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Article

Why people use social media: An investigation of engagement on an all-service platform

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Why people use social media: An investigation of engagement on an all-service platform

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ABSTRACT

This study provides the first investigation of the complete group of variables in the expanded theory of uses and gratifications on consumer engagement in an all-service social media platform. Consumer engagement is measured both from a psychological state and behavioral perspective, an approach which is important since the antecedent variables in uses and gratifications theory have both psychological and behavioral manifestations. A survey is conducted in Mainland China on WeChat with 805 respondents. Antecedent variables and consumer engagement are measured using previously validated scales. Regression analyses find that the antecedent variables of entertainment, integration/social interaction, personal identity, information, remuneration, and empowerment are significantly associated with consumer engagement on WeChat. Age and gender relationships are also explored in correlation and regression analyses, with associations strongest among males and older groups. The results give added support to the relevance of the uses and gratifications theoretical framework.

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1. Introduction

Uses and gratifications theory (Katz et al., 1973) provides a key understanding of why people use social media. This theory, as expanded by Muntinga et al. (2011), helps explain consumer engagement on social media via categories of entertainment, integration/social interaction, personal identity, information, remuneration and empowerment. Consumer engagement on social media has been shown to be an important variable, positively affecting the development of brand equity (Dessart et al., 2015; Dwivedi, 2015; Santos et al., 2022; Schivinski, 2021), well-being (Khatri et al., 2021), electronic word-of-mouth (Chu et al., 2019; Pang et al., 2024; Tan & Chen, 2019), social support (Pang, 2020; Wang et al., 2019), and business-consumer relationship quality (Chen, 2017). It has been defined as a psychological state including three dimensions (Schaufeli et al., 2002): (1) vigor – a dimension denoting high levels of energy and mental resilience, (2) absorption – a dimension denoting a sense of concentration and involvement in interactions, and (3) dedication – a dimension referring to a sense of enthusiasm and inspiration. In addition, consumer engagement has been conceptualized behaviorally in terms of three levels of interactivity and involvement on social media – brand consumption, contribution and creation (Muntinga et al., 2011).

Although the expanded uses and gratifications theory has been tested on select U.S. social media platforms like Facebook, Instagram, Reddit and YouTube (Buzeta et al., 2020), the entire theoretical framework has never been evaluated on an all-service platform, such as WeChat. Moreover, studies on all types of platforms have been implemented either with a psychological state (Chu et al., 2019) or behavioral (Buzeta et al., 2020; Chen, 2017) measurement of the consumer engagement variable, but not with both types.

A test of the expanded uses and gratifications theory on an all-service platform would provide additional support for the relevance of the theoretical framework. This examination is particularly important

because Buzeta et al. (2020) found the variables added in the expansion – remuneration and empowerment – to be the most important drivers of consumer engagement. Although Chu et al. (2019) demonstrated the importance of self-enhancement and Chen (2017) of entertainment on consumer engagement in the all-service platform of WeChat, their tests did not include the remuneration and empowerment variables. A measurement approach based on psychological state and behavioral perspectives would also provide an improved test of uses and gratifications theory, since the theory's constructs have both psychological and behavioral manifestations. In addition, implementing a study which tested consumer engagement from both of these perspectives would enable a more rigorous evaluation of the variable.

Our study further develops uses and gratifications theory by testing its expanded version on an all-service social media platform, WeChat. We examine the influences of the complete group of variables embodied in the expanded theory, i.e., entertainment, integration/social interaction, personal identity, information, remuneration, and empowerment. In addition, we evaluate variables both from psychological state and behavioral perspectives. We begin by describing uses and gratifications theory and then move to a section on hypothesis development with accompanying literature support. Then we describe the methodology and detail the results of our study. Finally, we present a summary of key conclusions, implications for theory, practical implications, limitations, and suggestions for future research.

2. Uses and gratifications theory

A theoretical approach which helps explain internal antecedents of consumer engagement on social media is uses and gratifications theory (Katz et al., 1973). The theory argues that people are in control of the media they use, rather than the media overpowering them. It presents a grouping of needs which explains why different media are chosen by individuals. Originally, five types of needs were outlined: (1) needs strengthening information, knowledge, and understanding; (2) needs building aesthetic, pleasurable and emotional experience; (3) needs strengthening credibility, confidence, stability, and status; (4) needs building contact with family, friends, and the world; and (5) needs related to escape or tension-release. These needs are based on utilitarian, hedonic, psychological and social predispositions. McQuail (1983) later summarized these categories as entertainment, integration/social interaction, personal identity, and information, with Muntinga et al. (2011) adding the remuneration and empowerment categories due to their relevance for social media. Under remuneration, people use social media to gain some type of future reward, such as an economic incentive. Empowerment involves individuals engaging in social media to exert influence on other people or companies. Tsai and Men (2013) used this six-dimension set in their research on consumer engagement in social media, as did Buzeta et al. (2020) in their study on consumer engagement with U.S.-based social media platforms.

Per Buzeta et al. (2020, p. 81), the six categories may be defined as follows: (1) Entertainment – “The emotional relief generated by temporarily recreating or repressing from daily routines,” (2) Integration/social interaction – “The users’ feeling of connection (to an online community, for instance) that enables them to increase their knowledge about other people’s circumstances and augment individuals’ socializing capabilities,” (3) Personal identity – “The need for shaping one’s identity by providing an image of one’s personality and by receiving peer recognition,” (4) Information – “Individuals’ understanding of relevant events and conditions in the world around,” (5) Remuneration – “Users’ intention to obtain some future benefit or external reward that basically stands apart from the behavior,” and (6) Empowerment – “Individuals’ purpose of exerting their influence or power on others’ perceptions (e.g., consumer, companies, brands), by voicing their opinions and by demanding improvements in products, services, and corporate policies.” All of these categories involve psychological processes which lead to different types of behaviors on social media.

3. Hypotheses development

In our study, we seek to identify the key antecedents of consumer engagement on an all-service platform, represented by WeChat, using the six-folded categories based on uses and gratification theory. Engagement is defined both from a psychological state and behavioral perspective. The psychological state definition uses the vigor-absorption-dedication framework originally developed by Schaufeli et al.

(2002), and the behavioral definition the brand consumption-contribution-creation model originally proposed by Muntinga et al. (2011). As the constructs of uses and gratifications theory include psychological and behavioral manifestations, our hypotheses are framed across both types of definitions.

We believe that the entertainment dimension of uses and gratifications theory is an important antecedent of engagement on WeChat, since people are looking to the platform for emotional relief and pleasure. Chen (2017) found entertainment value to be significantly related to WeChat engagement, as defined by “stickiness”, or the degree of brand consumption and contribution. In addition, hedonic value was shown to be related to the variables of liking behavior (Gan, 2017), share intention (Ma et al., 2018) and continuance intention (Ashraf et al., 2019; Zhang et al., 2017) on WeChat. Boyd (2008) also demonstrated the relevance of entertainment on engagement on MySpace. Our first hypothesis is thus as follows:

H1: Entertainment is positively related to engagement on WeChat, measured as a psychological state of vigor-absorption-dedication and behaviorally as brand consumption-contribution-creation.

Based on research by Chu et al. (2019), personal identity is also an antecedent of WeChat engagement. They found that the need for self-enhancement was significantly associated with engagement on the platform, as measured by the vigor-absorption-dedication psychological state framework. In addition, Osei-Frimpong et al. (2022) highlighted the importance of self-status seeking on engagement on Facebook. Boyd (2008) also demonstrated the relevance of entertainment on engagement on MySpace. These results are in line with our belief that people look to WeChat to strengthen their confidence and status, as defined in the personal identity dimension of uses and gratifications theory. Therefore, our second hypothesis is as follows:

H2: Personal Identity is positively related to engagement on WeChat, measured as a psychological state of vigor-absorption-dedication and behaviorally as brand consumption-contribution-creation.

The remuneration and empowerment dimensions of uses and gratifications theory have not been tested as antecedent variables by WeChat researchers. However, Buzeta et al. (2020) showed that these dimensions were the most critical drivers of engagement as defined by the brand consumption-contribution-creation model, working with four different social media platforms – Facebook, Instagram, Reddit and YouTube. We feel that individuals use WeChat to receive remuneration via economic incentives and to achieve empowerment through influence over consumers, companies and brands, per the expanded uses and gratifications theory. Our third and fourth hypotheses are thus as follows:

H3: Remuneration is positively related to engagement on WeChat, measured as a psychological state of vigor-absorption-dedication and behaviorally as brand consumption-contribution-creation.

H4: Empowerment is positively related to engagement on WeChat, measured as a psychological state of vigor-absorption-dedication and behaviorally as brand consumption-contribution-creation.

We are not hypothesizing that the uses and gratifications theory dimension of integration/social interaction will be significant as an antecedent variable in our research. Chu et al. (2019) did not find the related dimension of sense of belonging to be significantly associated with engagement on WeChat. They suggested that relationship needs were not a critical motive for WeChat use, with a more important factor being the desire to showcase lifestyle and achievements (embodied in the dimension of personal identity). We are also not hypothesizing that the uses and gratifications theory dimension of information will yield significant results as an antecedent variable. Chen (2017) did not find usefulness, a dimension related to information, to be significant, explaining that usefulness was perceived more as a standard function than an added value of WeChat.

4. Methodology

We implemented a survey on WeChat, an ideal representative of an all-service platform, in Mainland China in the Mandarin language in October 2021. WeChat, with 1.3 billion users worldwide (Dixon, 2023) offers consumers a highly convenient tool to organize their lives and satisfy all their personal needs in one place. Consumers can use WeChat for social purposes, texting, payment, and other specific uses,

such as hailing rides or booking flights. The platform features WeChat Moments, or friendship circles, which has been shown to have positive social effects (Duan et al., 2020; Pang, 2019; Zhao et al., 2018). It also has a payment mechanism, WeChat Pay, which has become a beneficial feature (Greiffenhagen et al., 2023; Matemba et al., 2018). WeChat Moments and WeChat Pay together have enabled social commerce on the platform (Chen et al., 2019; Yang et al., 2016).

The survey was conducted through Tencent Survey, an online questionnaire platform developed by Tencent. We selected this survey platform because, first, it is one of the most widely used platforms in China; Tencent Survey has collected 3.3 billion questionnaires for 44.996 million users. Second, Tencent Survey could better assist us to recruit more respondents from our target group, WeChat users, as WeChat is a Tencent product. Third, WeChat Pay (one of China's two online payment methods and another Tencent product) could easily be used for paying each respondent 15 RMB (roughly \$2.25) for participation. Ethical approval for our study was received from the Pepperdine University Institutional Review Board under protocol 21-06-1614, and the study adheres to the Declaration of Helsinki. In addition, written informed consent was obtained from participants.

Our survey collected data from 805 individuals who were 20 years of age or older and used WeChat on a daily basis, with the sample 41.12% male and 58.88% female. Age composition was 82.24% 20-29, 13.04% 30-39, 3.73% 40-49, and 0.99% 50+. All demographic and WeChat use statistics, including gender, age, individual income, education, place of residence, when started using WeChat, and how often use WeChat on an average day, are summarized in Table 1.

Table 1. Demographics and WeChat usage of survey sample.

	N	%
Gender		
Male	331	41.12%
Female	474	58.88%
Age		
20-29	662	82.24%
30-39	105	13.04%
40-49	30	3.73%
50+	8	0.99%
Individual Income		
Less than 36,000 RMB	384	47.70%
36,000-143,999 RMB	310	38.51%
144,000-299,999 RMB	73	9.07%
300,000-419,999 RMB	25	3.11%
420,000-659,999 RMB	7	0.87%
660,000 or greater RMB	6	0.75%
Education		
Middle school or less	37	4.60%
High school	95	11.80%
Two-year college	253	31.43%
University	381	47.33%
Graduate school	39	4.84%
Place of Residence		
Shanghai-Jiangsu-Zhejiang	107	13.29%
Beijing-Tianjin	93	11.55%
Guangdong	129	16.02%
Other provinces	476	59.13%
Place of Residence		
Northeast China	50	6.21%
East China	277	34.41%
Central China	134	16.65%
North China	104	12.92%
South China	150	18.63%
Northwest China	24	2.98%
Southwest China	66	8.20%
When started using WeChat		
2014 or Earlier	213	26.46%
2015-2017	445	55.28%
2018 or Later	147	18.26%
How often visit WeChat on average day		
Less than 2 hours a day	222	27.58%
2 to 4 hours a day	113	14.04%
More than 4 hours a day	470	58.39%

The six antecedent variables of entertainment, integration/social interaction, personal identity, information, remuneration and empowerment were measured with an 18-item Likert scale used by Buzeta et al. (2020). This scale provides a validated tool for measuring the constructs included in the expanded version of uses and gratifications theory (Muntinga et al., 2011). Questions were adapted for appropriateness on the WeChat platform. In addition, we used scales validated in two different studies to test consumer engagement from a psychological state and behavioral perspective. The vigor-absorption-dedication psychological state measure of engagement was tested using a 9-item Likert scale developed for the WeChat platform by Chu et al. (2019). The brand consumption-contribution-creation behavioral measure of engagement was based on a 17-item Likert scale used by Buzeta et al. (2020), but reduced down to 10 Likert items adapted for appropriateness on WeChat. Administration of the scales measuring antecedent variables (AV), psychological state engagement (PSE) and behavioral engagement (BE) was rotated to avoid order bias, for a total of six different scale rotations: (1) AV/PSE/BE, (2) AV/BE/PSE, (3) PSE/AV/BE, (4) PSE/BE/AV, (5) BE/PSE/AV, and (6) BE/AV/PSE. In addition, demographic and/or WeChat use questions separated the administration of each scale in the survey in order to diminish common method bias (Podsakoff et al., 2012).

Table 2 summarizes questions, as well as their means (M) and standard deviations (SD). These questions tested six antecedent variables, three psychological state engagement variables, and three behavioral engagement variables. Each variable was composed of a series of multiple Likert-type items which represented similar questions. The average of the responses to these Likert

Table 2. Survey questions.

Type	Variable	Question	M	SD
Antecedent Questions	Entertainment	I use WeChat because it is entertaining. (Q1)	3.18	1.08
		I use WeChat because it relaxes me. (Q2)	3.42	1.02
		I use WeChat because it is fun. (Q3)	3.45	1.01
	Integration/ Social Interaction	I can interact with people like myself on WeChat. (Q4)	4.10	0.83
		I use WeChat to belong to a group with the same interests as mine. (Q5)	3.91	0.88
		I have made interpersonal connections to other people on WeChat. (Q6)	4.11	0.76
	Personal Identity	On WeChat, I can present to others who I am. (Q7)	3.72	0.86
		I try to adjust my comments on WeChat to improve my reputation among other WeChat users. (Q8)	3.25	1.00
		WeChat allows me to express my opinions. (Q9)	3.87	0.78
	Information	WeChat gives me something to talk about with my friends. (Q10)	3.98	0.84
		I use WeChat to keep up with what's going on. (Q11)	3.93	0.85
		I use WeChat to remember something important. (Q12)	3.85	0.90
	Remuneration	I use WeChat to get a discount. (Q13)	3.43	0.99
		I use WeChat to get the red envelopes. (Q14)	4.06	0.87
		I use WeChat to access other financial benefits. (Q15)	3.60	0.98
	Empowerment	On WeChat, I want to give suggestions to other users. (Q16)	3.43	0.95
		On WeChat, I want to influence other people. (Q17)	3.22	1.01
		On WeChat, I want to influence companies and organizations. (Q18)	3.14	1.04

(Continued)

Table 2. Continued.

Type	Variable	Question	M	SD
Psychological State Questions	Vigor	I can continue using WeChat for a very long period at a time. (Q22)	3.57	1.01
		I feel vigorous when I am using WeChat. (Q23)	3.41	0.91
		I devote a lot of energy to WeChat. (Q24)	3.42	1.00
	Absorption	I am rarely distracted when using WeChat. (Q25)	3.22	0.97
		My mind is focused when using WeChat. (Q26)	3.29	0.98
		I pay a lot of attention to WeChat. (Q27)	3.28	1.01
	Dedication	I am enthusiastic in using WeChat. (Q28)	3.62	0.95
		I found WeChat full of meaning and purpose. (Q29)	3.75	0.87
		I am interested in using WeChat. (Q30)	3.78	0.84
Behavioral Questions	Consumption	I read (product/service) brand-related posts and/or watch videos created by the company on WeChat. (Q35)	3.68	0.89
		I read (product/service) brand-related articles and/or watch videos created by influencers on WeChat. (Q36)	3.58	0.92
		I read (product/service) brand-related information and/or watch videos created by my contacts on WeChat. (Q37)	3.58	0.92
	Contribution	I follow brands on WeChat. (Q38)	3.64	0.95
		I follow brand-related influencers on WeChat. (Q39)	3.29	1.07
		I "like" brand-related posts and/or videos on WeChat. (Q40)	3.41	1.00
	Creation	I comment on brand-related posts and/or videos on WeChat. (Q41)	3.32	1.03
		I share brand-related posts and/or videos on WeChat. (Q42)	3.20	1.04
		I initiate brand-related posts and/or videos on WeChat. (Q43)	3.22	1.08
		I write brand-related reviews on WeChat about products I try or use. (Q44)	3.44	1.01

items was used to construct the respective variable. This type of construct allowed the application of the central limit theorem, which supports the parametric analysis in the study. The assumption can be verified by the histograms of the linear regression residuals discussed in [section 5.2](#) (see [Figure 1](#)).

To test the internal consistency reliability of each variable, we calculated both Cronbach's alpha (α) and McDonald's omega (ω). All alphas and omegas are at least 74%, indicating strong internal consistency for each variable (see [Table 3](#)).

These scales were further validated through convergent and discriminant validity analyses, which can be observed from the factor loading matrix exhibited in [Table 4](#). Strong correlations between questions of the same variable showed convergent validity (see bold numbers in [Table 4](#)). For discriminant validity, weak correlations were found between questions of different variables; in [Table 4](#), most of those numbers were omitted because they were insignificant. Additionally for convergent validity, we calculated average variance extracted (AVE) and composite reliability (CR). Although for a few (five out of twelve) variables, AVE was a bit less than 0.5, all CRs were close to or above 0.7 (see [Table 4](#)). According to [Lam \(2012\)](#), the convergent validity for these variables is considered to be adequate.

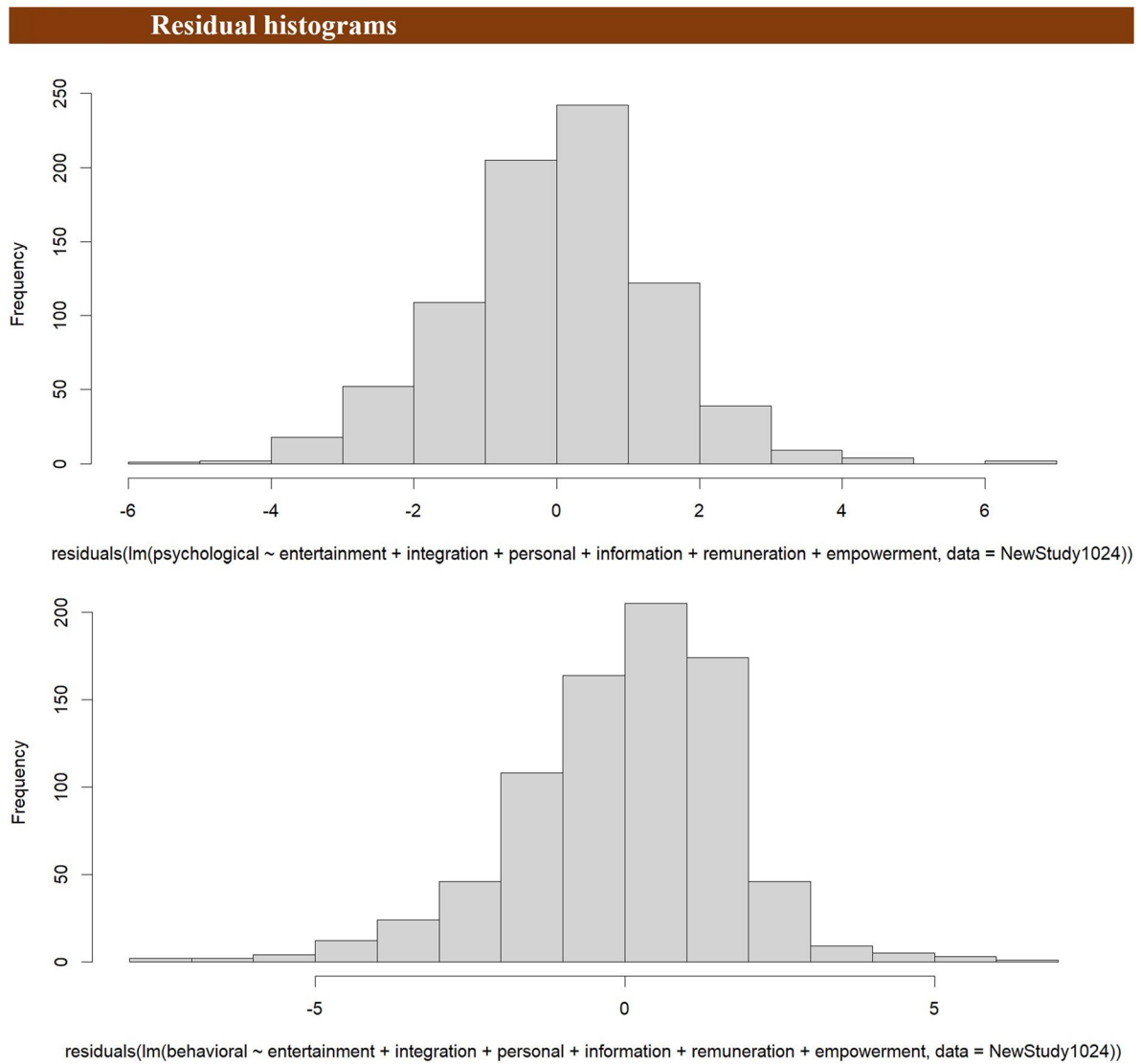


Figure 1. Residual histograms.

Table 3. Internal consistency (α and ω) and convergent validity (AVE and CR).

Variable	α	ω	AVE	CR
Entertainment	0.85	0.85	0.649	0.847
Integration/ Social Interaction	0.81	0.81	0.522	0.763
Personal Identity	0.75	0.75	0.472	0.699
Information	0.74	0.74	0.479	0.711
Remuneration	0.74	0.75	0.551	0.784
Empowerment	0.83	0.84	0.632	0.825
Vigor	0.79	0.79	0.471	0.693
Absorption	0.87	0.87	0.572	0.779
Dedication	0.84	0.85	0.609	0.818
Consumption	0.80	0.81	0.496	0.724
Contribution	0.88	0.90	0.433	0.753
Creation	0.79	0.79	0.594	0.810

5. Results

5.1. Correlational analyses

We use two nonparametric statistical techniques to measure the relationship between ordinal variables: the Spearman rank-order correlation and Kendall's tau-b correlation. Table 5 shows Spearman's ρ and Kendall's τ between the antecedent variables and the psychological state and behavioral engagement variables. Correlations are positive for all pairs at a .32 level or above.

Table 4. Convergent and discriminant validity.

	Entertainment (MR3)	Remuneration (MR4)	Personal Identity (MR1)	Information (MR6)	Integration/ Social Interaction (MR5)	Empowerment (MR2)
Q1	0.72			−0.13	0.11	
Q2	0.87					
Q3	0.82					
Q4		0.81				
Q5		0.75				
Q6	−0.13	0.59	0.27			
Q7		0.12	0.99	−0.18		
Q8			0.50			0.24
Q9			0.43	0.33		
Q10		0.23		0.55		
Q11			−0.17	0.97		
Q12				0.44		
Q13			0.13		0.66	
Q14		0.11			0.69	−0.10
Q15			−0.15		0.86	
Q16			0.17		0.20	0.43
Q17						0.94
Q18						0.91

Table 5. Nonparametric correlation – Spearman's ρ and Kendall's τ .

	Entertainment		Integration/ Social Interaction		Personal Identity		Information		Remuneration		Empowerment	
	ρ	τ	ρ	τ	ρ	τ	ρ	τ	ρ	τ	ρ	τ
Vigor	0.50	0.40	0.50	0.40	0.51	0.41	0.54	0.44	0.43	0.34	0.47	0.38
Absorption	0.44	0.35	0.40	0.32	0.45	0.36	0.47	0.38	0.39	0.30	0.49	0.39
Dedication	0.50	0.40	0.53	0.44	0.48	0.39	0.56	0.46	0.42	0.33	0.44	0.35
Consumption	0.35	0.28	0.37	0.30	0.40	0.33	0.41	0.34	0.40	0.32	0.32	0.26
Contribution	0.43	0.33	0.43	0.34	0.49	0.38	0.49	0.38	0.41	0.32	0.44	0.35
Creation	0.39	0.31	0.39	0.32	0.50	0.41	0.47	0.38	0.39	0.31	0.44	0.36

Analyses of correlations were also implemented by gender. Table 6 compares Spearman's ρ between antecedent variables and engagement measures and shows that the relationships were consistently higher for males than females. A possible explanation for these results could be that due to the popularity of more female oriented platforms like Xiaohongshu (Thomala, 2023a), WeChat is less salient for females than males as a social media platform. The identification of gender differences is in line with other research which has found variation in adoption of online platforms by gender (Ajina et al., 2023).

In addition, correlation analyses were conducted by age group (see Table 7). The associations between antecedent variable and engagement measures were consistently greater for the 30+ than 20-29 age group. An explanation for these results may be that because of the popularity of platforms like Douyin (TikTok in China) among people under 30 (Thomala, 2023b), WeChat is less salient for younger than older groups.

5.2 Regression analyses

In our regression analyses, we used the antecedent variables as the independent variables, and the psychological state engagement and behavioral engagement variables as the dependent variables. Table 8 shows the variance inflation factor (VIF) to measure the amount of multicollinearity. The minimum of 1.519 for entertainment and maximum of 2.251 for personal identity indicate that the independent variables have fairly low correlation under ideal conditions.

As shown in Table 1, the sample (survey respondents) was representative of the population. The central limit theorem assures that the constructed Likert scales are normally distributed; this assumption is supported by the histograms of the linear regression residuals (see Figure 1).

Using the antecedent variables as the independent variables and the psychological states as the dependent variables, we found that five out of six antecedent variables significantly affected psychological states

Table 6. Nonparametric correlation – Spearman's ρ (male vs. female).

Gender	Entertainment		Integration/ Social Interaction		Personal Identity		Information		Remuneration		Empowerment	
	M	F	M	F	M	F	M	F	M	F	M	F
Vigor	0.49	0.51	0.57	0.45	0.58	0.48	0.59	0.52	0.50	0.37	0.53	0.44
Absorption	0.47	0.42	0.47	0.33	0.48	0.44	0.55	0.41	0.45	0.34	0.54	0.45
Dedication	0.51	0.48	0.58	0.49	0.51	0.47	0.58	0.54	0.47	0.38	0.51	0.41
Consumption	0.42	0.27	0.43	0.31	0.52	0.32	0.52	0.32	0.45	0.35	0.41	0.26
Contribution	0.42	0.43	0.46	0.41	0.54	0.45	0.53	0.45	0.44	0.39	0.49	0.41
Creation	0.39	0.39	0.40	0.39	0.54	0.47	0.48	0.46	0.39	0.39	0.46	0.43

$n_{\text{male}} = 331$ and $n_{\text{female}} = 474$.

Table 7. Nonparametric correlation – Spearman's ρ (20-29 vs. 30+).

Gender	Entertainment		Integration/ Social Interaction		Personal Identity		Information		Remuneration		Empowerment	
	20-29	30+	20-29	30+	20-29	30+	20-29	30+	20-29	30+	20-29	30+
Vigor	0.46	0.65	0.46	0.66	0.45	0.73	0.51	0.67	0.37	0.64	0.43	0.62
Absorption	0.40	0.62	0.36	0.52	0.40	0.64	0.45	0.58	0.33	0.63	0.45	0.64
Dedication	0.46	0.63	0.52	0.57	0.44	0.59	0.53	0.64	0.38	0.56	0.41	0.53
Consumption	0.27	0.63	0.32	0.55	0.32	0.72	0.34	0.73	0.33	0.66	0.25	0.64
Contribution	0.38	0.62	0.41	0.51	0.42	0.73	0.44	0.69	0.37	0.59	0.38	0.68
Creation	0.34	0.57	0.38	0.44	0.45	0.70	0.44	0.61	0.34	0.59	0.40	0.62

$n_{20-29} = 662$ and $n_{30+} = 143$.

Table 8. Variance inflation factor of independent variables.

Entertainment	Integration/ Social Interaction	Personal Identity	Information	Remuneration	Empowerment
1.519	1.916	2.251	2.147	1.578	1.865

Table 9. Regression analysis – psychological state engagement.

		Vigor	Absorption	Dedication	Total Psychological State Engagement
Entertainment	unstandardized β	0.16	0.16	0.17	0.48
	standardized β	0.18	0.16	0.19	0.20
	p-value	2.0E-08***	2.2E-06***	1.5E-09***	5.8E-12***
Integration/ Social Interaction	unstandardized β	0.20	0.14	0.26	0.60
	standardized β	0.17	0.11	0.23	0.19
	p-value	1.4E-06***	4.5E-03**	7.4E-11***	4.4E-09***
Personal Identity	unstandardized β	0.09	0.04	-0.02	0.11
	standardized β	0.08	0.03	-0.02	0.04
	p-value	3.3E-02*	4.7E-01	6.3E-01	3.0E-01
Information	unstandardized β	0.23	0.22	0.27	0.72
	standardized β	0.20	0.18	0.24	0.23
	p-value	2.7E-07***	1.5E-05***	1.6E-10***	3.1E-11***
Remuneration	unstandardized β	0.10	0.05	0.09	0.23
	standardized β	0.09	0.04	0.09	0.08
	p-value	3.9E-03**	2.6E-01	7.0E-03**	5.4E-03**
Empowerment	unstandardized β	0.16	0.27	0.13	0.57
	standardized β	0.17	0.27	0.15	0.23
	p-value	1.6E-06***	2.0E-12***	3.5E-05***	4.7E-12***
R-Squared		0.4726	0.3822	0.4754	0.5606

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, . $p < 0.1$.

(see Table 9). Using total psychological state engagement as the dependent variable, it was indicated that the antecedent variables of entertainment (unstandardized coefficient = .48, standardized coefficient = .20, $p < .001$), integration/social interaction (unstandardized coefficient = .60, standardized coefficient = .19, $p < .001$), information (unstandardized coefficient = .72, standardized coefficient = .23, $p < .001$), remuneration (unstandardized coefficient = .23, standardized coefficient = .08, $p < .01$), and empowerment (unstandardized coefficient = .57, standardized coefficient = .23, $p < .001$) were significant factors. When focusing on each specific psychological state variable (vigor, absorption, and dedication) as the dependent variable, we had similar findings. The five antecedents of entertainment, integration/social interaction, information, remuneration, and empowerment were significant, except in the case of absorption for remuneration.

Therefore, hypotheses 1, 3 and 4 were supported. However, hypothesis 2 was not confirmed, as personal identity was not related to psychological state engagement. Another interesting result was that two variables not hypothesized to be associated with engagement – integration/social interaction, and information – were found to be significant. One explanation for these results may be the timing of the survey during the Covid-19 pandemic lockdown period in China. It could be that during this time frame, WeChat consumers were particularly driven to the platform to satisfy social and information needs rather than to build personal esteem. In addition, Pang and Zhang (2024) showed that user belongingness exhibited a positive association with emotional attachment on WeChat. Gan (2017), in a previous study, also found that information seeking was associated with liking behavior, a variable related to engagement, on the platform. The total psychological state engagement model has an R-squared of 0.5606, indicating that the antecedents can explain 56% of the psychological state engagement variation.

Investigating behavioral engagement, results are shown in Table 10. Five out of six antecedent variables, i.e., entertainment (unstandardized coefficient = .34, standardized coefficient = .13, $p < .001$), personal identity (unstandardized coefficient = .47, standardized coefficient = .15, $p < .001$), information (unstandardized coefficient = .66, standardized coefficient = .20, $p < .001$), remuneration (unstandardized coefficient = .46, standardized coefficient = .16, $p < .001$) and empowerment (unstandardized coefficient = .29, standardized coefficient = .11, $p < .01$), were significantly associated with total behavioral engagement. Findings were also significant for each specific behavioral variable (consumption, contribution and creation) except in the case of consumption for empowerment. Thus hypotheses 1, 2, 3 and 4 were all supported. In addition, an interesting finding was that information, a variable not hypothesized to be associated with engagement, was found to be significant. As with psychological state engagement, the Covid-19 pandemic may have heightened the salience of the information driver on behavioral engagement. The total behavioral engagement model had an R-squared of 0.4099, indicating that the antecedents could explain 41% of the behavioral engagement variation. Although the R-squared was relatively low, it was improved in multigroup analyses (see Section 5.3).

5.3. Moderation and multigroup analyses

In Section 5.1, we compared different subject groups along two dimensions, gender and age. In this section, we used the same two variables as moderators and extended the regression analyses from Section 5.2 to a multigroup context.

Using gender as the moderator, we found that it did not change the significance level of any coefficient in any model. In other words, the impact of the antecedents on the two types of engagement did not show significant changes due to the gender variable. This finding was also verified when we compared the multigroup model (the female group and the male group). However, the gender moderator

Table 10. Regression analysis – behavioral engagement.

		Consumption	Contribution	Creation	Total Behavioral Engagement
Entertainment	unstandardized β	0.09	0.13	0.12	0.34
	standardized β	0.10	0.14	0.11	0.13
	p-value	5.7E-03**	4.5E-05***	2.0E-03**	6.6E-05***
Integration/ Social Interaction	unstandardized β	0.11	0.10	0.02	0.23
	standardized β	0.10	0.08	0.02	0.07
	p-value	1.5E-02*	4.4E-02*	7.0E-01	6.2E-02.
Personal Identity	unstandardized β	0.12	0.12	0.23	0.47
	standardized β	0.11	0.11	0.17	0.15
	p-value	1.2E-02*	1.3E-02*	6.8E-05***	2.3E-04***
Information	unstandardized β	0.22	0.21	0.23	0.66
	standardized β	0.20	0.18	0.17	0.20
	p-value	6.9E-06***	2.4E-05***	5.8E-05***	3.4E-07***
Remuneration	unstandardized β	0.19	0.15	0.12	0.46
	standardized β	0.19	0.14	0.10	0.16
	p-value	8.8E-07***	1.0E-04***	5.8E-03**	4.8E-06***
Empowerment	unstandardized β	0.00	0.11	0.18	0.29
	standardized β	0.00	0.12	0.16	0.11
	p-value	9.1E-01	2.6E-03**	5.0E-05***	3.3E-03**
R-Squared		0.2952	0.3476	0.3320	0.4099

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, $p < 0.1$.

did improve the R-squared minimally. This effect occurred because there was always a group of subjects showing a higher R-squared than another group. For example, the R-squared for consumption was higher with females than males, while for creation it was higher with males than females. In other words, our model better explained the corresponding engagement in the group with the higher R-squared. Results are shown in Tables 11 and 12.

Using age as the moderator, we found that it changed the significance level of the coefficient for certain variables. Among subjects in the 20-29 age group, for example, the coefficient of the personal identity variable on vigor was insignificant for the 20-29 age group but was significant for the 30+ age group (see Table 13). In addition, remuneration had a significant impact on contribution for the 20-29 age group but no impact on the 30+ age group (see Table 14). Comparing the younger group to the older one, the impact of integration on almost all behavioral engagement variables was also significantly reduced for the older group, while information was more important (had a more significant impact) for the older group among all behavioral engagement variable. Bold numbers in Tables 13 and 14 indicate that the age moderator changed the significance level of the coefficient of the respective variable, i.e.,

Table 11. Gender moderator analysis (psychological state engagement).

		Vigor	Absorption	Dedication	Total Psychological State Engagement
Entertainment (coefficient β_i)	female	0.19***	0.16***	0.17***	0.52***
	male	0.11*	0.14**	0.14**	0.38***
	gender moderator	-0.09	-0.02	-0.03	-0.13
Integration/ Social Interaction (coefficient β_i)	female	0.15*	0.10	0.26***	0.51***
	male	0.24***	0.16*	0.25***	0.65***
	gender moderator	0.09	0.06	0.00	0.14
Personal Identity (coefficient β_i)	female	0.07	0.08	0.02	0.17
	male	0.15*	0.00	-0.06	0.09
	gender moderator	0.09	-0.08	-0.08	-0.07
Information (coefficient β_i)	female	0.27***	0.19**	0.27***	0.72***
	male	0.16*	0.27***	0.26***	0.70***
	gender moderator	-0.10	0.08	0.00	-0.03
Remuneration (coefficient β_i)	female	0.09*	0.02	0.08 .	0.19 .
	male	0.10 .	0.07	0.09 .	0.27*
	gender moderator	0.01	0.06	0.01	0.08
Empowerment (coefficient β_i)	female	0.16***	0.30***	0.11**	0.57***
	male	0.17**	0.25***	0.18***	0.61***
	gender moderator	0.01	-0.05	0.07	0.03
R-Squared	female model	0.4333	0.3348	0.4523	0.5128
	male model	0.5191	0.4422	0.4958	0.6123
	moderated model	0.4785	0.3855	0.481	0.5648

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, . $p < 0.1$.

Table 12. Gender moderator analysis (behavioral engagement).

		Consumption	Contribution	Creation	Total Behavioral Engagement
Entertainment (coefficient β_i)	female	0.06	0.14**	0.13*	0.33**
	male	0.11*	0.11*	0.10 .	0.33*
	gender moderator	0.05	-0.03	-0.02	0.00
Integration/ Social Interaction (coefficient β_i)	female	0.16*	0.12 .	0.07	0.35 .
	male	0.05	0.08	0.00	0.13
	gender moderator	-0.11	-0.04	-0.07	-0.22
Personal Identity (coefficient β_i)	female	0.10	0.13 .	0.17*	0.40*
	male	0.16*	0.12	0.31**	0.59**
	gender moderator	0.06	-0.01	0.14	0.19
Information (coefficient β_i)	female	0.15*	0.22***	0.30***	0.68***
	male	0.28***	0.20*	0.14	0.61**
	gender moderator	0.13	-0.03	-0.17	-0.07
Remuneration (coefficient β_i)	female	0.19***	0.15**	0.15*	0.49***
	male	0.17**	0.16*	0.09	0.41*
	gender moderator	-0.02	0.01	-0.06	-0.08
Empowerment (coefficient β_i)	female	0.00	0.12*	0.20***	0.31*
	male	0.01	0.12 .	0.15*	0.28 .
	gender moderator	0.00	0.01	-0.04	-0.03
R-Squared	female model	0.2343	0.3606	0.3699	0.4148
	male model	0.3597	0.3336	0.3014	0.4056
	moderated model	0.3018	0.3494	0.3387	0.412

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, . $p < 0.1$.

Table 13. Age moderator analysis (psychological state engagement).

		Vigor	Absorption	Dedication	Total Psychological State Engagement
Entertainment (coefficient β_i)	20-29	0.16***	0.15***	0.14***	0.44***
	30+	0.16*	0.18**	0.30***	0.64***
	age moderator	0.00	0.04	0.16*	0.20
Integration/ Social Interaction (coefficient β_i)	20-29	0.21***	0.15**	0.28***	0.65***
	30+	0.18 .	0.08	0.13	0.39
	age moderator	-0.02	-0.08	-0.16	-0.26
Personal Identity (coefficient β_i)	20-29	0.03	0.02	-0.01	0.05
	30+	0.31**	0.06	-0.12	0.25
	age moderator	0.28*	0.04	-0.11	0.20
Information (coefficient β_i)	20-29	0.24***	0.24***	0.24***	0.72***
	30+	0.15	0.18	0.48***	0.81**
	age moderator	-0.09	-0.06	0.24*	0.09
Remuneration (coefficient β_i)	20-29	0.10*	0.03	0.10**	0.22*
	30+	0.07	0.10	0.00	0.16
	age moderator	-0.03	0.07	-0.10	-0.06
Empowerment (coefficient β_i)	20-29	0.16***	0.27***	0.13***	0.56***
	30+	0.17*	0.29***	0.15 .	0.60**
	age moderator	0.01	0.01	0.01	0.04
R-Squared	20-29 model	0.4139	0.3376	0.4503	0.5167
	30+ model	0.6662	0.5776	0.5718	0.6956
	moderated model	0.4798	0.3872	0.483	0.5631

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, . $p < 0.1$.

Table 14. Age moderator analysis (behavioral engagement).

		Consumption	Contribution	Creation	Total Behavioral Engagement
Entertainment (coefficient β_i)	20-29	0.06 .	0.12***	0.10*	0.28**
	30+	0.16**	0.18**	0.18*	0.52**
	age moderator	0.10	0.05	0.08	0.24
Integration/ Social Interaction (coefficient β_i)	20-29	0.14**	0.14**	0.08	0.36**
	30+	-0.08	-0.18 .	-0.24*	-0.50*
	age moderator	-0.22 .	-0.32*	-0.32*	-0.86**
Personal Identity (coefficient β_i)	20-29	0.09	0.08	0.18**	0.35*
	30+	0.12	0.24**	0.37**	0.72**
	age moderator	0.03	0.16	0.19	0.37
Information (coefficient β_i)	20-29	0.18**	0.18**	0.22***	0.57***
	30+	0.54***	0.45***	0.35*	1.33***
	age moderator	0.36**	0.27 .	0.13	0.76*
Remuneration (coefficient β_i)	20-29	0.18***	0.18***	0.14**	0.50***
	30+	0.13 .	-0.05	-0.01	0.07
	age moderator	-0.05	-0.23*	-0.14	-0.43
Empowerment (coefficient β_i)	20-29	-0.02	0.11*	0.18***	0.27*
	30+	0.07	0.23**	0.23**	0.53**
	age moderator	0.09	0.12	0.05	0.26
R-Squared	20-29 model	0.2142	0.2911	0.2844	0.3409
	30+ model	0.6577	0.6525	0.5686	0.7072
	moderated model	0.3169	0.3662	0.3452	0.4286

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, . $p < 0.1$.

changed the effect of the independent variable on the dependent variable. These findings can also be verified through the multigroup model (the young-subject group and the old-subject group). Comparing the R-squared percentages, we found that the age moderator improved all R-squared percentages to some extent. In addition, the older group always had a much higher R-squared than the younger group, indicating that the antecedent variables could better explain psychological state and behavioral engagement for older subjects than younger ones.

6. Discussion

6.1. Conclusions

Our study's results indicate that a wide variety of underlying factors are associated with consumer engagement on WeChat, with the site living up to its reputation as an all-service platform. The antecedent variables of entertainment, information, remuneration and empowerment showed significant

relationships with both psychological state and behavioral measures of engagement, supporting previous work on the entertainment variable by Chen (2017), on the information variable by Gan (2017), and on the remuneration and empowerment variables by Buzeta et al. (2020). Integration/social interaction was significantly associated with engagement as measured via a psychological state metric, in line with Pang and Zhang (2024), and personal identity was significantly related to engagement as measured by a behavioral metric, supporting Chu et al. (2019). The special consumer dynamics of the Covid-19 pandemic lockdown period in China may help explain differences vs. hypotheses on the integration/social interaction, personal identity and information variables. In addition, the popularity of alternative social media platforms among women and younger individuals may have made the relationships between antecedent variables and WeChat engagement weaker among these groups. Based on the moderation and multigroup analyses, these effects seem particularly pronounced for the age variable. The findings provide new support for uses and gratifications theory by showing the relevance of variables in its expanded version on an all-service social media platform.

6.2. Theoretical implications

This research has provided the first test to our knowledge of the complete set of groupings in the expanded uses and gratifications theory on consumer engagement in an all-service social media platform. The study has also included psychological state and behavioral measures of engagement, in line with the theory's manifestation of both psychological and behavioral elements. Significant results for the four drivers of entertainment, integration/social interaction, personal identity and information show the relevance of the original constructs proposed by the theory (Katz et al., 1973). In addition, positive findings for the remuneration and empowerment antecedents support the efforts of Muntinga et al. (2011) and Buzeta et al. (2020) to add additional constructs to the theory which are pertinent for social media. Finally, our study expands the appropriateness of the theory by showing its applicability to social media in cultures outside the U.S., building on previous international work in Japan (Wang & Haapio-Kirk, 2021), Italy (Mainolfi et al., 2022) and Canada/Latin America (Ifinedo, 2016).

6.3. Practical implications

The findings in our study have useful implications for marketers who wish to use an all-service platform as a vehicle for building their brands. The most important message is that marketers need to work in a host of areas simultaneously to build consumer engagement. Content they develop for the platform should be entertaining in order to foster emotional relief and pleasure. It should also provide information, knowledge and understanding about the events and conditions in the world. In addition, marketers should, where possible, develop programs which provide WeChat consumers with some type of remuneration, particularly economic incentives. The positive results for the integration/social interaction variable also indicate the importance of fostering social contact among consumers with their family, friends and the larger world community. Finally, marketers should work towards creating content which allows consumers to shape their own identity and influence the perception of others. The significant findings in the areas of personal identity and empowerment support this kind of orientation.

6.4. Limitations and future research

A limitation of this study is that it was conducted during an unusual period of time, the Covid-19 lockdown in China. This timing may have given special salience to the drivers of integration/social interaction and information on engagement. The study should be replicated during a future period to see if the key relationships still hold. Another limitation is that the sample was heavily skewed to females (59%) and individuals between the ages of 20-29 (82%). A more even gender and age representation would give greater credence to the analysis of cross-tabulations.

Work in related research areas suggests a number of promising avenues for future studies. Schivinski (2021) has identified five different types of consumers – brand passionate, brand fan, low engaged,

brand curious, and prospect brand fan – based on cognitive patterns which stimulate social media engagement. It would be valuable to chart the relationship between these variables and the antecedents investigated in our research. Other lines of inquiry would be to evaluate the association between our drivers and online shopping (Nayak et al., 2022) as well as the broader areas of technology usage (Kiburu et al., 2023) and concept restoration (Li et al., 2023).

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Author contributions statement

Steven Bauer and Fang Tian were both involved in the conception and design of the work; the acquisition, analysis and interpretation of the data; the drafting of the paper and reviewing it critically for important intellectual content; and the final approval of the version to be published; and they agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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Data availability statement

The data that support the findings of this study are available from the corresponding author, Steven Bauer, upon reasonable request.

References

- Ajina, A. S., Javed, H. M. U., Ali, S., & Zamil, A. M. A. (2023). Are men from mars, women from venus? Examining gender differences of consumers towards mobile-wallet adoption during pandemic. *Cogent Business & Management*, 10(1), 2178093. <https://doi.org/10.1080/23311975.2023.2178093>
- Ashraf, R. U., Hou, F., & Ahmad, W. (2019). Understanding continuance intention to use social media in China: The roles of personality drivers, hedonic value, and utilitarian value. *International Journal of Human–Computer Interaction*, 35(13), 1216–1228. <https://doi.org/10.1080/10447318.2018.1519145>
- Boyd, D. (2008). Why youth (heart) social network sites: The role of networked publics in teenage social life. In D. Buckingham (Ed.), *Youth, identity, and digital media* (pp. 119–142). MIT Press.

- Buzeta, C., De Pelsmacker, P., & Dens, N. (2020). Motivations to use different social media types and their impact on consumers' online brand-related activities (COBRAs). *Journal of Interactive Marketing*, 52(1), 79–98. <https://doi.org/10.1016/j.intmar.2020.04.004>
- Chen, R. Y.-R. (2017). Perceived values of branded mobile media, consumer engagement, business-consumer relationship quality and purchase intention: A study of WeChat in China. *Public Relations Review*, 43(5), 945–954. <https://doi.org/10.1016/j.pubrev.2017.07.005>
- Chen, Y., Lu, Y., Wang, B., & Pan, Z. (2019). How do product recommendations affect impulse buying? An empirical study on WeChat social commerce. *Information & Management*, 56(2), 236–248. <https://doi.org/10.1016/j.im.2018.09.002>
- Chu, S.-C., Lien, C.-H., & Cao, Y. (2019). Electronic word-of-mouth (eWOM) on WeChat: Examining the influence of sense of belonging, need for self-enhancement, and consumer engagement on Chinese travellers' eWOM. *International Journal of Advertising*, 38(1), 26–49. <https://doi.org/10.1080/02650487.2018.1470917>
- Dessart, L., Veloutsou, C., & Morgan-Thomas, A. (2015). Consumer engagement in online brand communities: A social media perspective. *Journal of Product & Brand Management*, 24(1), 28–42. <https://doi.org/10.1108/JPBM-06-2014-0635>
- Dixon, S. (2023, February 14). Most popular social networks worldwide as of January 2023, ranked by number of monthly active users. Retrieved from <https://www.statista.com/statistics/272014/global-social-networks-ranked-by-number-of-users/>
- Duan, W., He, C., & Tang, X. (2020). Why do people browse and post on WeChat Moments? Relationships among fear of missing out, strategic self-presentation, and online social anxiety. *Cyberpsychology, Behavior and Social Networking*, 23(10), 708–714. <https://doi.org/10.1089/cyber.2019.0654>
- Dwivedi, A. (2015). A higher-order model of consumer brand engagement and its impact on loyalty intentions. *Journal of Retailing and Consumer Services*, 24, 100–109. <https://doi.org/10.1016/j.jretconser.2015.02.007>
- Gan, C. (2017). Understanding WeChat users' liking behavior: An empirical study in China. *Computers in Human Behavior*, 68, 30–39. <https://doi.org/10.1016/j.chb.2016.11.002>
- Greiffenhagen, C., Li, R., & Llewellyn, N. (2023). The visibility of digital money: A video study of mobile payments using WeChat Pay. *Sociology*, 57(3), 493–515. <https://doi.org/10.1177/00380385221104007>
- Ifinedo, P. (2016). Applying uses and gratifications theory and social influence processes to understand students' pervasive adoption of social networking sites: Perspectives from the Americas. *International Journal of Information Management*, 36(2), 192–206. <https://doi.org/10.1016/j.ijinfomgt.2015.11.007>
- Katz, E., Haas, H., & Gurevitch, M. (1973). On the use of the mass media for important things. *American Sociological Review*, 38(2), 164–181. <https://doi.org/10.2307/2094393>
- Khatri, P., Raina, K., Dutta, S., Pahwa, H., & Kumari, P. (2021). Reaction to COVID-19, social media engagement and well-being: A mediation analysis. *Labour & Industry: a Journal of the Social and Economic Relations of Work*, 31(4), 457–484. <https://doi.org/10.1080/10301763.2021.196623>
- Kiburu, L., Njiraini, N., & Boso, N. (2023). Social networks and consumer technology usage: A systematic literature review and future research directions. *Cogent Business & Management*, 10(1), 2153487. <https://doi.org/10.1080/23311975.2022.2153487>
- Lam, L. W. (2012). Impact of competitiveness on salespeople's commitment and performance. *Journal of Business Research*, 65(9), 1328–1334. <https://doi.org/10.1016/j.jbusres.2011.10.026>
- Li, P., Cho, H., Shen, C., & Kong, H. (2023). From context adaptation to context restoration: strategies, motivations, and decision rules of managing context collapse on WeChat. *Journal of Computer-Mediated Communication*, 29(1), zmad043. <https://doi.org/10.1093/jcmc/zmad043>
- Ma, L., Zhang, X., & Ding, X. Y. (2018). Social media users' share intention and subjective well-being. *Online Information Review*, 42(6), 784–801. <https://doi.org/10.1108/OIR-02-2017-0058>
- Mainolfi, G., Lo Presti, L., Marino, V., & Filieri, R. (2022). YOU POST, I TRAVEL. 'Bloggers' credibility, digital engagement, and travelers' behavioral intention: The mediating role of hedonic and utilitarian motivations. *Psychology & Marketing*, 39(5), 1022–1034. <https://doi.org/10.1002/mar.21638>
- Matemba, E. D., Guoxin, L., & Maiseli, B. J. (2018). Consumers' stickiness to mobile payment applications: An empirical study of WeChat Wallet. *Journal of Database Management*, 29(3), 43–66. <https://doi.org/10.4018/JDM.2018070103>
- McQuail, D. (1983). *Mass communication theory: An introduction*. SAGE Publications Ltd.
- Muntinga, D. G., Moorman, M., & Smit, E. G. (2011). Introducing COBRAs. *International Journal of Advertising*, 30(1), 13–46. <https://doi.org/10.2501/IJA-30-1-013-046>
- Nayak, S., Suhan, M., Nayak, R., Spulbar, C., Birau, R., & Gull, S. M. (2022). Antecedents to purchase intention in virtual market space in India: An empirical investigation. *Cogent Business & Management*, 9(1), 2003502. <https://doi.org/10.1080/23311975.2021.2003502>
- Osei-Frimpong, K., McLean, G., Islam, N., & Otoo, B. A. (2022). What drives me there? The interplay of socio-psychological gratification and consumer values in social media brand engagement. *Journal of Business Research*, 146, 288–307. <https://doi.org/10.1016/j.jbusres.2022.03.057>
- Pang, H. (2019). How can WeChat contribute to psychosocial benefits? Unpacking mechanisms underlying network size, social capital and life satisfaction among sojourners. *Online Information Review*, 43(7), 1362–1378. <https://doi.org/10.1108/OIR-05-2018-0168>
- Pang, H. (2020). Examining associations between university students' mobile social media use, online self-presentation, social support and sense of belonging. *Aslib Journal of Information Management*, 72(3), 321–338. <https://doi.org/10.1108/AJIM-08-2019-0202>

- Pang, H., Qiao, Y., & Zhang, K. (2024). Modeling pathway linking mobile social media intensity to attitude towards electronic word-of-mouth and engagement: The significant role of social trust and perceived homophily. *Technological Forecasting and Social Change*, 198, 123023. <https://doi.org/10.1016/j.techfore.2023.123023>
- Pang, H., & Zhang, K. (2024). Determining influence of service quality on user identification, belongingness, and satisfaction on mobile social media: Insight from emotional attachment perspective. *Journal of Retailing and Consumer Services*, 77, 103688. <https://doi.org/10.1016/j.jretconser.2023.103688>
- Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology*, 63(1), 539–569. <https://doi.org/10.1146/annurev-psych-120710-100452>
- Santos, C. R., Cheung, C. M. K., Coelho, P. S., & Rita, P. (2022). Consumer engagement in social media brand communities: A literature review. *International Journal of Information Management*, 63, 102457. <https://doi.org/10.1016/j.ijinfomgt.2021.102457>
- Schaufeli, W. B., Martínez, I. M., Pinto, A. M., Salanova, M., & Bakker, A. B. (2002). Burnout and engagement in university students: A cross-national study. *Journal of Cross-Cultural Psychology*, 33(5), 464–481. <https://doi.org/10.1177/0022022102033005003>
- Schivinski, B. (2021). Eliciting brand-related social media engagement: A conditional inference tree framework. *Journal of Business Research*, 130, 594–602. <https://doi.org/10.1016/j.jbusres.2019.08.045>
- Tan, S., & Chen, W. (2019). Can members' WeChat engagement affect relational outcomes in community-supported agriculture? Empirical evidence from China. *Agribusiness*, 35(1), 36–52. <https://doi.org/10.1002/agr.21590>
- Thomala, L. L. (2023a, June 30). Monthly active users of Xiaohongshu app in China 2020–2022. Retrieved from <https://www.statista.com/statistics/1327421/china-xiaohongshu-monthly-active-users/#:~:text=The%20Chinese%20lifestyle%20app%20Xiaohongshu,a%20third%20of%20its%20userbase>
- Thomala, L. L. (2023b, February 27). Share of Douyin (TikTok) users in China as of November 2022, by age group. Retrieved from [https://www.statista.com/statistics/1202727/china-douyin-user-age-distribution/#:~:text=Douyin%20\(TikTok\)%20user%20age%20distribution%20in%20China%202022&text=As%20of%20November%202022%2C%20one,as%20measured%20in%20November%202022](https://www.statista.com/statistics/1202727/china-douyin-user-age-distribution/#:~:text=Douyin%20(TikTok)%20user%20age%20distribution%20in%20China%202022&text=As%20of%20November%202022%2C%20one,as%20measured%20in%20November%202022)
- Tsai, W.-H. S., & Men, L. R. (2013). Motivations and antecedents of consumer engagement with brand pages on social networking sites. *Journal of Interactive Advertising*, 13(2), 76–87. <https://doi.org/10.1080/15252019.2013.826549>
- Wang, G., Zhang, W., & Zeng, R. (2019). WeChat use intensity and social support: The moderating effect of motivators for WeChat use. *Computers in Human Behavior*, 91, 244–251. <https://doi.org/10.1016/j.chb.2018.10.010>
- Wang, X., & Haapio-Kirk, L. (2021). Emotion work via digital visual communication: A comparative study between China and Japan. *Global Media and China*, 6(3), 325–344. <https://doi.org/10.1177/20594364211008044>
- Yang, S., Chen, S., & Li, B. (2016). The role of business and friendships on WeChat Business: An emerging business model in China. *Journal of Global Marketing*, 29(4), 174–187. <https://doi.org/10.1080/08911762.2016.1184363>
- Zhang, C.-B., Li, Y.-N., Wu, B., & Li, D.-J. (2017). How WeChat can retain users: Roles of network externalities, social interaction ties, and perceived values in building continuance intention. *Computers in Human Behavior*, 69, 284–293. <https://doi.org/10.1016/j.chb.2016.11.069>
- Zhao, Z., Zhu, M., & Hao, X. (2018). Share the gaze: representation of destination image on the Chinese social platform WeChat Moments. *Journal of Travel & Tourism Marketing*, 35(6), 726–739. <https://doi.org/10.1080/10548408.2018.1432449>