

Organizational Culture and Knowledge Sharing Behavior: Moderating Effect of Knowledge Governance Mechanism and Motivation

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Abstract

This paper aims to examine and test the moderating effects of informal knowledge governance mechanisms and knowledge sharing motivation on the relationship between clan organizational culture and knowledge sharing behavior thematically organized around social exchange theory. This study uses survey design based on stratified random sampling to measure the constructs. Data was collected from 279 university teachers. Preacher and Hayes process macro was used to test the hypotheses. Authors find support for the direct relationship between clan organizational culture and knowledge sharing behavior. The direct relationship is moderated by informal knowledge governance mechanisms and knowledge sharing motivation. Data support the hypotheses, but the contributions of the study should be acknowledged while allowing the limitations to be realized that lead to future directions. This study suggests that practitioners and managers should re-consider the role of informal knowledge governance mechanisms and knowledge sharing motivation as vital contextual factors for creating synergy to upsurge knowledge sharing behavior. This paper concludes that presence of knowledge sharing motivation and adaption of informal knowledge governance mechanisms have a strong contingent effect on the positive relationship between clan organizational culture and knowledge sharing behavior at workplace.

Keywords: Clan Organizational Culture, Informal Knowledge Governance Mechanism, Knowledge Sharing Behavior, Knowledge Sharing Motivation, Social Exchange Theory.

1. Introduction

In today's dynamic business and economic environment, transfer of knowledge has become a critical challenge (Segarra-Cipre's, Roca-Puig & Bou-Llusar, 2014). According to Kang and Kim (2017), knowledge transfer efficiency determines firm's survival. It is also considered a core competency for an organization to achieve competitive advantage and an indicator to attain a recognizable position in the market (Zhao, Fan & Wang, 2017). Lack of appropriate knowledge sharing (KS) leads to approximately \$31.5 billion annual losses by *Fortune* 500 companies (Heisig et al., 2016). Technology, structure and organizational culture are the three factors that affect knowledge sharing (Intezari, Taskin & Pauleen, 2017). Hence, type of organizational culture adopted in relation to transferring knowledge has a strong impact on subsequent outcomes (Paro & Garolamo, 2017).

Knowledge sharing is an elementary component of knowledge management (Wu & Lee, 2017). According to social exchange theory, knowledge sharing has a vital role in knowledge management (Pee & Min, 2017). Organizational culture that encourages knowledge sharing ensures continuous flow of information from holder to receiver. Conversely, scarcity of knowledge sharing mechanisms (Cavaliere, Lombardi and Giustiniano, 2015) and lack of motivation to share valuable knowledge (Huang, Chiu and Lu, 2013) serves as a barrier to knowledge transfer. Following this line, the impact of an organizational culture on knowledge sharing behavior can be examined through the context of knowledge sharing mechanisms adopted and the knowledge sharing motivation (KSM) possessed by individuals.

1.1 Background and Knowledge Gap

Despite a plethora of research exploring independent effects of organizational culture on knowledge sharing, no empirical study has been carried out to examine the effect of contextual variables on knowledge sharing behavior and the boundary conditions that determine or limit the effectiveness of culture on knowledge sharing. Moreover, there is scarcity of empirical studies on knowledge sharing (Henttonen, Kianto & Ritala, 2017) in developing countries like Pakistan in both public and private sector (Haq & Anwar, 2016).

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Knowledge sharing has been examined in relation to organizational culture, but little is done to study the conditions that boost or diminish the effect of specific type of organizational culture on knowledge sharing behavior. Different terms are used inconsistently to describe a particular knowledge process that leads to confusion among researchers and practitioners about the use of these terms. It makes the identification of crucial factors that contribute to improved knowledge transfer in any organization (Intezari et al., 2017).

The debate on the influence of various dimensions of knowledge governance mechanisms on knowledge sharing exists since Foss (2007, 2010) introduced the concept of knowledge sharing mechanisms. Since then, studies are exploring the mutual effects but much is left to be explored. Empirical findings are inconsistent despite the fact that literature has attempted to establish relationships among knowledge sharing motivation, knowledge governance aspects and knowledge transfer. More specifically, no study has examined the effect of multiple moderators as contextual variables on the relationship between clan organizational culture and knowledge sharing behavior. This study has significant contribution in establishing that the organizational culture that is often considered a barrier to share knowledge (Durmusoglu, Jacobs, Nayir, Khilji & Wang, 2014), would in fact facilitate knowledge transfer under a set of specific conditions when employed at the appropriate time. This premise is built on social exchange theory that establishes the reciprocal exchange relationship between organizational culture, knowledge sharing behavior and the contextual variables.

1.2 Aim of the Study

This study aims to fill this gap by examining the moderating effects of knowledge sharing motivation and informal knowledge governance mechanism on the relationship between organizational culture and knowledge sharing behavior. Therefore, the need to examine the boundary conditions operating in a specific organizational culture that foster KSB, leads to the following research questions:

R.Q. 1: What is the effect of clan organizational culture on knowledge sharing behavior?

R.Q.2: What is the moderating effect of introducing organization level contextual variable (IFKGM) between organizational culture and knowledge sharing behavior?

R.Q. 3: What is the moderating effect of introducing individual level (KSM) contextual variable between organizational culture and knowledge sharing behavior?

2. Literature Review and Hypothesis

2.1 Organizational Culture

In the literature, organizational culture has been defined through use of various typologies and frameworks. Few of the famous frameworks are Gattorna's Culture Map (2006), Oliveria and Tamayo (2004) Profile of Organizational Values (PVO) and Cameron and Quinn (1999, 2006) Competing Values Framework (CVF) along with many others. Cameron and Quinn (1999) Competing Values Framework is one of the most widely used framework (Paro & Garolamo, 2017) to study organizational culture.

2.1.1 Competing Values Framework

The four quadrants of CVF identify four different types of organizational culture, namely, hierarchy, clan, market and adhocracy (Cameron & Quinn, 1999; Turner & Pennington III, 2015). *Hierarchy* Characterized by well-defined processes, policies, and procedures, hierarchy culture follows the tall structures and strict control mechanisms, chain of command and centralization. *Market* This organizational culture is driven by competition and is results and outcome oriented. Transactions are purely value based. An efficient market is marked by value generated through minimum cost and time. *Adhocracy* Adhocracy culture offers more flexibility and autonomy than any other type of organizational culture to adapt with the changes in dynamic business environment. Tools such as prototyping and market testing are used to develop and penetrate in markets through utilizing teams rather than gigantic projects. Calculated risks taken by managers ensure significant gains.

2.2 Clan Organizational Culture

Clan organizational culture is an organizational environment that is like a family with emphasis on shared common goals and values (Cameron and Quinn, 2009). Less focus on control and flexible structure are associated with clan culture. As individuals share things about themselves freely with others, clan culture is conducive to transferring knowledge. Wellness programs, organizational commitment, employee involvement and team work are particular to clan culture. Rules and standards of behavior are not

necessarily documented; they are learned through social communication. Autonomous teams have shared goals and they strive to achieve those (Suppiah & Sandhu, 2011). Vision, participation in decision making, and goal sharing motivate individuals and hence strict control mechanisms are not required (Turner & Pennington III, 2015).

2.3 Knowledge Sharing Motivation

Knowledge sharing motivation is willingness of individuals to share knowledge (Huang et al. 2013). Knowledge sharing motivation is one of the components of ability, motivation, opportunity (AMO) framework developed by Applebaum, Bailey, Berg and Kellayberg (2001). It is a well-known framework that is widely acknowledged in human resource research (García-Sánchez, García-Morales & Bolívar-Ramo, 2016). Social exchange mindset is associated with motivation. Social norms, trust and teamwork are social motivation factors (Huang et al., 2013). Social relationships that develop trust, confidence, friendship and teamwork are the motivators that bring people closer and hence they are more willing to exchange knowledge (Kang & Kim 2017). Less expensive motivators for people interaction are social media blogs, social networking sites, wikis and the like (Rathi & Given, 2017).

2.4 Knowledge Sharing Behavior

Knowledge sharing is termed as the transfer of acquired knowledge by an individual to others in an organization (Tsai, Joe, Lin & Wu, 2017). Knowledge is valuable in today's dynamic environment and serves as a competitive advantage making an organization's survival is incredible without it. Individuals create and exchange knowledge both explicit and implicit through frequent interactions. (Chang, Liao & Wu, 2017). Knowledge sharing is one of the widely studied knowledge management process (Intezari et al., 2017). Knowledge sharing behavior is a voluntary behavior, people share when they are willing to do so, do effort to share and have the ability, motivation and opportunity to transfer knowledge (Yang, 2010; de Almeida, Lesca & Canton, 2016; Kang and Kim, 2017).

2.5 Knowledge Governance Mechanisms

Basically, knowledge governance has four distinct aspects: governance goals, governance mechanisms, governance environment and implementation. Among them, most significant are knowledge governance mechanisms and environment as they effect the behavior and let people think of taking advantage of knowledge sharing motivation (Yang, 2011; Kang & Kim, 2017). Formal and informal mechanisms are utilized to reduce the risk of people involving in opportunistic behavior (Huang et al. 2013). Formal governance mechanisms are the reward system, performance appraisal system, management information system, work design, standardized operating procedures and organizational structure. Informal mechanisms are the beliefs, values and shared norms and goal internalization to warrant desirable behavior (Huang et al., 2013).

2.6 Clan Organizational Culture and Knowledge Sharing Behavior

Organizational culture is positively associated with knowledge sharing behavior (Durmusoghlu et al., 2014) but different types of organizational culture affect the outcomes in a different way (Tsai et al., 2017). Although attitudes, intention and behavior chain is important in shaping employee behavior but organizational culture is the major driver of behavior (Aquilani, Abbate & Codini, 2017). Many studies have examined organizational culture as a predictor of knowledge sharing (Amayah, 2013; Akhavan, Hosseini, Abbas & Manteghi, 2015). In a recent study Serenko and Bontis (2016) described that social exchange theory focuses on some social norms and values to shape the desired behavior among individuals. Extent literature reveals that clan organizational culture has a positive impact on knowledge sharing (Amayah, 2013; Turner and Pennington III, 2015; Aquilani et al., 2017). People are less inclined to share knowledge in a competitive environment but there willingness to share knowledge increases in a cooperative environment (Matic, Cabrilo, Nesčić & Milic, 2017). Clan organizational culture is characterized by free flow of information, development of trust and pro-social norms, encouragement of affection and affiliation. These qualities motivate individuals to share their knowledge an dexperience voluntarily in a social setup like workplace (Tsai et al., 2017). Hence, it is proposed that

H₁: Clan organizational culture is positively associated with knowledge sharing behavior.

2.7 Informal knowledge governance mechanism and knowledge sharing behavior

Social exchange theory posits that both formal and informal mechanisms are necessary for mutually valuable exchange process. However, selection of a specific mechanism by an organization depends upon the national and the organizational culture. Collectivistic countries like China relies on informal mechanisms and individualistic cultures like US are comfortable with formal ones (Yang, 2011; Huang et al., 2013). Pakistan is a collectivistic society (Khilji, 2003; Durmusoglu et al., 2014); so it will be more convenient to adapt the informal mechanisms for knowledge sharing.

Knowledge sharing is a social process (Tsai et al., 2017). Informal knowledge governance mechanisms set the norms of behavior and inculcate social pressure that leads people to share their knowledge with organizational members (Matic et al., 2017). Huang et al. (2013) suggest that informal knowledge governance mechanisms have a positive impact on knowledge sharing behavior of expatriates. Hence, it is proposed that

2.8 Informal Knowledge Governance Mechanism as a Moderator

Recent studies have shown the relevance of SET for the role of organizational culture and governance mechanisms in enhancing the positive effects on knowledge sharing behavior (Abbasi & Dastgeer, 2018).

Informal arrangements like coffee breaks, water coolers, social activities, having lunch together are part of informal mechanisms that reduce distrust and bring people together (Huang et al., 2013). Differences in organizations that adapt informal mechanisms and those who do not can be seen in the quantity and quality of knowledge shared (Yang, 2011). In a clan culture (Suppiah & Sandhu, 2011), presence of knowledge supportive mechanisms, drives people to willingly share their knowledge because of the trust and confidence between that is the core of a social exchange (Huang et al. 2013). Workplace behavior is directed by the situational clues provided by the organizational culture regarding the norms of behavior embedded in an organizational value set (Paro & Gerolamo, 2017). It does not always happen that knowledge is not being shared intentionally; sometimes active knowledge sharing is just not occurring (Henttonen et al., 2016).

Informal mechanisms bring people closer as more social interaction is involved (Huang et al., 2013). Those who are more socially active will have the tendency to voluntary transfer the knowledge to peers and others in the organization (Serenko & Bontis, 2016) specifically when the organizational culture is knowledge oriented (Aquilani et al., 2017) like the clan culture. Hence, it is proposed that

H₂: Informal knowledge governance mechanism moderates the positive relationship between clan organizational culture and knowledge sharing behavior such that the relationship is stronger when informal knowledge governance mechanism is high and weaker when informal knowledge governance mechanism is weak.

2.9 Knowledge Sharing Motivation as a Moderator

People are encouraged to share knowledge in a knowledge supportive environment (Aquilani et al., 2017). Many organizational factors determine the effectiveness of knowledge transferred (Kang & Kim, 2017). As explained by social exchange theory, people show greater willingness to share when they have something of value to exchange (Serenko & Bontis, 2016). Loss due to lack of motivation can be recognized as significant if individuals are different in recognizing their behaviors or what factors motivate them in a certain situation (Matic et al., 2017). Knowledge sharing motivation is a strong predictor of knowledge sharing behavior (Huang et al., 2013). Motivated individuals try to build strong working and social relationships to get into a valuable exchange process (Tsai et al., 2017) and are more confident (Kang & Kim, 2017). When they find a supportive environment, they can reap even more benefits as a result of exchange (Durmusoglu et al., 2014) when it comes to knowledge sharing (Amayah, 2013) and hence hoard less knowledge (Intezari et al., 2017). Knowledge sharing motivation helps individuals to involve in knowledge sharing behavior but that too in a cost-effective manner (Huang et al., 2013) because they believe that knowledge would be efficiently transferred when minimum resources will be utilized and people would be motivated enough to share knowledge (Serenko & Bontis, 2016). Therefore, it is proposed that

H₃: Knowledge sharing motivation moderates the positive relationship between clan organizational culture and knowledge sharing behavior such that the relationship is stronger when knowledge sharing motivation is high and weaker when knowledge sharing motivation is low.

Figure 1 shows the conceptual framework of the study.

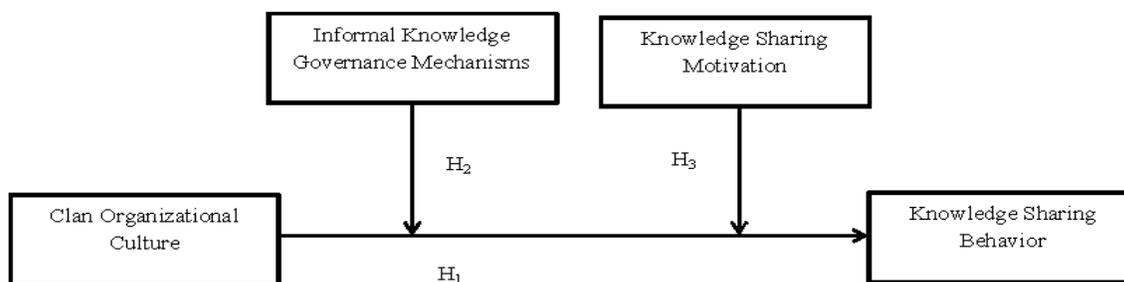


Figure 1: Conceptual Framework of the Study

3. Methodology

3.1 Sample Selection

Social exchange theory posits that attitudes and behaviors in different national cultures give different results, i.e., they could be different in a collectivistic vs individualistic culture when measured on the same scale (Hur, Moon & Ko, 2016). In developing countries like Pakistan, there is dearth of studies that examine knowledge management and its related processes (Haq & Anwar, 2016). Hence, the sample for this study was collected from faculty members of higher education institutions and universities located in public and private sector of Islamabad and Rawalpindi.

3.2 Measures

All the variables were measured through self-report measures. Common method bias that is usually introduced in a self-report measure was dealt by using Harman one factor test. Common method bias was not involved in the data as total variance explained was less than 50%. Variables were measured on a seven point Likert scale with "1" used to measure *strongly disagree* and "7" to measure *strongly agree*.

3.2.1 Clan Organizational Culture

Cameron and Quinn (1999) developed Organizational Culture Assessment Instrument (OCAI) to measure different dimensions of organizational culture. This study examined only one of the four dimensions, i.e, clan organizational culture that has six items. "Loyalty, mutual trust and commitment are shared values among employees" is an example of item used to measure clan organizational culture.

3.2.2 Knowledge Sharing Behavior

Bock, Zmud, Kim and Lee (2005) seven item scale was used to measure knowledge sharing behavior. "I usually share my knowledge and experience when I participate in meeting or discussion" is an example of the items used to measure knowledge sharing behavior.

3.2.3 Knowledge Sharing Motivation

KSM was measured using three item scale adapted by Huang et al. (2013). Scale was developed from Cabrera and Cabrera (2005) and Ipe (2003). Example of the item used to measure knowledge sharing motivation is "I want my colleagues to praise me".

3.2.4 Informal Knowledge Governance Mechanisms

IFKGMs was measured by the three-item scale developed by Bjorkman et al. (2004). Example of items used to measure IFKGMs include "There are leisure activities for colleagues to make friendship".

3.3 Pilot Study

To improve the study results in a subsequent survey, Sekeran and Bouge (2016) recommend conducting a pilot study on a small scale. This study tested the study survey through 60 teachers from 3

universities to trace the initial trend in the data. On the basis of feedback received from pilot study, survey questionnaire was revised.

3.4 Sample Size

This study used disproportionate random sampling design to collect data from selected sample. Departments and teachers both were randomly selected to be selected in the sample and participate in the study. According to Sekeran & Bougie (2016), a sample size of 200-300 is considered sufficient for regression analysis. A sample size that is at least ten times the number of variables in a study is the minimum size recommended by Hair et al. (2010). Initially, 400 survey forms were administered among the faculty members from ten universities/Higher Education Institutions (HEIs). 290 were returned and size of usable survey was 279 and 69.75% was the response rate. Data was collected from all levels of faculty members including junior and senior faculty members. Language of survey was English as respondents were qualified enough to respond the questionnaire in English language. 67.3% respondents were male, between the age of 26 and 35, mostly lecturers from public sector.

Table 1 gives the factor loadings, discriminant and convergent validity for all the items and latent constructs. The thresholds for these values are as follows:

Reliability: CR > 0.7

Convergent Validity: AVE > 0.5

Discriminant Validity: MSV < AVE, ASV < AVE

Values for CR (Composite Reliability), AVE (Average Variance Extracted), MSV (Maximum Shared Variance), ASV (Average Shared Variance) given in Table 1 meet the above criteria. It indicates that there is no issue of discriminant and convergent validity.

Table 1: Factor Loadings, Discriminant and Convergent Validity

Construct	Item	Loadings	S.E.	t-value	CR	AVE	MSV	ASV
COC	COC1	0.728***	.063	14.561	0.93	0.70	0.59	0.27
	COC2	0.772***	.049	20.097				
	COC3	0.864***	.050	19.814				
	COC4	0.871***	.050	19.973				
	COC5	0.874***	.049	20.097				
	COC6	0.885						
KSB	KSB1	.828***	.070	14.058	0.92	0.63	0.57	0.35
	KSB2	.064***	14.494	14.583				
	KSB3	.061***	13.249	16.640				
	KSB4	.060***	15.859	15.859				
	KSB5	.056***	16.640	13.249				
	KSB6	.059***	14.583	.059				
	KSB7	.753						
KSM	KSM1	.875***			0.89	0.73	0.62	0.19
	KSM2	.900***	.054	21.107				
	KSM3	.912***	.057	21.708				
IFKGMs	IFKGM1	0.673***	.064	11.564	0.81	0.59	0.54	0.28
	IFKGM2	0.812***	.064	14.660				
	IFKGM3	0.813						

COC=Clan organizational culture, KSB=knowledge sharing behavior, KSM=knowledge sharing motivation, IFKGM=Informal knowledge governance mechanism, SE= Standard Error, CR=Composite Reliability, AVE=Average Variance Extracted, MSV=Maximum Shared Variance, ASV=Average Shared Variance.

Table 1 gives the factor loadings, discriminant and convergent validity for all the items and latent constructs. The thresholds for these values are as follows:

Reliability: CR > 0.7

Convergent Validity: AVE > 0.5

Discriminant Validity: MSV < AVE, ASV < AVE

Values for CR (Composite Reliability), AVE (Average Variance Extracted), MSV (Maximum Shared Variance), ASV (Average Shared Variance) given in Table 1 meet the above criteria. It indicates that there is no issue of discriminant and convergent validity.

4. Results

Table 2 shows the sample descriptive statistics, bivariate correlations and Chronbach α (reliability) for all variables. Zero-order bivariate correlations were in the desired direction. Chronbach α is above the threshold value 0.7 for all latent constructs.

Table 2: Mean, Standard Deviation, Reliability, Correlations

		Mean (7-point scale)	SD	1	2	3	4
COC	1	4.99	1.28	0.92			
KSB	2	4.90	1.27	.59**	0.92		
KSM	3	4.88	1.52	.72**	.58**	0.88	
IFKGMs	4	4.96	1.42	.63**	.67**	.64**	0.79

** Correlation is significant at the 0.01 level (2-tailed), n=279.

Values on the diagonal represent the chronbach α , reliability of latent constructs.

Table 3: Model Summary and Interaction Effects

R	R-sq	MSE	F	df1	df2	p
0.6776	0.4592	0.8485	46.3523	5.0000	273.0000	0.0000
Model						
	Coeff (b)	Se	t	p	LLCI	ULCI
Constant	5.5106	1.1386	4.8399	.0000	3.2691	7.7521
IFKGMs	.1756	.1220	1.4388	.1513	-.4158	.0647
COC	.5461	.2507	2.1785	.0302	-1.0396	-.0526
COC*IFKGMs	.0797	.0267	2.9816	.0031	.0271	.1323
KSM	.3343	.2062	1.6211	.1061	-.7403	.0717
COC*KSM	.0979	.0452	2.1652	.0312	.0089	.1870

Table 3 also reveals that the tested hypotheses are supported as p-value is significant for all interaction effects and the combine defect of two moderators. In addition, zero should not lie between the lower and upper confidence interval. i.e., LLCI and ULCI, as this is also an indicator that the effect is significant. Level of confidence for all confidence intervals in output is 95. All three predictors were mean centered prior to analysis.

Table 4: R-square Increase Due to Interaction(s)

	R2-chng	F	df1	df2	P
COC*IFKGMs	.0176	8.8901	1.0000	273	.0031
COC*KSM	.0093	4.6880	1.0000	273	.0312
Both	.0380	9.5939	2.0000	273	.0001

Table 4 shows the change in the dependent variable, knowledge sharing behavior due to interaction effects of two mediators independently and the change in dependent variable due to moderating effect of both variables. All the R-square changes are negligible but interactions are significant with $p < 0.05$ for interaction effect of informal knowledge governance mechanisms and $p < 0.01$ for knowledge sharing opportunity and the combined effect of multiple moderators. Table 3 further reveals that all the tested hypotheses are supported as p value is significant for all the tested relations including moderated effects. Additionally, when zero does not lie between the lower confidence interval (LLCI) and the upper confidence interval (ULCI), the effect is significant.

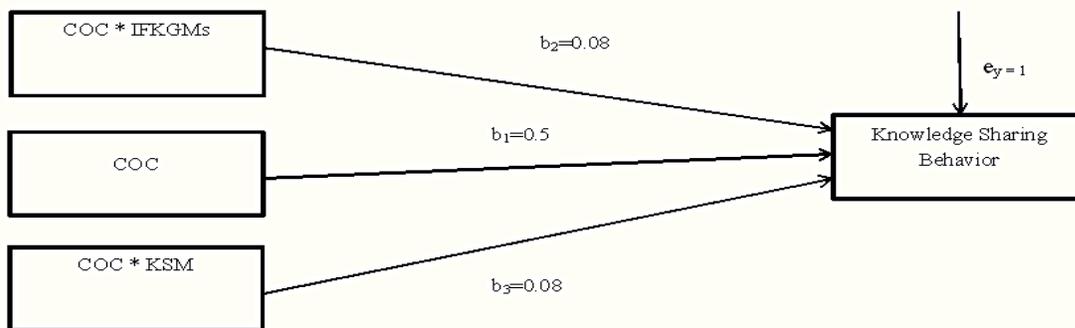


Figure 2: COC = Clan Organizational Culture, IFKGMs = Informal Knowledge Governance Mechanisms, KSM = Knowledge Sharing Motivation

Figure 2 shows the statistical diagram of the direct and moderating effects of predictors on the dependent variable. From Figure 2 and Table 3, we can see that

$$\text{COC } (b_1) = 0.40, t(273) = 25.07, p < 0.05$$

Hence, hypothesis 1 is accepted that clan organizational culture has a positive influence on knowledge sharing behavior. It can be interpreted as, for everyone unit increase in COC, we get a 0.40 unit increase in KSB. The result is in line with previous studies (Suppiah & Sandhu, 2011) where it was found that clan culture is positively associated with knowledge sharing.

Table 5: Conditional Effect of X on Y at Values of the Moderator(s):

KSM	IFKGMs	Effect	Se	T	P	LLCI	ULCI
4.6397	3.4183	0.1807	0.0722	2.5022	.0129	0.0385	.3229
4.6397	5.0108	.3076	0.0763	4.0335	.0001	.1575	.4578
4.6397	6.6032	.4346	0.1002	4.3364	.0000	.2373	.6319
5.5938	3.4183	.2742	0.0646	4.2461	.0000	.1471	.4013
5.5938	5.0108	0.4011	.0606	6.6240	0.0000	.2819	.5203
5.5938	6.6032	.5280	0.0824	6.4087	0.0000	.3658	.6902
6.5479	3.4183	.3676	0.0827	4.4428	0.0000	.2047	.5305
6.5479	5.0108	.4945	0.0724	6.8317	0.0000	.3520	.6370
6.5479	6.6032	.6214	0.0852	7.2946	0.0000	.4537	.7892

Level of confidence for all confidence intervals in output is 95. All three predictors were mean centered prior to analysis.

For interaction 1, that is CoC and IFKGMs, 0.0271 is the LLCI and 0.1323 is the ULCI. Zero does not lie between this confidence interval and the interaction effect is significant with $p < 0.05$. Hence, hypothesis 2 is accepted and we conclude that informal knowledge governance mechanisms moderate the positive relationship between COC and KSB such that the relationship is stronger if informal knowledge governance mechanism is higher in organizations.

Mean of COC is 4.99 as given in Table 2. Subtracting and adding standard deviation (SD) 1.28 from mean gives values of 3.71 and 6.27 approx. Table 5 gives the conditional effect of independent variable COC on dependent variable KSB at different levels of moderators. There are significant p-values at all levels of IFKGMs and KSM. As we go from lowest value -4.63 to highest 6.54 slopes of lines in Figure 3. The effect of knowledge governance mechanisms on the relationship between clan organizational culture and knowledge sharing behavior is positive at all points on the line as the sloping is moving upward as we go from lowest to highest values of contextual variable IFKGMs denoted by knowledge governance in Figure 3. Hence, it is concluded that in presence of informal knowledge governance mechanisms, organizational members are more open to share their knowledge with other organizational members when the organization adopts clan organizational culture

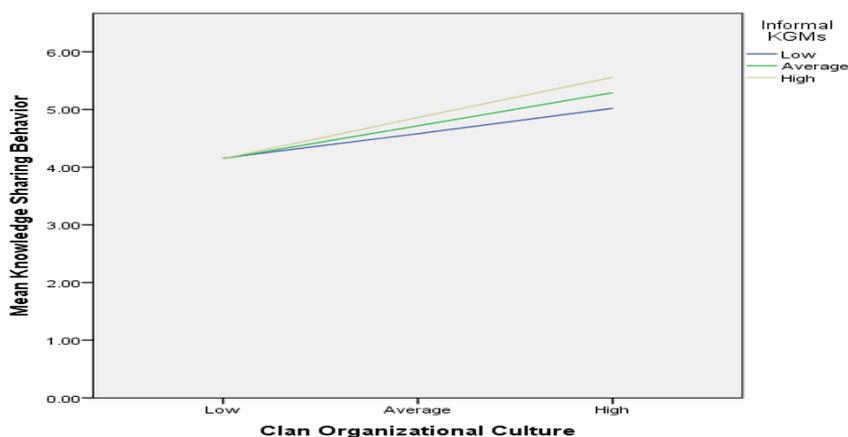


Figure 3: Moderating effect of informal knowledge governance mechanism

Similarly, for interaction 2, that is COC and KSM, 0.0089 is the LLCI and 0.1870 is the ULCI. Zero does not lie between this confidence interval and the interaction effect is significant with $p < 0.05$. Hence, hypothesis 3 is accepted and we conclude knowledge sharing motivation moderates the positive relationship between COC and KSB such that the relationship is stronger in presence of knowledge sharing motivation. Table 5 shows that at all levels of knowledge sharing motivation, that is, from lowest 4.63 to highest 6.54, p-value is significant. It can be seen in Figure 4, where slope of lines is moving in upward direction at all levels of knowledge sharing motivation.

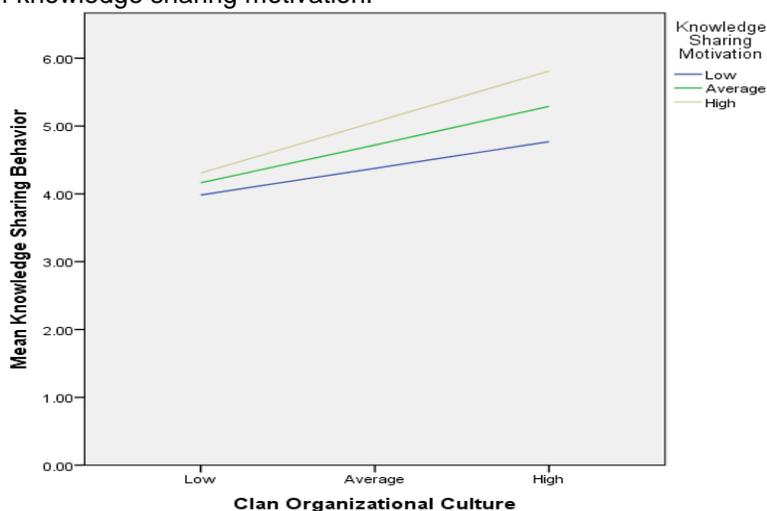


Figure 4: Moderating Effect of Knowledge Sharing Motivation

Hence, conditional effect of COC on KSB is given by following equation: Conditional effect of COC on KSB = $b_1 + b_2 \text{IFKGMs} + b_3 \text{KSM}$
 $= 0.50 + 0.08 \text{IFKGMs} + 0.08 \text{KSM}$

Keeping the value of KSO constant, there would be an increase of 0.08 unit in KSB for every unit increase in IFKGMs, and keeping the value of IFKGMs constant, there would be an increase of 0.08 unit in KSB for every unit increase in KSM. It can be concluded from above that presence of knowledge sharing motivation had a moderating conditional effect on the relationship between COC and KSB. When organizational members are motivated to transfer knowledge, interaction effects are more visible in a clan organizational culture, as people are more interactive and willing to share their knowledge with other organizational members. Studying these interaction effects is an attempt to fill the gap that organizational processes and individual factors that hinder or help knowledge sharing in a certain organizational culture are examined as suggested by (Aquilani et al., 2017).

5. Discussion

One of the research questions was to examine the effect of organizational level independent variable on knowledge sharing behavior. Examined relationships are significant and overall model is also significant. There are some exceptions despite the general agreement to previous studies that organizational culture has a positive influence on knowledge sharing behavior (Matic et al., 2017). Few studies have tried to examine the underlying mechanisms that effect knowledge sharing behavior (Huang et al., 2013; Abbasi and Dastgeer, 2018) but rarely anyone has examined contextual factors or conditions necessary to observe the effect of organizational culture on knowledge sharing behavior.

Knowledge sharing is recognized as an exchange process if we see through the perspective of social exchange theory. Outcomes are always affected by some conditional factors. Employees are willing to share knowledge when they work in a flexible and knowledge supportive culture. Selection of right type of cultural typology is as much important as the mix of right conditions that collectively leads to desired results. This study concludes that informal knowledge governance mechanisms and motivated individuals are unavoidable to have a multiplicative effect on knowledge sharing behavior. Findings of the study suggest that informal arrangements like coffee breaks and lunches, social gatherings and the type along with the motivation among employees to share their knowledge can create a synergistic effect. Individuals involve in an exchange process that leads them to develop trust and confidence to share their knowledge and experience with others in the workplace.

Interaction effects of two moderating variables were in the desired direction as well as their combined interaction effect on knowledge sharing behavior at all three levels of contextual variable. It depicts that higher the level of knowledge sharing motivation and informal knowledge governance mechanism in a higher educational institution, higher would be the impact of organizational culture on knowledge sharing behavior.

The assertion that these contextual variables act as a catalyst due to their multiplicative effect with culture on knowledge sharing behavior must be further investigated. Human behavior relates to cost and benefit analysis and selection of optimal alternative, as suggested by proponents of social exchange theory. In the field of organizational behavior, this paradigm is used to explain a mutually satisfying, reciprocal exchange process. Satisfaction gained could be material or immaterial. It could be immaterial in the form of knowledge gained and the recognition of knowledge holder as a source of valuable knowledge. Both individuals involved in the exchange process have something of value to offer each other and exchange takes place when both have something of significant value to offer. This exchange process in an informal set up is itself a source of motivation for both receiver and holder to bring them together and hence a greater willingness to share and receive knowledge.

Findings of the study suggest that theories and relationships examined in Western cultures (Huang et al., 2013) are generalizable to Pakistani context. Although not documented formally, informal mechanisms have a strong influence in strengthening the relationship of organizational culture with knowledge sharing behavior. Similar is the case with knowledge sharing motivation that further strengthens the exiting influence of culture on knowledge sharing behavior. The study is also consistent with the call to test the theories developed and tested in Western culture, in a non-Western context. This study is also consistent with the future directions recommended by Intezari et al. (2017) in the field of knowledge management. It also validated the results of previous studies (Kang and Kim, 2017) and added to the present body of knowledge by examining the effect of multiple moderating variables. It also responded to the need to explore boundary conditions by introduction of diverse contextual factors.

6. Limitations and Future Directions

Future studies may explore the role of a different set of predictors on knowledge sharing behavior in different work set ups. New and distinct moderators maybe introduced. Additive and multiplicative models of ability, motivation, opportunity (AMO) framework maybe utilized as motivation is a single component of this framework. Common method bias can be dealt by choosing dyad as the unit of analysis.

There might be social desirability bias in the responses. The basic reason behind this could be the social desirability of sample studied (Podsakoff, Mackenzie & Podsakoff, 2012; Hur et al., 2016). This effect

could be controlled in future studies by directly measuring the social desirability. For this, desirability may be introduced as a marker variable in the relationship between organizational culture and knowledge sharing. Selection of sample from only one sector may lower its external validity. In future, sample may be selected from medical, services, manufacturing or information technology sectors. Another limitation of the study is that no controls were employed for individual behavior which although is a demonstration of organizational behavior but must be controlled as it may introduce differences at organizational level. A multi-level model like hierarchical modeling may be utilized to avoid confusion in methodology.

6.1 Implications for Researchers and Practitioners

The study provides valuable implications for practitioners in the field of knowledge management. Higher ups in education sector should address the contextual factors that contribute to KSB. Cultural values and norms should be knowledge conducive to share knowledge. Organizational and individual factors should be aligned and embedded in the culture to reap the advantages of knowledge management and related processes. As knowledge sharing is an exchange process, right mix of individual and organizational factors leads to improvement in knowledge sharing behavior of individuals at workplace. Social networks and network ties are becoming crucial to survive; hence, this dynamic era requires prudent selection of individuals who socialize in the benefit of organization. Like minded may socialize easily and it could serve as a source of motivation so that individuals are more comfortable to share their knowledge, experience and expertise with people at their workplace without fear of losing their knowledge power. Due acknowledgement should be given to the knowledge holders and their contribution must be recognized.

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