

Cross-Cultural Virtual Team and Its Key Antecedents to Success

Mike (Tae-In) Eom
University of Portland

A virtual team (VT) has been emerging as an appealing, effective means to help organizations achieving this goal, because of its distinctive capabilities of overcoming traditional organizational barriers (e.g., cost, location, time, space, a lack of talents and expertise in an organization, etc.) to facilitate collaboration among different functions and establish strategic partnerships/alliances outside their boundaries. Despite of its advantages, a VT have several challenges detrimental to its successful deployment (e.g., a lack of leadership, differences in VT members' dispositions, tendency and willingness to communicate, share information, etc.). To address such shortcomings with probable solutions, this study aims to provide a conceptual model that links a VT leader's behaviors (transformational and transactional) and a VT member's different cultural backgrounds to the development of trust in the VT, a key proxy for a VT's success. The proposed model is expected to provide practitioners with practical and prescriptive view on VT dynamics and steps for the VT (e.g., leadership training for a VT leader, education session for VT members on diverse culture) in a way to increase trust, which will, in turn, enhance the performance of a VT.

INTRODUCTION

A team is the most common and basic working unit in today's business organizations (Katzenbach & Smith, 1993). As available computer-mediated communication systems (CMCS) are advanced, organizations have been seeking ways to enhance the performance of a team based working group to a greater extent. A virtual team (VT) has been emerging as an attractive, yet effective means to help organizations achieving this goal, because of its distinctive capabilities of overcoming traditional organizational barriers (e.g., cost, location, time, space, a lack of talents and expertise in an organization, etc.) to facilitate collaboration between different functions within and establish strategic partnerships/alliances out of organizational boundaries (Lee, Eom, & Kim, 2004; Lipnack & Stamps, 1999; Anthony M Townsend, DeMarie, & Hendrickson, 1998). Indeed, prior literatures suggest that a VT is positively associated with overall organizational performances by increasing a team's productivity, effectiveness and efficiency in completing its tasks (Kerber & Buono, 2004; Lee et al., 2004; Lipnack & Stamps, 1999; Rutkowski, Vogel, Bemelmans, & Van Genuchten, 2002; Anthony M Townsend et al., 1998).

Despite of its advantages, a VT possesses aspects of structural mechanisms and dynamics that may be detrimental to its successful deployment. These weaknesses may include a lack of strong leadership, physical interactions/proximity among VT members, differences in VT members' dispositions (e.g., tendency and willingness to communicate, share information, etc.). These challenges mainly stem from people and technology involved in the formulation/development of VT, which in turn will affect the success of a VT (e.g., one's trust, satisfaction towards a VT and its members, the quality of a VT's task, etc.)(Dube & Pare, 2001; Jarvenpaa, Knoll, & Leidner, 1998; Kayworth & Leidner, 2001/2002; Kerber & Buono, 2004; Morris, Marshall, & Rainer Jr., 2002; Pauleen, 2003; Vakola & Wilson, 2004). A VT must overcome such shortcomings to become a more effective, established working unit (e.g., Jarvenpaa & Leidner, 1999; Morris et al., 2002). In addition, these challenges are expected to be more damaging in magnitude if a VT consists of members coming from different culture¹.

What can be the key factors that transform a VT's structure or dynamics to overcome aforementioned shortcomings resulted from the differences in members' cultural backgrounds? This study aims to provide a possible, yet prescriptive solution to the question by focusing on two potential key antecedents, leadership and cultural differences, to the success of VT. Specifically, drawn from prior literature, this study proposes a conceptual model that links a particular set of leadership behaviors (transformational and transactional) on the part of a VT leader and a VT member's different cultural backgrounds to the development of trust, which is considered as a key proxy variable for the success of a VT (Jarvenpaa et al., 1998; Jarvenpaa & Leidner, 1999; Morris et al., 2002). The proposed model is expected to provide practitioners practical, prescriptive, and actionable steps to implement proper leadership training for a VT leader and education on diverse culture in a way to increase trust among VT members, which in turn enhances the performance of a VT.

This study is organized as follows. First, a VT is briefly examined in comparison with a traditional team to accentuate its unique structure and dynamics. Secondly, trust in a VT is examined and elaborated in terms of how it is affected under the influence of transformational and transactional VT leadership and different cultural backgrounds. Lastly, a conceptual model for the study is presented with a set of propositions followed by the concluding remarks.

CONVENTIONAL TEAM VS. VIRTUAL TEAM

Conventional Team

Drawn from a previous literature (Hightower & Sayeed, 1995; Katzenbach & Smith, 1993), a 'team' is a group of two or more individuals, within a confinement of a stable structure, share a common goal and engage in social actions by having a large pool of expertise and knowledge. In general, a team has four main structural components: roles, status, norms, and cohesiveness (Hackman, 1992). Team members must identify themselves with their roles without any confusion (role). Each member must possess the prestige of a team membership distinguishing members from other teams (status). A team must operate with a clearly defined set of rules that guide members' actions (norm) as well as pervasive 'we' feeling or feeling of 'belonging' (cohesiveness).

While working to achieve a given goal (e.g., completing tasks), a team evolves through four stages: storming, norming, performing, and adjourning (Hackman, 1992). It first goes through a

¹ Note that VT members' cultural backgrounds encompass differences in both their organizational and national culture to avoid any confusion.

'storming' stage in which members with different attributes (e.g., skills, knowledge, expertise, background, personality, etc.) form a team, they filter out differing situations (e.g., resistance/conflict to work together). At 'norming' stage, team members set generally agreed informal rules that guide their actions to become an established entity. Then, a team starts performing to attain a common goal ('performing' stage). At last, at 'adjourning' stage, a team will be adjourned if there is no need or goal to achieve.

Virtual Team

In today's business environment, a VT has emerged as an essential form/structure of how people work together to achieve common goals (Anthony M Townsend et al., 1998). Drawn from prior literature, a VT is defined as an alternative form of a team established in need of specific tasks (task-oriented) with *same structural components* as a team whose members are culturally diverse and geographically dispersed and have no common past or future, but guided by different forms of social interactions through CMCS (e.g., a web-based collaborative tool)(Jarvenpaa & Leidner, 1999; Lipnack & Stamps, 1999; Pauleen, 2003; A.M Townsend, DeMarie, & Hendrickson, 1996; Wong & Burton, 2000).

According to Lipnack and Stamps (1999), VT must have its purpose, people, and links properly intact to be successful. Purpose refers to an anchor that makes a VT stay together as long as it is robust and agreed upon by all members and is translated into action steps. Each VT member should be autonomous, self-reliant, capable of being interdependent, and must know how to be "me" while keeping cohesiveness. Finally, all parties must be linked via CMCS with which members communicate and develop personal connections (e.g., trust) over time. Moreover, the evolution of VT to be an established entity can be summarized in three stages: strangers, acquaintance, and partnership. In 'strangers' stage, due to no or limited physical contacts, a member's assessment of others is restricted to given personal information/attributes (e.g., age, gender, education, etc.). Initial contacts will be made electronically. A task and role for each member will be determined based on his/her job and skills descriptions. In 'acquaintance', VT members try further to test each other's dependability and trust via various venues (e.g., a frequency of emails, a reaction time to postings). Over time, members will be categorized as high- or low-performers, which will be used as a measure stick for future tasks/roles. In 'partnership', all VT members establish linkages based upon mutual obligation and trust.

A VT overcomes such conventional barriers as geography, time, organizational boundaries, co-location costs, lean/flat organizations, geographical dispersion of key workers, and globalization, which are often considered as detriments to how conventional teams operate effectively and efficiently (A.M Townsend et al., 1996). This, in turn, provides organizations potential advantages in the forms of productivity gain, reduced costs of setting up teams, etc. (Kerber & Buono, 2004). Accordingly, more organizations are forming VTs that involve participants from different functional areas in different locations, organizations, countries (Wong & Burton, 2000).

Organizations may enjoy many potential advantages to seize the opportunities in the market by employing a VT. A VT enables organizations to become more flexible and flat and provides an access to previously unavailable expertise, a pool of knowledge and talents, and different, yet, unique cultural and organizational perspectives to name the few (e.g., Lipnack & Stamps, 1999; Anthony M Townsend et al., 1998). A VT may also provide participating organizations to bring together critical contributions who might not otherwise be able to work together due to time,

travel, and cost restrictions (Anthony M Townsend et al., 1998). For example, a global auto-maker, Hyundai, employed a VT successfully in its attempt to introduce new designs for its line of automobiles. It included parties from four different countries (South Korea, Japan, U.S., and U.K./France) and was successful in coming up with a new design for an automobile (Moon, 2004). This is one good example of a VT enhancing the available pool of resources by including people from outside the sponsoring organization, such as supply chain affiliates, members of partner organizations, or external consultants (Kerber & Buono, 2004; Rutkowski et al., 2002).

LEADERSHIP

Leadership has emerged as an important antecedent to the success of a VT by affecting VT members' predispositions. It is expected to affect the way VT members' perception of their team and other team members, self-concepts, their willingness to communicate and share information, and their level of satisfaction (Kayworth & Leidner, 2001/2002; Kerber & Buono, 2004; Pauleen, 2003).

Most of prior leadership studies defined leadership as behaviors exerted by an individual leader to influence others to act in a certain way (Yukl, 2001). One recent leadership study defined leadership as the incremental influence of position holders exercised via direct and indirect means to maintain and/or alter the existing dynamics in and of a system (Osborn, Hunt, & Jauch, 2002). This definition describes 'incremental influence' as that which is over and above the impact of formally designated aspects of the system such as standard operating procedures or formal role definitions. Based on this, in the context of VT, leadership is defined as incremental influence of a VT leader exercised via electronic means to maintain and/or alter the existing dynamics pertaining to the operation of VT.

In this study, the conceptualization of incremental influence behaviors is described in terms of the manner or style in which a VT leader exerts his/her influences: transactional and transformational. Both transactional and transformational leadership styles are considered to be important for effective leadership (Bernad M. Bass, 1985; Waldman, Ramirez, House, & Puranam, 2001). They are not mutually exclusive; both leadership styles can be practiced by the same leader, and a right mixture of these styles is expected from an effective leader, in which transformational leadership augments follower's effort and performance over and beyond produced by transactional leadership alone (Avolio & Bass, 1988; Hater & Bass, 1988; MacKenzie, Podsakoff, & Rich, 2001).

Transactional Leadership

Transactional leaders motivate followers by engaging in transactional relationships in which they exchange rewards for performance, specifically, transactional leaders display contingent rewards and management by exception behaviors. Contingent rewarding involves motivating followers by assigning what needs to be done and providing rewards (e.g., bonus, promotion) depending on their accomplishments. Management by exception focuses on actively monitoring deviances from standards, mistakes, and errors, and taking corrective actions (Bernard M. Bass & Avolio, 1993).

Transformational Leadership

Transformational leaders influence followers by setting challenging expectations, creating mutual respect, displaying exemplary behaviors, and focusing on followers' needs and higher-

level motives (Bernard M. Bass, 1998). Specifically, transformational leaders display intellectual stimulation, individualized consideration, inspirational motivation, and idealized influence (Bernard M. Bass & Avolio, 1993). Intellectual stimulation involves stimulating followers to be innovative and creative by encouraging them to approach familiar situations in new ways. Individualized consideration focuses on paying attention to individual followers' needs for achievement and growth by acting as coach or mentor and providing a supportive climate in which followers can develop. Inspirational motivation deals with motivating followers by articulating a compelling vision, providing meaning and challenge to their work, making them identify with the collective or the group, and inspiring them by expressing high expectations and confidence. Idealized influence involves being a role model by displaying exceptional capabilities, strong conviction to the vision, and behaviors that the leader wants the followers to display (Bernard M. Bass, 1998).

TRUST

In general, one tends to trust other members because he/she believes that they have enough at stake to cooperate and perform at the expected level. Thus, trust can be considered as the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party (Mayer, Davis, & Schoorman, 1995). Trust has been widely studied and found to be positively related to a team's performance by affecting its cohesiveness, effectiveness, identity, or members' commitment and satisfaction (Doney, Cannon, & Mullen, 1998). Accordingly, trust plays an important role in affecting VT's key outcome variables such as its efficiency, effectiveness, level of satisfaction, the quality of completed tasks, etc. (e.g., Edwards & Sridhar, 2005; Jarvenpaa et al., 1998; Jarvenpaa & Leidner, 1999; Morris et al., 2002).

Consistent with Jarvenpaa et al. (1998), trust is defined as a function of one's perceptions of another member's ability, benevolence, and integrity, due to a lack of personal interactions. 'Ability' refers to a group of skills enabling a member to be perceived competent within specific domains. 'Benevolence' means the extent to which a member is believed to have interpersonal persona (e.g., care, concern) and the willingness to do good to another beyond his/her personal interests. 'Integrity' refers to the obedience to a set of principles that requires members' accountability, dependability, and reliability. Essentially, positive changes in these dimensions would lead to the enhancement of trust among VT members. Trust is found to be one of the most widely-studied VT's success factors (Jarvenpaa et al., 1998; Jarvenpaa & Leidner, 1999; Morris et al., 2002), which tends to be closely associated with (individual) interactions made among VT members such as information sharing (Edwards & Sridhar, 2005).

CULTURAL BACKGROUND

Culture refers to a set of values, guiding beliefs, understandings, and ways of thinking pervasive across the entity to which one belongs (Daft, 2001). All organizations (and even in each part of an organization) have their own culture and organizational structures and systems that fit into their culture (Handy, 1993). Equally, individuals who work in the same organization may be different and have their own culture (Vakola & Wilson, 2004). Individual's cultural backgrounds may include one's work ethic, work hours, preferred method of communication,

individualism versus collectivism, concern for quality, and even a language (Edwards & Sridhar, 2005). It is considered to have a profound impact on individual's cognitive process and behavioral patterns (e.g., willingness to share information, a tendency to communicate, etc.) (Hofstede, 1980, 1983).

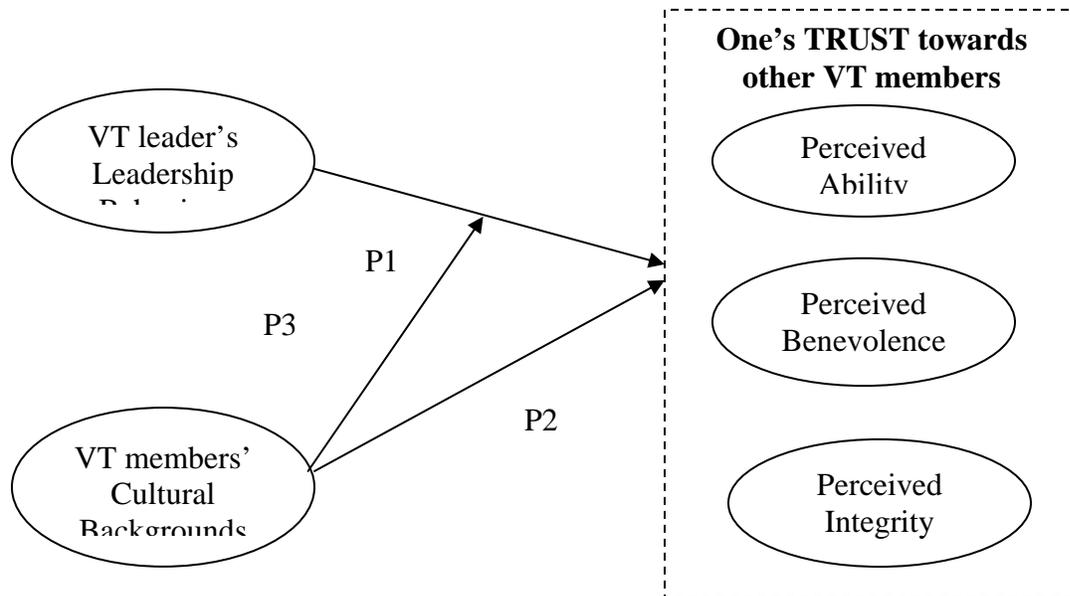
In a networked society, people have a tendency to share knowledge and assist others (including remote strangers) whom they will never meet in person (Finholt & Sproull, 1990). This tendency is likely to vary under the presence of higher-level contextual factors such as culture (Kelley & Thibaut, 1978). Accordingly, in VT, exchange of information and cultural background are recognized as key factors (Drucker, 1988; Edwards & Sridhar, 2005; Vakola & Wilson, 2004) as well as the most intriguing challenges that may pull the team apart (Kerber & Buono, 2004).

By its nature, VT is normally consisted of members with diverse cultural backgrounds (Wong & Burton, 2000). Thus, VT members are characterized by the heterogeneity in their cultural and organizational backgrounds (Wong & Burton, 2000). These backgrounds are expected to affect VT members' perceptions of other members, interaction/communication patterns, the degree of information exchange, and willingness to communicate and share information (Dube & Pare, 2001). Because people with different cultures may have different ideas about what constitutes good performance, proper communication style, and notions of accountability (Dube & Pare, 2001). This may in turn influence one's cognitive process of developing trust toward other members (i.e., how to perceive others in terms of their ability, benevolence, and integrity). Indeed, one study found that individuals from individualistic culture may be more ready to trust others than individuals from collectivist culture in CMCS environments (Jarvenpaa & Leidner, 1999).

CONCEPTUAL MODEL

A conceptual model is shown in Figure 1. Figure 1 depicts relationships among transformational and transactional leadership styles of a VT leader, each VT member's cultural backgrounds, and the development of trust in a VT. In the following section, a proposed model and specific relationships among aforementioned factors are discussed in detail.

**FIGURE 1
CONCEPTUAL MODEL**



VT Leadership and Trust

As mentioned, leadership in general has emerged as a critical success factor for a VT (Jarvenpaa & Leidner, 1999; Kayworth & Leidner, 2001/2002; Kerber & Buono, 2004; Pauleen, 2003). Both transactional and transformational VT leadership is expected to affect three dimensions of trust among VT members because both leadership behaviors are expected to influence/change perception and behaviors of VT members.

First, effective leaders should be able to clarify specific roles and responsibilities that each VT member assumes. In addition, expectations and consequences that each role and responsibility conveys must be clarified. This is very important for a VT because it builds shared understanding of one another's responsibilities and alleviates uncertainties resulting from having heterogeneous team members in many aspects (Wong & Burton, 2000). An effective VT leader should also be able to control and monitor regular, detailed, and prompt communication with his/her peers or among team members (Kayworth & Leidner, 2001/2002). This is important because regular and prompt communication is believed to be critical for a VT to perform by effectively dealing with ambiguity and confusion amplified by the virtual nature of the interaction, while performing as an entity (Pauleen, 2003).

At stages of 'stranger' and 'acquaintance', a VT requires a disciplined approach to its development by using a detailed document/description of the external business context and the company's internal environment, team purpose, objectives, and projects, major responsibilities of existing and new roles within the team, and/or team operating procedures including the high level objectives of meetings and other forms of communication (e.g., e-mail, online discussion, etc.)(Kerber & Buono, 2004). A VT must also establish explicit and well-defined structures

and/or protocols with which its members must abide by in getting to know other members and communicating with one another (e.g., posting a resume with specific information such as a list of skills and expertise, educational backgrounds, mandatory responses to any postings/emails within a short time frame, regular video-conferencing at fixed time slots, etc.). Such structure and processes lend themselves well to specification of explicit outcomes (e.g., expected response time, number of complaints generated by other members, etc.), constant monitoring of its turnout relative to these goals, and (consequently) rewarding on the basis of outcomes. Given that these behaviors form the basis of transactional leadership, transactional VT leadership would be effective.

As time passes, VT members will gather amount of information to develop their perception of other members. This information can be other members' educational background, expertise, job experiences, personal interests and goals, how fast they respond, etc., which create psychological profile and personality characteristics of the specific team members (Warkentin, Sayeed, & Hightower, 1997). This may, in turn, increase one's perception of other members' ability 'benevolence', and 'integrity'.

At 'partnership' stage, VT members may be asked to continuously learn about the situations and other members, adapt to a varying degree of different cultural backgrounds and attitudes, shifting processes and procedures, and emerging and fast-changing communication technologies and skill requirements (Anthony M Townsend et al., 1998). VT members need to devote considerable time and effort over and beyond what is specified in their formal contracts to respond to these requirements. Thus, effective VT leadership must demonstrate the ability to deal with various and emerging situations that VT may experience by performing multiple leadership roles (Kayworth & Leidner, 2001/2002). A challenge for a VT leader here may reside in creating and maintaining a level of collaboration and productivity that can handle today's rapidly changing business environment (Kerber & Buono, 2004).

In such situation, a transformational VT leader is likely to be effective in inducing the required effort by emphasizing the intrinsic value of continuous learning and its contribution to personal development and the success of VT (Roepke, Agarwal, & Ferratt, 2000) and by 'role modeling' the efforts to continuously explore, learn, and adopt to understand other members (Kayworth & Leidner, 2001/2002). Along the line, a transformational VT leader must exercise individual consideration, patience, persistence, and perseverance as well as a certain degree of tolerance, flexibility, and understanding in a way that each member develops and fosters familiarity and proficiency with techniques of social interaction via communication technologies (Warkentin et al., 1997). A transformational VT leader is also likely to articulate the significance of the work done by each member and role relationship by relating them to higher level goals (Kayworth & Leidner, 2001/2002). Given that these behaviors form the basis of transformational leadership, such behavior is likely to engage the values of VT members and inspire them to perform beyond expectations. This is possible because VT members realize and understand their values, goals and aspirations coincide with the work they perform for VT (MacKenzie et al., 2001).

With transformational VT leadership, VT members will be more potent and capable, become more acquainted and have a sense of 'one' group. VT becomes more reliable unit with its members being more accountable and dependable to one another. This, in turn, leads VT to become a complete entity by establishing 'partnership' across members, which may imply heightening the level of trust pervasive throughout a VT. Thus, I propose the following proposition:

P1. Transactional and transformational leadership behaviors on the part of a VT leader will be closely associated with the development of trust in a VT.

Cultural Background and Trust

Cultural background is likely to be an important factor that determines the level of trust in VT because culture influences one's guiding beliefs and value, understanding, and ways of thinking about future relationships with others, the balance of power among them, and others' perception of her/him, which would be displayed in atypical behaviors and attitudes in her/his interactions with others (Kelley & Thibaut, 1978; Weisband, Schneider, & Connolly, 1995; Zuboff, 1988). Accordingly, in VT, members are often likely to be involved in social acts in action situations that are normatively regulated by their own culture (Ngwenyama & Lee, 1997). Thus, VT members' attitudes about information sharing, pattern of communication, motivation to speak and disclose of private information with others are guided by their cultural backgrounds (or misunderstanding/biases resulted from the differences in VT members' culture), which may lead to discontinuous or distorted communication (Constant, Kiesler, & Sproull, 1994; Edwards & Sridhar, 2005; Jarvenpaa & Leidner, 1999; Kayworth & Leidner, 2001/2002).

Specifically, all these may make VT's group dynamics more complex, enhance or hinder the way VT members develop perceptions of other members' ability, benevolence, and integrity, and jeopardize its viability and effectiveness (Jarvenpaa et al., 1998; Shachaf, 2005). This may enable or challenge the development of trust among VT members by either releasing accurate and key information promptly or delaying/hiding them from other members (Doney et al., 1998). That is, different cultural backgrounds on the part of VT members determines the degree of revealing and willing to exchange information and knowledge (whether it is personal or public, expertise or common), which will affect the duration of time it takes to develop trust in VT and the extent to which each member trusts other members (Doney et al., 1998; Roepke et al., 2000). This, in turn, will determine one's level of trust.

For instance, individualistic culture values a good citizenship, good-will, and voluntary help, which, in turn, encourage members to share information (Grover, 1993; Zuboff, 1988). Thus, VT members from individualistic culture tend to be less concerned with self-categorizing, have greater skills in engaging in open and precise communication, and be involved in ambiguous communications more actively than individuals from collective cultures, which is very critical to develop trust-related perception of other members (Hofstede, 1980; Jarvenpaa & Leidner, 1999). In sum, the following proposition is proposed:

P2. VT members' cultural backgrounds will be closely associated with the development of trust in a VT.

Moderating Effect of Cultural Backgrounds

The effect of VT leader's transactional and transformational behaviors on the development of trust in a VT is expected to vary depending on a VT member's cultural background. For instance, a VT member whose cultural background is individualistic is likely to value personal achievement and advancement, creativity and innovation and prefer room for improvement and autonomy in completing VT's tasks. For such VT members, a transformational VT leader is likely to be more effective in fostering trust by articulating/accentuating the intrinsic and relational aspects of tasks (e.g., personal development, needs, satisfaction, future career

advancement, etc.) in consistent with the VT members' values and aspirations (Kayworth & Leidner, 2001/2002; MacKenzie et al., 2001; Pauleen, 2003). A transformational VT leader is also likely to be effective in motivating the required effort of VT members by emphasizing the intrinsic value of continuous communication and collaboration with others tied 'learning from others with various expertise and domain knowledge' to the personal development. Such behaviors engage in the self-concept of VT members with individualistic culture and inspire them to see the values they have not envisioned and proactively interact with other members beyond expectations.

On the contrary, collectivist culture values the overall success of a VT, organizational citizenship behaviors and sacrifice individual goals and aspirations for the sake of a VT (e.g., providing deliverables on time). This typically takes the form of universalistic norms rather than particularistic rules about information sharing (Heimer, 1992). For VT members with such cultural background, the effect of transformational VT leader is likely to be enhanced because s/he is effective by articulating the significance of the work done by each members contributing to the entire VT. Such behavior is likely to be consistent with collectivist cultural background and encourage VT members with such culture to continuously engage in behaviors and patterns of communication guided by universalistic norms for VT. Simultaneously, collectivist culture promotes to respect decisions made by a superior entity or hierarchy and interact with other members abided by rules and norms. In leading VT members with such cultural backgrounds, transactional VT leadership behaviors are likely to be more effective in encouraging VT member to share information with others to develop perceptions of others' ability, benevolence, and integrity via extrinsic aspects of work (e.g., rewards) and/or managing deviating attitudes/behaviors from VT norms of communication (MacKenzie et al., 2001). Thus, the following is proposed:

P3. The impact of a VT leader's transactional and transformational behaviors on the development of trust in a VT will vary depending on VT members' different cultural backgrounds.

CONCLUDING REMARKS WITH MANAGERIAL IMPLICATIONS

This study aims to examine unique dynamics of a VT in ways to evaluate a process of developing trust among its members with different cultural backgrounds. Specifically, the proposed model (Figure 1) is to highlight the importance of VT leadership in its success as posited in recent VT literature (Vakola & Wilson, 2004). The model shows the links between transformational and transactional VT leadership behaviors and VT members' cultural backgrounds to the development of trust. A VT must have a strong leadership present to operate as an effective working-group. A VT leader must display both transactional and transformational behaviors to be effective because these leadership behaviors will greatly affect how VT members interact and communicate with one another via electronic means. It has become more of VT leader's responsibility to build the environment that will support information sharing and knowledge dissemination and facilitate open learning (Dube & Pare, 2001). Proper leadership training would be useful for future VTs and this training must be focused on educating potential VT leaders the importance of transactional (e.g., contingent reward and management-by-exception) and transformational behaviors (e.g., inspirational motivation and individual consideration).

The role of cultural backgrounds is also very important in the development of trust. In virtual-setting, people with various cultural backgrounds come together and form a working group, in which different ideas about what constitutes good performance, proper communication style, and notions of accountability are prevalent (Shachaf, 2005). This may result to lower the levels of integration and cohesion and a lack of shared mental models that would enable understanding other, which may increase stereotyping of other members, miscommunication, and mistrust (Vakola & Wilson, 2004). For example, a VT in construction industry tends to confront problems such as lack of availability and time planning because a bureaucratic culture (which is prevailing culture in construction industry) cannot facilitate a cross-functional VT and hinder its process and operation. On the other hand, participatory type of culture, which values flat structure, open communication channels, participation and involvement in decision-making, can enhance sharing of information and facilitate a VT. In sum, cultural background (whether it is based on national or organizational culture) is likely to be closely associated with the success of a VT by having an impact on the development of trust and must be emphasized (Dube & Pare, 2001).

REFERENCES

- Avolio, B. J., & Bass, B. M. (1988). Transformational Leadership, Charisma and Beyond. In J. G. Hunt, H. R. Baliga, H. P. Dachler & C. A. Schriesheim (Eds.), Emerging leadership vistas, Lexington, MA: Heath.
- Bass, B. M. (1985). Leadership and Performance Beyond Expectations, New York: Free Press.
- Bass, B. M. (1998). Transformational Leadership: Industrial, Military, and Educational Impact, New Jersey: Lawrence Erlbaum Associates.
- Bass, B. M., & Avolio, B. J. (1993). Transformational Leadership: A Response to Critiques. In M. M. Chemmers & R. Ayman (Eds.), Leadership Theory and Research: Perspectives and Directions (pp. 49-88), San Diego: Academic Press.
- Constant, D., Kiesler, S., & Sproull, L. (1994). What's Mine is Ours or Is It? A Study of Attitudes about Information Sharing. Information Systems Research, 5, (4), 400-421.
- Daft, R., L. (2001). Organization Theory and Design (7th ed.), Cincinnati, OH: South-Western College Publishing.
- Doney, P. M., Cannon, J. P., & Mullen, M. R. (1998). Understanding the Influence of National Culture on the Development of Trust. Academy of Management Review, 23, (3), 601-620.
- Drucker, P. (1988). The Coming of the New Organization. Harvard Business Review, 66, 35-53.
- Dube, L., & Pare, G. (2001). GlobalVvirtual Teams. Association for Computing Machinery. Communications of the ACM, 44, (12), 71.

Edwards, H. K., & Sridhar, V. (2005). Analysis of Software Requirements Engineering Exercises in a Global Virtual Team Setup. Journal of Global Information Management, 13, (2), 21.

Finholt, T. A., & Sproull, L. (1990). Electronic Groups at Work. Organization Science, 1, (1), 41-64.

Grover, S. L. (1993). Lying, Deceit, and Subterfuge: A Model of Dishonesty in the Workplace. Organization Science, 4, (3), 478-495.

Hackman, J. R. (1992). Group Influences on Individuals in Organizations (Vol. 1,2,3,4), Palo Alto: Consulting Psychologists Press.

Handy, C. (1993). Understanding Organization (4th ed.), Harmondsworth, UK: Penguin.

Hater, J. J., & Bass, B. M. (1988). Superiors' Evaluations and Subordinates' Perceptions of Transformational and Transactional Leadership. Journal of Applied Psychology, 73, (4), 695-702.

Heimer, C. A. (1992). Doing Your Job and Helping Your Friends: Universalistic Norms about Obligations to Particular Others in Networks. In N. a. E. Nohria, R.G. (Ed.), Networks and Organizations: Structure, Form and Action, Boston, MA,: Harvard Business School Press.

Hightower, R., & Sayeed, L. (1995). The Impact of Computer-mediated Communication Systems on Biased Group Discussion. Computers in Human Behavior, 11, (1), 33-44.

Hofstede, G. (1980). Culture's Consequences, Beverly Hills, CA: Sage.

Hofstede, G. (1983). The Cultural Relativity of Organizational Practices and Theories. Journal of International Business Studies, 14, (2), 75-89.

Jarvenpaa, S. L., Knoll, K., & Leidner, D. E. (1998). Is Anybody Out There? Antecedents of Trust in Global Virtual Teams. Journal of Management Information Systems, 14, (4), 29-64.

Jarvenpaa, S. L., & Leidner, D. E. (1999). Communication and Trust in Global Virtual Teams. Organization Science, 10, (6), 791.

Katzenbach, J. R., & Smith, D. K. (1993). The Wisdom of Teams: Creating the High-Performance Organization, Boston, MA: Harvard Business School Press.

Kayworth, T. R., & Leidner, D. E. (2001/2002). Leadership Effectiveness in Global Virtual Teams. Journal of Management Information Systems, 18, (3), 7.

Kelley, H. H., & Thibaut, J. W. (1978). Interpersonal Relations: A Theory of Interdependence, New York, NY: Wiley.

Kerber, K. W., & Buono, A. F. (2004). Leadership Challenges in Global Virtual Teams: Lessons from the Field. S.A.M. Advanced Management Journal, 69, (4), 4.

Lee, J., Eom, M. T.I., & Kim, B.O. (2004). Strategic Use of Virtual Organizations. In M. Fong (Ed.), E-Collaborations and Virtual Organizations, Hersey, PA: IRM Press.

Lipnack, J., & Stamps, J. (1999). Virtual Teams: The New Way to Work. Strategy & Leadership, 27, (1), 14-19.

MacKenzie, S. B., Podsakoff, P. M., & Rich, G. A. (2001). Transformational and Transactional Leadership and Salesperson Performance. Journal of the Academy of Marketing Science, 29, (2), 115-134.

Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An Integration Model of Organizational Trust. Academy of Management Review, 20, (3), 709-734.

Moon, I. (2004, September 6). Building a 'Camry Fighter'. Business Week, 62-63.

Morris, S. A., Marshall, T. E., & Rainer Jr., R. K. (2002). Impact of User Satisfaction and Trust on Virtual Team Members. Information Resources Management Journal, 15, (2), 22.

Ngwenyama, O. K., & Lee, A. S. (1997). Communication Richness in Electronic Mail: Critical Social Theory and the Contextuality of Meaning. MIS Quarterly, 21, (2), 145-167.

Osborn, R. N., Hunt, J. G., & Jauch, L. R. (2002). Toward a Contextual Theory of Leadership. Leadership Quarterly, 13, (6), 797.

Pauleen, D. J. (2003). Leadership in a Global Virtual Team: An Action Learning Approach. Leadership & Organization Development Journal, 24, (3), 153.

Roepke, R., Agarwal, R., & Ferratt, T. W. (2000). Aligning the IT Human Resource with Business Vision: the Leadership Initiative at 3M. MIS Quarterly, 24, (2), 327-353.

Rutkowski, A. F., Vogel, D., Bemelmans, T. M., & Van Genuchten, M. (2002). Group Support Systems and Virtual Collaboration: The HKNET Project. Group Decision and Negotiation, 11, (2), 101-125.

Shachaf, P. (2005). Bridging Cultural Diversity Through E-mail. Journal of Global Information Technology Management, 8, (2), 46.

Townsend, A. M., DeMarie, S. M., & Hendrickson, A. R. (1996). Are You Ready for Virtual Teams? Human Resource Magazine, 41, (9).

Townsend, A. M., DeMarie, S. M., & Hendrickson, A. R. (1998). Virtual Teams: Technology and the Workplace of the Future. The Academy of Management Executive, 12, (3), 17.

Vakola, M., & Wilson, I. E. (2004). The Challenge of Virtual Organisation: Critical Success Factors in Dealing with Constant Change. Team Performance Management, 10(5/6), 112.

Waldman, D. A., Ramirez, G. G., House, R. J., & Puranam, P. (2001). Does Leadership Matter? CEO Leadership Attributes and Profitability under Conditions of Perceived Environmental Uncertainty. Academy of Management Journal, 44, (1), 134-143.

Warkentin, M. E., Sayeed, L., & Hightower, R. (1997). Virtual Teams Versus Face-to-face Teams: An Exploratory Study of a Web-based Conference System. Decision Sciences, 28, (4), 975-996.

Weisband, S. P., Schneider, S. K., & Connolly, T. (1995). Computer-mediated Communication and Social Information: Status Salience and Status Differences. Academy of Management Journal, 38, (4), 1124-1151.

Wong, S.-S., & Burton, R. M. (2000). Virtual Teams: What are Their Characteristics and Impact on Team Performance? Computational and Mathematical Organization Theory, 6, (4), 339.

Yukl, G. (2001). Leadership in Organizations (5th ed.), Upper Saddle River, NJ: Prentice Hall.

Zuboff, S. (1988). In the Age of the Smart Machine, New York, NY: Basic Books, Inc.