Knowledge Contribution Determinants through Social Network Sites: Social Relational Perspective

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ABSTRACT

The advancement of the social network sites (SNSs) have enabled individual to share and exchange information through online platforms. This relatively new form of information exchange, motivations of knowledge contribution only recently received have significant academic attention. Many studies have focused at the usage intention of SNSs by examining the factors that affect individual's engagement in such environment. Knowledge contribution behavior can be explained from the social relational perspective that emphasizes the public goods. However, based on literature there is a need for further investigation for determinants of knowledge sharing through SNSs. This paper focuses on the social relational factors as key motives of individual's engagement in online knowledge sharing behavior. The research model empirically tested with a sample of 426 members of Facebook users. The results in this study confirm that reciprocity and sense of community are significantly related to users' engagement in knowledge sharing behavior, whereas trust had shown no relationship. The implications for both researchers and practitioners are discussed.

Keywords: Social Network Sites, Knowledge Contribution, Social Relations Factors
JEL Classifications: D85, L14

1. INTRODUCTION

Social network sites (SNSs) such as MySpace, Facebook, and Twitter enable users to present themselves and establish unlimited relationships with others. These sites have taken a place in different contexts like work, romantic relationships, and politics (Ellison et al., 2007). The higher level of social presence and self-disclosure have made SNSs the most popular internet activity (Kaplan and Haenlein, 2010). SNSs allow participants to join virtual communities with common interests; share and exchange information that may achieve desired or expected benefits. This form of knowledge sharing has become a vital tool for exchanging product-related information and consumptions experiences.

Industrial statistics have provided evidence in supporting the substantial effect of user's online contributions. For example, eMarketer revealed that the share of information about local business doubled, from 9% in 2010 to 17% in 2015, these online reviews enhance internet users to visit business websites rather than business itself (eMarketer, 2015).

Given the significance effects SNSs on individuals behavior (Goh et al., 2013; Nadeem et al., 2015; Rapp et al., 2013), it becomes vital for businesses to understand what makes consumers more engaged in online activities such as product-related information exchange.

User's interactions have only recently received practitioners and academic attention. Most of previous researches have focused on intention of SNSs usage, examining the factors that influence individual's engagement. To date, the determinants of users engagement in an online information exchange behavior has received limited attention. We need more understanding why individuals may contribute their knowledge in such environment. Hence, it is necessary to examine this phenomenon from different theoretical perspective, this study explained users engagement from the social capital perspective, specifically the relational dimension. In the second section this paper addresses the theoretical background. Then present the research framework, hypotheses, methodology and findings discussions. Finally, several implications were provided, limitations of the study, and future directions.

2. THEORITCAL BACKGROUND

Prior researches provide a rich basis of theory on which to construct a research model that explains why individuals are willing to share their knowledge with others through social network. This section describes user's engagement in online contribution behavior and the theoretical foundation of the research model.

2.1. Knowledge Contribution

With the rapid growth of SNSs virtual community members have become more active to contribute their opinions. It is not surprising since these platforms providing users a venue to voice their recommendations and complaints, this form of communication has become a vital marketing tool, therefore firms recognized recently the important role of online contributions in the marketplace. This form of communication has been known in the marketing researches as electronic word of mouth "any positive or negative statement made by potential, actual, or former customers about a product or company, which is made available to a multitude of people and institutions via the Internet" (Hennig - Thurau et al., 2004). People share their consumption experience with a specific product or service which is substantially influences other consumers' decisions.

The underlying support of SNSs in such communication form is the availability for huge online virtual communities. Online product or service related information exist in a various forms such as text, photo, and video. The immense volume and diversity of information available create a new challenge for manufacturers and retailers to look behind those factors make SNSs users more willing to engage in word-of mouth communication. Despite the voluntary nature of word-of-mouth, the non- commercial focus may be not certain (Chatterjee, 2001), individuals might be engaged in knowledge sharing behavior for various reasons. Prior researches (Chu and Kim, 2011; Hennig□Thurau et al., 2004; Tong et al., 2007; Wasko and Faraj, 2005) provided rich base of the most influential motivations from different point of views.

2.2. Prior Research on Knowledge Contribution

Researchers have adopted different approaches to investigate what stimulate individuals to contribute in online environment. For instance In terms of product-related information Hennig-Thurau et al. (2004) identified eleven factors that enhance individuals engagement regarding knowledge exchange behavior (concern for other, help the company, social benefits, exerting power, advice-seeking, self-enhancement, economic rewards, convenience, problem-solving, expressing positive emotions and venting negative feelings). In the other hand, Tong et al. (2007) investigated individuals motives to share their knowledge from the cost and benefits perspective; cognitive and executional cost, enjoyment in helping others, self-enhancement, and reward. Recently, Cheung and Lee (2012) identified four perspectives to explain individuals engagement in online consumer-opinion platforms: Egoism, collectivism, altruism, and principlism.

However, these studies have been conducted in online consumer-opinion platforms, nevertheless, the different nature of SNSs where the participants can articulate themselves in various communities and share mutual interests based on relational factors. Chu and Kim (2011) posited that users may generate online content because of the desire to maintain social relationships with their personal networks. The study developed its model based on the social relational factors; tie strength, homophile, trust, informational influence, and normative influence. The findings reveal that trust, normative and informational influences are positively associated with engagement in online communication through SNSs. The ubiquities and interactivity of SNSs have transformed the communication process and allowed users to exchange information in different contexts (French and Read, 2013).

Despite the relevant researches that examined key drivers of information exchange behavior (Choi and Scott, 2013; Johnston et al., 2013; Wang et al., 2016), users' intention to share information for social relational reasons still unclear. Individuals are absolutely free whether to share their product-related information or not, through online medium such as SNSs (Shin, 2013). Considering this issue we need to understand the key motives of user's engagement in knowledge contribution behavior from the social relational perspectives.

2.3. Social Capital

Social capital consists of three distinct dimensions: Structural, relational, and cognitive (Nahapiet and Ghoshal, 1998). This paper examined the relational dimension role in enhancing individual's engagement in information exchange behavior through SNSs. Social relational capital refer to "the kind of personal relationships people have developed with each other through a history of interactions" (Nahapiet and Ghoshal, 1998). The relational dimension includes trust, reciprocity, and sense of community.

2.3.1. Trust

Trust among SNSs users is a worth consideration in terms of users' engagement in online knowledge contribution behavior through SNSs. Many studies have indicated that trust plays a dynamic role in the process of information and knowledge exchange in online environment (Hsu et al., 2007; Sharratt and Usoro, 2003). Research have demonstrated that trust is an essential prerequisite for knowledge sharing behavior (Chang and Chuang, 2011; Lin et al., 2012). Trust is much more important in voluntary activities, such as knowledge exchange in virtual communities (Zolfaghar and Aghaie, 2012). Therefore Individuals' who perceived relationships as trustworthy are more encouraged to cooperate with each other.

With regard of SNSs interactivity and mobility that allow individuals to maintain various relationships and exchange information with them, the established trust also extend to the virtual communities improving overall activities in such environment. As Chu and Kim (2011) suggested, the mutual agreement to become friends in SNSs and the ability to go through each other's profiles would enhance levels of trust which increase social interactions such as knowledge contribution. Along with, Tamjidyamcholo et al. (2013) indicated that trust significantly affect intention of knowledge sharing in virtual communities. Accordingly, improving trust among SNSs contacts may strongly affect users' engagement in knowledge contribution behavior; hence this study proposed the following hypothesis:

H_1: Trust positively associated with users' engagement in knowledge contribution behavior through SNSs.

2.3.2. Reciprocity

Reciprocity or the mutual exchange behavior can also facilitate knowledge sharing process. Individuals' might be engaged in reciprocal behavior because they expecting future returns (Ipe, 2003; Wiess, 1999). Reciprocal behavior appears among people and even with strangers, simply because they all have common goal orientation (Leana and Van Buren, 1999). This relational source also can influence individuals' interactions in online environment. For instance, Bock et al. (2005) suggested that members with strong norm of reciprocity are more willing to contribute their information, since they feel that their efforts will be reciprocated.

Prior studies indicated that knowledge sharing through electronic networks is facilitated by strong sense of reciprocity (Kankanhalli et al., 2005; Wasko and Faraj, 2000), these research found reciprocal behavior positively associated with usage and intention of knowledge contribution in electronic repositories. However, the advanced features of SNSs enable users reciprocate to builds a longer and bigger social network. These large networks of social connection help people to obtain benefits and give it back to others in different forms such as information exchange. As previous research (Cheung and Lee, 2012; Liao et al., 2013), suggested that knowledge contribution has relied on relational resources and people with high norm of reciprocity more likely to engage in information exchange behavior through online sittings.

With regards of SNSs affordances users can achieve several interests through different online activities, one of these activity is to contribute their knowledge which may help others in their decisions like pre-purchase decision. Thus, the present paper proposed the following hypothesis:

H_2: Reciprocity positively associated with user's engagement in knowledge contribution behavior through SNSs.

2.3.3. Sense of community

The primary assumption of social identifications or sense of community is that people are inspired to keep up and improve their self-image as a part of the community (Ely, 1994). In other word, sense of community refers to the emotional involvement with social aggregate. When individuals' set themselves as part of community and align their objects with its members, they will treat other as relatives and they are more interested and willing to do something beneficial for them (Hars and Ou, 2001). In respect of virtual communities individuals also brought together by common goals and interests. Hence, their higher sense of community increases the likelihood of engagement in online interactions such as knowledge contribution.

Prior researches (Dholakia et al., 2004; Yoo et al., 2002) indicated that members with high sense of community more inclined to participate and contribute in virtual communities. Nahapiet and Ghoshal (1998) argued that sense of community plays important role to combine and exchange information. In contrast, less sense

of community within groups could be a significant barrier to the knowledge exchange and contribution. Similarly, Chiu et al. (2006) examined the social capital resources as predictors for knowledge contribution, pointed that people would not share knowledge to another person unless they recognized them as a group-mate. This is consistent with Cheung and Lee (2012) found sense of belonging is the most influential factor on consumers' intention to spread any consumption experience or product-related information.

According to the literature above, the key question whether sense of community is strong enough to enhance users' engagement in knowledge contribution behavior with the different nature of SNSs still unclear. Hence the present study proposed the following hypothesis:

H_3: Sense of community positively associated with users' engagement in knowledge contribution through SNSs.

3. RESEARCH METHOD

The research model was examined using a sample of universities' students in Jordan, in particular students who have Facebook profile. Facebook one of the most popular SNSs, allow users to articulate their social networks, and maintain different types of connection with others.

3.1. Data Collection

A random sample was used by inviting universities students to participate in this study. Self-administered questionnaires were distributed on a number of students who have Facebook account. Respondents were kindly asked to fill the questionnaire based on their actual behavior on Facebook. A total of 426 usable questionnaires were collected in this research. Through the 426 questionnaires, 62% of respondents were female, and 38% were male. The majority of respondents (88%) were aged between 19 and 24.

3.2. Measurement

Variables of interest in this research consist of users' engagement in knowledge contribution through SNSs, trust, reciprocity, and sense of community. The measurement build based on previous literature take into account the validity and reliability. Likert scale, ranging from strongly disagree (1) to strongly agree (5).

4. DATA ANALYSIS

This study used partial least squares (PLS) method for performing the statistical analysis. According Hair et al. (2006) following PLS analytical approach need two main steps; first the measurement model to assess scales and model evaluation, second is the structural model to examine the relationships and drawing the final results.

4.1. Measurement Model

Both convergent validity and discriminant validity of the model were examined. Convergent validity was tested using the criteria proposed by Chin (1998) that composite reliability should be at

least 0.70, and item loadings should be higher than 0.70. The average variance extracted (AVE) should be at least 0.50 (Fornell and Larcker, 1981). Based on result, researcher excluded RCE4, SOC5 because their loadings were <0.70. All other items loadings were higher than the required threshold. Convergent validity conditions were also satisfied in the study model by having CRs ranging from 0.85 to 0.89, and AVE from 0.58 to 0.69. Table 1 shows the results of analysis.

Table 1: Measurement model result

Constructs	Item	Loading	t-value	CR	AVE
Users engagement	ENG1	0.82	15.69	0.85	0.59
	ENG2	0.74	11.8		
	ENG3	0.75	13.6		
	ENG4	0.76	12.95		
Reciprocity	REC1	0.85	16.24	0.87	0.69
	REC2	0.89	20.86		
	REC3	0.74	10.63		
Sense of community	SOC1	0.82	10.48	0.85	0.59
	SOC2	0.7	6.62		
	SOC3	0.78	8.26		
	SOC4	0.76	5.58		
Trust	TRU1	0.72	3.35	0.89	0.58
	TRU2	0.82	6.82		
	TRU3	0.82	6.07		
	TRU4	0.75	5.88		
	TRU5	0.76	3.96		
	TRU6	0.7	4.53		

CR: Composite reliability, AVE: Average variance extracted

Discriminant validity can be assessed by the square root of the AVE for each construct. A reasonable level of discriminant validity acquires if each construct correlations is greater than other. Table 2 present the correlations matrix and the square root of AVE for each construct in the research model.

Table 2: Correlations matrix

Construct	REC	SOC	TRU	ENG
Reciprocity	0.83			
Sense of community	0.33	0.77		
Trust	0.4	0.36	0.76	
Users engagement	0.5	0.36	0.26	0.77

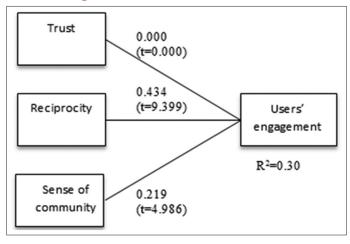Italic values are the root square of AVE, AVE: Average variance extracted

The square root of the AVE should be higher than the correlations for all other constructs. As shown Table 2, data in present study provide solid evidence of convergent validity and discriminant validity.

4.2. Structural Model

The second step was the assessment of the structural model; the variance explained (R2), path coefficient, and t-values were estimated based on hypothesis test in the research model. Figure 1 shows the results of the hypothesized structural model test.

The result of the research model examination demonstrates that the R^2 value explains 0.30% of the variance in users' engagement in knowledge contribution behavior through SNSs. Surprisingly trust had no effect on users' engagement to contribute their knowledge. The result revealed significant effects for reciprocity and sense of community with path coefficients at 0.43, and 0.22 respectively, which is provides support for H_2, H_3.

Figure 1: Result of the measurement model

5. DISCUSSION

The research model was based on social capital theory in specifically the relational dimension. The analysis indicated that users' engagement in knowledge contribution behavior is significantly associated with two relational factor; reciprocity and sense of community.

Reciprocity was the most influential factor on users' engagement in knowledge contribution through SNSs. The result is consistent with prior literature on online contribution, where the norm of reciprocity plays important role of fostering cooperation between electronic network members (Lin, 2007). In this research, users with high reciprocal behavior on Facebook have greater intentions to share their knowledge with others. A strong norm of reciprocity would enhance Facebook users' to contribute their knowledge, because they believe that this effort could be reciprocated.

This study also revealed that sense of community is decisive in affecting users' engagement in knowledge contribution behavior through SNSs. This finding is consistent with previous studies in online context (Cheung and Lee, 2012), providing supplementary evidence that sense of community is a strong predictors of individuals engagement in knowledge contribution behavior through online environment. Willingness to contribute knowledge or information in Facebook reflects their sense of community. In other word, this act makes users feel that they are belonging to a group like relatives. These results explain the importance role of social relational factors through SNSs, unlike such as in the current investigation.

Contrary to expectations and prior literature (Chu and Kim, 2011; Zolfaghar and Aghaie, 2012), the result showed that high level of trust does not enhance knowledge contribution behavior through SNSs. The possible explanation is that the knowledge they might contribute is not personal information, and they would not show a big concern if their social networks are trusted members. Thus trust among Facebook friends does not have a significant effect on users' engagement in knowledge contribution behavior.

6. LIMITATIONAN AND FUTURE RESEARCH

Although the usefulness of results in the current study, it has several limitations. First, whether the results could be generalized to other types of SNSs such as Twitter and LinkedIn are unclear. Knowledge contribution in virtual communities might be different since these sites have designed for diverse interests. Further exploration is important to confirm the generalizability of present findings. Second, the sample involves only universities students', who are active Facebook users. Other users who had participated in SNSs might have different insights about the impact of social capital. The results cannot be generalized to all participants, this limitation urge the need for additional research. Third, this study examined only the relational factors of social capital. This study did not examine the structural and cognitive factors that can be key motives for knowledge contribution through SNSs. Future studies should investigate the remains dimensions of social capital as motivations for knowledge contribution. Finally, SNSs is a universal medium it would be fruitful to investigate knowledge contribution motives in different cultural sitting, while this study only focus on Jordanian Facebook users'.

7. IMPLICATIONS

This research contributes to present online knowledge contribution research in a number of ways. First, most of existing studies focus mainly on the factors affect individual intention to use SNSs. There is a short understanding of why individuals' would share their knowledge or information with other participants in online environment. This study enhances the current literature by investigating the relational dimension of social capital that explains users' engagement in knowledge contribution behavior through SNSs. Second, the research model provide an empirical support that relational factors such as reciprocity and sense of community shows significant impact on users engagement in online contribution behavior.

Moreover this research also beneficial for practitioners by providing more understanding of SNSs members' behaviors. For instance results of this study show that reciprocity and sense of community are crucial factors that encourage users to share their information with others in the context of SNSs. Thus, practitioners should provide a vital mechanism through SNSs take into account the reciprocal behavior among users and their sense of community.

8. CONCLUSION

In conclusion, SNSs represent vital communication medium. This phenomenon could be exploited in different contexts of business. However, it seems that individuals' contribute their knowledge in such environment if they perceive their supportive actions for others will be reciprocated, and returned back in future benefits. They also engage in such behavior when they identify themselves as part of group, they will exchange information with others conceive them as relatives to fulfill their sense of community. Unexpectedly, this research find that individuals engagement in

knowledge contribution behavior through SNSs do not impacted by trust in other users on social networks.

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