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Shahrokh Nikou

Abo Akademi University, snikou@abo.fi

Jie Guo

Xi'an Jiaotong University, jieguo_ec@qq.com

Harry Bowman

Delft University of Technology and Abo Akademi University, w.a.g.a.bouwman@tudelft.nl

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MOBILE SOCIAL NETWORK SERVICES: CHINESE USERS' ADOPTION PATTERNS

Nikou, Shahrokh, Åbo Akademi University (IAMSR) and TUCS, Joukahaisenkatu 3, 20500, Turku, Finland, snikou@abo.fi

Guo, Jie, Xi'an Jiaotong University, No.28, Xianning West Road, Xi'an, Shaanxi, 710049, China, jieguo_ec@qq.com

Bouwman, Harry, Delft University of Technology and Åbo Akademi University (IAMSR), Jaffalaan 5, 2628 BX Delft, The Netherlands, W.A.G.A.Bouwman@tudelft.nl

Abstract

Recent technological advancement in Telecommunications industry has enabled service providers and application developers to offer some of their services which used to be solely PC based for mobile devices as well. Given the prevalence of mobile data services, specifically mobile social network services, and application-stores such as Market (Andriod) and AppStore (Apple), it is crucial to understand user behaviour toward mobile service diffusion. The present study aims to investigate Chinese users' behaviour toward mobile social network services, based on a sample of 212 respondents who used the most popular mobile social network services such as Tencent QQ in China. Our analysis suggests that each construct, perceived enjoyment, social influence, critical mass and mobile accessibility of social network service makes a unique contribution to our understanding of mobile social network service usage behaviour.

Keywords: Mobile Social Network Services, Mobile Data Services, User Intention, Social Influence

1 Introduction

Due to the rapid growth and massive investment in mobile telecommunication industry in recent years, vast varieties of new mobile service innovations have been designed, developed, implemented, distributed and adopted. For instance, Apple's AppStore has over 600,000 apps and recently Android Market has also reached a milestone, hitting the 500,000th submitted apps. Whilst, mobile service providers have to make large-scale investment to acquire license for 3G and recently 4G mobile networks, with the introduction of WiFi and 4G mobile network such as Long Term Evolution (LTE), end-users can access unlimited digitalized and personalized contents and applications thorough their smart mobile devices (Dahlman, Parkvall, and Skold, 2011). Rapid growth in mobile technologies has enabled service and application providers to focus on developing, sometime highly innovative, applications and exploring new service concepts to earn back the huge investments in license and network roll out. However, due to the entrant of IP-based companies with their so called over-the-top disruptive services such as Facebook, Skype and Tencent QQ, mobile network operators see a steady decline of their voice and SMS service profit and revenue (Nikou, Bouwman and de Reuver, 2012). Moreover, based on technological advancement, end-users are expecting to have cheaper or even free voice and text-based services from IP-based companies –like Skype, Google with Google talk, WhatsApp, Viber and MSN live.

Mobile services can be categorized in many different ways, while some services are categorized as communication services, others can be featured as entertainment, information and transaction or web 2.0 services (Bouwman, Bejar, and Nikou, 2012). There are services which are mainly focused on individuals, while others have group-oriented purposes –like Facebook and Twitter. In recent years, social network services (henceforth referred to as SNSs) and specifically mobile SNSs have become increasingly popular and gained a massive attention among the individuals.

The popularity of SNSs among individuals becomes increasingly important research theme in individual IT acceptance research. To investigate individual technology acceptance, behavioural intention and actual use, several theories have been proposed, applied and tested. Some of these theories are, but not limited to, Technology Acceptance Model (Davis, 1989), Unified Theory of Acceptance and Use of Technology (Venkatesh, Morris, Davis, and Davis, 2003), Theory of Reasoned Action (Fishbein and Ajzen, 1975), and Theory of Planned Behaviour (Ajzen, 1991). In TAM, perceived usefulness and perceived ease of use are defined as the main determinants of accepting task-oriented information systems –like in management of information systems (Davis, Bagozzi, and Warshaw, 1989; Dillon, 2001; Venkatesh et al., 2003).

When, human-oriented interaction is involved with information systems such as social network services, there are avenues of research that may provide insights into understanding individual acceptance. However, empirical research examining whether the constructs defined exploring that traditional acceptance theories remain sufficient and applicable for explaining the individual intention to adopt mobile SNSs use is lacking. Furthermore, to the best of our knowledge, there is a lack of empirical research focusing explicitly on intention to use, benefits and values gained by using of mobile SNSs.

The purpose of this study is twofold. First, extending TAM model by adding some other determinants to investigate how individual profiles and preferences affect users' intention to use mobile SNSs. We do so by placing four dimensions as constructs, i.e., perceived enjoyment, social influence, critical mass and individual mobile accessibility together with TAM model to build our conceptual framework. Second, to investigate constructs which have greater impact on behavioural intention of the users. The intention to use these constructs is that, they have been found to play a significant role in individual IT acceptance (Marwell, Pamela and Prahla, 1988; Venkatesh and Bala, 2008).

The findings of this study contribute to the debate surrounding several issues and discussion in (mobile) SNSs. Theoretically the results of this study contribute to understanding why users intend to adopt SNSs and how social norms and critical mass plays a role. More specifically the results of this

study contribute to adoption models on mobile technologies by understanding the potential audience behaviour that will be the key SNS participants.

To provide the required grounding for these research purposes, the rest of this paper is organized as follows. Section 2 discusses related work on social network services. Section 3 introduces the research model and formulation of the hypotheses. Section 4 and 5 provide the methodology and research results respectively. Finally Section 6 contains the discussions, conclusion and limitations.

2 Related Work and Theoretical Foundations

Social network service phenomenon can be defined as web-based services that allow individuals to create a public or semi-public profile, create a list of others with whom they share a connection and view or traverse their list of connections (Ellison, 2007). Another definition postulated by (Kwon and Wen, 2010) is that, SNS is an individual web page that allows online human-relationship built by collecting useful information and sharing it with specific or unspecific people. Social network services are varied in their features, capabilities and target group. For instance, some only have photo-sharing or video-sharing features, while some have built-in blogging (Yuta, Ono, and Fujiwara, 2007), instant messaging and voice-calling capability. Some web-based SNSs support mobile interactions –like Facebook, Tencent QQ, Twitter, MySpace, and Cyworld. Target audience can also be varied from specific geographical regions, like Hyves in the Netherlands or Orkut in Brazil. For example, Facebook was launched at Harvard University first, and then introduced to high school networks, followed by corporate networks and finally became available for everyone. Some sites are designed with specific ethnic, religious, sexual orientation, political, or other identity-driven categories in mind (Huang and Liu, 2009).

Social network services as a subset of ‘social media’ have expanded and become increasingly popular to provide different types of services to millions of people globally in recent years. For example, Facebook, it is now available in more than 70 languages, and has more than 800 million active users, of which 80% of the users are from outside of the U.S. and Canada (Facebook, 2012). In China, the largest internet community Tencent QQ has over 145 million concurrent users as of Sep 2011 (Tencent, 2012). Cyworld founded in 1999, is the most popular social network in South Korea. Moreover, Renren.com, the largest social network platform in China, provides relationships and interactions platform to improve the efficiency of communication within a group of individuals (Li, 2011). Social network services have gone beyond the traditional social network paradigm. In traditional social network theory the intention and focus are to connect some social entities such as individuals, groups or organizations to share mutual interests and values by socially meaningful often face-to-face relationships (Garton, Haythornthwaite, and Wellman, 1997). However, in recent years the focus of social network has shifted toward establishing online virtual community using computer as a mediating communication tool (Kwon and Wen, 2010). As a result of this paradigm shift, social network services have attracted the attention of a massive audience due to its diversity in application and usage possibilities.

The users of mobile social network services generally have different needs and intentions; they either use the service to build the relationships, maintain relationship, and keep in-touch within their network community or to perform a task. For instance, using for real-time video/audio sharing (Chang, Liu, Chou, Chen, and Shin, 2007), a tool to be used during election campaigns (Robertson, Vatrappu, and Medina, 2010), to form and maintain social capital (Ellison, Steinfield, and Lampe, 2007). Current types of applications allow individuals to build their personal profiles, inviting others to access their profiles, sharing interests and exchanging photos, emails and instant messages between each other (Kaplan and Haenlein, 2010). Furthermore, firms use social network platforms as a distribution channel to gain competitive advantage and promote their services or products (Stauss, 2000). It is argued that adoption of specific advanced mobile service and application (for example, mobile SNSs) is highly dependent on individuals’ lifestyle and the type of service involved (Bouwman et al., 2012; Liu and Li, 2010).

2.1 Technology acceptance model

Technology Acceptance Model (TAM) is by far the most broadly used theory in IS research to investigate individual IT acceptance. TAM proposed by (Davis, 1989), is based on two dominant determinates for system use, perceived ease of use (PEOU) and perceived usefulness (PU). The theoretical importance of perceived usefulness and perceived ease of use as determinants have overly been tested by past empirical IS research such as in e-commerce adoption (Gefen and Straub, 2000; Lee and Benbasat, 2004.), in computer technology acceptance (Davis et al., 1989), in health care (Holden and Karsh, 2010). The initial TAM model together with (PEOU and PU) is composed of three more constructs, (i) attitude toward using, (ii) behavioural intention and (iii) actual system use. The extended TAM model referred to as TAM2 proposed by (Venkatesh and Davis, 2000), included other key determinates such as social influence processes (subjective norm) and cognitive instrumental processes (job relevance). This is done to examine how the effects of these determinants change with increasing user experience over the time with the target system (Venkatesh and Davis, 2000).

To explain individual behaviour and intention to use social network services, other new variables according to the specific characteristics of the technology or system (mobile SNSs in here) have to be integrated to TAM model. Several past studies indicated that TAM provides reasonable explanation for examining individual acceptance of mobile service innovations (Kaasinen, Mattila, Lammi, Kivinen, and Väikkynen, 2011; López-Nicolás, Molina-Castillo, and Bouwman, 2008; Luarn and Lin, 2005). Nonetheless, it is recommended that in order to explain and to predict better the acceptance behaviour, additional explanatory variables are needed to incorporate with TAM (Lu, Yao, and Yu, 2005; Pedersen and Nysveen, 2003; Rogers, 1995; Venkatesh and Davis, 2000; Wang, Lin, and Luarn, 2006). Therefore, in this study, individual mobile accessibility, perceived enjoyment, social influence and critical mass constructs will be used to test individual behaviour toward SNSs and specifically mobile SNSs. Table 1 and Figure 1 summarize the definition of each determinant constructs and depicts the conceptual research model respectively.

Table 1. Definition of the constructs.

Construct	Definition	Reference
Mobile accessibility of social network service	Ability to access mobile social network services ubiquitously, regardless of time and place (anytime/anywhere)	(Coursaris and Hassanein, 2002; Mallat, Rossi, Tuunainen, and Oorni, 2006)
Critical mass	A small segment of the population that chooses to make big contribution to the collective action, while the majority do little or nothing	(Allen, 1988; Markus, 1987; Oliver, Marwell, and Teixeira, 1985)
Perceived ease of use	The degree to which a person believes using a mobile social network service would be free of effort	(Davis, 1989)
Perceived usefulness	The degree to which a person believes using a mobile social network service would enhance his or her task performance	(Davis, 1989)
Perceived enjoyment	Individuals adopt technology because they usage of particular technology is enjoyable	(Davis, Bagozzi, and Warshaw, 1992)
Social influence	Social influence is defined as the degree to which an individual perceives that important others believe he or she should use the new system	(Venkatesh et al., 2003)
Behavioural intention	Behavioural intention measures a person's relative strength of intention to perform a behaviour	(Fishbein and Ajzen, 1975)

3 Hypothesis

According to TAM theory, individuals accept and adopt new technology if they believe using a particular system would be easy and free of effort to perform their tasks. In the context of current

study, we can argue that if a mobile SNS is easy to use, then likelihood of its adoption will be increased, we can therefore postulate the following hypothesis:

H1: *Perceived ease of use has a direct positive effect on intention to use mobile SNSs.*

Moreover, several motivation theories have argued that behaviour 'usage' is determined by both intrinsic and extrinsic motivation (Davis et al., 1992; Lin, 2007; Teo, Lim, and Lai, 1999). Individuals adopt technology if they believe that such usage would be useful and they get benefits by using that. In the context of mobile social network service, we can therefore postulate the following hypotheses.

H2a: *Perceive usefulness has a direct positive effect on intention to use mobile SNSs.*

H2b: *Perceived ease of use has a direct positive effect on intention to use mobile SNSs through perceived usefulness.*

The plausible reason would be that individuals use mobile SNS only if using the service helps them to perform their task. Furthermore, perceived ease of use has also been found to have direct effect on perceived usefulness. If the technologies are difficult to use then, they are less likely to be perceived useful (Teo et al., 1999).

3.1 Mobile Accessibility

The concept of mobility can be explained as moving around, either in space or in time. The benefits of mobile technologies are labelled as anytime and anywhere having two dimensions "spatial and temporal" (Kleinrock, 1996). The motivation for using mobile social network services is highly relevant to the ability of accessing such services anywhere and anytime. According to the China Internet Network Information Center (CNNIC, 2011), until June 2010, the number of users who used social networking sites reached a milestone, hitting 235 million users with an increase of 59.18 million compared to the previous year. It is obvious that social network services have found their ways in everyday life of people, as CNNIC indicated the important role of SNSs in the establishment, maintenance and development of personal relationship and have become an important platform for social interaction.

We therefore expect that individual mobile accessibility has positive influence on perceived usefulness and perceived ease of use of mobile SNSs. We thus propose the following hypotheses:

H3a: *Mobile accessibility has a direct positive effect on perceived ease of use of mobile SNSs.*

H3b: *Mobile accessibility has a direct positive effect on perceived usefulness of mobile SNSs.*

3.2 Critical Mass

The concept of critical mass has been introduced by (Oliver et al., 1985), arguing that collective action usually depends on a 'critical mass' that behaves differently from typical group members. A critical mass of users is needed for users to receive an acceptable level of value from the use of products or services (Shapiro and Varian, 1999). Social network services as a subset of interactive media have two characteristics which are not shared by many other innovations. Markus (1987, p.491), argued that, "widespread usage creates universal access, a public good that individuals cannot be prevented from enjoying even if they have not contributed to it". Moreover, he pointed out that "use of interactive media entails reciprocal interdependence, in which earlier users are influenced by later users or vice versa".

Mobile SNS offers several benefits to its users, for example, they can share information and value via a direct real time exchange through their mobile handsets. The more mobile SNS users there are, the more the interactive interpersonal communication can be emerged. By communicating who is online and using SNS, critical mass is created, as such the more people are online the more relevant SNS becomes (Allen, 1988). The perceived usefulness and the perceived enjoyment of a mobile social

network service can be determined by the number of users. The total number of users increase if mobile SNSs provide benefits or they feel mobile SNS is useful. This induces the following hypotheses.

H4a: *Critical mass has a direct positive effect on perceived usefulness of mobile SNSs.*

H4b: *Critical mass has a direct positive effect on social influence.*

H4c: *Critical mass has a direct positive effect on perceived enjoyment of mobile SNSs.*

As causality between critical mass and social influence maybe inverse (hypothesis 4b), we intend to test alternative models with inverse causality between these two latent constructs.

3.3 Social Influence

Social influence or subjective norm (Fishbein and Ajzen, 1975) has been found to be as one the four direct determinants of user acceptance and intention to use a technology in UTAUT theory (López-Nicolás et al., 2008; Venkatesh et al., 2003). Social norm is defined as the degree to which people have the impression that important others believe they should use a new system (Venkatesh et al., 2003). When studying the relationship between social influence and intention to use mobile SNS, we can argue that individuals start using such services if (i) people who influence their behaviour think s/he should use the service and (ii), people who are important to them think s/he should use the service. Moreover, using of such services would be enjoyable for users, enjoyment is perceived to provide reinforcement in its own right: hedonistic aspects, (Van der Heijden, 2004), or plays at least an equal role to utilitarian motives (Bouwman, Carlsson, Molina-Castillo, and Walden, 2007). Therefore, we can postulate the following hypotheses. Figure 1 show the research model used in this study.

H5a: *Social influence has a direct positive effect on intention to use mobile SNSs.*

H5b: *Social influence has a direct positive effect on perceived usefulness of mobile SNSs.*

H5c: *Social influence has a direct positive effect on perceived enjoyment of mobile SNSs.*

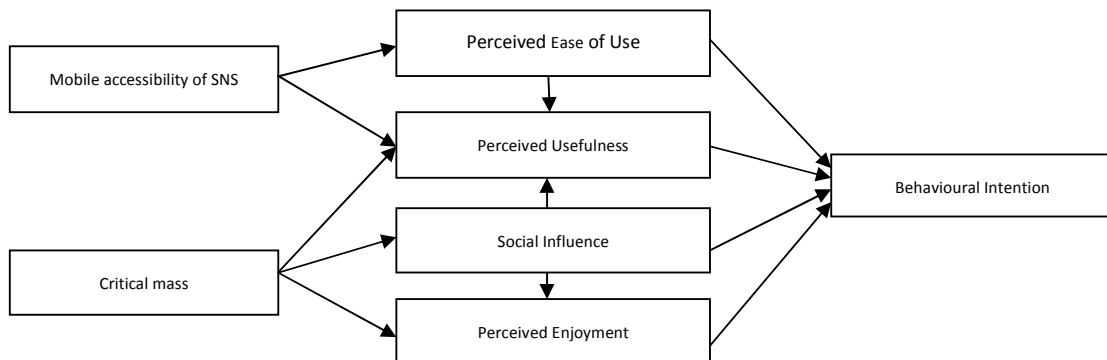


Figure 1. Conceptual model for mobile social network services, pointing arrows indicate direct impact on the ending point.

3.4 Perceived Enjoyment

Individuals adopt technology if its usage is enjoyable. Perceived enjoyment has been found to have significant effect on intention to use (Davis et al., 1992). Based on uses and gratifications research, the general idea is that users seek gratifications in media and technology use according to their needs and motivations (Lin, 1996). In the same vein, we can argue that if mobile social network services provide

individuals gratification and enjoyment, then it is more likely their intention to use of such services increase. Thus, we expect that perceived enjoyment have a positive influence on behavioural intention and following hypothesis is postulated.

H6: *Perceived enjoyment has a direct positive effect on intention to use mobile SNSs.*

4 Research Method

4.1 Sample

We used a survey technique to collect the data. We obtained in total 212 usable responses out of 263 for 20 days (from 26.12.2011 to 15.01.2012) through an online survey. The convenience sample was selected from individuals, mostly students, who are using mobile social network services on a regular basis available in China via Chinese SNS sites. 131 (61.8%) of the respondents were male and 81 (38.2%) were female. The respondents' age varied from 15 to 49 years with the average of 24 years. The participants used mobile SNS on average 12.88 times and spent on average 14.2 hours within the last 7 days.

There are some recommendations that should be taken into a close consideration while testing the reliability and usability of the sample. These recommendations are based on (Bentler and Chou, 1987), suggesting that the sample should be more than five times and less than ten times of parameters. Moreover, sample size of at least 200 is necessary for a critical model testing (Hoelster, 1983). In our study, based on the 212 valid responses we can thus argue that our model confirms those recommendations and further actions for validity and reliability of the model test can be conducted.

4.2 Measurement

In order to have a comprehensive list of measures, several prior studies have extensively been reviewed. In the current study, all measures for each constructs were selected from the previously validated measurements and slightly been modified to fit the specific context of mobile SNSs. To examine the intention to use of mobile SNSs, measures for perceived ease of use and perceived usefulness were derived from well-validated measures in TAM, based on studies of (Lin and Lu, 2011; Zhang and Lu, 2011). The measure for individual mobile accessibility and critical mass were derived from (Mallat et al., 2006; Markus, 1987). Furthermore, the measure for social influence and perceived enjoyment were developed from studies of (Kim, Kim, and Kim, 2010; Davis et al., 1992; Venkatesh et al., 2003). All items were measured using 7-point Likert scale from "Strongly disagree" to "Strongly agree". After the draft questionnaire was completed, a pilot test was run with mobile SNS users to verify the accuracy and to check any ambiguous items that may need to be revised. All items in this study were normally distributed. Table two demonstrates the list of items within each constructs.

Table 2. Question items used in the study.

Construct	Hypotheses	Items	Measure
Individual mobile accessibility	H3a	IMA1	I would like to be able to use mobile social network services to keep in touch everywhere I am
		IMA2	I would like to be able to keep in touch with my friends by using mobile social network services no matter where I am
	H3b	IMA3	I would like to be able to keep in touch with my friends by using mobile social network services no matter what time it is
Critical Mass	H4a	CM1	Many of my friends and relatives frequently use the mobile social network services
	H4b	CM2	I use the mobile social network services because I want to use the same communication media people around me use
	H4c	CM3	I use the mobile social network services because people around me use the mobile social network services in common
Perceived ease of use	H1	PEU1	My interaction with the mobile social network services would be clear and understandable
		PEU2	I would find the mobile social network services easy to use

Perceived usefulness	H2a	PEU3	Learning to operate the mobile social network services is easy for me
		PU1	I would find the mobile social network services useful in my life
	H2b	PU2	Using the mobile social network services enables me to accomplish my daily tasks more quickly
PU3		Using the mobile social network services increases my productivity	
Perceived enjoyment	H6	PENJ1	Using mobile social network services brings much pleasure to me
		PENJ2	Using mobile social network services makes life fun
		PENJ3	Using mobile social network services makes me feel happy and relaxed
Social influence	H5a	SI1	People who influence my behaviour think that I should use the mobile social network services
	H5b	SI2	People who are important to me think that I should use the mobile social network services
	H5c	SI3	People who are important to me would recommend using the mobile social network services
Behavioural intention		BI1	I am willing to use the mobile social network services in the near future
		BI2	I am likely to use the mobile social network services in the near future

4.3 Measurement model

The model included 20 items describing seven latent constructs: individual mobile accessibility, critical mass, perceived usefulness, perceived ease of use, perceived enjoyment, social influence, and behavioural intention. We used IBM SPSS Amos 19 software to test reliability and validity of the measurement model. The results show that the measurement model has a good fit with the data based on indication of their indices. For example, the adjusted goodness of fit index (AGFI) has a value of 0.82, comparative fit index (CFI) at 0.97, non-normed fit index (NNFI) at 0.90, and normed fit index (NFI) at 0.93 were all within the accepted thresholds. Moreover, the goodness-of-fit (GFI) value of 0.89 was slightly below the 0.90 benchmark, and the root mean square error of approximation (RMSEA) value of 0.065 falls well within the acceptable range of 0.05-0.08 (Browne and Cudeck, 1993). Moreover, constructs have been evaluated for discriminant validity. The value of < 0.85 indicates that discriminant validity is likely to exist between the two constructs, if the value is greater than 0.85 it is more likely that the two constructs overlap and measure the same thing (Campbell and Fiske, 1959). However, all the constructs used in this study had lower value than recommended (0.85). The psychometric properties of the measures were tested through the average variance extracted index (Fornell and Larcker, 1981) and the composite reliability index (Bagozzi and Yi, 1988). Both indexes were above the recommended benchmark of 0.50 and 0.60 respectively, as it can be observed in Table 3.

Table 3. Descriptive statistics and reliability.

Constructs	Items	Mean	SD	Cronbach's α	AVE ^a	SCR ^b	R ²	Lowest t-value
Perceived Usefulness	PU1	5.33	1.36	0.85	0.68	0.86	0.49	11.09
	PU2	4.75	1.38				0.79	
	PU3	4.69	1.40				0.71	
Perceived Ease of Use	PEOU1	5.17	1.27	0.87	0.70	0.87	0.66	12.82
	PEOU2	5.37	1.27				0.78	
	PEOU3	5.66	1.10				0.64	
Behavioural Intention	BI3	5.49	1.33	0.94	0.90	0.95	0.90	25.40
	BI4	5.57	1.29				0.90	
Social Influence	SI1	4.97	1.43	0.95	0.87	0.95	0.87	23.28
	SI2	4.94	1.41				0.92	
	SI3	4.90	1.42				0.82	
Individual Mobile Accessibility	MO1	5.30	1.43	0.95	0.86	0.95	0.83	22.84
	MO2	5.40	1.33				0.89	
	MO3	5.39	1.32				0.86	

Constructs	Items	Mean	SD	Cronbach's α	AVE ^a	SCR ^b	R ²	Lowest t-value
Critical Mass	CM1	5.06	1.40	0.88	0.71	0.87	0.64	13.11
	CM2	5.27	1.32				0.79	
	CM3	5.00	1.38				0.61	
Perceived Enjoyment	PENJ1	5.30	1.22	0.96	0.88	0.96	0.92	26.13
	PENJ2	5.31	1.21				0.88	
	PENJ3	5.27	1.20				0.84	

^a Average variance extracted.

^b Scale composite reliability.

5 Research Results

To test the research model and confirm the relationships between the hypotheses in this study, we used the Structural Equation Modelling (SEM) technique. The fit of the model is satisfactory, χ^2 (212) = 526.94, GFI: 0.89; NFI: 0.93; TLI: 0.95. Behavioural intention was explained by a variance 67%, perceived ease of use and perceived usefulness have explained variance of 42% and 29% respectively. Figure 2 presents each model's proven hypotheses, where bold lines indicate significant relationships and dotted lines indicate 'not supported'.

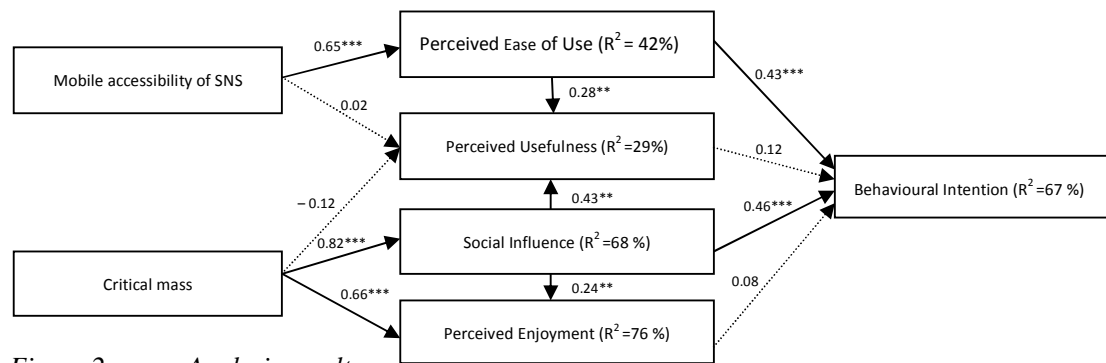


Figure 2. Analysis results.

Figure 2 shows the model and how the hypotheses were postulated, the fit indices for measurement and structural model indicated that critical mass has an impact on social influence; therefore hypothesis H4b is strongly supported. As we predicted that the perceived ease of use and social influence would positively affect behavioural intention, hypotheses H1 and H5a were supported in the model. Furthermore, social influence has an impact on perceived usefulness and enjoyment, thus hypotheses H5b and H5c were supported in the model. Interestingly perceived usefulness and perceived enjoyment, (hypotheses H6 and H2a), do not have any significant effect on behavioural intention to use mobile SNSs and hence not supported. In the case of mobile social network services, presumably users intend to use such services because their friends are using it, therefore, they may not care as much about perceived usefulness and enjoyment. Apparently social influence is stronger than the perceived enjoyment and perceived usefulness. Both can be seen more as a result than as a driver, but seen the explained variance this is more outspoken for enjoyment than usefulness. Consistent with our hypothesis, where we predicted that perceived ease of use (H2b) has positive effect on perceived usefulness, the results indicate that not only PEOU has direct effect on behavioural intention to use mobile social network service, but also has strong effect on perceived usefulness; therefore the hypothesis is supported by the model. As for individual mobile accessibility, we could not find any explicit and direct relationship with perceived usefulness and therefore H3b is not supported, while

H3a was supported, meaning that individual mobile accessibility has a significant effect on ease of use. As for critical mass, we could not find any explicit direct relationship with perceived usefulness and therefore H4a was not supported in the model, although there is an indirect effect via social influence. Moreover, as expected, we found strong relationships between critical mass and perceived enjoyment, meaning that hypothesis H4c was confirmed.

6 Discussions, Conclusion and Limitations

Mobile social network services become increasingly popular among individuals. Mobile SNSs enable individuals to build personal, professional relationships and share knowledge. The current study develops a research model to examine and investigate individuals' intention to use mobile social network services in China. The model proposed in this study is an extended TAM model in which, individual mobile accessibility, critical mass, social influence and perceived enjoyment are integrated to TAM model. The results of the current study suggest that in order to have better understanding of the individual's intention to use mobile SNSs, we need to include other variables in the model rather than perceived usefulness and perceived ease of use. The current research framework asserted that user's behavioural intention toward using mobile SNSs is determined by social influence and critical mass. Moreover, the results indicate that behavioural intention to use mobile SNSs is strongly affected by those two critical predictors. Furthermore, the study findings indicate that, perceived usefulness and enjoyment have no significant effect on behavioural intention. A plausible reason can be, individuals intend to use mobile SNSs because their friends or relatives are using it, and as such they may not care about the perceived usefulness and enjoyment. Social influence plays a significant role in behavioural intention and also has a positive direct effect on enjoyment. This might be a cultural effect (Hofstede, 1984), in which collectivism plays an important role, but also confirming the hedonistic orientation of young people in modern China. Moreover, the study findings indicate that user perception of accessing the mobile SNSs anywhere/anytime (mobility) is positively associated with the perceived ease of use.

Similar to other studies, there are some limitations in our study which need to be addressed. First, this research was conducted via a convenient sampling and the target sample was chosen from young-adult individuals. Therefore, our sample may not be the representative of the entire Chinese population. Moreover, the results are only applicable to China and it would be interesting if similar results would be obtained in other, western societies. As prior research indicated that the determinants of behavioural intention vary in different cultures and countries (Lee et al., 2011; Leong et al., 2011)

Second, the current research has used a limited set of predictors (constructs) and having other predictors such as actual use, context of use, and habit within the research model may result in different findings. It can be wondered if this is a strong or a weak point of TAM model. Finally, the next step would be research on perceived enjoyment as dependent concept and moving from intention to actual use behaviour.

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