Socio -Technical Determinants of Knowledge Sharing Behaviour-An Investigation on Social Networking Sites users

Md. Fahami Ahsan Mazmum

Received: 13 December 2018 Accepted: 2 January 2019 Published: 15 January 2019

Abstract

Social Networking is a buzzword in modern communication for eradicating the distance barrier. Due to the advancement in Information and Communication Technology, peoples can communicate with each other from anywhere in anytime. Different way of communication tools exits; Social networking is one of them. Through social networking, users can share their thinking, values, emotions, insights and so on with others. However, their behaviour of the social networking sites (SNS) users is influenced by different factors. This paper aims at identifying those determinants, specially the sociotechnical determinants of knowledge sharing behaviour among the user of SNS. Structural equation modelling (SEM) was conducted on the primary data collected through the survey. Therefore, the outcome of this study shows that ethical culture, social ties, sense of belonging, knowledge selfefficacy, information privacy and structural assurance are all significant variables as socio-technical factors. This study provides a guideline to the different group of people likemarketers, employers who need to understand the knowledge sharing behaviour of the SNS users.

Index terms— socio-technical, determinants, social networking, knowledge-sharing behaviour.

1 Introduction

n this day and age, people are getting more involved in virtual world through their presence in social networking sites (SNS). Online users of various sites consider networking online as a convenient media of sharing thoughts and knowledge. People in online communicate with their friends, family, neighbours and even strangers. By the grace of these online networking sites, people get scope to interact with one another in more convenient way then the previous. People from diverse geographical area with similar interest can communicate with each other through online networking (Brown & Duguid, 2001). Social networking sites become more popular because of high level social presence and self-disclosure (Kaplan & Haenlein, 2010). Currently, popular social networking sites are-Facebook, twitter, LinkedIn, Instagram, Snapchat, Flickr, WhatsApp etc. (Maina, 2018). Through this SNS people share their views, idea, insights which derived from the implicit and explicit knowledge they process (Hakami et al., 2014).Knowledge sharing among people enhanced through the emerged online tools, like-Social Network, Blogs, Wikis and Podcast Forums (Hakami et al., 2014).

According to Aliakbar et al. (2012), knowledge sharing is the process by which knowledge is transferred and exchanged among people. Pulakos et al., (2003)believes that knowledge sharing is not limited to transfer and exchange but sharing thoughts to solve problem and developing ides also included in knowledge sharing. This knowledge sharing may be influenced by various types of factors; social, technical, personal etc. In this paper socio-technical determinants of knowledge sharing are given concentration. Socio-technical determinants refers to users social background regarding knowledge acquire, thought, views and its interaction with technical system like SNS (IGI, 2018). These socio-technical factors can affect the knowledge sharing which leads to knowledge gap among communities. So if the socio-technical determinants can be identified, the way of knowledge sharing will be accelerated, which ultimately reduced knowledge gap with proper knowledge, among the communities. For this purpose this paper will focus on socio-technical issue on knowledge sharing behaviour where variable of each factor will be identified by reviewing literature. Later, quantitative analysis is conducted to determine the

core variable on social and technical sector. The research question of this study is-What are the sociotechnical determinants of knowledge sharing behaviour among social networking sites user? This paper includes six parts. First part provide introduction of this paper. In the second part, literature review has been described. Third part discusses the methodology. Data analysis and discussion has been shown in forth part. Fifth part includes the integrated findings. In the last part, conclusion of this paper has been given.

2 II.

3 Literature Review

The term 'Socio-technical' use to emphasis the connections between the social and the technical factors to understand particular technology or behaviour in the organization (Trist, 1963). In socio-technical system, social and technical factors interact and impact each other for a particular process or output. (Pasmore et al., 1982). According to Davenport & Prusak (2000), if only technological factors are considered, proper knowledge sharing behaviour cannot be determined, as knowledge sharing behaviour is a social process which impacted by social factors. To understand the knowledge sharing in SNS, both social and technical factors are necessary for investigation. Therefore, this study focused on the socio-technical determinants of the knowledge sharing behaviour in SNS.

In the modern age, the uses of SNS as a form of communication and knowledge sharing is increasing at a high speed and the times lapse between per visit also gradually reducing. Some researchers used quantitative analysis to identify the determinants of knowledge sharing behaviour while others used qualitative approach. A study by Tan (2013) found that the main determinants of successful knowledge sharing behaviour are Social ties, knowledge self-efficacy, structural assurance and system quality. As a social factors ethical culture, social tie, and a sense of belonging in online network and as a technical factors structural assurance of service providers and structural assurance of the Internet have been identified by Chai & kim (2012). However, these studies focused on particular demographic area, different age group can provide different outcome. Therefore, more quantitative studies need to conduct on diverse group of people for more generalizable outcome.

Different researchers used different theories to analyse the knowledge behaviour of the SNS users. A study to analyse knowledge sharing behaviour by Hsua et al. (2007) proposed a social cognitive theory (SCT)based model which mainly focused on trust, selfefficacy, and outcome expectations. According to study by Paroutis & Saleh (2009) history, outcome expectation, perceived organizational and management support and trust are four key variable of knowledge sharing with the use of web 2.0 technologies. Social factors, like-trust, reciprocity, social network ties were founded along with other personal and organizational factor by Chen & Hew (2015).Share willingness, trust, reciprocity and altruism identified as main variables in a proposed model based on social exchange theory of knowledge sharing behaviours in virtual communities by Jinyang (2015). A study by Majali et al. (2016) identified that reciprocity and sense of community play vital role in knowledge sharing behaviour where trust considered as insignificant one. However, they ignored technical and other factors that might have impact on knowledge sharing behaviour as well. Information Privacy and Social Ties are considered initially as determinants in a technological category in knowledge sharing behaviour, however finally social ties identified as a leading variable in knowledge sharing in social media (Hakami et al., 2014). Studies conducted by Tohidinia & Mosakhani (2010) and Chai & kim (2012) identified that social ties is positively correlated with the knowledge sharing behaviour. Previous study by Wang & Wei (2011) indicates that sense of belongings does not have high positive correlation relation with the knowledge sharing behaviour, where absence of direct relationship is considerate as moderating variable. Self-efficacy impacts positively in knowledge sharing behaviour, which is identified in a study conducted by Zhang & Ng (2012). Hara & Hew (2007) conducted a research study where, structural assurance considered as positively correlated with knowledge sharing behaviour. Considering all the previous research, this study considered some social and technical factor as sociotechnical determinants of knowledge sharing behaviour.

4 a) Research Dimension and Hypothesis Developed

Reviewing the literature and considering the outcome of the previous studies, variables are identified for study in two sectors, one is social and another one is technical. In social sector the variables are-ethical culture (EC), social ties (ST), sense of belonging (SB), knowledge self-efficacy (KSE). In technical sector the variables are-information privacy (IP), structural assurance (SA).

5 Ethical Culture

Ethical culture refers to the moral value that is injected to the individual (Hawker, 2002). Hawker (2002) said that ethics is a moral value and principle while Pai & Arnott (2013) defined ethics in Social Networking Sites (SNSs) as access control and privacy control of information. Chai & kim (2012) mentioned that the ethical culture is becoming imperative in recent days because of the widespread use of technology. In this consequence, the quality of information sharing in SNSs is very essential as a medium or platform for knowledge sharing. Devito (2009) emphasized on politeness while communicating in SNSs towards other individuals and mutual respect to one another. Matthews & Stephens (2010) marked that ethical culture is important to seek the truth.

Although there is high usage of SNSs which makes ethical culture much important, we need to avoid circulation of false information also. Based on this discussion following hypothesis emerged-H1: Ethical culture (EC) has a significant effect on KSB.

6 Social Ties

Social ties indicate the closeness between or among users in SNSs (Chaia & kim, 2012,). Chow & Chan (2008) highlighted that social ties is the degree of contact that is maintained with other members in the SNSs. Several researchers **??**Hsu et al., 2007;Chow & Chan, 2008)shows that stronger social ties between or among users in SNSs increase the Knowledge Sharing (KS) behaviour. He et al. (2009) also indicated that the degree of Knowledge Sharing (KS) may vary on the basis of the degree of social ties. So, higher social ties make higher KS in SNSs. Wang & Wei (2011) supported that trust is an essential segment of social ties which help build up the strong relationship among the participants or individuals. Moreover, the time spent in SNSs has contributory effect to make social relationship between users (Chai & kim, 2012). Therefore, following hypothesis is developed-H2: Social ties (ST) has a significant effect on KSB.

7 Sense of Belonging

Lin (2008) defined sense of belonging as a selfrealization of being as an individual within the specific community. He added that it defines the relationship for sense of belonging with Knowledge Sharing. Lin (2008) suggested that the higher the degree of belonging an individual has, the greater the chances for sharing knowledge. **??**hiu Based on the discussion following hypothesis emerged-H3: Sense of belonging (SB) has a significant effect on KSB.

8 Knowledge Self-efficacy

Hakami et al. (**??**014)) perceived that self-efficacy has high relationship to knowledge sharing behaviour. It is assumed that people with high self-efficacy believe that their owned knowledge will benefit others and they are more willing to share (Tohidinia, 2010). Knowledge self-efficacy, as believing that, an individual knowledge has the ability to solve problems as well as to make better decisions (Luthans, 2003). Therefore, this study has considered knowledge self-efficacy to have an effect on KSB H4: Knowledge self-efficacy(KSE) has a significant effect on KSB

9 Information Privacy

The wish of individuals to manage or have some influence over data about themselves is called information privacy. Information technology's advances have increased the concern information privacy and its impacts. As a result, researchers of information systems have started to explore information privacy issues, along with technical solutions to focus these concerns (France & Robert, 2011). Information Privacy is an individual's claim to control personal information-information identifiable to the individual-is acquired, disclosed or used (Kang, 1998). The ability of users' like-individuals, groups or institutions to decide when, how, and to what extent their information is shared to others is called information privacy. Information privacy refers to restricted access to private information in internet and is a significant reason for user participating in social networking sites (Snyder & Slauson, 2006). H5: Information privacy(IP) has a significant effect on KSB.

10 Structural Assurance

Defensive arrangements such as securities, laws, lawful recourses and promises, that are used for promoting transactional success is called structural assurance. For example, there are different legal and technological internet and websites safeguards that are attached with the internet or website. These protective measures secure the internet and website users from privacy loss, identity loss, credit card fraud or any other criminal activities that could happen on the internet. This is usually known as structural assurance To make feeling safe the internet and websites users in their sharing of knowledge is the objective of structural assurance. If the service providers and the internet can't provide necessary structural assurance ,it will play negative role in stimulating knowledge sharing behaviours (Evangelou & Karacapilidis, 2005). Moreover, in electronic marketing, structural assurance has acted an important role in forming trust (Pavlou, 2002). Customers' belief while making decision on which e-vendors to use is influenced by strong structural assurance provided by these e-vendors. (Gefen et al., 2003). Thus, for maintaining knowledge sharing, structural assurance is taken as major element (So & Bolloju, 2005). In SNSs, structural assurance is known as the internet's structure that ensures user a protected environment (Chai & Kim, 2012). Performance promises, rules, regulations, and legal assurance are the terms of this structure. McKnight et al.(2002) specified that that structural assurance is the protection of SNSs' users from criminal and fraud activities and also from the prevention of loss of privacy and individual identity. As for example, SNSs users must be able to make their information open to the public or limited to certain users and every SNS should provide such kind of options (Tan, 2013). Hara & Hew, (2007) indicated that structural assurance is positively related to knowledge sharing behaviour in SNSs. Ribbink et al., (2004) found that structural assurance have

positive impact on the internet use and internet trust. Therefore, following hypothesis emerged-H6: Structural assurance(SA) has a significant effect on KSB.

People can and do encounter unpredicted reprimand or even discharge from their positions because of unsuitable actions as a result. According to Chou & Liao (2013) in case of knowledge sharing in social media, information privacy has a significant impact. So, Information privacy is considered in this study, so following hypothesis emerged- The measurement construct of the variables taken for this study are developed based on the discussion above. Considering the nature and core facts of each variable the items are taken for this study. This study considered new items rather than the previous one to represent the core theme of the variables, because the previous items were not self-exploratory. As survey method was used, so self-exploratory items will provide more quality data (Duffy et al., 2005). However, the new items were developed through changing and modifying the items of Chai & kim (2012)

11 Methodology

Both primary and secondary data have been used to answer the research question of this study. For secondary data, various relevant research articles, journals, books, periodicals, magazines have been reviewed. A semi-structured questionnaire has been prepared to collect primary data. A Google form has been used to prepare this questionnaire. The link of this form has been shared with respondents to collect this data. There are various thoughts regarding the sample size. According to Wang & Wang (2018) in order to conduct structural equation modelling (SEM) sample size of more than 150 would be better, whereas Roscoe (1975) argued that total number of items on the study provide the base for calculating sample size. Moreover for collecting good sample size questionnaire link was sent to 270 people. Out of 270, 242 responses have been received thus the response rate is 89.63%. Therefore, the collected responses show a good sample size for conducting the SEM.At first the reliability of the constructs were tested through Cronbach's alpha reliability analysis. Afterwards, a confirmatory factor analysis was conducted in AMOS (version 22) on both measurement model and structural model. The outcome of the CFA provides the base from testing the model fitness of measurement model and also for the testing the hypotheses.

12 IV.

13 Data Analysis and Discussion

14 a) Demographic Analysis

In our study, out of 242 respondents 54.1% and 45.9% are male and female respectively. In case of age group, 76.4% people grouped into 20-24 years where .4% people are from 40-44 years. Most of the respondents are students which is responsible for 86% of the total response. Among the participants, all have more or less experience in using social networking sites. But 122 participants out of 242 mentioned that they have 4-6 years of experience in this regard. It is needed to refer that 35.5% spent 3-4 hours per day (where less than 1 hour usage rate is 6.6% and more than 14 hours rate is .4%) in social networking sites.

15 b) Reliability Analysis

Before conducting the confirmatory factor analysis (CFA) through Structural equation modelling (SEM) the reliability of the construct need to be tested through the cronbach alpha reliability analysis. Following provide the details of the reliability analysis. From the reliability statistics (Table 3), the value of Cronbach's alpha coefficient for the 16 items is .835. It means that these items have comparatively high internal consistency. The last column of item-total statistics table (Table 4) entitled 'Cronbach's alpha if item deleted' measures probable value of the Cronbach's alpha, if it is needed to get rid of a particular item. So, from the item-total statistic stable, it is obvious that that none of the values of the column of 'Cronbach's alpha if item deleted' is greater than the current alpha of the whole scale: .835. This indicates that it is not necessary to delete any items. Hence, to measure all construct consistency, the survey questionnaire can be taken as a trustworthy tool.

16 c) Model fitness measures

After checking the reliability of the constructs, a measurement model was developed in AMOS **??**version 22) in order to test the fitness of the model. To test the model of this study, structural equation modelling (SEM) was used as SEM test the relationship among the variables through confirmatory factor analysis (Byrne, 2016) V.

17 Implication

This study provides a theoretical contribution on the area of studies relating to social networking and knowledge sharing. This study also shows the significance of the taken factors to the knowledge sharing behaviour. Social and technical factors that are taken into consideration in this study turned significant, which implies that not only social factors but also technical factors affect the knowledge sharing behaviour of SNS users. Whereas, previous studies showed social factors more significant than the technological factors (Chai & kim, 2012). As a methodological contribution, this study shows construct reliability of the newly developed items through reliability

analysis and model fitness measures. This study also implies some practical contribution, the outcome of this information provide good insight about the social media users behaviour and the underlying feeding factors which ultimately provide guidance to various group of people (i.e. marketers, organizations focus group, employers etc.) who needs to deal with the behavioural psychology of the SNS users. The output information is also useful to the social networking platform provider to develop, improve and make it interactive through understanding their needs. In order to provide social networking platform to particular community and group, platform provider should consider the offline developed social factors because along with technical factors, as those offline social factors also impact the online behaviour.

18 VI.

19 Limitation and Future Focus

This study counted several limitations; firstly, this study is cross-sectional, so the long term relationship between the factors cannot be confirmed by this study. Therefore, in future longitudinal studies can be conducted. Secondly, this study didn't test the master validity of the measurement items, which implies that convergent and divergent validity of the newly developed measurement items cannot be confirmed. In future, these validities can be tested to make the items more generalizable. Thirdly, this study used two items for Knowledge Self-Efficacy and structural assurance; however use of more items can robust the outcome for generalization as researcher recommend use of at least three items of reflecting a factor (Hair et al., 2010).

20 VII.

21 Conclusion

In the nutshell, this study aimed to research the socio-technical determinants of the knowledge sharing behaviour of SNS users. To find the answer of the research question this study collected data on the developed items of each factors taken from the previous literature. A SEM was conducted which leads to the outcome of this study. All the considered factors; ethical culture, social ties, sense of belonging, knowledge selfefficacy, information privacy and structural assurance are found as significant factors behind the knowledge sharing behaviour of the SNS users. The finding of this research contributes theoretically, methodologically and practically. A manager can use this paper for getting ideas and make decision on how social networking is used for the organizational engagement along with to realize the factors of social networking engagement. Researchers may find valuable and interesting factors that were previously less prioritized but with the sequence of time those factors are getting more importance. [1] [2]

Figure 1:

[1] Socio -Technical Determinants of Knowledge Sharing Behaviour-An Investigation on Social NetworkingSites users

[2] © 2019 Global Journals

1

Construct	Related items
Ethical Culture (EC)	EC-1: I think individual values is important in knowledge sharing behaviour EC-2: I do believe that individual norms play a vital role in knowledge sharing behaviour EC-3: Individual morality has great impact on knowledge sharing behaviour
Social Ties (ST)	ST-1: Trust to followers shapes knowledge sharing behaviour ST-2: Time one spent in virtual world is judgmental in knowledge sharing attitude ST-3: Frequency of people interaction is one of the vital components in knowledge sharing Attitude
Sense of Belonging (SB)	SB-1: One belongs to a particular group sometimes shape one behavioural pattern in sharing knowledge SB-2: Commitment level to a particular group in knowledge sharing is note worthy SB-3: Comfort level to share his/her thoughts and opinions is very crucial in knowledge sharing trend

Figure 2: Table 1 :

2

Descriptions		Frequency	Percentage
Gender	Male Female	131 111	54.1% 45.9%
	15-19	6	2.5%
	20-24	185	76.4%
	25-29	36	14.9%
Age	30-34 35-39	7 2	2.9% .8%
	40-44	1	.4%
	45-49	3	1.2%
	Above 49	2	.8%
	Student	208	86%
	Teacher/Faculty	14	5.8%
	Engineer	3	1.2%
Profession	Business	8	3.3%
	Doctor	3	1.2%
	Others	6	2.5%
Experience in Using Social Networking Sites (In years)	1-3 4-6 7-9	63 122 43	26.0% 50.4% 17.8%

Figure 3: Table 2 :

3

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.835	.844	16

Figure 4: Table 3 :

4

	Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
EC_1	63.6186	47.309	.348	.248	.831
EC_2	63.6864	47.671	.347	.305	.831
EC_3	63.6864	46.599	.392	.253	.829
ST_1	64.2203	45.151	.436	.298	.827
ST_2	64.4280	46.348	.315	.274	.834
ST_3	63.9661	45.939	.414	.254	.828
SB_1	64.0085	46.340	.417	.238	.828
SB_2	64.2585	45.461	.373	.220	.831
SB_3	63.9195	45.802	.372	.238	.830
KSE_1	63.8093	45.815	.472	.305	.825
KSE_2	64.2246	45.017	.483	.319	.824
SA_1	64.0381	43.782	.568	.444	.819
SA_2	64.2246	45.154	.395	.267	.830
IP_1	63.7500	44.810	.485	.424	.824
IP_2	64.2881	44.844	.447	.309	.826
IP_3	63.6780	45.326	.502	.433	.823

Figure 5: Table 4 :

significance level (p-value), Comparative fit index (CFI),
Standardized root-mean-square residual (SRMR) and
Root Mean Square Error of Approximation (RMSEA)(Hair
Year 2019
12
Volume XIX Issue II Version I
( )
Global Journal of Management and Business Research

et al., 2010). The estimated value of the measurement model of this study shows excellent model fitness in comparison to the threshold value (shows in table-5).

Figure 6:

5

Measure	Estimate	Threshold	Interpretation			
CMIN	119.330	–	–		Cut-off	
DF	87	–	–		criteria taken	
CMIN/DF	1.372	? 3	Excellent		from (Hair et	
CFI SRMR RM-	0.951 0.051	>0.95	Excellent	Excellent	al., p.654)	2010,
SEA	0.040	<0.08	Excellent			
		<0.06				
PClose	0.833	>0.05	Excellent			
d) Hypothesis Testing						

Figure 7: Table 5 :

6

Hypothesis	Path	Standardized path coefficient (Beta)	T-statistics	Decision
H1	EC -> KSB	.247	6.286***	Supported
H2	ST -> KSB	.264	6.652***	Supported
H3	SB -> KSB	.128	3.014**	Supported
H4	KSA -> KSB	.212	5.050***	Supported
H5	IP-> KSB	.179	4.846***	Supported
H6	SA ->KSB	.208	4.187***	Supported
Note: ***p < 0.001, ** P<0.05				

Figure 8: Table 6 :

[Maina (2018)] , A Maina . https://smallbiztrends.com/2016/05/popular-social-media-sites.html 2018. June 2018. p. 30.

[Hakami et al. ()] 'A Review of Factors Affecting the Sharing of Knowledge in Social Media'. Y Hakami , S Tam , A H Busalim , A R C Husin . *Science International* 2014. 26 (2) p. .

[Chai and Kim ()] 'A socio-technical approach to knowledge contribution behavior: An empirical investigation of social networking sites users'. S Chai , M Kim . *International Journal of Information Management* 2012. Elsevier. 32 (2) p. .

[Pi et al. ()] 'A study of Facebook Groups members' knowledge sharing'. S.-M Pi , C.-H Chou , H.-L Liao . *Computers in Human Behavior* 2013. 29 p. .

[Zhang and Ng ()] 'Attitude toward knowledge sharing in construction teams'. P H Zhang , F F Ng . *Industrial Management & Data Systems* 2012. 112 (9) p. .

[Hawker ()] *Color Oxford Dictionary. Thesaurus and Wordpower Guide*, S Hawker . 2002.

[Ribbink et al. ()] 'Comfort your online customer: quality, trust and loyalty on the internet'. D Ribbink , A C R V Riel , V Liljander , S Streukens . *Managing Service Quality* 2004. 14 (6) p. .

[Duffy et al. ()] 'Comparing data from online and face-to-face surveys'. B Duffy , K Smith , G Terhanian , J Bremer . *International Journal of Market Research* 2005. 47 (6) p. .

[Aliakbar et al. ()] 'Determinants of Knowledge Sharing Behavior'. E Aliakbar , R B M Yusoff , N H N Mahmood . *2012 International Conference on Economics, Business and Marketing Management*, (Singapore) 2012. 2012. IACSIT Press.

[Paroutis and Saleh ()] 'Determinants of knowledge sharing using web 2.0 technologies'. S Paroutis , Saleh . *Journal of knowledge management* 2009. 13 (4) p. .

[Lin ()] 'Determinants of successful virtual communities'. H F Lin . *Contributions from system characteristics and social factors. Information and Management*, 2008. p. .

[Tan and Melaka ()] 'Determinants of successfull knowledge sharing behavior in social networking sites'. C N L Tan , Melaka . *Journal of Knowledge Management Practice* 2013. 14 (3) .

[Mcknight et al. ()] 'Developing and validating trust measures for e-commerce: An integrative typology'. D Mcknight , V Choudhury , C Kacmar . *Information Systems Research* 2002. 13 p. .

[So and Bolloju ()] 'Explaining the intentions to share and reuse knowledge in the context of IT service operations'. J So , N Bolloju . *Journal of Knowledge Management* 2005. 9 p. .

[Roscoe (ed.) ()] *Fundamental Research Statistics for the Behavioral Sciences*, J T Roscoe . Holt, Rinehart and Winston (ed.) 1975. (2nd ed)

[Kang ()] 'Information privacy in cyberspace transactions'. J Kang . *Stanford Law Review* 1998. 50 (4) p. .

[Information Systems Education Conference, Dallas] http://proc.isecon.org/2006/3333/ISECON.2006.Snyder.pdf *Information Systems Education Conference, Dallas*, p. .

[Pavlou ()] 'Institution-based trust in interorganizational exchange relationships: The role of online B2B marketplaces on trust formation'. P A Pavlou . *The Journal of Strategic Information Systems* 2002. 11 p. .

[Brown and Duguid ()] 'Knowledge and organization: A social-practice perspective'. J S Brown , P Duguid . 10.1287/orsc.12.2.198.10116. http://dx.doi.org/10.1287/orsc.12.2.198.10116 *Organization science* 2001. 12 (2) p. .

[Majali and Bohari ()] 'Knowledge Contribution Determinants through Social Network Sites: Social Relational Perspective'. T A Majali , A M Bohari . *International Review of Management and Marketing* 2016. 6 (3) .

[Shen et al. ()] 'Knowledge contribution in virtual communities: accounting for multiple dimensions of social presence through social identity'. K N Shen , A Y Yu , M Khalifa . *Behaviour and Information Technology* 2010. p. .

[Hsua et al. ()] 'Knowledge sharing behavior in virtual communities: The relationship between trust, selfefficacy, and outcome expectations'. M.-H Hsua , T L Jub , C.-H Yenc , C.-M Changa . *International Journal of Human-Computer Studies* 2007. 65 (2) p. .

[Tohidinia and Mosakhani ()] *Knowledge sharing behaviour and its predictors. Industrial management and Data systems*, Z Tohidinia , M Mosakhani . 2010. 110 p. .

[Jinyang (2015)] 'Knowledge Sharing in Virtual Communities: A Social Exchange Theory Perspective'. L Jinyang . *Journal of Industrial Engineering and Management* March 2015. p. .

[Chen and Hew ()] 'Knowledge Sharing in Virtual Distributed Environments: Main Motivators, Discrepancies of Findings and Suggestions for Future Research'. Y Chen , K F Hew . *International Journal of Information and Education Technology* 2015. (6) p. 5.

[Wang and Wei ()] 'Knowledge sharing in wiki communities: an empirical study'. W T Wang , Z H Wei . *Online Information Review* 2011. 35 (5) p. .

[Hara and Hew ()] 'Knowledge-sharing in an online community of health-care professionals'. N Hara , K F Hew . *Information Technology & People* 2007. 20 (3) p. .

[Pulakos et al. (ed.) ()] *Managing knowledge for sustained competitive advantage: Designing strategies for effective human resource management*, E D Pulakos , D W Dorsey , W C Borman . S.E. Jackson, M.A. Hitt & A.S. DeNisi (ed.) 2003. San Francisco: Jossey Bass. p. . (Hiring for knowledge-based competition, m.k)

[Hair et al. ()] *Multivariate data analysis*, J Hair , W Black , B Babin , R Anderson . 2010. Upper Saddle River, NJ, USA: Prentice-Hall. (7th ed)

[Snyder et al. ()] *Myspace.com-A social networking site and social contract theory*, J Snyder , D Carpenter , G J Slauson . 2006. 2006. (Paper presented at the)

[Evangelou and Karacapilidis ()] 'On the interaction between humans and knowledge management systems: A framework of knowledge sharing catalysts'. C Evangelou , N Karacapilidis . *Knowledge Management in Research and Practice* 2005. 3 p. .

[Wang and Wang (2018)] *Oreilly*, X Wang , J Wang . `https://www.oreilly.com/library/view/structural-equation-modeling/9781118356302/c07anchor-1.html` 2018. Accessed 21 July 2018.

[Trist ()] *Organizational choice-capabilities of groups at the coal face under changing technologies : the loss, rediscovery & transformation of a work tradition*, E L Trist . 1963. London: Tavistock.

[Luthans ()] *Positive organizational behaviour: developing and managing psychological strengths*, F Luthans . 2003. Academy of Management Executive. p. .

[France and Robert ()] 'Privacy in the digital age: a review of information privacy research in information systems'. B France , C E Robert . *MIS Quarterly* 2011. 35 (4) p. .

[Matthews and Stephens ()] 'Sociable knowledge sharing online: philosophy, patterns and intervention'. P Matthews , R Stephens . *Aslib Proceedings*, Aslib Proceedings 2010. p. .

[Chow and Chan ()] 'Social network, social trust and shared goals in organizational knowledge sharing'. W S Chow , L S Chan . *Information & Management* 2008. p. .

[He et al. ()] 'Social relationship and its role in knowledge management systems usage'. W He , Q Qiao , K K Wei . *Information & management* 2009. p. .

[Pasmore et al. ()] 'Social technical systems: A North American reflection on empirical studies of the seventies'. W Pasmore , C Francis , A Shani . *Human Relations* 1982. 35 (12) p. .

[Byrne ()] *Structural Equation Modeling With AMOS*, B Byrne . 2016. New York: Routledge.

[Devito ()] *The communication blog: Politeness and Verbal Messages*, J A Devito . `http://tcbdevito.blogspot.com/2009/02/politeness-and-verbal-messages.html` 2009.

[Gefen et al. ()] 'Trust and TAM in online shopping: An integrated model'. D Gefen , E Karahanna , D Straub . *MIS Quarterly* 2003. 27 p. .

[Chiu et al. ()] 'Understanding knowledge sharing in virtual communities: An integration of expectancy disconfirmation and justice theories'. C M Chiu , E T Wang , F J Shih , Y W Fan . *Online Information Review* 2011. p. .

[Lee ()] *Understanding music sharing behaviour on social network services. Online Information Review*, D Lee . 2011. p. .

[Pai and Arnott ()] 'User adoption of social networking sites: Eliciting uses and gratifications through a means-end approach'. P Pai , D C Arnott . *Computers in Human Behavior* 2013. p. .

[Kaplan and Haenlein ()] 'Users of the world, unite! The challenges and opportunities of Social Media'. A Kaplan , M Haenlein . *Business Horizons*, 2010. p. .

[Mcknight and Chervany ()] 'What is Trust? A conceptual analysis and an interdisciplinary model'. D H Mcknight , N L Chervany . *AMCIS 2000 Proceedings*, 2000.

[Mcknight and Chervany ()] 'What trust means in e-commerce customer relationships: An interdisciplinary conceptual typology'. D Mcknight , N Chervany . *International Journal of Electronic Commerce* 2001. 6 p. .

[Davenport and Prusak ()] *Working Knowledge: How organizations manage what they know*, T H Davenport , L Prusak . 2000. Boston: Harvard Business School Press.