How Reviews Quality and Community Relationship of Cross-border E-commerce Influence Consumers' Purchase Intention?

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How Reviews Quality and Community Relationship of Cross-border E-commerce Influence Consumers' Purchase Intention?

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Abstract: This article focuses on how reviews quality and community relationship influence consumers' purchase intention. Community users of Kaola, a cross-border e-commerce import platform, were investigated through questionnaires to establish the research model and hypotheses. The empirical results show that on the central path, quality of online community reviews positively influences reviews usefulness and reviews usefulness positively influences consumers' purchase intention. If the relationship between reviews' recipients and platform is stronger, the greater the positive impact on reviews usefulness and consumers' purchase intention. On the edge path, reviews source credibility positively influences reviews usefulness. As an intermediary variable, reviews usefulness positively influences consumers' purchase intention. The relationship strength between reviews' recipients and platform also positively moderates the relationship between reviews source credibility, reviews usefulness and consumers' purchase intention. In addition, reviews quality as the central path, has stronger influence than reviews source credibility of the edge path.

Keywords: Elaboration Likelihood Model, Information Adoption Model, Social network, Online reviews, Reviews usefulness

1. INTRODUCTION

Currently, studies on the influence of online reviews on consumer behavior is mainly discussed from three dimensions: content feature, content source feature, and content recipients feature. A number of studies show that online reviews affect consumers' attitude towards products, perception of reviews usefulness and the adoption degree of reviews, which in turn affects purchase intention. However, with the rise of social commerce and online communities, the influence of social factors such as the social network structure of reviews’ recipients on shopping intention gradually emerged. Existing research on cross-border e-commerce consumers behavior lacks comprehensive research on how the characteristics of reviews content and the social network structure of reviews’ recipients affect purchase intention.

Therefore, the main questions of this study are as follows:

RQ1 Do reviews quality, reviewer professionalism and reviewer credibility of online community reviews on B2C platform of cross-border e-commerce affect consumers’ purchase intention?

RQ2 Do degree of network centrality and relationship strength with B2C platform of online community reviews on B2C platform of cross-border e-commerce affect consumers’ purchase intention?

RQ3 The path and mechanism of online community reviews on cross-border e-commerce B2C platform influencing consumers’ purchase intention.

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2. LITERATURE REVIEW

2.1 Research on the influence of online community reviews on purchase intention

Purchase intention shows the change of individual attitudes, psychology and emotions after consumers stimulated by external factors, which affects the possibility of certain purchase behavior. Mudambi and Schuff (2010) took online reviews on Amazon as research objects. Empirical results show that both the length and extremeness of reviews have positive effects on reviews usefulness for experience-oriented and search-oriented products, and the type of products also plays a regulatory role. Racherla and Friske (2012) studied three types of goods (search, experience and trust) from U.S. reviews website Yelp, and examine the factors that influence reviews usefulness. The research found that reputation and experience of reviewers positively promoted reviews usefulness, while professionalism of reviewers had the opposite effects. In addition, there is an inverted U-shaped relationship between reviews scores and reviews usefulness. That is, extreme reviews (extremely positive or extremely negative) will arouse consumers' doubts about authenticity of reviews, and thus affect consumers' positive perception of reviews usefulness. Yu Wan (2014) regarded reviews dissemination among consumers as the process of information dissemination and creatively discussed the impact of online reviews on consumers' purchase intention from three perspectives: information publishers, information recipients, and online reviews themselves. Results prove that information senders' professionalism has a positive effect on consumers' purchasing decisions, while information recipients' professionalism has a negative correlation with consumers' purchasing intention.

2.2 Information adoption model

Persuasion is defined as the process of an individual’s attitude or behavioral change when receiving information from others. The process of persuading individuals can also be seen as an individual’s process of processing information. Elaboration Likelihood Model (ELM) and Heuristic method-systematic Model (HSM) are the two most representative dual-process models, which are widely used in researches on how to adopt viewpoints, information and knowledge. Sussman and Siegal (2003) built Information Adoption Model based on ELM theoretical framework to explain how people receive and adopt information during dissemination mediated by computers. The model emphasizes that process of knowledge transmission from information sources to information receiving and decision-making is an internalized process. There are two paths in this process: the central path is reviews quality, and the edge path is reviews source credibility. The survey shows that reviews quality and reviews source credibility are the direct factors that affect the perceived information usefulness. Consumer involvement refers to the degree of importance and relevance that consumers perceive to goods or services based on expectations, concerns and values. Cheung and Luo (2009) proved that consumers tend to collect more information and conduct detailed analysis when they are highly involved, to form their purchase intention. When consumers are at a low level of involvement, they will more trust authoritative information sender and pay attention to distribution of positive and negative reviews.

2.3 Influence of online community structure and relationship strength on purchase intention

Burt (1992) pointed out that certain structural characteristics can affect the communication process of information in a social network. Susarla (2012) conducted an empirical analysis on YouTube and found that the more subscriptions UGC producers had, the more favorable reviews the video received, which would further promote the forwarding number of this video. Thus accelerate the speed and scope of its dissemination. Guo-peng Yin (2012) took Douban 400 movie reviews as research objects of regression analysis. Yin has launched that length of reviews and reviews usefulness has a positive correlation, extremity of starred reviews and reviews usefulness is a negative correlation, and there is a U-shaped relationship between centrality of reviewers’ community and reviews usefulness. Ruqing Wei and Fangzheng Tang (2016) took users of Little...
Red Book, a cross-border e-commerce platform, as research objects, and proved that structural capital played a
moderating role in the relationship between UGC reviews’ feature and consumers’ purchase intention. The higher the network centrality, the stronger the connection strength and influence of UGC reviews’ feature on purchase intention[11].

3. HYPOTHESES DEVELOPMENT

The research takes Information Adoption Theory as theoretical basis for model construction, which combines the characteristics of B2C cross-border e-commerce platform users, and focuses on the impact of three dimensions: reviews quality, reviews source(reviewers) credibility, and characteristics of reviews’ recipients on reviews usefulness and consumers’ purchase intention. Among them, characteristics of reviews quality and characteristics of reviews source credibility serve as the core path and the edge path of Information Adoption Model respectively. The characteristics of reviews’ recipients consider online community network structure and relationship dimension, with network centrality and connection strength as indicators.

3.1 Reviews quality and reviews usefulness

Olshavsky(1985)'s results showed that when consumers perceived that information satisfied their needs and solved their doubts, they were willing to consider the value of products and services based on the criteria for making purchase decisions. Cheung, Lee, Rabjohn(2008) found in their research that when consumers chose to buy a certain product or service, the quality of online reviews had a significant impact on it. They believe that high-quality online reviews can make consumers perceive their authenticity, while further stimulating consumers’ positive attitudes toward products or services to make purchase decisions[12]. Reviews quality refers to the persuasive strength of information, McLean and DeLone(2003) pointed out that consideration dimensions mainly focus on accuracy, relevance, comprehensibility, integrity, timeliness and flexibility[13].

H1: Reviews quality is positively correlated with reviews usefulness

3.2 Reviews source credibility and reviews usefulness

Online reviews spread among strangers in different regions, and people have almost the greatest freedom to put aside their real identities and express opinions about products or services on the Internet. This trait increases the attention of reviews’ recipients to the credibility of reviews[14]. In the process of collating literature, the author found that reviews source credibility had become a research factor closely related to the characteristics of reviewers, which directly affects the consumer's judgment on the acceptance of information presented. Reviews source credibility mainly includes two aspects: specialty and credibility of reviewers. Consumers will have a higher value perception of reviews usefulness when they believe that the review sender has a high reputation (that's mean he or she has a high degree of specialty and credibility).

H2: Reviews source credibility is positively correlated with reviews usefulness

3.3 Reviews usefulness and purchase intention

Cheung et al., Liu and Zhang all proved that there was a direct positive relationship between reviews usefulness and reviews adoption[15][16][17]. Information usefulness, reliability and adoption are closely related in theory, which is further explained by Information Adoption Model. In virtual community, when consumers touch on ideas and opinions about products or services, they will always perceive whether these ideas and opinions have a guiding role in their purchase decisions. Therefore, when consumers find reviews useful, they will have a stronger behavioral tendency to adopt reviews information. This paper takes consumers’ purchase intention as a variable to measure consumers' acceptance of online reviews information, and makes the following hypothesis:

H3: Reviews usefulness is positively correlated with consumers' purchase intention

3.4 Social network structure of reviewers and reviews usefulness

The closer the relationship between social networks, the stronger the frequency and depth of information
exchange, and the more likely consumers are to accept and adopt information\cite{18}. The comments disseminated in strong social networks will have a greater impact on consumers’ purchasing behavior. At the same time, in groups with strong connection strength, behaviors of core members are more likely to be detected by other members, and other members are more likely to adopt imitation or identification behaviors to make purchasing decisions. Introversive network centrality of network is the number of friends that consumers are concerned about in online community, indicating how much consumers are concerned and liked by other participants in social network. Extroversive network centrality refers to the number of friends that consumers pay attention to in online communities, representing the ability of consumers to actively spread information in network environment. Relationship between reviews’ recipients and B2C platform represents frequency of reviews’ recipients using online shopping platform, degree of satisfaction and importance of platform to users. Therefore, this paper makes the following hypotheses:

H4: Extroversive network centrality of reviews’ recipients positively moderates the relationship between reviews quality and reviews usefulness

H5: Extroversive network centrality of reviews’ recipients positively moderates the relationship between reviews source credibility and reviews usefulness

H6: Introversive network centrality of reviews’ recipients positively moderates the relationship between reviews quality and reviews usefulness

H7: Introversive network centrality of reviews’ recipients positively moderates the relationship between reviews source credibility and reviews usefulness

H8: Relationship strength between reviews’ recipients and B2C platform positively regulates the relationship between review quality and reviews usefulness

H9: Relationship strength between reviews’ recipients and B2C platform positively moderates the relationship between reviews source credibility and reviews usefulness

3.5 Research model

The independent variables of this model are reviews quality and reviews source credibility. Reviews quality, consists of three observation variables: correlation, richness and accuracy. Reviews source credibility is measured by two observation variables: reviewers’ professionalism and reviewers’ credibility. Recipients’ network centrality and strength of relationships with online community users are used as moderators. Gender, age and education degree of consumers are introduced into this model as control variables. Mediator is reviews usefulness, and purchase intention of consumers is a dependent variable. The specific research model is shown in Figure 1.

Figure 1. Conceptual model of online community reviews influencing consumers’ purchase intention
4. METHODOLOGY

4.1 Sample and data collection

The questionnaire survey was carried out by sending online questionnaires. A total of 300 questionnaires were recovered, and a total of 243 valid questionnaires were collected, among which 86 were male and 157 were female, aged between 18 and 40, mainly in East China, with bachelor's degree and income between 2000 and 10000 yuan.

According to the white paper of China's cross-border e-commerce index in 2017, women accounted for 61.87% and men for 38.13% of cross-border shopping consumers. Compared with traditional online shopping users, cross-border online shopping users have higher education and income levels, as well as higher consumption ability and demand. The demographic distribution of this survey conforms to the current situation of cross-border consumption market and is representative to some extent[19]. Based on extensive literature, we cited the measurement items of six variables from relevant authoritative scale.

4.2 Hypotheses testing

The significance of regression coefficients between latent variables and observed variables was tested. As shown in Table 1, all C.R. and P in the modified model coefficients are greater than 2.58 and less than 0.01, so regression coefficients of this structural equation model are significant.

<table>
<thead>
<tr>
<th>Hypothesis path</th>
<th>regression coefficient</th>
<th>standard error</th>
<th>C.R.</th>
<th>P value</th>
<th>standardized regression coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>reviews usefulness &lt;- reviews quality</td>
<td>.459</td>
<td>.124</td>
<td>3.067</td>
<td>***</td>
<td>.443</td>
</tr>
<tr>
<td>reviews usefulness &lt;- reviews source credibility</td>
<td>.413</td>
<td>.147</td>
<td>3.121</td>
<td>.002</td>
<td>.424</td>
</tr>
<tr>
<td>Purchase intention &lt;- reviews usefulness</td>
<td>.948</td>
<td>.061</td>
<td>15.498</td>
<td>***</td>
<td>.912</td>
</tr>
<tr>
<td>AQ1              &lt;- reviews quality</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td>.811</td>
</tr>
<tr>
<td>AQ2              &lt;- reviews quality</td>
<td>.996</td>
<td>.056</td>
<td>17.938</td>
<td>***</td>
<td>.786</td>
</tr>
<tr>
<td>AQ3              &lt;- reviews quality</td>
<td>1.157</td>
<td>.073</td>
<td>15.771</td>
<td>***</td>
<td>.897</td>
</tr>
<tr>
<td>SC1              &lt;- reviews source credibility</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td>.831</td>
</tr>
<tr>
<td>SC2              &lt;- reviews source credibility</td>
<td>1.047</td>
<td>.066</td>
<td>15.967</td>
<td>***</td>
<td>.853</td>
</tr>
<tr>
<td>SC3              &lt;- reviews source credibility</td>
<td>1.023</td>
<td>.062</td>
<td>16.472</td>
<td>***</td>
<td>.872</td>
</tr>
<tr>
<td>IU1              &lt;- reviews usefulness</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td>.841</td>
</tr>
<tr>
<td>IU2              &lt;- reviews usefulness</td>
<td>.966</td>
<td>.067</td>
<td>14.350</td>
<td>***</td>
<td>.875</td>
</tr>
<tr>
<td>IU3              &lt;- reviews usefulness</td>
<td>.994</td>
<td>.071</td>
<td>13.919</td>
<td>***</td>
<td>.757</td>
</tr>
<tr>
<td>PI1              &lt;- Purchase intention</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td>.819</td>
</tr>
<tr>
<td>PI2              &lt;- Purchase intention</td>
<td>1.097</td>
<td>.073</td>
<td>15.073</td>
<td>***</td>
<td>.831</td>
</tr>
<tr>
<td>PI3              &lt;- Purchase intention</td>
<td>1.064</td>
<td>.079</td>
<td>13.491</td>
<td>***</td>
<td>.756</td>
</tr>
</tbody>
</table>
According to table 1, the direct effect of reviews quality on reviews usefulness is 0.443, and the direct
effect of reviews usefulness on purchase intention is 0.912, so the indirect effect of reviews quality on purchase
intention is 0.404. In addition, the direct effect of reviews source credibility on reviews usefulness is 0.424, so
the indirect effect of reviews source credibility on purchase intention is 0.387. Thus, the mediating effect of
reviews’ usefulness is significant. Besides, the effect of central path on purchase intention is greater than that of
the edge path, so it is reasonable to set up dual-path framework of the model in this study.

4.3 Moderating Effect Test

4.3.1 Moderating Effect of network centrality Test

In this study, samples were divided into two groups according to the values of introversive and extroversive
network centrality: high introversive network centrality group and low introversive network centrality group,
high extroversive network centrality group and low extroversive network centrality group. Path analysis was
carried out in turn, and results were as follows: in the groups of high introversive network centrality and low
introversive network centrality, path coefficient between reviews usefulness and purchase intention was
significant, but P-value of path coefficient between reviews quality and reviews source credibility and reviews
usefulness was greater than 0.01, which was not significant. Chi-square difference in multi-group comparative
analysis has a P-value of 0.235 on corresponding degrees of freedom, which is not significant. Therefore,
introversive network centrality has no moderating effect on reviews usefulness.

According to analysis results of high extroversive network centrality group and low extroversive network
centrality group, only the path coefficient between reviews quality and reviews usefulness in high extroversive
network centrality group, and the path coefficient between reviews usefulness and purchase intention were
significant. P-values of other coefficients were all higher than 0.01, which was not significant. Chi-square
difference of restricted model and unrestricted model was 16.421, and P-value of 8 degrees of freedom was
0.037, which was not significant. Therefore, it was not believed that extroversive network centrality had a
moderating effect on reviews’ usefulness. In conclusion, network centrality had no moderating effect on the
relationship between reviews quality, reviews source credibility and reviews usefulness.

According to operation results, test results of moderating reviews’ recipients network centrality are
obtained.

4.3.2 Moderating effect of relationship strength test

The strength of relationship between reviews’ recipients and B2C platform was studied based on the survey
of ts1-ts4 in the questionnaire. SPSS was used to cluster samples and then the samples were divided into two
groups: high relationship strength group and low relationship strength group.

Path analysis was conducted for the two groups. In high relationship strength group, the path coefficient of
reviews quality on reviews usefulness was 0.491 (P < 0.001), which was greater than the path coefficient of
reviews source credibility on reviews usefulness 0.446 (P < 0.001), and the path coefficient of reviews
usefulness on purchase intention 0.941 (P < 0.001). At the same time, in low relationship strength group, review
quality acts on the path coefficient of review usefulness is 0.430 (P < 0.001), was greater than reviews source
credibility to reviews usefulness path coefficient of 0.398 (P = 0.004), and reviews usefulness to purchase
intention of path coefficient of 0.910 (P < 0.001). Overall, path coefficient of high relationship strength was
greater than the low relationship strength group. After significance test, the study entered into multi-group
comparative analysis to test fit goodness and moderating effect of restricted model and unrestricted model.
Results showed that the indexes of fit goodness were all within an acceptable reasonable range, and P-value of
chi-square difference 13.525 between restricted model and unrestricted model on corresponding difference of 8
in freedom was 0.008, and the results were significant. Therefore, it could be considered that there was a
significant difference between the two groups. Relationship strength between reviews’ recipients and B2C
platform had a moderating effect on the relationship between reviews quality, reviews source credibility, and reviews usefulness. Hypothesis 8 and 9 were verified.

5. RESEARCH CONCLUSIONS

In this study, structural equation model method was used to test all model hypotheses. Test results are as follows:

Table 2. Summary of test results of research hypotheses

<table>
<thead>
<tr>
<th>Hypotheses NO.</th>
<th>Contents of hypotheses</th>
<th>Test results</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>Reviews quality is positively correlated with reviews usefulness</td>
<td>supported</td>
</tr>
<tr>
<td>H2</td>
<td>Reviews source credibility is positively correlated with reviews usefulness</td>
<td>supported</td>
</tr>
<tr>
<td>H3</td>
<td>Reviews usefulness is positively correlated with consumers' purchase intention</td>
<td>supported</td>
</tr>
<tr>
<td>H4</td>
<td>Extroverse network centrality of reviews' recipients positively moderates the relationship between reviews quality and reviews usefulness</td>
<td>not supported</td>
</tr>
<tr>
<td>H5</td>
<td>Extroverse network centrality of reviews' recipients positively moderates the relationship between reviews source credibility and reviews usefulness</td>
<td>not supported</td>
</tr>
<tr>
<td>H6</td>
<td>Introverse network centrality of reviews' recipients positively moderates the relationship between reviews quality and reviews usefulness</td>
<td>not supported</td>
</tr>
<tr>
<td>H7</td>
<td>Introverse network centrality of reviews' recipients positively moderates the relationship between reviews source credibility and reviews usefulness</td>
<td>not supported</td>
</tr>
<tr>
<td>H8</td>
<td>Relationship strength between reviews' recipients and B2C platform positively regulates the relationship between reviews quality and reviews usefulness</td>
<td>supported</td>
</tr>
<tr>
<td>H9</td>
<td>Relationship strength between reviews' recipients and B2C platform positively moderates the relationship between reviews source credibility and reviews usefulness</td>
<td>supported</td>
</tr>
</tbody>
</table>

According to the results in table 2 above, it could be seen that nine research hypotheses were proposed in this study. Amos20.0 was used for calculation and test of structural equation model, a total of five research hypotheses were supported.

6. THEORETICAL CONTRIBUTIONS

Most of studies on online reviews and purchase intentions have focused on the influence of content characteristics of reviews on purchase intentions, and there is a lack of research on the influence of social factors of reviewers on purchase intentions, and even less research on cross-border e-commerce online community reviews and purchase intentions from the individual level. This study selected users of kaola online community as research objects to explore the mechanism of UGC online reviews on consumer purchase intention, and compromised basic framework of Processing Probability Model and Information adoption Model, and not only considered the intermediary role of reviews usefulness on consumer purchase intention, but also explained the moderating effect of relationship strength of recipients and platform on reviews usefulness and purchase intention, which supplements and improves the existing model, and explains influence mechanism of online community reviews on cross-border e-commerce consumers purchasing intention.

7. PRACTICAL IMPLICATIONS

Results of this research can help cross-border e-commerce platforms to build a prediction model of reviews usefulness, scientifically sort and apply online reviews on home page, business page, and activity page, and
provide consumers with more accurate information search and smoother user experience. Based on the research conclusions and characteristics of kaola cross-border e-commerce B2C platform, the following suggestions are proposed:

Firstly, establishing a professional online reviews evaluation system. Based on online reviews quality’s significantly positive influence on cross-border shopping consumer purchase intention, cross-border e-commerce platform can create a professional online reviews evaluation system to structure reviews, to rate and finely operate reviews quality from different dimensions, and achieve improvement of reviews quality in the round.

Secondly, establishing users' hierarchy system. Online reviews source credibility also has a significant positive effect on cross-border shopping consumers' purchase intention, especially in two dimensions of reviewers’ professionalism and reviewers’ credibility. Therefore, it is an effective operation strategy for cross-border e-commerce platforms to collect and summarize user groups with different behavioral characteristics and establish a user hierarchy system.

Third, giving positive feedback on problems identified in online comments. Online reviews continuously enlarge users’ frequent interaction in a virtual environment. If negative reviews can't get timely treatment, it will spread quickly in consumer groups, and will have a greatly serious influence on consumer expectations of products or services. Therefore, it is very important to deal with the real and direct suggestions and questions raised by consumers, especially negative issues in time.

8. LIMITATIONS AND FUTURE RESEARCH
Subjects of this study are mainly students, employees and self-employed people distributed in east, north and South China and consumer groups surveyed all had experience of buying cross-border goods multiple times. Therefore, results of this study are primarily applicable to experienced cross-border consumers. Factors influencing fresh cross-border consumers’ purchase intention need to be further explored.

Due to numerous dimensions of influencing factors for online community reviews usefulness and reviews quality, it is necessary to pay more attention to the propagation characteristics of online reviews in future research, discuss influence of online WOM propagation on purchase intention, supplement and optimize existing models, and improve the universality of theoretical research.

9. CONCLUSIONS
Based on experience notes on goods in online community of Kaola, an empirical analysis of the influence mechanism of online reviews in the form of UGC on consumers’ purchase intention shared by users in community. It confirms that online reviews in the form of UGC influence consumers' purchasing decisions to a large extent.

In the content feature dimension, reviews quality and reviews source credibility on content characteristics will positively affect reviews usefulness (H1, H2) and reviews usefulness positively affects consumers' purchase intention (H3). In the community relationship dimension, the stronger the relationship connection between reviews’ recipients and platform, the greater the positive impact of reviews quality on reviews usefulness and consumer's purchase intention (H8), strength relationship between reviews' recipients and platform will also positively adjust the relationship between reviews source credibility and reviews usefulness and the consumer's purchase intention (H9). These research conclusions bring applicable practice for cross-border e-commerce enterprises to create online communities and develop social commerce to enhance consumers' purchase intention.
REFERENCES


