UNDERSTANDING WECHAT USERS' MOTIVATIONS, ATTITUDES AND INTENTION OF READING PROMOTIONAL MATERIAL

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ABSTRACT

Smartphone has become a necessary adjunct to people's daily life. Mobile apps such as instant messaging and payment wallet are commonly used on smartphones. In China, WeChat is the most popular social application due to its multi-purpose platform such as online advertisements and payments, etc. WeChat is expected to become more popular since it has just been launched in Europe in 2017. The purpose of this study is to evaluate psychological motivations that can affect WeChat users' intention to read WeChat promotional material. The results indicate that personalization, entertainment, incentives and perceived usefulness positively influence users' attitudes towards WeChat promotional materials. In addition, their subjective norm, perceived behavioral control and their attitudes significantly affect their behavioral intention of reading WeChat promotional material.

Keywords: WeChat, promotional material, motivations, attitudes, intention, mobile advertising

INTRODUCTION

The mobile network has turned into one of the most rapidly advancing industries [23]. In the past, companies' promotions used old style media, such as flyer advertisements, newspapers, radio and TV channels. However, interpersonal communication has changed rapidly, people like to receive updated news every minute and share every little thing about their life with their friends. Currently, 90% of promoters perceive social media as very important for their business development [44], indicating that social media promotions will be a trend for companies to expand their business in this era. Meanwhile, the popularity of smartphones has been increasing rapidly in the past decade due to their high speed access to the Internet. Hence, the smartphone has become one of the potential platforms for companies to promote their products through online graphical advertisements and mobile advertising will develop into a huge potential market for the advertisers.

Mobile Communication Application

Instant Messaging (IM), a social media tool offering real-time text transmission over the Internet [28], is a common mobile application allowing mobile users to communicate with each other at anytime and anywhere, using apps such as: WeChat, WhatsApp and Line, etc. The common functions of these communication apps includes: text, voice, image and video messaging through mobile network. WeChat is very popular in China because it does not only include the basic functions of communication software, but also functions that can find

the people who are also using WeChat nearby. In this way, promoters can make use of this feature to advertise their products and services. It is the main reason why WeChat, developed by Tencent holdings limited in 2011, is the most popular communication mobile app in China [48]. WeChat is also expected to be one of the most popular communication mobile apps in the global market as it has just been launched in Europe [6]. Furthermore, due to the fact that some of the social media apps are blocked in China, for example: Facebook, YouTube and Twitter - WeChat is one of the most important mediums that marketers can utilize to communicate directly with their Chinese mobile users [28]. As a result, WeChat provides a channel for companies to promote their brands and products in the global market.

Mobile Promotion

Promotion is one of the frequently used tools in marketing strategy. The mobile channel has emerged as a new, potential tool for promotional activities [2, 51]. Major impacts of mobile devices on the marketing communication mix appear in three areas: advertising, sales promotion, and direct marketing [27]. Mobile advertising can target customers everywhere [41]. Compared to the traditional promotion channels, such as Newspapers, TVs and Radios, mobile promotion channels provide an effective way to promote the products to the public, because it permits users to instantly obtain and share information with a list of their online "buddies" [8].

Previous studies indicated that Theory of Planned Behavior (TPB) and Technology acceptance model (TAM) can be integrated to predict consumers' behavior about mobile marketing [54]. This study investigates online consumers' perceptions of WeChat promotional materials by using the integrated model. The purpose of this study is to identify some significant factors that affect Chinese consumers' intention to read WeChat promotional Materials (WPM). Once the factors are identified, the results may provide a reference for marketers to design an appropriate promotional strategy to promote their products and services. In addition, mobile application developers can further improve the design of WeChat promotional materials to improve consumers' experience of mobile business in WeChat; thus increasing the possibility of making higher revenues.

BACKGROUND, RESEARCH MODEL AND HYPOTHESES

The Growth of Mobile Advertisement

Mobile Advertising allows marketers to deliver a content based marketing strategy effectively because it is better targeted and more engaging. With the emergence of mobile network, the marketers can advertise their products or services through wireless devices. In the US, mobile advertising spending rose dramatically from US$1.45 billion to US$19.15 billion between 2011 and 2014 [46]. In Europe, mobile advertising growth continues to accelerate and increased 68.2% to 49 billion US dollars in 2015 from 29 billion US dollars in 2014. In China, mobile marketing is very popular with young Chinese consumers [16]. According to Econsultancy [11], investment in local mobile advertising was expected to exceed US$1.65 billion in 2014, a year-on-year increase of 93.6% in China. PwC forecasts the Chinese mobile advertising market to grow at a 27% compound annual growth from over US$1.81 billion in 2014 to US$3.72 billion in 2017 [38]. This data indicates that the potential market for advertising products/services on the smartphones' platform is huge. One of the popular channels for mobile advertising is WeChat, where enterprises can create their own official accounts to create consumer experiences through its open platform and extended services such as WeChat Pay for a truly mobile digital life. Tencent's "performance marketing" sales jumped by 83 percent in 2015 to hit US$0.64 billion, thanks to the enterprises' advertisements in WeChat and revenue from official accounts for brands inside WeChat [47].

Personalization and Irritation

Personalization is defined as a mechanism of changing a system in order to customize users' personal characteristics [2]. Chellappa et al. [5] indicated that personalization can increase the consumers' interest in the messages about their personal and preference information. Previous studies indicated that personalization is an important component that improves a consumer's attitude toward mobile advertising [35, 40, 53]. Thus, the following hypothesis is proposed:

> **H1.** Personalization has a positive impact on the attitude towards WeChat promotional materials.

Greyser [18] suggested that an increase in irritation levels can lead to a general reduction in the effectiveness of all advertising. Reyck et al. [39] revealed

consumers would prefer to give permission before receiving any mobile advertising in the future. Furthermore, Gao and Zang [15] indicated that irritating messages affects consumers' attitude towards receiving mobile advertising. If the advertising is related to the recipient's interests and needs, the level of irritation will be decreased [25]. Thus, the following hypothesis is proposed:

H2. Irritation has a negative impact on the attitude towards WeChat promotional material.

H3. Personalization has a negative impact on irritation of reading WeChat promotional material.

Entertainment, Informativeness and Credibility

Entertainment refers to happiness valence perceived by users in the process of using a product/service [34]. Shavitt et al. [42] indicated that people's feeling of enjoyment is the important factor for consumers' attitude towards advertising. Entertainment has a positive influence on the consumers' attitude towards web advertising [10]. Tsang et al. [49] indicated that entertainment is the major factor influencing a person's attitude towards reading mobile advertisements. In addition, Fu et al. [14] indicated that there is a significant positive impact of entertainment on WeChat users' continuous use behavior. Moreover, entertainment has a positive influence on WeChat users' attitude [28]. Based on the previous study, Song et al. [45] also indicated that users have more leisure time to get entertainment services in WeChat . On the other hand, entertainment has a stronger relationship with attitude towards advertising on social network service [31]. Thus, the following hypothesis is proposed:

H4. Entertainment has a positive impact on the attitude towards WeChat promotional material.

Informativeness refers to the ability to effectively provide relevant information [36]. Informative advertising can positively affect consumers' attitude towards mobile advertising [2, 50]. In addition, Mir [33] found information is one of the significant predictors of consumers' attitude towards advertising in social media context. Thus, the following hypothesis is proposed:

H5. Informativeness has a positive impact on the attitude towards WeChat promotional material.

Credibility indicates a person's perception towards the truthfulness and believability of advertising [32]. Haghirian et al. [19] indicated that the advertising message is positively associated with the factor of credibility. Tsang et al. [49] also indicated that the credibility has a direct positive influence on consumers' attitude towards mobile advertising. In addition, credibility has significant influence on consumer's attitude towards receiving mobile promotions [7, 15]. Thus, the following hypothesis is proposed:

H6. Credibility has a positive impact on the attitude towards WeChat promotional material.

Perceived Usefulness and Ease of Use

Zhang and Mao [55] concluded both perceived usefulness and perceived ease of use have a positive impact on young Chinese consumers' intention towards SMS mobile advertising. Kim et al. [24] also indicated that the perceived usefulness and perceived ease of use have a positive impact on attitudes towards mobile advertising effect in a smart home environment. Thus, the following hypothesizes are proposed:

H7. Perceived usefulness has a positive impact on the attitude towards WeChat promotional material.

H8. Perceived ease of use has a positive impact on the attitude towards WeChat promotional material.

Incentives, Attitudes, Subjective Norm and Perceived Behavioral Control

Incentive-based advertisement provides specific financial rewards to consumers who agree to read the advertisements [49]. Therefore, promoters may reward customers with free coupons to attract them to read their advertisements. In addition, Gao and Zang [15] indicated that the consumers would not reject promoters' advertisements in cases where some incentives were offered. Hanley and Becker [21] concluded that the incentives were a key motivating factor for the consumer to accept advertising in mobile devices, and those incentive types include but are not limited to the following, such as free minutes, ringtones, music, wallpaper, screensavers, etc., especially if the users are given monetary incentives. Thus, the following hypothesis is proposed:

H9. Incentive has a positive impact on consumers' attitude towards WeChat promotional material.

Based on the theory of planned behavior: attitude, subjective norm and perceived behavioral control are the main factors to affect a person's behavioral intention. Liu et al. [30] indicated that the TPB can provide useful information for the company to promote their products through advertising. Chang and Zhu [4] developed a theoretical model to predict peoples' behavioral intention to use social networking sites based on the theory of planned behavior. Okazaki et al. [37] found that attitude has a positive impact on user's intention to get mobile advertising.

H10. Attitude has a positive impact on consumers' intention to read WeChat promotional material.

H11. Subjective norm has a positive impact on consumers' intention to read WeChat promotional material.

H12. Perceived behavior control has a positive impact on reading WeChat promotional material.

As a result, the proposed research model diagram is shown in Figure 1.
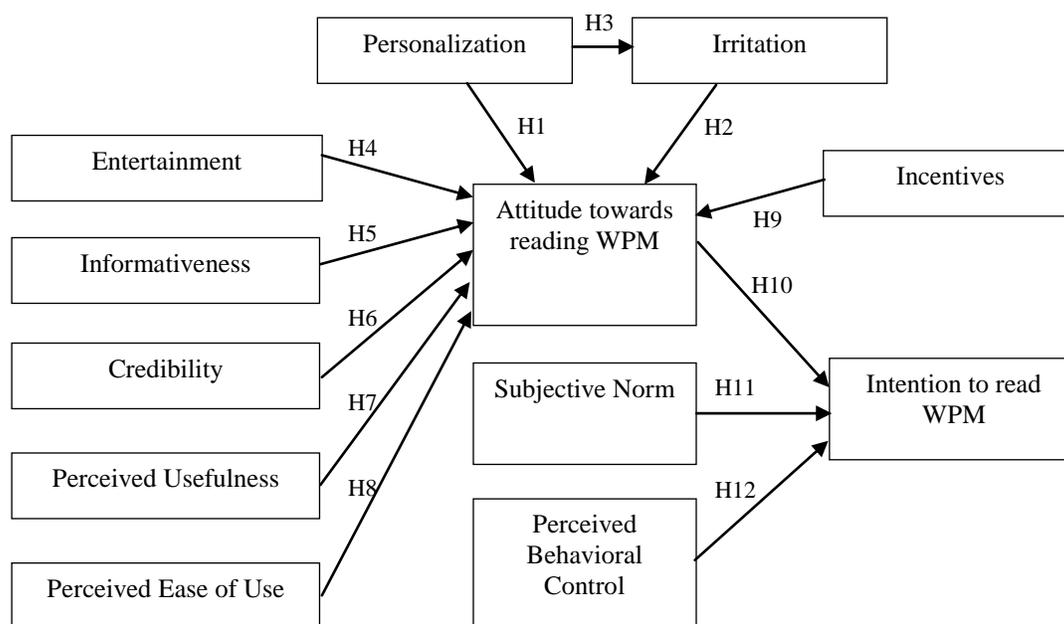
Figure 1: Conceptual Model

RESEARCH METHODOLOGY

Measurement

The constructs in this proposed model are based on previous studies. The items of Attitude, Subjective Norm, Perceived Behavioral Control and Intention to read were adopted from Ajzen [1] while Perceived usefulness and Perceived ease of use were adopted from Davis [9]; Entertainment and Irritation were adopted from Tsang et al. [49]; Credibility was adopted from Chowdhury et al.

[7]; Personalization was adopted from Xu [53]; Informativeness was adopted from Chang and Zhu [4] and Incentives were adopted from Unal et al. [50]. The questionnaire items are measured on a seven point Likert-Scale ranging from "strongly disagree = 1" to "strongly agree = 7". The measurement items are summarized in Appendix A.

Data Collection

This survey was conducted mainly to investigate Chinese consumers' intention to read WeChat

Promotional Materials. The target respondents for this study were mobile users in China. A total of 396 surveys were collected, 2 samples were not Chinese people, 9 samples were incomplete (with missing values), 21 samples didn't have a WeChat account, so there were 32 samples that were not considered for data analysis, resulting in a final sample of 364. Table 1 represented the descriptive statistics of all respondents.

Table 1: Overall demographic profile of the 364 respondents

Demographics	Number	Percentage
Gender		
Male	195	53.60%
Female	169	46.40%
Education		
Primary school	15	4.12%
Secondary school	53	14.56%
High school	167	45.88%
Two-year college diploma	52	14.29%
University or above	77	21.15%
Age		
< 18	26	7.10%
18 – 29	198	54.40%
30 – 39	85	23.40%
40 – 49	38	10.40%
> 49	17	4.70%
Salary		
< RMB10,000	119	32.70%
RMB10,000 - RMB19,999	158	43.40%
RMB20,000 - RMB29,999	68	18.70%
RMB30,000 – RMB39,999	15	4.10%
> RMB39,999	4	1.10%
WeChat Usage (Months)		
< 7	18	4.95%
7 – 12	26	7.14%
13 – 24	63	17.31%
25 – 36	83	22.80%
> 36	174	47.80%

ANALYSIS AND RESULTS

Assessment of Measurement Model

Structural equation modeling (SEM) was adopted to examine the hypotheses. It was selected to analyze all of the interrelated data by modeling the relationships among the dependent and independent constructs at the same time [20]. Moreover, Confirmatory Factor Analysis (CFA) was also adopted to investigate the relationships among the theoretical constructs. The purpose is to test the theoretical expectations for the proposed structure [17].

Exploratory factor analysis (EFA) and Confirmatory factor analysis (CFA) were used to evaluate

the validity of the measured items using SPSS software. Firstly, exploratory factor analysis is used to extract all items to analyze the correlation among the variables in the dataset. The results are shown in Table 2.

Table 2: Exploratory factor analysis results and Cronbach's alpha

	Factor											
	1	2	3	4	5	6	7	8	9	10	11	12
CRED2	0.944											
CRED3	0.872											
CRED1	0.782											
INC3		0.955										
INC2		0.897										
INC1		0.818										
IRR2			0.934									
IRR1			0.898									
IRR3			0.819									
SN2				0.943								
SN3				0.923								
SN1				0.757								
PER2					0.985							
PER1					0.773							
PER3					0.740							
EOU2						0.980						
EOU1						0.790						
EOU3						0.688						
ATT2							0.888					
ATT3							0.835					
ATT1							0.786					
ITR2								0.969				
ITR1								0.865				
ITR3								0.709				
INF2									0.898			
INF1									0.797			
INF3									0.704			
PBC1										0.865		
PBC2										0.850		
PBC3										0.726		
PU2											0.941	
PU1											0.766	
PU3											0.707	
ENT1												0.976
ENT2												0.772
ENT3												0.678
Cronbach's Alpha	0.92	0.923	0.912	0.908	0.879	0.881	0.891	0.895	0.846	0.848	0.849	0.876

Secondly, the CFA was employed to measure the proposed model's goodness-of-fit and validity. For a good fit model, Hu and Bentler [22] suggested the acceptance of indexes are shown in Table 3, namely Chi square/degree of freedom ratio (Cmin/df), Comparative Fit Index (CFI), Goodness of Fit (GFI), Adjusted Goodness of Fit Index (AGFI), Standardized Root Mean Residual (SRMR), and Root Mean Square Error (RMSEA). In addition, the initial proposed model didn't have a good fit, the items of Subjective Norm 1 (SN1) and

Credibility 1 (CRED1) were removed in order to improve the proposed model fit, and the revised fit indices are shown in Table 3. All of the index values met their minimal requirements except the value of GFI (0.876), which is not far away from the corresponding minimal requirement.

Table 3: Fit indices for the measurement model

Measure	Cmin/df	CFI	GFI	AGFI	SRMR	RMSEA	PCLOSE
Model fit criterion	<5	>0.8	>0.95	>0.8	<0.09	<0.05	>0.05
Index value	1.859	0.954	0.876	0.84	0.0345	0.049	0.666
Good model fit (Y/N)	Y	Y	N	Y	Y	Y	Y

Finally, the construct reliability and convergent validity were tested for the measurement model. Fornell and Larcker [13] indicated the composite reliability (CR) and the average variance extracted (AVE) should be above 0.7 and 0.5 respectively, and the square root of AVE was examined larger than the correlations between the construct and the other constructs. Based on Table 4 and 5, the results show that both the reliability and validity tests are passed.

Assessment of structural model

After the validity results were found to be satisfactory, AMOS 22 was employed to test the structural model in order to confirm the relationships among the constructs by examining the structural path and the R^2 scores. The model fit indices (cmin/df = 1.237; RMSEA = 0.026; RMR = 0.019; CFI = 0.999; AGFI = 0.956; PCLOSE = 0.777) indicate a good model fit. Then, this study evaluated the structural model to examine the hypothesized relationships. Figure 2 shows the results for the structural model, indicating that H1, H4, H7, H9, H10, H11 and H12 are significantly supported and the hypothesized paths account for a substantial portion of variance in the WeChat advertising environment. A summary of hypotheses test results are shown in Table 6.

Table 4: Results of convergent validity testing

Construct	Indicator	Factor Loading	CR	AVE
Credibility	CRED2	0.94	0.905	0.826
	CRED3	0.80		
Incentives (INC)	INC3	0.90	0.924	0.802
	INC2	0.87		
	INC1	0.80		
Irritation (IRR)	IRR2	0.93	0.913	0.779
	IRR1	0.85		
	IRR3	0.83		
Subject Norm	SN2	0.93	0.908	0.831
	SN3	0.86		
Personalization	PER2	0.87	0.883	0.716
	PER1	0.78		
	PER3	0.70		
Perceived Ease of	EOU2	0.88	0.885	0.721
	EOU1	0.84		
	EOU3	0.76		
Attitudes (ATT)	ATT2	0.91	0.894	0.738
	ATT3	0.77		
	ATT1	0.84		
Intention to Read	ITR2	0.89	0.899	0.749
	ITR1	0.88		
	ITR3	0.77		
Informativeness	INF2	0.90	0.853	0.661
	INF1	0.83		
	INF3	0.63		
Perceived	PBC1	0.84	0.86	0.672
	PBC2	0.78		
	PBC3	0.82		
Perceived	PU2	0.90	0.853	0.66
	PU1	0.83		
	PU3	0.82		
Entertainment	ENT1	0.86	0.877	0.704
	ENT2	0.76		
	ENT3	0.81		

Table 5: Square root of AVE and correlation among constructs

	PU	CRED	INC	IRR	SN	PER	EOU	ATT	ITR	INF	PBC	ENT
PU	**0.812**											
CRED	0.398	**0.909**										
INC	0.380	0.443	**0.895**									
IRR	0.009	-0.025	-0.098	**0.882**								
SN	0.395	0.399	0.406	-0.044	**0.912**							
PER	0.448	0.505	0.430	-0.009	0.336	**0.846**						
EOU	0.461	0.257	0.301	-0.063	0.332	0.271	**0.849**					
ATT	0.532	0.338	0.463	-0.083	0.495	0.373	0.399	**0.859**				
ITR	0.529	0.389	0.417	-0.031	0.456	0.433	0.541	0.463	**0.865**			
INF	0.460	0.252	0.467	0.003	0.364	0.421	0.344	0.356	0.409	**0.813**		
PBC	0.410	0.292	0.286	0.075	0.384	0.332	0.548	0.423	0.454	0.326	**0.820**	
ENT	0.554	0.533	0.519	-0.065	0.476	0.441	0.500	0.540	0.538	0.409	0.421	**0.839**
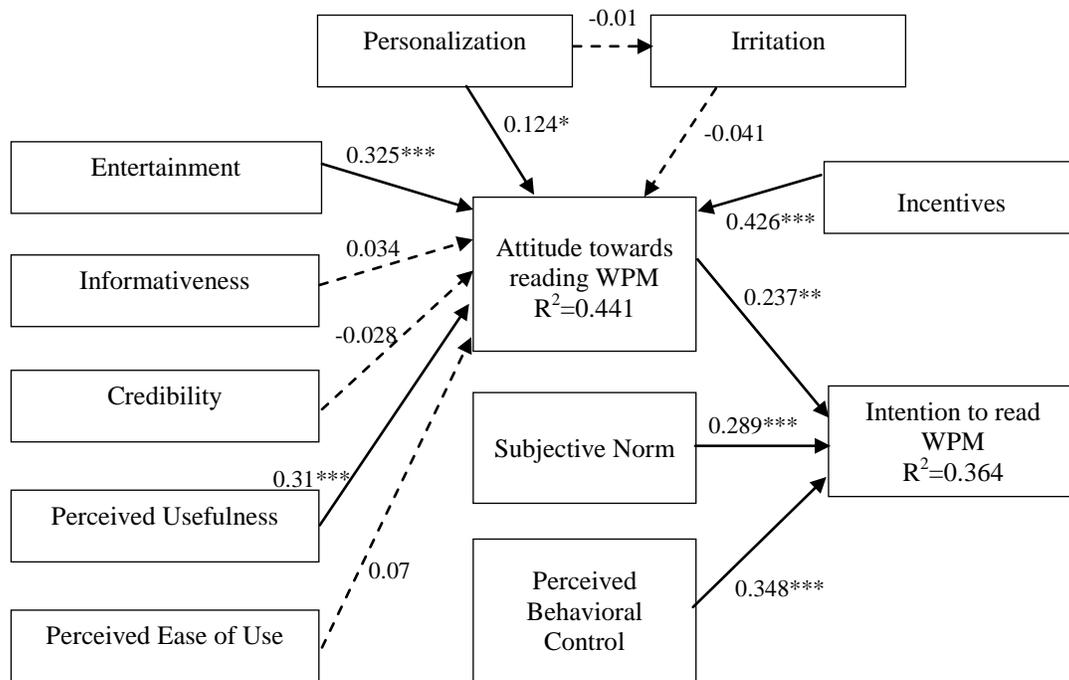
Figure 2: The results of the structured model.

Table 6: Summary of hypotheses test results.

Hypothesis	Path	Result
H1	Personalization → Attitude	Supported
H2	Irritation → Attitude	Rejected
H3	Personalization → Irritation	Rejected
H4	Entertainment → Attitude	Supported
H5	Informativeness → Attitude	Rejected
H6	Credibility → Attitude	Rejected
H7	Perceived usefulness → Attitude	Supported
H8	Perceived ease of use → Attitude	Rejected
H9	Incentives → Attitude	Supported
H10	Attitude → Behavioral intention	Supported
H11	Subjective norm → Behavioral intention	Supported
H12	Perceived behavioral control → Behavioral intention	Supported

DISCUSSION AND CONCLUSION

This study is an initial study to analyze the effects of WeChat promotional material. As WeChat is already popular in China and is expected to get popular in Europe, the facts provide strong motivations for this study. The results of this study have several important implications.

First, based on the coefficients of psychological motivations (entertainment, incentives, perceived usefulness and personalization), incentives (0.426) is the most influential factor of attitude, followed by entertainment (0.325), perceived usefulness (0.31) and personalization (0.124). These findings support the dominant role of incentives in influencing mobile users' attitudes towards WeChat promotional materials. This outcome is consistent with Varnali, Yilmaz & Toker's research findings regarding university students placing relatively greater emphasis on incentives about SMS-based mobile advertising campaigns using a field experience [52]. Providing more incentives enhances users' attitudes towards WeChat promotional materials, which in turn will strengthen their propensity to engage in reading WeChat promotional material. In terms of entertainment, these findings partly support research findings from Kim et al. [26] that American students place relatively greater emphasis on seeking entertainment from using social networking sites (but not for Korean students). As per perceived usefulness, users read WeChat promotional material based on whether the advertisements are useful to them. The results are consistent with Zhang and Mao's research findings [55] that perceived usefulness is one of the predictors for the intention to read SMS advertising messages. With regard to personalization, the results are consistent with those

obtained by Feng, Fu and Qin [12] that personalization is one of the positive predictors of extrinsic motivation that leads to higher levels of behavioral intention engagement with mobile advertising. It is suggested that WeChat offers personalized WeChat promotional material to WeChat users to gain a higher acceptance rate of mobile advertising.

Second, subjective norm and perceived behavioral control are found to have a significant positive impact on consumer attitude. The results are consistent with the findings from Lin and Chen [29] that subjective norms and perceived behavior control have significant positive effects on the intention to accept SMS advertisements. The WeChat platform is suggested to provide a good user interface such that WeChat users can easily read some multi-media or even 3D attractive advertisements.

Third, in terms of attitude, the overall mean of attitude is 4.67 (out of 7), indicating that the Chinese users have slightly positive attitudes toward WeChat promotional material. Attitude has a significant positive impact (0.237) on behavioral intention of reading WeChat promotional material supporting Shih et al. [43]. Motivating users through incentive, entertainment and perceived usefulness improves their attitudes, which in turn will increase their intentions of reading WeChat promotional material.

Finally, the overall mean of behavioral intention of reading WeChat promotional material is 5.07 (out of 7), reflecting that the Chinese WeChat users generally have the willingness to read WeChat promotional material. The improved users' attitudes toward WeChat promotional material; increased level of incentives; increased control over reading WeChat promotional material and the increased social pressure to engage reading WeChat

promotional material will enhance Chinese users' intentions of reading WeChat promotional material.

LIMITATION AND DIRECTIONS FOR FUTURE RESEARCH

There are some limitations in this research study. First, the target respondents are mainly Chinese and may not be generalized to WeChat users in other countries. Second, this research survey was performed in Macau only. Since Macau is an international gambling city in China, WeChat users in Macau may not reflect the total WeChat population in China. Third, the psychological motivations identified in this literature may not fully describe Chinese users' motivations of reading WeChat promotional material. Fourth, more than 50% of respondents are young adults (aged 18 – 29) in this study. However, the older adults (aged 30 – 60) have gradually become more frequent WeChat users, they may have different attitudes and behaviors toward reading WeChat promotional material.

There are a few recommendations for a future study. First, psychological motivations of reading WeChat promotional material can be compared in different countries in order to find out any cultural differences. Second, collecting more data for older adult groups can be used to compare the results among different age groups. Finally, in addition to including additional psychological motivation factors such as convenience, satisfaction can also be included as an important antecedent of behavioral intention to read WeChat promotional material. Measuring the direct and indirect effect of psychological motivation factors on behavioral intention of reading WeChat promotional material mediated by satisfaction are suggested.

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APPENDIX A: LIST OF SURVEY ITEMS BY CONSTRUCT

Constructs and source	Items
Personalization [53]	I feel that the WeChat promotional materials should display personalized message to me.
	I feel that the WeChat promotional materials should be personalized for my usage.
	Contents in WeChat promotional material should be personalized.
Irritation [49]	WeChat promotional material is irritating.
	WeChat promotional material is annoying.
	WeChat promotional material is deceptive.
Entertainment [49]	I feel that receiving WeChat promotional material is enjoyable.
	I feel that receiving WeChat promotional material is entertaining.
	I feel that receiving WeChat promotional material is pleasant.
Informativeness [4]	WeChat promotional material enable me to learn unknown things.
	Reading WeChat promotional material enable me to search the information I need.
	Reading WeChat promotional material enable me to keep up to date on current trends.
Credibility [7]	WeChat promotional material is credible.
	WeChat promotional material is trustworthy.
	WeChat promotional material is believable.
Perceived Usefulness [9]	Reading WeChat promotional material enables me to receive more information about products.
	Reading WeChat promotional material improves my efficiency in receiving information.
	Reading WeChat promotional material is useful to me.
Perceived ease of use [9]	Learning to operate reading WeChat promotional material would be easy.
	It is easy for me to read WeChat promotional material.
	Overall, I find the WeChat promotional materials are easy to read.
Incentives [50]	Rewards make me want to read WeChat promotional material.
	I would take action to get WeChat promotional material offering rewards.
	I am satisfied to get WeChat promotional material offering rewards.
Attitudes [1]	WeChat promotional materials are good to me.
	WeChat promotional materials are pleasant to me.
	WeChat promotional materials are beneficial to me.
Subjective norm [1]	People who are important to me influence my decision of reading WeChat promotional material.
	People who I listen influence my decision of WeChat promotional material.
	People whose ideas are valued influence my decision of reading the WeChat promotional material.
Perceived behavioral control [1]	I have the knowledge/ skill to read the WeChat promotional material.
	Reading WeChat promotional material is under my control.
	I have the facilities (e.g. I have installed the app) to read the WeChat promotional material.
Behavioral intention [1]	If I have time, I will read WeChat promotion material.
	I intend to read WeChat promotional material.
	I plan to read WeChat promotional material.