

Attitude-To-Process Model, Social Network, Social Trust and Shared Goals In Organizational Knowledge Sharing: Empirical Evidence From Pakistan

Örgütsel Bilgi Paylaşımında Sürece Yönelik Tutum Modeli, Sosyal Ağ, Sosyal Güven ve Paylaşılan Hedefler: Pakistan'dan Ampirik Kanıt

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Abstract

This paper conceptualizes the theory-of-reasoned-action and attitude-to-behavior process model and integrates them into previous research. The target is to see whether social capital has any significant role in sharing of knowledge in organizations. To achieve the purpose, the researchers empirically tested 11 hypotheses (nine were put to validation as these hypotheses have already been tested in other settings while two were put to test for the first time) by employing confirmatory factor analysis as a statistical technique. Data for the study were collected from 114 faculty members of two universities in Khyber Pakhtunkhwa, Pakistan. The results validated the majority (8 out of the 9) of the previously tested hypotheses and evidence of the significant contribution of social networks and shared goals on an employee's willingness of sharing knowledge. However, social trust has shown a significant contribution in the reverse direction which is very interesting and needs further in-depth exploration. Similarly, hypotheses 10 and 11, which were put to test for the first time, were not supported by the empirical data. As a whole, the results of this study warrant organizations that knowledge sharing is indisputable for remaining viable in the market. The results have also made this evident that employees are willing to share knowledge if organizations provide a more conducive atmosphere to affect knowledge sharing. The results also challenge the absoluteness of trust and demand organizations that could have negative results as well. The results have practical as well as theoretical implications. The study has some limitations as well.

Keywords

Attitude-to-process model, knowledge sharing, shared goals, social capital, social trust

Öz

Bu makale, düşünceyle eylem teorisi ve tutum-davranış süreç modelini kavramsallaştırmakta ve önceki araştırmalarla entegre etmektedir. Buradaki amaç, sosyal sermayenin organizasyonlardaki bilgi paylaşımında önemli bir rol oynayıp oynamadığını görmektir. Bu amaca ulaşmak için, doğrulayıcı faktör analizi gibi istatistiksel bir teknik kullanarak 11 hipotez deneysel olarak test edildi. Bu hipotezlerden dokuzu daha önce farklı ortamlarda test edildiği için doğrulama amacıyla test edilirken, ikisi ilk kez test edilmiştir. Çalışmanın verileri, Pakistan'ın Khyber Pakhtunkhwa bölgesindeki iki üniversitenin 114 öğretim üyesinden toplanmıştır.

Sonuçlar, daha önce test edilen hipotezlerin çoğunluğunu (9'un 8'i) doğrulanmış ve sosyal ağların ve ortak hedeflerin bir çalışanın bilgi paylaşma isteği üzerinde önemli bir etkisi olduğunu göstermiştir. Bununla birlikte, sosyal güvenin ters yönde önemli bir katkı sağladığı ilginç bir bulgu ortaya çıkmış ve daha derinlemesine araştırmaya ihtiyaç duyulmuştur. Aynı şekilde, ilk kez test edilen 10. ve 11. hipotezler, deneysel veriler tarafından desteklenmemiştir. Genel olarak, bu çalışmanın sonuçları, organizasyonların pazarda varlıklarını sürdürebilmeleri için bilgi paylaşımının tartışılmaz derecede önemli olduğunu göstermektedir. Sonuçlar, çalışanların bilgi paylaşma isteği, organizasyonların daha uygun bir ortam sağlaması durumunda artış göstereceğini ortaya koymuştur. Sonuçlar ayrıca güvenin mutlaklığını sorgulamakta ve organizasyonlardan olumsuz sonuçlar da beklenmesini talep etmektedir. Bu sonuçların hem pratik hem de teorik önemi bulunmaktadır. Çalışmanın bazı sınırlılıkları da bulunmaktadır.

Anahtar Kelimeler

Süreç Yönelik Tutum Modeli, Bilgi Paylaşımı, Paylaşılan Hedefler, Sosyal Sermaye, Sosyal Güven

Introduction

The critical role of knowledge in the economies of developed and industrialized countries over the past decades is an evident fact that has been duly recognized. Notwithstanding, there is still a need to think over new ways of managing knowledge for the sustainable development of organizations (Lee, 2018; Mohajan, 2019). In this search, it has been observed that there is an evident fact that these economies have shifted their dependence from natural resources to intellectual resources (Omotayo, 2015). There is a need that the developing economies should also affect this change from just recognizing the theory to the application of the theory. Organizations have been endeavoring to affect this shift. However, researchers (e.g., Vines, Jones, & McCarthy, 2015) believe that this shift is a major challenge for almost all organizations. They are struggling for finding ways to manage their organizational knowledge. Success on this front has become a question of competitive advantage for any organization (Lin, 2007). To be more precise, this race of knowledge management has remained a vital concern for organizations. The most common manifestations of knowledge in organizations are: what knowledge they have; how they utilize their existing knowledge; and how fast they are capable of creating something new. It is the very central role of knowledge management (Lee, 2018) that enables organizations to effectively and efficiently utilize their resources. For this, organizations need to search for several critical initiatives that help them in accruing the potential benefits of knowledge management. This necessitates the need for understanding the core processes of KM and the capabilities required for making those processes productive. The four core and commonly researched processes are: how knowledge is acquired, created, stored, and how it is practically applied in the organization (Aujiprapongpan, Vadhanasindhu, Chandrachai, & Cooperat, 2010). These four processes are interlinked and help organizations in achieving their goals and objectives. Easy to say but a very challenging task for organizations to properly manage the existing knowledge in such a way that it may engender the creation of new knowledge (Lin, 2007). Researchers (e.g., Zboralski, 2009) contend that the role of the workforce is critical in cherishing and improving upon the exiting learning and its respective sharing in organizations.

The ability of an organization to leverage its knowledge effectively depends heavily on the people of the organization who actually create, share, and use the knowledge (Ipe, 2003, p. 341). There is a need of strengthening this ability for which the organization has to develop and promote the required behaviors (Chow & Chan, 2008). To start with an organization is required to focus on bolstering active and effective interactions within the workforce by encouraging employing diverse techniques to enable the workforce to convert knowledge of individual into knowledge an organization (Ardichvili, Maurer, Li, Wentling, & Stuedemann, 2006). However, it has been observed that here employers believe that technology will help them in this regard. Researchers (e.g., McInerney & Mohr, 2007) contend that this is a fallacious approach. Technology is not supposed to serve this soft and delicate purpose. To be more precise, it is the human relationship of promoting learning and sharing of information. Here it is highly imperative for organizations to note that it is motivation which could encourage employees to partake in this activity of information sharing. Undertaking such activities are highly critical because researchers (Du Plessis, 2007; Mohajan, 2019) have empirically found that employees are generally reluctant to share their knowledge as they believe that it is their individual property.

Researchers (e.g., Ardichvili, et al., 2006; Ho, 2009; Riege, 2005; Yu & Chu, 2007) have widely acclaimed not only the importance of knowledge sharing but also its complexity, the barriers that hinder it and factors that facilitate it (Nadason, Saad, & Ahmi, 2017). To look at this phenomenon, the extant literature carries two commonly known theories— resource-based theory (RBT) and knowledge-based view of the firm (KBV). Within these theories, there are some commonly known factors that the researchers have identified which include organizational culture, information technology, role and support of top management, employees' motivation, and the structure of an organization (Ardichvili, et al., 2006; Chen & Hung, 2010). Notwithstanding, one needs to acknowledge the fact that these factors prove ineffective if there is a lack of strong social relationships within the workforce (McInerney & Mohr, 2007; Rouse, 2015). From this, it is very easy to connote that both the theoretical approaches appear more mechanical to explain the phenomenon. There is a need for psycho-analysis of exploring employees' willingness towards knowledge sharing. To study this willingness and its possible linkage with the support of management, a number of studies (e.g., Chow & Chan, 2008) have researched the theory-of-reasoned-action (TRA). In such studies researchers have concluded that it is not only the extrinsic factors (like rewards, organizational culture, etc.) it is the high levels of social capital that make the difference. Researchers (Chow & Chan, 2008) have empirically looked into these factors to see the intensity and role that they play in knowledge sharing. But taking a close view of these studies, it becomes evident that these studies have relative cultural perspectives as they have been empirically tested locally. There is a need of validating their findings to see as to what extent these findings have values across the cultural boundaries. The authors believe that these studies have been carried in cultures which are individualistic, their validation in collectivist cultures

(Hofstede, 1980) will be of great value. Besides, the authors believe that an employee's behaviour is not always directed by one particular explanation (here the theory of reasoned action), it could be coupled by another behavioral process i.e., an employee's attitude which is termed as attitude to process model.

The review of the extant literature exhibits that organizations have been found showing their willingness to adopt a number of critical initiatives that help them in achieving organizational goals and objectives through knowledge management. However, before implementing any initiative, organizations need to be confident about the proper management of the existing knowledge in such a way that it may engender the creation of new knowledge and its sharing within organizations (Michailova & Minbaeva, 2012). This means there is a need for some integrated approach that encompasses all the critical aspects of KM. This research is an effort in that direction. It would be an effort of empirically validating previous findings (Chow & Chan, 2008) and conceptually integrating attitude to process model in the decision making process. At the same time, the study would also empirically test that integration as well to see how knowledge is shared or supposed to be shared in organizations.

The expected outcomes from this research are: an integrated approach to the critical aspects of the knowledge management domain; it would help in identifying sources of knowledge and basic activities of knowledge management which, in turn, may intensify the understanding of implicit and explicit knowledge transfer process. As knowledge is part of wealth and power, it is not shared the way organizations wish. What organizations need is to understand the social capital of their employees, organizational requirements, and the sociology of the environment. The crux of the matter is that organizations need to understand all the dimensions of the sharing of the knowledge and should provide an enabling environment to the workforce where they have the opportunities to share their knowledge.

Theoretical and conceptual background

There is a very close inter-relationship between attitudes and is a central theme in persuasion research. The assumption in this relationship is: a person's behavior is the product of her/his attitude and the shift in the latter can predict the shift in the former. There are two common theoretical models that provide an explanation for this prediction. These models are the attitude-to-process model and theory-of-reasoned action. The former, postulated by Ajzen and Fishbein (1969), purports that what humans do is the direct outcome of their thoughtful planning. Putting it in other words, it can be said that the theory talks about the predictive nature of human decisions in organizations (Southey, 2011). While the latter expounds that human activity is an extemporaneous response to the situation that one finds her/himself in. To explain the relationship of human attitude with subsequent action, one needs to take into consideration four factors. These are: specificity, person, situation, and attitude. It has also to be kept in mind that it is the quality of each factor that explains the quality of the predictivity of a person's action. However, one has to note that these factors are further affected by the cultural dimension of the individual (Hofstede, 1980). This means that individuals of the individualistic culture will be under the influence of the former model while those of the collectivist culture will be under the influence of the latter model.

Literature Review

"Knowledge is a powerful source of organizations" (Mohajan, 2019, p. 52) and is considered a critical organizational resource (Lee, 2018). It is a key strategic asset that by its very nature is the exclusive property of an individual and resides in the mind (implicit knowledge) of an individual and has many manifestations in different social contexts (Fernie, Green, Weller, & Newcombe, 2003). It has always been a herculean task for organizations to provide opportunities to their workforce to create knowledge and then to motivate them to share it (Ipe, 2003). Researchers have identified four factors that are instrumental in KS. They are: the knowledge itself, willingness of the person concerned, the opportunities available for such sharing, and culture. Besides, this implicit knowledge, it could be explicit as well. Researchers (e.g., Nonaka, 1991) believe that the latter is easy for organization to communicate as it is formal and more systematic as compared to the former one, and the organization can create a "common cognitive ground" among employees and can enable them to share their latent knowledge. An organization needs to focus on both as they supplement and complement each other.

Knowledge sharing and social capital

Social capital has an important role in constructive interactions in organizations (Coleman, 1988; Okoli & Oh, 2007). According to Nahapiet and Ghosha (1998), it is "the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit" (p. 243). For some researchers (e.g., Chiu, Hsu, & Wang, 2006) the role of social capital is very critical in interpersonal in this domain. Keeping

this in mind, some researchers (e.g., Willem & Scarbrough, 2006) warn managers that this can engender some sort of negative organizational politics which can, consequently, affect social capital which may further affect her/his behavior towards knowledge-sharing. That is why there is a dire to delve deep to an improved understanding of these interlinked concepts and their cumulative effects on an employee's behavior of knowledge sharing in an organization.

Social capital is considered an instrumental factor in knowledge sharing through two approaches—a) the emergent approach, and b) the engineering approach (Van den Hooff & Huysman, 2009). Accordingly, the former approach gives weightage to social capital in the process of knowledge sharing. While the latter approach is management-oriented which means that management is tasked to facilitate knowledge sharing. For them, it is not possible to compartmentalize these two approaches and that each approach has its respective role in knowledge sharing in organizations.

Researchers (e.g., Chow & Chan, 2008) have explained the social capital of an organization in three dimensions/aspects. These are: structural, relational, and cognitive. The first aspect/dimension looks at communication systems, organizational network relations, and power hierarchy; the relational aspect looks at the quality of trust among employees when they interact; and the cognitive aspect “refers to resources increasing understanding between parties” (Chow & Chan, 2008, p. 459). To empirically look into these factors researchers Chow and Chan (2008) have looked at the three social factors to represent the three dimensions of social capital with “network configuration” renamed as “social network” and “trust” as “social trust” and “shared goals” (p. 459). This current study would be an empirical study to test these relationships in the light of cultural differences through attitude-to- processes model.

Theory of reasoned action (TRA)

This theory explains how and why an individual acts (Ajzen & Fishbein, 1969, 1977; Fishbein & Ajzen 2010). The theory has engaged the attention of various researchers. This theory posits that attitudes, through conscious thought and deliberation, guide the influence of an individual's attitudes and specific courses of action (Fazio & Roskos-Ewoldsen, 2005, p. 53). This relatively simple theory helps in identifying the most important determinant (a person's intention) of any behavior (Cooke & French, 2008; Silverman & Lim, 2016). The theory is well supported in the literature and has wide acceptability as it includes social norms, a construct not provided in other theories. That is why the theory has commonly been employed to explain diverse problems related to voting, health, and financial behavior (Ellis & Helaire, 2020). The limitation of the theory is that it explains only an individual's volitional behavior while providing no explanation for behavior when a person is in the grip of emotions, or when behaves spontaneously or habitually. Besides, it is also lacking in providing an explanation for actions that occurs in response to unique opportunities and situations where cooperation is required (Hale, Householder, & Greene, 2002). Though the theory does not cover behavior under all circumstances, it is sufficient to explain the relationship between attitude and. According to this theory, volitional behavior can easily be predicted from attitude. As human attitude is subject to change and development, which could be affected by organizational culture and environment, and which has bearing on affecting knowledge sharing, the theory holds merit.

Attitude-to-process model

This model explains an individual's spontaneous behavior. The theory explains that when individuals merely observe an attitude object, they spontaneously access their attitudes from memory. In the subject process there are a lot of situational factors, personality variables, and attitudinal qualities that are considered consistent (Fazio, Powell, & Williams, 1989; Fazio & Roskos-Ewoldsen, 2005). According to this model “attitudes can guide a person's behaviour even when the person does not actively reflect and deliberate about the attitude” (Fazio & Roskos-Ewoldsen, 2005, p. 53). In such situations, the determiner of individuals' behavior could be the individualistic definition of the specific event. This definition has two parts: a) an individual's knowledge of the situation; and b) that individual's perceptions of the attitude object in that very situation.

This theory has some bearing on knowledge sharing in organizations. While individuals cannot be kept bound to act always with deliberation/consciousness (theory of reasoned action), there happen to be situations where individuals spontaneously access their attitudes from memory and act accordingly (attitude-to- process model). Now, if there are opportunities for knowledge sharing in the former, the latter, operating within the same parameters of social capital, could also have the potential for knowledge sharing. There may be differences in degrees, one cannot negate their collective influence, keeping in mind their corresponding ratio of operation, in an organization.

Hypotheses Development

The current study is an effort to integrate these two theories into one model (Figure 1). In an association, staffs act together with one another and improve interactions among them with varying degrees influenced by the structure of the organization, relationships among employees, and their respective cognitive skills (Nahapiet & Ghoshal, 1998). Individuals have been found employing their social networks (the ability of people to communicate with others) to gain knowledge (Nadason et al., 2017). These social networks are used for knowledge sharing for both intra-firms, and inter-firms by taking part in formal and informal meetings, dialogs (Lee et al., 2016). To empirically test these dimensions, researchers (Chow & Chan, 2008) hypothesizing these relationships. As the intensity of this interaction depends on the structure of the organization, Rouse (2015) contends that it is social networking that is instrumental in expanding any business. It is through social contacts that individuals make and make new connections. The current study would employ the hypothesis tested by Chow and Chan (2008) and replicate it in a new context. The main concept of the hypothesis is that employees who have a close relationship (social networking) are more prone to share their ideas and resources. The researchers put the following hypothesis for validation:

H1. The larger the social network among the members of the organization, the more favorable the attitude towards knowledge sharing will be.

Knowledge sharing is mostly subjective. Therefore, subjective norms have a vital role. Because these norms reflect an individual's perception regarding their respective ability of reaching those goals with the product (Salgues, 2016). These norms are the beliefs that a particular behavior will be approved or disapproved by some notables. This behavior is the product of the perceived social pressure and compels the individual to move in line with those people's views. As such these norms turned to be the outcome of an individual's social and environmental surroundings and a person's perceived control over the behavior. Resultantly, one can conclude that individuals having a positive attitude and positive subjective norms will exhibit strong control and increase the likelihood of intentions governing changes in behavior. Keeping this in mind, one can claim that an employee having a more extensive social network in the organization would be more prone to share knowledge due to the greater social pressure. In simple parlance, members of an organization enjoying good social relations have high expectations as social reciprocation. Thus, according to Chow and Chan (2008) employees connected through social networks will be more prone to share their knowledge with one another. This study would again replicate their hypothesis. The hypothesis is:

H2. The wider the social network among the members of an organization, the more favorable will be the subjective norms for knowledge sharing.

In social and organizational relationships trust plays a vital role in bonding people. Trust is considered essential in the workplace for knowledge sharing because in an atmosphere of mistrust employees will not share knowledge (Fauzi, et al., 2018, Jolae, et al., 2014). It is a person's belief in the honesty, fairness, or benevolence of another person. The extant literature is replete with empirical pieces of evidences that exhibit trust as one of the predictors of many organizational outcomes like, commitment, satisfaction, motivation, performance, and turnover intentions (Rahman, 2012; Rahman & Shah, 2012). Trust has also been found instrumental in increasing team creativity and improving organizational performance (Dong, Bartol, Zhang, & Li, 2017). It could be a motivating factor in improving interaction and facilitating knowledge sharing. Having said that, the current study would again replicate the hypothesis tested by Chow and Chan (2008). The hypothesis is:

H3. The greater the social trust among the members of an organization, the more favorable the attitude towards knowledge sharing.

Trustworthiness is always considered a positive factor in social relationships. In other words, trust and positive behavior are positively related. Researchers (e.g., Riege, 2005) posit that when employees trust each other and have the conviction that knowledge-sharing behavior is going to benefit them and their organization, they will willingly share it. Similarly, researchers (e.g., Sharrat & Usoro, 2003) employees get motivated to participate in knowledge sharing if they found that their respective organizations' value commitment, reliability, mutual reciprocity, and honesty. From this, researchers (Kalantzis and Cope, 2003) have deduced that there exists a positive relationship between knowledge sharing and employees' trust. From this Chow and Chan (2008) have concluded that employees enjoying trust among one another will be prone to embrace knowledge sharing. This study would again replicate their hypothesis. The hypothesis is:

H4. The greater the social trust among the members of an organization, the more favorable are the subjective norms for knowledge sharing.

In organizations, there is a need of fostering collaboration among the members. It has generally been found that employees prefer individual achievements over common organizational goals. Researchers (Jolae et al., 2014) have found that working for common organizational goals through knowledge sharing may not always be in line with the goals that the member shares. However, the cognitive dimension of social capital emphasizes on the increasing understanding, which includes shared goals, between parties. There is a need for this shared understanding for knowledge sharing (Wasko & Faraj, 2005). There must be a sort of longing that drives the members of a team to put concorded efforts towards the achievement of the commonly agreed upon organizational goals. This longing is instrumental in realizing the end where the team is dreaming of going. This is the concept of shared goals. When there are shared goals, mutual understanding becomes essential. Thus the existence of shared goals glues employees together and lets them exchange their ideas. From this Chow and Chan (2008) have hypothesized that shared goals are positively related to knowledge sharing in an organization. This study would again replicate their hypothesis. The hypothesis is:

H5. The greater the shared goals among the members of the organization, the more favorable the attitude towards knowledge sharing will be.

Both TRA and TBA explain the determinant (intention) of the behavior of individual and are considered the function of an individual's subjective norms and attitude (Jolae et al., 2014). While working in organization employees have collective goals. Researchers (e.g., Wagner, 1995) contend that employees' shared goals facilitate mutual understanding among them which culminates on the exchange of ideas. The formation of an association and then systematic cooperation within the association is only possible when there is an aura of trust towards developing shared-goals (Bautista, Bayang, 2015). To achieve these goals employees put in their respective efforts to realize them. These efforts include the utilization of their respective knowledge and their sharing with one another. From this Chow and Chan (2008) hypothesized that subjective norms and knowledge sharing are positively related. This study would again replicate their hypothesis. The hypothesis is:

H6. The greater the shared goals among the members of the organization, the more favorable the subjective norms for knowledge sharing will be.

It is commonly believed that if one wants to change a person's behavior, change her/his attitude first and then behavior will follow. Notwithstanding, to predict a person's intentions one needs to know that person's attitude. So if an employee is attitudinally inclined to act in a particular manner (prone to share knowledge), then the perceived behavioural control of that employee will let them in carrying out the action (behaviour of knowledge sharing). This perceived behavioral control is the individual's perceptions of their ability of performing that behavior (Bautista, Bayang, 2015). From that commonality, Chow and Chan (2008) hypothesized that attitude towards knowledge sharing and intention to knowledge sharing are positively related. This study would again replicate their hypothesis. The hypothesis is:

H7. The more positive an organization's members' attitudes towards knowledge sharing, the greater the intention to share knowledge.

The theory of planned behavior posits that an individual's behavior is guided by a number of considerations that includes beliefs about the normative expectations of others (Jolae et al., 2014). It has to be kept in mind that researchers (e.g., Sutton, 2001) contend that subjective norms are closely linked with a person's salient normative beliefs. An individual's perceptions of social normative pressures influence her/his attitudes toward sharing knowledge. Keeping this in mind, Chow and Chan (2008) hypothesized that subjective norms of knowledge sharing attitude and actual knowledge sharing. This study would again replicate their hypothesis. The hypothesis is:

H8. The higher the organization members' subjective standards for knowledge sharing, the more favorable the attitude towards knowledge sharing will be.

It has also to be borne in mind that subjective norms also determine human intention. Since an individual's subjective norms are part of her/his normative beliefs which carry the concern of approval or disapproval of the subject by relevant others (Billari, Philipov, & Testa, 2005), it was found instrumental in generating positive intentions to perform the predictive behavior. From this Chow and Chan (2008) hypothesized that an individual's subjective norms are positively linked with the intention to share knowledge. This study would again replicate their hypothesis. The hypothesis is:

H9. The higher the organization members' subjective standards for knowledge sharing, the greater the intention to share knowledge.

Individual employees sometimes act impulsively because the situation or context demands such spontaneity. In this case, the presence of a particular cue stimulates an individual's behavior with spontaneity. In such cases, the determining factor is

an individual's definition of the event (Fazio, 1986; Fazio & Roskos-Ewoldsen, 2005). In organizations where employees find themselves acting spontaneously in a knowledge-sharing issue, there will be subject to the definition or knowledge of the situation that individuals have in their memory regarding the appropriateness of the in that specific situation and will act accordingly. From this, it is deduced that in the attitude-to-process model, i.e., accessibility of the attitude from memory is a critical determiner of the subsequent (Fazio, et al., 1989). From this, the authors posit that:

H10. The higher the knowledge of the organization members about the situation of knowledge sharing, the greater the intention to share knowledge.

To explain an individual's spontaneous response, it is contended that it is influenced by another factor—an individual's perceptions of the attitude object in the immediate situation (Fazio & Roskos-Ewoldsen, 2005). This perception of the attitude object influences an individual's definition of knowledge of the event and thereby determines the consequences. The element of accessibility also affects an individual's perception of the event and influences the attitude. The central point in the discussion is that attitude is required to be activated from the memory. In organizational settings, this activation can be made through situational cues (Snyder & Kendzierski, 1982) like of the management, organizational caring, etc. From this the authors posit that:

H11. The higher the organizational members' perception of the cues, the greater will be the intention to share knowledge.

Methodology

The survey method was adopted for data collection. Data was collected from two universities in Peshawar, Khyber Pakhtunkhwa, Pakistan (one each from the private and public sectors) through a questionnaire. As the selected public sector university is quite bigger (having approximately 520 faculty members) than the private sector university (with approximately 200 faculty members), the ratio of the sample was taken as 70 and 50 respectively. Simple random sampling was used for selecting the required number from the respective population. The questionnaire was personally administered. With the help of a cover letter respondents were ensured of the confidentiality and purpose of the study. To test the plausibility of the model to the data, the researchers employed structural equation modeling. To analyze the collected data, Amos-18 software was employed.

The logic behind employing Structural Equation Modeling (SEM) is its potential advantage of simultaneous estimation. This technique is mostly suggested for analysis when the relationships in the models are interdependent with a set of latent constructs (Reisinger & Mavondo, 2007). The current study has interdependencies and that is why SEM is suitable for this study. It is considered a pre-eminent multivariate data analysis technique and its importance has widely been recognized through its application in almost all social sciences fields like sociology, psychology, economics, environmental studies, cross-cultural research, etc. (Dastgeer, Rehman, & Rahman, 2012).

Measurement and Data Collection

To measure the constructs of social networks, shared goals, social trust, subjective norms about knowledge sharing (each construct with three questions), intention to share knowledge, and attitude toward knowledge sharing (each construct with five questions) have been adopted from Chow and Chan (2008) in toto. However, scales have been developed for the two constructs of individual perception, and knowledge of the situation (three items each). A 5-point Likert scale ranging from (1) "strongly disagree" to (5) "strongly agree" has been employed across all constructs. The researchers distributed 250 questionnaires among the target population. A total of 123 filled in questionnaires were received back. Out of the total received questionnaires, nine were found incomplete and discarded. The response rate happened to be 49%.

Analysis

SEM (Structural Equation Modeling) is a statistical technique employed for a complex inter-dependent relationship of variables. This technique can be used for exploratory as well as confirmatory factor analysis. In other words, it can be used for hypothesis validation and creation. In the current research, the technique was employed for both purposes. In the current study, the researchers employed a two-stage analytical procedure: first, the measurement model was assessed, and then the structural model was to see the fitness of the data with the underlying conceptual model. With the help of the structural path, the relations among the constructs and their significance were assessed. To assess the proposed models in both cases, some recommended goodness of fit indices were employed. These indices included chi-square, CMIN/df, root mean square residual (RMR), root mean square error of approximation (RMSEA), goodness-of-fit index (GFI), and comparative fit index (CFI). The basic motive behind using four fit indices has to have a holistic approach to the model. An SEM model has many dimensions of its fitness to the data, therefore, it is always imperative to use diverse fit indices to have more holistic results of the model. For the purpose of comparison acceptable level/threshold values of these fit indices are provided in Table 1.

Table 1: Goodness of fit Statistics and the Respective Threshold Values

#	Type of Goodness of Fit Indices	Cut-off or Threshold Value
1	Chi-square (χ^2)	Smaller the better
2	CMIN/df	$\leq 2-5$
3	RMSEA	≤ 0.08
4	RMR	≤ 0.1
5	GFI	≥ 0.90
6	CFI	≥ 0.95

Source: Byrne (2010).

Measurement model

The measurement model is supposed to assess the suitability of the indicators to the respective construct in the model i.e. scores on the measuring instrument. Results of the measurement model for all the constructs of the model are provided in Table 2. These values show that all the constructs of the current study are valid measures as they fall within the acceptable range shown in Table 1. Table 2 presents the fit indices for all eight constructs.

Table 2: Fit Statistics for all the Eight Constructs

Description	Reliability	CMIN/df	RMSEA	RMR	GFI	CFI	IFI
Social network	0.858	1.716	0.082	0.023	0.991	0.995	0.913
Social trust	0.816	1.445	0.062	0.024	0.996	0.992	0.954
Shared goals	0.785	4.886	0.079	0.046	0.973	0.961	0.931
Attitude toward KS	0.847	1.542	0.069	0.012	0.968	0.987	0.897
Subject norm about KS	0.885	3.482	0.083	0.032	0.982	0.989	0.898
Knowledge of the situation	0.829	2.231	0.067	0.019	0.987	0.991	0.907
Perception of the individual	0.863	2.012	0.085	0.02	0.988	0.994	0.934
Intention to KS	0.885	1.662	0.077	0.009	0.977	0.992	0.912

All the values in the Table 2 fall within the acceptable limits of the fit indices. This reflects that the proposed model is valid and one can proceed further.

Indicators	Completely Standardized Loadings	t-value	Sig.
SN	0.12	3.6	.000
ST	0.08	2.2	.029
SG	0.11	3.1	.002
IP	0.39	8.2	.000
IK	0.13	3.8	.000
Att	0.10	2.9	.003
SNO	0.12	3.2	.000

Structural model

After the measurement model was being validated, the researchers put to test the structural model to see if the model was fit to explain the causal relationships among the constructs of the model. For this purpose, confirmatory factor analysis was carried out.

To provide a summarized form of the data regarding the relationship among the constructs, correlations statistics are provided in table 3. There is no serious problem in these values.

Table 3 Correlation Matrix

Variables	1	2	3	4	5	6	7	8
Social network	1.00							
Social trust	0.05	1.00						
Shared goals	0.09	0.34	1.00					
Attitude towards KS	0.09	0.29	0.62	1.00				
Subjective Norms towards KS	0.14	0.30	0.68	0.56	1.00			
Individual Perception towards KS	0.13	0.34	0.70	0.64	0.79	1.00		
Individual Knowledge towards KS	0.05	0.33	0.80	0.67	0.70	0.74	1.00	
Knowledge Sharing	0.11	0.36	0.65	0.64	0.66	0.70	0.79	1.00

Factor loadings of the construct

There is always a need to look whether individual constructs are related to one another or otherwise. To find out this aspect, factor loadings is a good indicator. As a rule of thumb a factor loading of less than 0.3 is considered low, above 0.30 is considered moderate, above 0.5 is considered a good one. However, this rule of thumb has been applied in the light of the existing theory if it supports it. When theory is not very clear, deleting a construct with low loading is not advisable. A factor loading is just reflect the effect of a latent variable on the observed variable or the correlation between both. Concepts which are conceptually more distant from the supposed latent variable could result in a lower loading without leading to questioning the validity of the measurement model and latent variable. Results of the factor for the current model is provided in table 4.

Table 4 Factor Loadings

Table 4 Factor Loadings

Figure 1 depicts the inter-dependence relationships among the constructs through the path diagram. To assess the model fitness, five measures from the four perspectives: absolute fit measures using Chi-square (χ^2) and GFI; non-centrality based fit measure using CFI and RMSEA; incremental fit measure by employing IFI, and CFI; and parsimonious fit measures by getting the ratio of chi-square and degree of freedom (χ^2/df). The values for the fit measures have been provided in Table 2. All these values are within the acceptable levels (Table 1) which means that the findings of the current research have achieved the required acceptable level.

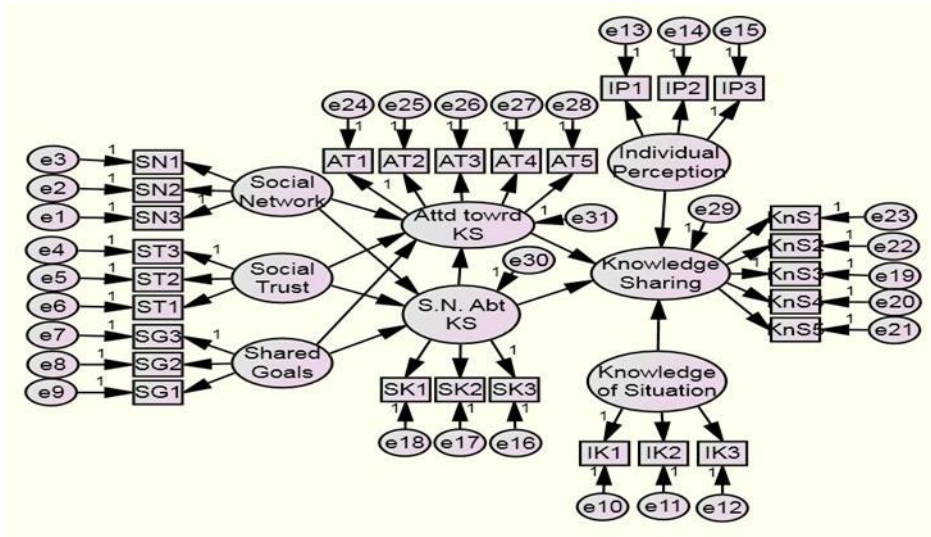


Figure 1: Hypothesized model of the study-the arrows indicate the independence, inter-dependence

Hypotheses Testing

The results of all 11 hypotheses have been summarized in Table 5. The empirical data supported H1 and H5 thereby validating the findings of the previous research of Chow and Chan (2008). These findings are in line with the findings of previous studies (e.g., Lee et al., 2016; Nadason et al., 2017). This means that high levels of social connection and shared goals greatly influence employees' willingness to share knowledge. Similarly, the results also validated their results in the H7, H8, and H9. This means that the findings of the previous studies (e.g. Bautista & Bayang, 2015; Chow & Chan, 2008; Jolaee et al., 2014) are still valid and required to be taken seriously. Hypotheses related to social networks and shared goals and their effect on subjective norms on knowledge sharing (H2 and H6) have also been validated. This validation has strengthened the view that employees who had social connections with their co-workers with shared goals felt pressure to share their respective knowledge.

Similarly, the findings of Chow and Chan (2008) did not support the H4 which has been validated by the findings of the current study. These findings appear strange because extant literature exhibits that trust has positive effects on individual volition to share knowledge (Bautista & Bayang, 2015; Jolaee et al., 2014). However, it has to be noted that there is a very thin that segregates competition and cooperation and trust plays different roles in them. Researchers (Bengtsson & Kock, 2000, 2014) believe that there is a difference between trust in competition and trust in normal collaboration. In collaboration, it may have positive effects but may not have the same effects in the competition (Sende, 2016). In collaborations, employees may not doubt each other but in competition, the case may not be the same because results may not be the same. Despite all the positive impacts trust has a dark side as well (Sende, 2016). In competition, there is a risk that a partner may abuse the trust. In the current case, the negative results may be due to the competition between employees. It means that organizations need not be blind to negative impacts. They have to be wary of the fact that trust can have a negative impact on performance and profit (Molina-Morales, Martínez-Fernández, & Torlò, 2011). From the above discussion, it can be concluded that trust is not an absolute positive construct, it is a relative one.

However, the current research had very different results for H3. Here though the results are significant as indicated by a high t-value (3.47) but the sign is negative. This means that social trust contributes negatively whether the effect is significant as in H3 or insignificant as in H4. These results are somewhat inconsistent within and a sort of deviation from the previous researches (Bautista & Bayang, 2015; Chow & Chan, 2008; Fauzi, et al., 2018; Jolaee et al., 2014). Causes could be many which may include cultural (country culture—individualist vs. collectivistic; organizational culture—cooperative or supportive vs. competitive) differences, individuals' understanding of the concept, organizational differences, and the like. The validation of some hypotheses in the current study and deviant results in some others ask for further research in the area. The concept of knowledge sharing is

in its infancy in developing countries and intensive basic researches are needed to have a holistic view of knowledge-sharing.

While looking at the two additional hypotheses (H10 & H11), the empirical data did not support these hypotheses. The reason may be the regional culture. In Pakhtun culture where the study was carried out, people are habitual in remembering things for a long time and their actions may not necessarily be spontaneous and may not be stimulated by the presence of a particular cue but depend on the ability to read/recall from memory. However, the authors warrant that this may be a hasty conclusion. Therefore, this needs further empirical evidence from this culture with samples from other organizational settings or other cultures as well.

In the case of H11, the authors believe that organizational settings matter. In the sample study, organizational settings are conventional and change is a rare commodity. In such situations the situational cues i.e., the behavior of the management, organizational caring, etc. are not judged but are accepted as they are. Again, there is a need for further validation and cross-checking of the hypothesis in other cultures in diverse organizations.

In sum, this study found that social networks and sharing goals indirectly influence employees' knowledge-sharing intentions through mediators of knowledge-sharing attitudes and subjective knowledge-sharing norms. However, an individual's perception of the situation and the individual's knowledge of the situation did not show any direct significant effect on the intention to share knowledge. Again, there are implications in these findings. The models through which these hypotheses have been tested are accepted models and unexpected results demand further validation through additional researches.

Table 5: Hypotheses of the Research Study

#	Description	Hypots	Path Coff	T-Value	P-Value	Results
1	Social network—attitude toward KS	H1	0.27	3.37	.000	+ve*
2	Social network—subjective norms about KS	H2	0.49	4.92	.003	+ve*
3	Social trust—attitude toward KS	H3	-0.18	-3.47	.029	+ve*
4	Social trust—subjective norms about KS	H4	-0.06	-0.92	.533	-ve**
5	Shared goals—attitude toward KS	H5	0.15	2.41	.002	+ve*
6	Shared goals—subjective norms about KS	H6	0.14	2.34	.003	+ve*
7	Subjective norms about KS—attitude toward KS	H7	0.32	3.14	.000	+ve*
8	Attitude toward knowledge sharing—intention to KS	H8	0.75	4.29	.003	+ve*
9	Subjective norms about KS sharing—intention to KS	H9	0.18	3.47	.034	+ve*
10	Individual perception of the situation—intention to KS	H10	-0.04	-0.71	.342	-ve**
11	Individual's knowledge of the situation—intention to KS	H11	-0.1	-1.53	.243	-ve**

*+ve = Hypothesis supported; **-ve = Hypothesis not supported by the empirical data

Discussion and Implications

The main objectives of this paper were to validate some previous research regarding the influence of social capital on organizational knowledge sharing and testing of two new variables in the previous model by researchers (Chow & Chan, 2008). The results of the current research have revealed that:

- ✓ Overall, faculty members in the target se universities are willing to share knowledge;
- ✓ The existence of a strong social network and greater shared aims considerably contribute to approaches towards sharing of knowledge;
- ✓ Strong social networks and greater shared aims meaningfully contribute to the subjective norms on sharing of knowledge;
- ✓ Social trust has a direct negative effect on attitudes towards sharing of knowledge and an insignificant effect on subjective norms though it influences both attitudes towards sharing of knowledge and the intent to share knowledge;
- ✓ Strong social networks and greater common goals have an indirect impact on intentions to share knowledge; and
- ✓ Individuals' perceptions of the situation and individual's knowledge of the situation exhibited little direct noteworthy relationship with the intention to share knowledge within the organization.

The results of the study reveal that social capitals, and its three dimensions, are instrumental in increasing knowledge-sharing intention. And according to the theory of planned behavior this intention is the immediate antecedent to behavior. Based on the results of the current research and previous research on knowledge sharing it can be easily concluded that it is one of the critical responsibilities of the management of any organization to promote an atmosphere wherein every employee of the organization can appreciate and contribute knowledge (Yu & Chu, 2007). This further warrants the management that social ties are very important and that it should be taken care of during the stage of recruitment and selection. Employees who share common interests and exhibit the existence of shared goals need to be preferred because it is a critical task for human resources

departments (Chow & Chan, 2008). These social values among the employees are very helpful for promoting and enhancing knowledge-sharing among them. It has also to be noted that trust may have a negative impact as well when organizational culture is highly competitive. Therefore, there is a need of looking at the moderating role of culture or some conditional situations that can affect the relationship. Besides, the role of an individual's perceptions of the situation and the individuals' knowledge of the situation needs further exploration in different organizations and different cultures to explore the issue more thoroughly.

Conclusion and Limitations

In major, this study was supposed to empirically validate the previous empirical research findings (Chow & Chan, 2008) with the aim to look into the influence of social networks, social trust, and shared goals on employees' intention to share knowledge. In addition to that, the study also integrated two other variables (individual perception & knowledge of the situation) into the previous model. The purpose of this addition was to delve deep into the inter-dependence of these variables. Practically, this research would enable the practitioners to realize the value of social capital and the individual's role regarding their perception of the situation in affecting knowledge sharing within the boundaries of an organization. Overall, the study has explored the direct and indirect effects of the variables of interest on knowledge sharing within the boundaries of an organization. The empirical results demonstrate that some relationships are strong, some are weak while some have an insignificant effect in this interdependence model in the sample study.

The study has some limitations. First, it is a perception-based study and thereby carries all the limitations (like small sample limitations, individualistic understanding of the participant which may not be absolute, the study is cross-sectional, the study is carried out in education institutions only, etc.) that such studies carry. Second, it is a validation-cum-exploration study that has put to validation 9 old and to test 2 new hypotheses. The number of hypotheses cannot be called exhaustive in the field of knowledge-sharing in an organization. Lastly, the study has sample limitations like a small sample size, selection of only universities, etc. These limitations, if addressed, in future researches, may have positive and changing results.

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Publication Ethics

The authors declare that all ethical principles and rules were followed in the data collection, analysis, and reporting processes.

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This article was written by four authors.

Conflict of Interest

The authors declare no conflict of interest