduct AMOS multi-group analysis. Results show that sense of power has no significant moderating effect on information quality and trust. According to previous literatures, sense of power is a subjective psychological perception of consumer power (Rucker et al., 2012). High-power consumers tend to be self-oriented, while low-power consumers tend to be community-oriented (Galinsky et al., 2008). To the contrary however, social networks effect a fundamental and dynamic change to consumer power sense. Subjective perceived power is no longer constant: with the evolution of social networks it is increasingly subject to the reputations of opinion leaders (Zhao et al., 2018). Improving opinion leader reputation is thus a burgeoning business strategy. Recent advances in this domain suggest that social influence, proximity, and customer social-network preference all affect business popularity (Bhowmick and Mitra, 2019), thus the salience of consumer eWOM communication. In other words, in social networks, cultural orientation, reputation of opinion leaders, social influence, and other non-power factors affect consumer eWOM behavior vis-à-vis social e-commerce (Lee and Choi, 2019). This provides a new theoretical perspective for hypothesis H5 in our study.

### 5.2. Managerial implications

Our results should be of great interest to social e-commerce platforms and businesses. Trust is regarded as a key element of social e-commerce (Sharma et al., 2019). Information quality can increase the credibility of information search results–and the social influence of social e-commerce is also enhanced–thus positively affecting people's mobile shopping behavior and eWOM communication. Results show that the influence of a social e-commerce platform is strengthened by high quality information in consumer eWOM. The establishment of a consumer-centered social business ecosystem should also promote the development of more high-quality social business platforms. We submit that social e-commerce platforms can effectively improve information quality and content supervision, which in turn might enhance user stickiness. We also show that social psychological distance between the two sides of eWOM communication affects social influence, and plays a decisive role in mobile shoppers' purchasing decisions. This should encourage businesses and consumers to strengthen communication of ideas and cultural orientations, for mutual benefit and improved customer participation (Shao and Pan, 2019). It should also help to change the relationship between the two sides from a transactional character to more of a partnership mode. Practical guidance is needed, as this is a determinant of consumer purchase intentions in social commerce (Lin et al., 2019).

### 5.3. Limitations and future research

Our study makes a contribution to both theory and practice, but has

limitations that can be addressed in future research. First, our sample distribution is uneven. Since the gender of Xiaohongshu users is predominantly female, females are proportionately more numerous in the study. The literature suggests that perceptions of the credibility of information are different across gender in eWOM (Fan and Miao, 2012). Therefore, it may be necessary to consider the influence of gender factors on the effect of information quality on trust. Moreover, respondents to our survey were mostly college undergraduates, probably because this group is keen on and skilled in using social media, and has rich experience in social e-commerce. However, according to Zhao et al. (2013), information in eWOM has a greater impact on consumers with more Internet experience, while novices may experience more uncertainty—and perceive more complexity—and so mistrust the information provided. Therefore, future research may take consumer experience of online shopping or Internet use as a moderator, to elicit the extent to which familiarity with the medium—and the mechanism of information quality—affects intention and behaviour.

Second, we advanced the hypothesis of a moderating effect of sense of power, but our statistical analysis led us to conclude that this was not valid. Sense of power for consumers is a subjective perception (Rucker et al., 2012). However, with increasing information and dynamic changes to social networks, sense of power becomes a more complex issue. External factors such as the nature of the site itself, the influence of opinion leaders (Lee and Choi, 2019), and relationship strength between social networks may play more important roles.

## Credit authorship contribution statement

**Yang Zhao:** Conceptualization, Methodology, Software, Data curation. **Lin Wang:** Funding acquisition, Project administration, Resources. **Huijie Tang:** Formal analysis, Visualization, Writing - original draft, Writing - review & editing. **Yaming Zhang:** Supervision.

## Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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