

Research on the Recommendation Impact of WeChat Moments on Consumers' Purchase Intention

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Abstract—With the increasing utilization rate of WeChat moments, recommendations of goods and services could be easily found on WeChat moments, which could significantly influence consumers' purchase decisions. By means of questionnaires, this research studies the impact of the degree of relationship, interaction and visual cues of WeChat moments on consumers' purchase intention. The research result indicates that the degree of relationship, interactivity and visual cues of WeChat moments positively affect consumers' purchase intention; among which, visual cues have the biggest impact. On the basis of the conclusion, this research puts forward some managerial implications.

Keywords—moments; degree of relationship; interaction; visual cues; purchase intention

I. INTRODUCTION

According to the report of the 37th survey of China's Internet network information, by the end of 2015, the Internet penetration rate was 50.3%, which means that more than half of China's population has access to the Internet. The population of mobile Internet users in China came up to 620 million people, which accounted for more than 90.1% of the total Internet users [1]. In recent years, the utilization rate of Weibo, BBS and other kinds of the mobile phone client has gradually dropped, while instant chat tools such as WeChat have become popular with netizens. According to the survey, the number of WeChat users in the past three years in China was on the rise, and now this figure has exceeded 600 million. At the same time, related studies revealed that college students has become a huge customer group which uses WeChat moments, and through this channel, they communicate with their friends, relatives while gaining all kinds of information and resources.

Thorston Hennig-Thurau (2004) pointed out that it is common for people to collect the information of others via the network before they draw up a purchase plan. The rushed upgrading of WeChat and other social media provides a platform for the network recommendations to flow among consumers, and consumers can better retrieve the product information and then disseminate it quickly and efficiently [1]. Such a platform entitles communicators on both sides to have

the sublime freedom in space and time and enables the referees to easily share goods and using experience with others; therefore, the influence of the network information source on consumers' purchase decision will become more and more outstanding and even become the determinants of consumers' purchasing behavior.

Up to date, a lot of scholars have carried out thorough research of network recommendations and have achieved some research results [2]. Numerous studies proved that network recommendations in the information era will be discovered and used by more and more people and will play a decisive role. On the one hand, consumers come to frequently provide their evaluation of goods and services and their using experience in the network; on the other hand, the number of consumers joining the virtual community [3] is on the increase and consumers constantly collect recommendation information offered by other consumers. The impact of network recommendations among factors on consumers' decision-making gradually increases and this impact will not recede in a short period of time. In view of this, the current research attempts to intensively study the network recommendations of WeChat moments, explore the recommendation impact of WeChat moments on consumers' purchase intention; apart from supplementing the relevant research and literature on network recommendations, this research aims to offer help for managers in better using the network platform to marketing.

II. LITERATURE REVIEW

A. Studies Related to WeChat Moments

1) *Definition of WeChat Moments*: The well-known WeChat moments is a new feature included in WeChat 4.0 version, which enables users to convert their living conditions and state of mind into the form of texts, photos or videos and then post on moments exclusively for friends.

Another definition of WeChat moments is like this: WeChat moments refers to a social networking platform in which people get to know each other through certain channels and become friends for some common topics; friends of this platform can share all kinds of stories and interesting things in

their daily life and post all sorts of living conditions with written records to the platform so as to express their feelings and attitudes.

To sum up the abovementioned definitions, WeChat moments is a small and intimate network in which people use WeChat as the medium and most members are themselves and their friends of various background; it is a virtual community with complete functions that users of this network can follow each other and comment on dribs and drabs of each other's life, which overcomes the limits of time and space and strengthens the connection among friends.

2) Related Studies of WeChat Moments

Nie Lei et al (2013) regarded WeChat moments as a virtual community of acquaintances within the social network, and they further studied the structure of WeChat moments from the dimensions of relationship and function [4]. Meanwhile, they point out that compared with other social network platform, WeChat moments could be more confidential and help maintain the good relationship as well as the close association between the users and their friends, relatives, classmates and colleagues and provide users with material and spiritual support.

B. Related Studies of Recommendations from WeChat Moments

1) Definition of the Network Recommendation

Based on the conclusion of related studies, the network recommendation refers to the process of the two-way information flow between people, i.e., with the emergence of the Internet, information senders can comment on and express their views on the appearance and using experience of a specific product while browsing the web or collecting the information needed in certain social app; if necessary, they can communicate with and discuss with information recipients; and the both sides are consumers. The network recommendation consists of positive and negative recommendations. The current research focuses on the positive network recommendation. What's more, since the researcher of this study majored in Tourism Management, network recommendations mentioned in this study are mainly of tourism products or services.

2) Definition of the WeChat Recommendation and Its Measurement Dimension

With the vigorous development of the WeChat, its users began to comment on the using experience of different products on WeChat moments, post their views on the source, properties, relevant information and events of the products, and communicate with friends on WeChat moments [5]. This is called recommendations of WeChat moments. The definition of recommendations of WeChat is based on the definition of network recommendations and a kind of network recommendation supported by WeChat moments.

WeChat moments can be a community group which is virtual and interdependent. There is "no social contact among strangers", and most communications occurred among "nodding acquaintances" and "acquaintances" [6]. Therefore, the degree of relationship within factors affecting consumers' purchase intention can be used as a basic measurement factors. Secondly, the significant difference between WeChat moments and other media is that WeChat moments can not only post information, but also receive the feedback of viewers, and friends of WeChat moments can have synchronous or asynchronous interaction on this platform. Since the network recommendations of WeChat moments can have greater communication effects than other media, interaction is also used as a factor to measure variables in the study. Finally, the content of internet communication is no longer constrained by the words, audios, images, videos and the like have been used

on WeChat moments; the network recommendation has diverse manifestations in front of users and become more visual and vivid. The concept of visual cues began to act in the area of network recommendations; therefore, this current study includes the research of visual cues.

C. Definition of Purchase Intention

Mullet (2006) puts it that the purchase intention of consumers is produced by the interaction between their own inherent impression of the product and some external factors (such as advertisement or others' recommendation, etc.), in other words, the purchase intention of consumers is consumers' subjective bias towards a certain product and it has been confirmed as an important predictor of consumer consuming behavior [7]. Zhu Zhixian (1989) argues that the purchase intention should be the psychological consultant of consumers to purchase the products to satisfy their certain needs and can predict the occurrence of their consuming behavior. From what has been discussed above, the author concludes that the purchase intention of consumers is a kind of manifestation of consumers' psychology in the process of consumption, which can embody the realistic possibility of consumers to choose and buy a particular product or service. The purchase intention in reality can be manifested by consumers' willingness to spend his remaining money other than the necessary living expenses buying the product if their income has been guaranteed. The purchase intention in this research is primarily related to the purchase intention of tourism products.

III. HYPOTHESIS BUILDING AND MODEL CONSTRUCTION

When the information senders and the viewers know each other and acquaint with each other, the degree of relationship is thought to be strong, while the information senders and the viewers do not know each other and do not acquaint with each other, the degree of relationship is thought to be weak (Granovetter, 1973). The empirical results show that if the degree of relationship is stronger, then viewers will be more inclined to positively perceive the authenticity of the information sources, and the impact of recommended information on consumers' consuming behavior will be greater accordingly. Therefore, this research puts forward the following hypotheses:

H1: The degree of relationship with WeChat referees has significant positive influence on the purchase intention

Studies found that interaction of WeChat moments can provide consumers with a great deal of information and mutual communication between friends can improve consumers' enthusiasm to focus on products and services, help them foster a series of positive consuming feelings of liking or preferences [8], promote their purchase behavior to occur in a good state and make their consuming behavior emotional.

H2: Interaction with WeChat referees has significant positive influence on the purchase intention

Dellaert & Haubl (2005) hold that the manifestation of recommended information could have a significant impact on the decision making as well as will of consumers. Generally speaking, vivid, concrete and impressive recommendations are more attractive than plain and ordinary ones, and the former could affect the judgment of the information receivers. Therefore, this study made the following hypothesis:

H3: Visual cues of WeChat referees' recommendations have significant positive influence on the purchase intention

A. Measurement of Variables

Variables studied in this research include the degree of relationship and interaction of referees and viewers of WeChat moments, visual cues of recommended information and the purchase intention of viewers. On the basis of the relevant research, this research designs the measurement scale of factors affecting the purchase intention of recommendations of WeChat moments and the measurement scale of the purchase intention; and the questionnaire items of this research are responded with Likert 7-level scale. Respondents are informed that the questionnaire is mainly designed to survey tourism recommendations of network. Details are shown in Table 1 and Table 2.

TABLE I. MEASUREMENT SCALE OF FACTORS AFFECTING THE PURCHASE INTENTION OF RECOMMENDATIONS OF WECHAT MOMENTS

Dimensions	Content	References
Degree of relationship	Quite familiar with referees on WeChat	Brown&Reingen,1987; Duhan,1997
	Quite familiar with referees in real life	
	Often discuss with referees on WeChat	
Interaction	Referees always respond to my questions on WeChat	Ye Lu. 2015
	I pay close attention to products recommended by referees on WeChat	
	Referees always communicate with consumers on WeChat	
Visual cues	Recommended information on WeChat is shown with pictures and vivid	Dellaert&Haubl. 2005
	Recommended information is of visual and real description with videos or audios	
	I am quite satisfied with the show form of recommended goods on WeChat	

TABLE II. MEASUREMENT SCALE OF THE PURCHASE INTENTION

Dimensions	Content	References
Purchase intention	Referees on WeChat provided a great help for my buying decision	Mullett&Dodds
	Referees on WeChat enriched my understanding of some goods	
	I purchased some goods under the influence of referees on WeChat	

B. Sample and Data Collection

The questionnaire of this research is mainly distributed on WeChat, and respondents are mainly from friends on WeChat moments. All the questionnaires are collected and statistically processed. In total, 190 questionnaires are delivered, among them, 177 are valid, and the effective rate of the questionnaire is 93.2%.

After the frequency analysis of the personal basic information of the sample data, the demographic information of respondents is indicated in Table 3.

From Table 4-3, we can see that the number of women in the sample is about twice of that of men; the age of respondents mainly ranges from 18 to 24; most respondents have the bachelor degree, followed by respondents with junior college degree or below; on occupation, most respondents are students, accounting for 71.7% of the total. According to the online survey, college students are the largest group using WeChat, which are also main research subject of this research.

TABLE III. DEMOGRAPHIC INFORMATION OF RESPONDENTS

Basic information	Frequency	(%)
Gender	Male	64
	Female	113
Age	Under 18	12
	18-24	158
	25-30	3
	31-35	1
	Above 35	1
Education degree	Junior college or above	64
	Bachelor	112
	Master	1
	Ph.D. or above	0
Monthly wages	Below 500	16
	500-1000	67
	1001-2000	45
	2001-3000	24
	3001-5000	18
	5001-8000	6
	Above 8000	1
	Enterprise employee	21
Occupation	Teacher/Researcher	3
	Student	127
	Farmer	0
	Self-employed	10
	Others	16
		0
		0

A. Reliability and Validity Testing

1) Reliability Analysis

Cronbach coefficient is employed in this research to test the reliability of variables, and details of the analysis results are shown in Table 4.

TABLE IV. RELIABILITY ANALYSIS OF THE VARIABLES

Variables	Questionnaire items	Cronbach's value	Total number of questionnaire items	Cronbach's a value
Degree of relationship	3	0.87	9	0.92
Interaction	3	0.86		
Visual cues	3	0.86		

As what is shown in Table 5-1, the Cronbach coefficient values of the degree of relationship, interaction and visual cues are 0.87, 0.86 and 0.86, respectively, which are all greater than 0.7, i.e., the reliability is high. Meanwhile, overall Cronbach's values of these three variables are as high as 0.92, which means that internal consistency is wonderful, i.e., the credibility of this measurement is great.

2) Validity Testing

Factor Analysis is utilized in this research to test the validity of questionnaires. First of all, Kaiser-Meyer-Olkin (KMO) and Bartlett Sphericity are employed to test and prove whether the data is suitable for Factor Analysis. According to the Kaiser, it will be appropriate if KMO value is above 0.7.

Factors affecting the purchase intention of recommendations of WeChat moments are tested by KMO and Bartlett Sphericity, and results are in Table 5.

TABLE V. KMO AND BARTLETT SPHERICITY TEST

Measurement of KMO for the sufficient degree sampling		0.88
Bartlett Sphericity	Approximate chi-square	115.08
	df	36
	Sig	0.000

In Table 5, the value of KMO is 0.88, which is more than 0.7; in line with the standard of Kaiser, variables are appropriate for Factor Analysis; the value of significant probability is 0.000, which is less than 0.001, i.e., the sample data have better conditions for Factor Analysis.

Secondly, the Principal Component Analytical Method is used to analyze the sample data to select and extract factors (the factor number is 3), and then the table of the original variable total variance can be obtained. The number of factors can be tested appropriate or not through the analysis of the cumulative variance contribution rate, and the cumulative variance contribution rate should be greater than 80%. Specific results of the analysis are shown in Table 6.

TABLE VI. LOAD MATRIX TABLE OF SAMPLE FACTORS

Components	Variance contribution rate		Accumulated Variance Contribution Rate			Post rotating accumulated Variance Contribution Rate			
	Total score	Percent	Cumulative Percent	Total score	Percent	Cumulative Percent	Total score	Percent	Cumulative Percent
1	5.604	62.272	62.272	5.604	62.272	62.272	2.653	29.480	29.480
2	.867	9.635	71.907	.867	9.635	71.907	2.338	25.978	55.458
3	.776	8.626	80.533	.776	8.626	80.533	2.257	25.075	80.533
4	.478	5.315	85.848						
5	.389	4.323	90.171						
6	.278	3.085	93.256						
7	.252	2.804	96.059						
8	.190	2.113	98.173						
9	.164	1.827	100.000						

In Table 6, the cumulative variance contribution rate of the three factors extracted is 80.53% (more than 80%), which means that the three factors extracted in this research are appropriate and the result of Factor Analysis is relatively convincing.

The principal component analysis was done to the scale data obtained from the questionnaire, and the structure validity of the questionnaire items is tested with the post-rotating factor loading matrix in three dimensions; the concrete analysis results are shown in Table 7.

TABLE VII. POST-ROTATING FACTOR LOADING MATRIX

	Components		
	1	2	3
Quite familiar with referees on WeChat	0.28	0.86	0.27
Quite familiar with referees in real life	0.22	0.86	0.30
Often discuss with referees on WeChat	0.49	0.59	0.12
Referees always respond to my questions on WeChat	0.65	0.40	0.33
I pay close attention to products recommended by referees on WeChat	0.80	0.29	0.26
Referees always communicate with consumers on WeChat	0.85	0.13	0.31
Recommended information on WeChat is shown with pictures and vivid	0.30	0.28	0.81
Recommended information is of visual and real description with videos or audios	0.21	0.19	0.89
I am quite satisfied with the show form of recommended goods on WeChat	0.47	0.37	0.60

In Table 7 the values of factor loading coefficient of each item concerning factors affecting recommendations on WeChat moments are all greater than 0.5, and the values of factor loading coefficient of these items in the other variables are all less than 0.5, which shows that each item in the questionnaire design conforms to the original dimensions. Therefore, each questionnaire item has good convergent validity and differentiate validity and is corresponding to the three variables. The above information shows that the scale has higher validity.

B. Hypothesis Testing

The purchase intention of customers is set as the dependent variable, and calculated average values of the degree of relationship, interaction, visual cues are set as the independent variables. After the regression analysis, details of the results are in Table 5-5.

TABLE VIII. OVERALL REGRESSION RESULTS

Independent variable	Multiple correlation coefficient (R)	Affirmative coefficient (R.2)	Affirmative coefficient after adjustment (Adjusted R.2)	F value	Significance probability (Sig.)
Degree of relationship	0.80a	0.64	0.63	100.32	0.00a
Interaction					
Visual cues					

As we can see in Table 7, the significance probability after the overall regression analysis is 0.00 (less than 0.01), which means that the purchase intention has a significant linear relationship with the degree of relationship, interaction and visual cues and the regression has good effects. Regression coefficient matrix is shown in Table 8.

TABLE IX. REGRESSION MATRIX OF THE PURCHASE INTENTION IN THREE DIMENSIONS

Independent variable	Un-standardized coefficients		Standardized coefficients	T value	Significance probability (Sig.)	Collinearity diagnostics	
	B	Standard errors	Beta			Tolerance	variance inflation factor (VIF)
Constant	0.21	0.04		0.89	0.37		
Degree of relationship	0.21	0.07	0.21	3.19	0.00	0.45	1.20
Interaction	0.24	0.08	0.24	3.28	0.00	0.41	2.43
Visual cues	0.44	0.08	0.44	6.56	0.00	0.46	2.16

Table 8 shows that the variance inflation factor values of the degree of relationship, interaction, visual cues are less than 10, indicating that there is no multicollinearity among them. And values of their standardized coefficient are 0.21, 0.24 and 0.44, i.e., visual cues have the largest impact on purchase intention. The table also indicates that the values of the significance test in three dimensions are all 0.00, less 0.05 than the value of α which is at the average significance level, and the test is passed. Therefore, the standard regression equation is: the purchase intention = 0.21 × the degree of relationship + 0.24 × interaction + 0.44 × visual cues. The regression equation shows that visual cues have the largest influence on purchase intention, followed by the degree of relationship and interaction. It can be concluded that the degree of relationship, interaction and visual cues are positively correlated to the purchase intention, and the original hypotheses H1, H2 and H3 are verified.

VI. CONCLUSION AND ENLIGHTENMENT FOR APPLICATION

A. Conclusion

According the data analysis we can see that the degree of relationship, interaction and visual cues have a significant impact on the purchase intention, and visual cues have the biggest impact. Visual cues are an evaluation standard to influence the information recipients' perception of network recommendations and are more related to the show form of recommendations by the referees. Therefore, when recommendations occur in the network, sensory impact as well as the perceived value directly brought by recommendation information can have a greater impact on viewers' purchase intention and further contribute to a change in consumers' decision-making in comparison with the degree of the relationship and interaction with the referees. We may come to a conclusion that people attach more attention to physical display of articles.

B. Enlightenment for Application

The research verified that the degree of relationship, interaction and visual cues have significant positive impact on the consumers' purchase intention on WeChat moments. Since we are living in the times of prevalent network recommendations, the information authenticity delivered by visual cues and the trust of information viewers accumulated by the degree of relationship and interaction are the basic requirement to guarantee the effective reception of information by the viewers. Since tourism recommendations occupy a certain proportion in the network recommendation on WeChat moments, the management of hotels, scenic spots and tourist destinations should be aware of the huge influence of network recommendations and take measures to better their management and marketing. Therefore, this research suggests that tourism enterprises should pay attention to the following aspects while releasing tourism information:

1) In order to have their long-term development, tourism enterprises should guarantee their information authenticity and provide customers with good visual experience in the virtual network environment.

The conclusion of this research indicates that visual cues are the most important factor that consumers pay attention to. Therefore, the authenticity and completeness of information should be ensured in the process of releasing tourism information.

A variety of display forms should be used; sounds and images can be added into the text [10] to enable information viewers to have more vivid and visual perceptions of recommendations and to neutralize the boring feeling that text

brings to them. What's more, because there is a difference in individual cognition, it will be better to display the information while taking the regional and customers' preferences into account, which might get a better marketing result.

2) Even though visual cues of tourism information are primary, keeping good interaction with information viewer and establishing a friendly relationship with them can be also necessary.

Some studies indicate that consumers are more inclined to make purchase decisions if they have a higher degree of relationship with referees after they have a better understanding of goods or services; consumers are more likely to choose to trust recommendations by referees who interact with them frequently. Therefore, tourism enterprises should highlight their interaction with customers in the process of contact and foster customers' cordial feelings and trust rather than unilaterally promote information or do cold machine marketing.

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