An Empirical Study of Consumer Attitude towards Mobile Marketing: Take WeChat as an Example

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Abstract: *This study aims to know how the factors mentioned influence consumer attitude towards WeChat. Based on the Theory of Rational Behavior, Technology Acceptance Model and the Use and Satisfaction Theory, through integrating and improving Technology Acceptance Model and the model of consumer behavior to construct research framework of consumer attitude towards WeChat marketing, and test consumer behavioral intention. The study was conducted by using questionnaire survey. Technique of data analysis used structural equation model and PLS path model. The result revealed that entertainment and trust have predictive significance to attitude in WeChat marketing; entertainment, usefulness, trust and attitude have predictive significance to behavioral intention; personalized and trust can enhance the usefulness of WeChat marketing.*

Keywords: Mobile marketing, consumer attitude, WeChat marketing

1. Introduction

Mobile marketing is a series of (marketing) practical activities based on positioning, through mobile devices or networks, through personalized customization and consumer related forms of interaction so that enterprises and consumers can communicate (Huang and Xia, 2015) . According to eMarketer, the cost of global mobile advertising will reach nearly 63 billion dollars. Iimedia research also forecasts Chinese mobile advertising market will reach 187 billion by the end of 2017, and will be more than 250 billion by the end of 2018. It shows the growth trend in the mobile advertising market size.

WeChat as the most widely used social network service in China has become an important social media platform (Gao and Zhang, 2013). In daily life, it's inevitably for WeChat users to receive Wechat marketing information. Whether consumer will take action as the enterprises expected relates to the effectiveness of marketing. According to the Theory of TRA, people act depends on their attitude (Ajzen and Fishbein, 1980). So it's necessary to measure attitude before predict behavioral intention. But there are few empirical studies about consumer attitude towards WeChat marketing. Therefore, this study on the basis of TRA and U&G theory explore the factors that influence consumer attitude towards WeChat marketing, and build a theoretical model for WeChat marketing implementation to improve its effectiveness.

2. Research Method

2.1 Psychological motivation, irritation, trust and attitude

Entertainment, informativeness, irritation and trust is a set of variables using to measure consumer attitude towards mobile marketing (Humayum et al, 2006). Kim et al

(2011)found that motivation has significant influence on individual attitude, pleasant situation brought by the entertainment has a positive impact on the consumer advertising attitude. Mobile phone users who feel more entertaining will have more positive attitude towards mobile advertising (Tsnag et al, 2004). Information is considered to be a very valuable incentive in mobile marketing that consumers react positively to this advertising transmission incentive (Varshney, 2003). Haghirian and Inoue (2007)also found this rule. The following two hypotheses are proposed in this study:

H1: entertainment has a positive effect on attitude;
H2: informativeness has a positive strengthening effect on attitude.

Irritation is a negative emotional response. The study found that emotional impact as a situation constructed emotional focus research. Varshney (2003),Vander Waldt (2009) both found that consumers tired of advertising will make it a negative attitude. Thus, the following hypothesis is proposed:

H3: irritation has a negative effect on attitude.

In addition, the establishment of a trust relationship with consumers is the key to the success of mobile marketing (Dow, 2013). Scholars' researches based on Corporate Social Responsibility and Social Contract Theory found that when consumers perceived that advertising is responsible, their attitude might improve through trust (Torres and Heiser, 2007). The following hypothesis is proposed:

H4: Trust has a positive strengthening effect on attitude.

2.2 Personalization, usefulness and attitude

In order to develop and maintain long-term relationships

with customers, mobile marketing requires close contact with customers with personalization and interaction (Achadinha et al, 2014). Many scholars found that personalization helps consumer accept mobile marketing and form a positive attitude toward it (Saadeghvaziri and Hosserni, 2011). Thus, the following two hypotheses are proposed in this study:

H5: personalization has a positive effect on attitude;
H6: usefulness has a positive effect on attitude.

2.3 Attitude and behavioral intention

Attitude and behavioral intention are often used to predict adoption or diffusion rates (Van and Ittersum, 2010). Scholars also found that consumer attitude towards mobile advertising are positively related to behavior (Altuna and Konuk,2009; Wajeeha et al, 2016).

H7: attitude has a positive effect on behavioral intention.

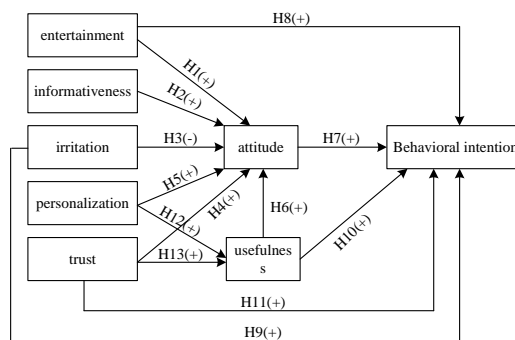## 2.4 Entertainment, irritation, usefulness, trust and behavioral intention

Studies have shown that entertainment significantly affects the general situation, network situation and behavioral intention in mobile marketing situation (Oh and Xu, 2003). Mobile advertising that more entertaining has positive effect on purchase intention (Choi et al, 2008). Consumers tend to avoid irritating advertisement(Li and Lee, 2002).But if the advertisement is useful, they may tend to use it (Lai and Li, 2005). Trust has a direct impact on consumers' intention to purchase according to the advertising (Lee and Lee, 2005). Thus, the following hypotheses are proposed:
H8: entertainment has a positive effect on behavioral intention;

H9: irritation has a negative effect on behavioral intention;
H10: usefulness positively strengthens behavioral intention;
H11: trust has a positive effect on behavioral intention.

2.5 Personalization, trust and usefulness

Previous studies have found that personalized service can solve the problem of information overload (Liang and ku,2006) and make the information more useful to users. In the network environment, trust is one of the decisive factors of perceived usefulness (Gefen and Straub, 1997) .Thus,
H12: personalization has a positive effect on usefulness;
H13: trust has a positive effect on usefulness.
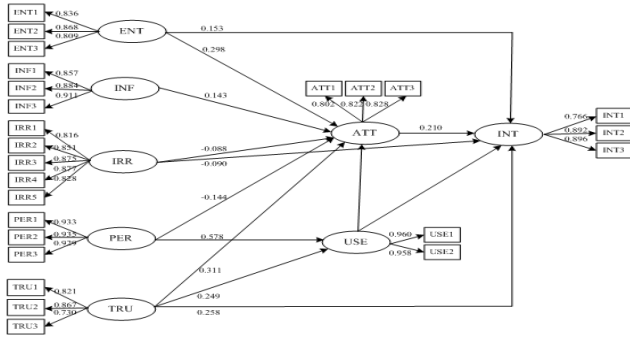
The research model is shown in figure1.

Figure1: Research Model

3. Method

3.1 Variable scale

This study uses Likert 5 point scale to measure attitude. After pre test, the final variable scale's sources and number of items are shown in table1.

Table1: Scale Source and Number of Items

Variable	Variable Scale Source	Number of items
Behavioral intention	Xu(2006)	3
Attitude	Humayum et al(2006)	3
Entertainment	Humayum et al(2006)	3
Informativeness	Humayum et al(2006)	3
Irritation	Scott et al(2008)	5
Trust	Humayum et al(2006)	3
Personalization	Xu(2006)	3
Usefulness	Wells et al(2012)	2

3.2 Data Collection and Analysis

Questionnaires were collected from the questionnaire website. There were 193 valid questionnaires, accounting for 43.52% of men and 56.48% of women. The age was focus on 17-28.
3.2.1 Evaluation of reliability and validity of measurement model

In this study, the reliability and validity of the model were tested by calculating Alpha, comprehensive reliability, factor load, convergent validity and discriminant validity. The results are shown in Table2 and Figure2.

Table2: Alpha Value and Comprehensive Reliability of Measurement Model

Variable	INT	ATT	ENT	INF	IRR	TRU	PER	USE
Alpha Value	0.811	0.756	0.793	0.860	0.904	0.734	0.925	0.913
Comprehensive Reliability	0.889	0.858	0.876	0.915	0.929	0.849	0.952	0.959

Alpha value shows that the values of each variable are between 0.734-0.925 and above 0.70. The comprehensive reliability of each variable is higher than 0.8, shows that the structural equation model has good reliability

Figure 2: Measurement Variable Factor Load Value

Factor loadings are used to represent the relative importance between observed variables and latent variables. In this study, the factor loadings are above 0.5, indicating

compliance with the reliability requirements. After the reliability test, the validity of the measurement model was tested. Table3 and Table4 show the main indicators of the validity of the measurement model.

Table 3: Latent Variable AVE Value

Variable	INT	ATT	ENT	INF	IRR	TRU	PER	USE
AVE	0.728	0.668	0.703	0.782	0.722	0.653	0.869	0.920

AVE value need to higher than 0.5, which means that 50% of the items' variance is explained. In this study, the AVE values of variables are above 0.6, indicating that the research scale has a good convergent validity.

Table 4: Comparison between the Correlation Coefficient and the Square Root of the Latent Variable AVE

	INT	ATT	ENT	INF	IRR	TRU	PER	USE
INT	**0.8532**							
ATT	0.606	**0.8173**						
ENT	0.534	0.575	**0.8385**					
INF	0.660	0.575	0.587	**0.8843**				
IRR	-0.435	-0.403	-0.301	-0.420	**0.8497**			
TRU	0.634	0.609	0.495	0.639	-0.449	**0.8081**		
PER	0.627	0.549	0.587	0.784	-0.440	0.709	**0.9322**	
USE	0.616	0.575	0.526	0.724	-0.495	0.659	0.754	**0.9592**

Discriminant validity is determined by comparing the coefficient of correlation between the square root of AVE and the latent variable. By comparison, the square root of AVE is greater than the correlation coefficient, which shows that the measurement model has good discriminant validity.

3.2.2 Evaluation of structural model
The study adopted Variance Analysis evaluating the goodness of fit of the model. Endogenous latent variables'

determination coefficient R^2 is used to predict the prediction ability of structural model. R^2 of behavioral intention, attitude and usefulness are more than 0.33. Determination of coefficient of usefulness has been very close to the better level of 0.67. The explanation of behavioral intention is more than 50%, and the explanation of usefulness is 60%. It shows that the structural equation model has good prediction ability. (Figure3)
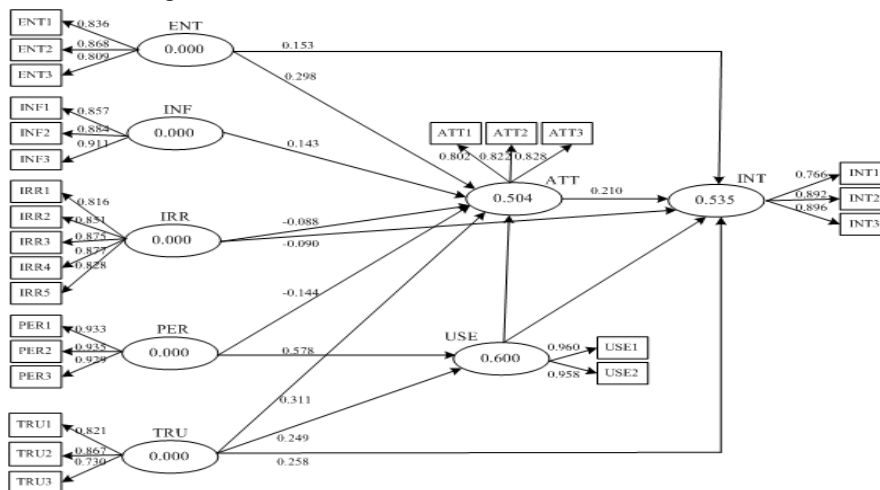

Figure 3: Structural Model

3.2.3 Hypothesis Test
In this study, the Smart PLS software was used to analyze the data, and the Bootstrapping method was used for

statistical inference. The hypothesis test results are as follows (Talbe5):

Table 5: Hypothesis Test

Hypothesis	Path coefficient	t-value	result	Hypothesis	Path coefficient	t-value	result
H1(+)	0.298***	4.311	Y	H8(+)	0.153*	2.209	Y
H2(+)	0.143	1.632	N	H9(-)	-0.090	1.303	N
H3(-)	-0.088	1.416	N	H10(+)	0.200*	2.630	Y
H4(+)	0.311***	4.239	Y	H11(+)	0.258**	3.100	Y
H5(+)	-0.114	0.936	N	H12(+)	0.578***	7.863	Y
H6(+)	0.153	1.282	N	H13(+)	0.249**	3.269	Y
H7(+)	0.210**	3.060	Y				

* means $p<0.05$；** means $p<0.01$；*** means $p<0.001$.

4. Conclusion

According to the result of hypothesis test, entertainment and trust have significance for prediction of attitude. Both of them help consumers form a positive attitude towards WeChat marketing. At the same time, entertainment, usefulness, trust and attitude can predict the behavioral intention. Entertainment and trust not only directly affect the attitude, and through attitude as a mediating variable affect behavioral intention. Personalization and trust can strengthen the usefulness of WeChat marketing.

5. Suggestion

Enterprises should enhance the usefulness and credibility of WeChat marketing information. Make use of the data that consumers leave on the Internet to mine implicit information of the data, like consumer demand, content preferences and so on. Send customizing and personalizing advertising that can meet consumer demand to achieve accurate social marketing.

Directly convey the interests and credible rational appeal to the consumer, do not exaggerate the use and effect of the product.

Effective use the diversity forms of WeChat marketing. It integrates text, pictures, audio, video, interactive games and other kinds of information delivery mode. Enterprises should choose different forms of WeChat marketing according to their actual conditions, so that consumers can meet their expectations in entertainment, so as to achieve good marketing results.

Balance user experiences and the efficiency of advertising. In the aspects of user experience, enterprises can judge consumers' interests, demands through WeChat usage and achieve accurate delivery. If enterprises can obtain users' location information, they can make location information and actual needs form a butt joint and induce consumer demands. Enhance advertising creative design and interactive design can also effectively improve advertising efficiency.

References

[1] Huang. Lijuan, Xia. Xiaomeng. Review and Prospect of Mobile Marketing Research[J]. Foreign Economics & Management, ,2015,37(10):58-68.

[2] F. Gao, Y. Zhang. Analysis of WeChat on Iphone[C]. 2nd International Symposium on Computer, Communication, Control and Automation. France: Atlantis Press , 2013.

[3] I. Ajzen, M. Fishbein. Understanding Attitudes and Predicting Social Behavior[M]. New York: Prentice-Hall, 1980.

[4] K. C. Humayun, P. Nargis , W. Christian, et al. Consumer Attitude toward Mobile Advertising in an Emerging Market: an Empirical Study[J]. International Journal of Mobile Marketing, 2006, 1(2): 33-41.

[5] M. M. Tsang, S. C. Ho, T. P. Liang. Consumer Attitudes toward Mobile Advertising: an Empirical Study[J]. International Journal of Electronic Commerce, 2004, 8 (3): 65-78.

[6] Y, Kim, D. Sohn, S. M. Choi. Cultural Difference in Motivations for Using Social Network Sites: a Comparative Study of American and Korean College Students[J]. Computers in Human Behavior, 2011, 27(1): 365-372.

[7] U. Varshney. Location Management for Mobile Commerce Applications in Wireless Internet Environment[J]. ACM Transactions on Internet Technology, 2003, 3(3): 236-255.

[8] P. Haghirian , A. Inoue. An Advanced Model of Consumer Attitudes toward Advertising on the Mobile Internet[J]. International Journal of Mobile Communications, 2007, 5(1):48-67.

[9] D. L. R. Van der Waldt, T. M. Rebello, W. J. Brown. Attitude of Young Consumer toward SMS Advertising[J]. African Journal of Business Management, 2009,3(9): 444-452.

[10] C. Dow. Mobile Marketing and the Value of Customer Analytics [J]. International Journal of Mobile Marketing, 2013, 8(1):117.

[11] I. M. Torres, R. S. Heiser. The Effects of Warning-label Placement in Print ADS: a Social Contract Perspective[J]. Journal of Advertising, 2007, 36(2):49-62.

[12] N. Achadinha, L. Jama L, P. Nel. The Drivers of Consumers' Intention to Redeem a Push Mobile Coupon[J]. Behaviour & Information Technology, 2014, 33(12):1306-1316.

[13] F. J. Saadeghvaziri, H. K. Hosseini. Mobile Advertising: an Investigation of Factors Creating Positive Attitude in Iranian Customers[J]. African Journal of Business Management, 2011, 5(2): 394-404.

[14] K. Van Ittersum, F. Feinberg. Cumulative Timed Intent: a New Predictive Tool for Technology Adoption[J]. Journal of Marketing Research, 2010, 47(5): 808-822.

[15] O. Altuna, F. Konuk. Understanding Consumer Attitudes toward Mobile Advertising and Its Impact on

Consumers' Behavioral Intentions: a Cross- market Comparison of United States and Turkish Consumers[J]. International Journal of Mobile Marketing, 2009, 4(2): 43-51.

[16] Wajeeha Aslam, Maria Batool, Zia Ul Haq. Attitudes and Behaviour of the Mobile Phones Users towards SMS Advertising: a Study in an Emerging Economy[J]. Journal of Management Sciences, 2016, 3(1): 63-80.

[17] L. B. Oh, H. Xu. Effects of Multimedia on Mobile Consumer Behavior: an Empirical Study of Location-aware Advertising[C]. Paper presented at the 24th International Conference on Information Systems, 2003.

[18] Y. K. Choi, J. S. Hwang, S. J. Mcmillan. Gearing up for Mobile Advertising: A Cross-cultural Examination of Key Factors that Drive Mobile Messages Home to Consumers[J]. Psychology & Marketing, 2008, 25(8):756-768.

[19] H. Li, J. H. Lee. Measuring the Intrusiveness of Advertisements: Scale Development and Validation[J]. Journal of Advertising, 2002, 31(2):37-47.

[20] V. S. Lai, H. Li. Technology Acceptance Model for Internet Banking: an Invariance Analysis[J]. Information & Management, 2005, 42(2):373-386.

[21] T. Lee, T. Lee. The Impact of Perceptions of Interactivity on Customer Trust and Transaction Intentions in Mobile Commerce[J]. Estuaries, 2005, 21(2):328-339.

[22] T. P. Liang, Y. C. Ku. Personalized Content Recommendation and User Satisfaction: Theoretical Synthesis and Empirical Findings[J]. Journal of Management Information Systems, 2006, 23(3): 45-70.

[23] D. Gefen, D. W. Straub. Building Users' Trust in Freeware Providers and the Effects of this Trust on Users' Perceptions of Usefulness, Ease of Use and Intended Use of Freeware[J]. Doctoral Dissertation, 1997, 156-166.

[24] Scott McCoy, Andrea Everard, Peter Polak, et al. An Experimental Study of Antecedents and Consequences of Online Ad Intrusiveness.[J]. International Journal of Human-Computer Interaction, 2008, 24(7): 672-699.

[25] R. Wells, C. E. Kleshinski and T. Lau. Attitudes toward and Behavioral Intentions To Adopt Mobile Marketing: Comparisons Of Gen Y In The United States, France and China[J]. Mobile Marketing Association, 2012, 7(2): 5-25.