

# UNDERSTANDING USERS' ACCEPTANCE OF COMPETITIVE SOCIAL MEDIA: A RELATIVE MODEL

Xiao-Liang Shen, Economics and Management School, Wuhan University, Wuhan, China,  
xlshen@whu.edu.cn

Shun Ma, Economics and Management School, Wuhan University, Wuhan, China,  
957013534@qq.com

Yongqiang Sun, School of Information Management, Wuhan University, Wuhan, China,  
syq@mail.ustc.edu.cn

## **Abstract**

*Although information system acceptance has received considerable attention in the past two decades, prior studies on competing products are still relatively scant. In the new era of Web 2.0, consumers face with a wide range of products with similar functions and purposes, and therefore, they have to make choice among these competing technologies. Drawn from media richness theory and social identity theory, we develop a research model to investigate the alternative behavior that occurs in the competing products. An empirical study is conducted in two competitive social media platforms, i.e., light-blogging and micro-blogging. The results demonstrate that social identity positively affects we-intention in both light-blogging and micro-blogging. However, the impact of media richness on social identity in the two competing products are different. Specifically, three constructs in media richness, i.e., immediate feedback, multiple cues and personal focus positively affect social identity in light-blogging, while for micro-blogging, only immediate feedback and personal focus take effect. A relative model was further applied to explain users' media choice of competing products. The findings reveal that the relative perception towards immediate feedback, language variety and personal focus across the two social media will positively predict users' relative social identity, which further leads to their relative we-intention to use. In this regard, the relative model suggests that social media companies should focus their efforts and tactics on the relative advantages, as compared to their competitor. This study highlights the importance of applying the relative model into investigation of competitive social media acceptance, and is expected to shed some new lights on both research and practice.*

**Keywords:** *Competitive Products; Relative Model; Media Choice; We-Intention; Media Richness Theory; Social Identity Theory*

# 1 INTRODUCTION

According to the CNNIC report, the number of Internet users has reached 632 million and the Internet penetration rate reached 46.9% in the first half of 2014, up 1.1% from 2013 (CNNIC 2014). As a result, the social media platform enjoys a big boost with the continued growth of internet users and penetration rate. However, many social media suffers usage and activeness decline. For instance, more than 22.8% users reduce the time they stay in micro-blogging while only 12.7% users increase the use time (CNNIC 2014). One of the main factors account for this phenomenon is the serious homogenization and competition among social media platforms, which results in usage transference from one platform to another. Consequently, the usage time for a specific social media platform will be reduced. The homogenization and competition will also affect user's choice and usage behavior for a specific social media.

Though many user acceptance models have been widely used to study user's usage behavior, researchers mainly focus on a single social media platform rather than take the alternative products into consideration (Cheung et al. 2011; Lee et al. 2011; Lin et al. 2011; Shen et al. 2013; Venkatesh et al. 2003). Researchers have also ignored the effects of rival social media platform when they study the behavioral intention of a specific product (Lin et al. 2011; Lin et al. 2006). When measuring users' intention to choose and accept a specific product, psychological literature have widely demonstrated that other alternative products are very likely to affect their evaluation toward this product (Davis & Warshaw 1991; Jaccard 1981; Szajna 1994). For instance, when subjects are asked for measuring the intention to use the iPhone, they may carry out conclusions after comparing it with other competing products such as SumSung. Hence, measuring user behavioral intention of a specific social media platform without consideration of other competing alternatives may lead to some incomplete results. Considering these issues, this paper attempts to investigate the factors affecting the choice and acceptance of social media platforms by integrating the perception of alternative products.

In addition, in the new ere of Web 2.0, an increasing number of user behaviors possess the characteristic of mass collaboration and collective interaction with the proliferation and success of social computing, people may form a kind of mutual agreement together when participating in online activities. (Balzer & Tuomela 2003; Shen et al. 2012). In this regard, concentrating on individual alone when measuring user behavior is not applicable any more (Chiu et al. 2006; Kankanhalli et al. 2005; Wasko & Faraj 2000). The widespread use of social media depends on the social interaction and mutual collaboration among the users to disseminate information, hence the choice and use of social media in this context has the collective nature. Although user behavior is one of the most mature research topics in information system field, most of these researches focused on the individual intention approach rather than the collective intention approach (We-intention) (Li 2010; Lou 2005; Van Slyke 2007). Therefore, the second objective of this research is the understanding of collective acceptance intention for the social media platforms.

The remainder of this paper is organized as follows. The theoretical background for our proposed research model is reviewed in the following sections. This is followed by research model and hypothesis. Subsequently, research methodology and results are discussed. We end by briefly stating the key findings, limitations, and potential implications for both research and practice.

## **2 THEORETICAL BACKGROUND**

### **2.1 Social Media**

Social media have become increasingly pervasive in people's daily life. Many kinds of social media have emerged in recent years, such as micro-blogging, light-blogging, WeChat and different kinds of social networking service. These social media often include functions such as information sharing and dissemination, online comment and chatting, and collaboration (Ma & Chan 2014).

This paper investigates users' collective intentions (i.e., we-intention) to choose and accept the social media by utilizing light-blogging and micro-blogging. We select them because they are two competing and homogeneous social media platforms and have a large number of members. Previous studies on micro-blogging mainly focus on how and why people adopt micro-blogging to disseminate information (Moon 2011; Zhao & Rosson 2009). Specifically, Zhao and Rosson (2009) indicate that people using micro-blogging to disseminate information is a kind of informal communication and can bring personal and relational benefits. Meanwhile, rare researches on light-blogging are conducted in information systems field, although Tumblr (a kind of light-blogging in America) is viewed as one of Obama's top five technic tools by the PC World (a global IT professional magazine) (Paul 2009). Moreover, considering the fact that these two social media platforms have the similar functions, and users' evaluations toward one specific social media platform (e.g., light-blogging) are very likely influenced by other alternative product (e.g., micro-blogging) in the competing environment, therefore concentrating on single product cannot give accurate answers in the examination of users' choice and acceptance behavior to social media platforms (Cheung et al. 2011; Lee et al. 2007; Lin et al. 2011; Shen et al. 2013; Venkatesh et al. 2003). However, little researchers have considered this alternative behavior between these two competing products.

### **2.2 Alternative Behaviors**

The alternative behaviors have been examined in many contexts (Lin et al. 2011; Lin et al. 2006; Wang 2013). Chan et al. (2004) use the technology acceptance model (TAM) to examine the alternative behaviors in the situation of competing software products. They conclude that perceived usefulness (PU) has only effect on the product which possesses favorable evaluation. Lin et al. (2006) investigate the alternative behaviors in the context of instant message applications. Based on the theory of planned behavior (TPB), they find that the impacts of attitude and subjective norm variables on usage behavior are different in the TPB model for two competing products (i.e., MSN and ICQ). Moreover, the result of these effects in MSN has changed when take the competing application (i.e., ICQ) in to consideration. Hence it is reasonable to conclude that the competing instant message application can impact users' choice and acceptance behavior. In another study, they develop an extended theory of planned behavior to study the choice intention in competing web application platforms and carry out similar conclusions with their previous study. In addition, Wang (2013) evaluates the impacts of attitudes, norms, efficacy on social media choice intention by controlling alternative behaviors in other social media platforms. However, this study has not illustrated how other competing social media platforms influence users' choice intention.

Although some researchers have examined alternative behaviors in information system field, these studies mainly focus on the individual rather than the collective dimension. Moreover, prior literature

that investigates the alternative behavior mainly applies the traditional acceptance models, such as TAM or TPB, which may not give a deep insight towards the competition environment (Lin et al. 2011; Lin et al. 2006). In addition, little research has studied the alternative behavior in the context of social media either.

### **2.3 We-intention**

We-intention can be defined as individuals' shared commitment to the joint action, which contains mutual agreement to participate in joint activities among the group members (Tuomela 1995). This collective intention ensures that every individual will perform his/her own part of the joint action so as to participate in the joint action together with other members (Cheung et al. 2011). In this regard, we-intention can be understood as a kind of "individual's subjective perception" toward the group behavior (Shen et al. 2012). While I-intention can be understood as one's perception of performing an individual behavior at an individual level, we-intention inheres in mutual beliefs which make members undertake obligation to participate in joint action (Bagozzi & Lee 2002).

Since social media emphasizes more about social interactions and connection, and requires collective collaboration and interdependence to ensure the success of social activities, prior studies have claimed that individual intention may not be appropriate for the investigation of social media (Cheung et al. 2011; Shen et al. 2009; Shen et al. 2012; Shen et al. 2013). Therefore, we apply we-intention into the examination of users' collective choice and acceptance behavior in the context of social media.

### **2.4 Social identity theory**

Social identity theory stems from Tajfel and Turner's (1979) study in the examination of psychological state of inter-group discrimination. When the organization can not only satisfy the needs of the member alone, but also the demands of the group, then the social identity will be formed (Dholakia et al. 2004). Social identity highlights the sense of identity towards the group because an individual will regard himself or herself as one member of the community and form a sense of belonging during the group activities. Therefore, the member will think, feel and acts on the basis of collective consciousness rather than an independent individual (Hogg & Abrams 1988). Building on Tajfel's (1978) work, Ellemers, Kortekaas, and Ouwerkerk (1999) suggested that social identity can be measured by three dimensions, including "a cognitive component (a cognitive awareness of one's membership in a social group – self-categorization), an evaluative component (a positive or negative value connotation attached to this group membership – group self-esteem), and an emotional component (a sense of emotional involvement with the group – affective commitment)" (p. 372). As we discussed above, we-intention highlights individual's commitment and mutual beliefs toward the group (Cheung et al. 2011; Shen et al. 2009; Shen et al. 2013; Shen et al. 2012). Hence it is reasonable to apply the social identity theory into the examination of we-intention.

### **2.5 Media richness theory**

Media richness theory is developed for explaining the dissemination of messages and evaluating the communication channels' ability to convey information in an organization (Daft & Lengel 1984, 1986; El-Shinnawy & Markus 1997; Korschun & Du 2013). Media richness has also been used in the investigation of the choice between communication media, which focuses on the reduction of uncertainty and equivocality rather than the amount of information (Daft & Lengel 1986; Lee et al.

2007). Specifically, the uncertainty derived from the deficiency of information, while equivocality is the different views among the members in communication channels. Media richness can be assessed from four criteria: immediate feedback, multiple cues, language variety, and personal focus. Immediate feedback refers to the speed of medium providing timely information. Multiple cues can be defined as the ability to convey various explicit and implicit messages. Language variety is related to the adoption of various natural languages (e.g., images, videos, music, emoticons) to present information. Personal focus refers to the extent of a certain medium encompassing personal emotions.

### 3 RESEARCH MODEL AND HYPOTHESES

This study aims to investigate users' choice and acceptance behavior among competing social media products. A research model integrates the media richness theory and social identity theory to study collective intention (i.e., we-intention) to use social media. Specifically, this study analyzed the single model for each product (as shown in Figure 1) and the relative model for the competitive products (as shown in Figure 2). In the following sections we discussed in detail the interrelationships of the constructs.

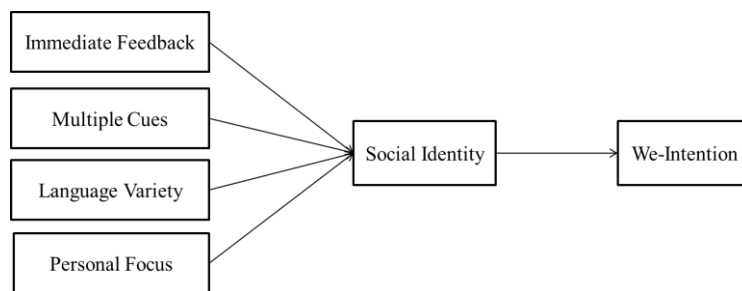


Fig.1. Research model for single product (Note: to examine the single effects, the research model is tested twice for light-blogging and micro-blogging, respectively)

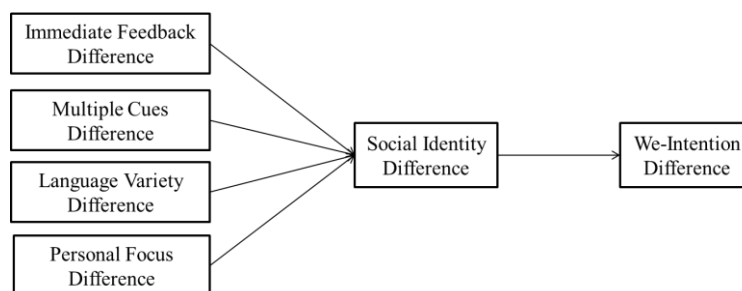


Fig.2. Relative model for competing products (Note: the research model is tested once, and the differences in each construct are calculated first)

#### 3.1 The role of social identity on we-intention

Recently, social identity theory has been widely used in the investigations of we-intention in the context of online social networking groups (Bagozzi & Dholakia 2006; Dholakia et al. 2004; Shen et al. 2009; Shen et al. 2013; Shen et al. 2012). Social identity derives from the community which possesses the function to fulfill individuals' needs as well as the demands of group, then the particular

behavior benefiting all the users can be developed (Bagozzi & Dholakia 2006; Hogg & Abrams 1988). Social identity also helps form a sense of group uniqueness and create a feeling of belonging to a online community, hence it will determine the collective use of online community in some extent (Cheung et al. 2011; Dholakia et al. 2004). Considering the interaction and communication mechanism in both light-blogging and micro-blogging, the social identity will be enhanced when members make efforts to keep and promote the relationship with other users, and as a result, the collective intention to choose and accept social media will be stimulated (Bagozzi & Dholakia 2006; Shen et al. 2012). Therefore, we hypothesize that:

Hypothesis 1a: social identity in light-blogging will have a positive effect on we-intention to use light-blogging.

Hypothesis 1b: social identity in micro-blogging will have a positive effect on we-intention to use micro-blogging.

### **3.2 The role of media richness on social identity**

The media richness of social media refers to the ability of disseminating information and promoting social interaction via the use of non-word utterances, visual signs and symbols (Lee et al. 2007). If there exists interaction and communication barrier in the communication media, the perception of media richness will be diminished, then users' satisfaction towards the communication media will be reduced either (Ogara et al. 2014). In the context of social media, the rich media enables members to express their ideas freely and encourages social interactions among users, users will be more satisfied with the social media, which further facilitate the formation of social identity (Korschun & Du 2013). Therefore, users' satisfaction towards the social media will be improved when the social media have a high level of media richness, which accelerates the social identity process.

When we analyze the characteristics of the two social media platforms selected in this study (i.e., light-blogging and micro-blogging) in the guidance of the four criteria of media richness (El-Shinnawy & Markus 1997), we find that both of them have a high level of media richness. First, light-blogging and micro-blogging can convey static text through written form, dynamic visual information via audio and video, and implicit information via various expressions, hence they are rich in multiple cues and language variety. Second, the functions of information subscription, follow, interaction and mechanisms of information distribution and transmission will the speed of feedback. Final, the nature of these two platforms is information expression and sharing, users can easily convey their own messages to their friends, which promote the exchange of personal feelings and emotions. Therefore, we hypothesize that:

Hypothesis 2a: immediate feedback in light-blogging will have a positive effect on social identity in light-blogging.

Hypothesis 2b: immediate feedback in micro-blogging will have a positive effect on social identity in micro-blogging.

Hypothesis 3a: multiple cues in light-blogging will have a positive effect on social identity in light-blogging.

Hypothesis 3b: multiple cues in micro-blogging will have a positive effect on social identity in micro-blogging.

Hypothesis 4a: language variety in light-blogging will have a positive effect on social identity in light-blogging.

Hypothesis 4b: language variety in micro-blogging will have a positive effect on social identity in micro-blogging.

Hypothesis 5a: personal focus in light-blogging will have a positive effect on social identity in light-blogging.

Hypothesis 5b: personal focus in micro-blogging will have a positive effect on social identity in micro-blogging.

### **3.3 The comparative mechanism**

For the two competing social media platforms (i.e., light-blogging and micro-blogging), users may evaluate the determinants of we-intention in a comparative way (Candel & Pennings 1999; Dabholkar 1994; Lin et al. 2011; Lin et al. 2006). When users are required to answer their assessment of social identity toward light-blogging, they may compare it with micro-blogging, hence they may form a relative social identity toward these two social media platforms. Consequently, they may form a relative immediate feedback, multiple cues, language variety, personal focus, and we-intention.

There are three comparing methods in relative model: “comparison by difference, comparison by ratio, and dummy comparison” (Candel & Pennings 1999; Dabholkar 1994; Lin et al. 2011; Lin et al. 2006). Considering the result of comparison by difference (e.g., the relative social identity can be obtained from the subtraction between social identity in light-blogging and social identity in micro-blogging) is best among the three methods, and this method is more intuitive when users are asked to evaluate the differences of their perceptions toward competing products, this paper chooses comparison by difference method in the examination of relative behavior (Candel & Pennings 1999; Lin et al. 2011; Lin et al. 2006). For example, relative we-intention is measured as we-intention light-blogging minus we-intention micro-blogging. Hence, we can calculate users’ relative perceptions of media richness, relative social identity and relative we-intention towards the two competing social media. Consistent with the hypotheses developed above, we have the following hypotheses for the relative model:

Hypothesis 1c: relative social identity will have a positive effect on relative we-intention.

Hypothesis 2c: relative immediate feedback will have a positive effect on relative social identity.

Hypothesis 3c: relative multiple cues will have a positive effect on relative social identity.

Hypothesis 4c: relative language variety will have a positive effect on relative social identity.

Hypothesis 5c: relative personal focus will have a positive effect on relative social identity.

## **4 RESEARCH METHODOLOGY**

### **4.1 Data collection method**

An invitation message with the URL to the online questionnaire is posted to both micro-blogging and light-blogging users. A lucky draw was provided to the successful respondents to attract sufficient number of volunteers to answer the questionnaire. A screening question is used to make sure that the

respondents have accessed both light-blogging and micro-blogging before. A total of 309 usable questionnaires are collected in this study. About 85% of the respondents have the experience of light-blogging and micro-blogging for more than three months and about 89% of the respondents have a college or above education level. The majority of the respondents (76.1%) are aged between 18 and 25. The number of female account for 46.6% in the sample and male is 53.4%.

## 4.2 Measures

All the measures used in this study are multi-item scales, which are adapted from prior research. Minor changes in the wordings were made in order to fit the current investigation context. A seven-point Likert scale was employed for all items in the questionnaire. Due to the page limits, we have not included the measures, which can be obtained upon inquiry.

## 5 RESULTS

SmartPLS Version 2.0 was used to measure the proposed research model and test the significance of our hypotheses. Following the two-step analytical procedures (Hair et al. 2005), we first examine the measurement model and then the structural model.

### 5.1 Measurement Model

Convergent validity indicates the extent to which theoretically similar constructs are highly correlated with each other. It can be established if the values of composite reliability are greater than 0.70, and the values of average variance extracted are greater than 0.50 (Fornell 1987). As shown in Table 1, all the measures exceed the recommended thresholds.

Discriminant validity indicates the extent to which a given construct is different from other latent constructs. It can be demonstrated if the square root of the average variance extracted (AVE) for each construct is greater than the correlations between that construct and all other constructs (Fornell 1987). Table 1 presents the correlation matrix of the constructs and the square roots of the AVE. Overall, the results demonstrate that all constructs have a satisfactory level of convergent validity and discriminant validity.

*Table 1. Reliability and discriminant validity*

	CR	AVE	IF	LV	MC	PF	SI	WE
Light-Blogging								
IF	0.945	0.895	<b>0.946</b>					
LV	0.874	0.776	0.431	<b>0.881</b>				
MC	0.91	0.834	0.606	0.625	<b>0.913</b>			
PF	0.924	0.859	0.441	0.482	0.468	<b>0.927</b>		
SI	0.903	0.608	0.486	0.380	0.480	0.409	<b>0.780</b>	
WE	0.975	0.953	0.399	0.305	0.348	0.402	0.553	<b>0.976</b>
Micro-Blogging								
IF	0.947	0.901	<b>0.949</b>					



LV	0.914	0.841	0.622	<b>0.917</b>					
MC	0.954	0.912	0.742	0.731	<b>0.955</b>				
PF	0.961	0.924	0.586	0.627	0.580	<b>0.961</b>			
SI	0.937	0.714	0.522	0.512	0.502	0.604	<b>0.845</b>		
WE	0.984	0.968	0.527	0.484	0.528	0.533	0.681	<b>0.984</b>	
Relative Model									
IF	0.946	0.897	<b>0.947</b>						
LV	0.894	0.808	0.440	<b>0.899</b>					
MC	0.914	0.843	0.647	0.665	<b>0.918</b>				
PF	0.935	0.878	0.448	0.572	0.491	<b>0.937</b>			
SI	0.900	0.599	0.450	0.414	0.440	0.431	<b>0.774</b>		
WE	0.981	0.962	0.486	0.405	0.493	0.437	0.648	<b>0.981</b>	

Note: CR=Composite Reliability, AVE=Average Variance Extracted, IF=Immediate Feedback, LV=Language Variety, MC=Multiple Cues, PF=Personal Focus, SI=Social Identity, WE=We-Intention

\*The bold numbers in the diagonal row are square roots of the average variance extracted

## 5.2 Structural model

The results of this study are depicted in Table 2, which present the overall explanatory power, the estimated path coefficients and the associated t-value of the paths.

Table 2. Summary of the results in two single models and relative model

Relationships	Models								
	Light-blogging ( $R_1^2=0.317$ ; $R_2^2=0.306$ )			Micro-blogging ( $R_1^2=0.418$ ; $R_2^2=0.464$ )			Relative Model ( $R_1^2=0.291$ ; $R_2^2=0.420$ )		
	PC	t	supported?	PC	t	supported?	PC	t	supported?
H1: SI → WI	0.553***	12.623	YES	0.681***	20.506	YES	0.648***	18.082	YES
H2: IF → SI	0.262***	4.070	YES	0.177**	2.211	YES	0.236***	3.592	YES
H3: MC → SI	0.207***	2.673	YES	0.061	0.726	NO	0.106	1.270	NO
H4: LV → SI	0.056	0.886	NO	0.107	1.496	NO	0.124*	1.656	YES
H5: PF → SI	0.169***	3.201	YES	0.398***	6.255	YES	0.202***	2.793	YES

Note: PC=path coefficients,  $R_1^2=R^2$  in social identity,  $R_2^2=R^2$  in we-intention. \* $p<0.1$ ; \*\* $p<0.05$ ; \*\*\* $p<0.01$

Table 2 shows the results of structural models for single product effect of the research model for light-blogging and micro-blogging. The results account for 30.6% of the variance in we-intention to use light-blogging, 31.7% of the variance in social identity. The results also explained 46.4% of the variance in we-intention to use micro-blogging, 41.8% of the variance in social identity. Most of the hypotheses are supported in this study except for hypothesis 3b, hypothesis 4a and hypothesis 4b. Both immediate feedback (H2a, H2b) and personal focus (H5a, H5b) exerted statistically significant effects on social identity in the two single product models. Social identity also have a significant impact on we-intention (H1a and H1b are supported), with path coefficients at 0.553 and 0.681 respectively. However, multiple cues (H3b) fails to predict social identity for micro-blogging, whereas multiple cues (H3a) poses significant role on social identity for light-blogging (H3a is

supported; H3b is not supported). The effects of language variety on social identity are not significant for light-blogging and micro-blogging either (H4a and H4b are not supported). More specifically, we do the path coefficients comparison analysis based on Keil et al.'s (2000) study. As shown in Table 3, all of the differences in path coefficients between light-blogging and micro-blogging are statistically significant. This means that immediate feedback (H2a: path coefficient = 0.262) and multiple cues (H3a: path coefficient = 0.207) in light-blogging have stronger impact on social identity than in micro-blogging (H2b: path coefficient = 0.177; H2b: path coefficient = 0.061), while the effects of personal focus in micro-blogging (H5b: path coefficient = 0.398) is significantly stronger than light-blogging (H5a: path coefficient = 0.169).

Table 3. The results comparison by difference for path coefficients

	$PC_1$	$PC_2$	$t$	$Diff$
Social identity → We-intention	0.553***	0.681***	-40.811	***
Immediate feedback → Social identity	0.262***	0.177**	14.611	***
Multiple cues → Social identity	0.207***	0.061	22.257	***
Language variety → Social identity	0.056	0.107	-9.420	***
Personal focus → Social identity	0.169***	0.398***	-47.362	***

Note:  $PC_1$ =path coefficients for light-blogging,  $PC_2$ =path coefficients for micro-blogging,  $t$ = the t-statistic of difference in path coefficients between light-blogging and micro-blogging. \* $p<0.1$ ; \*\* $p<0.05$ ; \*\*\* $p<0.01$

Table 2 also shows the results of comparison by difference method for two competing products in the relative model. The relative social identity has a positive effect on relative we-intention (H1c is supported). Both relative immediate feedback (H2c) and personal focus (H5c) exhibit significant effects on relative social identity (H2c, H5c are supported). Particularly, the effect of relative language variety (H4c) on relative social identity is significant, while not significant in both competing products (H4c is supported). Relative multiple cues (H3c) does not have any impact on relative social identity, but multiple cues pose a significant effect on social identity for light-blogging (H3c is not supported).

## 6 DISCUSSION

This study develops a research model to examine the choice and acceptance behavior between two similar social media by utilizing the comparative mechanism (i.e., relative model). Considering the underlying rationale that people can actually use social media effectively only when a group of users research mutual belief that they will participant in the joint action together (Bagozzi & Lee 2002; Shen et al. 2012), this paper studied the collective intention (i.e., we-intention) rather than individual intention (i.e., I-intention) in the examination of the choice and acceptance behavior. We conduct separate analyses for each social media alone before using comparison by difference method to assess our relative model. As shown in Table 2, most of the hypotheses are supported in our study, except for hypotheses 3b, 4a and 4b. The findings and implications are presented below.

## 6.1 Findings

The effect of multiple cues on social identity in micro-blogging (i.e., hypothesis 3b) is not significant in our study. As micro-blogging has limitation in no more than 140 characters and focuses on offering real-time updates (Kietzmann et al. 2011), users' perception toward multiple cues in micro-blogging maybe not very deep. In this regard, the insignificant path coefficient can be explained. The hypotheses related to the effect of language variety on social identity are not supported in both social media platforms (i.e., hypothesis 4a, hypothesis 4b). A possible explanation to this phenomenon is that almost all of the social media platforms can provide a variety of signs and symbol (e.g., words, expressions, pictures, sounds, images, and links) to convey message, this property has been so pervasive that users may gradually ignore their evaluations toward language variety in the social interaction process (Hong & Tam 2006).

Interestingly, we find the result to the same competition question is different between single social media research model and the relative model. Considering the incomplete result arises from single social media research model, we would like to use the relative model in the examination of users' acceptance and choice behavior between the two competing social media platforms. Drawn from the relative model, immediate feedback (Hypothesis 2c) and personal focus (Hypothesis 5c) are the most important determinants of we-intention, whereas from the results of path coefficients comparison, the most two important factors for light-blogging are immediate feedback (Hypothesis 2a) and multiple cues (Hypothesis 3a) in competing with micro-blogging, and personal focus (Hypothesis 5b) is the most important determinants of we-intention for micro-blogging. Hence if we want to attract more people to choose and accept light-blogging relative micro-blogging, we should focus on immediate feedback and personal focus rather than multiple cues. This can be understood from the low correlation between the determinants of we-intention for light-blogging and micro-blogging. When take measures to increase personal focus for light-blogging, it will pose less positive impact on its competitor. Then the relative impact on social identity and we-intention will not be offset by micro-blogging. Particularly, the path coefficient between multiple cues and social identity (Hypothesis 3c) is insignificant for the relative model, but significant for light-blogging (Hypothesis 3a). Combined with the insignificant effect of multiple cues on social identity for micro-blogging, we can conclude that multiple cues for light-blogging has the absolute advantage compared with micro-blogging, then it will be useless and meaningless to take measures to improve multiple cues to get people use light-blogging more relative to micro-blogging. Besides, we should notice that the effect of language variety (Hypothesis 4c) in relative model is significant, but not significant in research model for both light-blogging (Hypothesis 4a) and micro-blogging (Hypothesis 4b), which means the correlation between language variety for light-blogging and micro-blogging is very low. This implies that taking measures to enhance language variety for light-blogging can positively promote users' collective intention to choose and accept light-blogging and has much less of a positive impact on micro-blogging at the same time.

## 6.2 Limitations

This study is potentially subject to several important limitations. First of all, this study was conducted in a collectivistic culture. Previous study has demonstrated that culture can act as an important factor in predicting users' choice and acceptance of information technology (Tan et al. 1998). Hence it is necessary to realize that the group behavior may be more likely to occur in a collectivistic culture than

in an individualistic culture (Bagozzi & Lee 2002). Consequently, a cross-cultural study should be needed in order to better investigate the impact of media richness on we-intention. Furthermore, in the current study we have not investigated the actual social commerce usage behavior. As individual intention can facilitate the actual usage behavior, it is very likely that we-intention can have an significant impact on the actual usage behavior (Shen et al. 2009) . Therefore, this effect requires more attention in future study.

### **6.3 Implications for research**

First, this paper demonstrates that understanding user acceptance behavior in a comparative frame is important in competitive context. Since the use experiences for other alternatives may impact user's evaluation toward one specific product, researchers should investigate user's acceptance behavior in a comparative frame. For instance, if a subject rates the statement "I intend to use light-blogging" as 3, it may seem that he does not want to use light-blogging. However, if comparing the lower rating (e.g., 1) of the competing alternative (i.e., micro-blogging), it is reasonable to conclude that he prefer to use light-blogging. Therefore, researchers may have an incomplete picture on users' intention to use single application if they ignored the impact of the competing alternative.

Second, the research method can be applied to other studies especially for the examination of usage behavior for competitive products. Drawn from the research model for single product, we can see the principles of independent variables influence usage behavior from the perspective of product alone and know which factors are the most important in promoting usage behavior. However, when considering the external competitive product, the relative model can provide more accurate results to deal with the alternative behavior between competing products. However, few studies combine these two research models into the examination of users' intention to choose and accept information system technology, particularly for the competing products, hence many more future researches may focus on this issue.

Third, this study develops a research model in the examination of collective behavior based on the media richness, social identity and we-intention theory. The empirical results show that media richness can positively impact we-intention via the sense of social identity. Particularly, the results for light-blogging and micro-blogging are different from each other. For instance, the multiple cues play a significant role on social identity for light-blogging but not significant for micro-blogging. Consequently, the findings for one product may not applicable to other products when generalizing the research model.

In addition, this study investigates people's choice and acceptance behavior for social media in the collective rather than individual frame. Different from I-intention approach, we-intention captures the main aspects that individuals perceive themselves as an indispensable part in the group and highlights the joint action among all the participants in a unit. In the new era of Web 2.0, this is consistent with the view that the essence of Web 2.0 based technology is harnessing collective intelligence (O'Reilly 2006). This study thus enriches the study of collective behavior in the era of Web 2.0.

### **6.4 Implications for practice**

Based on the research model developed in this study, the practitioners can adopt the targeted strategies to compete with the competitors in the guidance of relative model result. For instance, the

relative model show that multiple cues is not an important factor for light-blogging competing with micro-blogging, whereas the immediate feedback, personal focus and language variety are important factors influencing users to choose between these two competing social media platforms. When comparing the results between single-product model and relative model, we can see the strengths and weaknesses both for the product and its competitor's. For instance, multiple cues significantly impacts we-intention through the sense of social identity for light-blogging, but not affecting we-intention both for micro-blogging and relative model. Personal focus, which has a bigger impact in micro-blogging model, is also still an important factor influencing relative we-intention. Particularly, factor (i.e., Language variety) that has insignificant impact on we-intention in both single-product models may positively affect relative we-intention. Thus the practitioners should notice that factors that not affecting the usage of both the product and its competitors may pose a significant impact in competing strategies. Consequently, drawn from the results between relative model and single-product model, the managers can exactly know the comparative advantages differentiate from other competitive product and can rely on diverse criteria in media richness to promote the collective intention to choose and accept information system technology.

## **ACKNOWLEDGEMENTS**

The work described in this paper was supported by the grants from the National Natural Science Foundation of China (Project No. 71301125; 71231007) and the Humanities and Social Sciences Foundation of the Ministry of Education, China (Project No. 13YJC630132).

## REFERENCES

- Bagozzi, R. P., & Dholakia, U. M. (2006). Open source software user communities: A study of participation in Linux user groups. *Management Science*, 52(7), 1099-1115.
- Bagozzi, R. P., & Lee, K. H. (2002). Multiple routes for social influence: The role of compliance, internalization, and social identity. *Social Psychology Quarterly*, 65(3), 226-247.
- Balzer, W., & Tuomela, R. (2003). Collective intentions and the maintenance of social practices. *Autonomous Agents And Multi-Agent Systems*, 6(1), 7-33.
- Candel, M. J. J. M., & Pennings, J. M. E. (1999). Attitude-based models for binary choices: A test for choices involving an innovation. *Journal Of Economic Psychology*, 20(5), 547-569.
- Cheung, C. M. K., Chiu, P.-Y., & Lee, M. K. O. (2011). Online social networks: Why do students use facebook? *Computers in Human Behavior*, 27(4), 1337-1343.
- Chiu, C. M., Hsu, M. H., & Wang, E. T. G. (2006). Understanding knowledge sharing in virtual communities: An integration of social capital and social cognitive theories. *Decision Support Systems*, 42(3), 1872-1888.
- CNNIC. (2014). the 34th China Internet Development Statistics Report. Retrieved from: [http://www.cnnic.net.cn/hlwfzyj/hlwzbg/hlwtjbg/201502/t20150203\\_51634.htm](http://www.cnnic.net.cn/hlwfzyj/hlwzbg/hlwtjbg/201502/t20150203_51634.htm).
- Dabholkar, P. A. (1994). Incorporating Choice into an Attitudinal Framework - Analyzing Models Of Mental Comparison Processes. *Journal Of Consumer Research*, 21(1), 100-118.
- Daft, R. L., & Lengel, R. H. (1984). Information Richness - A New Approach to Managerial Behavior And Organization Design. *Research In Organizational Behavior*, 6, 191-233.
- Daft, R. L., & Lengel, R. H. (1986). Organizational Information Requirements, Media Richness And Structural Design. *Management Science*, 32(5), 554-571.
- Davis, F. D., & Warshaw, P. R. (1991). Choice Sets and Choice Intentions. *Journal of Social Psychology*, 131(6), 823-830.
- Dholakia, U. M., Bagozzi, R. P., & Pearo, L. K. (2004). A social influence model of consumer participation in network- and small-group-based virtual communities. *International Journal of Research in Marketing*, 21(3), 241-263.
- Ellemers, N., Kortekaas, P., & Ouwerkerk, J. W. (1999). Self categorisation, commitment to the group and group self esteem as related but distinct aspects of social identity. *European Journal of Social Psychology*, 29(2 3), 371-389.
- El-Shinnawy, M., & Markus, M. L. (1997). The poverty of media richness theory: Explaining people's choice of electronic mail vs. voice mail. *International Journal of Human-Computer Studies*, 46(4), 443-467.
- Fornell, C. (1987). A second generation of multivariate analysis: Classification of methods and implications for marketing research. In M. J. Houston (Ed.), *Review of Marketing*, 407-450.
- Hair, J. F., Black, B., Babin, B., Anderson, R. E., & Tatham, R. L. (2005). *Multivariate Data Analysis* (6th Edition): Prentice Hall.
- Hogg, M. A., & Abrams, D. (1988). *Social identifications: A social psychology of intergroup relations and group processes*. London: Routledge.
- Hong, S. J., & Tam, K. Y. (2006). Understanding the adoption of multipurpose information appliances: The case of mobile data services. *Information Systems Research*, 17(2), 162-179.

- Jaccard, J. (1981). Attitudes and behavior: Implications of attitudes toward behavioral alternatives. *Journal of Experimental Social Psychology*, 17, 286-307.
- Kankanhalli, A., Tan, B. C. Y., & Wei, K. K. (2005). Contributing knowledge to electronic knowledge repositories: An empirical investigation. *MIS Quarterly*, 29(1), 113-143.
- Keil, M., Tan, B. C. Y., Wei, K. K., Saarinen, T., Tuunainen, V., & Wassenaar, A. (2000). A cross-cultural study on escalation of commitment behavior in software projects. *MIS Quarterly*, 24(2), 299-325.
- Kietzmann, J. H., Hermkens, K., McCarthy, I. P., & Silvestre, B. S. (2011). Social media? Get serious! Understanding the functional building blocks of social media. *Business Horizons*, 54(3), 241-251.
- Korschun, D., & Du, S. (2013). How virtual corporate social responsibility dialogs generate value: A framework and propositions. *Journal of Business Research*, 66(9), 1494-1504.
- Lee, M. K. O., Cheung, C. M. K., & Chen, Z. (2007). Understanding user acceptance of multimedia messaging services: An Empirical study. *Journal of the American Society for Information Science and Technology*, 58(13), 2066-2077.
- Li, D., Chau, P. Y., & Van Slyke, C. (2010). A comparative study of individual acceptance of instant messaging in the US and China: A structural equation modeling approach. *Communications of the Association for Information Systems*, 26(1), 5.
- Lin, J., Chan, H. C., & Wei, K. K. (2011). Understanding Competing Web Application Platforms: An Extended Theory of Planned Behavior and its Relative Model. *IEEE Transactions on Engineering Management*, 58(1), 21-35.
- Lin, J. L., Chan, H. C., & Wei, K. K. (2006). Understanding competing application usage with the theory of planned behavior. *Journal of the American Society for Information Science and Technology*, 57(10), 1338-1349.
- Lou, H., Chau, P. Y., & Li, D. . (2005). Understanding individual adoption of instant messaging: An empirical investigation. *Journal of the Association for Information Systems*, 6(4), 5.
- Ma, W. W. K., & Chan, A. (2014). Knowledge sharing and social media: Altruism, perceived online attachment motivation, and perceived online relationship commitment. *Computers in Human Behavior*, 39, 51-58.
- Moon, S. (2011). Analysis of Twitter Unfollow: How often Do People Unfollow in Twitter and Why? *Social Informatics*, 6984, 7-7.
- O'Reilly, T. (2006). My Commencement Speech at SIMS. Retrieved from: <http://radar.oreilly.com/2006/05/my-commencement-speech-at-sims.html>
- Ogara, S. O., Koh, C. E., & Prybutok, V. R. (2014). Investigating factors affecting social presence and user satisfaction with Mobile Instant Messaging. *Computers in Human Behavior*, 36, 453-459.
- Paul, I. (2009). Obama's Top 5 Tech Tools. PCWorld. Retrieved from: <http://www.cio.com/article/2430998/government/obama-s-top-5-tech-tools.html>
- Shen, A. X. L., Cheung, C. M. K., Lee, M. K. O., & Chen, H. (2009). How social influence affects we-intention to use instant messaging: The moderating effect of usage experience. *Information Systems Frontiers*, 13(2), 157-169.
- Shen, X. L., Cheung, C. M. K., & Lee, M. K. O. (2013). Perceived critical mass and collective intention in social media-supported small group communication. *International Journal of Information Management*, 33(5), 707-715.

- Shen, X. L., Lee, M. K. O., & Cheung, C. M. K. (2012). Harnessing collective intelligence of Web 2.0: group adoption and use of Internet-based collaboration technologies. *Knowledge Management Research & Practice*, 10(4), 301-311.
- Szajna, B. (1994). Software-Evaluation and Choice - Predictive Validation of the Technology Acceptance Instrument. *MIS Quarterly*, 18(3), 319-324.
- Tajfel, H. (1978). Social Categorization, Social Identity and Social Comparison. In H. Tajfel (Ed.), *Differentiation between Social Groups: Studies in the Social Psychology of Intergroup Relations* (pp. 61-76). London: Academic Press.
- Tajfel, H., & Turner, J. C. (1979). An Integrative Theory of Intergroup Conflict. In W. Austin & S. Worchel (Eds.), *The Social Psychology of Intergroup Relations* (Vol. 33, pp. 33-47). Austin: Monterey.
- Tan, B. C. Y., Wei, K. K., Watson, R. T., Clapper, D. L., & McLean, E. R. (1998). Computer-mediated communication and majority influence: Assessing the impact in an individualistic and a collectivistic culture. *Management Science*, 44(9), 1263-1278.
- Tuomela, R. (1995). *The importance of us: A philosophy study of basic social notions*. Stanford, CA: Stanford University Press.
- Van Slyke, C., Ilie, V., Lou, H., & Stafford, T. (2007). Perceived critical mass and the adoption of a communication technology. *European Journal of Information Systems*, 16(3), 270-283.
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 27(3), 425-478.
- Wang, X. (2013). Applying the integrative model of behavioral prediction and attitude functions in the context of social media use while viewing mediated sports. *Computers in Human Behavior*, 29(4), 1538-1545.
- Wasko, M. M., & Faraj, S. (2000). "It is what one does": why people participate and help others in electronic communities of practice. *Journal of Strategic Information Systems*, 9(2-3), 155-173.
- Zhao, D. J., & Rosson, M. B. (2009). How and Why People Twitter: The Role that Micro-blogging Plays in Informal Communication at Work. *Group 2009 Proceedings*, 243-252.