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Electronic Word-of-Mouth for E-Commerce Consumption in

Mobile Social Network: a Case Study from WeChat

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Abstract: With the population of social networking services (SNS) like WeChat, they have emerged as an increasingly important media or platform that facilitates product-focused electronic word-of-mouth (eWOM) activities. Meanwhile, e-commerce has become an essential part of our daily life. The goal of the current research is to discover the key factors that affect consumers' willingness to engage in eWOM behaviors on mobile social media like WeChat. We mainly investigate eight factors including personal factors, WeChat usage, social communication, e-commerce participation, consumer online perceptions, perceived risk, platform factors, and product factors, which may encourage or restrain consumers to spread eWOM on WeChat. We have constructed a theoretic model and proposed a series of hypotheses. In order to verify the model as well as the hypotheses, we have carried out a questionnaire survey. Moreover, we use SPSS 20 software to analyze the results of the survey. We try to find out the significant factors that affect eWOM most on WeChat. According to the result, social communications and consumer online perceptions have shown strong influence on eWOM. Finally we make a discussion on the results, which could be used to support the marketing or sales activities of potential enterprises.

Keywords: eWOM, consumer perception, e-commerce, WeChat

1. INTRODUCTION

Social media or social networking service (SNS) has significantly changed the way people exchange information online. SNS and IM are particularly popular among young generation because they enables users to acquire and share information with the list of their online 'friends' instantly[1]. As social media evolves, electronic word-of-mouth (eWOM) has reached a large number of consumers and influenced consumers' attitudes, product judgments, and product sales[2,3]. Steffes and Burgee illustrate that Internet has enabled consumers to exchange product-oriented information among peers and share their purchasing experiences online, just as what they do offline[4]. With the emergence of mobile Internet, users are able to enjoy mobile social media such as Facebook, Twitter, and WeChat. These social media have induced more and more consumers to participate in product-related eWOM by sharing consumption experiences, which have contributed to the promotion for Internet marketing and e-commerce[5,6].

How consumers perceive products or service (also called consumer perception) has been well studied, i.e. it is said that consumers differ in how they perceive products or services[7] and they attach significance to the perceptual features of products or services[8]. Different consumers can generate different perceptual space. This perceptual space reflects differences in how they perceive products or services and how they assess them cognitively. Individual differences in consumers' information processing, recognition structure and task-related factors may affect consumer perception. In consequence, consumer perception usually includes a number of perceptual features, which are considered to estimate the similarity and difference among products or services meanwhile[9].

About fifty percent of the users on mobile virtual communities are closed to products or service[10]. Therefore, mobile social media have become an important channel for companies to release information about

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their products and service as well as a platform through which to contact with customers[11]. Community members are more likely to receive the information from the virtual communities on social media and provide positive electronic word-of-mouth (eWOM) than non-members' communities[12]. eWOM makes the information and sources diffusion scope wider and larger than traditional media. The rapid growth of mobile social media has caused firms to invest in relationships with consumers on SNS and generate a maximum effect of eWOM, which is called a ripple effect. Understanding how eWOM is generated on mobile social media will provide further management contributions for our practitioners.

WeChat is a mobile social media and communication service, which is provided by Tencent Company of China, and was first released in January 2011[13]. Besides, it is one of the largest social media APPs in China[14]. It supports social networking services similar with those run by Facebook, Tencent QQ or Twitter[15]. WeChat has enabled users to connect with each other through mobile social media[16]. In August 2015, WeChat has got over a billion accounts, with 600 million active users, and 70 million users outside China[17]. By the end of September 2015, WeChat has been the fourth largest virtual community around the world.

The concrete eWOM process in mobile social media like WeChat can be illustrated through a flow diagram (see Figure 1) as follows.
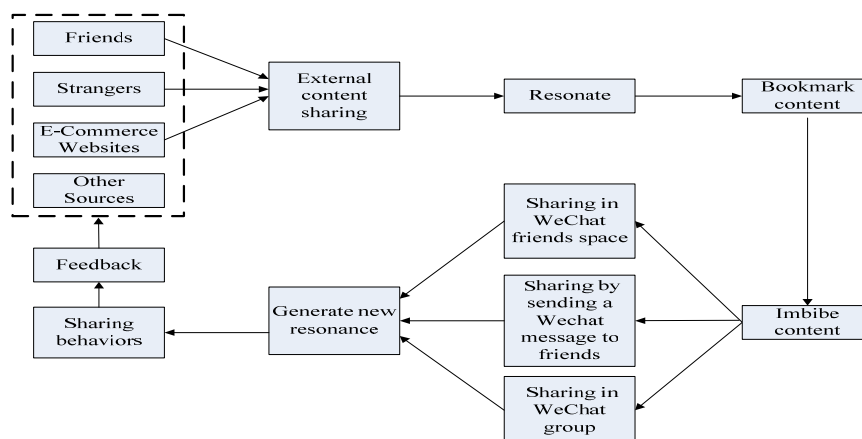

Figure 1.   eWOM flow diagram in WeChat

2.   RELATED WORK

A widely-used definition of eWOM is 'any positive or negative statement made by potential, actual, or former customers about a product or service, which is made available to a vast number of people and institutions via the Internet[18]. In this study, we refer eWOM to any positive or negative product-related content in cyberspace. Usually, it is generated by consumers and passed on among peer consumers through the Internet.

Over the past few years, a growing collection of research efforts have examined eWOM in the domain of communications[19]. For example, Chevalier and Mayzlin examined the effects of eWOM regarding consumer reviews on product or success and found that positive reviews lead to an increase in sales[20]. Hennig-Thurau et al. investigated the factors that motivate consumers to engage in eWOM via social media and found the motives of consumer online participation including consumers' concern for other consumers, the potential for self-enhancement, desire for social interactions, desire for economic incentives, and advice seeking[21]. Further, Cheung et al. suggested that the informational (i.e., argument strength, source credibility, confirmation with prior belief) and normative (i.e., recommendation consistency and aggregate rating) have an influence on consumers' evaluations of the credibility of online consumer recommendations[22].

A unique perspective of social media is that eWOM communication typically occurs between users who have preexisting social relationships with one another, thus increasing the credibility and persuasive nature of

eWOM therein[23]. Recently, a few of studies have extended eWOM research to the context of online social media[24]. For example, Coulter and Roggeveen tested the effects of eWOM communication on persuasion in SNS[23]. Specifically, Coulter and Roggeveen investigated how source, network, and message or content factors affect consumers' responses to eWOM, such as product awareness, knowledge, and preference in SNS[23]. The findings of their study suggest that source expertise is an important determinant of the effectiveness of eWOM communication. However, the impact of source closeness on consumers' decisions to seek product knowledge was not confirmed. Overall, the emerging research on eWOM in social media suggests that social media facilitate eWOM communication among consumers and enable marketers to interact with their customers in order to establish long-term relationships[6]. Further, product-related contents generated or endorsed by peer friends are more likely to be considered trustworthy and reliable.

Consumers' purchasing decisions are affected by eWOM, and this phenomenon has attracted many investigations in the past years[25]. Several studies have suggested that eWOM has a positive influence on purchasing decisions[26]. Using eWOM to revise the introduction and evaluations of a product is a easy and efficient way that consumers can refer to so as to avoid the purchasing risk and reduce the uncertainty. Consumers may have some pleasant purchasing experiences by trusting eWOM and buying some satisfied products or services[27]. Kamtarin investigated the effects of eWOM on the purchasing intentions of consumers in China and confirmed the posited relationship[25].

Generally, when a consumer is cheated and has a negative or dissatisfied purchasing experience (e.g., the consumer receives some products that differ from what have been recommended through eWOM, purchasing products that do not meet expectations and needs, in other words, deceived by eWOM), he or she may have negative attitudes towards the product and even will not trust it. Nevertheless, although some eWOM can be fabricated, eWOM recommendations are still an critical reference for consumers to make purchasing decisions[28]. This study focused on exploring the relationship between consumer decision-making and eWOM, and discovering the key factors that affect eWOM on social media like WeChat.

3.   CONCEPTUAL FRAMEWORK

The main objective of this study is to demonstrate that social media like WeChat play an important role in facilitating eWOM over Internet and we can try to find out the key factors that affect eWOM on social media. To achieve this goal, a conceptual framework that describes the relationships among the key variables was proposed. We use the framework to identify the factors that discriminate whether users engage in product-related eWOM for e-commerce on WeChat. Especially, eight factors related to users' attributes and behaviors for e-commerce consumption on WeChat were considered:

(1) Personal factors (gender, age, salary, occupation);

(2) WeChat usage factors (length of WeChat usage, number of WeChat friends, number of followed WeChat official accounts);

(3) Social communications factors (WeChat space brushing, WeChat space sharing, WeChat P2P communication, WeChat group communication);

(4) Consumer online perceptions (perceived usefulness, perceived ease of use, trust);

(5) Participation in e-commerce (time span, month's expenditure, participation frequency);

(6) Perceived risk factors (economic risk, privacy risk, time risk);

(7) Platform factors (platform popularity, logistic quality, security of platform, efficiency of customer service);

(8) Product factors (product awareness, product evaluation, product price).

Product-related eWOM on WeChat was conceptualized as respondents' view, forwarding and posting about products on WeChat. Tweeting captures the concepts of product-related information seeking and giving, while

re-tweeting examines information passing among brand followers on WeChat. The details about the framework are shown in Figure 2.
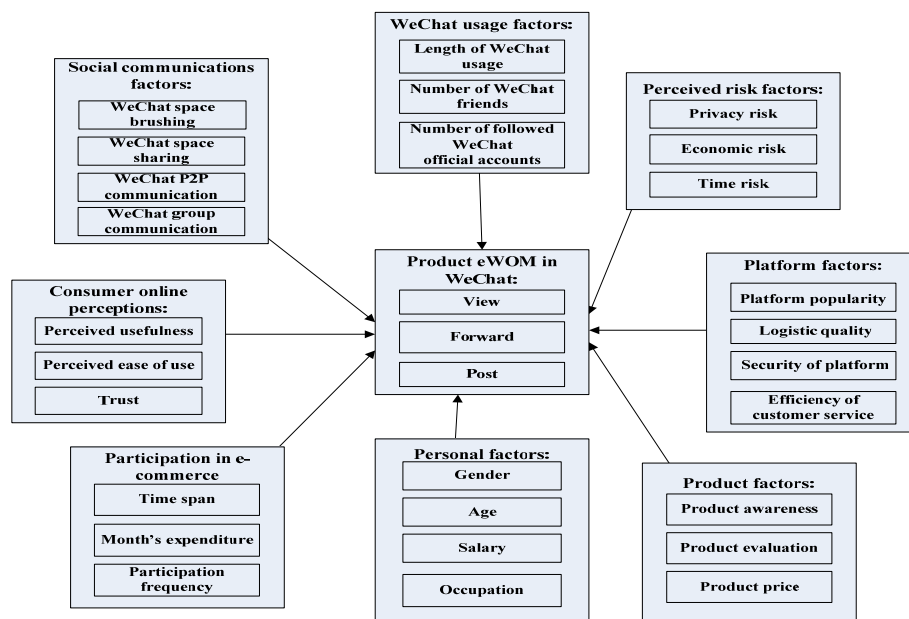

Figure 2.   Conceptual framework

4.   RESEARCH METHOD AND DATA ANALYSIS

4.1 Method description

To assess the research model in Figure 2, an online survey was used to collect users' data from WeChat. The survey questionnaire was put up to collect the information via a web site, which is called Sojump. It was made up of several web pages[2]. The actual questionnaire consists of 35 questions covering the variables proposed in the model. And all the questions are generated based on some references in literature. The questionnaire adopts a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Altogether, we have issued 130 questionnaires via the Internet, and finally acquired 118 valid questionnaires, the valid response ratio is about 90.77%. Questionnaire samples are mainly from 11 provinces, including Zhejiang Provinces, Jiangsu Province, Shanghai, Beijing and so on.

4.2 Hypotheses and data analysis

According to the existing theoretical foundations, we proposed eight hypotheses based on the research model in Figure 2. We argue that these factors including WeChat usage factors, social communication factors, consumer online perception, participation in e-commerce, perceived risk factors, platform factors, product factors and personal factors affect eWOM on WeChat.

We use SPSS 20 software to process and analyze the data. However, personal factors are the demographic and non-quantitative factors, so they can't be used to evaluate the reliability and validity. Altogether the remaining factors were proposed, namely WeChat usage factors, social communications factors, consumer online perceptions, and participation in e-commerce, perceived risk factors, platform factors, product factors, and eWOM. Given the exploratory nature of this study, 0.6 was chosen as cut point for the reliability test. All eight factors' Cronbach's Alpha are higher than 0.6, so the scales are considered reliable (see Table 1).

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[2] http://www.sojump.com/

Table 1.   Questionnaire design, hypotheses and reliability

Configurations	Hypotheses	Questions	Cronbach's Alpha
WeChat usage factors	H1: WeChat usage factors are related to WeChat product followers' engagement in eWOM.	Q5 When did you begin to use WeChat? Q6 How often do you use WeChat per week? Q7 How often do you brush WeChat space per day? Q8 How many WeChat friends do you follow? Q9 How many WeChat subscriptions do you follow?	0.601
Social communication factors	H2: Social communication factors are related to WeChat product followers' engagement in eWOM.	Q8 How often do you use WeChat per week? Q9 How often do you brush WeChat space per day? Q13 After buying some products that you feel satisfied, you will post it in your WeChat space. Q14 After buying something good online, you will share it to your friends by sending a private message . Q15 After buying something good online, you will share it in your WeChat group. Q16 When your friends share something interesting in his or her WeChat space, you will click and browse it. Q18 When your friends share something interesting by sending a private message to you, you will click and browse it. Q20 When your friends share something interesting in a WeChat group, you will click and browse it.	0.764
Consumer online perception	H3: Consumer online perception is related to WeChat product followers' engagement in eWOM.	Q22 You think that shopping online meets your demands. Q23 You prefer shopping online to traditional shopping because of its convenience. Q24 You will encourage your friends to shop online.	0.774
Participation in e-commerce	H4: Participation in e-commerce is related to WeChat product followers' engagement in eWOM.	Q10 When did you start online shopping? Q11 How much do you spend in online shopping per month? Q12 How often do you shop online per month?	0.662
Perceived risk factors	H5: Perceived risk factors are related to WeChat product followers' engagement in eWOM.	Q25 You think online shopping is risky. Q26 You think online shopping may reveal your privacy. Q27 You think online shopping may let you suffer property loss. Q28 You think online shopping is a waste of	0.762

Configurations	Hypotheses	Questions	Cronbach's Alpha
		time.	
Platform factors	H6: Platform factors are related to WeChat product followers' engagement in eWOM.	Q29 You will consider the popularity of e-commerce platform when you select it. Q30 You will consider the logistic service quality of platform when you select it. Q31 You will consider the security of platform when you select it. Q32 You will consider the efficiency of customer service of platform when you select it.	0.825
Product factors	H7: Product factors are related to WeChat product followers' engagement in eWOM.	Q33 You will consider the brand awareness of product when you select it. Q34 You will consider the consumer evaluation of product when you select it. Q35 You will consider the price of product when you select it.	0.808
Personal factors	H8: Personal factors are related to WeChat product followers' engagement in eWOM.	Q1 Your gender. Q2 Your age. Q3 Your salary. Q4 Your occupation.	/
eWOM		Q13 After buying some goods which make you satisfied, you will post it in your WeChat space. Q16 When your friends share something interesting in his or her WeChat space, you will click and browse it. Q17 When your friends share some goods which make you interested, you will forward it. Q18 When your friends share something interesting by sending a private message to you, you will click and browse it. Q19 When your friends share some goods which make you interested by sending a private WeChat message to you, you will forward it. Q20 When your friends share some goods which make you interested in the WeChat group, you will click and browse it. Q21 When your friends share some goods which make you interested in the WeChat group, you will forward it.	0.877

Given the exploratory nature of this study, 0.6 was fixed as a cut point for the validity test. All eight factors' KMO are higher than 0.6, so the scales are considered valid (see Table 2).

Table 2.   Validity analysis

Configurations	KMO
WeChat usage factors	0.649
Social communication factors	0.755
Consumer online perception	0.686
Participation in e-commerce	0.604
Perceived risk factors	0.724
Platform factors	0.796
Product factors	0.664
eWOM	0.821

From Table 3, we can see the correlations among the model variables. According to the results, we can draw out the following conclusions:

Hypothesis 1 proposes that WeChat usage factors should be positively associated with eWOM. However, the correlation test doesn't support this hypothesis. Therefore, the hypothesis was not supported. It seems that WeChat usage factors are not necessarily linked with eWOM. Hypothesis 2 suggests that there is a positive relationship between social communications factors and eWOM. This hypothesis is strongly supported by a Pearson correlation coefficient of 0.891 (P<0.01). Hypothesis 3 is supported by the Pearson correlation coefficient of 0.437 (P<0.01), indicating that there is a strong positive correlation between consumer online perceptions and eWOM, just as we have predicted. However, Hypothesis 4-7 are all rejected by a non-significant P value. It seems that participation in e-commerce, perceived risk factors, platform factors, and product factors may not have a great influence on eWOM.

Table 3.   Correlations between model variables

Variables		eWOM
WeChat usage factors	Pearson correlation	0.007
	Sig.(two-tailed)	0.942
Social communication factors	Pearson correlation	**0.891****
	Sig.(two-tailed)	0.000
Consumer online perception	Pearson correlation	**0.437 ****
	Sig.(two-tailed)	0.000
Participation in e-commerce	Pearson correlation	-0.018
	Sig.(two-tailed)	0.843
Perceived risk factors	Pearson correlation	0.066
	Sig.(two-tailed)	0.476
Platform factors	Pearson correlation	0.138
	Sig.(two-tailed)	0.146
Product factors	Pearson correlation	0.114
	Sig.(two-tailed)	0.220
eWOM	Pearson correlation	1.000
	Sig.(two-tailed)	

Bold letter: correlation significant at 0.01 level.

*Correlation is significant at the 0.05 level (two-tailed).

**Correlation is significant at the 0.01 level (two-tailed).

5.   DISCUSSION AND CONCLUSION

The results of the study provide support for a part of proposed hypotheses in this study. Although some hypotheses didn't gain significant support from the data, the framework appears to hold fairly well with the demand for some moderate revisions, therefore this framework is a rational beginning point for us to explore eWOM for e-commerce consumption in mobile social network. The relationship between social communication factors and eWOM got much support from the data above. It has shown that social communication factors were well-tried and tested factors. They are closely related to eWOM. Moreover, consumer online perception is closely associated with eWOM. Consumer online perception directly affects consumers' purchasing decisions, and then have an impact on eWOM.

The results also provide some evidence for the impacts of gender, age, salary, and occupation on eWOM. From the analysis, we can see that the female are more likely to have deep web experience and participate in e-commerce, and people with higher salary are more likely to worry about e-commerce risks. Moreover, Chinese people are generally optimistic about e-commerce. Therefore it is worth-while to look further into how exactly customer's demographic characteristics influence their online perception, purchasing decisions and eWOM. Generally, The finding in this study supports our viewpoint that WeChat denotes a new form of socialization platform that exerts an impact on consumers' social media behaviors, and thus on products' brand engagement.

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