Research on the Influence of Weibo Opinion Leaders on College Students’ Consumption Decision

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Abstract. “Weibo opinion leaders, as creators and disseminators of information, influence college students' perceptions of products and services. This research model takes the consistency, influence and professionalism of Weibo opinion leaders as subdivision characteristics, and introduces perceived risk as a mediator variable and word of mouth as a regulatory variable to analyze the impact on college students' consumption decision-making. Through the construction of this research model, empirical research methods are used to explore the influence of Weibo opinion leaders on college students' consumption decisions. The study found that the consistency and professionalism of Weibo opinion leaders have a significant impact on college students’ consumption decisions. The characteristics of Weibo opinion leaders have a significant role in achieving consumer trust and thus reducing perceived risk in consumption. Word-of-mouth plays a regulatory role between professional traits and consumer decision-making.”

Introduction

As the mainstream social media in China, Weibo has always played a very important role, and has innate advantages in the speed, depth and breadth of information dissemination. Weibo opinion leaders have also become a typical representative of the deep integration of information flow and influence flow. As a mainstream consumer group, college students often refer to the suggestions of various microblog opinion leaders in their consumption decisions. They usually like to search for relevant information from informal channels and through word-of-mouth before buying to reduce the perceived risk of consumption. This study is mainly aimed at the influence of Weibo opinion leaders on the consumption decision-making of college students, which provides a reference for the information control and dissemination of Weibo opinion leaders for college students, and also promotes the virtual social platform to become a consumer group.

Literature Review

The Concept of Weibo Opinion Leader

Weibo opinion leaders mainly refer to the general term of those who publish, spread and have a certain scale of followers and influence groups on the weibo platform. Table 1 below is the concept of Weibo opinion leader

| Author and time          | View                                                                                                                                 |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Li Yuqiu (2015) [1]     | Weibo opinion leaders have unique status and influence, can set agendas and cause public opinion, and even promote the resolution of public issues. |
| Yang Xiaoru (2010)[2]   | Weibo opinion leaders must have the following conditions: First, the user is at the upper end of the information tour, and can act as an authoritative person for information release and attention attraction. Second, the blogger has certain social rights and influence in reality, and the third is released. The information can be recognized and resonated by the audience. |
| Tang Wei (2014) [3]     | Weibo opinion leaders influence fans with their strong radiation and high conversion rate.                                           |
This study combines the definition and research of Yang Xiaoru. The definition of this paper is: opinion leaders use the microblogging platform to use Weibo's fan effect and traffic to spread their own cognitive information about products and services, to obtain support and recognition of a certain number of audiences, to influence and change the behavior of the audience group.

**Opinion Leader Related Research and Model Analysis**

Lin Puying (2015) [4] used perceptual risk as a mediator of purchase intention and word-of-mouth trust in the study of the impact of online opinion leaders on online shopping willingness. The research model is shown in Figure 1. Empirical analysis is used to examine the impact of different characteristics of customer information sources on perceived risk and online shopping willingness.

![Figure 1. Research model of online opinion leaders' willingness to purchase online.](image1)

**Perceived Risk Related Research**

Harvard University's Bauer first proposed the concept of perceived risk in 1960, and believed that consumers always had unexpected situations when purchasing products or services, and negative situations would bring risks to consumers. Tian Ling (2010) [5] takes the perceived risk of consumers on the network as the starting point and proposes the influencing factors of online customer perceived risk. As shown in Figure 2, the three parts of perceived risk are: the risk associated with the customer, the risk associated with the product, and the risk associated with the purchase of the website.

![Figure 2. Dimensional model diagram of online consumer perceived risk.](image2)

**Research on Consumer Decision-making Behavior**

At present, there are relatively many studies on consumer decision-making behaviors. This study mainly intercepts the research of foreign scholars Fishbein & Ajzen (1975) on consumer decision-making and Li Ling (2016) on self-media and consumer decision-making. Duan Shengda (2018) [6] proposed in the study of social media opinion leaders' intentions on Chinese consumers' behaviors that opinion leaders' perceptions of consumer traits are related to consumer trust and will influence consumers' purchasing decisions. From the perspective of communicator convergence, the study studies the influence of opinion leaders on different characteristics. The research model framework is shown in Figure 3.
Figure 3. Research model of social media opinion leaders' intentions on Chinese consumers' behavior.

**Word-of-Mouth Effect Research**

Lu Chang (2017) started from the perspective of online opinion leaders' word of mouth and consumer willingness. The study found that the gender, professionalism, relevance and interactivity of online word-of-mouth opinion leaders have a significant impact on college students' consumption decisions. Chi Mengya (2012) [7] studied the influence of Internet word-of-mouth on college students' purchasing intentions. The research found that Internet word-of-mouth is the main channel for consumers to obtain information at present, starting from two dimensions of network word-of-mouth, and constructing a network. The research model of word of mouth communication (as shown in Figure 4).

Figure 4. Network word-of-mouth impact on purchase intention model diagram.

**Summary of Literature Review**

From the research object, this study combines Lin Puying's analysis of the characteristics of opinion leaders, and summarizes the characteristics of Weibo opinion leaders as consistency, influence and professionalism. Relevant research on perceived risk mainly focuses on consumption decision-making. Although the dimensions of perceived risk are different, they all express psychological concerns before consumption. The definition of perceived value in this paper is mainly about the concerns of products or services before the consumption of college students.

From the perspective of research fields, most of the research on opinion leaders at home and abroad is concentrated on the overall opinion of network opinion leaders. There are relatively few researches on opinion leaders under the microblog platform. This paper combines the microblogging media platform with opinion leaders and has certain practical significance.

**Research Model Design and Hypothesis**

**Research Model Assumptions and Construction**

According to Lin Puying's research model on the traits of Weibo opinion leaders, this paper divides the characteristics of Weibo opinion leaders into consistency, influence and professionalism as the independent variables of this study. Combined with Tian Ling's research model basis for perceived risk, a model of perceived risk mediator variables is proposed. Based on Duan Shengda's research model of purchasing intention and consumption decision-making, consumer decision-making is used as the dependent variable. According to Chi Mengya's research model of word-of-mouth, word of
mouth is used as a moderator. The research model of this paper is shown in Figure 5. Conditional Hypothesis: The influence of the intrinsic traits of Weibo opinion leaders.

![Figure 5. Research model diagram.](image)

**Definition of Research Variables**

This paper gives the following definitions for the variables in the research model, as shown in Table 2.

| Variable       | Title          | Variable definition                                                                                                                                 |
|----------------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Independent variable | Consistency A  | Common characteristics, hobbies, and concerns between customers and opinion leaders.                                                                  |
|                 | Influence B    | They has outstanding authority and interpersonal relationship, has a high reputation, usually acts as a leader, has a certain number of followers, and has strong relevance to users. |
|                 | Professional C | With rich professional knowledge and product involvement, they can effectively publish and disseminate word-of-mouth information, and provide users with professional information services from a novel perspective. |
| Mediator variable | Perceived risk R | Information asymmetry causes loss in consumption, deviation of product or service from psychological expectations, security risk of pre-sales and after-sales service, and authenticity of marketing advertising. |
| Dependent variable | Consumption decision D | After users collect, understand, and compare product and service information, they are willing to purchase products.                                |
| Moderator       | Word of mouth P | A common point in the consumer group's trust and choice of opinion leaders, a cognitive consensus generated by consumers communicating with each other. |

**Research Relationship Hypothesis**

The relationship between the regulatory variables is shown in the model diagrams in Figure 2 above. H5a, H5b and H5c correspond to the relationship between consistency, influence and professionalism and consumption decision respectively. H5 corresponds to H5a, H5b and H5c, H5 and H5a. H5b and H5c together play a regulatory role.

| Hypothesis | Description                                                                 |
|------------|-----------------------------------------------------------------------------|
| H1a        | The consistency of weibo opinion leaders has a significant positive effect on college students' consumption decisions. |
| H1b        | The influence of Weibo opinion leaders has a significant positive effect on college students' consumption decisions. |
| H1c        | The professionalism of Weibo opinion leaders has a significant positive effect on college students' consumption decisions. |
| H2a        | The consistency of weibo opinion leaders has a significant positive effect on the reduction of perceived risk. |
| H2b        | The influence of Weibo opinion leaders has a significant positive effect on the reduction of perceived risk. |
| H2c        | Weibo opinion leaders have a significant positive effect on the reduction of perceived risk. |
| H3         | The reduction of perceived risk of college students' consumer groups has a significant positive effect on consumer decision-making |
| M1         | Perceived risk plays a mediating role between consistency and consumption decisions |
| M2         | Perceived risk plays a mediating role between influence and consumption decisions |

Table 3. Relationship hypothesis.
M3  Perceived risk plays a mediating role between professionalism and consumer decision-making

H5a  For the strength of the word-of-mouth effect, there is a difference in the impact of consistency on consumption decisions.

H5b  For the strength of word-of-mouth effect, the influence of influence on consumption decision-making is different.

H5c  For the strength of the word-of-mouth effect, the influence of professionalism on consumer decision-making is different.

Data Analysis and Hypothesis Testing

A total of 296 questionnaires were returned, of which 262 were valid questionnaires, and the effective recovery rate was 88.5%.

Demographic Analysis

The main target of the survey was the group of college students aged 18-25, accounting for 87.02%. The survey covered all grades including undergraduate and master's degrees, which is in complete agreement with the requirements of this survey group. The ratio of male to female is close to 5:6, which basically meets the requirements.

Reliability and Validity Analysis

In this paper, SPSS is used for reliability analysis. The overall coefficient of the questionnaire is 0.943. The Cronbach's Alpha coefficients of the research variables A, B, C, R, D, and P are 0.74, 0.819, 0.767, 0.744, 0.716, and 0.731, respectively, which are greater than 0.7, which is a reasonable range of validity. And the Bartlett test Sig. of the data shows that 0.000 indicates a strong correlation between the factors.

Correlation Analysis

The correlation coefficient between A and P, D and PR is 0.740, 0.639, 0.69, respectively. The correlation coefficient between B and P, D and PR is 0.701, 0.583, 0.728, respectively. The correlation coefficient between C and P, D and PR is 0.736, 0.619, 0.773, respectively. There is a significant positive correlation.

Regression Analysis

Regression analysis was carried out between Weibo opinion leader traits A, B, C and consumption decision D, perceived risk R, and perceived risk R and consumption decision D. The results are shown in Table 4 below.

| Coefficient | VIF | F | Coefficient | VIF | F | Coefficient | VIF | F |
|-------------|-----|---|-------------|-----|---|-------------|-----|---|
| Constant    | 0.892 | - | 0.438       | - |   | 0.937       | - |   |
| A           | 0.35  | 2.11 | 0.234       | 2.117 |   | 0.724       | 1.00 |
| B           | 0.098 | 2.77 | 0.201       | 2.774 |   |             |     |   |
| C           | 0.279 | 2.65 | 0.416       | 2.657 |   |             |     |   |
| A           | 0.943 | - |            |     |   | 176.6       | 81.00 |
| B           | 0.724 | 1.00 |            |     |   |             |     |   |
| C           | 0.937 | - |            |     |   | 273.501     | 0.00 |

Table 4. Regression Analysis Table.
The formulas for the A, B, C, and D models are: $D=0.892 + 0.350*A + 0.098*B + 0.279*C$. The regression coefficient value of A to D is $0.350(t=5.668, P=0.000<0.01)$. The regression coefficient value of C to D is $0.279(t=3.904, P=0.000<0.01)$. The regression coefficient value of B to D is $0.098(t=1.452, P=0.148>0.05)$. It is indicated that both A and C have a significant positive influence on D, and B does not affect D.

The formulas for the A, B, C and R models are: $R=0.438 + 0.234*A + 0.201*B + 0.416*C$. The regression coefficient of A to R is $0.234 (t=4.838, P=0.000<0.01)$. The regression coefficient value of B to R is $0.201 (t=3.808, P=0.000<0.01)$. The regression coefficient of C to R is $0.416 (t=7.428, P=0.000<0.01)$. It shows that A, B, and C all have a significant positive impact on R.

The model formula for R to D is: $D=0.937 + 0.724*R$. The regression coefficient of R is $0.724(t=16.538, P=0.000<0.01)$. It shows that PR has a significant positive impact on D.

**Test of Perceived Risk Mediation**

|        | coefficient | VIF |       | coefficient | VIF |       | coefficient | VIF |
|--------|--------------|-----|-------|--------------|-----|-------|--------------|-----|
| constant | 1.185        | -   |       | 1.090        | -   |       | 0.789        | -   |
| A       | 0.651        | 1.000 |     | B            | 0.649 | 1.000 | C            | 0.746 | 1.000 |
| Dependent variable: R | 2.080 |     | D-W: | Dependent variable: R | 2.049 |     | D-W: | 2.204 |

The model formula of A versus R is: $PR=1.185 + 0.651*A (F=245.734, P<0.05)$, and the regression coefficient value of A is $0.651 (t=15.676, P=0.000<0.01)$. The model formula of B vs. R is: $PR=1.090 + 0.649*B (F=293.654, P<0.05)$, and the regression coefficient value of B is $0.649 (t=17.136, P=0.000<0.01)$. The model formula for C vs. R is: $PR=0.789 + 0.746*C (F=385.087, P<0.05)$, and the regression coefficient value of C is $0.746 (t=19.624, P=0.000<0.01)$. A, B and C all have significant positive effects on R.

The regression coefficients of independent variables A, B, and C for D are 0.371, 0.109, and 0.286, respectively, and the regression coefficients of independent variables A, B, and C for R are 0.697, 0.728, and 0.773, respectively. The regression coefficients of the three dimensions of the independent variables to the intermediate variables are: 0.251, 0.226, 0.773. Adding A, B, C and R to the equation at the same time, and multivariate regression analysis of the dependent variable D, the standard regression coefficients of the independent variables A, B, and C for the dependent variable D are: 0.077, 0.040, 0.160, and can pass Significant test. After adding the mediator variable R, the standard regression coefficient of A decreased from 0.697 to 0.077, the standard regression coefficient of B decreased from 0.728 to 0.040, the standard regression coefficient of C decreased from 0.773 to 0.160. It is indicated that A, B and C have a lower effect on D due to the addition of R, indicating that R plays a certain intermediary role between A, B, C and D.

**Test of Regulatory Variables**

In this study, a hierarchical regression method was used to test the manipulated variable of word of mouth. First, the summation enumeration is performed separately, and the variables A, B, and C are interpreted. The dimensional representation symbols are $X_1$, $X_2$, and $X_3$, the dimension of the mediation variable R represents the symbol $Z_1$, the dimension of the adjustment variable P represents the symbol $Z_2$, the dimension of the interpreted variable D is The symbol is Y. Secondly, the explanatory variables and the adjustment variables are standardized, and the standardized explanatory variables are obtained. The variable symbols of A, B, and C are $SX_1$, $SX_2$, and $SX_3$, and the variable symbol of P is $SX_4$. Finally, the explanatory variables and the adjusted variables are normalized and multiplied to obtain the final interaction items required for the study. The variable symbols and equations of the A, B, and C interaction terms are: $\lambda_1=\text{SX}_1\times\text{SZ}_1$, $\lambda_2=\text{SX}_2\times\text{SZ}_2$, $\lambda_3=\text{SX}_3\times\text{SZ}_3$. After the variables are sorted, the paper analyzes the role of the manipulated variable in four angles:
Table 6. Under the influence of professional independent explanatory variables.

|                | Stratification 1 | Stratification 2 |
|----------------|------------------|------------------|
|                | B     | t     | P     | B     | t     | P     |
| constant       | 13.489** | 96.922 | 0    | 13.677** | 89.852 | 0    |
| S_ professional| 1.773** | 12.713 | 0    | 1.555** | 9.908  | 0    |
| Professional interaction | -0.257** | -2.869 | 0.004 |
| Dependent variable(Y): D | * p<0.05 | ** p<0.01 | Y=13.489+1.773*SX_1 |

Table 7. Under the influence of influence independent explanatory variables.

|                | Stratification 1 | Stratification 2 |
|----------------|------------------|------------------|
|                | B     | t     | P     | B     | t     | P     |
| constant       | 13.489** | 93.715 | 0    | 13.787** | 93.869 | 0    |
| S_ Influence   | 1.670** | 11.584 | 0    | 1.368** | 11.067 | 0    |
| Influence interaction | -0.427** | -4.569 | 0    |
| Dependent variable(Y): D | * p<0.05 | ** p<0.01 | Y=13.489+1.670*SX_2 |

Table 8. Under the influence of consistent independent explanatory variables.

|                | Stratification 1 | Stratification 2 |
|----------------|------------------|------------------|
|                | B     | t     | P     | B     | t     | P     |
| constant       | 13.489** | 98.932 | 0    | 13.783** | 93.869 | 0    |
| S_ consistency | 1.829** | 13.39  | 0    | 1.581** | 11.067 | 0    |
| consistency interaction | -0.399** | -4.509 | 0    |
| Dependent variable(Y): D | * p<0.05 | ** p<0.01 | Y=13.489+1.829*SX_3 |

Table 9. Under the influence of the explanatory variables common to the three variables.

|                | Stratification 1 | Stratification 2 |
|----------------|------------------|------------------|
|                | B     | Standard | t     | P     | B     | Standard | t     | P     |
| constant       | 13.489** | 0.129 | 104.917 | 0    | 13.695** | 0.142 | 96.763 | 0    |
| S_ consistency | 1.062** | 0.187 | 5.668  | 0    | 0.975** | 0.185 | 5.278  | 0    |
| S_ professional| 0.820** | 0.21  | 3.904  | 0    | 0.733** | 0.211 | 3.466  | 0.001 |
| S_ Influence   | 0.312   | 0.215 | 1.452  | 0.148 | 0.276   | 0.211 | 1.309  | 0.192 |
| consistency interaction | -0.334 | 0.207 | -1.609 | 0.109 |
| Professional interaction | 0.462* | 0.225 | 2.048  | 0.042 |
| Influence interaction | -0.427 | 0.254 | -1.68  | 0.094 |
| F               | 78.680** | 43.735** |
| Dependent variable(Y): D | Y=13.489+1.062SX_1+0.82SX_2+0.312SX_3 |

From the data analysis of Table 6, Table 7, Table 8, and Table 9, it can be concluded that the study data after adding the regulatory variables found that the regression coefficient of the consistency interaction term is -0.334, which is not significant indicating that consistency interaction does not affect D. The regression coefficient of the professional interaction term is 0.462, which is significant (t=2.048, P=0.042<0.05), indicating that the professional interaction term will have a significant positive impact on D. The regression coefficient of the influence interaction term is -0.427, and it does not show significant, indicating that the influence interaction term does not affect D.
Hypothesis Test Result

After empirical research, 10 hypothesis results were established and 3 hypothesis results were not established. The verification results are shown in Table 10.

| Hypothesis result | Hypotheses result | Hypotheses result | Hypotheses result |
|-------------------|-------------------|-------------------|-------------------|
| H1a Established   | H2a Established   | H3 Established    | M1 Established    |
| H1b invalid       | H2b Established   |                   | H5a invalid       |
| H1c Established   | H2c Established   |                   | M2 Established    |
|                   |                   |                   | H5b invalid       |
|                   |                   |                   | M3 Established    |
|                   |                   |                   | H5c Established   |

Verification Model

Based on the above data analysis results and the test results in Table 3-10, the verification model of this empirical study can be obtained, as shown in Figure 6 below.

Figure 6. Verification model.

According to the above test, the model of this study is shown in Figure 6, which is basically consistent with the original theoretical model. It is assumed that H1a, H1c, H2a, H2b, H2c, H3, and H5c are established, and it is assumed that H1b, H5a, and H5b are not established. The median variable test process is as shown in Section 3.7 above, and the test results result in the assumption that M1, M2, and M3 are established. The regression coefficient value of H3 is 0.724, which indicates that the perceived risk mediator variable has the most significant positive effect on the consumption decision maker's dependent variable. The degree of influence of traits on consumption decision-making is obtained: consistency is the most significant, followed by professionalism, and influence has no significant effect. In the test of regulatory variables, H5c passed the test and H5a and H5b did not pass, indicating that word-of-mouth played a regulatory role between professionalism and consumption decision-making. The regression coefficient was 0.462, which had a significant positive effect.

Analysis of the reasons: First, the summary of Weibo opinion leaders' traits for consistency, influence and professionalism may not control the traits of opinion leaders, so that influence has no significant impact on consumption decisions. Second, the research object is the group of college students with rational consumption consciousness. In the study of the influence of Weibo opinion leaders on the group, the degree of professional influence is greater than the degree of consistency, and the experimental results are consistent with the actual results. Third, in the process of regulating variable test, only the professional passed the test, indicating that the objective trait of professionalism has been unanimously recognized by college students, and the two characteristics of consistency and influence have no specific standards due to individual differences. Therefore, it is impossible to adjust accordingly.

Research Conclusions and Recommendations

Analysis Conclusion

According to the above research results, the conclusions of the Weibo opinion leaders' consumption decision-making on the consumption groups of college students are as follows: First, the higher the
consistency and professionalism of Weibo opinion leaders, the easier it is to influence college students' consumption decisions, and the consistency has the strongest influence. It shows that college students are more likely to trust opinion leaders who have common concerns and have expertise in the field. Second, perceived risk plays a significant intermediary role in opinion leader traits and consumption decisions. The opinion leader trait can make consumers more fully understand the products and services themselves, thus reducing the perception of college students' risk in the consumption process. It also shows that the value of opinion leaders is to help the audience understand the basic attributes and functions of products and services. Third, the reduction of perceived risk has a significant impact on consumer decision-making. Perceived risk is mainly caused by unfamiliarity with products and services, and college students seek useful information from opinion leaders in order to reduce the uncertainty of consumption. Fourth, the word-of-mouth effect plays a regulatory role between professional characteristics and consumer decision-making and between perceived risk and consumption decision-making. Explain that the opinion leader's reputation is also directly affecting consumers' trust and decision-making behavior on Weibo opinion leaders. In the process of decision-making, college students are based on the truthfulness and professionalism of information, and are not affected by the perceptual factors of consistency and influence.

Research Suggestion

As the leader of Weibo opinion, the most important thing is to improve the involvement in this field, including product involvement, brand involvement, after-sales and similar competitive products. The starting point of the consumer's trust opinion leader is its professionalism, which can provide relevant information to college students. Weibo opinion leaders should give full play to the power of word of mouth, in order to gain more fans' trust and follow, strengthen their own branding and win the recognition of college students with professional information services as a selling point.

As far as college students' consumer groups are concerned, in the process of consumption decision-making, the attraction and true validity of Weibo opinion leaders are the points that college students need to pay attention to when selecting Weibo opinion leaders. In the decision-making process, the marketing advertisement and the information of the Weibo opinion leader are effectively integrated, and the word-of-mouth opinions of the same group of people are used to make the correct consumption decision.

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