ARTICLES

The Relationship Between Collaborative Climate and the Use of Communication Channels in Kuwaiti Companies

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Abstract

Collaborative climate has been recognized as one of the major factors influencing effectiveness of knowledge work. Communication channels, on the other hand, play a vital role in the knowledge sharing process. The relationship between collaborative climate and the use of communication channels has not been systematically investigated; therefore, this study examines whether there exists a statistically significant relationship between the collaborative climates and the communication channels used by employees in different companies. Nine hundred and forty employees in nine Kuwaiti companies were identified to participate in this study. A research instrument, consisting of two sections of collaborative climate and communication channels, was pilot-tested and used. Total number of responses received was 526(55.9 %). The participants indicated their perceptions about the existence of a collaborative climate on a 5-point Likert scale. In addition, they specified the effectiveness of ten communication channels for sharing information/knowledge.

Data were analyzed using correlation statistics. It has been found that significant relationship existed between rich communication channels such as face to face interactions - both individual and group - with the collaborative climate of these companies. In addition, it was found that the use of formal channels of communication had significantly stronger relationship with collaborative climate as compared to the use of informal channels of communication. These findings indicate that though collaborative climate exists in these companies, business ties have a stronger influence than social ties in most companies. These findings are explained in the light of socio-

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cultural factors, such as the dominance of formal ties as opposed to informal ties in the Kuwaiti working environment.

Introduction:

Organizations nowadays are under great pressure to achieve higher levels of quality and productivity in an intensely competitive market. A major economic shift is taking place that appears to be unrelenting and complex, involving a multiplicity of factors.

Duffy, J. (1999) identifies some of these pressures emanating from external forces such as globalization, the need for constant renewal, the accelerated speed of change, intense competition, and customer relationships. Internal forces such as a shortage of resources, increased demands on existing employees, and changes in technology bear additional strains on the demand and availability of information and knowledge, having an impact on all organizations, whether large or small.

As companies move forward, they must negotiate difficult paths between serving existing markets, and developing new initiatives to meet the challenges of new competitors and opportunities. The key to the negotiation between these opposing forces successfully is knowledge, specifically the knowledge assets each firm holds within (Housel, T. & Bell, A.(2001)).

Hayek, F. (1996) was among the first economists to recognize the importance of a well-functioning economy of knowledge and its distribution. He argued that most economists had misunderstood the nature of the economic problem. In his diagnostic stance, ''the economic problem of society is not merely a problem of how to allocate given resources... it is a problem of the utilization of knowledge which is not given to anyone in its totality.''

Organizations are becoming increasingly aware of knowledge as the source for competitive advantage. Conceptualizing organizations as social communities in which knowledge is structured, coordinated, and shared is central to understanding knowledge sharing and collaboration in organizations. Kogut, B. & Zander, U. (1992) state that a ''firm should be understood as a social community specializing

in the speed and efficiency in the creation and transfer of knowledge.'' This is an important and relatively new view on the theory of the firm.

Framework

Importance of knowledge sharing in organizations

The organizations' ability to share knowledge from one unit to another has been found to contribute to the organizational performance in so many different settings within manufacturing and the service sector (Sveiby and Simons, 2002).

> Knowledge sharing prevents the ''reinvention of the wheel'' (i.e., the redundancy in knowledge production leading to costly duplications), ensures the speed of best practices and makes available private knowledge in the problem-solving or decision-making process).

Duffy, J. (1999). Both practitioners and researchers have discussed the importance of knowledge sharing within an organization (Kogut, B. & Zander, U. (1992); Zander, U. & Kogut, B. (1995)).Knowledge sharing leads to a synergistic cost advantage, providing a shared resource at a lower cost than if different parts of the organization had separately produced or created the same product (Porter, E. (1987)). Moreover, knowledge sharing allows employees to obtain complete knowledge and information and to be able to make better informed decisions (Gynawali, R.; Stewert, H.; & Grant, H. (1997)).

Many organizations are now addressing the issue of knowledge sharing as they gain a growing awareness of its benefits in creating value. Its substantial impact is evident from Chevron's $200 million reduction in annual energy expenses; the sales turnaround at Nippon Roche; Buckman Laboratory's gain in sales due to new products; and Xerox's $11 million a year gain from sharing knowledge through Eureka (O'Dell, C. & Grayson, J. (1998)). Figures like these do not really capture the true value of sharing knowledge. General Electric's

CEO Jack Welch asserted that GE's global status was primarily due to its ability to share and leverage expertise (Stewart, T. (2001)).

Now, there is an increasing realization that knowledge sharing cannot be forced. People would only share knowledge if there was personal reason for them to do so, implying that organizational conditions need to be created and adjusted in such a way that people would like to share. Organizations need to adopt appropriate strategies towards knowledge sharing. Such interventions must be well-intended, rationalized, and befittingly operationalized. That requires a clear understanding of the factors that underlie effective knowledge sharing processes. One of the major factors that has been mentioned in the literature is a collaborative culture where employees share their knowledge to achieve organizational goals.

Organizational Culture:

Organizational culture is believed to be a significant contributing factor to effective knowledge management and knowledge sharing. This culture determines values, beliefs, and work systems that could encourage or impede knowledge sharing and creation (Alavi & Leidner, 2001). Research on knowledge management initiatives has shown that knowledge and culture are linked in organizations (Brown, J., & Duguid, P. (1991)). Firstly, Long, D. & Fahey, L. (2000) explain why a culture influences the creation, sharing and use of knowledge. They believe that culture shapes perceptions and behaviors. The authors state that cultures - and particularly subcultures - heavily influence what is perceived as useful, important or valid knowledge in an organization. Different perceptions of what knowledge is important may eventually lead to conflict among individuals and units. Secondly, they explain how culture dictates what knowledge belongs to the organization and what knowledge remains in control of the individuals or sub-units. They explain this point by giving an example of a senior manager asking his employee to "show me something I've never seen before" instead of "show me where you've worked together with another business unit." Thirdly, they assert that culture creates a context for social interaction that ultimately determines how effective

an organization can be in creating, sharing and applying knowledge. Lastly, they mention how culture shapes the process by which new organizational knowledge together with its accompanying uncertainties is created, legitimated and shared.

Buckman Labs, an International corporation producing over 500 different products and employing over 1,300 people in over 70 countries is a leading manufacturer of specialty chemicals for aqueous industrial systems. The company was founded on its unique ability to create and manufacture innovative solutions to control the growth of microorganisms.

Buckman Labs has gained prominence for its knowledge sharing culture. For the fifth straight year, it has been recognized as one of the worlds most admired knowledge enterprises (MAKE (2004)).

Difference between Culture and Climate:

Reading and assessing corporate culture is never easy because it occurs at multiple levels. Schein (1995) defined culture as the shared values, beliefs, and practices of the people in the organization. The most obvious place to begin understanding an organization's culture is to read the espoused mission, philosophy, and values. Such statements usually say something about the culture, even if there is more aspiration than reality.

The concept of culture is contested and too broad to be a good foundation for an empirical study (Sveiby&Simons,2002). We are interested only in one specific aspect of a culture; the values, beliefs and assumptions that influence the behaviours and the willingness to share knowledge. This aspect is called the collaborative climate and is defined by behaviours that people can observe ''what people do around here''.

Climate studies mainly reveal shared features of upper, more visible layers of culture and are best studied through the use of surveys (Denison,1996). In contrast, the depths of complexities of organizational culture with a single organization or among a limited number of cases are better explored by inductive and interpretative studies

(O'Reilly et al., 1991). These qualitative studies help to decipher the unique cultural characteristics of assumptions of an organization.

Communication Channels:

One of the vital constructs for knowledge sharing in organization is related to the channels of communication the employees use within an organization. Employees use diverse ways and means for sharing their knowledge with each other. These include the channels of email, discussion board, mail, telephone, teleconference, face-to-face encounter, and so many other ways. Previous research in this area suggests how different ways of interaction play an important role in determining the degree to which employees develop a common stock of knowledge. Berger and Luckmann (1966) assert that most of our perceptions of others develop in our face-to-face situations, where people can read body language. This can be termed as the richest channel of communication.

March (1998) observed that the selection of a particular communication channel could be self-reinforcing, which may lead to its repetitive use, disregarding the fact that the knowledge provided might not be optimal. In researching what influences managers in choosing their communication medium, Trevino et al. (1987) identified the following factors that could influence managers in choosing their communication medium: (1) ambiguity of the message content and richness of the communication medium, (2) symbolic cues that the medium provides, and (3) situational determinates such as time and distance. They noted that ambiguity was a key to understanding the amount and kind of interaction that was required and which communication medium could be appropriate for delivering the message.

Richness of Channels:

Daft, Lengel and Trevino (1987) concluded that communication media differ in their ability to facilitate understanding. These might be high or low in terms of richness, based on the media's capacity to facilitate shared meaning. They place communication media on a five-step continuum of richness which is as follows: (1) face-to-face, (2)

telephone, (3) written personal, (4) written formal, and (5) numeric formal. In their view, richness has hierarchical dimension where face-to-face interaction has the highest richness and numeric formal has the least. Daft and Lengel (1986) noted that while numbers conveyed greater precision of meaning than did natural language, natural language could be used to convey understanding of a broader set of concepts and ideas. Natural language and face-to-face media were reported to be more powerful as channels of communication.

In strategic management and inter-organizational cooperation, media richness is seen to be a determinant of the extent to which knowledge is successfully transferred (Daft and Huber, 1987). It has been stressed that face-to-face interaction is the richest medium because of its capacity for immediate feedback and the availability of multiple cues. It is asserted that tacit knowledge can only be shared in face-to-face interactions, while explicit knowledge can be shared through less information rich communication channels. Daft and Huber (1987) argue that people will be reluctant to share their knowledge unless a relationship has been established through information rich channels.

Formal/Informal channels of communication:

Communities exist in the workplace, just as they do outside the commercial arena: in families, villages, schools or clubs, etc. Businesses rest on patterns of social interaction that sustain them over time. These patterns are built on shared interests and mutual obligations and thrive on cooperation and friendship.

Organizations are composed of ties of a myriad nature. Ties can differ according to whether they are based on friendship, work, and advice; whether what flow through them are resources, information, knowledge or affection; or whether they are face to face or electronic, etc. The substance and type of ties in a network can have important implications for action (Nohria, N. (2000)).

Relationships in organizations are essential for getting things done. Formal relationships are typically documented with job descriptions and organizational charts. Every organization also has its

informal networks - people who know each other and help each other regardless of rank, function, job title, etc. (Greenburgh, J. (1983)). Ibarra, H. (2000) differentiates between prescribed networks and emergent networks in organizations. He defined prescribed networks as those who are composed of a set of formally specified relationships between superiors and subordinates and among functionally differentiated groups that must interact to accomplish an organizationally defined task. Emergent networks, on the other hand, involve informal, discretionary patterns of interaction where the content of the relationship maybe work related, social, or a combination of both. The emergent network, Nohria, N. (2000) explains, "develops out of the purposive action of social actors who seek to realize their self-interest, and depending on their abilities and interest, will negotiate routinized patterns of relationships that enhance their interests."

The literature suggests that people distinguish between friendship and acquaintance relationships and that different rule govern peoples interactions in the two types of relationships (Clark, S., & Mills, R. (1993)). The primary difference between the two types of relations is the amount and type of communication each generates. Research has also shown that individuals share more information with friends than with non-friends (Zaccaro, J. & Lowe, A. (1988)).

This study draws upon the previous concepts in identifying two types of communication in a working environment: (1) Formal communication; and (2) Informal communication.

Research Problem

Organizations known to have a collaborative climate that supports knowledge sharing enjoy a synergistic cost advantage, providing a shared resource at a lower cost to different parts of the organization. Moreover, a collaborative climate that enhances knowledge sharing allows employees to make better informed decisions. Understanding the relationship between collaborative climate and the communication channels will help top management in getting the right knowledge to the right people at the right time by providing

appropriate channels of communication either face to face or electronically for knowledge sharing to take place.

Organizations need to adopt appropriate strategies towards collaboration and knowledge sharing between their units and employees to gain a competitive edge. Such interventions must be well-intended, rationalized, and befittingly operationalized. That requires a clear understanding of the factors that underlie effective knowledge sharing processes. An understanding of these factors needs to be empirically tested. Two significant factors were identified:

(1) The climate of the organization and (2) Communication channels.

The relationship between these two factors has not been studied, to the best of my knowledge.

Findings of this study are expected to provide insights that might contribute to the enhancement of creating and fostering a better collaborative climate in organizations, which in return will help them in gaining a competitive edge in a much changeable market.

Research Questions

The following research questions were formulated for this study:

1 - Does a statistically significant relationship exist between the overall collaborative climate and use of communication channels in these organizations?

2 - Does a statistically significant relationship exist between the overall collaborative climate and the use of formal/informal communication channels in these organizations?

Procedures

Employees of nine Kuwaiti companies participated in this survey. Following procedures were used for the conduct of the survey:

Identification of Companies:

To be included in the present study, participating companies were required to satisfy the following criteria: (1) 250-1000 employees; (2) capital worth or volume of a minimum of one million Kuwaiti dinar (equivalent to US$ 3.3 million), and (3) willingness to participate.

Twenty companies were approached through personal, telephonic, and written contacts. Nine companies that consented within a specified timeframe were included in the study.

Initial data about organizational structure and use of communication channels were gathered through visits and telephonic contacts. In the process of seeking consent for participation, the approval of the chief executive had to be secured in all cases.

Identification of Participants:

Some baseline criteria were used for identification of participants. The participants were supposed to have a minimum of 2 year post-secondary school education, should be proficient in English language, and may not be engaged in blue-collar jobs such as messengers, drivers, etc. These criteria were applied as English was second language for most of the participants and the survey instrument was in English. Procedures for the identification of participants varied from company to company. Executives from three companies identified employees for participation. In three other companies, human resource/personnel departments distributed survey instruments, collected responses, and handed them back to the research staff. Research staff had direct access in three other companies and distributed instruments and collected them back. In 4 of the 9 companies, employees from certain departments were identified to participate in the study through mutual consultation. Since it is a multi-site study, convenience sampling is considered to be appropriate. A target was set that a minimum of 50 participants would be identified for each company.

Research Instrument:

Since data for this study had to be collected from more than five hundred participants, located in nine companies, a survey instrument was considered to be appropriate. The questionnaire consisted of two parts. The first part covered the perceptions of employees about the sharing climate in their organizations. Using a five-point-Likert scale-(5 = strongly agree, 1 = strongly disagree) employees were requested to indicate to what extent did they agree or disagree with each statement.

The statements in the first part of the sharing climate were designed around the factors influencing knowledge sharing. The following four clusters of statements were used:

1 - Describing the respondent's own attitude towards knowledge sharing;
2 - Describing the knowledge sharing behaviour of the individual's nearest colleagues;
3 - Describing the knowledge sharing behaviour of the immediate supervisor; and
4 - Describing the knowledge sharing work environment in the organization as a whole.

The second part of the questionnaire covered ten communication channels that were identified for this study. Listed below are the ten items that were included in the final analysis:

- Informal one-to-one communication (face-to-face)
- Formal one-to-one communication (face-to-face)
- Informal meetings with groups of employees
- Formal meetings with groups of employees
- Telephone conversation
- E-mail
- Chatting with other employees over internet
- Communicating through discussion groups over internet
- Official correspondence such as letters, office orders
- Personal notes to employees on scrap paper

These media cover face-to-face interactions, telephone, e-mail, chatting, discussion groups, and text communications. None of the nine companies that consented to participate in the study used videoconferencing, electronic meetings, and other Internet-based conferencing. Consequently, the medium of video was excluded from the list of communication channels.

In this part of the questionnaire, participants were asked to indicate their perception about the effectiveness of each medium for sharing information/ideas/knowledge with other employees in the company on a

scale of 1 to 5, where 1 meant least effective and 5 meant extremely effective. The participants were informed that the perception of effectiveness was based on their actual choice and use of these channels. It is assumed that these perceptions of effectiveness reflected their judgment about choice and use of these channels. In this study, the terms channel and medium are used interchangeably. The participants were advised not to mark those channels to which they had no exposure or they did not use. Last part of the instrument sought information about the nature of their work, educational qualifications, length of employment in the company, age, and gender. The instrument was pre-tested on employees of a Kuwaiti company, whose data were not included in the study but whose credentials matched the actual participants. Also, the instrument was distributed among four faculty members and four graduate students of a local university, Kuwait University. The feedback was helpful in removing jargon, making adjustments in the list of ten channels, and an improvement in the style and format of the instrument.

Data Collection:

Each questionnaire included a covering letter that outlined the purpose of the study, the steps that would be taken to ensure participant confidentiality, and an approximate amount of time for answering the questionnaire. Initially, participants were given one week to complete the questionnaire. No reminder was required in three companies; one reminder was used in four companies, and a member of the researcher team visited and gave reminders in two companies. Table 1 provides breakdown of surveys administered, responses received, and their respective percentages. Altogether, 940 instruments were distributed and the final count of responses was 526, with a response rate of 55.9%. In two companies a response rate of 100% was achieved, indicating that the instrument was given to only those who had consented to participate in the study. In one company the response rate was found to be 30.4%.

Table 1
Response Rate

Companies	Administered	Responses	Percentage
Company 1	80	68	85
Company 2	75	61	81.3
Company 3	100	53	53
Company 4	140	68	48.6
Company 5	130	51	39.2
Company 6	61	61	100
Company 7	50	50	100
Company 8	250	76	30.4
Company 9	54	38	70.3
Total	940	526	55.9

It was found that seventeen instruments were not useable for analysis due to incomplete data. Thus, the final analyses included data from 509 completed questionnaires.

Analysis & Results

Overall sharing climate and the use of communication channels:

The first question was whether there existed a statistically significant relationship between the overall collaborative climate and the use of ten communication channels in organizations.

Employing SPSS, a Pearson correlation was used between the overall sharing climate (first part of the questionnaire) and each communication channel separately (second part of the questionnaire). The score for the overall sharing climate was obtained through aggregating the respondent scores for the four clusters that were identified in the preceding section. Table 2 displays the results of the Pearson correlation between the overall climate in all nine companies and ten communication channels. Correlation score and the respective

level of significance are also given in Table 2. At the criterion of.05, it was found that the overall sharing climate was:

- significantly related to formal one-to-one communication conducted officially
- significantly related to informal meetings with groups of employees
- significantly related to formal meetings with groups of employees
- significantly related to e-mailing
- insignificantly related to the remaining six communication channels

Table 2
Pearson Correlation between Overall climate and each communication channel

Communication Channels	Overall Sharing Climate	
Informal one-to-one communication conducted officially	.075	(.09)
Formal one-to-one communication conducted officially	.187	(.000)**
Informal meetings with groups of employees	.103	(.020)**
Formal meetings with groups of employees	.202	(.000)**
Telephone conversation	.069	(.119)
Emailing	.132	(.015)**
Chatting with individuals over internet	.058	(.193)
Communicating through discussion groups over internet	.078	(.077)
Official correspondence such as letters, office orders	.071	(.112)
Personal Notes to employees on scrap paper	.064	(.146)
N = 509		

Discussion on these findings and their implications will be included in the next section.

Overall sharing climate and the use of formal or informal channels of communication:

The second research question was whether there existed a statistically significant relationship between the overall collaborative

climate and the use of formal/informal communication channels in the nine organizations. Six of the ten channels could be grouped in clear categories of formal and informal. The remaining four channels had a mixed orientation and could not be used

Formal one-to-one communication

Formal meetings with groups of employees

Official correspondence such as letters, office orders

The second group consisted of the following informal communication channels:

Informal one-to-one communication

Informal meetings with groups of employees

Personal notes to employees on scrap paper

Following channels were not included in either of the two categories.

Telephone conversation

Emailing

Chatting with other employees over internet

Communicating through discussion groups over internet

The average mean scores of each group, formal and informal, were calculated and then a Pearson correlation measure was used to determine the relationship between the categories of formal and informal channels and the overall sharing climate. Table 3 displays the results of the Pearson correlation between the overall climate in all nine companies and the formal and informal communication channel.

Table 3
Pearson Correlation between Overall climate and Formal / Informal communication channels

Communication Channels	Overall Sharing Climate
Formal Pearson Correlation	.195**
Sig. (2-tailed)	.000
N	509
Informal Pearson Correlation	.058
Sig. (2-tailed)	.191
N	509

It was found that at the criterion of.05, formal channels of communication were significantly related to the overall sharing climate. No such association could be determined for the informal channels. The score for formal channels was found to be.195, significant at.000, whereas it was.058 for informal channels, significant at.191.

Discussion

This study has examined the relationship between collaborative climate and the use of communication channels in nine Kuwaiti organizations. Two specific characteristics were investigated in relation to the overall sharing climate; the richness and the formality levels of those channels.

It has been found that significant relationship existed between rich communication channels - both individual and group - with the collaborative climate of these companies. In addition, it was found that the use of formal channels of communication had significantly stronger relationship with the existence of a collaborative climate as compared to the use of informal channels of communication. Earlier research had indicated that face- to -face communication is considered to be the richest medium of communication.

This study went a step further in providing a new insight into the relationship between the existence of a collaborative climate and the use of rich communication channels. Employees who perceive the existence of a sharing environment in their organizations also believe that rich channels are more effective than leaner ones. Maybe the reason behind that the fact that large parts of human knowledge, such as skills, techniques and know-how cannot be easily articulated or communicated in codified forms like documents and memos. Knowledge of this kind is experience based, and it can be revealed only through practice in a particular context and transmitted through rich channels like face- to- face because it may be too difficult to explain, too changeable, too contextually specific or too politically sensitive. Most information systems have failed to capture the tacit knowledge

that companies were striving to collect even though such expertise is so crucial for innovation.

Another interesting finding was the significant relationship between collaborative climate and formal communication channels as opposed to informal channels. This finding points to the significant dominance of working relationships over social relationships in Kuwaiti companies though the environment is collaborative and enhances knowledge sharing. This could be explained by the dominance of bureaucratic organizational structures with centralized management style. Several interviews that were conducted after the analysis of the quantitative data, with a couple of employees in these nine companies, pointed to this fact. From an information processing perspective, centralization is likely to have a positive effect on intra-firm knowledge sharing because "centralization provides coordination and integration across the interdependency" (Egelhoff, 1988). The existing literature on organizational coordination (Martinez, J. & Jarillo, J. (1989), Ghoshal, S., Korine, H., & Szulanski, G. (1994)) suggests two generic types of coordination: (1) formal hierarchical structure, and (2) informal lateral relations. Organizational coordination refers to integrating or linking together different parts of the organization (Van de Ven, H. (1976)). Given that diverse knowledge is embedded in different units, the way the firm coordinates different units greatly affects the pattern of intra-organizational knowledge sharing (Grant, R. (1996)).

Nevertheless, much current research has focused on informal relations and decentralization as a mechanism for sharing knowledge (Reagans, R. & McEvily, B. (2003); Hansen, M. (2002)). The reason for this is largely because innovation and the creation of new knowledge are now receiving more attention in organizations because of the rising pressures of increased competition. Using formal hierarchy as the coordinating mechanism leads to the sharing of unstructured knowledge for the sake of near-term gains as opposed to long-term gains. Unstructured types of knowledge sharing, which are naturally stimulated without systematic mechanisms or overt intervention from the organization, are often representative of actual day-

to-day practices and are part of the work flow between individuals in different units. By contrast the structured forms are more likely to lead to collective knowledge and organizational learning. Creating informal social opportunities and functions helps employees to build trust and develop caring relationships which in return stimulates the flow of tacit knowledge in the organization horizontally as opposed to vertically. In firms with hierarchical control, noises from below (i.e., from those who are on the front line and have the most insight and experience) are often not heard "up there." Such local insights are too valuable for a firm's competitive advantage to go unheard or be "lost."

Conclusion

Contrary to results of current research in the western world, results of this study showed the dominance of formal business ties in companies that foster a collaborative climate. Social informal ties were found to be more effective in the sharing of knowledge between employees in western organizations. This difference can be further investigated by comparing the overall culture and how it affects the organizational norms and values within organizations in different countries. In addition, these results draw our attention to the fact that generalizing and applying the results of studies – conducted in the west without taking into consideration the different context into which organizations operate in eastern countries – can lead to unsuccessful implementations of strategies which in return would lead to the waste of time and money.

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