A Supportive Knowledge Sharing Climate
To Enable IT/Business Strategic Alignment
(An Empirical Study on the Telecommunications Sector in Jordan)

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ABSTRACT

The purpose of this study is to investigate the relationship between the organizational knowledge sharing climate and the enablement of IT/Business strategic alignment. A suggested model was developed by combining Mckinzey seven Ss model with Luftman and his colleagues model of six main IT/Business strategic alignment enablers. So, the hypothesized model was estimated with two latent variables; supportive knowledge sharing climate (SKSC), IT/Business strategic alignment enablement (ITBAE), and six paths represent the relationship between the independent variable and the sub dimensions of the dependent variable.

To provide an objective view of the current situation within the researched companies, an organization-wide assessment approach was adopted in this study. For that purpose, a structured quantitative survey using a questionnaire tool was developed and delivered to companies' members from all managerial levels within mobile and fixed telecommunications organizations in Jordan. Based on the perceptions of respondents from the researched organizations, the seven Ss of knowledge sharing climate were explored throughout the study and the relationship between knowledge sharing climate and IT/Business strategic alignment enablement was investigated.

The results of the study proved the suggested research model as they confirmed the main and the sub hypotheses of the study. The analysis results confirmed the main hypothesis and indicated that there is a direct positive (beta = 0. 86), significant (t-value= 10.76, p<0.05) relationship between supportive knowledge sharing climate and IT/Business strategic alignment enablement. The results also prove that there are indirect positive significant relationships between supportive knowledge sharing climate on the one side and each of the IT/Business strategic alignment enablers on the other side. These results confirmed the sub-hypotheses.

Based on the results of this study implications for theory, practice and future research in knowledge sharing climate and IT/Business strategic alignment enablement were recommended.

Keywords: Knowledge sharing climate, IT/Business strategic alignment enablement.

INTRODUCTION

By entering the knowledge economy, organizations became information-based and knowledge specialists (Drucker,1988). So, knowledge has emerged as the key resource in the post-industrial society (Pillania, 2008) and became the deceive factor within the cotemporary organizations (Drucker, 1997). Some remarked that

almost everyone agrees that knowledge management is about the support of knowledge sharing (Huysman and De Wit, 2000). Other practical evidences declared clearly that; companies that are more effective at knowledge transfer have been shown to have a greater likelihood of organizational survival and higher levels of productivity (Burgess, 2005; Darr et al., 1995; Dyer and Nobeoka, 2000; Galbraith, 1990). These calls warned companies from wasting their efforts rediscovering knowledge, learning the same lessons or reinventing solutions that already exist (Mohrman and Finegold, 2000). Some companies built their strategies on "never

solve the same problem twice" principle (McEntyre and Associates, 2002; Hariharan, 2002). According to Brink (2003), knowledge sharing goes beyond simple information sharing and extends to stimulate the exchange of experiences, ideas, and thoughts between people (Brink, 2003) which requires creating a supportive climate of knowledge sharing.

On the other hand, IT/Business strategic alignment acquires the first rank over the other organizational issues in the current dynamic business and continuous evolving technologies environment (Adenfelt; Lagerstro, 2006; Weiss and Thorogood 2006; Voelpel et al., 2005; Luftman, 2004). So, among the most important tasks that leaders should enable in contemporary organizations is IT/Business strategic alignment. Thus, strategic management field is currently developing new mechanisms and means for guiding corporations in their efforts to ride the waves of the so-called global knowledge economy (Adenfelt and Lagerstrom, 2006). The basic focus of strategic management today is how to ensure that the different parts of the organization are pulling together in the same strategic direction (Luftman, Papp, and Brier 2002, Luftman, 2004). In order to fulfill this crucial task, many serious efforts are required. Among the key contributions within this field was the one presented by Luftman and his colleagues (2002). Based on the results of a conducted scientific study, they ranked six main enablers due to their importance to IT/Business strategic alignment as follows: senior executive support for IT, IT involvement in strategy development, IT understanding of the business, Business/IT partnership, well-prioritized IT projects, and IT demonstrated leadership.

Davenport and Prusak (1998) stressed that "the transmission and absorption - of knowledge- have no value unless they lead to a development of some idea that leads to a new behavior". Alavi and Leidner (1999) did not only observe that knowledge can have a limited organizational value if it is not shared, but they also stressed that "the ability to integrate and apply specialized knowledge of organizational members is fundamental to a firm's ability to create and sustain a

competitive advantage". Others assure that both large and small companies, require continuous sharing and implementation of knowledge in order to maximize their competitiveness and survival chances in the modern information society (Nunes et al., 2006; Perez-Araos et al., 2006). Therefore, the researcher assumes that the supportive climate of knowledge sharing may enhance the enablement of IT/Business strategic alignment.

RESEARCH PROBLEM

Strategic alignment has emerged as one of the most important issues facing business and IT executives all over the world (Weiss and Thorogood, 2006; Broadbent and Kitzis, 2005; Senn, 2004). The results of a conducted study declared that although a striking acknowledgment by 96% of IT executives regarding the importance of alignment efforts to achieve it have been largely unproductive (Senn, 2004). Leganza (2003) stated that, lack of alignment is typically blamed on IT, while in fact IT management might not be responsible for falling short of alignment because there are conditions out of IT's control which make alignment process a difficult one. This leads to call for adopting a systemic view in order to enable the true alignment and to eliminate the negative impacts on performance.

On the other hand, although knowledge sharing relationships can yield amazing results, yet, extensive knowledge sharing within organizations still appears to be the exception rather than the rule (Bock et al., 2005). This leads employees in different parts of the organization to spend their time rediscovering knowledge, learning the same lessons or reinventing solutions that already exist (Mohrman and Finegold, 2000). Claiming that would be a particular condition which would stimulate knowledge sharing process as an oversimplifying reality where knowledge sharing is a complex process, influenced by numerous factors. In addition, sharing knowledge is embedded not only in the way of thinking but also in the way of working. Therefore, the researcher argues that the various organizational components should be nurtured to produce a supportive knowledge sharing climate. Such a climate is expected to provide an appropriate vehicle for

enabling IT/Business strategic alignment process. The relationship between such a climate and IT/Business strategic alignment enablement forms actually the backbone of this research. So, this study aims specifically at answering the following main research question:

What is the relationship between a supportive knowledge sharing climate and IT/business strategic alignment enablement in mobile and fixed telecommunications companies in Jordan?

SIGNIFICANCE OF THE STUDY

The importance of this study stems from the continuous need to share knowledge and to align efforts. Besides, adopting a systemic view in studying knowledge sharing climate and its relationship to IT/Business strategic alignment is expected to provide many contributions that raise the significance of this study. This becomes clearer when recognizing that organizations are among the most complex systems imaginable: they are vast, fragmented, and multidimensional (Daft and Weick, 1984).

Based on the analysis of many strategic alignment models - such as Henderson and Venkatraman (1993); Broadbent and Kitzis (2005); Weiss and Thorogood (2006) - the researcher found that although these models denoted to many essential components, the crucial role of supportive knowledge sharing climate in enhancing strategic alignment enablers was not investigated. From the researcher's point of view, this climate could be seen as a prior and a basic requirement for these enablers. So, the researcher's attempt to fill the lack of any exploration of the supportive knowledge sharing climate relationship with IT/Business strategic alignment enablement in the literature increases this research importance. So, a main motivation for this study is to fulfill the current need for more practical diagnostics methods (Broadbent and Kitzis, 2005) to assist technology leaders and business managers to define and enable strategic alignment process as a permanent manner, and not as an ad hoc manner especially within the targeted fixed and mobile telecommunications companies in Jordan.

The researcher also hopes to provide a theoretical contribution to both knowledge management field and strategic alignment field.

OBJECTIVES OF THE STUDY

Basically, the lack of academic research to support whether or not a relationship between the supportive knowledge sharing climate and IT/Business strategic alignment enablement exists motivates the researcher to investigate this subject. Therefore, this study attempts to provide some viewpoints, and empirical results to understand this relationship. Following are the main objectives of this study:

1. Investigating the relationship between the supportive knowledge sharing climate and IT/Business strategic alignment enablement in mobile and fixed telecommunications companies in Jordan.

2. Developing a model for nurturing a supportive knowledge sharing climate to enable IT/Business strategic alignment enablement process in mobile and fixed telecommunications companies in Jordan.

Theoretical Background

Nurturing a supportive knowledge sharing climate requires "facilitating relationships and conversations as well as sharing local knowledge across an organization" (Nonaka and Takeuchi 1995). What the researcher means by supportive climate coincides with what Krogh, Ichijo, Nonaka (2000) called "enabling context". Based on Japanese idea of ba (or "place") Krogh, Ichijo and Nonaka argue that such an organizational context can be "physical, virtual, mental, or- more likely- all three" (2000). The researcher agrees with the previous argument and assumes that, the suggested climate is correlated with many interrelated tangible and intangible dimensions that reflect the "dynamic, relational, and human action based" (Krogh, Ichijo, Nonaka, 2000) nature of the knowledge. This diversity of knowledge characteristics embedded in "ba" or context (Nomura, 2002) and "depends on the situation and people involved rather than on an absolute truth or hard facts" (Krogh, Ichijo, Nonaka, 2000).

The complex nature of knowledge sharing enhances the manager's need to understand the surrounding

context in order to provide the supportive elements of knowledge sharing climate. This need was considered among the knowledge management principles as presented by Davenport and Prusak (1998). They said that "knowledge sharing must be encouraged and rewarded" and correlated this support with resources "management support and resources are essential" (Davenport and Prusak, 1998). Sveiby assured that "a resource understood as a capacity-to-act cannot be discussed without reference to people and how to motivate individuals to share and create" (2001). This means that resources solely don't work without management support. Therefore, the researcher agrees that, nurturing, supporting, enabling (Nonaka and Takeuchi, 1995) and caring (Krogh, Ichijo, Nonaka. 2000) are more compatible – even often so foreign in a business context- than managing knowledge.

Many researchers were interested in determining how organizations can create a suitable climate (McFarlan; Warren; McKenney; Pyburn, 1983; Patterson, Warr and West, 2004, Ashforth, 1985 and others) and many dimensions had been identified for such a climate. According to this study, these dimensions were identified using Mckinzey's seven Ss model. The Latter model is one of the most predominant frameworks that can be used as a diagnostic tool of organizational components (12manage, 2009; Rasiel and Friga, 2006; Waterman, Peters and Phillips,1980; Pascale, Athos, 1981; Peters and Waterman, 1982). It is consisted of seven interrelated dimensions: strategy, structure, systems, staff, skills, style, and shared values. Based on her literature review, the researcher assumes that supportive knowledge sharing climate is composed of all the previous dimensions. So, the researcher suggests that seven main organizational dimensions should be nurtured if a knowledge sharing climate is needed to be a supportive one. These organizational dimensions are listed and renamed to constitute what the researcher called supportive 7Ss knowledge sharing climate as will be clarified in the following section.

When analyzing many strategic alignment models - such as Henderson and Venkatraman (1993); Broadbent and Kitzis (2005); Weiss and Thorogood (2006) - the researcher found that the crucial role of the supportive knowledge sharing climate in enhancing strategic alignment enablement was not investigated. So, in this study, the researcher assumes that supportive knowledge sharing climate enhances IT/Business strategic alignment.

SUGGESTED RESEARCH MODEL

In this study, the researcher assumes that knowledge sharing climate is closely affected by the organizational dimensions. These dimensions were identified by using McKinsey's 7-Ss framework. The latter framework consists of seven organizational factors: strategy, structure, systems, staff, skills, style, and shared values (Rasiel and Friga, 2006; Brink, 2003; Kermally, 2002). These factors are interrelated (Rasiel and Friga, 2006) and should be aligned in an integrated manner. By adopting McKinsey 7-Ss model, the researcher suggests that, seven main organizational dimensions should be nurtured if a knowledge sharing climate is needed to be a supportive one. On the other hand, the six main enablers of IT/Business strategic alignment as were presented by Luftman et al., (2002) were also utilized in this study – as will be clarified later-.

Based on the literature review of both the knowledge sharing process and the IT/Business strategic alignment enablers, a suggested model indicating the relationship between nurturing a supportive knowledge sharing climate and IT/business strategic alignment enablement was developed. The suggested model is intended to overcome the major criticisms dealing with the parochial focus of the previous perspectives. This model combined IT/Business strategic alignment enablers on the dependent variable side, and the supportive knowledge sharing climate on the independent one as can be seen in figure1.
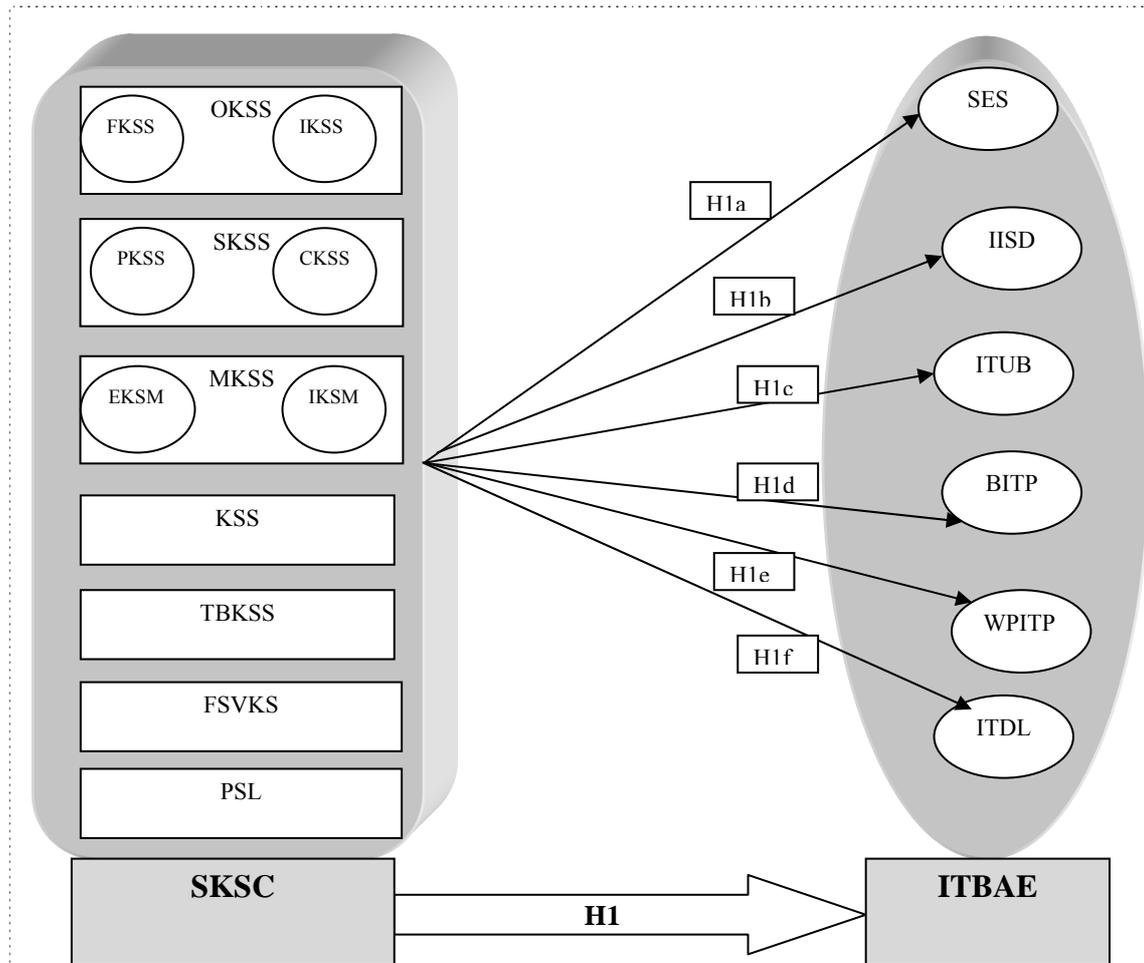
Figure1Supportive knowledge sharing climate and IT/Business strategic alignment enablement

Some researchers have studied the impacts of one or some variables on knowledge sharing process (Jafari, Bourouni, Roozbeh, Amiri, 2009; Sayed-Ikhsan and Rowland, 2004; Pillania, 2008). They adopted a micro – partial- view. In this research, a macro -systemic- view which takes into consideration the entire integrated supportive knowledge sharing climate dimensions was adopted. The following dimensions were hence identified and searched based on 7-Ss Mckinzey model. They were searched as the dimensions of the independent variable (supportive knowledge sharing climate) – as can be seen from figure (1):

1. Supportive knowledge sharing strategy (SKSS)

2. Organic knowledge sharing structure (OKSS)

3. Participative style of leadership (PSL)

4. Motivated knowledge sharing staff (MKSS)

5. Complementary task related and personal knowledge sharing skills (KSS)

6. Friendly shared values of knowledge sharing (FSVKS)

Technology based knowledge sharing systems (TBKSS)

Partially -on the dependent variable side- the suggested model built on one of the most well-known works in this area. Namely, the six main alignment enablers that were proposed by Luftman and his

colleagues (2002). These six enablers composed the dependent variable – IT/Business strategic alignment enablement- of this study. Based on the results of their study, Luftman and his colleagues (2002) ranked these enablers as follows:

1. Senior executive support for IT (SES)
2. IT involvement in strategy development (IISD)
3. IT understanding of business (ITUB)
4. Business-IT partnership (BITP)
5. Well-prioritized IT projects (WPITP)
6. IT demonstrated leadership (ITDL)

The suggested research model was utilized to explore the relationship between supportive knowledge sharing climate (the independent variable) and IT/Business strategic alignment enablement (the dependent variable). The model proposed that nurturing a supportive knowledge sharing climate will enhance IT/Business strategic alignment enablement. Following is a brief review of this study's variables operational definitions.

Basically the **knowledge** studied in this research includes explicit knowledge and to some extent tacit knowledge that can be transformed to explicit knowledge and transferred through detailed documentation and person-to-person discussions (Sayed-Ikhsan and Rowland, 2004). In turn, this may include studying organizational ideas, needs, successes, problems and solutions (Rastogi, 1998). On the other hand, in this study, **knowledge sharing (KS)** process denotes to the provision and receipt of knowledge (Hansen, 1999) by the subsidiary sharing and the subsidiary receiving knowledge (Leonard-Barton and Sinha, 1993) among the various managerial levels about the organizational issues.

Supportive knowledge sharing climate (SKSC) in this research denotes to the climate that supports communicating and sharing organizational ideas, needs, successes, and problems through the provision or the receipt of knowledge. This suggested climate is expected to be as a function of all of 7Ss organizational dimensions – strategy, structure, style, skills, staff, systems and shared values-. So, this study explores whether there is a concern of providing and supporting

the seven Ss dimensions of the suggested knowledge sharing climate in the researched companies. For example; it explores whether the researched organizations develop the needed skills, or whether they provide the appropriate rewards etc. Following is a brief review of the seven Ss dimensions of supportive knowledge sharing climate:

• **Supportive knowledge sharing strategy (SKSS)** denotes to the strategy that concentrates on making the collective information and experience of an organization available to individual worker (Pillania, 2008; Sayed-Ikhsan and Rowland, 2004; Donoghue et al., 1999; Brink, 2003). It adopts an integrated approach to identifying, managing and sharing all the organizational knowledge either explicit (using codification strategy) or tacit knowledge (using personalization strategy) (Hein, 2004). It stems from the business strategy and aims to provide the needed type of knowledge to produce products and services (Nonaka and Takeuchi, 1995). Two main types of supportive knowledge sharing strategy. Codification knowledge sharing strategy is the first one and personalization knowledge sharing strategy is the second one:

• **Codification knowledge sharing strategy (CKSS)** denotes to the strategy that encourages sharing all of the codified explicit knowledge (Hansen et al., 1999). It encourages organization members to record what they know and to get those documents into the electronic repository (Brink, 2003). Therefore; this strategy focuses on elaboration, storage and easy access of explicit knowledge in databases, documents, policies, and procedures (Sayed-Ikhsan and Rowland, 2004).

• **Personalization knowledge sharing strategy (PKSS)** denotes to the strategy that adopts an integrated approach to identifying, managing and sharing all the unarticulated (uncodified) expertise and experience (tacit knowledge) that generally remains in the heads of individuals (Hansen et al., 1999). The efforts are devoted to bring the consultants –or those who have the needed knowledge - together in attempts to exchange knowledge (Sayed-Ikhsan and Rowland, 2004). Therefore, face-to-face formal and informal meetings and training are encouraged.

- **Organic organizational structure** denotes to organizational structure that is designed to facilitate the need to acquire, share, and to put the necessary knowledge when needed (Leyland and ogilvie, 2006; Capshaw and Koulopoulos, 1999). Organic structures are flat hierarchical (minimal hierarchic layers), with multidisciplinary teams (Hariharan, 2002) of heterogeneous backgrounds (for example; IT and Business backgrounds) (Mitroff, et al., 1994; Kluge et al., 2001). In addition this study explores whether specific positions or departments within the organizational structure affect knowledge sharing process are found. Knowledge analyst, knowledge manager and chief knowledge officer are some of these positions. In addition, knowledge and learning centre or a learning and development function may affect organizational knowledge sharing (Sayed-Ikhsan and Rowland, 2004).

- **Complementary personal knowledge sharing skills and Task-related skills** refer to the competences of respondents that are expected to affect knowledge sharing (Brink, 2003) either personal skills regarding discussion and dialogue skills (Nonaka and Takeuchi, 1995; Rastogi, 1998) or task related skills – the needed skills to perform their jobs- (Kermally, 2002; Lemken, Kahler and Rittenbruch, 2000; Rastogi, 1998). In addition, this study explores whether the management is concerned of analyzing and developing these skills (Brink, 2003; Kermally, 2002).

- **Technology based knowledge sharing systems:** denote to technology-based systems that support the communication, collaboration, provision of knowledge, storing the accumulated knowledge and retrieving it when needed (Hein, 2004; Brink, 2003; Rastogi, 1998).

- **Motivated knowledge sharing staff:** Denotes to the willingness of the staff to exert high levels of effort toward knowledge sharing behavior that is conditioned by the management's ability to satisfy some staff needs (Brink, 2003; Hariharan, 2002; Huysman and de Wit 2002). Therefore; this willing is a result of the interaction of the individual (intrinsic rewards) and the situation (extrinsic rewards).

- **Extrinsic rewards (or incentives):** denote to those rewards that the employee expects to have from his manager or the company if she/he shares knowledge with other organization members (Gee-Woo, Zmud, Young-Gul, Jae-Nam, 2005; Huysman and de Wit 2002). These rewards are devoted toward fulfilling both of the physiological needs and safety needs (Umstot, 1988; Robbins, 1993).

- **Intrinsic rewards (or motives):** in this study refer to the expected internal rewards that the knowledge sharer seeks to fulfil his affiliation, esteem and self actualization needs (Bock et al 2005; Huysman and de Wit 2002, Davis and Newstrom1985).

- **Participative style of leadership**: denotes to the organizational leadership that enables all members and levels of the organization to share knowledge (Lemken, Kahler, and Rittenbruch, 2000). Specific characteristics such as empowerment and role model are crucial to participative style of knowledge-sharing leadership. Such a leadership is concerned in enabling employees to participate and act with a high degree of autonomy. Therefore; it provides transparency about ongoing activities, openness and trustful environment to activate this participation (Lemken, Kahler and Rittenbruch, 2000). Furthermore the leader not only talks about knowledge sharing and encourages it, but she/he also participates in conveying sayings into doings - for example- by attending specific training courses (Hariharan, 2002; Rastogi, 1998).

- **Friendly-shared values of knowledge sharing:** denotes to specific shared values and characteristics adopted by the organizational staff that are expected to support knowledge sharing process (Pillania, 2006; McDermtt and O'Dell, 2001; Davenport, 1993). Commitment, flexibility and no blame culture are some of these values and characteristics. Commitment value in this study denotes to the perceptions of the respondents that knowledge is an organizational asset and should be shared with their colleagues to have a strong cohesion and walk to the same goals (Leyland and ogilvie, 2006; McDermott, Boulder and O'Dell,

2001; Lemken, Kahler, and Rittenbruch, 2000). **Flexibility** relates to the degree the employees think that their organizational culture allows and encourages them to question the existing ways of operating and experiment new methods based on learning from outside their functions (Hein, 2004; Kermally, 2002). **No blame culture** deals with the respondents' thinking that meaningful failures within the companies they work in are expected to occur and shouldn't inhibit sharing knowledge behaviors (Hariharan, 2002).

By finishing the operationalization of the independent variables, the process will continue to the next complementary side–the dependent variable side–. In this study, IT/Business strategic alignment enablement is the dependent variable. According to Luftman and his colleagues (2002), achieving alignment demands focuses on maximizing the enablers and minimizing the inhibitors. They defined enablers as "the factors that promote and encourage the alignment of IT and business" (Luftman et al., 2002). Based on these conclusions, IT/Business strategic alignment enablement denotes to the concern of providing and supporting the six main enablers - that were identified by Luftman and his colleagues (2002) -as perceived by the respondents in the researched organizations. This means that, the researcher explores the current state of these enablers or factors in the researched organizations. Therefore; **IT/Business strategic alignment enablement** is supposed to be a function of the six main enablers of IT/Business strategic alignment. Following is a brief review of the six main enablers' operational definitions:

• **Senior executive support for IT:** denotes to the senior executive financial, morale support and/ or encouragement and facilitation of the IT staff interactions with the different administrative levels (Luftman et al., 2002).

• **IT involvement in strategy development:** denotes to the active involvement of the IT staff in the development of IT vision and strategy. Forming a team (Mdlungu, 2005; Vasquez, 2004) of senior decision makers from the IT department and the other business units is the dominant style of this involvement ((Luftman

et al., 2002). This also includes that; CIO understands the business strategy and knows how to connect (Riel et al., 2005) IT strategy with business strategy (Hildreth, 2005) which enables her/him as a consequence to manage the new enterprise and IT risks (Luftman et al, 2002; Luftman et al, 2004; Luftman, 2000).

• **IT understanding of the business:** this study explores to what range IT staff understands the firm's internal and external business environment, or can communicate IS performance in business relative language (Renner et al., 2003; Venkatraman 1993), or to what level IT staff understands financial vocabularies. On the other hand, this study will also explore whether the business staff understands IT main vocabularies that are closely related to mutual planning and strategic alignment language which leads to the mutual understanding between both (Deloitte, 2004; Luftman et al., 2002).

• **Business - IT partnership:** denotes to what range each of the business staff and IT staff perceives the nature and the importance of the roles of each other (Jouirou and Kalika, 2004; Deloitte, 2004) in achieving the organizational goals (Ross et al, 1996). In addition, the study extends to explore the actions that the researched organizations often took to create effective partnerships (Henderson, 1990). For example; whether they held training courses (Rockart et al, 1996) in those areas where tasks are interrelated or dependent on each other or whether they measured and perceived the achieved benefits resulted from the intended partnership (Luftman et al, 2004; Luftman et al, 2002).

• **Well-prioritized IT projects:** denoted to the priority level that IT has within the researched companies (Luftman et al, 2002). This may include exploring whether the researched companies have a vision for how IT will benefit the organization, or whether they adopt new technologies before their competitors (Luftman et al, 2002), or whether they allocate a big portion of their expenditures to IT needs and projects (Jaime and Kevin, 2005; Luftman et al, 2002).

• **IT demonstrates leadership:** this enabler denotes to the active role that CIO plays in developing IT strategy (Weiss and Thorogood, 2006; Cook 1999)

and in improving the alignment between IT and the business functions as it is perceived by the respondents. Specific indicators for this enabler such as the CIO position in the organizational chart and in the internal management board within the researched companies will be explored (Luftman et al, 2002).

RESEARCH HYPOTHESES

The major hypothesis of this study deals with the relationship between supportive knowledge sharing climate and IT/Business strategic alignment enablement. Although no prior studies – within the limits of the researcher's knowledge - investigated directly the supposed relationship, the seeds of this relationship rooted back to pioneer studies in both of KM field and strategic alignment field. For example, Nonaka and Takeuchi (1995) linked the knowledge with strategy when they mentioned that the essence of strategy lies in developing the organizational capability to acquire, create, accumulate and exploit the knowledge domain. Therefore, they argue that the organizations should adopt a knowledge vision to serve as the foundation upon which the company's strategy is formulated. Another indicator of this relationship can be derived from Luftman's et al. (1999) conclusion that both IT and business need to listen to one another and communicate effectively. They also mentioned that each of the alignment enablers is important, but none of them matter if there is not an atmosphere of open and honest communications (Luftman et al., 1999).

From Sveiby perspective, a knowledge-based theory of the firm can be valuable for strategy formulation. He justified his argument by recognizing the distinctive features that differentiate knowledge transfers from tangible goods transfers. He concluded that in contrast to tangible goods knowledge grows when used and depreciates when not used (Sveiby, 2001). In another work, Luftman (2005) mentioned that technology, skills and agility of the organization are not enough to improve the IT-business relationship, therefore he called IT and business organizations to focus on improving their communications and partnerships with each other. Others found that shared

domain knowledge influences both short and long term alignment (Reich and Benbasat, 1996).

According to Nickels (2004), IT and business strategic planning must be highly supported by open and consistent communication between high-level IT and business managers to ensure the success of strategic planning initiatives. Others examined the influence of different dimensions of employee communication on employee behavior regarding the strategic initiatives. The results show the communication climate within an organization is of vital importance to stimulate strategic business alignment (Riel et al., 2005). Other results indicate that there is no easy path to alignment and CIO is not expected to make miracles in a vacuum, therefore, companies can only win when business and IT work side by side to achieve common goals (Ziff, 2003).

Based on what was mentioned before, the main hypothesis of this study related to the relationship between the supportive knowledge sharing climate and IT/Business strategic alignment enablement. Following H1 hypothesis illustrated this supposed relationship.

H1: A direct positive relationship exists between supportive knowledge sharing climate and IT/Business strategic alignment enablement.

Six sub hypotheses can be derived from the main hypothesis as presented below.

H1a: A positive relationship exists between SKSC and SES.

H1b: A positive relationship exists between SKSC and IISD

H1c: A positive relationship exists between SKSC and ITUB

H1d: A positive relationship exists between SKSC and BITP

H1e: A positive relationship exists between SKSC and WPITP

H1f: A positive relationship exists between SKSC and ITDL

RESEARCH METHODOLOGY
Research instrument:

A survey questionnaire was developed based on the

proposed research model, extensive literature review, consideration of and comparison with existing validated survey instruments investigating similar issues (Von Krogh and Nonaka, 2000; Leyland and ogilvie, 2006; Sayed-Ikhsan and Rowland, 2004; Davenport, 1993). A 5-point likert scale was used to increase distinction between different levels.

The questionnaire was tested for clarity, evaluation and to provide a coherent research questionnaire, a macro review covers all the research constructs was accurately performed by five academic reviewers - from four Jordanian universities- specialized in management information systems, organizational behavior, strategic management and knowledge management. Some items were added based on their valuable recommendations. Some other items were reformulated to become more accurate to enrich the research instrument. The survey instrument was also validated through a pilot test with a sample of 30 participants who were not included in the sample frame for the subsequent data collection. The aim was to minimize the distorted and irrelevant responses which helped reduce what Cooper and Schindler (1998) called, 'the instrument as an error source'. These provided insight into the formatting of items and indicated that acceptable levels of validity and reliability would be forthcoming. Tables in appendix section show the items that were used to measure the researched constructs.

Study population:

The segment of fixed and mobile telecommunications companies was the target population of this study. The choice of a single segment stems from the need to use a way to control for the differences between business strategies in each segment. Thus, a single segment can add to the understanding of a phenomenon and over-generalization is avoided (Yin, 1994). Moreover, telecommunications companies can be characterized as knowledge organizations. This is true because of their growing need for connectivity and the synergy of information and knowledge. In addition, this segment is receiving much attention from the highest formal levels in Jordan to get the most possible benefits

from it. The researcher hopes that this study will contribute to the development of this segment. So, five fixed and mobile telecommunications companies were selected for the survey setting. These companies are: Jordan Telecom, Fast Link, Mobilecom, Express and Umniah.

The Sample:

A sample was selected for study because the researched companies put some restrictions regarding the allowed number of questionnaires that was distributed. So, stratified sample type was chosen in this research. The sample composition was planned to be compatible with the composition of the workforce in the researched companies. The respondents were randomly chosen in a representative manner from all managerial levels.

Data collection strategy

An average of 120 survey forms was sent to each company. The total size of the research sample was 600. 225 questionnaires were returned within three months. All surveys were checked for quality of completion and completeness. Seven surveys with relatively huge missing data and six other surveys containing incompatible answers were excluded. The remaining 212 questionnaires were used in the statistical analysis. The response rate was 37.5% and accepted for the research purposes (Sekaran, 2003).

Data analysis:

Based on the nature of the research subject and its objectives, selected statistical analysis methods were used. So, in this study the data was analyzed in two stages. First, a descriptive analysis using (SPSS11) package software was undertaken to describe the respondents and analyze measurement scales. The factor analysis (Varimax method of orthogonal rotation) was also used to validate the scales and confirm the factors researched. Two criteria were applied in the data reduction process: significance of factor representations and significance of item loading. According to the first criteria, eigenvalues were examined in order to determine the number of factors largely responsible for variation in the data, only factors with an eigenvalue (or

the total variance explained by the factor) greater than 1.00 were accepted. According to the second criteria, only those items with a loading of at least 0.50 on any of their associated factors were retained. Summated scale technique was utilized in order to merge several individual variables - loading significantly on a factor- into a single composite measure (Hair et. al., 1998). Second, structural equation modelling software was then used to test the research model. CFA or measurement model in SEM was used to give the researcher a complete control over specification for the indicators for each construct. Furthermore, CFA, with the use of SEM, permits for statistical test of the goodness of fit for the anticipated confirmatory factor solution, therefore the researcher was able to simultaneously evaluate the propositions and the measurements for the model in question (Jarvenpa and Staples, 2000; Pedhazur, 1982).

Factor analysis and Reliability analysis Results:

Table 1: Factor analysis and Reliability analysis Results

Constructs	No. of items	Loadings	α-value
PSL *	4	0.79 to 0.72	0.75
OKSS ** (IKSS, FKSS)	5	0.65 to 0.89	0.74
MKSS** (IKSM, EKSM)	6	0.61 to 0.86	0.74
SKSS ** (CKSS, PKSS)	9	0.53 to 0.82	0.86
KSS *	5	0.70 to 0.82	0.82
FSVKS *	5	0.77 to 0.67	0.77
TBKSS *	4	0.83 to 0.73	0.80
SES *	5	0.76 to 0.83	0.86
IISD *	5	0.64 to 0.79	0.79
ITUB *	4	0.79 to 0.75	0.77
BITP*	3	0.83 to 0.72	0.70
WPITP*	4	0.83 to 0.77	0.79
ITDL*	3	0.84 to 0.80	0.75

* Constructs loaded on one factor; ****** Constructs loaded on two factors

Each of the research constructs was tested for reliability and validity using Cronbach's (minimum 0.70) and factor analysis (minimum loading 0.50). Each factor has an eigenvalue greater than 1. As can be seen from table 1,8 and tables (10-18) factor analysis showed a one-factor solution of each of KSS, FSVKS, TBKSS, PSL, SES, IISD, ITUB, BITP, WPITP and ITDL constructs. The factor analysis showed clear discriminant validity since all items – representing each of the previous constructs- are loaded on one factor. On the other hand, the factor analysis showed a two-factor solution of each of OKSS, MKSS and SKSS constructs (tables 6,7,9). Table (1) demonstrates that all items had reliabilities of 0.70 or greater which indicates an acceptable reliability (Sekeran, 2003). Because multiple items were utilized to measure each construct a summed variable was derived for the items representing each construct to represent the intended variable.

Confirmatory factor analysis results for SKSC and ITBAE

By reviewing the following table, one can see that for the absolute fit measure, chi-square test results are 89.45 for 80 degrees of freedom (P = 0.22) and is not significant at 0.05 significance level.

Table 2: Goodness of fit for the structural equation model of SKSC and ITBAE

	AFM		IFM		
	X2	GFI	RMSEA	IFI	CFI
Hypothesized Model	(89.45) P=0.22	0.95	0.02	1.00	1.00

X^2, Chi-square; GFI, Goodness-of-fit index; RMSEA, Root-mean-square error of approximation; IFI, Incremental fit index; CFI, Comparative fit index

The GFI has a value of 0.95. Another measure that attempts to correct the tendency of the chi-square statistic with a sufficiently large model is the Root Mean Square Error of approximation (RMSEA), where values ranging from 0.08 to 0.12 (Jöreskog and Sörbom, 1993).

DESCRIPTIVE ANALYSIS OF THE SAMPLE:

As can be seen from table (3) most respondents (75.5%) have Bachelor's degree. Most of the respondents' age was ranging from Less than 30 to 40 years. In relation to managerial level, respondents were distributed on top, middle, lower and front- line employees levels in the ratio 10:15:20:55. Over half of the respondents (56.6%) were male. In terms of work experience, most of the respondents have a short work experience which is consistent with the young age of the researched organizations.

Table 3: Respondents demographics

| Respondents demographics		Frequency	Percent
Level of Education	Secondary school or less	5	2.4
	College	34	**16**
	Bachelors	160	**75.5**
	Higher education	13	6.1
	Total	**212**	**100**
Managerial Level	Top Management	21	10
	Middle Management	32	15
	Operational Management	42	**20**
	Front-Line Employees	117	**55**
	Total	**212**	**100**
Age	more than 50	2	0.9
	41-50	13	6.1
	31-40	66	**31.1**
	30 years or less	131	**61.8**
	Total	**212**	**100**
Gender	Male	120	**56.6**
	Female	92	43.4
	Total	**212**	**100**
Experience	5 years or less	109	51.4
	6-10 years	69	**32.5**
	11 or more	34	16.0
	Total	**212**	**100**

CONSTRUCTS DESCRIPTIVE ANALYSIS

The survey highlighted that the levels of 7Ss dimensions across the surveyed organizations were good (ranging from 3.58 to 3.99 out of 5) levels as illustrated by figure (2). Based on Mean statistics TBKSS acquired the first rank among the other constructs of SKSC. This result is an expected one and compatible with many previous studies. The second rank was acquired by KSS and MKSS which indicates that a good level of concentration on motivating organizational staff and enhancing the skills of the staff. The lowest level of these was OKSS which should be nurtured to eliminate this gab.
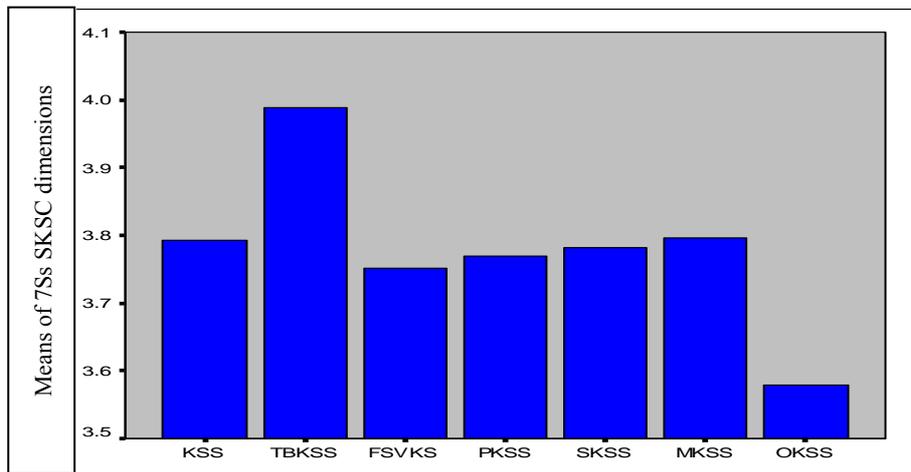
Figure 2: 7Ss SKSC dimensions in the researched organizations from the respondents' perspectives
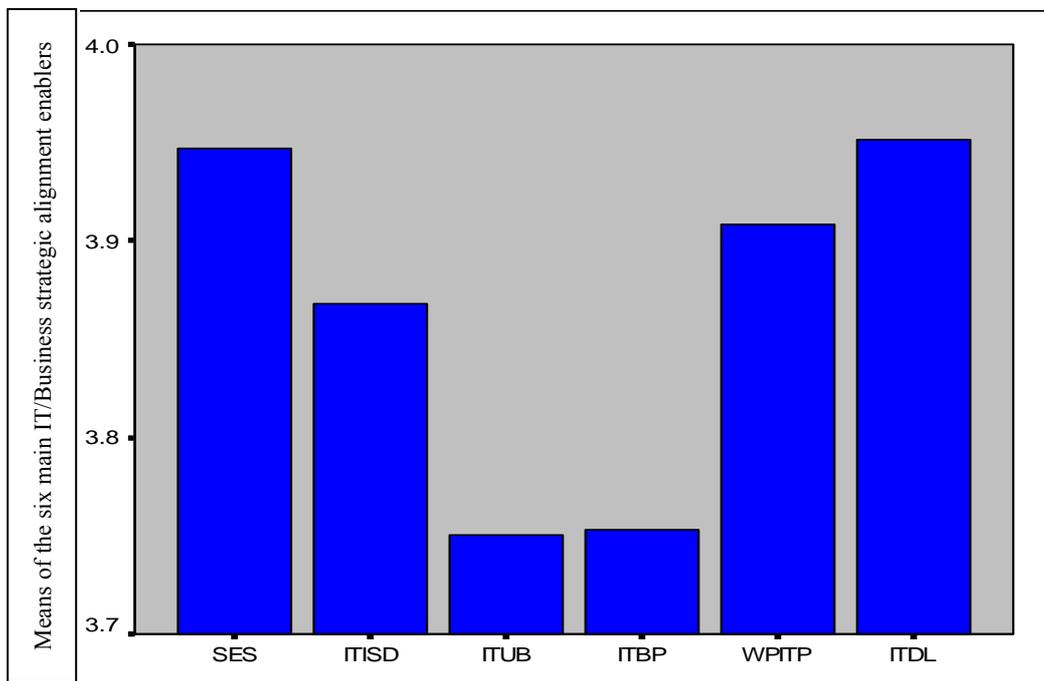
Figure 3: The six main IT/Business strategic alignment enablers from the respondents' perspectives

Among the amazing results that can be seen from figure 3 is the latest enabler in Luftman and his colleagues' model; the ITDL enabler, acquired the first rank in this study. This provides another crucial support for the need of this study. The results differentiated from the American society to Jordanian society. Another horrified results are relatively low levels of both of ITUB and ITBP which in turn stimulate the researcher to continue studying the relationship between ITBAE and SKSC. The researcher suggests that the latter enablers can be considered as a lively translation of supportive knowledge sharing climate or even its heart.

TESTING HYPOTHESES AND RESULTS DISCUSSION

The review of the hypothesised model reveals that the structural model was estimated with two latent variables; ITBAE and SKSC and six paths. Supportive knowledge sharing climate and its impact on IT/Business strategic alignment enablement (ITBAE) construct where this relationship is designed to test research hypotheses.

A macroanalysis was designed to test the relationship between the independent construct and its impact on the dependent constructs. The proposed relationships between the independent and the dependent constructs were represented in the form of regression equations, as illustrated below.

(H1): SKSC and ITBAE: ITBAE f (SKSC) → ITBAE = α SKSC + ε

H1a. SKSC and SES : SES f (SKSC) → SES = α SKSC + ε

H1b. SKSC and IISD : IISD f (SKSC) → IISD = α SKSC + ε

H1c. SKSC and ITUB : ITUB f (SKSC) → ITUB = α SKSC + ε

H1d. SKSC and BITP : BITP f (SKSC) → BITP = α SKSC + ε

H1e. SKSC and WPITP : WPITP f (SKSC) → WPITP = α SKSC + ε

H1f. SKSC and ITDL: ITDL f (SKSC) → ITDL = α SKSC + ε

Direct and indirect relationships were tested. Findings of both of the direct and indirect significant relationships and the related statistics of the main hypothesis and its sub hypotheses are presented in table 4.

Table 4: Summary of SCs (*beta*), *t*-value and R^2 of SKSC and ITBAE

Regression Path	Standardised coefficient (*beta*)	*t*-value	R^2
Direct effect			
ITBAE = f (SKSC)	0.86*	10.76	0.72
Indirect effect			
SES = f (SKSC)	0.63*	11.60	N/A
IISD = f (SKSC)	0.64*	11.45	N/A
ITUB = f (SKSC)	0. 69*	11.04	N/A
BITP = f (SKSC)	0.66*	10.72	N/A
WPITP = f (SKSC)	0.67*	10.76	N/A
ITDL= f (SKSC)	0.64*	10.33	N/A

*Significant at 0.05 probability level

The structural equations fit of the endogenous constructs, and the other results show that:
o   72% of the total variance in ITBAE was accounted by SKSC as can be seen from the coefficient of determination R2 of the regression path: SKSC → ITBAE.

The analysis results also indicate that a direct positive (beta = 0. 86), significant (t-value= 10.76, p<0.05) relationship exists between supportive knowledge sharing climate and IT/Business strategic alignment enablement. This result confirms the main hypothesis (H1).

o   The analysis results also indicate that an indirect positive (beta = 0. 63), significant (t-value= 11.60, p<0.05) relationship exists between supportive knowledge sharing climate and executive support for IT. This result confirms the sub-hypothesis (H1a).

o   The results prove that another positive indirect (beta=0.64) significant (t-value =11.45, p<0.05) relationship between supportive knowledge sharing climate and IT involvement in strategy development exists. This result confirms (H1b) sub-hypothesis.

o   (H1c) sub hypothesis was confirmed as a positive indirect (beta = 0.69) significant (t-value =11.04, p<0.05) relationship between supportive knowledge sharing climate and IT understanding of the Business was found.

o   Other positive (beta = 0.66) indirect significant

(t-value =10.72, p<0.05) relationship between supportive knowledge sharing climate and IT/Business partnership was also found. This result provides a clear confirmation to (H1d) sub hypothesis.

o   The results show that a positive (beta = 0.67) indirect significant (t-value =10.76, p<0.05) relationship exists between supportive knowledge sharing climate and well prioritized IT projects. This result allows the acceptance of (H1e) sub hypothesis.

o   The results declared that a positive (beta = 0.64) indirect significant (t-value =10.33, p<0.05) relationship exists between supportive knowledge sharing climate and IT demonstrated leadership. This result enables the researcher to accept (H1f) sub hypothesis.

Besides the prior statistical analysis that was utilized and presented before, a further complementary one was also conducted to verify the results. The respondents were asked to indicate to what range they think that knowledge sharing climate enhances IT/Business strategic alignment enablement in the organizations they work in. The respondents answers were classified as presented in table 5.

Table 5: Respondents perceptions regarding SKSC and ITBAE

Knowledge sharing climate enables IT/Business strategic alignment	Frequency	Percent
Strongly agree	40	18.9
Agree	112	**52.8**
Uncertain	46	21.7
Disagree	12	5.7
Strongly disagree	2	0.9
Total	**212**	**100**

Figure (4) indicates that most of the respondents agree that supportive knowledge sharing climate enhances IT/Business strategic alignment enablement in the researched organizations.
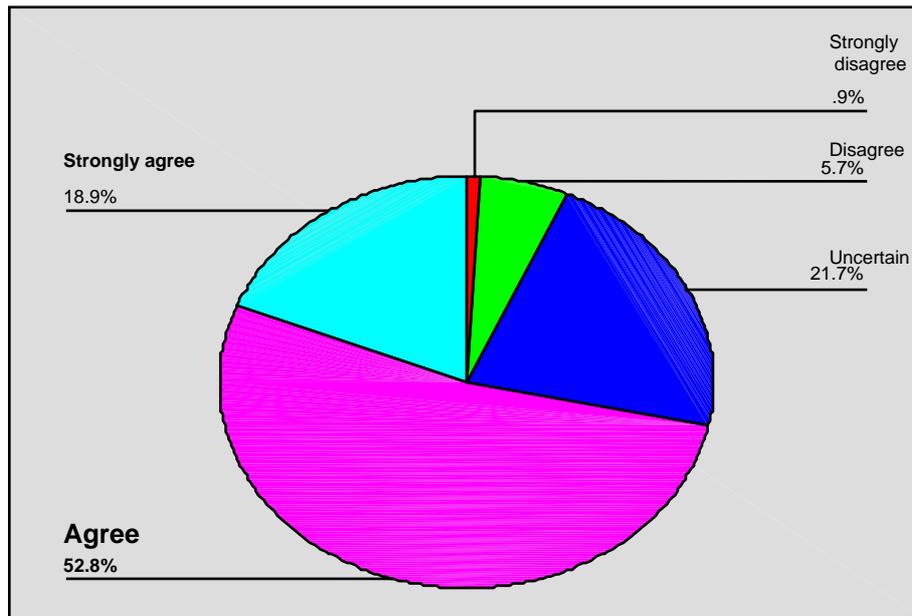
Figure 4: Respondents perceptions regarding SKSC and ITBAE

The results of this study indicate that, SKSC enhances IT/Business strategic alignment enablement by enabling senior executive support of IT, IT involvement in strategy development, IT understanding of the business, business IT partnership, well prioritized IT projects, and IT demonstrated leadership. So, the researcher can conclude that the more the supportive knowledge sharing climate the more each of the six enablers will be on the one hand and the more the whole ITBAE will be on the other hand.

The results of this study came compatible with some studies that can be considered as initial seeds of this study. For example, the results of this study came compatible with Luftman's (2005) which assured that technology, skills and agility of the organization are not enough to improve the IT-business relationship, therefore he demnded IT and business organizations to focus on improving their communications and partnerships with each other. The results are also consistent with the results of some other studies such as Ziff (2003), Riel et al., (2005), Nickels (2004) and others. This in turn leads the researcher to conclude that nurturing a supportive knowledge sharing climate

enhances IT/Business strategic alignment enablement.

IMPLICATIONS AND RECOMMENDATIONS

The results of this study have implications for theory, practice and future research in knowledge sharing climate and IT/Business strategic alignment enablement. Following is a brief review of these implications.

Theoretical implications

The first main contribution of this study is enhanced understanding about knowledge sharing climate through identification of seven Ss organizational dimensions - using "Mckinzey's seven Ss" model - which influence the nurturing of a supportive knowledge sharing climate in organizations.

More importantly the proposed model of this study facilitates a thorough understanding not only of the independent and dependent variables of the study but also of the uncovered and the unstudied relationship between the SKSC and ITBAE which constitutes a vital source of the originality of this study.

Practical implications

Based on the findings of this study, the following general recommendations may benefit mangers desiring

to nurture a supportive knowledge sharing climate:

• SKSC should be synthetically developed by everyone engaged with organizational life as it is not something that can be left to technologists or senior managers, although both these groups have a major part to play.

• Traditional role of management should be replaced by a nurturing role for the interactions and the other organizational dimensions required for supportive knowledge sharing climate.

• In order to shift to the preferred SKSC, organizations must understand their current status - as is situation- by using questionnaire survey called knowledge sharing climate scanning such as the questionnaire that was developed in this study. The survey will help companies understand what points to focus on. This should be done on an organization wide assessment and include all the organizational levels to bridge the awareness level regarding nurturing SKSC requirements.

• Managers should concentrate on overcoming knowledge hoarding habits and replace them with knowledge sharing attitudes. Personal benefits should be linked to sharing knowledge efforts and results.

On other hand the following recommendations should be considered to enable IT/Business strategic alignment:

• Senior executive management should secure funding and significant investment in information technology and IT projects and should be concerned with supplementing IT department with high qualified human resources.

• Forming a team of senior decision makers from the corporate IT and business unit is recommended to be the dominant style in strategy development.

• IT staff should be encouraged to understand the basic nontechnology issues of the organization which facilitate their interaction with the other business departments. This can be partially done by the use of cross-function job rotations

• Partnership efforts should be extended to encompass the factors that affect the day-to-day working relationships and the ability of the partners to influence over decision making. Cross-functional coordination and joint task force may be beneficial here.

• IT department should monitor emerging technologies and propagate their importance to the company.

• IT leaders should have a high rank in the organizational chart and should be encouraged to enhance their leadership skills and to manage CEO business expectations. Attending training sessions regarding leadership skills may provide good results.

Directions for Future Research

This research is one step in the complex process to understand the relationship between knowledge sharing climate and IT/Business strategic alignment. With respect to the outcome of the research, it is recommended for future research to concentrate on some issues call for closer examination.

• Future research should examine qualitative and quantitative benefits of ITBAE resulted by nurturing SKSC. In addition, efforts should examine how the loss of potential knowledge affects ITBAE and the sustained competitive advantage. This may be of assistance in justifying the needed investments for these purposes.

• Research on the impact of interorganizational knowledge sharing on nurturing SKSC and ITBAE is also recommended. By studying the external climate of knowledge sharing, the complementary results will picture a macro view of knowledge sharing climate. Therefore, examining knowledge sharing beyond the boundaries of single organizations may enable the employees to benefit from sharing knowledge with customers, suppliers and other partners.

• Other empirical evidence may also be needed to show whether stimulation of some knowledge sharing climate dimensions or some strategic alignment enablers produce more effect than others. This can lead to devote additional efforts toward the most important ones.

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