

## **Empirical Study About the Motivations for Using Multifunctional Social Media: Based upon the Uses and Gratifications Theory**

*(Full Paper)*

Shui Wang\*, Southwestern University of Finance and Economics, China, waterkemodo@163.com

Chuan Luo, Southwestern University of Finance and Economics, China, Luochuan@swufe.edu.cn

Peishan Jiang, Southwestern University of Finance and Economics, China, Jps813@163.com

### **ABSTRACT**

Social media is a kind of online platform which used by people to share contents and contact each other via virtual communities and networks. With the development of information technology, it becomes neoteric and multifunctional. In order to examine what factors affecting individuals' usage intentions for the various functions of social media, we proposed a model based on the uses and gratifications theory, this theory indicates there are three types of motivations, named as social motivation, utilitarian motivation and hedonic motivation, then six factors derived from the three motivations are presented. We collected 404 samples from the QQ users from 77 cities in China, with statistical analysis, the result shows that four of them can significantly affect individuals' usage intentions of QQ' various functions beyond as an instant messenger. This study extends current understanding about the usage motivations of social media and it can be a reference for future research in this field.

*Keywords:* Social media, uses and gratifications theory, motivation, user adoption

---

\*Corresponding author

### **INTRODUCTION**

Different from traditional contact ways such as letter and telegram, social interaction based on computer networks brings us a convenient and fast way to communicate with others. With the gradually evolution and development, social media came out, more than communicate with our acquaintances, this technology acts on helping us to build social networks or social relations with other people who share similar personal or career interests, activities, backgrounds or real-life connections (Obar & Wildman, 2015).

In the beginning, social media's main function was Instant messaging (IM), it generally deemed as a text-based tool whose sending and receiving short messages almost synchronously via the internet (Shiu & Lenhart, 2004). Later, as it said in Boyd and Ellison's (2010) article, social media possesses a variety of new technical features, and they allow individuals to construct a public/semi-public environment, articulate a list of other users that they share a connection with, and view their lists of connections in the system. In addition, with the high-speed development of information technology, many new functions about social media appeared, meanwhile it frequently consorts with other fields and brings trans-disciplinary functions, such as electronic game, books, music, video. Nowadays, social media are always comprehensive and multifunctional. At present, there are many social media in the world, billions of people use them every day. The largest social media platform in this world is Facebook with approximately 1.79 billion monthly active users worldwide, the second is QQ, it has 887 million monthly active users (Facebook, 2016; Tencent, 2016). In addition, other social media platforms, such as Twitter, LinkedIn, MySpace and WeChat also have numerous users in the world, and each of them has various kinds of functions.

Since there are millions of people use it, social media has a huge influence on our daily life, the significance of studying it becomes prominent. What is the future direction of social media, and which aspects of it should improve? These questions are worthy of concern. In order to explore these issues, we adopt uses and gratifications theory (UGT), this theory stands in the users' position and focuses on why and how they use a specific media to satisfy their needs.

What we want to investigate is about the motivations for people using social media, a number of similar studies have been conducted in this research field. However, as we mentioned in preceding text, social media is continually evolving and more and more new functions appearing, these functions can not only assist us in communication area, but also applied in various aspects of our life, this issue was rarely mentioned in previous literature. In order to fill in the research gap, our research concluded the new functions of social media in three aspects, respectively, they are social motivation, convenience of living and working and amusement. Aiming at these three aspects, we want to know what factors can motivate people using a multifunctional social media, the results can tell us which kinds of social media functions are influential, so we can arouse more attention to them and put forward practical suggestions to social media industry.

In this research, we collected data from the users of QQ, mainly because it is the largest social media platform in China. In the beginning, QQ was a simple instant messaging chat software, later it developed rapidly and extended its functions. As Ma Huateng, the Chairman and CEO of Tencent said "we have sought to enrich the lives of our users through technology, prompting

us to expand from communications to social networking, digital media, digital entertainment, and a world-leading technology and payments infrastructure."(Tencent, 2016) Now QQ has become a compound social media platform covering diversified aspects, so it can be an appropriate example for our research about the usage intentions of multifunctional social media platforms.

The paper proceeds as follows. In next section, we review previous research in the social media area and introduce UGT as the theoretical background of this study. In Section 3, we propose our research model and hypotheses; In Section 4, we expound the research methodology includes the processes of development the measurement instruments, collected and analyzed data, and tested the hypotheses, After that; in Section 5, we analyze the results from the previous section; Finally, we discuss the findings, implications and limitations of our study in Section 6.

## LITERATURE REVIEW AND THEORETICAL BACKGROUND

### Social media

Social media is defined as an online platform, used by people to build social networks or social relations with others who has similar interests, activities, backgrounds or real-life connections (Obar & Wildman, 2015). In some works the term "social network service" was also put forward, it has similar definition with social media, and some literatures mentioned social media as social networks (Boyd & Ellison, 2010) . For preciseness, in this paper, we may pay more attention to the contents belong to the scope of "social media", but the relevant contents of "social network service" could also be well references.

According to Obar and Wildman's research(2015), recently, social media have 4 common features, respectively are:

- 1) Social media are based on the concept of "Web 2.0". Put forward in 1999, Web 2.0 emphasizes the usability and interoperability for users, under this circumstance, we can create, communicate, collaborate and share diversified content (Dinucci, 1999). Therefore, social media is always interactive,
- 2) Social media's content is user-generated. Users of modern social media always owe their profile pages, they can upload their text, photo and video, chat with friends and watch other people's content, most actions happened in a first-person perspective.
- 3) Users need send service-specific profiles to the social media platforms, these profiles are mostly personal identifying information, with which we can find and communicate with each other, furthermore, many network functions, such as sharing, voting, liking and comparing the score of games need the user profiles, profiles are the backbone of social media.
- 4) Social media build online social networks by connecting a person's profile with the profiles belong to others. Users always create a social network by setting a list of people which they want to contact with, they can see the information of the members and manage their interactions through this list, at the same time, they are in others' lists. In addition, many social media allow users to set up a group in which the members have same interest, purpose or real-life communication.

Our research focuses on individuals' motivations for using the various kinds of functions of social media. Previous research has observed related issues, in respect of Facebook, scientists found that computer-mediated communication motivation can be a mediator variable between personality traits and attitude toward Facebook (Yan & Chua, 2017), but motivation is not this research's main objective, it just put forward generally as a mediator variable and lack of further detailed analysis. Dhir (2017) aims at psychosocial attributes of well-being and stand in a personal perspective, investigating a number of personal factors that drive adolescents' intensive using of Facebook. The result showed online sociability and bridging of social capital were the significant predictors of adolescents' intensive using of Facebook, it confirms the importance of social factors, but we think more aspects should take into consideration not only psychological factors, and the scope of users can be wider.

Besides, there are a number of researches about other social media, Salehan (2017) use a motivation-participation-performance framework to investigate the factors affect individuals participating in social media activities. The respondents are from a few social media platforms, such as Cyworld (a Korean social media), Twitter and Facebook. In this article, motivations are divided into four categories, they are vertical social motivation, horizontal social motivation, hedonic motivation, and utilitarian motivation, they respectively have effects on the participation in various degree. This research can be an applicable reference to us in respect to the definition and classification of motivations, but this research only focuses on using social media' sharing and collaboration functions.

The above-mentioned studies have made significant contributions in the research are of social media, but there are still some issues that beyond their consideration. As mentioned above, with the development of information technologies, social media are getting constant improvement, our research aims at exploring the antecedent factors of usage of comprehensive functions of social media, we hope our study could fill the vacancy to some extent in this research field.

### Uses and gratifications theory

Originated in 1940s, uses and gratifications theory (UGT) was developed from a number of prior theories about the socio-psychological communication tradition, this theory utilizes an audience-centered approach, which helps us understanding mass communication, explains why people choose one media over alternatives to fulfil their various needs (Severin & Tankard, 2001). Observing from a new perspective, UGT focuses on "what do people do with media?" instead of "what does media do to

people?"(Katz, 1959).

UGT has been widely used to the researches about traditional media, such as newspaper (Berelson, 1949) and TV (Mcquail, Blumler, & Brown, 1972). At a very early age around 1944, researchers began a work on investigating the reasons what influence people to choose specific types of media, they interviewed a number of soap opera fans and investigated why people listened to soap operas, according to this study, gratifications of audiences can be identified to three types, they are emotional, wishful thinking, and learning (West, Turner, & Zhao, 2010). Besides, McQuail, Blumler, and Brown (1972) had a research on the 1964 election in American by investigating people's motivations for watching certain political programs on TV. They suggested that the uses of different types of media could be classified into 4 categories: diversion, personal relationships, personal identity and surveillance.

Stepping into the information age, with the appearance and development of internet, scholars applied UGT to identify motivations for using Internet. For example, UGT is used to research people's usage motivations in mobile network (Leung & Wei, 2000), online game (Wu, Wang, & Tsai, 2010) and social media platforms. For instance, researchers found that the main motivations for people using social media sites in MySpace and Facebook are finding old friends, making new friends, learning about events, creating social functions, and feeling connected (Raacke & Bondsraacke, 2008). Besides, in a research about Facebook users' gratifications related to their civic participation offline (Park, Kee, & Valenzuela, 2009), authors interviewed a lot of college students about their level of agreement with specific reasons for using Facebook groups, the results showed that there were four needs for using Facebook groups, respectively are socializing, entertainment, self-status seeking, and information. In addition, a recent study used UGT to investigate the motivations for participating in social media interactions, it indicates that there are three categories of motivations which can satisfy people's needs: utilitarian motivation, social motivation and hedonic motivation (Salehan, Kim, & Kim, 2017). Utilitarian motivation is goal-oriented with practical purpose, social motivation is a motivation about social relationship and hedonic motivation is related to the fulfillment of hedonic expectations.

Based on the prior researches, we assume that people's usage intentions of the various functions of social media are stimulated by various motivations. We apply the UGT to our study and generate the hypothesis, and the three major types of motivations, namely social motivation, utilitarian motivation, and hedonic motivation are used to build our model, in the next section, the research model will be put forward and later we will have empirical analysis on it.

#### RESEARCH MODEL AND HYPOTHESES

Based on the UGT, in this study, three major types of motivations for people's usage intentions of various functions of the social media are identified, they are social motivation (Relationship benefit, Subjective norm and Social connection), utilitarian motivation (Perceived usefulness and Image enhancing), and hedonic motivation (Enjoyment). Figure 1 depicts our research model.

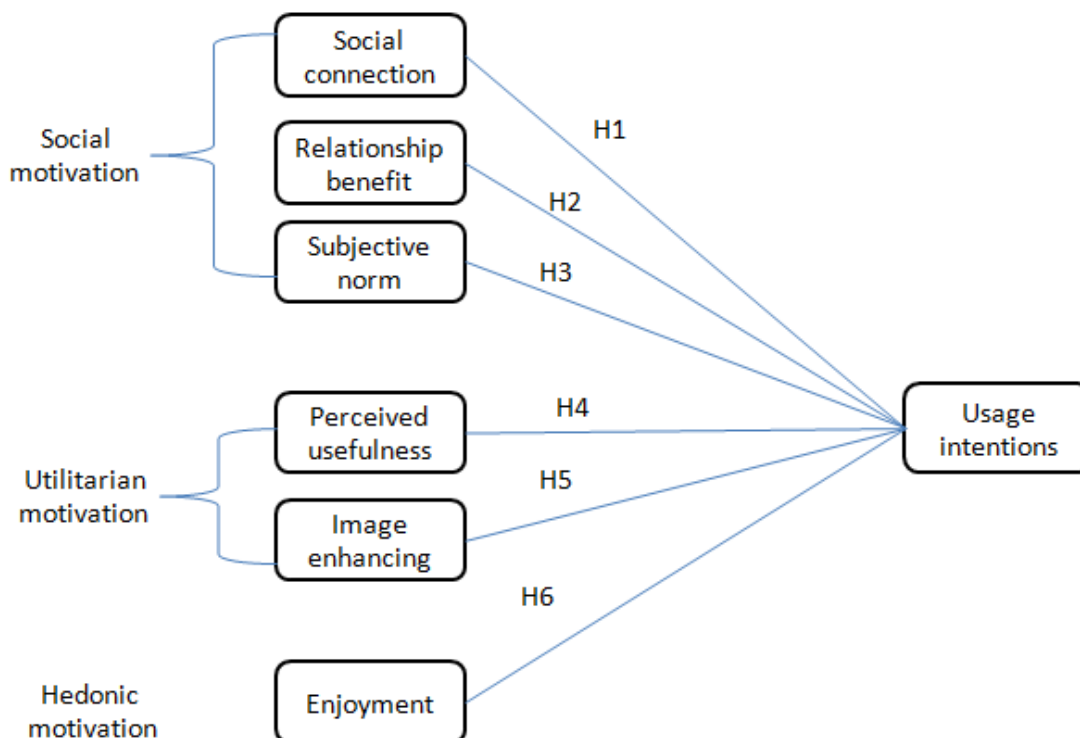


Figure.1: Research model.

### **Social motivation**

Social motivation is defined as a motivation for maintaining social relationship. People can use media to satisfy interpersonal needs, and use interpersonal communication to satisfy their psychological needs, the social media, in particular, can be an instrument for interpersonal communication (Flanagin & Metzger, 2010).

Previous literatures indicated that social or interpersonal interactions can be the reasons for people using social media (Ebersole, 2000), we use two factors, social connection and relationship benefit to describe the interpersonal interactions.

Social connection, also named as social relations or social interaction, is any relational ties between two or more individuals. In this study, high social connection means people are willing to spend plenty of time for keeping in touch with their current friends. They can interact with others by chatting in QQ, posting messages in QQ space (something like blog) or in other ways (e.g., play QQ game and video chat), by this way, people can maintain and strengthen the relationship with others.

When using social media, people would get relationship benefit, it emphasis on establishing relationship with new friends , we consider that people use social media, not only for keeping connections with their current friends and acquaintances, but also want to extend their social circle. With the help of social media, users can find people with similar interest and purpose online, or get in touch with unfamiliar persons in an organization or a specific place in real world.

As mentioned above, social connections and relationship benefits are important purposes for using social media, the social media can help user strengthen social relationship with current friends, they also can make new friends with others, so we predict:

*H1. Social connection can positively affect people's usage intention of the various functions of social media.*

*H2. Relationship benefit can positively affect people's usage intention of the various functions of social media.*

Meanwhile, we consider the subjective norm may also significantly affect peoples' usage intention of the various functions of social media. Subject norm is a kind of social influences, which conceptualized as the pressure that people perceive from important others to perform, or not to perform a behavior ; Schepers and Wetzels (2007) regarded subjective norm as a factor influence people accepting a technology. As we point out before, enormous people use social media, most of us cannot avoid being affected by the people around us, so we take subjective norm into our model because people may feel the pressure that from others. In a situation of high social norm, the sense of pressure will compel users using social media in order to adapt to their group, so we predict that subject norm will promote the usage intention of the various functions of social media, then the hypothesis are put forward:

*H3. Subjective norm can positively affect people's usage intention of the various functions of social media.*

### **Utilitarian motivation**

Utilitarian motivation deals with the use of social media for goal-oriented, mission-critical, rational, and decision-effective user tasks. It has been widely validated and applied in research about utilitarian-oriented information system, such as workplace and student settings (Venkatesh & Brown, 2001). In our study, we assume that users care about the benefits which they can get from using social media platforms, in this process, users may get convenience in work and daily life, they feel the quality of their life are improved, and their gratification for this effect brings their utilitarian motivations. In this study, utilitarian motivation is composed of two factors, Perceived usefulness and Image enhancing.

Davis (1989) developed a Technology Acceptance Model, a significant construct named "perceived usefulness." It was defined as " The degree to which an individual believes that using a particular system would enhance his or her job performance", this construct is widely used in the researches about the motivations for using an information technology. In our study, people not only believes that using social media system would enhance his or her job but also affect their daily life, so we extend "perceived usefulness" to describe the degree to which people think using social media can be conducive to their communication with others in daily life and job. If people think social media are conducive to them, namely they think social media is in high perceived usefulness, they will be glad to use them and get benefits, so it is reasonable to estimate that perceived usefulness can positively affect people's usage intention of the various functions of social media.

Rogers (2003) defined image enhancing as "the degree to which use of an innovation is perceived to enhance one's image or status in one's social system". In his Diffusion of Innovations Theory, he explained that "undoubtedly one of the most important motivations for almost any individual to adopt an innovation is the desire to gain social status". Besides, as discussed by Tornatzky and Klein (1982), researchers have found that the effect of Image is different from relative advantage, it should be considered as a separate factor. In our research, this factor means people think they can get recognition, image and fame from others by using social media platforms. High image enhancing brings people sense of social identity, they will feel the impressions in front of others are improved, so we propose that image enhancing can positively affect people's usage intention of the various functions of social media. Then we hypothesize:

*H4. Perceived usefulness can positively affect people's usage intention of the various functions of social media.*

**H5.** Image enhancing can positively affect people's usage intention of the various functions of social media.

### Hedonic motivation

Hedonic motivation is related to the fulfillment of hedonic expectations, it refers to using social media for happiness, fantasy, awakening and sensuality, we concluded it as enjoyment. In the field of information system, enjoyment is identified as a dominant motivator or a prominent intrinsic motivation driving an individual's use of a hedonic IS platforms (Ryan & Deci, 2000). The benefit of hedonic motivation is emotional fulfillment and the reasons why hedonic social media users using social media is because they enjoy experiential and emotional pleasure derived from doing so (Heijden, 2004).

In prior literatures, enjoyment has been proven to be a dominant and strong determinant of the intention to use a hedonic IS systems, such as playing games (Wu, Wang, & Tsai, 2010) and social network sites (Xu et al., 2012). Current social media has various functions that can entertain people, such as interesting news, e-books, chatting with friends, videos and games, a great number of people are willing to use these social media functions for getting enjoyment. We believe that it can be a significant factor of motivations for using social media. Hence, a hypothesis is posited:

**H6.** *Enjoyment can positively affect people's usage intention of the various functions of social media.*

## METHODOLOGY

### Data collection

We utilized online questionnaire to test the research model. The variables include six independent variable, social connection (SCCN), relationship benefit (RELA), Subjective norm (SBNR), perceived usefulness (USF), image enhancing (IMG) and Enjoyment (ENJ) and one dependent variable. All the items were adapted from prior research to ensure the content validity. They were measured with a seven-point Likert scale, ranging from strongly disagree (1) to strongly agree (7).

### Sample demographics

After dropped the invalid respondents who chose the same scores for all questions or spent less than 3 minutes in this questionnaire, a total of 404 respondents completed the questionnaires. Table 1 shows the demographic statistics of the samples. The subjects are from 77 cities of 23 provinces in China, their occupations include student, clerk, worker, manager, and others.

Table 1: Sample demographics.

Measure	Item	Frequency	Percentage(%)
Participants	In total	404	100
Gender	Male	196	48.5
	Female	208	51.5
Age	<=20	33	8.2
	21--25	216	53.5
	26--30	42	10.4
	31--35	33	8.2
	36--40	18	4.5
	40+	62	15.2
The period in using QQ	Less than 1 year	5	1.2
	1-3 years	29	7.2
	4-6 years	103	25.5
	7-9	111	27.5
	Above 9	156	38.6
Frequency of using QQ(per day)	Less than 1	78	19.3
	1-3	134	33.2
	4-6	55	13.6
	7-9	27	6.7
	Above 9	110	27.2
Average time of using QQ(per day)	Less than 20min	133	32.9
	20min-1h	105	26.0
	1h-2h	50	12.4
	2h-3h	39	9.6
	More than 3h	77	19.1

## RESULTS

### Measurement model analyses

In this study, confirmatory factor analysis (CFA) was adopted to test the measurement model, and we used convergent validity and discriminant validity to test the constructs of the research model. Convergent validity is used to measure whether each

measurement item is related to its corresponding theoretical construct. It can be assessed by examining item reliability, composite reliability, Cronbach's Alpha and average variance extracted (AVE) of each construct (Fornell & Larcker, 1981).

As shown in Table 2, we can see the Cronbach's Alpha is above 0.7, the composite reliability of all of the constructs is above 0.7, and the AVE is above 0.5, all of them are beyond their respective thresholds, so ensuring a good reliability. Table 3 shows that the factor loading of all items are above 0.7, it demonstrates that the item reliability is acceptable. All in all, these results confirmed our data has a high convergent validity.

Table 2: Descriptive results and internal consistency of model constructs.

Construct items	No. of items	Cronbach's alpha	AVE	Composite reliability
Social connection (SCCN)	3	0.913	0.852	0.945
Relationship benefit (RELA)	3	0.907	0.843	0.942
Subjective norm (SBNR)	3	0.908	0.845	0.942
perceived usefulness (USF)	3	0.937	0.888	0.960
image enhancing (IMG)	3	0.947	0.905	0.966
Enjoyment (ENJ)	4	0.948	0.865	0.963
Usage intentions (INT)	4	0.940	0.848	0.957

Table 3: Factor loadings and cross-loadings for all constructs

	SCCN	RELA	SBNR	USF	IMG	ENJ	INT
SCCN1	0.911						
SCCN2	0.919						
SCCN3	0.938						
RELA1		0.889					
RELA2		0.937					
RELA3		0.928					
SBNR1			0.931				
SBNR2			0.935				
SBNR3			0.891				
USF1				0.932			
USF2				0.947			
USF3				0.948			
IMG1					0.949		
IMG2					0.951		
IMG3					0.955		
ENJ1						0.928	
ENJ2						0.932	
ENJ3						0.931	
ENJ4						0.930	

INT1							0.930
INT2							0.942
INT3							0.924
INT4							0.886

Discriminant validity is the extent to which the items in a construct are distinct from those of other constructs; it can be verified by the square root of each construct's AVE is greater than its correlations with other variables. In Table 4, all constructs' square roots of the AVE are larger than other cross-correlations, that confirmed the discriminant validity of the constructs is acceptable.

Table 4: Square root of AVE and cross-correlations

	SCCN	RELA	SBNR	USF	IMG	ENJ	INT
SCCN	0.923						
RELA	0.656	0.918					
SBNR	0.666	0.602	0.919				
USF	0.554	0.667	0.594	0.942			
IMG	0.660	0.653	0.617	0.524	0.951		
ENJ	0.743	0.663	0.671	0.546	0.659	0.930	
INT	0.770	0.663	0.657	0.628	0.585	0.815	0.921

**Structural model analyses**

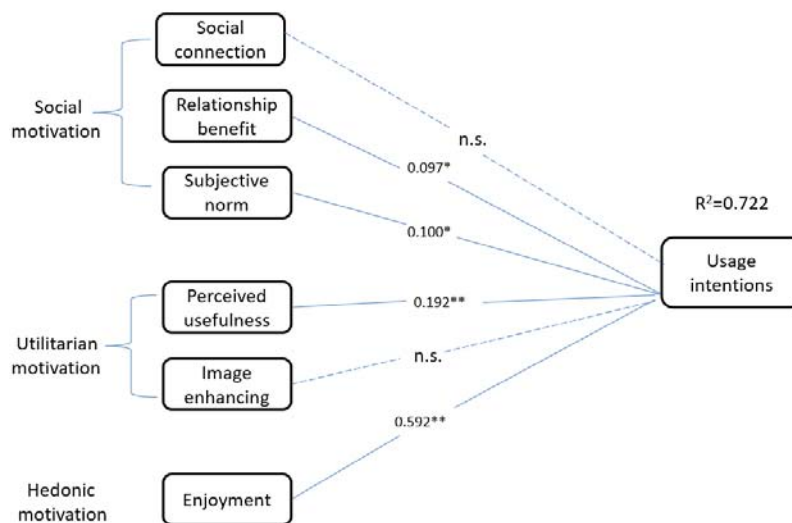
We utilized Smart PLS 2.0 to analyze the structural model (Ringle, Wende, & Will, 2005). As shown in Table 5, the full model is significant, with  $R^2 = 72.2\%$ . We find there are four constructs can affect the people' usage intentions for QQ, they are relationship benefit (RELA), subjective norm (SBNR), perceived usefulness (USF) and enjoyment (ENJ). With the condition of  $P < 0.01$ , USF's significant positive coefficient is 0.192 and the value of ENJ is 0.592, so H4 and H6 are supported, in addition, the RELA' path coefficients = 0.097 at  $p < 0.05$  level supports H2; the SBNR' path coefficients = 0.100 at  $p < 0.05$  level supports H3; However, social connection (SCCN) and image enhancing (IMG) cannot significantly affect the dependent variable, so H1 and H5 are not supported.

Table 5: Main effects test

Model	path coefficients	T	Result
SCCN	0.023	0.403	Insignificant
RELA	0.097	1.829	Significant
SBNR	0.100	1.993	Significant
USF	0.192	5.034	Significant
IMG	-0.046	0.945	Insignificant
ENJ	0.592	12.638	Significant

$R^2=0.722$ , Dependent Variable: Usage intention (INT).

The analyses result for all variables are shown in Fig.2.



Note: \* $p < 0.05$ , \*\* $p < 0.01$ ; n.s.: insignificant.

Fig. 2: The Results of the Research Model.

## DISCUSSION

### Discussion of results

Based on the uses and gratifications theory, this study intends to investigate how the three types of motivations (social, utilitarian and hedonic) affect people's usage intentions on QQ. We test six independent variables' effect on the dependent variable. The results show, the full model explained 72.2% of the reason for the usage intentions.

We find that there are four independent factors are significant in the research model, whereas other two are insignificant, they contradict with our hypotheses. For the four significant factors, the analyses results show that the hedonic motivation (enjoyment) has a very strong effect, its path coefficient is 0.592, it is the most important reason to affect people's usage intention. Besides, perceived usefulness, subjective norm and relationship benefit also have significant effects, but the path coefficient is relatively lower than enjoyment.

We consider that QQ's initial function is instant messaging, and many users have used it for long years, so people glad to spend their time on QQ in order to keep close connections with their friends, and social connection would significantly affect people's usage intentions, but the results showed it has no significant effects. It indicates that social connection is not the crucial factor that affects people's usage intentions. Besides, we also consider that image enhancing should be an important antecedent for individuals' usage intention. Whereas it has no significant effect, it means that no matter the social media (QQ) can improve their social status or not, it cannot affect users' attitude. We consider the insignificance may be due to the dominant effect of enjoyment. Many QQ users now may more incline to treat it as an entertainment tool, instead of a simple instant messenger. Thus, the influences of social connection and image enhancing are attenuated.

### Implications for research and practical implication

The findings of this study have made several significant implications for both academics and practitioners. From the theoretical perspective. First, this study aimed at investigating the factors affect people's usage intentions on the various functions of QQ, instead of just treating it as a communication tool. Thus, we enlarge the scope of the dependent variable. This is fit for current social media's development trend, almost all of them have been evolved to be multifunctional platforms. Second, we utilized UGT as the theoretical foundation in our research, to test the influences of social motivation, utilitarian motivation as well as hedonic motivation. The statistical results confirm all of the three kinds of motivations have significant roles. It confirms the applicability of this theory in our research context. Furthermore, we find that hedonic motivation takes the most crucial role in QQ. Third, we find some kinds of social motivation (social connection) and utilitarian motivation (image enhancing) are insignificant; this finding indicates that different kinds of social motivation and utilitarian motivation may take different roles in different research context. People may incline to use different cues to determine their usage intention.

From the practical perspective, we suggest the practitioners can improve the design of QQ according to our findings. As enjoyment takes a very crucial role to affect individuals' usage intention, we suggest the QQ need to improve its entertainment functions. Such as, design more amusement plug-ins in the QQ friend circle and QQ space; and include more popular games into 'QQ game.' Besides, perceived usefulness is also an important factor to affect users. Thus, QQ may also design more functions that can make life and work convenient, such as improve the payment function. Third, the QQ designers may also need to design some plug-ins to help users find new friends in QQ more conveniently, since the findings indicate relationship benefit is also a significant factor in the research model. Finally, as subjective norm can affect QQ users' usage intention, thus, we suggest that QQ may encourage its users to invite their friends to use various kinds of functions, especially the new functions they have experienced. By this way, it can attract more users to use its new functions embedded in QQ.

### Limitations and future research

We acknowledged that this study has some limitations. First, we only collect data from QQ, although it is one of the most popular social media. We understand that different social media have different features. Thus, our findings may not be applicable to other social media. We encourage future research to conduct more research in different social media; this will help us understand the crucial factors of social media usage intention more comprehensively. Second, as an initial study exploring the usage intention of the various functions of social media. We only include 6 factors into our research model, we suggest that future research incorporate more factors, to test their influences on individuals' usage intention.

## ACKNOWLEDGEMENT

This work is supported by the Fundamental Research Funds for the Central Universities (Grant No. JBK1802012, JBK120505), the Fund from Collaborative Innovation Center for the Innovation and Regulation of Internet-based-Finance (Grant No. JBK150407), and Fund from Laboratory for Financial Intelligence and Financial Engineering, Southwestern University of Finance and Economics.

## REFERENCES

- [1] Berelson, B. (1949). What'missing the newspaper'means. *Communications Research 1948-1949*, 111-129.
- [2] Boyd, D. M., & Ellison, N. B. (2010). Social network sites: Definition, history, and scholarship. *Journal of Computer-mediated Communication*, 38(3), 16-31.
- [3] Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *Mis Quarterly*, 13(3), 319-340.
- [4] Dhir, A., Kaur, P., Lonka, K., & Tsai, C. C. (2017). Do psychosocial attributes of well-being drive intensive Facebook use?



- Computers in Human Behavior*, 68, 520-527.
- [5] Dinucci, D. (1999). Fragmented Future. *Print*, 53(4), 32-33.
- [6] Ebersole, S. (2000). Uses and gratifications of the web among students. *Journal of Computer-Mediated Communication*, 6(1), JCMC614.
- [7] Facebook. (2016). Facebook Reports Third Quarter 2016 Results. Retrieved from <http://www.prnewswire.com/news-releases/facebook-reports-third-quarter-2016-results-300356153.html> (28 June 2018)
- [8] Flanagin, A. J., & Metzger, M. J. (2010). Internet use in the contemporary media environment. *Human Communication Research*, 27(1), 153-181.
- [9] Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, 18(1), 39-50.
- [10] Heijden, H. V. D. (2004). User Acceptance of Hedonic Information Systems. *Mis Quarterly*, 28(4), 695-704.
- [11] Katz, E. (1959). Mass communications research and the study of popular culture: An editorial note on a possible future for this journal. *Departmental Papers (ASC)*, 165.
- [12] Leung, L., & Wei, R. (2000). More than just talk on the move: Uses and gratifications of the cellular phone. *Journalism & Mass Communication Quarterly*, 77(2), 308-320.
- [13] Mcquail, D., Blumler, J. G., & Brown, J. R. (1972). The television audience: A revised perspective. *Media studies: A reader*, 271, 284.
- [14] Obar, J. A., & Wildman, S. (2015). Social media definition and the governance challenge: An introduction to the special issue. *Telecommunications Policy*, 39(9), 745-750.
- [15] Park, N., Kee, K. F., & Valenzuela, S. (2009). Being immersed in social networking environment: Facebook groups, uses and gratifications, and social outcomes. *Cyberpsychology & Behavior*, 12(6), 729-733.
- [16] Raacke, J., & Bondsraacke, J. (2008). MySpace and Facebook: applying the uses and gratifications theory to exploring friend-networking sites. *Cyberpsychol Behav*, 11(2), 169-174.
- [17] Ringle, C. M., Wende, S., & Will, A. (2005). SmartPLS 2.0. M3. Hamburg: SmartPLS. In. <https://www.smartpls.com/>.
- [18] Rogers, & EverettM. (2003). *Diffusion of innovations / 5th ed*: Free Press.
- [19] Ryan, R. M., & Deci, E. L. (2000). Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions. *Contemp Educ Psychol*, 25(1), 54-67.
- [20] Salehan, M., Kim, D. J., & Kim, C. (2017). Use of Online Social networking services from a theoretical perspective of the motivation-participation-performance framework. *Journal of the Association for Information Systems*, 18.
- [21] Schepers, J., & Wetzels, M. (2007). A meta-analysis of the technology acceptance model: Investigating subjective norm and moderation effects. *Information & Management*, 44(1), 90-103.
- [22] Severin, W. J., & Tankard, J. W. (2001). *Communication theories: Origins, methods, and uses in the mass media*: Pearson College Division.
- [23] Shiu, E., & Lenhart, A. (2004). *How Americans use instant messaging*: Pew Internet & American Life Project.
- [24] Tencent. (2016). Tencent Announces 2016 Third Quarter Results. Retrieved from <http://www.prnewswire.com/news-releases/tencent-announces-2016-third-quarter-results-300364123.html> (28 June 2018)
- [25] Tornatzky, L. G., & Klein, K. J. (1982). Innovation characteristics and innovation adoption-implementation: A meta-analysis of findings. *Engineering Management IEEE Transactions on*, EM-29(1), 28-45.
- [26] Venkatesh, V., & Brown, S. A. (2001). A Longitudinal Investigation of Personal Computers in Homes: Adoption Determinants and Emerging Challenges. *Mis Quarterly*, 25(1), 71-102.
- [27] West, R. L., Turner, L. H., & Zhao, G. (2010). *Introducing communication theory: Analysis and application* (Vol. 2): McGraw-Hill New York, NY.
- [28] Wu, J. H., Wang, S. C., & Tsai, H. H. (2010). Falling in love with online games: The uses and gratifications perspective. *Computers in Human Behavior*, 26(6), 1862-1871.
- [29] Xu, C., Ryan, S., Prybutok, V., & Wen, C. (2012). It is not for fun: An examination of social network site usage. *Information & Management*, 49(5), 210-217.
- [30] Yan, P. C., & Chua, Y. P. (2017). Do computer-mediated communication skill, knowledge and motivation mediate the relationships between personality traits and attitude toward Facebook? *Computers in Human Behavior*, 70, 51-59.

## APPENDIX A. Measurement Items

### Social connection (SCCN)

SCCN1: I'm keeping close relationship with many friends in QQ.

SCCN2: I spend a lot of time for communicating with my friends in QQ.

SCCN3: I frequently communicate with lots of friends in QQ.

### Relationship benefit (RELA):

RELA1: Using QQ' various functions can help me enhance the connection with new friends.

RELA2: Using QQ' various functions can help me make many new friends

RELA3: Using QQ' various functions can enlarge the circle of my friends.

### Subjective Norm (SBNR):

SBNR1: People who have an impact on me think I should use QQ.

SBNR2: People around me think I should use QQ.

SBNR3: The environment I was in prompted me to use QQ.

### Perceived usefulness (USF):

USF1: Using QQ' various functions greatly facilitate my communication with others.

USF2: Using QQ' various functions can increase the efficiency of communicating with others.

USF3: Using QQ' various functions make it easier to communicate with others.

### Image enhancing (IMG):

IMG1: Using QQ can improve my image within the circle of friends.

IMG2: Using of QQ can help me get approval from my friends.

IMG3: Using QQ can help me get a high reputation in the circle of friends

### Enjoyment (ENJ)

ENJ1: I like using the various functions of QQ.

ENJ2: Using the various functions of QQ makes me happy.

ENJ3: I feel satisfied with the various functions of QQ.

ENJ4: I feel pleasant when using the various functions of QQ.

### Usage Intention (INT):

INT1: I intend to continue using the various functions of QQ.

INT2: For a long time, I will continue to use the various functions of QQ.

INT3: I will often use the various functions of QQ in the future

INT4: I will continue to use the various functions of QQ when I need it