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IMPACT OF KNOWLEDGE SHARING BEHAVIOR ON PERFORMANCE OF AUDITING FIRMS IN PAKISTAN: MODERATING ROLE OF ORGANIZATIONAL CULTURE

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***ABSTRACT**--The aim of this study is to assess how the perceived performance of audit firms is affected by knowledge sharing behaviour (KSB). Additionally, the role of effective organizational culture as a moderator in determination of the intensity of the relationship between KSB and perceived performance is also assessed. For this purpose, data was collected from audit personnel of the big 4 audit firms as well as other "A" ranked accountancy firms in Pakistan via purposive sampling. The survey method which was used was the cross sectional method. Multiple regression and PROCESS macros(Hayes, 2013) were used and analysis of 207 valid responses was done through the use of SPSS software The results obtained were quite revealing in the sense that they showed significant relationship between knowledge sharing behavior and the three dimensions related to it i.e. organizational communication, personal communication as well as communities of practice with organization's perceived performance. However, no significant relationship was found to exist between written communication and knowledge sharing behavior. At the same time, effective organization culture had a moderating role on the relationship between written communication and organizational communication with organizational perceived performance. This study focused on one type of culture within the auditing firms but it should be taken into account that this is the initial step towards the investigation of the link which KSB and its distinct dimensions have with predicting the performance of eastern audit firm context while considering the role of culture at the same time. Fostering knowledge sharing by the management and the auditors for the improvement of audit practice and the development of a conducive culture for facilitating knowledge sharing.*

***Key Words**--Organizational culture (OCL); Knowledge sharing behavior (KSB); perceived performance (PPER).*

I. INTRODUCTION

The concept of knowledge-based organizations has emphasized the importance of intellectual resources as a key to sustainable competitive advantage (Teece, 2003) , thus making knowledge a primary organizational asset

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(Schultze & Leidner, 2002). The organizations with effective management of knowledge resources are found to have multitude of benefits i.e. reduction in operational costs, innovation, improved consumer service and an ultimate efficient corporate performance (Zack, McKeen, & Singh, 2009). Dynamic business environment, globalization, and cutthroat competition in present era, has made knowledge as a key source of performance enhancement(Hotho, Lyles, & Easterby-Smith, 2015). Knowledge management includes creation, sharing, utilization and implementation of organizational information in effective manner (Alavi & Leidner, 2001). In present knowledge based economy, although all elements of knowledge management contribute towards organizational performance (Zack et al., 2009), yet knowledge sharing has specifically becomes an important predictor of performance enhancement (Park & Jung, 2009). Knowledge sharing brings together the full range of employees' abilities and skills level, experience as well as their knowledge that ultimately improves the firms' ability to solve problematic issues, avoid repetitive mistakes and disseminate the adoption of best practices (Wang & Wang, 2012).Yin (2009) indicated that knowledge can be shared via written communication, personal interaction, organizational communication and communities of practice. Knowledge sharing is a prime precursor of effective and timely knowledge deployment (Ikhsan, Sharifuddin, & Rowland, 2004). Even though organizations possess great amount of information they cannot translate it to improved practices and performance unless there are effective knowledge sharing mechanisms (Henttonen, Kianto, & Ritala, 2016). Given these facts, many large global corporations(e.g. Dow Chemical, Hewlett-Packard, Shell, Xerox) have launched formal initiatives to promote knowledge sharing amongst employees(Machlup, 2014).

Knowledge sharing carries great importance in professional service sector (Hasan, 2011). Auditing firms are among such service sectors where the skills and knowledge of auditors are prime elements in satisfactory service delivery (Arel, Brody, & Pany, 2005). Due to the increased work requirements on the part of the audit firms internationally as well as in Pakistan (Aldamen, Duncan, Kelly, McNamara, & Nagel, 2012), it has become imperative for them to enhance their performance to meet their own increased costs and performance standards. This is mainly due to the fact that businesses were unable to meet the requirements of the Codes and the audit firms' personnel had to work longer hours to correct the problems they were facing from the clients. One solution is that the audit firms can appoint more experienced auditors to perform efficiently but due to this action cost will also increase. Outsourcing is another option of cost reduction. But audit is very sensitive work and there can be issues of secrecy. Auditing firms can achieve higher performance by use of knowledge sharing, where senior auditors can impart knowledge among the juniors. In this way, audit cost can be managed and performance can be enhanced. In the scenario of auditing firms sharing of knowledge is related to the assumption that combining the entire spectrum of the employees' expertise, knowledge base, as well as work related experience can increase the performance with which firms' abilities of problem solving, avoidance of repetitive mistakes and the spread of adoption of best practices can take place (Collins & Smith, 2006; Weick et al., 2005). Knowledge sharing among employees can improve the integrity of the entire audit process and help in the formulation of the audit opinion most appropriate to the given scenario(s). This leads towards increase organizational performance in audit firms (Chow, Ho, & Vera-Munoz, 2008).

The link in knowledge sharing and performance is usually influenced by situational factors (Zack et al., 2009). Amongst which organizational culture is an important facilitator or inhibitor of knowledge sharing and

organizational performance association (Connelly & Kevin Kelloway, 2003). People, systems, process, rewards, peer and leadership support, norms of knowledge sharing and interpersonal trust are among the major cultural characteristics that promote knowledge sharing (Chang & Lin, 2015; David, Long, and Fahey (2000). So it is important to examine how the organizational culture fosters sharing of information among employees.

Audit firms of Pakistan are facing increasing demand for organizational performance. In audit engagements, KSB can play a very important role to help them respond to this challenge, and this study focuses to further the understanding of such sharing. Despite the importance of knowledge sharing in improving audit firm's performance only handful research is carried out in western context (Chow et al., 2008). In contrast to the use of consolidated knowledge sharing construct we also include its four aspects/facets i.e. written communication, organizational communication, personal interaction and communities of practice as suggested by (Yin, 2009). We aim to extend this idea in developing eastern nation of Pakistan where the cultural norms may differently impact the association. Previous research studies have mostly investigated the knowledge sharing and individual performance relationship and failed to incorporate the impact of cultural factors (Henttonen et al., 2016). Thus, we also incorporate the role of culture as a moderator in knowledge sharing and performance link in audit firms of Pakistan. This study will not only contribute theoretically but it will also assist audit personal and policy makers to make effective knowledge sharing strategies and implementation them to enhance performance.

Problem Statement

"To enhance the performance of auditing firm even after new regulations, increased costs, and with existing employees, the probe can determine how knowledge sharing enhances the perceived performance of auditing firms of Pakistan and analyses the role of different dimensions of knowledge sharing on perceived performance of auditing firms. Further to investigate how organization culture can moderate the impact of knowledge sharing and perceived performance."

Research Objectives

- To find out the impact of KSB on PPER of audit firms in Pakistan.
- To find ~~the~~ impact of different dimensions of KSB on PPER in audit firms of Pakistan.
- To what extent organization culture moderates the relationship between knowledge sharing and perceived performance.

The Study Aims to Answer Two Research Questions:

- What is the impact of KSB on PPER of audit firms of Pakistan?
- How dimensions of KSB (a) written contribution (b) organizational communication, (c) personal interaction and (d) communities of practice impacts on PPER of audit firms of Pakistan?
- How organizational culture can facilitate or impede the relationship of KSB and perceived performance of auditing firms of Pakistan?
- How organizational culture moderates the association in dimensions of KSB (a) written contribution (b) organizational communication, (c) personal interaction and (d) communities of practice and perceived performance of auditing firms of Pakistan?

II. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Knowledge could be shared at individual, unit or group, and organizational levels, within or across organizations (Ipe (2003). There are various definitions and studies on knowledge sharing process. According to Akhavan, Rahimi, and Mehralian (2013) it is the voluntary social process to transfer, absorb and reuse the existing knowledge in order to serve an organizational end. Argote and Ingram (2000)explained that knowledge sharing is the process through which one unit is affected by the experience or another. In this respect, a unit can be an individual, a group or an organization. According to Senge (1997), the sharing of knowledge is not only to share the information with others it means to share your knowledge with other for their help but also improve organizations performance. The knowledge sharing behavior (KSB) attracts academics and shapes their know-how in the form of skills, expertise, knowledge and information, in written forms and documents in place of dialogue. KSB are segregated into four dimensions (a) written contribution (b) organizational communication, (c) personal interaction and (d) communities of practice (Yi, 2009).

KSB are linked to improved organizational performance (Henttonen et al., 2016). Performance refers to those behaviors that have been evaluated or measured as to their contribution to organizational goals (Cook & Hunsaker, 2001). In the same manner, Jones and George (2015) defines organizational performance as a measure of how efficiently and effectively managers use resources to satisfy customers and achieve organizational goals. It is difficult to compare organizations on performance measures because common quantifiable measures of performance rarely exist. Due to this reason study used measures of perceived performance. Limitations of perceptual data in judgment of organizational performance, like increased measurement error and mono-method bias has been well recognized (Huselid, 1995).However, a positive relationship between objectives and perceptual measures of organizational performance have often been found(Kirkman & Rosen, 1999).It is a common convention to use perceptual measures of organizational performance (Brewer & Selden, 2000; Huselid, 1995; Imam, Abbasi, Muneer, & Qadri, 2013).

Knowledge residing in an organization is a prime factor in performance improvement of employees (Henttonen et al., 2016). The performance of organizations differs on the basis of possession and use of tangible and non-tangible resources. Knowledge is one of the important non-tangible organizational assets, and its effective implementation improves corporate performance (Whelan & Carcary, 2011). Knowledge sharing is a prime precursor of effective and timely knowledge deployment(Ikhsan et al., 2004). Knowledge sharing brings together the full range of skills' level of the employees, their level of knowledge, and their work experience that ultimately enhances the firms' ability to solve problematic issues, avoid repeated mistakes and spread adopting best practices (Wang & Wang, 2012).Thus, improvement in employees' performance based on sharing of knowledge the organizations are in a position to performance (Henttonen et al., 2016). On the basis of above arguments we posit that:

H1: Knowledge sharing behavior has a significant impact on organizational PPER of auditi firms of Pakistan.

In addition of taking the consolidated construct of KSB we further examine the impact of its four individual dimensions on organizational performance in order to have a clear picture of the components of KSB and their link to organizational performance (Yin, 2009).

Written communication (WC) includes the sharing of expertise, ideas, information and suggestions in written format rather than verbal expression. This can take place by submission of ideas in data bases of organization and writing reports on the basis of expertise and knowledge. High knowledge sharing results in articles in journals and other knowledge forums which consequently benefits other academicians, the educational institutions, and the society as a whole. Knowledge sharing practice can be considered as publication of scientific knowledge which has been codified and then added to the pool of existing body of knowledge (Landry, Saïhi, Amara, and Ouimet (2010) and this is a non-commercial practice. This is a 'person-to-document' mode of knowledge sharing by using codification method that is mainly used in explicit sharing of knowledge (Yin, 2009). This kind of knowledge sharing can easily be recognized, tacked, evaluated and rewarded. There are more chances that written contributions are acknowledged and recognized and employees have improved extrinsic motivation to indulge in further knowledge sharing (Bartol & Srivastava, 2002). Employees are motivated to share information so that they can have recognition and pay based rewards(Käser & Miles, 2001). When the employees will share their expertise, knowledge and suggestions in documented form will their peers it increases the availability of knowledge availability across all the employees in organizations (Y.-H. Kim & Jang, 2015). Now, employees all over the organization can use the knowledge, expertise and suggestions to resolve problems, adopt innovative work methods and adopt improved way of doing things that consequently improve the overall corporate performance (Giampaoli, Ciambotti, & Bontis, 2017). Hence, we put forth the hypothesis:

H2: Written Contribution (WC) has a significant impact on organizational PPER of audit firms of Pakistan.

Organizational Communication (OC) refers to behaviors of sharing knowledge between a person and group through formal social interactions (Yi, 2009). For instance, brainstorming meetings produce ideas and solutions. One of the most commonly used mechanism for knowledge sharing is solving the problems collectively and arranging brainstorming sessions for this purpose, workshops and meetings are a useful method (Wickramasinghe and Widyaratne (2012). When there is a belief that sharing of knowledge will contribute towards the betterment and development of the organization, there is tendency for the employees to share more of their knowledge for these reasonsCabrera and Cabrera (2002). As this type of KSB occurs in more formal situations, therefore there is a greater tendency for personal and social interactions to get noticed by colleagues and other senior personnel. In this way there is a focus of such type of KSB getting rewarded (Bartol & Srivastava, 2002).In this situation, employees believe through knowledge sharing they can help the organization as a whole and meet its business objectives, but not for their self-interests (Gurteen, 1999). Employees make valuable contributions the organization by offerings ideas and suggestions for improvement; they have improved working when role-related information is shared in formal social interactions. OC is a source of connection among employees, and fosters better interpersonal settlement of issues, sharing of ideas, problems resolution, effective decision making and important work-related information is disseminated to all employees that is found to have significant impact on organizational performance(Malik & Shakshuki, 2018). Thus we formulate the following hypothesis,

H3: Organizational Communication (OC) has a significant impact on perceived organizational performance of auditing firms of Pakistan.

Personal interaction (PI) involve knowledge sharing through informal social interactions amongst different individuals (Yi, 2009). Different examples of this type of knowledge sharing include colleagues exchanging ideas

while conversing with each other. The purpose of knowledge sharing is to help other with specific problems, improve their efficiency, to minimize risks or avoid problems, and to enable others to share their passion and excitement on specific knowledge area (Yi, 2009). Often, such knowledge sharing is very productive because these knowledge exchanges enable participants to exchange knowledge that would have been inappropriate to exchange in a formalized context (Argote & Ingram, 2000). It is obvious that the larger the personal networks; the greater the chance that the individual will share knowledge with peoples he or she knows in his or her social networks. The enlarged and closer personal networks and personal relationships enable greater sharing of knowledge in such social networks. This type of KSB aims of encouraging helping other employees with specific problems, to work better and more professionally. These kind of helping behaviors reduce the mistakes and makes employee more knowledgeable to perform their work in accurate manner in timely manner. This ultimately improves the overall performance of organization (Kubo, Saka, and Pan (2001) hence we posit,

H4: Personal Interaction (PI) has a significant impact on perceived organizational performance of auditing firms of Pakistan.

This dimension of KSB includes sharing knowledge within CP that are, voluntary groups exchanging ideas, experiences in an informal way. Communities of Practices (CP) are informal group of people who are from same profession and they share knowledge related to their profession for the sake of learning. Tacit knowledge is shared through person to group social interactions on voluntary basis (Meyerhoff & Strycharz, 2013). Therefore, the motivation to share knowledge through communities of practice focuses on rewards which are intrinsic in nature(Käser and Miles (2001) e.g. as the opportunity to deepen the relationship with fellows or develop expertise and feelings of competence (e.g., by exchange of ideas, creating solutions, and experiences sharing). Under this behavior social exchange relationship-based behavior (a social exchange relationship is reciprocal acts in which individuals offer help to one another). Social exchange relationship-based behavior happens where there are common areas of interest, shared passion, specific shared problems. It issued in establishing group identity and shared perception of value (e.g., both parties know this knowledge has real potential value). Communities of practice are important for developing personal competencies and skills in professionals as people share their expertise and knowledge with others to improve their collective ability to perform their job in effective manner (Ardichvili, Page, & Wentling, 2003). Employees share tacit knowledge, best and effective practices to attain high level of service delivery. Harlow (2008) indicated that tacit knowledge sharing fosters innovative performance and enhance the organizational performance. Therefore, we propose:

H5: Communities of Practices (CP) has a significant impact on organizational PPER of audit firms of Pakistan.

Organizational culture influences the sharing of knowledge by creating an environment which encourages the sharing of knowledge by forming social norms (Kayworth & Leidner, 2004). Organizational culture is developed through rituals, socialization processes and narrating glorious feats of the founders and others who follow them. Organization's shared expectations for behaviors which are approved and done with mutual consent (Martin & Frost, 2011) Organizations having culture of trust, confidence and cooperation that encourage the sharing of knowledge (Lengnick-Hall & Moritz, 2003). In other words, a trusting and open culture will encourage more and more individuals to share more(Davenport & Prusak, 1998). In such cases the most common ways of managing

the development of such environments is fair decision making processes, open discussion and open communication, promoting equality in the organization, perceived support from the members and the organization itself, thereby encouraging trust, cooperation and reciprocity. Chang, Hsu, and Lee (2015) indicated that culture is prime factor in shaping the motivation of employees to share information and contribute towards the performance of organizations. Liu, Liu, and Chen (2006) indicated that organizations having effective organizational culture have teamwork, motivation, information flow, involvement of employees in decision making, supervisors' feedback and productive meetings. It was indicated by Danish, Munir and Butt (2012) that culture acts as a moderator in knowledge management and service effectiveness. When the culture of organization is supportive for sharing knowledge employees will be more effective in sharing their ideas, experiences and suggestions in written format and through personal interaction (Käser & Miles, 2001). It is found that culture impacts the link of communities of practice and their effectiveness (Heizmann, 2009). Ramdhani, Ramdhani, and Ainissyifa (2017) indicated that culture shapes more effective communication, if there is culture of open communication it will link communication to positive outcomes. We propose that this kind of effective organizational culture will play a moderating role in KSB and organizational performance as well as in all dimensions of KSB (a) written contribution (b) organizational communication, (c) personal interaction and (d) communities of practice and perceived performance of auditing firms of Pakistan. Hence, the following hypotheses are proposed:

H6: Organizational culture moderates the relationship of knowledge sharing behavior with perceived organizational performance.

H7: Organizational culture moderates the relationship of Written Contribution (WC) with perceived organizational performance.

H8: Organizational culture moderates the relationship of Organizational Communication (OC) with perceived organizational performance.

H9: Organizational culture moderates the relationship of Personal Interaction (PI) with perceived organizational performance.

H10: Organizational culture moderates the relationship of Communities Practice (CP) with perceived organizational performance.

On the basis of above literature, the following theoretical frame-work is proposed (Figure 1)

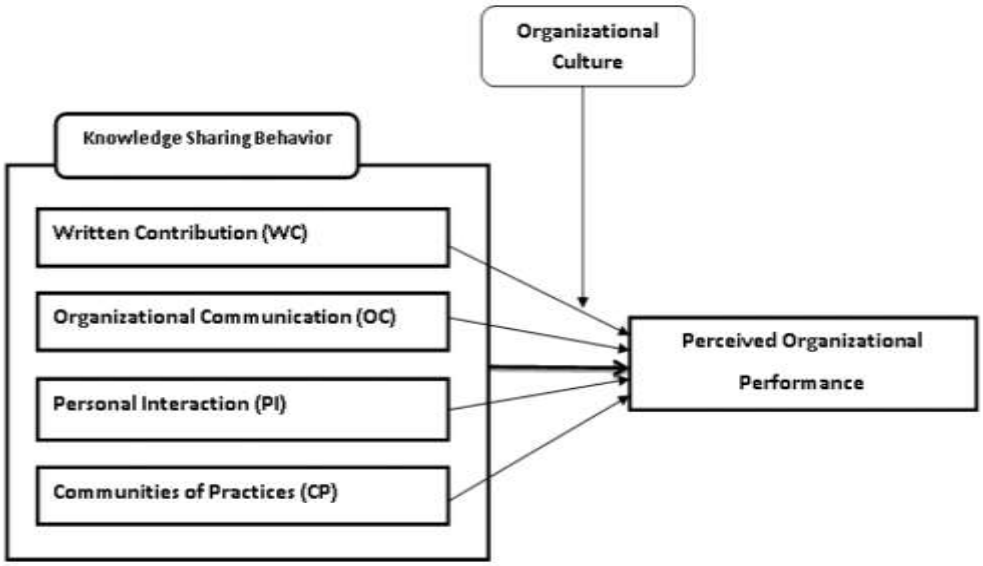

Figure 1: Research Model

III. METHOD

Research Design and Sampling

This is a quantitative and explanatory inquiry in which data is collected at single point of time. Sampling frame consisted of audit personnel ranging from staff associates to partners of the Big 4audit and accountancy firms which are also 'Category A' audit firms as per State Bank of Pakistan list for Annexure-A to BPRD Circular Letter No. 3 January 13, 2015 (SBP's PANEL OF AUDITORS UNDER SECTION 35(1) OF B.C.O. 1962). Purposive sampling method was employed to select auditors from Big four audit firms (Price water house Coopers A.F Ferguson &Co., KPMG Taseer Hadi and Co, Ernst & Young Ford Rhodes Sidat Hyder, Deloitte Touche Tohmatsu M. Yousaf Adil Saleem &Co.) of Pakistan because they comprise 60% of the audit assignments all over Pakistan (Devi & Devi, 2014). Therefore, sampling frame consist of Big 4 firms. The participants were audit personal ranging from staff associates to partners from big 4 firms in Pakistan. It is similar to the previous studies conducted in audit firms (Paino, Ismail, & Smith, 2010).

Total numbers of employees of PWCA.F Ferguson &Co are 1600 (PricewaterhouseCoopers, 2016), KPMG Taseer Hadi and Co. has 1300 employees (KPMG, 2016), Ernst & Young Ford Rhodes Sidat Hyder has 2000 employees(Ernst&Young, 2016) and Deloitte Touche Tohmatsu M. Yousaf Adil Saleem & Co. has 600 employees (Deloitte, 2016). Estimated sample size of 204 is suggested by GPower. 300 questionnaires distributed equally to Big 4 firms (30 staff auditors, 15 seniors, 15 managers, 15 senior managers, and 1 partner); out of which 247 completed surveys were received. Furthermore, 40 incomplete questionnaires were excluded, 207 complete responses made overall response rate of 69% that is slightly more than the 204 required for the research. The demographic profile used for this research includes is shown in Table I. Out of the 207 respondents, 164 are male while 43 are female. This indicates a percentage split of 79.2% male and 20.8% females. Most of these individuals (183 of the 207 respondents) are single while the remaining 24 are married, indicating that 88.4% respondents were single compared to only 11.6% being married. Considering the education level of the respondents, 161

(77.8%) out of the 207 are doing Chartered Accountancy (CA), 43 (20.8%) are doing ACCA and 3 (1.4%) are pursuing ACMA (Cost and Management Accountancy). This survey also indicated that 168 (81.2%) are involved in Pakistan based education while 39 (18.8%) are related to foreign education. In terms of completion of degree, 69 (33.3%) of the respondents were qualified while 138 (66.7%) were part qualified. This survey also involved staff members ranging from the lowest level i.e. Audit Junior (42%) to the most senior level i.e. Partners in the audit firms (1.9%). The other staff members' included in this survey involve Managers (7.7%), Assistant Managers (9.2%) and Audit Seniors (39.1%). Out of the 207 respondents, 60 (29%) have experience of less than 1 year, 107 (51.7%) have experience of between 1 and 3 years, 28 (13.5%) have experience of between 4 and 5 years and 12 (5.8%) have experience of between 6 and 10 years.

Table 1. Demographic Results

Characteristic	Dimension	Frequency	%
Gender	Male	164	79.20
	Female	43	20.80
Marital Status	Single	183	88.40
	Married	24	11.60
Education	CA	161	77.80
	ACCA	43	20.80
	ACMA	3	1.40
Degree	Qualified	69	33.33
	Part Qualified	138	66.67
QualificationType	Pakistan	168	81.20
	Foreign	39	18.80
Designation	Partner	4	1.90
	Manager	16	7.70
	Assistant Manager	19	9.20
	Audit Senior	81	39.10
	Audit Junior	87	42.00
Experience (years)	Less than 1	60	29.00
	1 to 3	107	51.70
	4 to 5	28	13.50
	6 to 10	12	5.80

Instruments

- Perceived organizational performance. It was measured by 12 item scale proposed by (S. Kim, 2005).
- Knowledge sharing behavior. It was measured by scale developed by (Yi, 2009), in which 5 items measured written communication, 8 items measured organizational communication, 8 items measured personal interaction and 7 items were used to gauge communities of practice.
- Organizational culture. A 18-item scale proposed by Liu et al. (2006) was used to measure organizational culture

A five point Likert type scale was employed in the form of a self-administrative questionnaire for data collection.

As self-reporting measures were used to measure all of the variables which were taken into account in this study, therefore several steps were taken during the design of the survey to reduce the possible impact of variance

by common method as suggested(Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). For instance, the respondents are kept anonymous so as to protect them with the intention of keeping the participants less likely to respond in an acquiescent, socially desirable, and lenient manner. We kept the questions simple and use widely known scale. Five point Likert type scale has been employed in the form of a questionnaire. Complete instrument used for all the different variables are included in Annexure A.

Data Collection

Self-administered structured questionnaire has been used for data collection, which was sent through e-mail / survey to audit personal ranging from staff associates to partners of big 4 Audit Firms. Mail questionnaires can generate a poor response rate so a personally administered onsite survey was used along with e-mail. It is important to declare that researcher is a Fellow member of ACCAUK, and is associated as part of the senior faculty of a renowned accountancy college, Professionals' Academy of Commerce (PAC). The researcher got support for data collection from these professional bodies and colleagues' referrals as well.

Validity and Reliability

It is essential to test the reliability of scales to ensure the quality of data (Pallant, 2013). Cronbach's alpha which has been extensively used in social and behavioral research for more than half a century as a measure of reliability (Cronbach, 1951). Cronbach's Alpha of each scale was measured to establish the reliability and the results shown in Table 2. This showed the Cronbach's alpha for organizational performance to be 0.912, KSB to be 0.957 and organizational culture to be 0.969. Since the values of all variables were considerably greater than the generally acceptable level of 0.5, therefore these indicate that the scales are highly reliable (Nunnally, 1967).

Table 2. Cronbach's Alpha

	Cronbach's Alpha	N of Items
Performance	.912	12
Knowledge sharing behavior	.957	28
Organizational Culture	.969	36

Data Analysis

IBM SPSS Statistics (version 21) has been used for conducting correlation and multiple regression analysis while moderation analysis was carried out via PROCESS macro (Model).

IV. RESULTS

Correlation Means and Standard Deviations

To find the association between the variables in a study, correlation analysis is performed. It basically measures the interrelationship among the variables. The correlations among the various constructs are shown in the Table 3.

Table 3. Correlation, Means and Standard Deviations

Sr. #		M	SD	1	2	3	4	5	6	7
1	Performance	3.99	.588	-						
2	KSB	3.61	.728	.584**	-					
3	WC	3.42	.926	.447**	.807**	-				
4	OC	3.79	.732	.618**	.883**	.629**	-			
5	PI	3.83	.737	.618**	.900**	.639**	.818**	-		
6	CP	3.29	1.030	.356**	.856**	.607**	.612**	.651**	-	
7	OCL	3.82	.660	.726**	.628**	.500**	.643**	.659**	.395**	-

Notes. **. Correlation is significant at the 0.01 level (2-tailed).
KSB=knowledge sharing behavior, WC= written communication, OC=organizational communication, PI=personal interaction, CP=communities of practice, OCL=organizational culture

It is also important to consider the correlation of the different variables with each other. The correlation of Knowledge Sharing behavior with Written Contribution (WC) is on the high side with a figure of 0.807, being within the range of 0.70 to 0.90 (high side). Similarly, the correlation of Organizational Communication (OC) with Knowledge Sharing Behavior is also on the high side at 0.883. This pattern continues with high correlations of Knowledge Sharing Behavior with Personal Interaction (0.900) and of KSB with Communities of Practices (CP) (0.856). The other correlations include those of KSB_WC with KSB_OC (moderate at 0.629), KSB_WC with KSB_PI (moderate at 0.639), and KSB_WC with KSB_CP (moderate at 0.607). The correlations of KSB_OC with KSB_PI (high at 0.818) and that of KSB_OC with KSB_CP (moderate at 0.612). Finally the correlations of KSB_PI with KSB_CP (moderate at 0.651).

Hypotheses Testing

Direct Relationship.

First hypothesis stated that knowledge sharing behavior has a significant impact on perceived organizational performance of auditing firms of Pakistan. Linear regression was employed to test H1 and our results supported that KSB have significant positive relationship with perceived organizational performance (β=0.476, t=10.29, p≤0.05). In order to test H2, H3, H4, and H5 multiple regression was run to find out the comparative impact of dimensions of KSB i.e. WC, OC, PI and CP on organizational performance. Multicollinearity was addressed by a statistical tool called Tolerance and VIF (*variance inflation factor)*. In this case there was no issue of multicollinearity (*VIF* = 1, *Tolerance* = 1) and Durbin Watson = 1.915 which indicated that there was no problem of autocorrelation. The results supported H3, H4 and H5, such that a significant positive relationship was found in OC and perceived performance (β=0.283, t=3.68, p≤0.005) and PI and perceived performance (β=0.306, t=3.861, p≤0.005); as well as CP and perceived performance (β=.088, t=2.075, p≤0.005). It indicates that organizational communication, personal interaction and communities of practice increase organizational performance. But H2 was not supported, such that relationship in WC and perceived performance (β=0.047, t=0.75, p≥0.005) was not found to be insignificant. The results of regression analysis are summarized in Table 4.

Table 4: Regression Results

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
KSB	.476	.046	.548	10.29	.000
WC	.047	.047	.075	1.003	.317
OC	.283	.077	.352	3.689	.000
PI	.306	.079	.383	3.861	.000
CP	.088	.042	.154	2.075	.039

Notes. Dependent Variable: Performance

KSB=knowledge sharing behavior, WC= written communication, OC=organizational communication, PI=personal interaction, CP=communities of practice

Interaction Impact. Hypotheses H6, H7, H8, H9 and H10 were proposed to test the interaction effect of organizational culture between KSB and perceived organizational performance as well as the dimensions of KSB i.e. WC, PI, OC and CP and perceived organizational performance PROCESS has been used (Hayes, 2013). It does the centering and interaction terms automatically (Aiken, West, & Reno, 1991). The results of moderation hypotheses are shown in Table 5.

Table 5: Moderation Analysis

	β	**SE**	**t**	**p**	**LLCI**	**ULCI**
OCL	.5532	.0550	10.0500	.0000	.4447	.6617
KSB	.1610	.0486	3.3102	.0011	.0651	.2569

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OCL*KSB	.0951	.0533	1.7846	.0758	-0.0100	
ΔR^2	.0069					
Sig.	0.0758					
F	3.1847					
OCL	.6064	.0485	12.4963	.0000	.5107	.7020
WC	.0653	.0346	1.8871	.0606	-.0029	.1335
OCL*WC	.1158	.0440	2.6317	.0091	.0290	.2026
ΔR^2	0.015					
Sig.	0.0091					
F	6.9256					
OCL	.5159	.0538	9.5936	.0000	.4099	.6220
OC	.2161	.0481	4.4891	.0000	.1212	.3111
OC*OC	.1112	.0515	2.1603	.0319	.0097	.2126
ΔR^2	.0098					
Sig.	.0319					
F	4.6670					
OCL	.5118	.0552	9.2714	.0000	.4029	.6206
PI	.2046	.0493	4.1528	.0000	.1074	.3017
OCL*PI	.0795	.0525	1.5129	.1319	-.0241	.1830
ΔR^2	.0049					
Sig.	.1319					
F	2.2888					
OCL	.6432	.0485	13.2505	.0000	.5475	.7389
CP	.0349	.0305	1.1431	.2543	-.0253	.0950
OCL*CP	.0673	.0398	1.6900	.0926	-.0112	.1457
ΔR^2	.0065					
Sig.	.0926					
F	2.8562					

Notes. KSB=knowledge sharing behavior, WC= written communication, OC=organizational communication, PI=personal interaction, CP=communities of practice, OCL=organizational culture

The significant interaction terms and change in ΔR^2 supported the moderating impact of organizational culture for relationship in WC and perceived performance (OCL*WC=.1158, t=2.6, P≤0.05; ΔR^2 =0.015, P≤0.05, F=6.9256) and OC and perceived performance (OCL*OC=.1112, t=2.1, P≤0.05; ΔR^2 =.0098 P≤0.05, F=4.6670). It shows that the relationship of WC with perceived organizational performance is increased by 1.5% in presence of organizational culture, of OC with perceived organizational performance is increased by 0.98% in presence of organizational culture. Thus offering support for H7 and H8.

Insignificant interaction was found for the moderating impact of organizational culture in association of KSB and perceived organizational performance (OCL*KSB=.0951, t=1.7, P≥0.05; ΔR^2 =0.0069, P≥0.05, F=3.187), PI and perceived organizational performance (OCL*PI=.0795, t=1.5, P≥0.05; ΔR^2 =0.0098, P≥0.05, F=4.667) and CP and perceived organizational performance (OCL*CP=.0673, t=1.6, p≥0.05; ΔR^2 =.0065, P≥0.05, F=2.8562). Therefore H6, H9 and H10 were not supported.

V. DISCUSSION

The objective of this study was to identify the impact of knowledge sharing on the perceived performance of organizations. This indicates that if knowledge sharing were to take place between different individuals of an organization, or between different work units or departments of the organization, this would improve the perceived performance of the concerned organization. This therefore formed the main hypothesis which was to be tested during the course of this research. As the development of this hypothesis continued, some of the components of knowledge sharing were identified i.e. written communication, personal interaction, organizational communication and communities of practice (Yin, 2009), which would help to better understand the relationship between knowledge sharing and perceived performance. Lastly, we proposed a moderating impact of organizational culture between KSB and organizational performance as well as the individual dimensions of KSB and organizational performance.

For the first set of hypotheses about direct relationship of KSB and its dimensions with organizational performance an overall support was received. It was validated that KSB in auditing firms are responsible for improvement in perceived performance. Our findings confirm the extant literature that shows overall organizational performance is increased by the knowledge sharing behaviors (Ritala et al., 2015). Further, the personal interaction, organizational communication and communities of practice were also linked to positive perceived performance. Such that, organizational communication is one of the method of information sharing through formal organizational channels (Gurteen, 1999). Employees offer ideas, solutions, insights on working methods, learning from experiences and suggestions for improvement. Thus, they have improved working when role-realted information and decision making is effective that contributes towards the effective performance (Haroon & Malik, 2018). Apart from the knowledge gained by formal meetings, personal interaction allows the employees to share those issues that cannot be discussed on formal platform(Argote & Ingram, 2000). Peers can exchange ideas and discuss the problems faced in work while conversing with each other. This not only allows the improvement of task performance and problem solving but also stirs the passion and excitement on specific knowledge area (Yi, 2009). Communities of practice are yet another important way of knowledge sharing in professional communities. Such as auditors who require tacit knowledge and experience from their colleagues in addition to the academic qualification specifically benefit from them (Hatmaker, Park, & Rethemeyer, 2011). They are informal group of people who are from same profession and they share knowledge related to their profession. The sharing of tacit knowledge promotes learning, skill development, innovation and develops the competencies of professionals (Meyerhoff & Strycharz, 2013) that are a precursor of improved organizational performance (Harlow, 2008).

But our findings didn't support the impact of written communication on performance. This is due to the fact that in comparison to the other knowledge sharing methods, written communication is used in audit settings comparatively in less frequency. Knowledge sharing practice can be considered as publication of scientific knowledge which has been codified and then added to the pool of existing body of knowledge. Mostly this kind of trend is used in academic settings (Landry et al. (2010).

The second set of hypotheses indicated interactional impact of organizational culture between KSB and organizational performance as well as the individual dimensions of KSB and organizational performance. The overall role of culture in as a moderating mechanism between KSB and organizational performance was not supported. Liu et al. (2006) indicated that organizations having effective organizational culture have teamwork, motivation, information flow, involvement of employees in decision making, supervisors' feedback and productive meetings. This kind of culture was proved to be a direct antecedent of organizational culture rather than being the moderator in the relationship between KSB and organizational performance. Furthermore, same case happened in case of personal interaction and communities of practice in predicting organizational performance in which organizational culture was significant as direct antecedent. This is in line with the study of Chang and Lin (2015) who found the culture to be antecedent of knowledge management processes. The moderating role of effective organizational culture was proven in the case of relating written communication (WC) and organizational communication (OC) with perceived performance.

This sheds light on the earlier direct insignificant link of written communication with perceived performance, such that employees in auditing firms are only likely to share knowledge in written format in case there is a culture of have teamwork, effective information flow, motivation, involvement of employees in decision making, supervisors' feedback and productive meetings. In addition, organizational communication and performance relationship was strengthened in the presence of such effective culture. This confirms the fact that KSB and performance association is dependent on the context (Zack et al., 2009). In line with the assertions of Connelly and Kevin (2003) our study shows that culture is an important element in shaping overall impact of KSB on organizational performance specifically in case of written communication and organizational communication.

VI. CONCLUSION AND IMPLICATIONS

The present study proved that knowledge sharing significant predictors of perceived performance in Big 4 auditing firms in Pakistan. Three dimensions of KSB i.e. OC, PI and CP were found to act as the source of improvement in perceived organizational performance yet written communication was found to have no significant relation with perceived organizational performance. WC and OC relationship with PPER was moderated by effective OCL. The impact that OCL has as a moderator in case of KSB, personal interaction and communities of practice with perceived organizational PPER performance was not moderated by OCL, rather culture acted as a direct predictor.

The research has contributed to the knowledge management literature in several ways. First of all, it has shed light on the scantly researched construct of knowledge sharing in specific context of audit settings as only limited number of research studies are carried in this context (Chow et al., 2008). In contrast to the use of consolidated knowledge sharing construct we also include its four dimensions i.e. written communication, organizational

communication, personal interaction and communities of practice as suggested by Yin (2009). As per the recommendations of Henttonen et al. (2016) we have extended the directed link of KSB and perceived performance by incorporating the role of culture as a moderator audit firms of Pakistan. Thus we have affirmed that cultural context is an important element in shaping the impacts of KSB on performance (Zack et al., 2009). This study also contribute assist audit personal and policy makers to make effective knowledge sharing strategies and implementation them to enhance performance. The auditors should codify their prior experience and knowledge so that their peers can take advantage from them and carry out the audit performance in efficient manner. The auditors should enhance informal interaction to share the issues and suggest possible solutions. In addition they should share their new knowledge and experiences with peers so that overall audit assignments can be completed with full vigilance. Formal communication channels should promote the ideas sharing, solutions of complex auditing issues, insights on working methods for detecting frauds and errors, learning from experiences and suggestions for improvement in future audit assignments. In this way auditors can have improved working when role-related information and decision making is more knowledge and skill based that will contribute towards the effective performance. In addition, the audit firms should have effective culture where teamwork, motivation, information flow, involvement of employees in decision making, supervisors' feedback and productive meetings take place so that knowledge sharing can positively impact performance.

VII. LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

In this study the sample sizes both in terms of audit firms and auditors was limited to Big 4 firm, future emphasis could be on research to further separate the appropriate variables. This study focused on Big 4 which have global standing; local audit firms may produce different results in future study. Different countries have different challenges in audit practice due to institutional differences. The data collection can further be improved for further researches by conducting personal interviews with the senior members of the organization(s). These are likely to provide with more in depth view from the respondents' perspective. Focusing future research on different sectors of the economy e.g. consultancy firms, law firms, banks and leasing companies, insurance companies etc. Due to the fact that audit firms are increasingly getting involved in global operations and audit and related works, further studies in the future can be conducted to identify and focus on the differences that exist across different countries and nations regarding the sharing of knowledge. Big 4 global prospect may generate different views (Jacks et al., 2012). In addition, the impact of comprehensive construct of knowledge management process can be examined (Vera-Munoz, Ho, & Chow, 2006). In addition, the role of other kinds of culture such as knowledge management culture (Mason & Pauleen, 2003), result oriented, job oriented and tightly controlled culture (Chang & Lin, 2015) can be examined.

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