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*Full Length Research Paper*

# Organizational culture and knowledge sharing: Empirical evidence from service organizations

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**This paper aims to investigate the relationship between organizational cultural elements and knowledge sharing. This is a quantitative research by nature. A questionnaire is derived from previous studies. The survey covered seven service organizations in Bangladesh. Regression was adopted to test hypotheses. Out of the four independent variables, trust, communication between staff, and leadership were found to have a positive and significant relationship with knowledge sharing. A surprising finding of this study is that reward system does not have any impact on knowledge sharing. It is reasonable here to conclude that knowledge sharing can be successful in the service industry in Bangladesh with given emphasis on trust, communication between staff and leadership.**

**Key words:** Service organizations, knowledge sharing, cultural elements.

## INTRODUCTION

In today's economy, knowledge is considered to be the most strategically important resource (Conner and Prahalad, 1996; Grant, 1996; Nahapiet and Ghoshal, 1998; Pettigrew and Whipp, 1993). The effective management of this resource is, therefore, one of the most important challenges facing today's organizations (Davenport and Prusak, 1998; Drucker, 1993; Hansen, Nohria, and Tierney, 1999). The sharing of knowledge between employees and departments in the organization is necessary to transfer individual and group knowledge into organizational knowledge, which leads to effective management of knowledge. Some researchers found that knowledge sharing is critical to a firm's success (Davenport and Prusak, 1998) as it leads to faster knowledge deployment to portions of the organization that can greatly benefit from it (Syed-Ikhsan and Rowland, 2004). When individuals share organizationally relevant experiences and information with one another, it significantly increases the resources of an organization and decreases time wasted in trial-and error (Lin, 2007).

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On the other hand, the unwillingness of knowledge sharing causes fatalities for organizational survival (Lin, 2007). Therefore, determining which factors contribute to effective knowledge sharing in an organization constitutes an important area of research (Hooff and Ridder, 2004).

In Bangladeshi economy, the major contributors to GDP are agriculture, industry and services. During the period from 1949-1950, agriculture contributed to 70% of GDP whereas the contribution by the service sector was only 26% (Nahar, 2009). However, changes have come over the years and during 2007-08, the contribution of the service sector to GDP was 49.46%, which is a significantly higher figure compared to the contribution of both agricultural GDP (20.87%) and industrial GDP (29.66%) (The financial express, 2008). More than a quarter of the domestic labor force is employed by the service organizations in Bangladesh (Raihan, 2005). The GDP employment ratio for service sector was USD 1,312.09 per employee per annum in 2000, making the sector a more vital player in creation of employment than manufacturing and agricultural sectors (Raihan, 2005). In Bangladesh economy, the service sector itself is a major user of services as inputs (Azad, 1999). Housing, electricity-gas, public administration, banking and insurance services are the big users of services per unit of output. Service industry in Bangladesh is more knowledge intensive compared to other industries. Although manufacturing and services have specific features related to the inputs into the production process, the nature of the process itself and the resulting output demands are more knowledge intensive for services (Islam, Ahmad, and Mahtab, 2010). In manufacturing the output is tangible, consumer's participation in manufacturing process is limited, and time lags between production and consumption are lengthy (Islam et al., 2010). Whereas in service industries the output is intangible, consumers often participate actively in the service delivery process and a high degree of simultaneity in production and consumption that requires service providers to be more creative (Gaither and Frazier, 2001). In this situation, individual and organizational knowledge plays a crucial role. In today's global competition, the firms in all industries including the service industries face steep competition from multinational companies which offer services that not only satisfy the needs of clients but also add an increased value (Islam, Doshi, Mahtab, and Ahmad, 2009). This strategic reorientation with importance put on innovativeness and uniqueness (Kumpe and Bolwjin, 1994), requires service organizations to constantly offer new services and this task is impossible to accomplish without sharing necessary knowledge among different functions of an organization. In this regard, organizational culture plays an important role to facilitate sharing of knowledge in an organization. Past studies have shown that cultural elements are related to successful knowledge sharing in developed and developing countries (Issa and Hadda, 2008; Al-Alawi et al., 2007; Kerr and Clegg, 2007; Oliver and Kandadi, 2006) but there is a lack of evidence from the underdeveloped countries. On this background, this research aims to investigate the relationship between the cultural elements and knowledge sharing in Bangladesh service organizations.

## LITERATURE REVIEW

### Defining knowledge and knowledge sharing

"Knowledge is a fluid mix of framed experiences, values, contextual information, and expert insight that provide a framework for evaluating and incorporating new experiences and information" (Davenport and Prusak, 1998). Some authors define knowledge as a state of knowing that constitutes facts, concepts, principles, laws, casual relationships, insights, judgments, intuition, and feelings (Ahmad and Daghfous, 2010). Due to globalization and technological challenges, now-a-days companies feel the need to pay greater attention to the development and preservation of internal skills and capabilities (Lopez, Peon and Ordas, 2004), which means in order to remain competitive, companies not only require to preserve knowledge but also share knowledge between individuals and functional groups. Sharing of knowledge can be defined as the dissemination of information and knowledge throughout the organization (Ling, Sandhu and Jain, 2009).Knowledge sharing plays an essential role in the organizational process because it helps an organization to transfer new ideas or solutions (Islam et al., 2010). When employees are interacting among one another for idea generation, it promotes the sharing of knowledge among them. Knowledge sharing enables the flow of knowledge among and between individuals, groups and organizations (Gee-Woo and Kim, 2002; Huang and Newell, 2003). In the literature, knowledge sharing is used in two ways. Some authors consider knowledge sharing as part of exploitation (McElroy, 2003) and others consider it as part of the exploration phase (Swan, Newell, Scarbrough and Hislop, 1999). Exploitation refers to the process where existing knowledge is captured, transferred and used in other similar situations. Exploration, on the other hand, involves processes where knowledge is shared, synthesized and new knowledge is created (McElroy, 2003). Bakker, Leendes, Gabby, Krazer, and Engelen (2006), are of the opinion that there is a difference between knowledge sharing as part of knowledge exploration (production) and knowledge sharing as part of knowledge exploitation (integration). Knowledge sharing in order to integrate knowledge takes place from one individual to many others at once ("broadcasting"). On the other hand, knowledge sharing as part of knowledge production takes place more in the form of group discussions, working together to solve a problem: employees define the problem together, shares their views and opinions, share information to find a solution together (Bakker et al., 2006). Since the authors of the present study are not only interested in knowledge integration, but also knowledge sharing that is facilitated by trust among the group members, open communication between staff, reward system, and influence of leaders, this paper considers knowledge as both part of knowledge integration process and part of the knowledge production process.

### Cultural elements and knowledge sharing

Organizational culture can be defined as the shared, basic assumptions that an organization learnt while coping with the environment and solving problems of external adaptation and internal integration that are taught to new employees as the correct way to solve those problems (Park, Ribiere and Schulte, 2004). An organizational culture that supports knowledge sharing can lead to more effective achievement because instilling a culture of standardizing and maintaining information is critical to achievement (Lai and lee, 2007; McManus and Loughridge, 2002).

Each organization has its own culture, which gradually develops overtime to reflect the organization's identity in two dimensions: visible and invisible (Al-Alawi et al., 2007). The visible dimension of culture is reflected in the espoused values, philosophy and mission of the firm while the invisible dimension lies in the unspoken set of values that guides employees' actions and perceptions in the organization (McDermott and O'Dell, 2001). Al-Alawi et al (2007), found that cultural elements such as trust between co-workers, communication, reward system, and organizational structure are positively related to knowledge sharing in organizations. Issa and Hadda (2008), also found that trust among co-workers is an important cultural element for successful knowledge management. Employees are willing to share knowledge in situations where they can trust the recipient of this knowledge (Connelly and Kelloway, 2002). Some other cultural elements, such as, leadership, organizational, and individual factors are also essential for successful knowledge sharing (Kerr and Clegg, 2007). Previous studies found that leadership and reward system have positive impact on knowledge sharing (Oliver and Kandadi, 2006). In the light of the aforementioned discussion, it is reflected that past researches revealed that cultural elements enhance knowledge sharing. Since we are also interested to evaluate how the cultural elements – trust, communication among staff, leadership, and reward system are related to successful knowledge sharing, based on past studies, the following section highlights how some of these cultural elements are contributing to sharing of knowledge.

## Trust

Trust is "a set of beliefs about the other party (trustee), which leads one (trustor) to believe that the trustee's actions will have positive consequences for the trustor's self" (Bakker et al., 2006). Trust is a multidimensional construct which express with the belief, sentiment or expectation about an exchange partner that results from the partner's expertise, reliability and intentionality or from the partner's honesty and benevolence (Cheng, Yeh and Tu, 2008; Claro, de Oliveira and Hagelaar, 2006; Ganesan, 1994; Kumar, Scheer and Steenkamp, 1995). Various past studies found that trust between co-workers is an extremely essential attribute in organizational culture, which is believed to have strong influence over knowledge sharing (Al-Alawi et al., 2007; Andrews and Delahay, 2000). Many researchers believe that when people trust each other, they are more willing to provide useful knowledge (Bakker et al., 2006). When trust exists, people are more willing to listen and absorb each other's knowledge (Andrews and Delahay, 2000; Levin, 1999; Mayer, Davis and Schoorman, 1995; Tsai and Ghoshal, 1998). On the other hand, Connelly and Kelloway (2002) noted that employee would only be interested to share knowledge in situations where they trusted the recipient of this knowledge. Other researchers such as Davenport and Prusak (2000), found that if distrust is present within an organization, knowledge management cannot, and will not, succeed because when fear is present, people will not contribute in sharing critical information and will be suspicious regarding their organization's true intentions. Contrary to other researches, Bakker et al. (2006), who believed that trust among people is important for successful knowledge sharing. However, Issa and Haddad (2008) revealed in a recent study that mutual trust among employees is needed in order for knowledge to flow freely with a company. They opined that companies should not forget that the most important asset that affects the sharing of knowledge is a trustful relationship that is directly affected by a proper organizational culture. De Long and Fahey (2000), also found in their work that the level of trust that exists between the organization, its subunits, and its co-workers greatly influences the amount of knowledge that flows both between individuals and from individuals into the organization's database, best practices archives and other records.

## Communication (interaction among staff)

Communication refers to "human interactions through oral conversations and the use of body language while communicating. Interaction among the employees is facilitated by the existence of social networking in the organization" (Al-Alawi et al., 2007). Some of the previous studies show that communication contributes to knowledge sharing as it is related to trust in various inter-organizational relationships (Cheng, Yeh and Tu, 2008; Hendriks, 1999; Anderson and Narus, 1990; Cummings, 1984; Mohr and Spekman, 1994). Smith and Rupp (2002) also revealed that interaction between co-workers is fundamental in encouraging knowledge sharing. Similarly, Al-Alawi et al. (2007) found that communication among staff is positively related to knowledge sharing in organizations. Organizations that explicitly favor knowledge sharing and knowledge integrating into the organization encourage debate and dialogue in facilitating contributions from individuals at multiple levels of the organization (Davenport and Prusak, 1997). Such participation among employees is enabled by practices that involve individuals gathering data from diverse sources, exercising their judgment to transform data into information and then engaging in intense interaction to produce new knowledge that can be the basis for action (Lopez et al., 2004). Therefore, an organization that encourages open flow of information among employees can make knowledge sharing successful, create new organizational knowledge and reduce the cost of trial-and-error.

## Leadership

The term leadership refers to the process of influencing others towards achieving some desired goals (Jong and Hartog, 2007). The leaders act as role models for the manner in which knowledge sharing occurs, as well as, making the incentives for doing so (Kerr and Clegg, 2007). The leaders facilitate networks of knowledgeable employees of the organization and provide best practice of coordination and collaborative activities (Kerr and Clegg, 2007). Therefore, leaders play an important role in knowledge sharing because they facilitate other members to create the necessary knowledge locally (Kreiner, 2002). As Nonaka (1987) argues, managers need to orient chaos toward purposeful knowledge creation by proving "conceptual framework that helps employees make sense of their own experience" (Nonaka, 1987). Therefore, a leader is expected to provide guidance and translate business strategies (business knowledge) to his team. As Kerr and Clegg (2007), stated in their research that leadership is necessary in providing appropriate knowledge and network with and across boundaries, which impacts the opportunities to share knowledge. The importance of leadership in affecting knowledge culture in organizations is also supported by Oliver and Kandadi (2006). They are of the opinion that "senior management should be actively involved in the evangelization process and convey that knowledge creation and knowledge sharing is highly valued in organizations". The results of their study highlights the essential role of middle and front level managers in developing a culture that will facilitate knowledge sharing through the manifestation of various leadership characteristics.

## Reward system

An effective reward system is essential in order to motivate employees to share knowledge among themselves and between different departments because in the absence of proper motivation, some employees may be unwilling to share knowledge due to fear of loss as a result of this action. Oliver and Kandadi (2006) confirmed that organizational rewards motivate employees towards knowledge sharing and foster a knowledge culture. They opined that the respondents suggested that the indirect rewards such as appreciation and recognition play a greater role than the monetary incentives in knowledge sharing. Also, in promoting knowledge sharing culture, long-term rewards such as profit sharing and employee share options (ESOPs) was observed as effective means when compared to the short-term rewards. Similarly, Cornelia and Kugel (2004) found that monetary rewards have an immediate effect on motivation to share knowledge. But in the long-term, people should be incentivized non-monetarily for sharing their knowledge. Other researchers also stress the importance of reward system in enhancing knowledge sharing (Davenport and Prusak, 2000; Gupta and Govindarajan, 2000). On the other hand Ling et al., (2009), revealed that the most effective method to promote knowledge sharing in the organization is to link it with rewards and performance appraisal. They believe that top management support is also vital to ensure the success of knowledge sharing in the organization. Contrary to other authors Ling et al. (2009), found that monetary reward is more effective than non-monetary reward in promoting knowledge sharing in the organization. Al-Alawi et al. (2007), also opined that managers (or leaders) must consider the importance of collaboration and sharing best practices when designing reward systems. The idea is to introduce and implement processes in which sharing knowledge and horizontal flow of information are encouraged and indeed rewarded. Such rewards should be based on group rather than individual contribution (Goh, 2002).

## Research model

As is evident in the current literature, there is not only a dearth of knowledge sharing studies in Bangladesh service industry, but an absence of empirical research that investigated the role of cultural elements on knowledge sharing. Most of the literature of knowledge sharing argued that cultural elements play a vital role in fostering knowledge sharing. The main emphasis of this research is to bridge the gap in literature to explain how cultural elements encourage knowledge sharing in service organizations in Bangladesh. Knowledge sharing is the process in which a unit of an organization is impacted by the experience and the know-how of another unit (Ahmad and Daghfous, 2010). The extensive literature on knowledge sharing has proved significant evidence of the benefits of cultural elements in enhancing knowledge sharing (Issa and Hadda, 2008; Al-Alawi et al., 2007; Kerr and Clegg, 2007; and Oliver and Kandadi, 2006). The theoretical framework for this study is shown in Figure 1.

## Hypotheses

Based on the relationship of the variables shown in the conceptual framework, the following research hypotheses have been developed. The central idea of this research is that cultural elements play an important role in knowledge sharing.

Organizational culture was seen in four main dimensions – trust among employees, communication

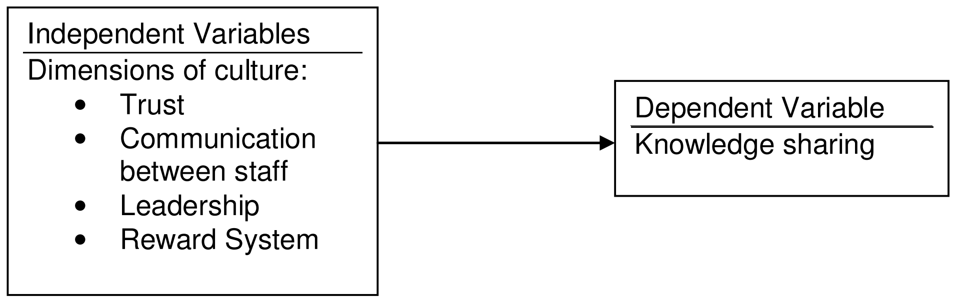


**Figure 1**. Theoretical framework.

between staff, leadership and reward system. De Long and Fahey (2000) revealed in a study that the level of trust that exists between the organization, its subunits, and its co-employees greatly influences the amount of knowledge that flows both between individuals and from individuals into the organization's database. Therefore, trust among employees is essential to improve the speed of knowledge sharing in organizations. Issa and Haddad (2008), also mentioned that trust is an important cultural element for the success of knowledge management because, if the recipient of knowledge is not persuaded that the source is trustworthy, it is not likely knowledge from that individual will be accepted. In another study, Connelly and Kelloway (2002) also found that people would only be willing to share knowledge in situations where they trust the recipient of knowledge. Other researchers also found that trust is related to free flow of knowledge among the co-workers. For example, Andrews and Delahay, 2000; Levin, 1999; Mayer et al., 1995; Tsai and Ghoshal, 1998 showed that when trust exists, people are more willing to gain and absorb each other's knowledge. Similarly, the findings of Al-Alawi et al. (2007) revealed that trust is positively related to knowledge sharing in organizations. Trust creates a trustworthy knowledge culture in organizations that improves knowledge sharing process. Therefore, it is hypothesized that:

$H_1$: There is a positive relationship between trust among co-workers and knowledge sharing.

Communication between co-workers is fundamental in encouraging knowledge sharing (Smith and Rupp, 2002). Organizations that encourage knowledge sharing and knowledge integrating into the organization creates a floor for open discussion and debate and this motivates individuals at various levels to freely give their opinions and views on different issues (Davenport and Prusak, 1997). Such participation among employees is enabled by practices that involve individuals gathering data from diverse groups, exercising their judgment to transform data into information and then engaging in intense interaction and discourse to produce new knowledge (Lopez, Peon and Ordas, 2004). Therefore, an organization that encourages open discussion among employees can make knowledge sharing easy and successful, create new organizational knowledge and reduce the cost of trial-and-error. From the literature it is evident that the positive influence of communication enhancing knowledge sharing (Al-Alawi et al., 2007). Hence the second hypothesis:

$H_2$: There is a positive relationship between communications (interaction between staff) and knowledge sharing.

Oliver and Kandadi (2006), highlights the essential role of middle and front level managers in developing knowledge culture through the manifestation of various leadership characteristics. They opined that senior managers must be actively involved in the evangelization process and convey that knowledge sharing and creating organizational knowledge are highly valued in organizations. Leadership at all managerial levels is required to develop a desired culture (Kluge, Stein and Licht, 2001; Marsh and Satyadas, 2003; Welch and Welch, 2005), that will make knowledge transfer an ongoing process. Therefore, leaders play an important role in knowledge sharing because they facilitate co-workers to create necessary knowledge (Kreiner, 2002). As Kerr and Clegg (2007), stated in their research that leadership is crucial in providing appropriate knowledge and network with and across boundaries, which impacts the opportunities to share knowledge. Therefore, it is hypothesized that:

$H_3$: There is a positive relationship between leadership and knowledge sharing.

Reward system is a strong motivator for knowledge sharing (Syed –Ikhsan and Rowland, 2004). Oliver and Kandadi (2006), showed that organizational rewards motivate employees towards knowledge sharing and foster a knowledge culture. Similar results are also found by other researcher such as Davenport and Prusak, (2000) and Gupta and Govindarajan (2000). Oliver and

**Table 1.** Summary of reliability analysis.

| Variable | Number of item | Cronbach's alpha |
|---|---|---|
| Trust | 5 | 0.520 |
| Communication | 3 | 0.617 |
| Leadership | 6 | 0.851 |
| Reward | 3 | 0.600 |
| Knowledge sharing | 4 | 0.609 |

Kandadi (2006) also opined that the indirect rewards such as appreciation and recognition play a greater role than the monetary incentives in knowledge sharing. Al-Alawi et al. (2007) also found that there is positive relationship between rewards and knowledge sharing in organizations.

However, some employees may be unwilling to share knowledge due to fear of losing job or being replaced by another employee. Therefore, managers or leaders must consider the importance of collaboration and sharing best practices when designing reward systems (Al-Alawi et al., 2007). The idea is to introduce a reward system that will encourage co-workers to openly share knowledge in order to achieve greater effectiveness. Therefore, it is hypothesized that:

$H_4$: There is a positive relationship between the reward system and knowledge sharing.

## METHODOLOGY

The research strategy adopted in this study was deductive in nature. By reviewing the relevant literature, the tentative theory was first derived. The hypotheses are then deduced and tested from the data collection through questionnaire survey. A structured survey questionnaire was administered to employees, mainly the CEO, top level managers, mid-level managers, and lower level managers who are the key decision-makers with regards to sharing of knowledge in the organizations. Questionnaires were distributed in seven service organizations in Bangladesh and in total one hundred and twenty nine were returned and used for data analysis. A five-point Likert scale was used for questionnaire design. Items of the questionnaire were adapted from Al- Alawi et al. (2007). Pilot studies were conducted to validate the measures prior to finalizing the questionnaire. Multiple regressions were used to test the relationship between independent and dependent variable as recommended by Sekaran (2007).

## RESULTS

Respondents were asked to provide demographic information. In the demographic section, 79.8% of the respondents were male, while 20.2% were female. In the age category, 1.6% respondents were below 25 while a large number of respondents (55.8%) were between 25 to 35 age categories; second large number (22.5%) was in the 36 to 45 age group. Only 7% respondents belonged to the 46 to 50 age group and the rest of the respondents (13.2%) were above 50. Education wise, 25.6% of the respondents were bachelor degree holders, 66.1% were masters' degree holders, and 3.1% were PhD's. Position wise, only 0.8% was top level managers, 15.5% mid level managers, 34.1% lower level managers, others were 49.6%.

In respect of number of years of experience, 20.2% had less than 2 years, 25.6% had between 2 to 4 years, 14.7% had between 5 to 7 years, 9.3% had between 8 to 10 years, and 30.2% had over 10 years' experience. 67.4% of the respondents' companies had less than 100 employees, 1.6 % each had 100-200, 300-400, and 401-500 respectively, and 4.7% had 201-300 whilst 23.3% had more than 500 employees. With respect to number of years of company operations, 77.5% companies have been operating for above 25 years, 17.1% for 11-15 years, only 1.6% each have been operating for 5-10 years and 16-20 years respectively, while the remaining 2.3% have been operating from 21 -25 years. As regards the firm's primary business, financial service constituted 62%, NGOs 19.4%, telecommunication 12.4% and others 6.2%. Considering the status of the companies, 'wholly local ownership" comprised 86.4%, "wholly foreign firms" only 0.8%, and "joint ventures" 12.4%.

Cronbach's alpha was chosen to analyze the degree of internal consistency among the items in a variable. Alpha coefficient ranges in value from 0 to 1. The higher the score, the more reliable the generated score is. According to George and Mallery (1999) there is no set interpretation in acceptable alpha values. A rule of thumb that applies in most studies is that acceptable alpha values are 0.50 to 0.90, but alpha values of less than 0.50 is not acceptable.

The internal reliabilities of all scales were between 0.520 and 0.851, exceeding the recommended value of 0.50, and therefore, accepted for further analysis. We have deleted one item from the trust items in order to improve the Cronbach's alpha score. Table 1 summarizes the results obtained from the reliability analysis.

### Hypotheses testing

The four main hypotheses formulated were tested using regression analysis. The analysis was generated using the Statistical Package of Social Sciences (SPSS). Table

2 displays the results of the relationship between the variables identified earlier. All these hypotheses examine the impact of cultural elements on knowledge sharing. Trust, communication, leadership, and reward were considered as independent variables and knowledge sharing as a dependent variable. Based on the regression analysis output shown in Table 2, the $R^2$ value of 0.373 implies that 37.3 percent of the variation in knowledge sharing can be explained by these four independent variables. The condition indexes, VIF, and tolerance were found to be within acceptable range, thus ruling out the potential problem of multicolinearity.

Similarly, the Durbin Watson of 2.053 showed that there is no autocorrelation problem in this regression model. Table 2 also reveals that Trust (Sig. = 0.047), Communication (Sig. = 0.005), and Leadership (Sig. = 0.000) were significant at 5 percent significance or 95 percent confidence level. In contrast, Reward System (Sig. = 0.811) was found to have no significant impact on knowledge sharing at 5 percent significance level.

In a summary, from the regression output, we can conclude that the hypotheses related to the cultural dimensions, $H_1$, $H_2$ and $H_3$ were accepted. Thus, we accept the following hypothesis:

$H_1$: There is a positive relationship between trust among co-workers and knowledge sharing.
$H_2$: There is a positive relationship between communications (interaction between staff and knowledge sharing.
$H_3$: There is a positive relationship between leadership and knowledge sharing.

## DISCUSSION

In this paper, we explored the relationship between trust among employees, Communications between staff, leadership, reward system and knowledge sharing. Our findings suggest that trust, communication, and leadership have a positive and significant relationship with knowledge sharing, and that reward system has a positive but insignificant influence on knowledge sharing.

### Trust and knowledge sharing

This research finding showed that trust has a positive and significant relationship with knowledge sharing. The finding supports the findings of Al-Alawi et al. (2007), that trust is positively related to knowledge sharing in organizations. Some other authors also found positive relationship between trust and knowledge sharing (Andrews and Delahay, 2000; Levin, 1999; Mayer et al., 1995; Tsai and Ghoshal, 1998; Connelly and Kelloway, 2002; Issa and Haddad, 2008; De Long and Fahey, 2000). Some other authors also claim that the amount of knowledge that flows freely both between the employees and from employees into the firm's main databases is highly influenced by the level of trust that exists between the firm, its different functions and its employees (De Long and Fahey, 2000). Trust can play an improved role if the right organizational culture is put in place.

Especially, today, there is not only competition among the firms worldwide, but also there is competition among the employees within a firm. Therefore, if the organizational culture is such that employees suspect that sharing information with co-workers would be harmful for their careers, they will not openly discuss and share knowledge with other co-workers (Davenport and Prusak, 2000). Thus, the most important asset that facilitates the sharing of knowledge is a trustful relationship that is directly affected by a proper organizational culture (Issa and Haddad, 2008). The result of our study indicates that knowledge sharing can be improved by trust among employees. The reason behind the finding related to trust may be service organizations studied in this paper are mainly telecommunication companies, banks and NGOs where senior management significantly influences teams to share project-related information freely amongst virtual team members through seminars, workshops, and information and communication technology. Thus, a proper organizational culture where people can trust each other in sharing knowledge, would automatically lead to enhancement of knowledge sharing (Bakker et al., 2006).

### Communications (interaction between staff) and knowledge sharing

The result related to communications demonstrated that communication (interaction between staff) has a positive and significant relationship with knowledge sharing. Al-Alawi et al. (2007) also found a positive relationship between communication and knowledge sharing. Previous studies also found that communication between co-workers is an important aspect in encouraging knowledge sharing (Smith and Rupp, 2002; Davenport and Prusak, 1997). In today's globalized world, due to technological advancement, information moves from one corner of the world to another within a few seconds. Therefore, if organizations, especially the service organizations where there is great deal of customer involvement with the organizations, cannot acquire and share timely knowledge about customers, competitors and markets between different departments, then it would be impossible for them to survive in the market. As a result, service organizations must create a floor for open discussion and debate which would motivate individuals at various levels to freely give their opinions and views on different issues (Davenport and Prusak, 1997). Formal organizational

**Table 2.** Regression summary

| Variable | Beta | Sig. | Tolerance | VIF |
|---|---|---|---|---|
| Trust | 0.164 | 0.047 | 0.758 | 1.319 |
| Communication | 0.231 | 0.005 | 0.782 | 1.279 |
| Leadership | 0.387 | 0.000 | 0.671 | 1.490 |
| Reward | 0.019 | 0.811 | 0.797 | 1.254 |
| Knowledge sharing | | | | |

$R^2$ = 0.373; Durbin Watson = 2.053; F value = 18.457*p< 0.05.

structures that constrain reporting solely within divisional channels limit each division's access to knowledge obtained by other divisions of the corporation (Syed-Ikhsan and Rowland, 2004). "Such 'vertical structures raise barriers to knowledge transfers between different divisions because each division is operated largely as if an independent firm" (Lord and Ranft, 2000). In addition, the 'top-down' communication functions take too much time to filter down knowledge through every level of the organization (Syed-Ikhsan and Rowland, 2004). Contrary to this, if an organization supports communications network that operate freely, where knowledge providers and knowledge seekers can access information and knowledge through the shortest path, it will definitely enhance knowledge creation and knowledge sharing in the organization (Syed-Ikhsan and Rowland, 2004).

## Leadership and knowledge sharing

Leadership was found to have a positive and significant relationship with knowledge sharing in this study. The role of leadership in improving knowledge sharing culture in organizations was also supported by other studies (Oliver and Kandadi, 2006; Kreiner, 2002; Kerr and Clegg, 2007; Kluge et al., 2001; Marsh and Satyadas, 2003; Welch and Welch, 2005; Nonaka, 1987). Kreiner (2002) found that leaders can influence employees to create the necessary knowledge locally. Kerr and Clegg (2007) also showed in their study that leadership is important to facilitate knowledge sharing within and across boundaries. They opined that leaders act as role models for the manner in which knowledge sharing occurs. They found that the leaders help to create network of knowledge members and provide best practice of coordination and collaboration activities. In our study, the positive outcome between leadership and knowledge sharing could be due to the actuality of continuous commitment shown by senior management over the last decade to ensure seamless information systems are in place, necessary and timely information is shared among teams, and communication channels are accessible and as short as possible across teams through the advancement of information technology (Islam et al., 2009). We observed from the findings that the top management in service organizations significantly influences the employees to share needed and relevant information among team members with the help of various participative activities and information and communication technology. Actually, leadership at all managerial level is required to develop a desired culture in order to enhance knowledge sharing in organizations (Kluge et al., 2001, Marsh and Satyadas, 2003; Welch and Welch, 2005). Positive initiative should be taken by the top management to give proper work environment through ensuring that the necessary support and proper organizational structure are in place to facilitate knowledge sharing among different functional groups.

## Reward system and knowledge sharing

Contrary to expectations, this study did not find reward system to be significantly associated with knowledge sharing, but previous researches which were based on developed and developing countries (Al-Alawi et al., 2007; Oliver and Kandadi, 2006; Syed–Ikhsan and Rowland, 2004; Davenport and Prusak, 2000; Gupta and Govindarajan, 2000; Cornelia and Kugel, 2004; Ling et al., 2009), argue that reward system is important for knowledge sharing. It may be because in Bangladeshi service organizations, despite the practice of reward system, the majority of the employees may not be motivated to share knowledge due to fear of losing their importance in the organization or fear of being replaced by another colleague. The reason could also be that in our culture, employees do not trust their colleagues, especially when it comes to sharing confidential information due to fear of being hurt by the vindictive action of their colleagues. Employees may fear that others may misuse knowledge or take unjust credit for it (Kerr and Clegg, 2007). Nevertheless, one cannot disregard that organizations need to carefully design a reward system that will inspire co-workers to share knowledge (Oliver and Kandadi, 2006) in order to achieve success. Al-Alawi et al. (2007) mentioned that in order for reward to be successful in motivating employees to share knowledge, these rewards must be properly designed to fit employees' needs and perceptions. They said ineffective or insufficient rewards can fail to reinforce knowledge sharing behavior.

## IMPLICATION OF THE RESEARCH

The findings of this study have practical implications for the scholars of other developed countries because this research underscores the importance of cultural elements in improving knowledge sharing in Bangladeshi service organizations. They may utilize the same model to examine if it also works in their service organizations. From the applications point of view, this research enables the managers of service organizations to identify the elements that need special attention in order to improve knowledge sharing. The knowledge of the dynamic relationship between cultural elements and knowledge sharing would help to reform the managerial approach that is used to enhance the extent of knowledge sharing. Thus, data generated from this study could be particularly useful to the managers of service organizations in formulating and reviewing knowledge sharing strategies in Bangladesh.

## LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

Despite these strengths, our study also has limitations. The findings of this study may be limited to the service industry in Bangladeshi. This study was conducted in Bangladesh service organizations only. Thus, the findings of this study might not be generalized to other cultures and countries. Future researchers can take steps to test the research framework on different industries and in different countries. One major limitation of this study is the small sample size. This was due to the very newness of this concept to the service organizations operating in Bangladesh. Follow-up work with large sample size is needed to judge if the results are applicable to corporations in other developing countries.

## Conclusion

In this era of rapid technological advancement, the sharing of knowledge is very important for service organizations in order to meet customers' rapidly changing demands. If there is lack of sharing of knowledge amongst the employees and between different departments of service organizations, then it would be difficult for organizations to survive in today's competitive global environment. Service industries should take a more proactive approach to achieve a higher extent of knowledge sharing than other organizations because the order to achieve more favorable outcome of knowledge service organizations constantly interact with customers who have different requirements and expectations. In sharing, organizations should provide greater emphasis on cultural elements. This study concludes that cultural elements, namely trust, communication between staff, and leadership are vital for knowledge sharing in Bangladeshi service organizations. It also cautions against the assumption that reward system enhances knowledge sharing because this paper revealed that reward system does not play a significant role in improving knowledge sharing in Bangladeshi service organizations.

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