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Adoption of social media sites by B2B companies in China

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Adoption of social media sites by B2B companies

Abstract

Social media sites have been perceived to be irrelevant in B2B sector. This is because of the perception of poor usability of those sites for B2B marketing. This study while extending Technology Acceptance Model by Nielsen's Model of Attributes of System Acceptability assesses the impact of usability, utility and perceived usefulness on adoption and use of social media sites in B2B context. The empirical investigation, carried out on a sample of 181 Chinese B2B companies, reveals that users' perception of the usefulness, usability and utility of social media sites drive their adoption and use in the B2B sector. The usefulness is subject to the assessment of whether social media sites are suitable means through which marketing activities can be conducted. Users' ability to use social media sites for B2B marketing purposes, in turn, is due to those sites learnability and memorability attributes.

Track: E-Business & E-Government

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Introduction

In the past decade digital transformation has taken place; changing way in which companies conduct their marketing activities. Specifically, companies moved from Web 1.0 and one-way communication to two-way interaction with consumers enabled by Web 2.0. Social media sites, building on ideological and technological foundations of Web 2.0 (Kaplan and Haenlein, 2010), are the most popular Internet-based applications used by companies in support of their marketing strategies (Simula et al, 2013). This is because of the growing consumers' pressure on companies to use these sites for marketing purposes (Michaelidou et al, 2011). Cone (2008) revealed that over 90 per cent of social media users believe that companies should be present on social media and over 85 per cent think that companies should interact with their target market via such sites. Companies operating in business-to-consumer (B2C) sector appear to respond to this growing consumer demand and thus they increasingly adopt social media sites in support of their marketing strategies. Business-to-business (B2B) companies however do not seem share the enthusiasm of B2C sector, as their adoption of social media sites is rather slow (Kaplan and Haenlien, 2010).

To date, researchers have explored possible factors driving adoption of social media sites by businesses (e.g. Rauniar et al, 2014). All such research however was conducted in B2C context whereas the adoption of social media sites in B2B business environment has not been explored so far (Michaelidou et al, 2011). Furthermore, all research concerning adoption and use of social media focused mainly on sites commonly used by western consumers (e.g. Facebook and Twitter). Despite growing popularity of Chinese social media sites (e.g. QQ and Qzone) their adoption in the business context has not been investigated. This research aims to address these gaps in the literature. Specifically, this study is set out to evaluate factors, which drive adoption of Chinese social media sites by B2B companies in support of their marketing objectives.

In order to achieve this aim the research is organized as follows. First, to provide the background for the study and highlight its importance we present some statistical data on social media sites use in China. Next, in Section 2 we discuss the advantages of using social media sites by B2B companies in support of their marketing strategies. The advantages are contrasted against disadvantages as well as barriers preventing companies from adoption of social media sites. It is revealed that the perception of usability of social media in B2B context plays an important role

while making adoption decision. Keeping this factor in mind we develop research framework based on Technology Acceptance Model (TAM) and Nielsen's (1993) Model of Attributes of System Acceptability (Section 3). Next, we discuss research methodology. Data analysis and discussion of research findings are provided in Section 5 and Section 6, respectively. The study finishes with conclusion and recommendations deriving from the study to theory and practice.

Social media sites usage in China

Despite Chinese government's policy of Internet censorship, which prohibits use of most western social media sites including Facebook, Twitter and YouTube, China is regarded to be the world's largest social media market. This statement can be verified comparing statistical data (www.statista.com) on social media use in China and in western countries such as the US and the UK. Perhaps unsurprisingly, Facebook is the most popular social media site worldwide. As of January 2015 it had over 1 billion registered users. The second and third most popular social media sites however are Chinese market specific; QQ and Qzone with 829 million and 629 million active accounts respectively. Users of those Chinese-specific sites tend to be more active online than many western Internet users. The statistical data reveals that in 2014 access to social media sites in China exceeded this in the US and in the UK making Asian netizens the heaviest consumers of social media sites globally. Such a heavy use of social media sites in China is directly related to the perception of those sites being a valuable source of information. Statistics show that in 2013 over 60 per cent of Chinese Internet users believed that social media sites were important source of knowledge, whereas only 30 per cent of the US and the UK-based social media sites users regarded them as possible source of information.

Companies operating in China, while recognizing the importance of those sites to their target market, actively adopt them for marketing. It is estimated that among top 500 Chinese companies over 40 per cent have social media presence. Furthermore, it is predicted that as the number of social media users in China will grow, the number of companies adopting social media sites will increase, so will the investment in social media marketing. All of which makes the investigation of social media sites adoption in China an interesting and valuable research topic.

Social media sites in B2B marketing

The adoption and use of social media sites for B2B marketing is a new phenomenon (Rodriguez et al, 2013). Despite its novelty some early studies proved that there are a number of benefits deriving from their utilization. To date, research has showed that social media sites can be effectively used for targeting and consumer relationship management. Specifically it has been shown that B2B companies can use social media sites to identify new business partners (Shih, 2009) and new business opportunities (Breslauer and Smith, 2009). Companies can also use social media sites to reach existing consumers and engage them in two-way communication. Such an online interaction enables companies to obtain valuable feedback (Enders et al, 2008; Kaplan and Haenlein 2010). The feedback when analysed may allow companies to better tailor their products or services to consumers' needs, which in turn might increase sales performance. Furthermore research has shown that maintaining two-way communication via social media sites can dippen B2B company's relationship with its consumers. This is because such a two-way interaction creates the perception of the company being closer to its target market (Breslauer and Smith 2009), which may result in trust and loyalty (Mangol and Faulds 2009).

In addition to the application of social media sites for targeting and consumer relationship management, B2B companies can also use those platforms for branding (Kapland and Haenlein, 2010). It was revealed that on social media sites companies can create a unique brand identity (Michaelidou et al 2011) and brand loyalty (Rapp et al, 2013). They can also direct traffic to company's branded website (Breslauer and Smith, 2009) increasing brand awareness worldwide (Rapp et al, 2013; Den Bulte and Wuyts, 2007).

Finally, Bughin et al (2009) reports that the biggest advantage deriving from digital technologies adoption such as social media sites is an access to knowledge. To date research has shown that social media sites can encourage virtual co creation (Simula, 2013). They can also facilitate intra- as well as inter-organizational collaboration (Moor et al, 2013). This, Karkkainen et al (2010) claim, can have positive impact on innovation and product management as it may result in the development of innovative products and services, which in turn can provide the company with a competitive advantage (Bughin et al, 2009). This is further confirmed by McKinsey (2013), who reports that via social media sites B2B companies are able to increase sales innovations and reduce time to market.

Despite the above listed advantages, social media sites are still perceived to be irrelevant in B2B context (Michaelidou et al 2011). Specifically, Michaelidou et al (2011) revealed that over 70 per cent of companies operating in B2B business sector do not use social media sites in support of their marketing strategies and over 60 per cent think that those sites are not relevant for their business. There is a common perception that social media sites are more suitable for B2C marketing but they are can not support B2B marketing objectives (Buehrer et al 2005; Jarvenien et al 2012). This is because of the nature of B2B sector as well as a numerous barriers; both internal and external, which B2B companies have to face while integrating social media sites into their marketing strategies (Buehrer et al 2005; Gillian and Schwartzman, 2011).

One of the biggest barrier deterring adoption of social media sites in B2B context is lack of understanding of senior management how to utilize those sites for marketing (Lu et al, 2005; Jarvinien et al 2012). This is confirmed by Michaelidou et al (2011), who claim that lack of understanding how to use social media sites effectively in the business context hinders their adoption. Furthermore, in addition to lack of 'know-how', researchers report that senior management is reluctant to invest in social media marketing, as they are unable to identify tangible benefits deriving from it (Buehrer et al, 2005). Thus, lack of tangible benefits, Buehrer et al (2005), claims creates negative perception of social media sites usefulness in B2B context and thus it hinders adoption of those sites (Pires and Aisbett, 2003; Michaelidou et al, 2011).

In addition to lack of knowledge how to use social media sites in B2B marketing, lack of control over communication via such sites can also obstruct their adoption (Hanna et al 2011; Mangold and Faulds, 2009). This is because companies being unable to control exchange of information online face risk of confidential information disclosure, which may have profound impact on their business (Kaplan and Jaenlien, 2010; Simula et al 2013). This is further confirmed by Jussila et al (2014) who argues that the possibility of confidential information leakage discourage B2B companies from social media sites use. As such the two-way interaction, recognized earlier as an advantage of social media sites, may be perceived as a disadvantage, which Nordlund et al (2011) state, seriously effects the perception of social media sites usability in B2B business environment.

Finally, Swani and Brown (2011) reveal that there is a common believe that social media sites do not fit into the nature of B2B business sector, where consumers are highly involves in the buying process. Those consumers require face-to-face interaction and the individual approach, which can not be achieved online (Brown, 2012). The interpersonal nature of online environment therefore is yet another factor effecting perception of social media sites applicability in B2B context, which may prevent companies from using them.

Interestingly, in spite of the numerous barriers discouraging adoption of social media sites in B2B environment, Van Den Bulte and Wuyt (2007) notice that some innovative companies started using those sites in support of their marketing strategies. This is because those companies recognize the value of those sites for business (Spekman and Dotson, 2009; Inks et al 2012; Swani et al 2013). Despite this early adoption however the full potential of social media sites in B2B marketing has not been exploited (Jussila et al 2011). This is because of the perception of poor usability of those sites in B2B context. This study aims to examine this factor. Specifically, this study aims to assess usability of social media sites for B2B marketing in China.

Research framework development

To date a variety of models have been employed to identify factors driving adoption of digital technologies (Taylor and Todd, 2001), such as e-mail (e.g. Sillince et al, 1998; Serenko 2008), e-commerce (e.g. Srite and Karahanna, 2006; Yoon, 2009) and social media sites (e.g. Cheung et al, 2011; Lin and Lu, 2011). One stream of research has employed intention-based models, including Theory of Reasoned Action (TRA) (Fishbein and Ajzen (1975), Technology Acceptance Model (TAM) (Davis, 1989), Theory of Planned Behaviour model (TPB) (Ajzen 1991), Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al 2003) and UTAUT 2 (Venkatesh et al 2012) to name a few. For the purpose of this study TAM was selected to from a central pillar of the research framework. The reason for this choice was twofold. First, TAM, unlike any other intention-based model, has been originally designed to predict adoption of technology in a workplace and it has been successfully extended to understand online technologies use (Moon and Kim, 2001; Pavlou, 2003). It intends to evaluate utilitarian motives (goal directed motives) for technology adoption. This is also the aim of the present study. Specifically, this study seeks to assess factors driving adoption of social media sites in B2B marketing.

Second, the model has been widely applied in a number of contexts (Lee et al, 2003). For instance, Moon and Kim (2001) extended TAM for a World Wide Web adoption, Yoon (2009) employed TAM to assess e-commerce acceptance, Ryu et al (2009) implement TAM to assess users' attitudes towards video posts and Rauniar et al (2013) successfully used TAM to assess social media adoption (i.e. Facebook). All such research confirmed high explanatory power of TAM.

TAM is based on attitudes-intentions-actual behaviour paradigm. Thus it assumes that attitudes towards behaviour (i.e. technology use) influence intentions whether or not to use particular technology. Intentions to use, in turn result in technology usage. Accordingly, we postulate that Intentions to Use (IUSE) social media sites for B2B marketing lead to Actual Behaviour (AU) and use of those sites.

H1. Intentions to Use (IUSE) social media sites impacts Actual Use (AU) of those sites for B2B marketing

According to TAM, intensions to use new technologies are influenced by two attitudes: Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). Davis (1989) defines PU as 'the individual's perception that using the new technology will enhance or improve job performance'. Thus, PU focuses on the perception whether the desired goal can be achieved while using particular technology. Nielsen's (1993) concept of Usefulness also refers to 'the issue of whether the system can be used to achieve desired goals'. Usefulness in Nielsen's (1993) Model of Attributes of System Acceptability is an important concept while assessing practical acceptability of the ICT system or technology. Thus, similarly to TAM, it refers to utilitarian reasons for new technology adoption. As such it can be assumed that those two terms; PU and Usefulness, are used interchangeably as they both refer to the perception whether desired goals can be achieved be the means of particular technology.

As it has been reveal in the previous literature, the perception of social media sites usefulness in B2B business context plays an important role while making adoption decision (Buehrer et al 2005). This is further confirmed by Braun (2013), who argues that the perception of technology usefulness drives its adoption in any business context. Thus, in the context of this study we claim that the perception of usefulness (PUsefulness) of social media sites has positive influence on the intentions to use (IUSE) those sites.

H2. Perceived usefulness (PUsefulness) of social media sites impacts intentions to use (IUSE) those sites for B2B marketing

In contrast to PU, PEOU refers to attitudes about the process leading to the desired goal rather than the assessment whether or not this goal can be achieved while using given technology. Specifically, PEOU is defined as 'the individual's perception that using new technology will be free of effort' (Davis, 1989). The ease of new technology use, Nielsen (1993) argues, is directly related to its functionality. He claims that 'the question how well users can use that functionality' is a question of technology Usability. Hence, both concepts; PEOU and Usability, refer to the ability to use new technology (and its functional elements) in the process of achieving desired goals. In the context of this study it concerns the perception whether social media sites users are capable of accomplishing B2B marketing objectives via those sites, which we term Perceived Usability (PUsability).

The literature review revealed that B2B companies are reluctant to adopt social media sites in support of their marketing activities due to the perception of poor usability of those sites in B2B context. Specifically, it has been argued that social media sites features, such as their interactive nature enabling two-way communication with consumers, have negative impact on the perception of usability of those sites in B2B marketing, which deters adoption of those sites. This study aims to verify this impact. Specifically, this study aims to assess if the perception of social media sites usability (PUsability) has any influence on intentions to use (IUSE) those sites for B2B marketing.

H3. Perceived Usability (PUsability) of social media sites impacts intentions to use (IUSE) those sites for B2B marketing.

According to TAM, PEOU has positive impact on PU. This is because PEOU refers to process leading to goal achievement, while PU assesses the final result of this process. Following TAM thus, we postulate the perception of social media sites usability for B2B marketing (PUsability) does not only influence intention to use (IUSE) but it also has positive impact on perceived usefulness (PUsefulness) of those sites.

H4. Perceived usability (PUsability) of social media sites impacts perceived usefulness (PUsefulness) of those sites for B2B marketing

Apart from the assessment of users' ability to use particular technology (and its functional elements) in the process of goals achievement (PUsability) as well as the evaluation whether those goals can be achieved by the means of the given technology (PUsefulness), Nielsen (1993) postulates that adoption of technology also depends on its Utility. Utility 'is the question of whether the functionality of the system can do what is needed' (Nielsen, 1993). Thus it assesses whether the technology and its functional elements fit particular task. As such users' perception of Utility (PUtility) depends on the technology type, task and goal assigned. For example, PUtility of educational technology refers to perception whether user can learn and acquire knowledge by the means of the technology, while PUtility of entertainment technology concerns users' perception of enjoinment and pleasure deriving from the technology use. Accordingly, in the context of this study PUtility refers to the perception whether via social media sites B2B marketing objectives can be achieved. We postulate that the perception of social media sites utility (PUtility) influences intentions to use (IUSE) those sites for marketing activities in B2B sector. Furthermore, we hypothesise that PUtility also influences PUsefulness. This is because the concept of PUtility assesses suitability of the given technology to the task of goal attainment, while PUsefulness considers the likelihood of those goals achievement. Thus, we claim that if the technology is believed to be appropriate to achieve specific goals (PUtility), it is also considered to be useful (PUsefulness).

H5. Perception of utility (PUtility) of social media sites impacts intention to use (IUSE) of those sites for B2B marketing

H6. Perception of utility (PUtility) of social media sites impacts perceived usefulness (PUsefulness) of those sites for B2B marketing.

The focal point of Nielsen's (1993) Model of Attributes of System Acceptability is Usability. As it has been revealed above similarly to PEOU it refers to users' ability to use given technology (and its functional elements) while achieving desired goals, which we termed PUsability to avoid interchangeable use of two terms.

Despite, initial resemblance of those two variables, Nielsen's (1993) concept of Usability is more complex than PEOU identified in TAM. This is because Nielsen (1993) recognizes that 'usability applies to all aspects of system with which a human might interact'. As such it is not a one-dimensional concept but it has multiple components, which has not been documented in TAM. Specifically Nielsen (1993) recognizes five usability attributes. Those are: Learnability, Efficiency, Memorability, Errors, and Satisfaction.

Learnability is the most fundamental usability attribute as, Nielsen (1993) claims most technologies have to be easy to learn and understand to be used. He realizes however that technology learnability is subject to technology type and users' previous experiences with the given technology. Thus, even though most technologies are 'easy-to-learn' and thus their users do not need any specific training to be able to use them, there are 'hard-to-learn' technologies which require extensive training prior to use. Furthermore, there are 'new' technologies, which require learning new skills and technologies, which usage does not require learning but rather transfer of already learned skills. For instance, users do not have to learn new skills to use technology upgraded versions, they can transfer previously learned skills and apply them to the technology upgrade. Similarly, user may be already familiar with the given technology in one context, thus use of the technology in a different context requires application of the same skills but not learning.

It can be assumed that social media sites are not 'hard-to-learn' technologies. They use does not require any advance training. On the contrary, social media users nearly instinctively discover how to use them for social interaction. The application of those sites in the business context thus, does not require learning but rather transfer of already acquired skills. As such it can be assumed that learnability of social media is relatively high. This however, seems to be questioned by Buehrer et al (2005), who claims that B2B companies are reluctant to adopt social media sites and they application is the business context requires training and staff upskill. Michaelidou et al (2011) confirm Buehrer et al (2005) findings. We aim to verify this. Specifically we aim to assess the user's perception of social media sites learnability (L) and its impact on perceived usability (PUsability) of those sites for B2B marketing.

H7: Learnability (L) of social media sites impact perceived usability (PUsability) of those sites for B2B marketing

Nielsen (1993) postulates that once user learns how to use given technology, high level of productivity should be possible. Thus, he claims, the technology should be efficient to use. The perception is technology efficiency in turn impact its usability. Thus we hypothesize that social media sites efficiency (E) impacts perception of their usability (PUsability) for B2B marketing.

H8: Efficiency (E) of social media sites impacts perceived usability (PUsability) of those sites in B2B marketing

Apart from the technology being easy to learn it also has to be easy to remember. Memorability, Nielsen (1993) claims, is particularly important usability attribute of occasionally used technologies. User of those technologies should be able to easily memorize how to use them to fulfil particular task. They should also be able to return to those technologies after a period of not having used it, without having to learn how to use it again. As such memorability seems to be essential usability attribute of social media sites used for marketing activities. Those sites are used in parallel with offline marketing channels in a business multichannel strategy (Rangaswamy and Bruggen, 2005; Rosenbloom, 2006). Thus they are not frequently used but rather they are used intermittently in support of marketing activities (Mangol and Faulds 2009). Accordingly usability of those sites for B2B marketing depends on users ability to memorize how to use them to achieve marketing objectives. To assess this relationship we postulate that memorability (M) of social media sites impacts perception of their usability (PUsability) in B2B business context.

H9: Memorability (M) of social media sites impacts perceived usability (PUsability) of those sites in B2B marketing

Using every technology involves making errors. An error refers to any action that can hinder achievement of desired goal. In order for the given technology to be adopted and used the number of those errors has to be low. Nielsen (1993) claims that users should make few errors while using the technology and those errors should be easy to recover from such that the user should be able to reach desired goal despite an error occurrence. Furthermore, he stresses that 'the catastrophic errors must not

occur'. Those errors refer to failures, which are difficult to recover from, and which may have profound impact on the users' goal achievement.

As it has been showed in the literature review occurrence of errors, which may affect business performance, are perceived to be an obstacle of social media sits deterring their adoption by B2B companies. Specifically, it has been showed that the possibility of confidential information disclosure may seriously limit usability of social media in B2B context and reduce its adoption (Nordlund et al, 2011). This study aims to assess this impact; hence we claim the errors (ERR) impact perception of usability (PUsability) of social media sites in B2B marketing.

H10: Errors (ERR) of social media sites impact perceived usability (PUsability) of those sites for B2B marketing

Finally, apart from usability attributes leading to goal achievement, Nielsen (1993) claims that the technology usability also depends on users' subjective assessment of satisfaction and pleasure deriving form using given technology. He states that satisfaction 'can be especially important usability attribute for systems that are used on a discretionary basis in a non-work environment'. This is because for such technologies the perception of entertainment is more important than, for example, speed of task completion and desired goal achievement. Thus, as social media sites are most commonly used for social interaction the perception of their usability in business context should heavily depend on users subjective satisfaction deriving from using those sites. As such we postulate that satisfaction (S) impacts perceived usability (PUsability) of social media sites in B2B context.

H11: Satisfaction (S) of using social media sites impacts perceived usability (PUsability) of those sites for B2B marketing.

This study aims to assess factors deriving adoption and use of social media sites in B2B business context. Specifically, this research intents to assess usability perspective of social media sites adoption for B2B marketing. In order to achieve the research objective hypotheses were drawn from two models: Davis' (1989) Technology Acceptance Model and Nielsen's (1993) Model of the Attributes of

System Acceptability. The research hypotheses are visually presented in the model displayed in Figure 1.

Figure 1. Research model.
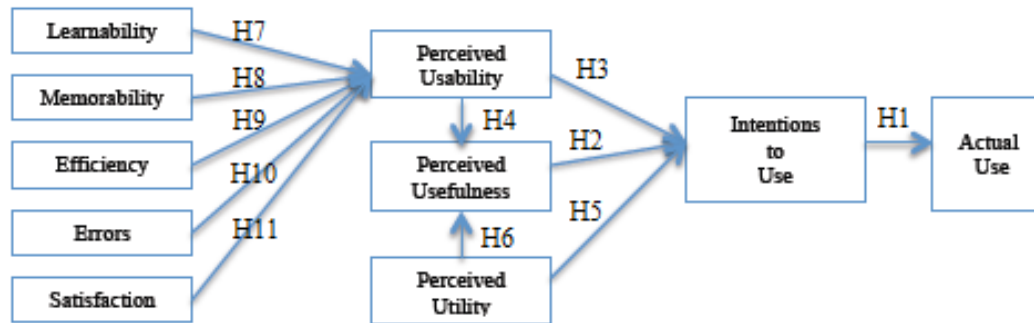
Research methodology

In order to test the hypotheses and the research model presented in Figure 1. the questionnaire survey was developed. It was divided into two parts. The first part aimed to screen sample of respondents and select only those, who use social media sites for B2B marketing, as according to Nielsen (1993) only technology users can assess its usability. The first part of the questionnaire also aimed to assess some basic demographic characteristics of respondents.

The second part of the questionnaire aimed test the research hypotheses. It included items measuring the extent to which users agree/ disagree with statements related to each constructs. All questionnaire items were measured on 7-point Linket scale. The second part of the questionnaire was generated by adopting previously developed items or the items were developed based on construct definition. Accordingly, IUSE was adopted form the study by Yoon (2009), PUsefulness and PUsability were adopted from the study by Yoon (2009) and Srite and Karahanna (2006). The items of PUtility, L, E, M, ERR and S were developed on the basis of their definitions or interpretations provided by Nielsen (1993). Initially, the questionnaire was developed in English, but in order to ensure high response rate it was translated into Chinese by a Chinese native speaker. Additionally, back-translation method suggested by Green and White (1976) was applied to avoid linguistic bias.

The questionnaire was distributed to B2B companies operating in China. Specifically, marketing departments of those companies were targeted. Initially 200 responses were collected. All respondents confirmed that they work in B2B company and that they are responsible for marketing activities. Among 200 responses 199 confirmed that the company uses social media sites to conduct marketing activities, one respondent confessed that his/ her company does not use social media sites for marketing and thus this response was removed from the dataset. Furthermore, another 18 responses confessed that even though they are involved in marketing activities in their organization and their company uses social media sites for B2B marketing they do not use social media sites for marketing purposes themselves. Subsequently, those responses were removed from the study. This resulted in 181 usable responses, which were used for further analysis.

Among 181 respondents there was equal distribution of male and female participants; approximately 51% of respondents were male and 49% were female. The majority of respondents were between 25 and 35 years of old (68%), which is also the group that has been identified as heavy users of social media sites in China (www.chinainternetwatch.com). 23% of respondents were between 35 and 45 years of old and 4% and 3% were in the of 45- 54 and 18-24 years of old group, respectively. The demographic characteristics are presented in Table 1

Table 1. Demographic characteristics of respondents

		Frequency	Percentage
Gender	Male	92	50.8
	Female	89	49.2
Age	18-24	6	3.3
	25-34	123	68.0
	35-44	42	23.2
	45-54	8	4.4
	55-64	2	1.1

Data Analysis

Before the data was used to test the research hypotheses its validity and reliability were assessed. To assess reliability of data Cronbach's Alpha was run. The

results confirmed reliability of all measured items (Table 2). The test revealed that all tested items meet the guidance exceeding the required 0.70 level.

Table 2. Cronbach's Alpha

	Cronbach's Alpha	Average Variance Extracted (AVE)	Composite Reliability (CR)
AU	0.819	0.643	0.607
IUSE	0.846	0.627	0.760
PUsefulness	0.905	0.975	0.917
PUsability	0.900	0.699	0.763
PUtility	0.896	0.770	0.825
L	0.915	0.954	0.912
E	0.841	0.672	0.805
M	0.839	0.610	0.792
ERR	0.825	0.678	0.811
S	0.836	0.681	0.814

To test validity of measured items first factor leadings were examined. Item validity is considered acceptable if factor leadings of measured items exceed recommended level of 0.50, and ideally 0.70. Most items meet the guidance, exceeding desired level of 0.70. All factor loadings exceed minimum acceptable level of 0.50 confirming items validity.

In addition to the assessment of factor leadings, items validity was verified through Composite Reliability (CR) and Average Variance Extracted (AVE). The tests revealed that all items meet recommended AVE value >0.50 and CR value of > 0.60 (see Table 2), confirming high validity of all tested items.

In additional to the validity and reliability checks, an effort was made to ensure that the data does not suffer from common method bias, which according to Podsakoff et al (2003) is common in behavioural research. Thus in order to ensure that common method bias does not exist in the study respondents' anonymity was ensured. All respondents were asked to mark answer they conceder correct and appropriate. Furthermore, the data was tested through Harman's single factor test. The test confirmed that common method bias does not exist in the study. Harman's single factor test revealed that single item does to exceed 50% of the variance.

Once it was verified that the data does not suffer from common method bias the fitness of the research model was studied. To determine model fitness, the following indices were examined; Chi-squared ($\chi 2$), degrees of freedom (df), Chi-squared/degrees of freedom ($\chi 2/df$), the root mean square error of approximation (REMSEA), the comparative fit index (CFI), the Tucker Lewis index (TLI). According to Bagozzi and Yi (1988), Browne and Cudeck (1993), Arbuckle and Wothke (1999), Byrne (2001), Hoang et al. (2006) and Hair et al. (2010), the model and the data have good fit if $\chi 2 /df \leq 3$, RMSEA≤ 0.08, CFI≥ 0.90 and TLI>0.90. As it can be seen from the Table 3, most indices of fit meet their recommended values apart from CFI and TLI. Those indices of fit however, ware in a short range of recommended value (CFI=0.843 and TLI=0.820), Thus it can be assumed that relatively good fitness of the research model was reached.

Table 3. Model fitness

Indices of fit	
Chi-squared ($\chi 2$)	1664.629
Degrees of freedom (df)	742
Chi-squared/degrees of freedom ($\chi 2/df$)	2.243
RMSEA	0.083
CFI	0.845
TLI	0.820
PNFI	0.652
PGFI	0.596

On the basis of the above analysis it can be confirmed that the data collected to test the research hypothesis is highly reliable and thus it can be used to test the research framework. Hence, to test the research framework and examine stated hypotheses SEM was run using SPSS software. The results are presented in Table 4.

Table 4. SEM (*** p> 0.001, ** p>0.01, * p> 0.1)

H1	IUSE→ AU	0.372***
H2	PUsefulness→ IUSE	0.423***
H3	PUsability→ IUSE	0.148*
H4	PUsability→ PUsefulness	0.015
H5	PUtility→ IUSE	0.180*
H6	PUtility→PUsefulness	0.631***
H7	L→ PUsability	0.407**
H9	M→ PUsability	0.622*
H8	E→ PUsability	-0.802***
H10	ERR→ PUsability	0.145
H11	S→ PUsability	0.121

As it can be seen from the Table above the intentions to use social media sites for B2B marketing result in actual use of those site. SEM revealed that there is a statistically significant relationship at p>0.001 between intentions to use social media sites (IUSE) and actual use (AU) of those sites, Thus H1 is supported. Similarly, the statistically significant relationship (at p>0.001) was revealed between perceived usefulness of social media sites (PUsefulness) and intentions to use those sites (IUSE) for B2B marketing, which support H2. There is statistically significant direct relationship at p>0.1 between perceived usability of social media sites (PUsability) as well as perceived utility (PUtility) of those sites for B2B marketing and intentions to use (IUSE). Accordingly H3 and H5 are supported. There is no significant relationship between those perceived usability and perception of usefulness of social media sites for marketing activities in B2B context. Thus H4 is supported. There is however statistically significant relationship (at p> 0.001) between perceived utility and perceived usefulness of social media sites i, hence H6 is supported. The relationships between the perception of usability (PUsability) of social media sites and two usability attributes; learnability (L) and memorability (M) are statistically significant at p<0.01 and p<0.1, respectively. Thus H7 and H8 are supported. The relationship between the perceived usability (PUsability) and efficiency (E) is significant at p<0.001 but as it is in the opposite direction to that hypothesized H9 is rejected. Finally, the relationships between the perceived usability (PUsability) and errors (ERR) as well as satisfaction (S) are not significant. As such H10 and H11 are rejected.

Discussion and Conclusion

Through the course of this research project we empirically tested the research framework developed by combining two models; Davis' (1989) Technology Acceptance Model and Nielsen's Model of the Attributes of System Acceptability. While doing so we aimed to assess the usability perspective of social media sites adoption in B2B marketing. Thus, we intend to fill the gaps identified in the literature in terms of factors driving adoption of social media sites in B2B sector as well as adoption of social media sites in China. To test the research framework and achieve research objectives, we develop a questionnaire survey, which was distributed to marketing departments of B2B companies operating in China. The results revealed several interesting research findings.

The research findings show that intention to use social media sites for B2B marketing in China result in adoption and use of those sites. It was also revealed that users' perception of social media sites usefulness, usability and utility influence intentions to use those sites. The research findings reveal that perception of social media sites utility but not the perception of usability influence user' perception of those sites usefulness in B2B context. Furthermore, the research findings show that Learnability and Memorability attributes have positive impact of users' perception of social media sites usability. No significant relationship was noticed between Efficiency, Errors and Satisfaction and users' perception of usability of social media for B2B marketing.

Consequently, the research results show that perception of social media sites usefulness, usability as well as utility play significant role while making adoption decision in B2B context. Furthermore, perception of usefulness in influenced by the assessment of users' assessment whether those sites fit particular marketing task. This in turn, is subject to learnability and memorability attributes of those sites.

Theoretical and managerial contribution

Our study provides important implications for both theory and practice. First, we filled gaps identified in the literature in terms of factors driving adoption of social media sites in B2B business context. We also examined adoption of Chinese- market specific social media sites. Second, we extended current technology acceptance research stream by combining two models; TAM and Nielsen's (1993) Model of the Attributes of System Acceptability. We proved that those two models complement

each other. By combining those two models we developed new research framework, which investigates adoption of technologies from the usability perspective. Finally, we empirically tested the framework, which provided an insight into factors driving adoption of social media sites for B2B marketing. This in turn results in a number of managerial implications.

The research findings suggest that if B2B companies, which wish to adopt social media sites for marketing, have to increase perception of usefulness, utility and usability of those sites. This can be effectively done once social media sites user's perception of their ability to use those sites as well as the assurance that social media are suitable marketing channel are increased. The companies therefore should encourage use of social media sites for marketing assuring the suitability of those sites for B2B marketing. Furthermore, they should offer training should social media sites users need to learn and/ or improve their social media marketing skills and abilities.

References:

1. Ajzen I. (1991) 'The Theory of Planned Behaviour' Organizational Behaviour and Human Decision Processes Vol. 50 No. 2 pp. 179-211,

2. Arbuckle J. and Wothke W. (1999) 'Amos 4.0 User's Guide', SPSS, Chicago, IL,

3. Bagozzi R. and Yi Y. (1988) 'On the evaluation of structural equation model, Journal of Academy of Marketing Science, Vol. 16, No. 1, pp. 74–94,

4. Braun M., 'Obstacles to social media networking website use among older adults' Computers in Human Behaviour Vol. 29 pp. 673- 680

5. Browne M. and Cudeck R. (1993) 'Alternative Ways of Assessing Model Fit' Sage Publications, Newbury Park, CA,

6. Breslauer B., and Smith T., (2009) 'Social media trends around the world! The global web index (GWI)' ESOMAR Research, Online Research, Chicago.

7. Brown, P., Zablah, ., Bellenger N., and Donthu, N. (2012). 'What factors influence buying center brand sensitivity?' Industrial Marketing Management, vol. 41, pp. 508-520.

8. Bughin J., Manyika, J. and Miller A. (2009) 'How companies are benefiting from Web 2.0. McKinsey Quarterly. 9, 2009.

9. Buehrer E., Senecal S., Bolman E. (2005) 'Sales force technology usage- Reasons, barriers, and support: An exploratory investigation' Industrial Marketing Management Vol. 34, pp. 389–398.

10. Byrne B. (2001) 'Structural Equation Modeling with AMOS: Basic Concepts, Applications and Programming' Lawrence Erlbaum Associates, Mahwah, NJ,

11. Cheung C., Chiu P., and Lee M., (2011) 'Online social networks; Why do students use Facebook?' Computers in Human Behaviour Vol. 27, pp. 1337 – 1343

12. Cone (2008). Business in social media study. http://onesocialmedia.com/wp-content/ uploads/2010/03/2008_business_in_social_media_fact_sheet.pdf

13. Davis F. (1989) 'Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology' MIS Quarterly Vol. 13 Issue 3 pp. 319-339,

14. Enders A., Hungenberg H., Denker H., and Mauch S. (2008) 'The long tail of social networking: Revenue models of social networking sites' European Management Journal Vol. 26, pp. 199–211

15. Fishbein M. and Ajzen I. (1975) 'Belief, attitude, intention, and behaviour: an introduction to theory and research' Reading, MA: Addison-Wesley,

16. Gillin P., and Schwartzman E. (2011) 'Social marketing to the business customer: Listen to your B2B market, generate major account leads, and build client relationships' (1st ed.). New Jersey: Wiley

17. Green R., and White R., (1976) 'Methodological considerations in cross-national research' Journal of International Business Studies Vil. 7 pp. 81-88

18. Hanna R., Rohm A. and Crittenden V. (2011) 'We're all connected: the power of the social media ecosystem' Business Horizons Vol. 54, No. 3, pp. 265-273.

19. Hoang D. Igel B. Laosirihongthong T. (2006) 'The impact of total quality management on innovation: findings from a developing country' International Journal of Quality AND Reliability Management, Vol. 23, Issue 9, pp. 1092–1117,

20. Inks S., Schetzsle S., and Avila R., (2012) 'Exploring the Use of Business Social Networking Tools in Sales: Current Perceptions and Future Expectations' The Marketing Management Journal, Vol. 22, No. 1, pp. 1-16.

21. Järvinen J., Tollinen A., Karjaluoto H. and Jayawardhena, C. (2012) 'Digital and Social Media Marketing Usage in B2B Industrial Section,' The Marketing Management Journal,Vol. 22, No. 2, pp. 102-117

22. Jussila J., Karkkainen H., and Aramo-Immonen H., (2014) 'Social media utilization in business-to-business relationships of technology industry firms' Computers in Human Behaviour Vol. 20 pp. 606-613

23. Kaplan A., and Haenlein M., (2010) 'Users of the world, unite! The challenges and opportunities of Social Media' Business Horizons, Vol. 53, pp. 59—68.

24. Kärkkäinen, H., Jussila, J. and Väisänen, J. (2010) 'Social media use and potential in business- to-business companies' innovation, in Lugmayr, A., Franssila, H., Sotamaa, O., Safran C., Aaltonen, T. (ed.), Proceedings of the 14th International Academic MindTrek Conference: Envisioning Future Media Environments, Finland: Tampere, pp. 228-236.

25. Lin K., and Lu H., (2011) 'Why people use social network sites; an empirical study integrating network externalities and motivational theory' Computers in Human Behaviour Vol. 27 pp. 1152- 1161

26. Lu J., Yao E. J., and Yu, C., (2005) 'Personal innovativeness, social influences and adoption of wireless Internet services via mobile technology' Journal of Strategic Information Systems, Vol. 14, No. 3, 245–268

27. Mangold W., and Faulds D.,(2009) 'Social media: The new hybrid element of the promotion mix' Business Horizons, Vol. 52, pp. 357–365

28. McKinsey (2013) 'Business and Web 2.0: An interactive feature. Explore, track, and customize six years of survey results on how businesses use new Web technologies and tools. Retrieved from <http://www.mckinsey.com/insights/business_technology/business_and_web_20_an_interactive_feature>.

29. Michaelidou M., Siamagka N., and Christodoulides G. (2011) 'Usage, barriers and measurement of social media marketing: an exploratory investigation of small and medium B2B brands' Industrial Marketing Management Vol. 40. pp. 1153- 1159

30. Moore J., Hopkins C., and Raymond M., (2013) 'Utilization of Relationship-Oriented Social Media in the Selling Process: A Comparison of Consumer (B2C) and Industrial (B2B) Salespeople, Journal of Internet Commerce, Vol. 12, No. 1, pp. 48-75

31. Moon J., and Kim Y., (2001) 'Extending the TAM for a World-Wide-Web context' Information and Management Vol. 28 pp. 217- 230

32. Nielsen J., (1993) ' Usability Engineering' AP Professional Academic Press Ltd, London

33. Nordlund H., Lempiala T., and Holopainen, M. (2011) 'Openness of innovating: The new roles of customers and users in business-to-business context' International Journal of Entrepreneurship and Innovation Management, Vol 14, No 4, 282–297

34. Pavlou P. (2003) 'Consumer acceptance of electronic commerce; integrating trust and risk with the Technology Acceptance Model' International Journal of Electronic Commenrce Vol. 3 pp. 69- 103

35. Pires G., and Aisbett J., (2003) 'The relationship between technology adoption and strategy in business-to-business markets' Industrial Marketing Management Vol. 32 pp. 291-300

36. Rapp A., Beitelspacher L., Grewal D. and Hughes D., (2013) 'Understanding social media effects across seller, retailer, and consumer interactions' Journal of the Academy of Marketing Science, Vol. 41 No. 5, pp. 547-566.

37. Rangaswamy A., Bruggen G., (2005) 'Opportunities and challenges in multichannel marketing; an introduction to the special issue' Journal of Interactive Marekting Vol. 10 No. 2 pp. 5

38. Rauniar R., Rawski G., Yang J., Johnson B., (2014) 'Technology acceptance model (TAM) and social media usage; an empirical study on Facebook' Journal of Enterprise Information Management Vol. 27 No. 1 pp. 6- 30

39. Rodriguez M. Peterson R. and Krishnan V. (2013) 'Social Media's influence on Business-to-Business sales performance' Journal of Personal Selling and Sales Management Vo. 32 No. 3 pp. 365-378

40. Rosenbloom B (2006) 'Multi-channel strategy in business-to-business marketing; prospects and problems' Journal of Marketing Management Vol 36 pp. 4-9

41. Ryu M., Kim S., Lee E., (2009) 'Understanding the factors affecting online elderly user's participation in video UCC survive' Computers in Human Behaviour Vol. 25 pp. 619- 632

42. Serenko A. (2008) 'A model of user adoption of interface agents for email notification' Interacting with Computers Vol. 20 pp. 461- 472

43. Silliance J., Macdonald S., Ledang B., Frost B., (1998) 'Email adoption, diffusion and impact with small firms; a survey of UK companies' International JOuanel of Information Management

44. Simula H., Töllinen A., and Karjaluoto H., (2013) 'Crowdsourcing in the Social Media Era: A Case Study of Industrial Marketers' Journal of Marketing Development and Competitiveness, Vol. 7, No. 2, pp.122-137.

45. Shih C. (2009) 'The Facebook era: Tapping online social networks to build better products, reach new audiences, and sell more stuff' Boston, MA: Prentice Hall.

46. Spekman R., and Dotson E., (2009) 'Using social media in the B2B context' Harvard Business Review, July 27

47. Swani K. and Brown B., (2011) 'The Effectiveness of Social Media Messages in Organizational Buying Contexts' American Marketing Association, Vol. 22, pp. 519.

48. Srite M., and Karahanna E., (2006) 'The role of espoused national cultural values in technology acceptance' MIS Quarterly Vol. 30 Issue 3 pp. 679- 704,

49. Swani K., Milne G., Brown B., (2013) 'Spreading the world through likes on Facebook; valuating the message strategy effectiveness of Fortune 500 companies' Journal of Research in Interactive Marketing Vol. 7 No. 4 pp. 269-294

50. Taylor S. Todd P. (1995) 'Assessing IT usage: The role of prior experience' MIS Quarterly, Vol. 19, Issue 2, pp. 561- 570,

51. Van Den Bulte, C., and Wuyts, S. (2007) 'Social networks and marketing'. Cambridge, MA: Marketing Science Institute

52. Venkatesh V. Morris M. Davis G. Davis F. (2003) 'User Acceptance of Information Technology: Toward a Unified View' MIS Quarterly Vol. 27 Issue 3 pp. 425 -478,

53. Venkatesh V. Thong J. Xu X. (2012) 'Consumer Acceptance and Usage of Information Technology; Extending the Unified Theory of Acceptance and Use of Technology' MIS Quarterly VOL. 36 Issue 1 pp. 157- 178,

54. Yoon C. (2009) 'The effects of national culture values on consumers acceptance of e-commerce; online shopping in China' Information and Management, Vol. 46, pp.294- 301,