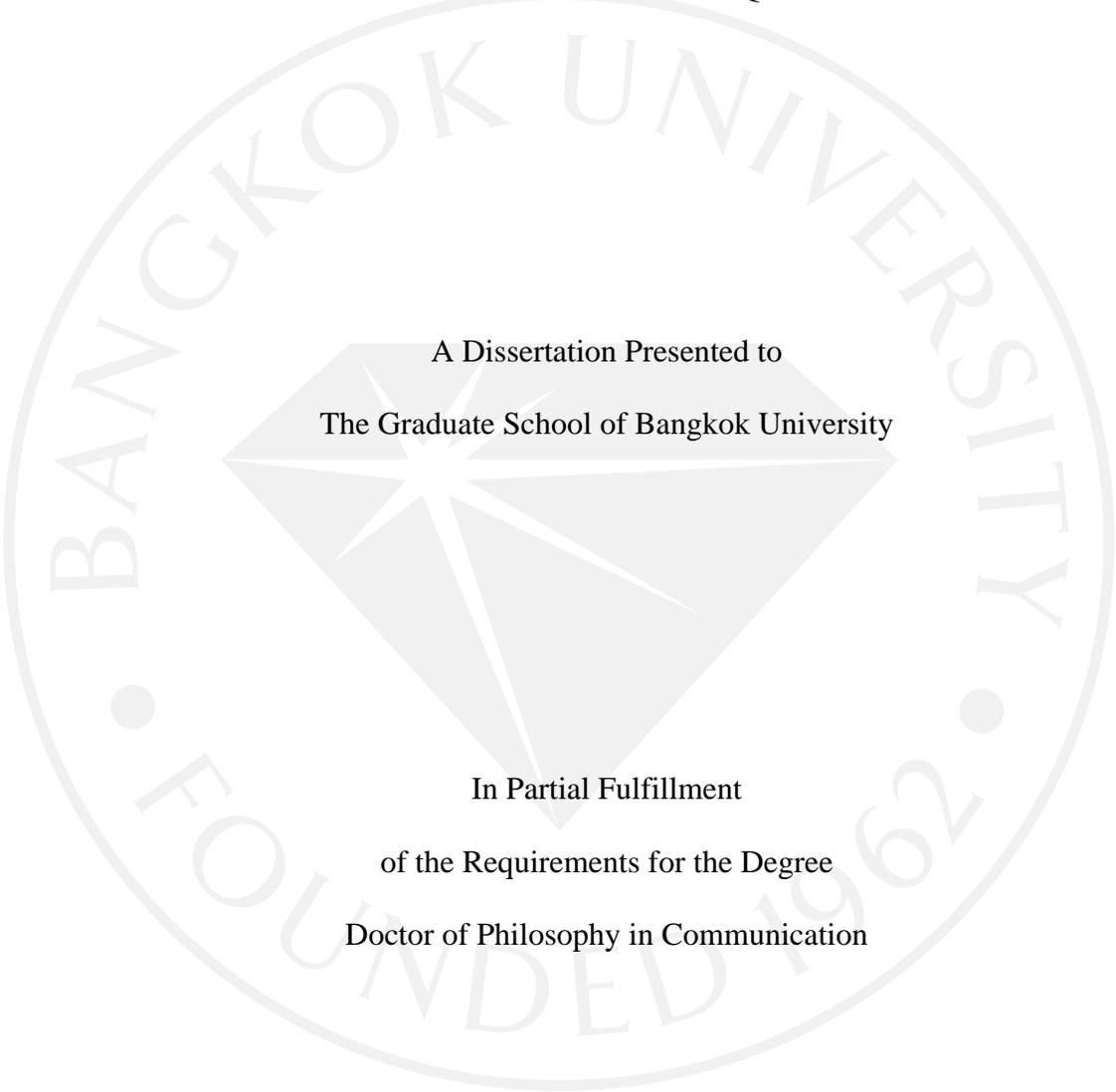THAI EMPLOYEE RESISTANCE TO ORGANIZATIONAL CHANGE AS

INFLUENCED BY LEADERSHIP STYLES, INFLUENCE TACTICS,

AND INFORMATION ADEQUACY

A Dissertation Presented to

The Graduate School of Bangkok University

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Doctor of Philosophy in Communication

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<u>Thai Employee Resistance to Organizational Chance as Influenced by Leadership</u>

<u>Styles, Influence Tactics, and Information Adequacy</u> (285 pp.)

<u>Advisor of dissertation</u>: Assoc. Prof. Scott Titsworth, Ph.D.

ABSTRACT

This study explores employees' willingness to participate in or resist change as a multidimensional construct that includes behavioral, affective, and cognitive components. The open systems theory identifies organizational change and resistance to change as an interrelationship between an organization, its members, and conditions in the environment. This study aims to identify predictors that enhance the inclination to resist change among employees. Specifically, three communication variables are the foci of this study: (1) leadership styles, (2) downward influence tactics and, (3) information adequacy. Data was collected through a questionnaire from five different organizations undergoing change. Prior to data analysis, exploratory factor analysis was undertaken to identify culturally specific aspects of the scales used in this study. Analyses of factor structure revealed that the structures of Thai leadership styles, downward influence tactics, and perceived information adequacy differed from that found in the prior research. Findings from a ANOVA resulted in the exclusion of one company and the aggregated data from the four companies.

To assess data, hierarchical regression analysis was used because the specification of the order which is entered into the equation provides accurate

significance tests. The findings revealed that management-by-exception: action, passive avoidance, legitimizing, and assertiveness are the significant predictors of employee disposition to resist change. The absence of individual-consideration style of leadership and the inadequate amount of information during the period of organizational change predict resistance only at the emotional level. Further, the findings evoke the awareness of ambivalent resistance to change. Implications for future research and practices are discussed.
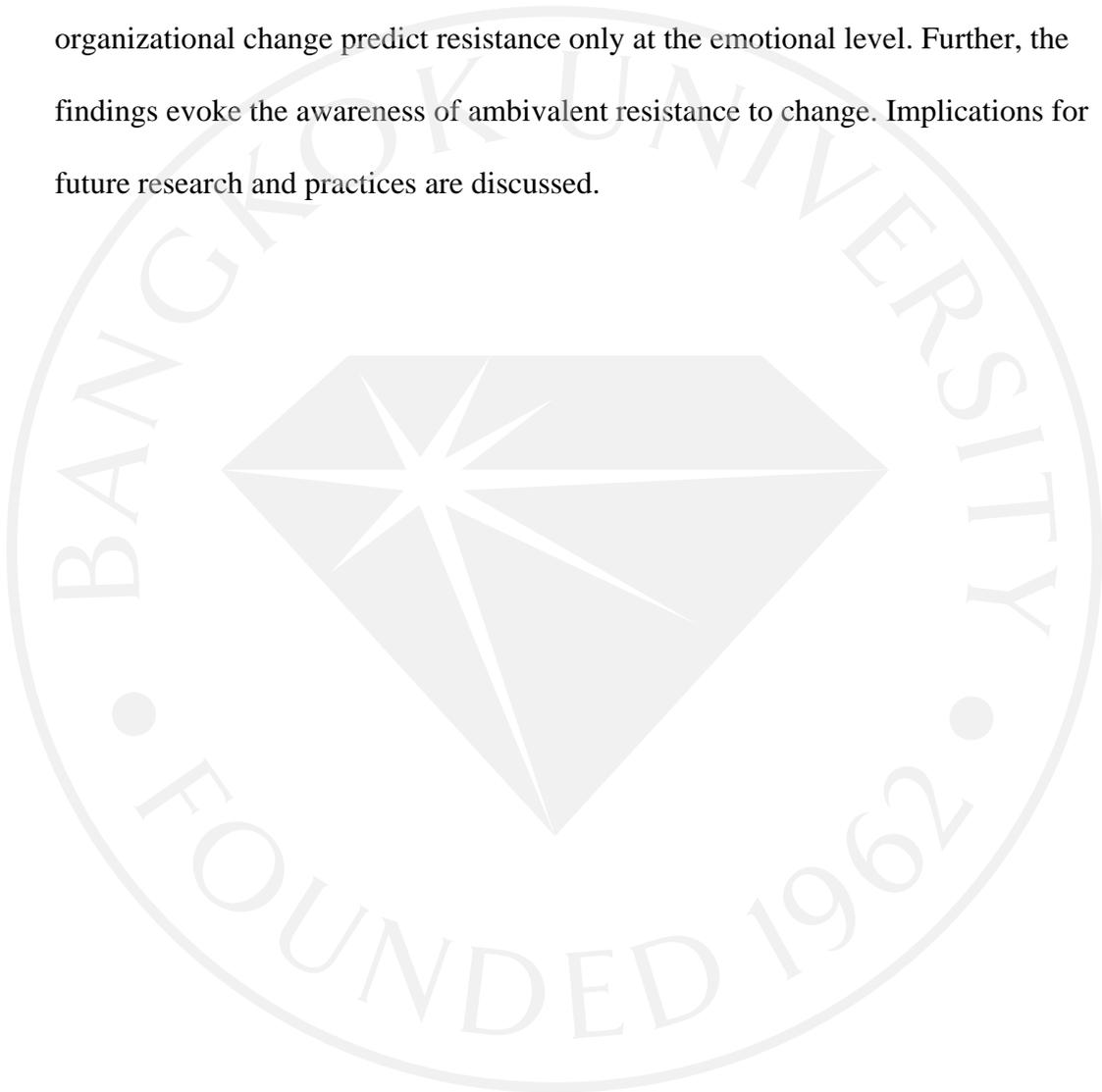
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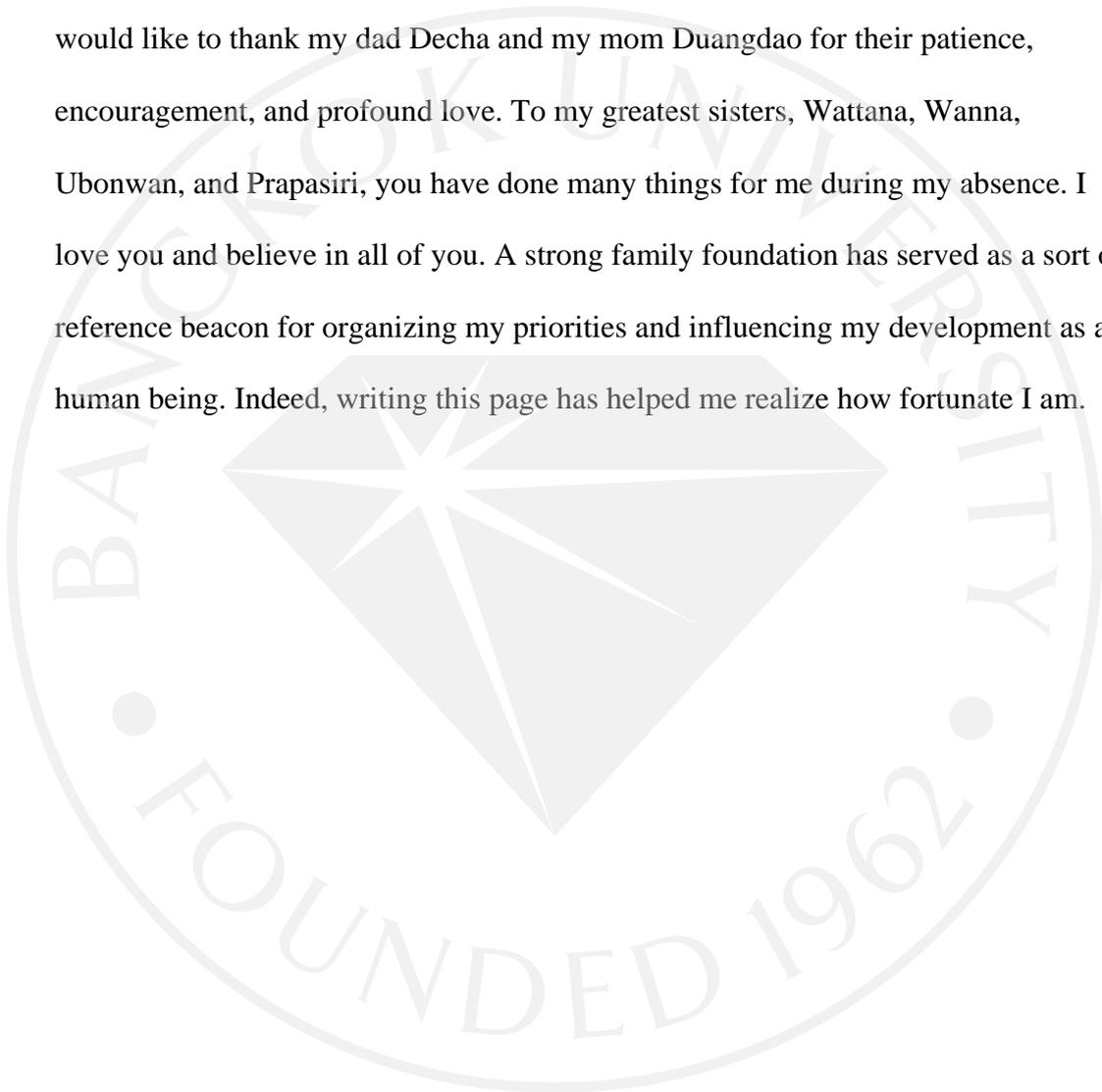
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CHAPTER 1

INTRODUCTION

Background of the study

Organizational change has become an ongoing common phenomenon that most organizations find necessary for survival. In today's business, the highly competitive environment forces a vast number of organizations to engage in various forms of organizational changes, such as mergers and acquisitions, downsizing, layoffs, top management replacement, or new strategies implementation. The effect of change can possibly bring prosperity and success to an organization in advanced knowledge, technologies or an annual income. However, it was also found that one-half to two-third of all major organizational change efforts ended unsuccessfully and resistance was found to be a critical contributor to this organizational failure (Maurer, 1996).

Because most organizational change contains components that threaten employees' state of mind, change can prompt members of an organization undergoing change to feel a loss of self-importance and finally turn into some defensive behaviors (Jha, 1977; Kiefer, 2005). Collinson (1994) stated that there are many factors interacting with employee resistance to change. Some of these factors have focused on the role of such contexts as the introduction of new technologies and new management systems, which tend to force employees to adapt to new things rather than self-initiation. The other intriguing factor is an individual different disposition toward change. The difference between individual dispositions implies an attempt to accept or resist change among employees.

Employee's disposition is a stable personality trait that acts as an internal inclination of individual responses to change either to resist or accept change (Oreg, 2006). Through a multidimensional view of employee's dispositional resistance to change, negative responses to a change initiative can be constructed based upon the three different components, namely cognitive state, emotional state, and behavior, on the psychological process underlying resistance (Oreg, 2003). In this regard, resistance to change can be viewed as some particular kinds of overt action, some emotional components of resistance, such as aggression, frustration, and anxiety, or negative thought resulting from employees' cognitive evaluation of change.

Attempts to study employee resistance to change through the view of employee's disposition provide a better understanding of the relationships between resistance and its antecedents. In addition, because employee inclination to resist change comprises the three psychological components, recognition of an ambivalent view of resistance to change has been highlighted (Oreg, 2003; Piderit, 2000). Employee resistance to change is sometimes ambiguous, especially when responses to change are exhibited in a subtle form. For example, even though employees are frustrated and feel insecure when change makes them work more difficult, they might not resist change explicitly. Employee resistance to change might exist through emotional reaction or even through negative evaluation of change at the cognitive level. The underlying reason for the inconsistency between an employee's feelings and beliefs toward change and their responses to change could be related to the manager's power and authority over employee's career. Given the ambivalence in response to change, the multidimensional views of resistance to change might allow

for greater understanding of employee resistance to change because different responses to change should be treated differently (Piderit, 2000).

Because both organizational development and survival require change, employee resistance is an important factor contributing to success or failure of change efforts. As a consequence, attempts to deal with resistance have emerged. Several efforts have attempted to investigate how to overcome resistance to change, especially from a managerial perspective (Judge, Thoresen, Pucik, & Welbourne, 1999; Paglis & Green, 2002). However, this study sought to explore a new area, specifically to identify the predictors of employee dispositions to resist change. This study limited its investigation to three communication variables: leadership style, downward influence tactics, and perceived information adequacy. Styles of leadership and leader's influence tactics display different communication behaviors from one leader to the others. Both aspects of communication variable are considered components of communication and managerial dimension that leaders use for interpersonal communication and change management. In addition, open system theories were used as a theoretical framework to conceptually suggest the relationship between the external environment, organizational change, and its consequence as employee resistance to change.

<center>Statement of the Problem</center>

From an organizational communication standpoint, Eisenberg, Andrews, Murphy, and Timmerman (1999) and Trombetta and Rogers (1988) stated that organizational change is about communication between change leaders and followers. Communication plays a significant role in disseminating information and exchanging new ideas. Communication is also critical to organizational change when that

communication is regarded as an instrument for diffusing satisfaction versus

dissatisfaction and/or positive versus negative attitudes among employees (Ford &

Ford, 1995). Given the importance of communication to change management,

employee resistance to change is considered a product of failure in change

communication. Because employee resistance to change can be exhibited cognitively,

affectively, or behaviorally, identifying employee resistance is relatively difficult.

Given the ambivalent view of resistance to change, failure in the implementation of a

change plan might occur because appropriate leader-subordinate interaction and

strategies for change management do not design based upon the recognition of this

problem.

The formation of employee resistance to change also includes a failure in

aligning personal attitudes, beliefs, values, and needs towards new organizational

goals. Psychologically, organizational members usually resist change because change

is incompatible with their existing beliefs, values, and skills. With regard to modern

organizations, especially those that aim to be innovative, two provocations of

employee resistance to change are a high investment in technology and the

management system. Because new technology and management system are typically

considered to be under greater management control, any applicable skills among

employees are judged as deficient in comparison (Paton & McCalman, 2000). A

number of change management scholars agreed that, because of a lack knowledge

concerning how to perform new tasks, individual's self-esteem, tolerance for

ambiguity, and risk aversion are low (Judge, et al., 1999; Wanberg & Banas, 2000).

Consequently, threat, stress, anxiety, and uncertainty will certainly be pervasive and

intensify resistance to change, especially if the employees feel obligated to accept a

change without receiving sufficient information or when leaders do not recognize or lack of knowledge about the multidimensional nature of employee resistance to change (Piderit, 2000).

A study of employee inclination to resist change will be more likely to provide a comprehensive picture when open systems theories are used as the theoretical framework. Although this study focused on the throughput and output processes, the three major functions (input, throughput, and output), and one critical characteristic (interconnectedness) provide a robust framework for exploring factors that make employees likely to resist change. Input into the system refers to the importation of information from the external environment. Organizational change is unavoidable in part because of inputs (Burke, 2002). Another source of information is feedback that occurs as a result of system mechanisms (Katz & Kahn, 1966). For the throughput, the interaction between employees and leaders, particularly leadership styles, influence tactics, and the amount of information received are of concern in this study as influencers of an output or the formation of employee resistance to change. The interconnectedness characteristic of the open system model is important to the extent that each function of the system is related to every other function. Change from the external environment will engender change within an organization. As a consequence of organizational change, leadership style, influence tactics, and perceived information adequacy are all the throughput process that relates to employee inclination to resist or participate in a change plan at the output process.

When external information is imported into the system, at the throughput process, leaders are believed to be the critical change agents who are responsible for formulating communication strategies and implementing change plans (Nadler &

Tushman, 1989a). Gibbons (1992) noted that during organizational chaos, subordinates increase their demand for leadership in either transactional or transformational styles. Leadership style is directly related to employee perceptions of leader and positive or negative attitudes toward change. Leadership style is also an important factor in influencing employee to participation in a change plan. A great amount of research has examined the relationship between transformational and transactional leadership styles and their relation to employee work performance (Howell & Avolio, 1993; Tucker & Russel, 2004; Waldman, Bass, & Einstein, 1987). These studies consistently revealed that transformational styles of leadership enhanced work performance, initiated new directions, provided inspiration, and promoted new behaviors among employees. However, the relationship between a transactional style and employee's dispositional resistance to change received less concern. Based on these findings, it is important to examine whether a transactional type of leadership can produce employee resistance to change.

With respect to leadership style, downward influence tactics focus on the study of employee perceptions of leader influence behavior. Influence tactics are highlighted at the center of the study of leadership and management when the introduction of change is likely to influence employee resistance to a new system of work. Research has shown that leaders employ a variety of tactics depending on expected outcomes (Kipnis, Schmidt, & Wilkinson, 1980; Yukl & Falbe, 1990). In the context of organizational change, influence tactics are the combination of power and behavioral approaches that are exercised by leaders to engender new behaviors (Yukl, 1998). Downward influence tactics are inherently employed by leaders to create a sense of urgency, a need for change, and new behaviors that are consistent with a new

strategic plan. Falbe and Yukl (1992) found that leaders' influence processes reflected the communicative strategies that leaders use to motivate subordinates, encourage commitment, or even identify failure or success of new strategies and policies. Influence tactics, especially forceful tactics can be considered key elements of a leader's communication and interpersonal skills influencing resistance to change.

In addition to leadership style and influence tactics, information distribution within an organization is known as a major factor in encouraging employees' new behaviors. When employees perceive that they receive an adequate amount of information, they feel less stressed, a greater sense of control, and that they can more effectively predict their future (Berger, 1987). Perceived information adequacy is relevant to employee satisfaction (Spiker & Daniels, 1981) and serves as an indicator of uncertainty reduction (Tushman & Nadler, 1978). However, in general, information that employees receive includes new strategies, organizational goals, and reasons for pursuing those goals. These types of information are directed toward benefiting organizations themselves and overlook employees' psychological states in this process. Perhaps, it would be interesting of this study to explore to the relationship between a perceived inadequate amount of information and resistance to participate in a change process.

For a greater depth of understanding regarding relationships among leadership communication styles, influence tactics, information adequacy, and employee resistance to change in Thailand, it is important to recognize the influence of culture. Chaidaroon (2004) pointed out that the understanding of Thai culture provides both Thai and foreign leaders with a communication orientation for leader-subordinate interaction. In Thailand, a vertically structured society, downward communication is

respected and inherently practiced in organizations (Sriussadaporn-Charoenngam &

Jablin, 1999). With a relatively strong hierarchy and acceptance of power distance,

legitimated authority is automatically designated to Thai leaders (Hofstede, 2001).

This cultural norm influences the style of leadership, managerial influence tactics, and

information processing within a Thai organization. The purpose of this study, then, is

to investigate predictors of employee inclination to resist change through the three

variables of interest: leadership style, downward influence tactics, and perceived

information adequacy.

<div align="center">Rationale of the Study</div>

To date, employee resistance to change is a controversial issue. While some

regard resistance as a constructive reaction to an organizational change, others

consider resistance a behavior that constrains organizational development (de Val &

Fuentes, 2003; Piderit, 2000; Waddell & Sohal, 1998). Employee resistance to change

in this study has been taken into account as a reason for failure in the development

efforts. Regarding organizations that have gone through a transformational period,

resistance to change is permeable. It highlights the importance of information and

calls for leaders of an organization to constructively manage both change and their

subordinates for the survival of organizations. Given the premises of the study, such

factors as styles of leadership, influence tactics, and the amount of information

distributed to employees were addressed to find their relationship with the likelihood

of employee disposition to resist change during an organizational disturbance.

Concerning the Thai management style and organizational culture, the rationale for

conducting this research is three-fold.

The first rationale for undertaking this study was derived from recognition of the potential for change that intervene organizational members' psychological well-being. Smircich and Morgan (1982) noted that, when a change is implemented in an organization, change can result in all forms of routine tasks being redefined. The consequences of change then stimulate organizational members to engage in either self-assessment of their work-related ability or a questioning of their work-life stability. With regard to the effects of change, this study attempted to investigate employee's dispositions (i.e., routine seeking, emotional reaction, short-term focus, and cognitive rigidity) to resist change through a multidimensional view that is constructed based on cognitive, affective, and behavioral dimensions.

The second rationale for undertaking this study was that, although there have been many studies of organizational change, only a small number of these studies have investigated organizational change from an Asian perspective. In this regard, the construction of knowledge relevant to employee disposition as an inclination to resist chance and the predictive model proposed in this study are unique contributions to the literature.

Finally, the major concerns of the study of organizational change have focused on such issues as employee commitment, empowerment, job satisfaction, and readiness to change with effective performance and organizational development serving as dependent variables (Weber & Weber, 2001; Zhu, May, & Rosenfeld, 2004). Employee resistance to change has been overlooked as a factor contributing to organizational development and change management. Therefore, because of the scarcity of research on this issue, especially in the Thai organizational context, a systematic study of employee resistance to change is warranted. To close this gap in

the research, the concern was given to a fundamental understanding of current and future trends in employee resistance to change through the investigation of leadership style, strategies used to influence new behaviors, and the information adequacy.

Purpose of the Study

This study followed Oreg's (2003) concept of resistance that explained employee inclination to resist change in terms of four personal dimensions: routine seeking, emotional reaction, short-term focus, and cognitive rigidity. Based on this view of employee resistance to change, this study intended to explore the relationship among the four components of the employee disposition to resist change and the three predictors of employee resistance to change, specifically leadership style, downward influence tactics, and perceived information adequacy. Three purposes served as justifications for this study.

First, this research sought to determine the influence of transactional leadership styles on each of the four components of the employee disposition to resist change. Second, this study sought to examine the importance of influence tactics in predicting and explaining the variance in each of the four components of the employee inclination to resist change. Finally, this research examined the incremental influence of the distribution of internal information (information inadequacy) on each of the four components of the employee inclination to resist change. In this regard, this study sought to investigate whether information inadequacy could add significantly to an explanation of employee resistance to change after leadership style and influence tactics had been accounted for.

Significance of the Study

In the context of organizational change, communication is regarded as an instrument for organizing any disruptive reactions to organizational development. In this study, the emphasis was placed on three communication variables: leadership style, influence tactics, and perceived information adequacy. These variables are important in helping leaders understand the critical role of communication in organizing and managing change. In addition, a thorough understanding of the management of change within an organization will provide leaders with appropriate approaches for coping with resistance to change. During periods of change, leaders should not be the only organizational members able to communicate new visions. They are responsible for mobilizing and motivating employees to participate in change efforts and feel a sense of urgency about making necessary changes. It is expected that this study will provide a fundamental understanding of how resistance to change is constructed through employee perception of leadership style, influence tactics and information adequacy. In addition, the results of this study can have practical implications for leadership behavior, strategic design, and implementation of leader communication techniques in organizing and managing organizations during periods of organizational transformation and change.

Definitions of Terms

This section provides the definitions of terms and concepts used throughout this study.

Employee's dispositional resistance to change is an employee-difference component of resistance to change that is constructed based on a "tridimensional" (negative) attitude towards change, including affective, behavioral, and cognitive

components (Oreg, 2006, p.76). Employee-difference component of resistance to change disposition acts as an internal inclination of individual responses to resist change.

Stimulation-avoidance refers to a behavioral component of resistance to change where employees exhibit inclination to resist change.

Emotional reaction refers to an affective aspect of resistance to change reflecting the amount of stress and uneasiness the employees encounter change.

Risk intolerance refers to an affective dimension that concerns the feelings of fear and threat when employees confront risks that are invited by organizational change.

Cognitive rigidity refers to resistance to change at the cognitive level. This also includes the effect of change on employee's beliefs and values toward change.

Leadership styles refer to "the transactional – transformational paradigm that views leadership as either a matter of contingent reinforcement of followers by a transactional leader or the moving of followers beyond their self-interests for the good of the group, organization, or society by a transformational leader" (Bass, 1997, p. 130).

Transformational leadership refers to deliberate influence process in which leaders "change their associated awareness of what is important, and move them to see themselves and the opportunities and challenges of their environment in a new way" (Avolio & Bass, 2004, p. 95). Transformational leadership comprises of charisma and individual consideration.

Transactional leadership refers to the constructive and corrective manners in which reward structure and organizational roles and policies are used to influence

commitment and participation among employees (Avolio & Bass, 2004). Two styles of transactional leadership are passive avoidance and management-by-exception: active (MBEA).

Downward influence tactics refers to the managerial influence tactics to influence attitude and behavior of subordinates in pursuit of organizational objectives (Kipnis, Schmidt, & Wilkinson, 1980). Four proactive influential tactics relevant for managers in organizations include legitimizing, assertiveness, friendliness, and inspiration-control.

Information adequacy is the positive derived discrepancy score between the employee perceptions of the amount of information they required and the amount of information that they actually received (Daniels & Spiker, 1983).

Information inadequacy is the negative derived discrepancy score between the employee's perceptions of the amount of information they required and the amount of information that they actually received (Daniels & Spiker, 1983).

Organizational change refers to organizational responses to change in the external environment (Katz & Kahn, 1978). Organizational change includes change in the psychical form of an organization including process reengineering, merger and acquisitions, total quality management, foreign competition, downsizing, the newly appointed CEO or executive, or the replacement of new technology (Colenso, 2000; Ellis, 1992).

Innovation refers to an idea, practice, object, or technology that is perceived as new by employees in an organization undergoing change (Rogers, 2003).

A Summary

After the financial and economic crisis in 1997, several Thai organizations suffered from economic drawbacks which, in turn, served as key triggers for organizational change. From an open systems perspective, in giving constructive responses to the external environment, most organizations changed their management strategies and structures to be more open to new technologies and innovations.

Although it is believed that the creation of a new type of work and responsibility during the period of organizational transformation and change will be able to bring improvement and development to an organization, resistance to change is unavoidable. Resistance to change is perceived as a form of conflict that provokes psychological strain among employees (Waddell & Sohal, 1998). During this transformational period, those who are unable to adapt to a new working environment and fear a loss of control or some other advantages will resist change and react to change through unproductive working performance. Concerning organizational growth, leadership style, influence tactics, and information adequacy are believed to help leaders in managing change. Based on a Thai organizational context, it is assumed in this study that employee resistance to change can be easily formed.

CHAPTER 2

REVIEW OF LITERATURE

While an increasing number of organizational change studies have emphasized

resistance to change as a phenomenon that introduces difficulty into the organizational

change process (see, for example, Amabile, & Conti, 1999; Judge, Thoresen, Pucik, &

Welbourne, 1999; Trader-Leigh, 2001), this study attempts to extend this research to

explain employee inclination to resist change that incorporate a tridimensional

(negative) attitudes toward change in a Thai context. Three predictors are of interest:

leadership style, leader's influence tactics, and information adequacy. To lay a

conceptual foundation for the study, this chapter is organized into six main areas: (a)

Thai organizational communication culture, (b) open systems theory, (c) leadership,

(d) influence tactics, (e) information adequacy, and (f) employee resistance to change.

Thai Organizational Culture

Culture, according to Hofstede (1984a), is "the collective programming of the

mind which distinguishes the members of one group or society from those of another"

(p.82). With regard to growth in the discipline of organizational communication

within a non-western cultural context, culture provides an orientation to the

understanding of organizational communication, especially the pattern of

communication between leaders and followers (Hofstede, 1984a; Komin, 1990). To

illustrate this idea, culture is believed to exert an influence on communication flow in

an organization (Sriussadaporn-Charoenngam & Jablin, 1999), work-related values

(Komin, 1990), communication strategies (Stage, 1999), and behavior influence

tactics (Noypayak & Speece, 1998). In Hofstede's (1998) study, the Thai culture was

designated as collectivistic, high power distance, high uncertainty avoidance, and a feminine culture. Although, in this study, culture is not used as a tested variable, culture still plays an important role in the formation of hypotheses and data analysis. Thus, the presence of culture in this section would provide the foundation to the analysis and the interpretation of data in a Thai context.

Collectivism in an Organization

Individualism versus collectivism is a cultural dimension that concerns the extent to which people are integrated into a group (Hofstede, 1998). As a collectivistic culture, Thais desire harmony in the workplace. Thais emphasize the importance of the group over the individual. They interact in ways that maintain social harmony, avoid personal confrontation, promote loyalty, and save the other's face (Knutson, 2000; Komin, 1990; Roongrengsuke & Chansuthus, 1998). In their study, Knutson, Komolsevin, Chatiketu, and Smith (2003) found that Thais were more likely than Americans to display respectful communication and concern for others in the group. Knutson et al. (2003) also reported that Thais were more likely than Americans to employ non-confrontational communicative tactics while engaging in social interaction rather than challenging others' ideas. Additionally, Komin (1990) found that ego orientation is the utmost cultural value among Thais. Any overt display of anger or face threats that jeopardize social status and the face of others, especially those of superiors, are regarded as signs of ignorance, immaturity, and ruthlessness (Knutson, 2000; Sriussadaporn-Charoenngam & Jablin, 1999).

Power distance in an Organization

Power distance is defined as the degree to which power, prestige, and wealth are unequally distributed (Hofstede, 1998). Hofstede (1998) described the Thai

culture as reflecting high power distance. In addition, the studies of Komin (1990) and McCampbell, Jongpipitporn, Umar, and Ungaree (1999) supported Hofstede by noting that downward communication is respected in Thai organizations. Because of the rigid hierarchical system, confrontations with authority are considered disruptions to management and are strongly discouraged. Employees thus give respect, comply with superiors' policies and practices, and place superiors in a higher social status (Roongrengsuke & Chansuthus, 1998). Superiors, then, are automatically designated the holders of power, resources, and control.

Uncertainty avoidance in an Organization

An uncertainty avoidant culture is characterized by a low degree of tolerance toward uncertainty and ambiguity (Hofstede, 1998). The Thai culture was considered high uncertainty avoidance. According to Hofstede (1983), people from such cultures feel threatened by uncertain and ambiguity, and try to create security and avoid risk taking. Monthienvichienchai, Bhibulbhanuwat, Kasemsuk, and Speece (2002) stated that this cultural dimension enforces conformity. Another prominent illustration has been provided by Roongrengsuke and Chansuthus (1998). They noted that, when there was an absence of a specific job description, individuals in Thai organizations experience anxiety and uncertainty. Thus, it can be concluded that most Thai organizational members will try to avoid situations that are high in uncertainty, especially during an organizational change period.

Femininity in an Organization

A feminine culture emphasizes caring for relationships, modesty, and quality of life (Hofstede, 1998). The Thai culture is characterized as feminine (Hofstede, 1998). Concerning femininity in the Thai culture, it is ostensible that relationships,

social support, and the quality of life are major concerns. Knutson (2000) added that

Thais emphasize softness and politeness in appearance and presentation as important

communication skills. In addition, Sriussadaporn-Charoenngam and Jablin (1999)

indicated that Thai communication and interpersonal communicative styles are

indirect and non-dominant. Therefore, it can be said that nurturing and caring are the

characteristics of Thai people that bring about the implementation of non-assertive

and non-competitive approaches in discussing, criticizing, or challenging people who

possess higher status in an organization.

     The foregoing review of literature concerning Thai cultural values provides a

better understand of the unique characteristics of Thai communication and

management styles. Effective communication and management are specifically

contingent on how to communicate so as to avoid face-to-face confrontation, conflict,

and face threatening situations. Instead, displaying respect and politeness, especially

to seniors is prized.

<div align="center">Open Systems Theories</div>

     For more than three decades, open systems theory has been demonstrated as a

concept that can be applied to the study of organizations (Pondy & Mitroff, 1979;

Suchan & Dulek, 1998). Through a review of literature in organizational

communication and management, the concept of the open system is critical to the

study of organizational change and resistance to change as it emphasizes change as a

process rather than a product of a system (i.e., Bruke, 2002; Cao, Clarke, & Lehaney,

2004; Katz & Kahn, 1966) and resistance to change as an outcome of the process

(Romanelli & Tushman, 1994). Regarding this point, open systems theory is used as

the theoretical framework for this study because it allows for a focus not only on

communication between leaders and subordinators but also a focus on leader influence tactics, and information perceived by employees as predisposing an employee to resist change. The following examines the historical development of open systems theory, and related theories that share similar assumptions and their application to organizational and management research.

Historical development of open systems theory

System thinking applied to the study of organizational communication has proliferated since the 1970s. In their work, "The Social Psychology of Organization", Katz and Kahn (1978) initially viewed an organization as a subsystem operating within one or more larger systems. Viewed from open systems perspective, activities, strategies, and operational systems are the functions of an organization and its relationship to these systems (Hickson, 1973; Katz & Kahn, 1978; Oliver, 1991). According to Suchan and Dulex (1998), the open systems theory was first developed from biological science by a German biologist Ludwig von Bertalanffy in 1950. His general systems theory has been acknowledged as the first system approach that postulates the concept of openness of every system. In 1956, Suchan and Dulex also noted that the development of open systems had been broadened by Boulding, from the biological concept of open systems to explain "openness" as a characteristic of more varieties of existing systems. His framework of open systems is known as a hierarchy of systems and can be classified using nine levels of complexity (Scott, 1992).

The nine levels of Boulding's typology are (a) framework or static structure of systems; (b) clockworks or noncontingent dynamic structure of systems; (c) cybernetic systems or self-regulation as the system behavior to an external prescribed

target or criterion; (d) open systems or self-maintenance as the adaptive capacity of systems through a throughput of the environmental resources; (e) blueprinted-growth systems or a developmental ability of the system to duplicate or reproduce by the production of "seeds" or "eggs" containing preprogrammed instructions; (f) internal-image systems or a detailed awareness of the environment acquired through differentiated information and organized into an image or knowledge structure; (g) symbol-processing systems or self-consciousness as the ability to construct meaning and use language, especially for interpersonal interaction; (h) social systems or a social organization comprising a collection of human beings; and (i) transcendental systems or any unknown or non-existed systems that are possibly developed (Pondy & Mitroff, 1979; Scott, 1992). Based on the nine levels of Boulding's open systems theory, Scott (1992) categorized the system concept into three levels. He noted that levels 1 to 3 include physical systems; levels 4 to 6 encompass biological systems; and levels 7 and 8 represent human and social systems.

The development of open systems theory is also found in the work of Katz and Kahn (1966). To Katz and Kahn (1966), instead of viewing an organization as a building where people come to work, an organization should be viewed as a place comprised of people working together. They developed an open system theory to explain the phenomenon of the social psychology of organizations. They explained that the study of a social psychology extended the scope of behaviorism and psychoanalytic theories which focused on individuals, interaction, and their social structure. Two aspects of social behavior patterns were highlighted. First, Katz and Kahn (1978) emphasized the importance of "system character" which considers the interconnectedness of each unit in a system. Another emphasis was placed on the

"openness to environment inputs" (p.3). This characteristic brings the state of flux in the organization.

Katz and Kahn (1966) listed nine characteristics of such a system: (a) the importance of energy; (b) the throughput; (c) the output; (d) the system as a cycle of events; (e) negative entropy; (f) information input and the coding process; (g) the steady state and dynamic homeostasis; (h) differentiation; and (i) equifinality. The nine characteristics explain the system model of the organization. According to the dynamic characteristics of the organization, a system is basically concerned with problems of relationships, structure, and interdependence.

Another systems theorist, Seiler (1967), used systems theory to analyze organizational behavior, particularly in a business organization. Seiler noted that it is necessary to realize that "we are dealing in a business organization with a multitude of systems of varying sizes, complexity, and types of relation to their external environment" (p. 24). In this sense, the critical key word as "interdependence" between a system and its environment led Seiler to propose internal and external environmental factors of systems as an assumption in his diagnostic framework. Internal forces, or the organizational system, can be illustrated by three interdependent domains: (a) internal input comprised of humans (i.e., skills, personal values, motivation, attitudes), technologies, social system (i.e., the informal structures and the selection of technology used in an organization), and organization (i.e., the alignment of strategic planning, production design, and organizational structure to achieve goals); (b) the actual behavior consists of activities, interactions, and sentiments of the members of a system; (c) organizational outputs presented by levels of productivity, satisfaction, and development.

The three forces of external environment to human behavior in organizations are human, organizational, and technological forces. Seiler (1967) noted that the external environment relates to an organization in two distinct ways: environment as resource constraints and environment as selections to be made among available resources. He finally concluded that organizational behavior can be thoroughly understood by first considering organizations and their relation to the environment by the extent to which the environment created obstacles or offers choices to the organizations. Then, once the external environment, including human, organizational, and technology forces, has been institutionalized into the system, the three internal mechanisms will finally act and respond accordingly.

As presented in earlier works, although open systems theory can be utilized in a variety of disciplines, applications of the theory share the common characteristics of openness and adaptation. In addition, open systems theory focuses on the input-throughput-output processes as well as the importance of feedback as one kind of energy to maintain and update the entire system of an organization. In order to elaborate the idea of open systems theory within organizational and management disciplines and to demonstrate its application for the study of organizational change and resistance to change, the next section focuses on the characteristics and the general concept of the related field of open systems theory.

Resource dependence theory is a branch of open systems theory that was fundamentally developed from general systems theory. As the founders of resource dependence, Pfeffer and Salancik (1978) emphasized environmental analysis as a crucial activity for the survival of organizations. Based on resource dependence theory, three forms of the relationship between organizations and their environment

have been recognized. First, "an organization's attempts to satisfy the demands of a given group are a function of its dependence on that group relative to other groups" (p. 80); second, in an attempt to gain control over the group, managers try to manage their external dependencies; lastly, the authority to make decisions is contingent to the power distribution in the organization (Levasseur, 2004).

When a concern is put on the social environment of an organization, change unavoidably comes into focus. Change is considered as a consequence of individual decisions and actions taken by organizational members (Levasseur, 2004). When change is a result of an individual and his authority, questions of (1) who controls the organization and (2) how power and influence are distributed are highlighted. Perhaps a negative response such as resistance appears to challenge those in power (Collinson, 1994). In the analysis of the external control of organizations, Pfeffer and Salancik (1978) stated that,

> The environment (a source of uncertainty, constraint, and contingency) impacts the distribution of power and control within the organization, which affects the selection and removal of executives, which influences organizational actions and structures. (p. 229)

Consistent with Levasseur (2004), Oliver (1991) stressed the necessity of adapting to environmental uncertainty, coping with inconsistency of internal mechanisms, and making a proactive plan to control external constraints. He further described that, through the exercise of power, control, or the negotiation of interdependency, not only is organizational uncertainty reduced, but also the external environment is strategically managed. However, Mumby (2005) proposed an

alternative perspective to Levasseur and Oliver asserting that resistance to change was also found as a consequence of an attempt to control discursive behaviors.

As a member of an environment, change from an external force poses either uncertainty or advantage to an organization. The recognition of social context and environmental constraints is an important factor in organizational adaptation to survive. Next, some studies that implement the open systems theory as a theoretical framework are discussed.

Open systems theory in organizational communicational research

Katz and Kahn's framework of open systems theory exerts much influence upon the work of later open systems theorists. With a harmonious perspective to Katz and Kahn, Hickson (1973) emphasized the adaptive component of the systems model and the ability to exchange, especially information processing and feedback to identify the ideal functioning of organizational communication. From Hickson's viewpoint, information input is crucial to the communication process to the extent that information processing is the energetic process taken into the system. Information is a power in that it helps leaders facilitate member adoption of new behaviors and innovations. At the same time, feedback is regarded as information that is brought into the organization so as to alter its functions and to adapt to environmental demands.

Similar to Hickson (1973), Burke (2002) applied Katz and Kahn's framework of open systems theory to explain the importation of information, negative entropy, and adaptation during a period of organizational change. He mentioned that the openness of organizations to their environment brings about an increasing state of negative entropy or organizational disorder. However, because of the ability to learn

and adapt through imported information, organizations can reorganize, or perhaps fundamentally adjust their structural characteristics for the maintenance of performance and survival. With regard to system thinking, Burke (2002) recognized the importance of employee commitment and participation. He noted that, if a planned change included employee demands and opinions, commitment and participation would occur. On the contrary, if a planned change ignored employee demands and opinions, employees might resist that change.

An open systems model was also utilized in the work of Mohrman and Mohrman (1989). They extended the importance of the external environment to the implementation of change at the micro level of an organization. Mohrman and Mohrman stated that to increase organizational performance and decrease risk, the macroeconomic environment should be considered a driving force of change. To translate environmental change into a practical plan, Mohrman and Mohrman employed an open systems framework and described change as a multi-step procedure. Change involves registering the change, developing a strategy, designing an organization that is capable of influencing the strategy, and then implementing the plan. At this level, the implementation of change shifts from a macro level process (driven by the external environment) to a micro level process whose success is tied into the ability of organizational leaders to constructively respond to uncertainty and resistance among organizational members (Mohrman & Mohrman, 1989).

The above analysis of open systems theory and its elaboration of the concept aid in the extension of open systems theory in such research fields as social sciences, psychology, sociology, organizational communication, management, marketing, and resistance to change. Regarding the study of an employee resistance during an

organizational change, open systems theorists view an organization as a collection of individuals and their mutual relationship within a structure and its supporting environment. When the external environment brings opportunities or posts constraints to an organization, the internal systems of the organization need to create awareness and adapt to change accordingly to maintain the organization's performance and stability (Das, 2001; Heifetz & Laurie, 1998; Moran & Brightman, 2001; Sayles, 1989). To extend this research, a number of studies have argued that to manage organizational turmoil, the change process must be managed by an institutional leader who is able to address and direct change processes and members of a system (Ahn, Adamson, & Dornbusch, 2004; Nadler & Tushman, 1989a; White, Hodgson, & Crainer, 1996). The discussion in following section focuses on leadership and its imperatives during the change process.

<div align="center">Factors Influencing Employee Resistance to Change</div>

<div align="center">Leadership Styles</div>

As evidence by more than 7,500 references in Bass's Handbook on Leadership (1990), leadership remains a champion in the twentieth century as a frequently studied topic in the field of organizational communication (Zorn & Violanti, 1993). The reason for such an emphasis could lie in the fact that leadership and leaders' responsibilities go beyond the scope of top management to incorporate how to cope with change and it consequences for organizational members. In this section, leadership is discussed to identify the redefined roles of leader and to distinguish leadership for organizational change from a conventional leadership. Then, the discussion centers on change leadership. Transformational leadership theories are examined next to investigate different styles of leadership. Finally, the research

concerning leadership and the consequences of the use of different styles of leadership are of concern.

<u>Definition of Leadership</u>

Several definitions of leadership have been developed, but its fundamental themes can be defined as a process of social influence through the leader-follower relationship toward the achievement of an expected goal (Barbuto, Fritz, & Matkin, 2001; Barbuto, Scholl, Hickox, & Boulmetis, 2001; Yukl, 1998). Barbuto, Fritz, and Matkin (2001) stated that this concept seems to designate leadership as a process of influence through the use of rules, strategies, and power to pressure followers to exert effort in pursuit of organizational goals. However, consistent with Kotter (1990), Zaleznik (1992) and Paglis and Green (2002) argued that this definition was incapable of explaining the dynamic properties of leadership and the performance of leadership in modern organizations. Leaders and managers should be considered different in patterns of action and relationship to their followers. Discrepancy between the definition of leaders and managers as well as leadership and management received much attention from researchers as the way to advance the understanding of leadership (Yukl, 1998). However, some researchers argued that the combination of leader and manager could be more effective for handling a dysfunctional situation or even be better for enhancing work performance (Kotter, 1990).

Based on a literature review exploring differences between leadership and management, Paglis and Green (2002) reported two primary distinctions. First, the dissimilarity could be viewed in terms of the exercise of power through task responsibilities. While managers' tasks focus on directing and controlling systems, leaders' tasks are directed toward encouraging follower commitment (Paglis & Green,

2002). A second aspect of the differences concerned the degree of openness to change. On one side, managers are committed to maintain and control working systems through a change plan. On the other side, leaders view change as an opportunity to gain follower commitment and overcome problems that might result in delays to the process of change (Paglis & Green, 2002). Consistent with this point, Yukl (1998) delineated that managers are those who look for stability whereas leaders are regarded as those who seek for innovation.

In addition, Kotter (1990) categorized the differences between leadership and management in to four major domains: (a) coping with change versus coping with complexity; (b) setting a direction versus planning and begetting; (c) aligning people versus organizing and staffing; and (d) motivating people versus controlling and problem solving. White, Hodgson, and Crainer (1996) compared managers as dictators who know what to do by setting a mission and establishing a process of work. Similarly, Ahn, Adamson, and Dornbusch (2004) viewed management as a predictive process and discussed leadership as an adaptive process of change. Ahn et al. explained that the tasks of management are based in the process of setting and maintaining systems of work while leadership's responsibilities are based in abilities to visualize the future, match the organization with a common vision, and encourage morality among followers. Thus, leadership was said to be adaptive to change and focuses on individuals rather than the work process.

Thayer (1988) proposed a thought-provoking idea of leadership. He commented that "the idea of leadership fascinates us not because of the way it is, but because of the way we are" (p. 234). In this sense, several efforts have been made to investigate various aspects of change leadership. Researchers such as Ahn et al.

(2004); Nadler and Tushman (1989a); Pawar and Eastman (1997); White et al. (1996) agree that explanations of leadership are likely to be unfinished, tentative, incomplete, and equivocal. Thus, in order to gain a better understanding of leadership for organizational change, leader's behaviors, attitudes, and task roles need to be reconsidered.

<u>Change Leadership</u>

When an organization's performance is sub-par, organizational change is most often initiated by leadership (Pawar& Eastman, 1997). Discussions of open systems (Cao, Clarke, & Lehaney, 2004; Katz & Kahn, 1966) as well as the threat-rigidity theory (Staw, Sandelands, & Dutton, 1981) help elaborate a situation in which leaders are the critical performers for the implementation of change. These theories posit that environmental change causes a threat to both organizations and organizational members. When individuals deal with threat either from the external or the internal environment, they encounter the realm of uncertainty. Staw, Sandelands, and Dutton (1981) further explained that when the implementation of a change plan is in progress, feelings of fear and anxiety cause a diminution in the ability to make decisions, maintain performance, and give critical responses. Therefore, leaders are major performers in the change process.

Pawar and Eastman (1997) and Richarson (1995) exhibited similar thought that to improve systems and individuals' skills, change leaders need to be competent in creating awareness and acquiring relevant information. Nadler and Tushman (1989a) delineated four aspects of change leaders characters and responsibilities. First, leaders should create an awareness of the external environment and be capable of determining key strategies and moves that can enhance the organization's

competitive status. Second, leaders for change should be able to create a sense of urgency through a means of generating employee energy and motivation to be involved in the change plan. Third, leaders need to be able to manage and reduce employee uncertainty. Finally, leaders should have a certain amount of controlling power. The theory of threat-rigidity offers a good explanation of the final characteristic of a leader. According to threat-rigidity theory (Staw, Sandelands, & Dutton, 1981) leaders gain a certain amount of power over followers because of the consequences of threats and uncertainty that reduce the ability to make critical decisions. As a result, followers increase their reliance upon their leader.

In addition, a behavioral aspect of the change leader role is described by Heifetz and Laurie (1997). They purposed six roles for leading an adaptive workplace. The first role involves getting on the balcony. As if on a balcony, a leader should be able to observe the overall activities, move players back and forth, and mobilize the right person to the right place. The first role postulates the second role, identifying the adaptive challenge. Heifetz and Laurie emphasized gaining trust at this level. A leader can generate trust when he or she is able to reflect the underneath conflict of an organization so as to let employees gain insight into what is the worst and the best of organizational norms and values. The next role is regulating distress. A leader needs to generate distress among his/her followers in order to motivate a sense of urgency and participation. The fourth principle is maintaining discipline. For instance, the role of a leader is to stimulate followers to discuss any conflicts on the table in order to utilize those conflicts as a source of creativity. The fifth principle is giving the work back to the people. The authors suggested leaders need to support and instill confidence in their people to solve their own problems. The last principle is to protect

the voice of leadership from below. Heifetz and Laurie suggested that leaders should be open and listen to their people. Consequently, they argued that different perspectives should be integrated to indicate potential benefits.

Although leadership and management are different in their philosophy of work, several researchers (e.g., Ahn, Adamson, & Dornbusch, 2004; Kotter, 1990; Yukl, 1998) agree that the two systems of action are complementary. Kotter (1990) added that in the highly competitive world of business nowadays, the combination of leadership and management are significant and are likely to improve both leader and follower performance.

Transformational Leadership Theories

To respond to either external or internal pressure, leadership is a phenomenon that helps organizations overcome their malfunctions. Through a review of leadership literature, Bass's (1985) transformational leadership theory has become a topic of interest among researchers in the fields of organizational communication, managerial management, and change management.

Transformational leadership theory was originally developed by Burn (1978) in his study of political leadership. In his work, the social exchange model was used to explain transactional leadership whereas the discussion of transformational leadership was presented through rhetorical skills as a means for creating new visions and shifting followers' beliefs, desires, and values. In 1985, the theory of transformational leadership was more systematically studied by Bass who applied Burn's theory of transformational leadership to organizational settings. Central to Bass's theory is the idea that leaders motivate followers to commit to and realize performance that exceeds their expectations. In the process, a leader increases

follower's awareness about the organization's goals and the directions to achieve them, encourages followers to transcend their own self-interest for the good of the organization and its survival, and stimulates followers to meet self-actualization as the higher order of Maslow's hierarchy of needs (Bass, 1985). As a result, followers are expected to create greater effort, commitment, and performance (Bass, Avolio, Jung, & Berson, 2003; Howell & Avolio, 1993; Waldman, Bass, & Einstein, 1987).

The theory of transformational leadership postulated a typology of leadership behavior that operationalized five elements of transactional and transformational leadership. The Multifactor Leadership Questionnaire (MLQ) was a measurement developed by Bernard M. Bass and his associates (Bass, 1985; Bass, Avilio, & Goodheim, 1987; Waldman, Bass, & Einstein, 1987) to determine the degree to which a leader exhibits transformational and transactional leadership and the degree to which followers are satisfied with their leader and their leader's effectiveness.

Transactional leadership

Transactional leadership is based on an exchange between leader and followers where followers are rewarded on the basis of their work performance (Zorn &Violanti, 1993). Bass (1985) identified contingent reward and management-by-expectation as the two factors that described transactional leadership behavior. Laissez-faire was identified later in the studies of Bass, Avolio, Jung, and Berson (2003) and Avolio and Bass (2004) as a form of non-leadership.

Contingent reward leadership relies heavily on a system of compromise and control (Bass, 1985) and on a reciprocal relationship between a leader and followers (Howell & Avilio, 1993). Contingent reward leaders are concerned with how and when to give directions and orders to followers. They promote compliance by

assuming that subordinates need guidance and set goals to assist them to accomplish their tasks.

Management-by-expectation leaders have implicit confidence in their followers to reach the common standard of work requirements (Bass, 1985). Thus, leaders are rarely involved in the system and do not encourage new ways of working (Hater& Bass, 1988). Because the intervention of leaders occurs only when employees fail, a lack of positive feedback is assumed (Bass, 1985). Only negative feedback is provided as a message from a management-by-exception leader.

The laissez-faire leader is a leader who lacks the ability or motivation to get involved with his/her employees. Bass, Avolio, Jung, and Berson (2003) explained that laissez-faire is a passive form of leadership. The leader either takes no action before problems arise or no actions are exhibited to deal with problems. Thus, laissez-faire is the most inactive and least effective style of leadership.

<u>Transformational leaders</u>

In contrast, transformational leaders differ from transactional leaders in that they attempt to raise their followers' consciousness by creating energy, trust, and commitment among those followers (Bass, 1985; Kent, Crotts, & Azziz, 2001). Bass (1985) initially classified transformational leadership according to three conceptual factors: charisma, individualized consideration and intellectual stimulation. Then, through theory refinements and research, a fourth factor was identified: inspirational motivation. Later, the term "charisma" was changed to "idealized influence" because charisma was potentially incompatible with transformational ideals (Bass et al., 2003).

In Bass's (1985) quantitative explorations of leadership, charisma or idealized influence is the factor that explains the greatest proportion of transformational leadership. Charismatic leaders or idealized influence leaders are expressive leaders who are capable of instilling pride, faith, and respect. They are able to visualize an organizations future and communicate a sense of mission (Hater& Bass, 1988).

Individualized consideration is supportive leadership (Bass, 1985). Leaders conforming to this style represent organizational mentors (Barbuto, 2005). They exhibit high regard toward employees and treat them as if they are an important mechanism of an organization. Intellectual stimulation refers to leaders who encourage creativity and stimulate employees to initiate new ways of thinking on a regular basis (Bass, 1985).

Leadership and Organizational Change

Over the past 20 years, a considerable number of studies have employed the MLQ to investigate a wide array of common indicators of leadership and its relationship to employee effectiveness and satisfaction (Avolio & Bass, 2004). Of all factors, transformational leadership exerted a good predictive level for organizational performance and change processes (Bass, 1985; Howell & Avilio, 1993; Kent, Crotts, & Azziz, 2001; Tucker & Russel, 2004).

Through open systems theories, the external and internal environment are important factors influencing leadership styles (Burk, 2002). An attempt to link the concepts of leadership, followership, and environment can be found in a study conducted by Gibbons (1992). Two aspects of leadership were considered by Gibbons, one directed at followers and the other at the external environment. He suggested that, during organizational chaos, subordinates increase their demand for

leadership in either transactional or transformational styles. However, he noted that the external factors, such as environment complexity and resource scarcity, lead to the need for transformational leadership if development is of concern.

In addition, Pawar and Eastman (1997) emphasized the reciprocity between organizational context and transformational leadership. They explained that context influences leaders to adopt an appropriate transformational process. They acknowledged that, through receptive modes of leadership, transformational leadership has the ability to shape the context. An emphasis is put on the period of organizational adaptation. During this phenomenon, leaders generate new beliefs, build new frames of reference for their followers, and align organizational strategies and tasks with the dynamic environment. Given the importance of the transformation for organizational members' attitudes and behaviors during the change period, Tucker and Russel (2004) supported the influence of the transformational leader. They revealed that transformational leaders were a crucial component of organizational development. Effective transformational leaders use their power and authority to inspire and motivate their followers. Consequently, they are capable of fostering new directions, new inspirations, and new work attitudes among their subordinates (Tucker & Russel, 2004).

Similarly, Paglis and Green (2002) supported the importance of leadership as an influence process during periods marked by rapid change. They added that leaders who are able to set an organizational vision, perform in a goal-directed manner, and make higher quality decisions in crisis situations will successfully gain commitment and lead their followers to reach organizational goals. However, Waldman, Bass, and Einstein (1987) and Bass, Avolio, Jung, and Berson (2003) argued that the contingent

reward factor of transactional leadership is able to increase performance appraisals in a large organization involved in manufacturing, wholesale and retail distribution.

Consequences of Leadership Styles

Consequences of leadership styles have been revealed in several ways. With respect to positive outcomes, several studies have shown transformational leadership styles to be positively related to employee satisfaction and performance. Given the emphasis on transformational leadership, Harter and Bass (1988) conducted a study focusing on employee perceptions of leaders. Their findings illustrated positive results in the implementation of transformational leadership styles during rapid changes at Federal Express. They found that transformational leaders received higher scores than transactional leaders on subordinates' ratings of effectiveness and satisfactions.

Howell and Avolio (1993) employed the MLQ as a measurement to examine the impact of leadership on organizations. The major contribution of their work was the extension of Bass's (1985) model in the three distinctive ways. First, results indicate that three factors of transformational leadership (charisma, intellectual stimulation, and individual consideration) are directly and positively related to goal achievement of a consolidated-business-unit. Second, a leader's support for innovation moderates the relationship between transformational leadership and good performance. Lastly, they found that locus of control, a key personality characteristic, was positively related to rating of transformational leadership. From their study, two factors of transactional leadership (management-by-expectation and contingent reward) were not effective leadership styles.

In the same vein, Deluga (1988) found that, compared to perceived transactional leaders, perceived transformational leaders elicited a closer link with leader effectiveness and employee satisfaction. He reasoned that, because of the equilibrium of flow of influence between leader and employees, both leader and satisfied employees effectively work in the pursuit of the organization's mission.

Among research that focused on transformational leadership and its effectiveness, a study by Barbuto, Fritz, and Matkin (2001) examined leader power and follower resistance. Drawing on the theory of transformational leadership and the theory of social power, they found a negative relationship between leader reward power and leader use of individual consideration. They demonstrated that, when compared with leaders who employ individual consideration, leaders possessing strong reward power are less concerned to the development of interpersonal relationships. They also disregard the continuous growth and development efforts with their subordinates. This result suggests a possibility for employee resistance.

Despite the fact that many leadership studies have been directed toward different styles of leadership as predictors of employee effectiveness and satisfaction, there has been less empirical research directly relating leadership style to employee resistance to change, especially in Thai organizations. Thus, based on Bass's theory of transformational leadership, this study sought to investigate leadership styles that lead to employee tendency to resist change.

<center>Influence Tactics</center>

There have been many approaches to organizational change, but the study of superior-subordinate communication is seen as playing an important role in understanding the role superiors play in influencing new behaviors that are consistent

with the requirements of new tasks. The study of whether managers or leaders purposefully influence change on their subordinates is important to a fuller understanding of organizational change (Rao & Hashimoto, 1997). Deluga (1990) asserted that our understanding of leadership will not be complete without an appreciation of leader power and influence. In this section, a definition of influence tactics is provided as so to shape the idea of leadership influence tactics. Then, the Profile of Organizational Influence Strategies (POIS) is introduced and discussed as a tool to measure influence tactics. Next, influence tactics are discussed in their relation to organizational change and leadership style. Finally, the discussion of influence tactics focuses on their consequences.

Definition of Influence Tactics

According to Kipnis, Schmidt, and Wilkinson (1980), influence refers to the behavioral strategies that managers use to change the attitudes and behaviors of subordinates to reach organizational and personal goals. Rao and Hashimoto (1997) extended the definition of Kipnis and his colleagues to include the exercise of leaders' influence to either obtain or fail to obtain compliance. In a harmony with Rao and Hashimoto, Schermerhorn and Bond (1991) and Yukl (1998) called for an attempt to change behavior as the downward managerial influence in order to describe the use of interpersonal networks to influence the behavior of subordinates to effectively accomplish organizational goals.

Through the analysis of managerial behavior, Terpstra-Tong and Ralston (2002) defined influence tactics as managerial strategies that deal with interpersonal relationships. They explained that an effective manager achieves work through interpersonal networks which comprised of subordinates, co-workers, and superiors.

In this sense, networks–influence tactics can be thought of in the form of relative power and influence. From one side, attempts to use downward influence tactics are either means to maintain leader power (Yukl, 1998) or a source to drive internal mechanisms (employees) to achieve organizational goals (Kipnis, Schmidt, & Wilkinson, 1980; Kotter & Cohen, 2003). On the other side, influence tactics are also employed by subordinates (e.g., to resist an innovation that has been brought into an organization) as a tool for negotiation, (Barbuto, Scholl, Hickox, & Boulmetis, 2001; Deluga, 1990) or receive a favorable performance evaluation (Kipnis & Schmidt, 1988. However, the focus of this study is on the former direction of influence strategies.

Downward Influence Tactics

During the process of organizational change, Ledford, Moharman, Moharman, and Lawler (1989) asserted that influence was ostensibly engaged in organizational leaders to cope with all sorts of problems and to help subordinates accomplish organizational goals. As agued by some of managerial researchers, leadership is a contextual factor which influences behaviors and attitudes of subordinates through the exercise of power (Deluga, 1990; Yukl, 1998). Therefore, given the importance of leadership influence strategies during organizational change, downward influence is highlighted in this study. Downward influence involves attempts by an agent (the one exerting the influence or the leader) to change the behavior, attitudes, or beliefs of the target (the one being influenced or the followers (Kipnis et al., 1980; Yukl & Falbe, 1990). Yukl (1998) also delineated downward influence as a leader's attempt to influence subordinates to carry out requests.

The Profile of Organizational Influence Strategies (POIS)

The Profile of Organizational Influence Strategies (POIS; Kipnis & Schmidt, 1982) has become one of the most frequently used instruments in research on managerial influence (Schriesheim & Hinkin, 1990; Rao & Hashimoto, 1997). The POIS originally developed from a study of intraorganizational influence conducted by Kipnis, Schmidt, and Wilkinson (1980). This study was conducted to determine the types of influence tactics people employ at work to influence their subordinates, peers, and superiors, as well as their reasons for attempting to influence others.

In their empirical study, Kipnis et al. (1980) initially identified eight distinct intraorganizational influence tactics used by U.S. managers: assertiveness, ingratiation, rationality, sanctions, exchange, upward appeals, blocking, and coalitions. They described assertiveness as an attempt to influence subordinates by being forceful. Ingratiation involves using tactics that create a favorable impression with subordinates, causing to think well of their superiors. Rationality includes using data, information, and logical arguments to convince subordinates. Sanctions involve using organizationally derived rewards or punishments. Exchange refers to the exchange of favors between superiors and subordinates where superiors might offer time, effort, and skills or access to organizational resources. In using upward appeals, superiors rely on more powerful members of the firm to gain subordinate compliance. Upward appeals were used either formally through the chain of command or by asking superiors to deal informally with subordinates. Blocking includes an attempt to stop subordinates from carrying on a task by engaging various kinds of blocking tactics. Finally, coalitions involved mobilizing others to support the superior's influence attempts.

Later Kipnis and Schmidt (1982) developed a refined version of intraorganizational influence tactics, the POIS, into three forms to assess interpersonal influence with superiors (form M), subordinates (form S), and peers (form C). Form M (manager) was a 27 item questionnaire developed to identify the influence tactics subordinates use to influence their manager. Kipnis and Schmidt (1982) excluded sanction as it was not applicable in upward influence tactics. Form C (co-workers) is a 27 item questionnaire utilized to measure attempts to influence co-workers. Since the focus of this research is on attempts to influence subordinates, the 33-items POIS (form S) will be used. Kipnis and Schmidt identified seven categories of tactic relevant to downward influence: assertiveness, friendliness (or ingratiation), reason (or rational persuasion), bargaining (or exchange), higher authority (or upward appeals), sanctions, and coalitions.

Although, the construct validity of the POIS has been proven, and further application of this instrument has been encouraged for the further application by Blickle (2000), critiques of the POIS were also found. One ostensible criticism was found in the work of Schriesheim and Hinkin (1990). In their re-examination on the POIS instrument, Schriesheim and Hinkin found that the dimensions reflected in Kipnis, Schmidt, and Wilkinson's work were generally supported. However, they suggested that the POIS would be substantially improved by deleting some subscale items and adding other items. In this regard, they proposed an 18-item instrument which was substantially different from the 58-item scale developed by Kipnis, Schmidt, and Wilkinson (1980).

Yukl and Falbe (1990) replicated and extended the work of Kipnis et al. (1980). They developed a new survey that resulted in some changes to the influence

strategies created by Kipnis et al. (1980). Some items in the Kipnis's et al. scale were deleted. Sanction was renamed "pressure". Based on their review of literature concerning managerial leadership, inspirational tactics and consultation tactics were added to the new scale. The eight components of Yukl and Falbe's Influence Behavior Questionnaire (IBQ) are pressure tactics, upward appeals, exchange tactics, coalition tactics, ingratiating tactics, rational persuasion, inspirational appeals, and consultation tactics. Inspirational appeals involve emotional requests or proposals that stimulate enthusiasm by increasing a subordinate confidence (Falbe & Yukl, 1992). Consultation tactics can be thought of as tactics that managers seek to get their employees in a good mood or to think favorably of them before making a request (Falbe & Yukl, 1992).

Influence Tactics and Organizational Change

During a state of internal disturbance, an individual's cognitive shift or paradigm shift is a major concern as it leads that individual to encounter uncertainty and ambiguity (Ledford, Moharman, Moharman, & Lawler, 1989). A cognitive shift occurs when individual beliefs, values, and assumptions are challenged and altered by some legitimately forceful actions. With this regard, power and influence have been increasingly highlighted in the study of organizational change and management. Howell and Higgins (1990) stated that during a change process, uncertainty and ambiguity produced more influence attempts, and greater influence tactics are used among change leaders. Garko (1992) supported that when managers perceive subordinates to be inattentive, unfriendly, and tense they more frequently used assertiveness, coalitions, higher authority, and sanctions to gain compliance from those subordinates.

In a downward direction, a leader influence tactics can be considered to be means to redesign and communicate new organizational practices (Nadler & Tushman, 1989b). By emphasizing the exercise of power and influence on the part a leader, Nadler and Tushman (1989b) considered envisioning and controlling as the major components of leadership. While envisioning refers to the creation of an approach to the future and development, controlling involves setting work procedures and organizational goals, monitoring work process, and measuring productivity (Nadler & Tushman, 1989b). Nadler and Tushman also illustrated that envisioning and controlling were strategies used to encourage new behaviors through day-to-day activities such as the use of agendas for events or meetings, the use of humor, stories, and myths, the use reward and punishment systems, and the use of newsletters. These day-to-day communicative approaches in turn provide a clearer picture for this study to the extent to which they support Bass (1985) that different styles of leadership bring about different selections of tactics.

During a state of organizational disturbance, commitment among employees is greatly expected. Gravenhorst and Boonstra (1998) stated that commitment was an urgent requirement during the change process because new innovations and work responsibilities usually demand that organizational members alter old behaviors and adopt new behaviors. The findings from a study of Falbe and Yukl (1992) also affirmed the exigency of employee commitment. They found that employee commitment could be obtained through such influence tactics as consultation and inspirational appeals where environment was likely to be supportive. However, employee resistance to change was likely to occur as a result of the use of strategies such as rational persuasion, legitimating tactics, coalitions, and pressure.

<u>Influence Tactics and Leadership</u>

With the regard to the relationship between the consequences of an individual's paradigm shift and the ability of a leader to pass a vision onto followers, a leader's influence tactics have received attention from several managerial and organizational communication scholars (e.g., Kipnis, Schmidt, & Wilkinson 1980; Lamude & Scudder, 1995; Noypayak & Speece, 1998; Yukl & Falbe, 1990). Rogers (2003) propounded a thought-provoking claim relevant to this issue that a change leader is not necessarily a powerful individual but can be anyone who knows how to approach others via communicative and persuasive skills.

To date, influence tactics have become an important topic of study that cuts across various fields of study. A great number of studies have paid attention to leader influence behaviors while others have emphasized the outcomes and the implications of influence tactics. In the study of intraorganizational influence tactics by Kipnis, Schmidt, and Wilkinson (1980), the original POIS was constructed and used in two studies of power that people use to influence new behaviors on the part of their superiors, co-workers, and subordinates. The contribution of their study to the field of leadership research is two fold. Kipnis et al. (1980) found that managers had different reasons for influencing their subordinates. Another significant finding was that the direction of influence (upward, downward, or lateral) was also contingent on influence objectives or the value associated with outcomes. They reported that ingratiation tactics were employed when managers sought personal assistance while pressure tactics were implemented when managers assigned work to their subordinates. Pressure tactics and rationality tactics were essential when managers

wanted to increase employee performance, and rationality tactics were used when a new idea or a change plan was introduced.

The study of Kipnis et al. (1980) postulated the fundamental assumption among researchers in the managerial field that the tendency to use each influence tactic depends on the expectation that the tactic will lead to an expected and desired outcome. One of the studies that extended the work of Kipnis et al. (1980) was conducted by Yukl and Falbe (1990). They developed a comprehensive list of influence objectives and reported that assigning new tasks, requesting faster and better performance, and requesting changes in plans and procedures were objectives for using downward influence attempts. Requesting resources and attempting to gain support for the agent's proposals were found to be utilized in upward and lateral influence efforts. Requesting approval occurred most often in situations of upward influence. Their results also gave confirmation to Kipnis and his colleagues' report of differences in reasons to support managers' use of influence tactics. In addition, Schermerhorn and Bond (1991) identified three relevant outcomes in influence situations including the need for compliance gaining, responsive sanctions, and/or the expectation for a side payment.

To influence subordinates, the objectives are not the only driving force determining the influence tactics used. Researchers in the behavioral field also regard the importance of dispositional of leadership to the selection of the tactics of managerial influence. In a study of the relationship of managerial work roles on tactics used to influence subordinates, Lamude and Scudder (1995) hypothesized differences among the use of influence tactics according to type of manager. Their findings revealed that consultation was a tactic frequently employed by managers who

reported themselves as vision setters. Ingratiation and inspirational appeals were used

by motivators. While managers who were identified in analyzers usually used

pressure and rationality tactics, task mastering managers applied exchange and

inspirational appeals tactics to influence subordinates. Noypayak and Speece (1998)

extended Lamude and Scudder's (1995) work into a sample of Thai managers in the

construction and petrochemical industry and reported slightly different outcomes.

Managers who rated themselves as vision setters used rational persuasion,

consultation, pressure, and upward appeals. The motivator type of manager generally

utilized rational persuasion and ingratiation. Pressure, rational persuasion, and upward

appeals were preferred influence tactics among analyzers, and rational persuasion as

well as pressure was implemented among task masters.

A number of studies have examined whether a manager prefers certain types

of influence tactics across different situations. Aguinis, Nesler, Hosoda, and Tedeschi

(1994) affirmed the invariability of ingratiation, assertiveness, rationality, and

exchange in three persuasive situations. They reasoned that the implementation of

each influence tactic was guide by a general schema that was relevant to influence

situations. In contrast, Mulder, de Jong, Kopperlaar, and Verhage (1986) revealed that

the choice of influence tactics used by a manager varied in crisis and non-crisis

situations. In crisis situations, formal power, sanction power, and expert power were

often found whereas in non-crisis circumstances, open consultation was used by

leaders.

Some efforts have expanded the investigations of the use of downward

influence tactics into the cross-cultural aspects of managerial influence processes. As

argued concerning the universal tactics of influence, the choice of influence tactics by

a leader is believed to vary across cultures (Noypayak & Speece, 1998; Pasa, 2000; Rao & Hashimoto, 1996; Schermerhorn & Bond, 1991). As a culture with a relatively strong hierarchy and an acceptance of power distance, rational persuasion, pressure or sanctions, and upward appeals are frequently used by Thai managers (Noypayak & Speece, 1998). Based on a high power distance and collectivist culture, Pasa (2000) discovered three leaders' influence behaviors: (a) granted power or authority of the leader; (b) an influencing behavior of taking over responsibility; and (c) a combination of pressure and rationalizing tactics. Granted power or authority of the leader was a common influence strategy for a downward situation as employees accepted the legitimate power of their leader. As for taking over responsibility, Pasa reported that leaders often employed this strategy because they assumed that their followers needed assistance and assurance from their superiors. Finally, pressure and rationalizing can be understood by way on an explanation through culture. Within this culture, Pasa explained that the tactic of rationalizing was not intended as a means of providing information and inviting suggestions. Instead, there was an implication for employee participation (pressure).

In a study of intercultural influence conducted by Rao and Hashimoto (1996), assertiveness, reasons, sanctions, and upward appeals were significantly employed by Japanese managers to generate new behaviors among Canadian subordinates. Reciprocity was a culturally specific influence tactic that was identified as often employed by Japanese managers. Reason, assertiveness, and friendliness were reported as universal strategies used by managers to influence their employees either in a high or a low cultural context (Rao & Hashimoto, 1997). With respect to cultural differences, Schermerhorn and Bond (1991) found that Hong Kong Chinese preferred

assertiveness whereas Americans preferred ingratiation, rationality, and exchange as influence tactics. However, the common downward influence tactics selected by both Hong Kong Chinese and Americans were ingratiation, assertiveness, blocking, exchange, upward appeal, and sanctions.

Consequences of Influence Tactics

Within the last two decades substantial interest has emerged in applying interpersonal influence tactics to organizational settings (Higgins, Judge, & Ferris, 2003). Specifically, most of the work on downward influence tactics and organizational change has been relevant to how managers motivate subordinate's commitment and extra effort (Bass, 1985; Falbe & Yukl, 1992; Gravenhorst & Boonstra, 1998). A study by Falbe and Yukl (1992) emphasized that combining two soft tactics was more effective to gain commitment than any single tactic. They reported that, in terms of downward influence attempts, strategies such as pressure tactics, inspirational appeals and consultation were found to be frequently used by managers. Consultation and inspirational appeals were found to be important strategies for understanding the process by which leaders influence follower commitment to new objectives, strategies, and projects. However, ingratiation and exchange were moderator variables with respect to commitment, compliance, and resistance.

Similarly to Falbe and Yukl (1992), Gravenhorst and Boonstra (1998) found inspirational appeals, consultation, and rational persuasion were frequently used influence tactics for gaining subordinate's commitment to constructive change processes. Inspirational appeals were found to be used in a downward direction to gain employee commitment to work on a new task or project. Markham (1998) found

that, in attempts to influence their subordinates to support a project, champions preferred cooperative tactics (rational, friendliness, and exchange) to confrontative tactics (coalition, assertiveness, and higher authority). Through the above review of literature, an inconsistency in the studies can be seen. To this point, Higgins, Judge, and Ferris (2003) gave a precise summary that, in order to obtain effective work outcomes, individuals alter their influence strategies to be appropriate for each situation.

Influence tactics were investigated in Deluga's (1990) study as the tactics that subordinates use to influence different styles of leadership. His study revealed that hard influence tactics, including higher authority, assertiveness, and coalitions, were reported to be used among subordinates to influence laissez faire leaders. For the transactional leaders, the results showed that subordinates preferred using bargaining and rationality with the contingent reward characteristic because, when exchange was adopted as a system of work, subordinates would use bargaining and rationality to gain organizational objectives and personal goals. In addition, when subordinates deviated from the expectations of a management-by-exception leader, they would recognize their weaknesses and employ friendliness as an influence attempt. For the transformational leader, a soft approach was found to be used by subordinates. Particularly, rational influence approaches were used to influence the intellectual stimulation characteristics. Similarly, subordinates used less assertiveness when they perceived that an affirming style of communication was employed by their supervisor (Edge & Williams, 1994).

In addition, much of the research on interpersonal influence in organizations applied influence tactics to work outcomes with particular reference to performance

assessments, salary, and promotion (Higgins, Judge, & Ferris, 2003), the fairness of

the performance evaluations (Dulebohn & Ferris, 1999), performance evaluations,

salary, and stress (Kipnis & Schmidt, 1988), the career progression and success

process, focusing on promotions and salary increases (Judge & Bretz, 1994), and the

selection interview (McFarland, Ryan, & Kriska, 2002). While prevailing studies have

emphasized the importance of influence tactics on positive outcomes, only small

number of studies has focused explicitly on negative consequences of downward

influence tactics. In a study conducted by Brennan, Miller, and Seltzer (1993),

bargaining, higher authority, and assertiveness were forceful strategies that were

perceived by both nurse managers and subordinates to associate with unsatisfied

outcomes. Rational persuasion, coalitions, and pressure tended to result in resistance

rather than in compliance or commitment (Falbe & Yukl, 1992). Although a number

of contextual factors and individual differences determine which influence tactics

leaders choose to use, a clear explanation of influence tactics that each style of leader

employs when change is implemented in an organization and the possibility for the

formation of employee resistance to change is scarce and requires investigation.

Influence tactics in this study is understood as communication approaches that

encourage and transform new attitudes among employees. During the change period,

communication in the form of information should provide a signal to the organization

about their environment and about an employee's own function in relation to the

environment (Katz & Kahn, 1966).

Information Adequacy

Organizational scholars have long acknowledged the importance of

communication in explanations of organizational change processes (Ford & Ford,

1995; Lewis, 1999; Miller & Monge, 1985). Ford and Ford (1995) explained that communication plays a critical role in providing and obtaining information. In a change context, communication is regarded as a tool for announcing and explaining information about change, preparing people for the positive and negative consequences of change (Lai & Mahapatra, 2004), and reducing anxiety and stress (Miller & Monge, 1985). In this section, information and its function in an organization are discussed through open systems theories. Information processing is then discussed to illustrate the importance of information adequacy to individuals within change projects. Next, information adequacy is presented. Finally, the importance of information adequacy to an individual response to change is examined.

Information as an Input in Open Systems

Information is vital for a change process because the essence of an organization is the exchange of information and the transmission of meaning. Information is a major component in an open system. Katz and Kahn (1966) explained this phenomenon through input, throughput, and output. External information provides input into a system. Information imported at this step accelerates actions related to organizational change to the extent that, after the organization becomes aware of the change information, change plans are usually implemented. In addition, information also plays an important role during the transformation process as the central medium for learning, adjusting, and developing. Thus, with regard to the external environment, the importance of imported information is to coordinate internal mechanisms and facilitate change in a manner that is compatible with a change plan.

Consistent with Katz and Kahn (1966), Goldhaber, Yates, Porter, and Lesniak (1978) compared an organization to a communication system. They stated that communication is the flow of information in the organizational system. The coordination of internal functions and adaptation to changes in the external environment relies on information. Through information system, the processes of strategic planning and decision making become more sophisticated (Keen, 1981). Goldhaber, Yates, et al. (1978) proposed three crucial components as influencing the effectiveness of information dissemination: (a) the structure of the information system, (b) the communication role performed by members of the system, and (c) the channels and messages employed by system members.

The structure of the information system is considered to be the pattern of interaction in the communication network. Goldhaber, Yates, et al. (1978) noted that network structure is complex in nature. The distribution of information depends on the degree of employee uncertainty and the environmental complexity, the perceptions and attributions of members, the size of the network, and the continuity of the process of organizational change. Importantly, in a high uncertainty situation, Nadler and Tushman (1989b) and Lewis (1999) argued that the flow of information should be initiated from the top-down where the content of information should be addressed at shaping and creating new behaviors to support employee participation in change plans.

The second component in the effectiveness of information dissemination is the communication role performed by system members. Communication roles prescribe the relationships between organizational members (Goldhaber, Yates, et al., 1978). Sias, Krone, and Jablin (2001) use the term "workplace relationships".

Workplace relationships are unique interpersonal relationships with important

implications for individuals in those relationships and the organizations in with the

relationships exist and develop (Sias et al., 2001). The flow of information is affected

by individual's psychological characteristics and their different types of relationship.

With regard to the distribution of information between superiors and subordinates,

information is regarded as a means of control (Keen, 1981). Superiors usually possess

a higher amount of information and distribute some aspects of that information to

their subordinates in order for those subordinates to perform their tasks. If change

brings complexity to an organization and its members, limitations of access to

information should increase employee anxiety and, perhaps, resistance to change.

Channels and messages are the final factors in information flow. The

emphasis on these factors is to identify how organizational members enact their

communication roles (Goldhaber, Yates, et al., 1978). The contribution of this last

component of the effectiveness of information dissemination is to an understanding of

the influence of individual relationships and communication activities on the way in

which members of an organization effectively respond to each specific

communication channel (i.e., face-to-face interaction, meeting, and email). However,

channels and messages are not the concern of this study.

Information Processing as an Integrating Concept in Information Adequacy

During periods of organizational transformation, information processing

through activities such as meetings, giving speeches, and responding to email is an

important factor for the implementation of change. Penly (1982) treated information

as a process of knowledge gathering. He noted that information assists employees in

interpreting and synthesizing data. Information processing is discussed as a

framework for explaining the importance of information within an organization. In this field of study, several researchers have agreed that organizations are open systems which must deal with environment and work-related uncertainty (Alexandar, Helms, & Curran, 1987; Sheer & Cline, 1995; Tushman & Nadler, 1978). Uncertainty is likely to occur when there is a difference between information processed by organizational members and information required to complete their tasks (Tushman & Nadler, 1978b). Penley (1982) argued that a match between information processing requirements and information processing capacity was a key determinant of information adequacy. From Penley's (1982) point of view, the higher the desire for information, the less likely that organizational member will be with the information received.

The central concern in the theory of information processing is the determination of information adequacy. Tushman and Nadler (1978b) pointed out three sources of work-related uncertainty: (a) subunit task characteristics, (b) subunit task environment, and (c) inter-unit task interdependence. Each source of work-related uncertainty influences the degree of uncertainty faced by an organizational unit. Penley (1982) extended the theory of information processing and uncertainty reduction to explain information adequacy. Based on an open systems framework, his model viewed the management of uncertainty as an organizational task. Organizational task was considered as an environment variable (external systems) that creates a requirement for information processing as well as employees' information processing capacity (internal systems). His findings asserted that information adequacy is a result of a consistency between information processing requirement and information processing capacity among employees. Thus, identification of

information inadequacy results from task that influenced inconsistency between requirement and capacity (Penley, 1982).

Alexandar, Helms, and Curran (1987) added three sources of organizational communication (i.e., downward, upward, and horizontal) to Penley's (1982) model. Though their analysis, Alexandar et al. not only supported Penley's model but also found a relationship between communication and information adequacy. Inadequacy groups are those who desire more information. The information inadequacy groups reported less communication than those in adequacy groups. More important, which in previous study previous studies where the vertical information was the most important, the findings revealed that horizontal communication was the most important form of communication.

Covin and Kilmann (1990) extended Alexandar et al. study into a context involving organizational change. They addressed the important role of leaders and vertical communication processes. Their study showed that constant messages and a high degree of communication from leaders influenced the effectiveness of large-scale change programs. Similarly, Fairhurst's (1993) case study of the implementation of a total-quality program found that the framing devices that were used by managers and other opinion leaders stimulated the acceptance of a planned change. She explained that framing devices were used by leaders both to sell and to spread the word about change programs. Through the study of long-term change in organizations, Keen (1981) concluded that information systems increasingly play a significant role in patterns of communication and perceived influence as well as authority and control.

Information Adequacy

Information adequacy has been studied for more than three decades as an indicator of employee perceptions of organizations and the implications of those perceptions for their performance and satisfaction (Spiker & Daniels, 1981). During organization turmoil, the role of information adequacy is highlighted as organizational members deal with threats and anxieties that have an impact on their decision making, creativity, and task performance (Amabile & Conti, 1999; Covin & Kilmann, 1990; Staw, Sandelands, & Dutton, 1981). In this sense, information adequacy can also be thought of as a concern on an expression of uncertainty, ambiguity, and complexity when organizational members experience new tasks and activities (Pich, Loch, & Meyer, 2002). Thus, given that satisfaction is a function of information adequacy, the proper amount of information should be communicated to employees if change leaders want to cultivate motivation, increase participation, and initiate creativity (Das, 2001). On the contrary, an inadequate amount of information can lead to a reduction in job satisfaction and refusal to participate in planned change (Spiker & Daniels, 1981).

Information adequacy has been conceptualized and operationalized using three different approaches. The first approach is aimed at discovering the actual knowledge level of organizational members about the organization and its rules and regulations (Spiker & Daniels, 1981).This branch of study conceptualized information adequacy as "an amount of information actually possessed by organization members in light of the amount which they might potentially possess" (Daniels & Spiker, 1983, p.119). To operationalize the amount of information, Daniels and Spiker (1983) noted that knowledge tests were employed to distinguish the gap between absolute and

distributed information. The findings were inconsistent. While some studies revealed no relationship between information adequacy and satisfaction, others reported a highly positive relationship (Daniels & Spiker, 1983). Studies relying on this approach have been more concerned with top-down communication within an organization (Goldhaber, Yates, et al., 1978).

The second approach for conceptualizing information adequacy is based on organizational members as the receivers of information. Within this school of thought, information adequacy is defined as the amount of information that organizational members think that they have received (Daniels & Spiker, 1983). Instead of examining adequate knowledge about organization as in the prior approach, this approach emphasizes the perceived adequacy of available information from the employee's perceptive (Spiker & Daniels, 1981). The concern is directed at whether employees feel that they possess the amount of information that they desire on a particular topic.

Finally, in the work of Spiker and Daniels (1981), information adequacy was conceptualized in terms of the perceptions organizational members have of how much information they receive about a specific job and organizational matters. The operationalization of information adequacy in this final approach indicated the amount of information employees required as opposed to the amount of information that they actually received. Several researchers (i.e., Daniels & Spiker, 1983; Goldhaber, Rogers, Lesniak, & Porter, 1978; Spiker & Daniels, 1981; Zhu, May, & Rosenfeld, 2004) have followed this approach because, rather than testing to test for an absolute knowledge level, the study of information adequacy through this perspective deals with the more realistic and acceptable notion of an employee's

perception of information adequacy. The basic assumption of this approach

emphasizes the sending and receiving information. These activities related to the

reduction of uncertainty and should, therefore, be related to a member's level of

participation in the organization and, in turn, that organizational member's level of

satisfaction (Goldhaber, Rogers, et al., 1978; Spiker & Daniels, 1981).

Originally, the concept of organizational information adequacy was developed

by Goldhaber, Rogers, and his colleagues in 1978. They focused on assessing

perceived adequacy of information concerning specific job-related matters and topics

of concern organization-wide. Although later the studies revealed a third area of

concern, policies and benefits, to organizational performance and personnel

performance (Daniels & Spiker, 1983), this study postulated a framework adopted by

several scholars who argued that job satisfaction is contingent upon the provision of

information that is given by an immediate supervisor. The findings from Goldhaber,

Rogers, et al. (1978) revealed that employees "receive and want to receive more

information related to their immediate work environment than information related to

the organization as a whole" (p. 90). They also found that correlations between

information adequacy and job satisfaction were highest for information involving

organization-wide matters.

The studies from Daniels and Spiker (1983) and Spiker and Daniels (1981)

supported the findings of Goldhaber, Rogers, et al. (1978) that the immediate

supervisor was the key person of the link between information adequacy and job

satisfaction. However, Daniels and Spiker (1983) noted that, over time, the immediate

supervisor might lose information power as subordinates receive a sufficient amount

of information. As a result, the immediate supervisor might be considered by some

subordinates as an unnecessary or perhaps even incompetent source of information.

Trombetta and Rogers (1988) found that, not only was there a positive relation

between information adequacy and job satisfaction, but there was a significant

positive relationship between communication openness and job satisfaction.

In their study of information adequacy and job satisfaction during a period of

organizational change, Zhu, May, and Rosenfeld (2004) offered findings that were, at

least in part, inconsistent with the previous studies. They found that information

adequacy did not always lead to employee job satisfaction during the execution of

change plans. Work satisfaction decreased despite information adequacy regarding

performance motivation, job security, and how organizational decisions were made

that affect the employee's job. Zhu, May, and Rosenfeld (2004) suggested that job

satisfaction would be most likely to occur when employees received information that

was timely and well designed.

Information acts as an intellectual instrument to manage organizational

change. By receiving a proper amount of information relevant to an individual's task

responsibility, information turns into a source of energy that will motivate members

of the organization. Therefore, information processing and perceived information

adequacy are the key determinants of an employees' response to organizational

change, and either participation in or resistance to that change.

Information Adequacy and Employee's Response during Change

Tushman and Nadler (1978) stated that an organization's failure to provide

employees with information can produce negative attitudes toward change processes.

A great number of studies also showed that insufficient information causes

uncertainty and anxiety (Eisenberg, 1984; Miller & Monge, 1985), as well as other

organizational problems including a decline in job satisfaction and a decline in organizational commitment (Covin & Kilmann, 1990; Lai & Mahapatra, 2004; Pich, Loch, & Meyer, 2002).

Although information is an inherent component when change is brought into the system (Shrivastava, 1986), most change leaders do not distribute an adequate amount of information to their followers. An explanation by Keen (1981) provided a clear picture of this situation. Keen observed that leaders of change processes often treat information as a status symbol. As such, possession of information enhances a manager's authority and control. The link between information and influence as well as information and control can be recognized in the extent to which information becomes a political resource for managers rather than an intellectual property of empowerment and organizational development (Keen, 1981). In this regard, a manager may not provide enough information about change or may not provide a clear scope of work after the implementation of change. Consequently, Keen noted that several resistance actions, such as inertia, delay, and tokenism, can be identified.

In addition to Keen (1981), Miller and Monge (1985) indicated that the need for information about change determines individual anxiety. In their study, social information processing theory was used to explain the antecedences of anxiety. The findings revealed three types of social information relevant to the formation of employee anxiety during the process of change: (a) individual needs related the change, (b) information or descriptions of the change, and (c) interpretations of descriptions in terms of need (why what they are getting is or is not what they want). In the same vein, Pich, Loch, and Meyer's (2002) model identified information inadequacy as an indicator of the organizational change uncertainty, ambiguity, and

complexity. They stated that information inadequacy can be found "if too little is known about the states of the world or the causal effects of actions on the payoff (ambiguity) or if the effect of actions on the payoff cannot be analyzed because too many parameters interact in the transition or payoff function (complexity)" (p. 1020).

Covin and Kilmann (1990) found out that perceived inadequacy of information was one of the major factors in explaining highly negative reaction to change processes. Poor communication was identified in their study as including failure to communicate the reasons for a change, not disclosing information to managers who must implement the change, and failure to create a climate for open dialogue about change. Therefore, when employees do not receive adequate information about change, they respond with negative actions toward the change. Resistance to change then might be a consequence of anxiety, uncertainty, and dissatisfaction.

The forgoing review ostensibly indicates the importance of information adequacy, especially during a time of organizational change. Regarding consequences of changes for individuals, positive and negative outcomes are significant. While change and perceived sufficiency of information as mechanisms for offering individuals opportunities for growth and progress in their career have received much attention from researchers (i.e., Daniels & Spiker, 1983; Spiker & Daniels, 1981; Trombetta & Rogers, 1988), little attention has paid to the problem of insufficient amount of information and its consequences for employees. Thus, an intention of this study is to examine the relationship between information adequacy and resistance to change. However, this research is not limited to the relationship of these between variables. This study also added two more dimensions in explaining employee

resistance to change by incorporating the variables of leadership styles and influence tactics.

Employee Resistance to Change

By means of such change processes as reorganizing, downsizing, or implementing new technology, change has become a common situation both for practitioners who are striving to remain at the competitive edge and researchers who are trying to examine and give a comprehensive explanation to change phenomena (Oreg, 2003; Piderit, 2000; Smollan, 2006; Wanberg & Banas, 2000). A number of scholars agree that resistance to change is pervasive and chronic in the organizations undergoing change, especially when the change alters individual's values and work related abilities (Prasad & Prasad, 1998). In this study, since the investigation of organizational change places emphasis on workplace resistance, the discussion in this section began with the relationship between open systems theory, which is the theoretical framework for the study, and resistance to change. Then the focus will shift to defining resistance to change and individual resistance processes. Finally, a multidimensional perspective of an individual's resistance to change will be presented.

Resistance to Change and Open Systems Theory

As discussed in the forgoing review of literature, open systems theory postulates two aspects of social behavior patterns in an organization. While one system characteristic concerns the interdependence of each unit in a system, the openness of a system to environmental inputs provides for an unpredictable and unstable organizational environment (Katz & Kahn, 1978). When the two major aspects are integrated for the study of organizational change, organizations can be

viewed as adaptive mechanisms that respond to the environment in ways that seek their own survival.

Based on these characteristics of open systems theory, Romanelli and Tushman (1994) viewed resistance to change as a product of the interdependence among each unit in an organization. An open systems theory analysis of resistance to change can be conducted by using Seiler's (1967) framework, especially focusing on the three internal domains of a system: (a) human, technological, and organizational inputs; (b) actual behavior; and (c) organizational outputs. Seiler (1967) stated that, because of the interdependence among each domain, change in one unit causes change in the other units. In this sense, after conditions in the external environment force internal factors to change, the impact of this phenomenon can be seen in the form of changes in organizational structure, goals, technology used, skills required for the new technology, and patterns of workplace relationship (Burke, 2002; Seiler, 1967). As a result of the change, employees are forced to either leave their job or to alter their skills and behaviors as needed for new requirements (Romanelli & Tushman, 1994).

Although change can occur in a particular unit of an organization, the affected area of change is not limited to that single part of the organization. Change in one part of the organization can lead to either minor or major changes in other parts. Eventually, the impact of organizational change creates change in the internal environment of the organization, including ability of organizational members to work with each other. According to Burke (2002), adaptive change is stressful for people going through it. Employees are required to take on new roles, develop new relationships, develop new values, adopt new behaviors, and assume new approaches to work. Trader-Leigh (2001) added that gaining one set of values and expertise can

be at the expense of another set. Thus, resistance to change is usually found when job

security, professional expertise, and social status in the organization are in jeopardy

(Katz & Kahn, 1978; Trader-Leigh, 2001). To gain a better understanding of

resistance to change, definitions of resistance to change from several perspectives

should be highlighted.

Definition of Resistance to Change

Several efforts have contributed to conceptualizing the concept of resistance to

change. Pardo and Fuentes (2003) defined resistance to change as "a phenomenon that

affects the change process, delaying or slowing down its beginning, obstructing or

hindering its implementation, and increasing its costs" (p. 148). Burke (2002)

described resistance to change among organizational individuals as a reaction to the

introduction of new ways of completing tasks and handling challenges that will have

an impact on impact extant work-related abilities, values, and beliefs. Consistent with

the forgoing descriptions of resistance, Ledford, Moharman, Moharman, and Lawler

(1989) defined resistance to change as a normative situation that usually occurs after

the introduction of change. They explained that members of an organization resist

change as it is threatening, creates uncertainty, and fosters feeling of anxiety.

Piderit (2000) noted that resistance to change is a negative attitude toward

organizational change. She examined a considerable number of conceptualizations of

resistance to change and proposed a multidimensional view of attitudes toward

resistance to change. Her three dimensions are: a cognitive dimension, an emotional

dimension, and a behavioral dimension. The cognitive dimension refers to an

individual's beliefs about the advantages or disadvantages of a new system of work.

The emotional dimension refers to an individual's feelings in response to change. The

behavioral dimension refers to an individual's intention to take some actions toward change.

Similar to Piderit's (2000) conceptualization of resistance, Burke (2002) presented two forms of resistance which are based on an individual's attitudes toward change. Political resistance is a personal belief that one is about to lose, for example, power, his/her job, or income if change is implemented. Another type of resistance is ideological resistance or resistance that comes from differences in beliefs, feelings, or philosophies about the proposed change, either in strategy or structure. While the foregoing suggests that resistance involves conscious intent, Stickland (1998) argued that resistance is sometimes subconscious in nature.

Based on a critical standpoint, Collinson (1994) distinguished two oppositional resistance views that are constructed by an individual's assess to power, knowledge, and information. The first type of employee resistance is called resistance through distance. This type of resistance can be referred to avoidance. Subordinates try to avoid or escape the requirements of their superior and distance themselves from sources of power and authority. The other type of resistance is resistance through persistence. Through this type of resistance, employees show greater demand for participation in and a higher commitment to involvement concerning change as shown by such behaviors as seeking more information, monitoring organizational practices, and challenging decision-making procedures.

Prasad and Prasad (1998) took a post modern lens to criticize the traditional view of resistance. According to them, the conventional views of resistance have limited most researchers to view employee resistance to change as "organized, collective opposition or any subversive action directly intended to damage and/or

disrupt the function of an organization" (p. 226). While traditional resistance reflects a tangible view of workplace resistance, Prasad and Prasad proposed routine resistance is more informal, less dramatic, and harder to specify. They noted that triggers of routine resistance does not emerge from a specific relationship such as from a superior and subordinate, but a wide range of sources, including diverse genders, occupations, classes, and cultural backgrounds. The expressions of routine resistance can be classified into four categories: (a) open confrontation; (b) subtle subversions of power relations; (c) disengagement; and (d) ambiguous accommodation (Prasad & Prasad, 1998).

Psychological Strain and Resistance to Change

Through the interdependence characteristic of an organization, the effect of an organizational planned change makes each individual in each interdependent unit who is obligated to change his/her organizational practices in some way. Ostensibly, employees' responses are not always positive. Based on the open systems perspective, Katz and Kahn (1978) viewed workplace resistance as a consequence of failure in an attempt to change. They identified six sources as provoking workplace resistance to change.

The first source is enduring systems. In this sense, when such systems as working system, hierarchical system, promotion, rewards and punishments, and patterns of relationship were institutionalized and appeared stable, a strong intention to resist change emerges. Second, a misunderstanding of the concept of "open systems" can cause resistance when one thinks that a system can be changed without any impact on its subsystems. The third source of resistance to change is individual and group inertia. Even though a change might occur in a small proportion of the

organization, these groups of people experience difficulty adopting the new requirements. The fourth source of resistance emerges in changes that have the potential to threaten an individual's expertise. Next, change that causes a fear of loss of power and authority in the system can lead to employee resistance. Finally, resistance to change can be produced when change jeopardizes the allocation of resources and rewards among a variety of groups in the system (Katz & Kahn, 1978).

Hannan and Freeman (1984) viewed inertia as an antecedent of resistance. In this regard, any changes to an organizational structure that tend to violate organizational members' moral commitments are likely to cause resistance to change. In addition to structural inertia, Ellis (1992) identified the relationship between employee uncertainty and source credibility as an indicator to resistance among employees. A significant finding from his study reported that uncertainty about and the credibility of the source of a message serve as main effects, influencing message effectiveness. When a change agent had low credibility, employees were likely to react with a high level of uncertainty and a demand for information. Lai and Mahapatra (2004) and Lewis (1999) supported Ellis's finding that employee resistance to change occurred when employees perceived that they received an inadequate amount of information which, in turn, increased employee uncertainty.

Threat-rigidity theory by Staw, Sandelands, and Dutton (1981) seems to provide a sound explanation for the antecedents of resistance to change discussed previously. According to Staw et al. (1981), during organizational change, organizational members encountered threats and high uncertainty which stimulate a maladaptive cycle in employee behavior. For employees, the consequences of being threatened can include psychological anxiety, stress, and arousal, all of which can

result in poor task performance. As a result, the diminishing of work performance as well as the reduction of efforts to implement change can produce resistance to change (Staw et al., 1981).

Resistance studies (i.e., Ogre, 2003; Piderit, 2000; Stanley, Meyer, & Topolnytsky, 2005) argue that much is lost in attempts to investigate the antecedents of resistance in a unidimensional manner, focusing on individual predisposition to resist change (i.e., Ellis, 1992; Hannan & Freeman, 1984). To elaborate an understanding of personality dispositions, Brehm's (1966) theory of psychological reactance can be used to explain the personality predisposition of resistance. The theory posited that when one's feeling of freedom is in jeopardy, the immediate reaction is likely to be an attempt to protect and/or regain that feeling. Following this line, Piderit (2000) agreed that an ambivalence of employee resistance to change is usually unaware, especially subtle resistance at emotional and cognitive levels.

A Multidimensional View of Employee Resistance to Change

A multidimensional view of resistance posited that negative responses to change are expressed along three distinct dimensions: emotional, cognitive and behavioral (Piderit, 2000). Building on this conceptual framework, Piderit (2000) suggested that it was possible that employee responses to change can be seen in an ambivalent context where feelings, behaviors, and thoughts about change do not go to the same direction. For example, Piderit noted that ambivalence can arise within the cognitive and behavioral dimensions when an employee believes that change initiated in an organization is necessary but that the planned change is insufficient. As a result of ambivalent attitudes, an attempt to resist change can arise. This employee might follow his or her cognitive ambivalence by exhibiting resistance through anonymous

comments in the suggestion box. However, public support for the change might not present because of uncertainty and fear of an executive's responses.

Based on Piderit's (2000) conceptualization of resistance, Oreg (2003) conducted an exploratory factor analysis of resistance to change and reported four factors as describing individual predisposition to resist change: (a) routine seeking, (b) emotional reaction, (c) short-term focus, and (d) cognitive rigidity. This scale shows a better capacity to predict specific change-related behavior rather than other personality characteristics, such as individual inertia (Hannan & Freeman, 1984), and personal resilience and self-efficacy (Wanberg & Banas, 2000).

Routine seeking is a behavioral dimension consisting of action or intention to respond to a change (Oreg, 2006). This factor explains two important aspects of an individual's tendency to adopt or resist change. While one domain of routine seeking focuses on an individual's preference for low levels of stimulation and novelty, the other domain emphasizes a reluctance to give up old habits. With regard to the former aspect of routine seeking, a distinction between an individual who prefers high versus low levels of stimulation and novelty can be drawn and distinguish an innovator from an adaptive individual (Oreg, 2003). The innovators are willing to think out of the box and feel excited about the outcomes of novelty. Adaptive individuals are those who are able to perform effectively within a well-defined and familiar scope of work. Ostensibly, adaptive individuals require lower levels of novelty. Thus, employees who are categorized as adaptive types will be more likely to resist change when the novelty in that change involves an increase in stimulation.

The reluctance to give up old habits refers to individuals or employees who are unwilling to move out of a comfort zone (Oreg, 2003). According to Quinn (2004),

employees who prefer to stay in a comfort zone are "externally driven, internally closed, self-focused, and comfort centered" (p. 19). Resistance to chance can be produced when individuals encounter an organizational change or move out of the comfort zone (Oreg, 2003). Katz and Kahn (1966) stated that, although the new goals of an organization might be constructively constructed through an interchange between the organization and its environment, those goals will not necessarily be identical with individual purposes. In addition, after the establishment of the new goals and new system of work, any current skills and abilities might turn out to be wastes given a new technology. In this sense, new stimuli and novelties are likely to generate psychological insecurity among organizational members and lead to resistance to change (Oreg, 2003).

The second factor of Oreg's (2003) antecedent of resistance to change is emotional reaction. Oreg stated that emotional reaction is an affective dimension that reflects the feelings of organizational members when confronted with change. Similar to Oreg, Quinn (2004) used emotional arousal to explain a stage when "one moves from thinking, to feeling, experiencing, and expressing feelings about the problem" (p. 204). With regard to the two researchers, this dimension emphasizes the amount of stress and uneasiness that can be expressed through anxiety and anger that an individual experiences with change. This factor explains psychological resilience and reluctance to lose control (Oreg, 2003). Psychological resilience is a personality disposition that emphasizes an individual's ability to cope with change. Individuals who possess high psychological resilience are more willing to adopt change and exhibit improved coping skills in response to change (Judge, Thoresen, Pucil, & Welbourne, 1999).

Reluctance to lose control can be regarded as a predictor of an individual's ability to cope with change. Individuals exert more positive attitudes toward organizational change when they believe that they have control over their environment (Lau & Woodman, 1995). For Judge et al. (1999), locus of control or a belief that one has control over a situation were significantly associated with ability to cope with organizational change. For someone high in locus of control, change is perceived as a desired phenomenon that will bring about improvement and development to an organization and its members. On the other hands, employees who experience a loss in control over their environment and fear about personal success might respond to change with anger, frustration and anxiety and, in turn, be very reluctant to change (Ogre, 2003).

Short-term focus is also an affective dimension that demonstrates an individual's distraction by short-term inconveniences resulting from the inability to embrace new ways of work (Oreg, 2003). This factor includes reluctance to lose control and intolerance for adjustments that are part of the change process. With regard to intolerance for adjustments to change, significant change explicitly requires employees to adapt their behaviors or routines. Logically, employees usually compare their current capabilities with new requirements for completing assigned tasks successfully. In addition, they compare the outcomes of their past performance to the potential outcomes of future performance. Resistance can occur when employees' long-term benefits are at risk. Barr, Stimpert, and Huff (1992) explained this phenomenon by emphasizing a time delay before a succession of planned changes. These researchers noted that an employee's learning ability is a developmental process that requires time for the construction of new skills and capabilities. When

employees have mentally assimilated to the new plan or change, positive attitudes and perceptions toward change will be developed over time. Thus, organizational individuals who are more willing to learn and adjust to new organizational requirements will be able to endure the adjustment period (Oreg, 2003). Any one who perceives that change increases work and requires learning and adjustment will be intolerant and resist change.

Cognitive rigidity is the fourth antecedent of resistance to change and refers to employees' thoughts and beliefs about change (Oreg, 2003). Oreg stated that what one thinks and believes about change can be thought of as the ability of an individual to alter their beliefs and respond to change. This factor addresses the ease and frequency with which individuals change their attitudes and conform to change. Differences in cognitive dispositions can be discussed through issues such cognitive complexity, authoritarianism and dogmatism, and emotional intelligence (Daly, 2002). In relation to the resistance to change, dogmatic individuals are rigid and closed-minded. A highly dogmatic person might be less open to new circumstances and change.

Along with individual predispositions to resistant change, Oreg (2006) added more facets to the study of resistance to change. In her study, Oreg agreed with Piderit (2000) as to the incongruity among cognitive, emotional, and behavioral responses to change by noting that:

> Whereas some variables may have their primary influence on how people feel about a change, others may have more impact on what they do, and yet others on what they think about it. Similarly, people's feelings toward a change may lead to different outcomes than the outcomes of their behavior or of their thoughts. (Oreg, 2006, p. 76)

The findings from Oreg's (2006) study revealed that, out of the three components from employee dispositional resistance to change, the affective component and the behavioral component had a strong relationship. Essentially, when an employee experiences negative emotion from a change situation, he or she will give a negative response to that change. Oreg's study also found a negative relationship between leadership and employee dispositional resistance to change. Specially, a lower level of trust in management was related to a higher level of affective, cognitive, and behavioral resistance. With respect to the amount of information about change, a relationship was found between behavior and cognitive resistance, but not affective resistance. Inconsistent with the previous study (i.e., Wanberg & Banas, 2000), this study reported that more information about change led to worse evaluation of it and finally provoke willingness to resist it. Oreg explained this finding by arguing that resistance to change appears without any good reasons and is due to employee's unfamiliarity with new contents of work.

<center>Conceptual Framework of Research Hypotheses</center>

In order to be theoretically and practically important, resistance to change must be related to variables that are meaningful and important to organizations and their members. Figure 1 illustrates the concept of employee dispositional resistance to change. To illustrate the interrelated relationship between organizational change and resistance to change, the model of individual resistance to change was drawn based upon a set of assumptions consistent with open systems theory. However, the investigation of predictors of resistance to change was placed on the throughput and output processes in small dashed-box.

Figure 1 : Predictive model of Employee's Dispositional Resistance to Change
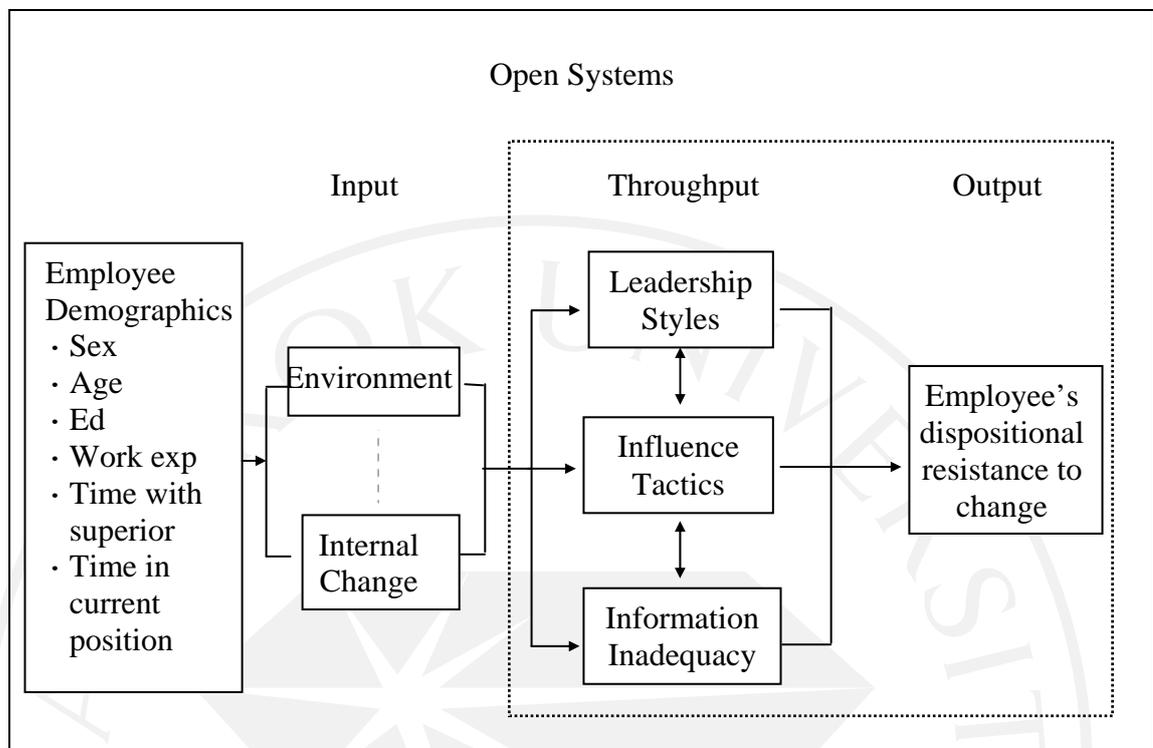
Given that the implementation of organizational change and resistance to change closely depend on the environment in which they function as well as the internal change as illustrated in the shift in employee psychological paradigm, it is argued in this study that leadership styles, influence tactics, and information adequacy are three predictors of employee dispositional resistance to change in a number of logical ways.

First, with the power to influence others and the ability to visualize situations and potential outcomes, as well as to provide solutions to problems, leaders are presumed to be the key persons who initiate change within organizations (Bass, 1985; Burke, 2002; Burns, 1978; Nadler & Tushman, 1989a). In addition to the ability to visualize organizational future, leaders are those people who are capable of creating a

sense of urgency, desire, and motivation among their followers (Nadler & Tushman, 1989a). The relationship between leaders and followers is varied in terms of motivation and power dimensions depending on one's leadership skills and personal beliefs in the pursuit of goal achievement (Burns, 1978). Therefore, employee responses to change, either positive or negative or explicitly through behavior or subtly through emotion or cognitive thinking, will vary depending on their interaction between the two fundamental types of leadership styles, transactional leadership and transformational leadership.

Second, in connection with leadership styles, influence tactics are important for understanding how leaders motivate subordinates. Influence tactics vary from a manipulative style to a supportive style. For example, while consultation and inspirational appeals are important tactics leaders use to influence their subordinates (Yulk & Falbe, 1990), rational persuasion can cause resistance (Falbe & Yukl, 1992) Therefore, in addition to leadership styles, it is presumed that influence tactics is a factor in predicting dispositional resistance to change among organizational members.

Third, the distribution of information to employees during organizational change is also relevant to the causes of resistance to change. Information adequacy is the differences between employees' self-report of the amount of information they actually obtain and the amount of information they desire (Goldhaber, Rogers, Lesniak, Porter, 1978). The perception that an adequate amount of information is being received has the potential to increase participation in change while a lack of information concerning change will stimulate negative responses to organizational reorientation and change plans.

Research Hypotheses

Employee motivation and willingness to change are closely related to job characteristics, including intrinsic rewards, performance feedback, degree of work autonomy, and work environment and leadership style (Komin, 1990). On the contrary, resistance to change is likely to arise as a result of ineffective leadership style, lack of performance feedback, and non-motivational working environments. With respect to Thai culture, it is believed that leadership styles, influence tactics, and information inadequacy will be more likely to predict the four dispositions of resistance to change.

Leadership Style

Komin (1990) described the Thai social system as a tight hierarchy in the sense that employees display high respect for leaders. The relatively strong hierarchy and inequality of distribution of power in Thai organizations automatically aligns with the transactional type of leadership. With their legitimate power, Thai transactional leaders are likely to utilize an exchange and reward system to increase employee motivation and less likely to encourage creativity and reinforce new ways of thinking and working. In relationship to the four factors of resistance to change (routine seeking, emotional reaction, short-term focus, and cognitive rigidity), it is believed that different styles of leadership result in different outcomes regarding resistance.

Oreg (2003) described routine seeking as a behavioral aspect of an employee resistance to change. Employees might show resistance to change when the preference for stimulation and novelty is relatively low, whereas employees with high preferences for stimulation and novelty are able to adopt new innovations. In the Thai context, it seems that leaders are more likely to employ exchange techniques rather

than trying to motivate or energize employees to participate in change.

Communication, then, exists in the form of giving directions and orders instead of

being supportive and encouraging employee involvement in the formation of planned

change. For the employees, it can be assumed that the level of preference for novelty

is relatively low. The exchange technique might not fully influence employees to

make changes and has the potential to result in reactions that can cause negative

outcomes in an organization. Therefore, emphasizing the Thai leader-follower

relationship, it is expected that the transactional style of leadership will lead to the

construction of routine seeking among employees. The following hypothesis is

proposed:

> H1a: Regarding organizational change in the Thai context, transactional
>
> leadership styles will be more significant predictors of routine seeking
>
> than will transformational leadership styles.

Emotional reaction is an affective aspect of resistance to change that is

comprised of a lack of psychological adaptability and a feeling of fear about losing

control (Oreg, 2003). Since the Thai organizational structure is fundamentally rooted

in the line of command (Sriussadaporn-Charoenngam & Jablin, 1999), not only do

Thai employees feel insecure when deviating from leaders' decision making and

opinions, but they also feel uncomfortable introducing change into their work system.

Consequently, it is expected that, although Thai employees feel more secure when

conforming to leaders' orders, emotional reactions will occur because change brings

uncertainty and threats to the employee psychological well-being. Therefore, the

following hypothesis is proposed:

H1b: Regarding organizational change in the Thai context, transactional

leadership styles will be more significant predictors of emotional

reactions than will transformational leadership styles.

Short-term focus is also an affective aspect addressed when change has been brought into the system. This factor consists of an inability to adjust oneself to change and an inability to handle the increased workload in a given time (Oreg, 2003). This factor also includes reluctance to lose control (Oreg, 2003). In Thai society, children have been taught to obey, respect, and conform to older people and those who are in a higher status (Knutson, Hwang, & Vivatananukul, 1995). These trends of cultural acceptance pre-program Thai employees that leader's orders are final. It is therefore harmful to one's career path if they cannot accomplish the leader's demands. When a new planned change is introduced to a system, Thai employees feel obligated to follow the line of command. Given intolerance to change and reluctance to lose a sense of self-control, employees are more likely to resist change due to the inconvenience of adverse effects of the change and a loss of control. Therefore, the following hypothesis is proposed:

H1c: Regarding organizational change in the Thai context, transactional

leadership styles will be more significant predictors of short-term focus

than will transformational leadership styles.

Cognitive rigidity is a cognitive aspect of employee dispositional resistance to change. Oreg (2003) stated that cognitive rigidity is a tendency of employees to change their mind when encountering change. With respect to the leadership's command and authority, Thai employees are required to adjust themselves to new forms of behavior and comply with change. It is expected that, although there will be

changing behavior consistent with new working system, this behavioral change will not be voluntary. Resistance to change cognitively arises but it might not be recognized as a normative practice in the workplace. The following hypothesis is purposed:

H1d: Regarding organizational change in the Thai context, transactional leadership styles will be more significant predictors of cognitive rigidity than will transformational leadership styles.

Influence Tactics

Influence tactics are the communicative tactics that leaders apply to influence new behaviors among their followers (Kipnis, Schmidt, & Wilkinson, 1980). In a high power distance and collectivist culture, leaders assume the requirement for providing work direction and guidance among employees (Pasa, 2000). Rational tactics and pressure or sanction tactics are inherent in practice. Consistent to Pasa (2000), Noypayak and Speece (1998) found that rationality and sanction are commonly used among leaders. They also added that while Thai leaders widely used upward appeals, exchange and coalition approaches are not commonly applied as influence tactics used in Thailand. The implementation of influence tactics are usually believed to be used by leaders as the key persons who are responsible for the management of change. Consequently, in addition to leadership styles, influence tactics are assumed to predict the four disposition of resistance to change.

According to the norm of resisting change, it is more likely that Thai employees prefer to perform their regular work instead of challenging tasks. During organizational change, according to Noypayak and Speece (1998) and Pasa (2000), influence tactics such as sanctions, upward appeals, and rationality are more likely to

influence changes in behavior and engender employee participation. Assuming high

uncertainty avoidance among Thai employees, the coordination of change might occur

because employees are technically forced to learn and perform differently from their

routine work. Resistance can result both in disrupting the functioning of the work

system and in low performance; therefore, it is expected that, in addition to leadership

style, influence tactics, especially rationality, sanctions, and upward appeals, are

likely to predict routine seeking among organizational members. The following

hypothesis targets this issue.

> H2a: Regarding organizational change in the Thai context, rationality,
>
> sanctions, and upward appeals will be significant predictors of routine
>
> seeking after leadership styles have been accounted for.

Regarding emotional reactions, tactics as sanctions, upward appeals, and

rational tactics are likely to increase employee anxiety and stress. While rational

tactics are employed in order to give information about the change, provide new job

descriptions, and clarify new working systems, sanction tactics and upward appeals

are used to intensify a leader's commands and to force participation in change plans.

In the transformational period, Thai employees have to follow a leader's directions

concerning a new way to work even though they might be uncomfortable adopting

their new behaviors. It is expected that emotional reactions, such as stress, frustration

and anxiety, will occur as employees remain unfamiliar with changes and fail to

possess the skills necessary to handle new assignments. Therefore, the following is

hypothesized.

H2b: Regarding organizational change in the Thai context, rationality, sanctions, and upward appeals will be significant predictors of emotional reactions after leadership styles have been accounted for.

A short-term focus emphasizes the inconvenience or dissatisfaction of a change as perceived by employees (Oreg, 2003). Oreg (2003) stated that employees resist change when they perceive they are not capable of coping with the increasing amount of work brought by the change. They require time to learn new skills and gradually adopt new behaviors to achieve new goals. During the change, sanctions, upward appeals, and rational tactics are assumed to successfully reinforce changed behavior; however, psychologically, employees might not know or possess the abilities to effectively perform their work to achieve a new goal. Therefore, it is expected that the implementation of sanctions, upward appeals, and rational tactics will be likely to betray a short-term focus and lead to resistance among employees. The following is the hypothesis concerning this issue.

H2c: Regarding organizational change in the Thai context, rationality, sanctions, and upward appeals will be significant predictors of short-term focus after leadership styles have been accounted for.

When considering cognitive rigidity, rationality, sanctions, and upward appeals will cause employees to resist the change. Because change and innovation include components of stress and threatening, employee's evaluation of change is usually inconsistent with the objectives of a change plan. It is expected that rationality, sanctions, and upward appeals will be a group of influence tactics that lead to cognitive rigidity among employees. The following is the hypothesis concerning this issue.

H2d: Regarding organizational change in the Thai context, rationality, sanctions, and upward appeals will be significant predictors of will be more significant predictors of cognitive rigidity after leadership styles have been accounted for.

Information Adequacy

Information adequacy is the difference between the amount of information that employees report that they actually acquire and the amount of information that they desire (Goldhaber, Rogers, Lesniak, & Porter, 1978). Information is an important factor in organizational change. It provides employees with a clear description of why they have to change, instructions for how to perform their new task, and clear directions toward future goals (Clampitt, DeKoch, & Cashman, 2000). Adequate amounts of information received by employees will limit work-related uncertainty and lead to participation in the change process (Tushman & Nadler, 1978). Regarding the resistance to change model, it is assumed that after leadership styles and influence tactics have been controlled for, information adequacy is the variable most likely to predict the four dispositions concerning resistance to change.

In relation to routine seeking, employees who perceive that they receive an adequate amount of information seem to comfortably adapt their behavior to new ways of working. But, employees who perceive that the amount of information they receive does not match the amount of information they require may respond with an increase in uncertainty because of their preference for routine work and the lack of appropriate reasons for changing their behaviors. In Thai organizations, information is usually distributed by leaders. Given that leaders have legitimate power, they might not pay attention to providing employees with details and explanations after they

order or assign employees new work. Therefore, it is expected that perceived

information inadequacy is likely to result in resistance, especially routine seeking. The

following is the hypothesis addressing this issue:

H3a: Regarding organizational change in the Thai context, information

inadequacy will be a significant predictor of routine seeking after

leadership styles and information adequacy have been accounted for.

In relation to emotional reactions, information adequacy will be more likely to

diminish employee tension and increase positive attitudes toward change, whereas

information inadequacy will be more likely to intensify tension and stimulate negative

emotional responses toward change. It is expected that, in addition to leadership styles

and influence tactics, information inadequacy will be likely to predict emotional

reactions. The following is the hypothesis addressing this issue:

H3b: Regarding organizational change in the Thai context, information

inadequacy will be a significant predictor of emotional reactions after

leadership styles and information adequacy have been accounted for.

In relation to short-term focus, while information adequacy is an intellectual

commodity for employees during organizational change (Keen, 1981), informational

inadequacy is a laggard to intellectual development. It is expected that, in addition to

leadership styles and influence tactics, an inappropriate amount of information will be

more likely to cause stress for employees and the inability to deal with new tasks. The

following is the hypothesis addressing this issue:

H3c: Regarding organizational change in the Thai context, information

inadequacy will be a significant predictor of short-term focus after

leadership styles and information adequacy have been accounted for.

In relation to cognitive rigidity, information adequacy can provide employees with a good rationale for why change has been introduced into the system, for a new direction of a company, and for a new job description. Employees might feel comfortable in changing their behaviors. On the other hand, employees who perceive that they do not receive sufficient information might disbelief in change and evaluate an outcome of change negatively. Therefore, it is expected that, in addition to leader styles and influence tactics, information inadequacy will be more likely to predict cognitive rigidity. The following is the hypothesis addressing this issue:

H3d: Regarding organizational change in the Thai context, information inadequacy will be a significant predictor of cognitive rigidity after leadership styles and information adequacy have been accounted for.

A Summary

Employee resistance to changes usually reflected in the deduction of work performance, creativity, work satisfaction, and commitment; thus, it should be assessed and managed as part of any implementation strategy. A number of factors influence resistance but leadership is critical to the context of organizational change. This chapter provided an in-depth literature review emphasizing the importance of leaders and their communication style, tactics and concern for the dissemination of information. Resistance to change among employees was also described. In addition, to point out the differences and create recognition of cultural influences on the behavior of leaders and employee resistance to change, the Thai culture was addressed. After the review of previous studies, research hypotheses were formed in this section. Next, in Chapter Three, the scheme for undertaking the current study is presented.

CHAPTER 3

METHODOLOGY

The intent of Chapter Three is to elucidate the procedures and measurements

employed to investigate the relationship among the following variables: leadership

styles, influence tactics, information adequacy, and employee's dispositional

resistance to change. This chapter discusses the research design including (a) the

population, sampling procedure, and sample size determination, (b), research

measurements and their reliability and validity, (c) the pilot study, (d) data collection,

(e) demographic information, (f) factor analysis, the discussion of the revised scales,

and the hypotheses, (g) tests of ANOVA, and (h) statistical analysis for each research

hypothesis.

Population and Samples

Research Sites: Rules for Inclusion

Selection was non-random in order to fit the criteria used to identify the type

of transformational organization. This type of sampling is called "purposive

sampling" (Miller & Salkind, 2002, p. 53) because the research sites were hand-

picked and judgments were made to determine the organizational contexts that were

likely to fit the objective of the study. This kind of sampling reduces the possibility of

generalizability to a wider population; however, this choice is both appropriate and

necessary for the general design guiding this study. The following five criteria

provided principles and justifications to recruit the research sites in this study.

First, organizations that were qualified to participate in the study must

experience the process of organizational transformation and change because the

population of this study was aimed at employees who were involved in the change process. Colenso (2000) and Ellis (1992) identified several forms of organizational change including process reengineering, merger and acquisitions, total quality management, foreign competition, downsizing, the newly appointed CEO or executive, or the replacement of new technology. Organizations that experienced one of the processes that show organizational transformation efforts described by Colenso and Ellis met the first criterion.

The second criterion to recruit participating organizations was set forth following the suggestion from Light, Singer, and Willett (1990). These authors stated that divergent sites helped researchers gain more information from a variety of respondents. Although using diverse samples is more difficult and takes longer for data collection and processing (Ginsberg, 1988), the current study selected a diverse sample over a typical site because it helps prevent the restriction of the conclusion and its limitation to the specific population introduced by a single site (Light et al., 1990). The divergent sites also help researchers increase variation in the data. Thus, the external validity of findings was assumed, if even only to other similar organizations.

Third, given that the diverse sample could make the results become more interesting, types of business should be different from one another. The advantage for including different types of industry was to obtain data from organizations that implemented changes in a variety of forms. Although the participating organizations were different in structure and characteristics, the emphasis was put on the effects of change on individuals and their psychology rather than the process of change within organizations. In addition, Ellis (1992) argued that a number of studies on organizational change attempted to study the effects of change but failed to

investigate communication and information processing as an important component of change effort. Responding to this argument, the current study included five different types of businesses to increase the variation of data.

Organizational size was considered as the fourth criterion. Typically, organizational complexity is less in a small organization than a large organization. By comparing a large-system corporation to a retail shop, for instance, significant impacts of change to individuals were implied as a result of the more levels of complexity in their structure and culture in the large organization (Ledford, Mohrman, Mohrman, & Lawler, 1989). Thus, the magnitude of change was permeable and its effects were explicitly reflected on individuals' psychological states and work performance. The research sites were chosen under the criterion of more than 1,000 employees in each company.

Finally, the length of time for implementing change plans was important and treated as the final criterion. Because change is a continuous process where the beginning and end cannot be defined (Salem, 1999), the concept of transition state help make the endless procedure of change become less abstract. Nadler (1981) stated that the transition state is the time when organizations move from a current state until they meet their desired state. Through the open systems model, Levasseur (2004) added that during the transition state, a time delay occurs before the congruence of organizational structure to its strategies. Therefore, under these circumstances, it is possible that several strategies and technologies are testing and changing before institutionalizing them into the system. As a result, problematic tasks and chaos bring a state of flux to the organization. Given these points, a period of one year is

considered to be a sufficient time for the selected organizations to establish a

relatively constant performance.

<u>Sample: Rules for Inclusion</u>

The unit of analysis in this study is the employees who work in organizations

that have gone through the transformational change period. Employees in the business

sector were chosen because they were able to draw on their own experiences to

describe an internal information dissemination and internal communication between

leaders and subordinates. With regard to the purposive sampling and the selection

bias, criteria were employed to secure this problem and insure the qualifications of the

samples. First, the major concern was directed to the employee's involvement in the

transformational process. In order to assess employee's perception of information

distribution, their leader, influence tactics, and employee resistance to change, the

presence of employees during the process of organizational change presumes their

tasks' accountability and their perception towards those areas of interest.

The work tenure of employees during the change process served as another

boundary. In the transitional period, the outcomes of the change plan can be observed

through either employee's trust in the organization or withdrawal from the

organization (Kiefer, 2005). Fukami and Larson (1984) asserted that work tenure was

positively related to the level of commitment. Furthermore, Paulsen et al. (2005)

found that job uncertainty and personal control directly related to emotional

exhaustion and job satisfaction. In this sense, personal control helped reduce job

uncertainty and emotional exhaustion. In order to describe the leadership practices

and the dissemination of internal information through the investigation of employee

perceptions, the respondents had to (a) possess at least six months of work tenure in

an organization; (b) work at least six months in the current position; and (c) be supervised by a present supervisor for at least six months. These criteria were believed to postulate the effective inclusion rules to recruit qualified respondents who spend an appropriate amount of time working on their tasks and dealing with their supervisor. Importantly, they were more likely to experience the change, deal with both positive and negative emotional and physical responses to change, and eventually, remain in a relatively stable state for personal control. Emotional exhaustion that might have an effect on the participants' responses was decreased after the implementation of change.

Finally, since one of the objectives of this study was examining employee perceptions of a leader in a Thai context, the concept of a leader and employees should be defined in order to identify the samples. In this study, a leader in a change organization was referred to a first-line manager. According to Griffin (2000), first-line managers typically referred to supervisors, coordinators, or office managers who supervise and coordinate the activities of operation employees. However, in the change circumstance, rather than emphasizing a great amount of time on supervising and controlling, managers are also asked by their senior manager to take a leader role by continuously focusing on their own leadership development and actively search for new opportunities and lead their followers to accomplish new organizational goals. Employees or the participants of the study are those who are Thai and are supervised by a Thai first-line manager. Throughout the remainder of the paper, a first-line manager was referred to as a leader and individuals who were supervised by a first-line manager were referred to as employees, subordinates, or followers.

Research Sites

A non-randomized sampling method was employed in order to fit the criteria used to identify organizations that implemented change plans as described by Colenso (2000) and Ellis (1992). Basically, a non-random sampling affects external validity of the results to other similar population. However, random assignment cannot affect reliability of the measurement because a focus of reliability is to examine the consistency of the responses on the same measurement (Light, Singer, & Willett, 1990). To be identified as the transformational organizations, the researcher studied and collected information from organizations' newsletters, websites, annual reports, and internal sources. But, assigning randomization at this level might bring unqualified organizations to the study.

To get permission for conducting the research, a phone call approach was used rather than written invitations of participation. The calls were made to explain the purpose of the study and ask for permission to distribute the questionnaire. Also, the researcher offered an executive summary of the research findings as an incentive for the participating organizations. It became more difficult to gain entry into middle organizations with the minimum number of employees at 1,000 people. Twenty-five phone calls were made to twenty-five companies and most of them were met with resistance. While some reasons for not participating in this study were that the companies had already participated in other research projects, most of the reasons given were that they did not have time and did not want the research to be conducted in their organizations. The calls resulted in commitments from five organizations.

According to the agreement between the participating organizations and the researcher, a pseudonym was used instead of a name of each company. The major

concern to this point was directly related to the topic of this study, employee resistance to change. The results from this research may result in the perception of employees to their leader and organizational environment. Therefore, only general information on the nature of change is presented for each company.

Recruiting Organizations

Alpha Company is a telecommunication company with approximately 10,000 employees in the metropolitan areas and about 6,000 employees in the headquarters locations where the data were collected. Alpha Company is a large firm that has experienced several changes including being listed in the stock market, having a flattened structure of work, a new system of management to replace a more rigid style of management, and investing in new areas of telecommunication technology in order to complete more effectively in the market.

Beta Company has operated in the computer and technology industry in Thailand for more than 10 years and employs approximately 6,000 employees. Through the continuous rejuvenation program, several projects were implemented for the improvement and development of the manufacturing process, products, and customer satisfaction.

Delta Company is a subsidiary of one of Thailand's largest industrial conglomerates which was established more than three decades ago and has more than 1,000 current employees. Delta Company promotes innovation in products, services, processes, and business models. Recently, the company adjusted the management structure as well as initiated attitude change at the individual level. In this sense, all employees are expected to be able to alter themselves to be in the alignment with the company's new mission.

Epsilon Company is a logistics subsidiary with approximately 1,200 employees. The company recently launched a one-stop service project for total logistics in order to provide quality service to the customers. Several significant change plans were implemented to achieve the quality services goal and a new managing director was appointed recently.

Gamma Company is a commercial bank in Thailand. It recently initiated a "Change Program" to restructure its organization for more efficiency and flexibility. The aims of the change program are to demonstrate the international performance through innovation, service enhancement and operational efficiency. Not only has the organizational restructuring had an impact on work policies and the pattern of relationships within the organization, but the employees have been asked to become more service minded.

Sample Size Determination and Sample Error

Because a hierarchical regression was used to study relationships between predictors and outcome variables in this study, sample size determination played a central role. Stevens (1999) stated that sample size should be determined before collecting data to ensure that a prediction equation provides generalizability for the study. Sample size is inversely proportional to sample error. In this sense, Babbie (2004) explained that sample error is the difference between information obtained from the sample and information obtained from the whole population. In other words, it is the degree of error to be expected from a sample of the study.

According to the formula for estimating the sample size proposed by Stevens (1999), the approximate number of 15 subjects per predictor were recommended for a reliable regression equation when the amount of shrinkage (a loss in predictive power)

is small ($<.05$) with high probability at .90 and the squared population multiple

correlation (ρ^2) is .50. To emphasize the accuracy, Stevens asserted that this method

can be used for average cross-validation of the sample. The sample cross-validity

refers to the effectiveness of the sample regression functions in other samples. With

17 predictors, the sample size of 255 was the minimum required number of responses

for a representative sample that allowed for generalizable results within a confidence

level of 95% ($\alpha = .05$), assuming a .05 amount of acceptable sampling error.

However, in this study, a large sample size (475 samples) was used. This

number allowed for more power, which reduces the risk of Type II error (Light,

Singer, & Willett, 1990). In this regard, when the relationship between predictors and

outcomes really exists, a small sample size may not be able to identify the statistically

significant findings. But with the large sample size, the chance of finding real effects

between predictors and outcomes increases. Although there is some possibility that a

large sample size will result in small effects being significant, effect size estimates

such as R^2 can be used to determine the practical significance of small, but statistically

significant findings.

Research Design

This study, as a survey research effort, was designed to investigate the

likelihood of employee resistance to change by examining employee perceptions

toward a leader and the importance of information to determine the possibility of

resistance to change through three predictors: leadership styles, influence tactics, and

information adequacy. Given this purpose, the study was based on a correlational

design where the relationships between predictors and outcome (resistance to change)

were examined. A hierarchical regression analysis was preferred to multiple

regressions because the specification of the order of entering predictors into the regression equation provided more accurate significance tests compared with the stepwise inclusion procedure (Lai & Mahapatra, 2004). Trend Analysis was also of concern to tests for particular types of linear and nonlinear relationships between the independent variable and dependent variable.

Quantitative methodology is the main methodology for this study. Data collection was conducted via questionnaires administered to Thai employees in organizations that have gone through a change period. The questionnaires employed in this study are widely recognized, research-based, and standardized measures. The questionnaire was divided into five parts: (a) the Resistance to Change scale, (b) the Receiving Information scale (c), the Multifactor Leadership Questionnaire, (d) the Profiles of Organizational Influence Strategies, and (e) respondent's characteristics. (See Appendix A for an English version and Appendix B for a Thai version. The Multifactor Leadership Questionnaire is not included due to copyright concerns by the scale developers.)

Variables of the Study

The purpose of this study was to investigate how employee perceptions of leadership styles, leader's influence tactics, and the amount of information distribution relate to employee inclination to resist change. The dependent variable of this study is employee resistance to change. It was measured by Resistance to Change Scale (RTC; Oreg, 2003). The three independent variables of this study are (a) leadership styles, (b) leader's influence tactics, and (c) information adequacy. Leadership styles were measured by the Multifactor Leadership Questionnaire (MLQ; Avolio & Bass, 2004). Influence tactics was assessed by the Profile of Organizational

Influence (POIS; Kipnis & Schmidt, 1982). Information adequacy was administered by the Receiving Information Scale (RI; Goldhaber, Rogers, Lesniak, & Porter, 1978).

Instrumentation

Resistance to Change Scale (RTC)

Resistance to change was conceptualized and operationalized in this study as an employee multidimensional disposition that comprises a "tridimensional" (negative) attitude towards change, including affective, behavioral, and cognitive components (Oreg, 2006, p.76). In this study, the RTC scale (Oreg, 2003) was used to examine an employee's tendency to resist or avoid making change. With particular attention to sources of resistance that appeared to derive from an individual's personality, Oreg (2003) generated an initial pool of 48 items describing an individual's general attitude toward change. This number was reduced to 44 by five independent reviewers, experienced in the scale-development process identifying ambiguous wording, double-barreled items, and redundant items. The questionnaire was then distributed to 226 individuals from a variety of groups (i.e., men vs. women, students vs. nonstudents, and different age groups). No significant differences were found in the factor structures of these groups. Content analysis identified a total of 21 statements representative of the general attitude toward change grouped into 4 personality factors: (a) routine seeking, (b) emotional reaction, (c) short-term focus, and (d) cognitive rigidity. Oreg (2003) found that those 21 items of the 4 factors explained just over 57% of the variance. Thus, five items were removed and the two additional items were written, resulted in a 17-item questionnaire that accounted for 62% of the variance in the scale.

The RTC instrument contains four subscales reflecting three different indicators of individuals' evaluation of a situation relevant to change including behavioral, affective, and cognitive aspects. The behavioral component examines individuals' tendency to adopt routines. The affective component consists of two dimensions: first, the emotional reaction factor concerns individuals' feelings such as stress and uneasiness when encountering change. Second, the short-term focus reflects short-term inconveniences that distract individuals experiencing change. The cognitive component assesses what one thinks about the change which can be understood by the frequency and ease with which individuals change their minds. Oreg (2003) noted that the existence of a general inclination to resist change was able to be observed by the occurrence of moderate-to-high intercorrelations among factors. This supported the assumption that these factors are all the dimensions of the same trait (Oreg, 2003).

Several studies were conducted by Oreg (2003, 2006) to test the RTC scale. The alpha coefficients for the full scale ranged from .81 to .93. Subscale alphas ranged from .68 to .80 for the routine seeking facet, .71 to .81 for the emotional reaction facet, .71 to .87 for the short-term thinking facet, and .69 to .86 for the cognitive rigidity facet. To complete this measure, respondents were asked to answer the 17 items on a five-point Likert scale, from 1 (strongly disagree) to 5 (strongly agree).

Multifactor Leadership Questionnaire (MLQ)

Leadership styles in this study were based on the combination of an individual's beliefs, values, and preferences, as well as the organizational culture and norms which would encourage some styles and discourage others. It was

operationalized by Avolio and Bass's (2004) Multifactor Leadership Questionnaire (MLQ), describing transactional and transformational styles. There were five general components of transformational leadership; (a) idealized influence (attributed), (b) idealized influence (behavior), (c) inspiration motivation, (d) intellectual stimulation, and, (f) individualized consideration. The four general components of transactional leadership were (a) contingent reward, (b) active management-by-exception, (c) passive management-by-exception, and, (d) laissez faire.

Bass (1985) initially generated a total of 142 items describing transactional and transformational leaders by a literature search and an open-ended survey of 70 senior executives. The initial 142 items were reduced to a 73-item questionnaire by having a panel of 11 expert judges determine whether an item represented either transactional or transformational leadership. Items that could not be classified into either category were not included on the questionnaire (Bass, 1985). Then, they were administered as MLQ Form 1 to senior U.S. Army officers. They completed the questionnaire, ranking their immediate supervisor from 0 (the behavior is observed not at all) to 4 (the behavior is observed frequently, if not always).

Studies of the MLQ factor structure revealed that there were high, positive correlations among the four transformational leadership scales (Avolio & Bass, 2004; Barling, Slater, & Kelloway, 2000; Howell & Avolio, 1993; Lievens, Geit, & Coetsier, 1997). However, Avolio and Bass (2004) and Howell and Avolio (1993) confirmed that these four factors composing of transformational leadership were conceptually and empirically distinct.

In addition, active management-by-exception and laissez faire exhibited either low positive or negative correlations with the transformational leadership items and

contingent reward, a constructive form of transactional leadership (Avolio & Bass, 2004; Lievens, Geit, & Coetsier, 1997). Active management-by-exception also showed a positive correlation with passive management-by-exception and inactive laissez faire leadership ratings. On the contrary, Howell and Avolio (1993) and Lievens, Geit, and Coetsier (1997) reported a negative relationship between active management-by-exception and passive management-by-exception. Lievens, Geit, and Coetsier found that laissez faire leadership and passive management-by exception correlated positively with each other and negatively with all other dimensions. Howell and Avolio summed that contingent reward was apparently distinct from all factors in transformational leadership and from the two factors representing management-by-exception. They also pointed out the two separate factor structures of management-by-exception.

Coefficient alpha reliabilities (α) for this scale, reported in the work of Avolio and Bass (2004) and Barbuto (2005), were as follows: idealized influence (attributed) "Instill pride in me for being associated with him/her," $\alpha =$ .75 to .79; idealized influence (behavior) "Talk about their most important value and belief, $\alpha = $ .70 to.71; individualized consideration "Spends time teaching and coaching," $\alpha = $ .73 to .75; intellectual stimulation "Seeks differing perspectives when solving problems," $\alpha = $ .71 to .77; laissez-faire "Avoids getting involved when important issues arise," $\alpha = $ .71 to .76; contingent reward "Provides me with assistance in exchange for my efforts," $\alpha = $ .69 to .77; active management by exception "Focused attention on irregularities, mistakes, exceptions, and deviations from standards," $\alpha = $ .71 to .75;

and passive management by exception "Fails to interfere until problems become serious," α = .70 to .72.

To rate a leader in this study, items were changed from the original 0 to 4 to 1 to 5 for consistency in the questionnaire and for facilitating the respondent's understanding in responding to the questions. Thus, the respondents were asked to judge how often their leader displayed each of the 36 behaviors using a five-point frequency scale ranging from 1 (not at all) to 5 (frequently, if not always).

The Profile of Organizational Strategies

Influence tactics were conceptualized as communication strategies used by leaders to influence new attitudes and behaviors to their subordinates (Kipnis, Schmidt, & Wilkinson, 1980). To operationalize the influence tactics, the Profile of Organizational Influence form S (POIS; Kipnis & Schmidt, 1982) was utilized to assess the seven types of tactics that leaders used to influence their employees at work.

Kipnis et al. (1980) initially derived a taxonomy of interpersonal influence processes by asking 165 part-time students to each write a paragraph describing "How I get my way" with their boss, co-worker, or subordinates. Kipnis et al. then conducted four factor analyses: one for the total sample and one for each influence target subsample. The analyses resulted in the identification of eight dimensions of influence (Assertiveness, Ingratiation, Rationality, Sanctions, Exchange of Benefits, Upward Appeal, Blocking, and Coalitions) and in the development of the intraorganizational influence tactics scale consists of multi-item scales to assess each dimension. With an attempt to develop the intraorganizational influence tactics scale, Kipnis and Schmidt (1982) built on the original Kipnis et al. (1980)'s scales to

develop the Profile of Organization Influence Strategies (POIS) that included seven components. The 33-item behaviorally based POIS form S contained a seven-strategy typology of influence consisting of Friendliness, Bargaining, Reason, Assertiveness, Sanctions, Higher Authority, and Coalition.

Friendliness is the strategy used to create a favorable impression with subordinates by causing them to think well of their leader. *Bargaining* involves using tactics that influence subordinate by means of negotiation and the exchange of favors between leaders and followers. *Reason* refers to the use of information, data, and logical arguments to convince subordinates. *Assertiveness* is an attempt to influence subordinates by being forceful. *Sanctions* include the use of power inherent through an organizational policies, rules, rewarding or punishment to support leader's demand. *Higher Authority* is a leader's attempt to rely on more powerful members of the organization to gain subordinate compliance. *Coalition* involves mobilizing others to support the leader's influence attempt.

The analyses of intercorrelations resulted in a fair degree of independence among the factors, with the exception of the relationship between Ingratiation and Exchange tactics (Kipnis et al., 1980). Upward Appeal and Sanctions showed slightly negative correlation with Reason (Rao & Hashimoto, 1996). The POIS showed moderate reliability (coefficient alpha) ranging from .60 to .77 in the work of Rao and Hashimoto (1996) and from .61 to .68 in the work of the same authors in 1997.

To respond to the POIS in this study, respondents were asked to describe their leader's influence attempts using a five-point Likert type scale ranging form 1 (never) to 5 (almost always). Since this instrument had been originally designed to capture the agent's responses, rephrasing was employed in this study to insure consistency across

the scales and to describe influence attempts from the target's perspective. For example, the POIS item, "I simply direct my subordinate to do what I want," was rephrased as "The leader simply directs me to do what he or she wants."

Receiving Information Scale (RI)

Information adequacy was operationalized in this study as the difference between an individual's self-reports of the amount of information he or she wanted to receive and the amount of information he or she actually received (Daniel & Spiker, 1987). One of the subscales from the ICA Communication Audit Questionnaire, "Receiving Information from Others," was used to measure this construct (Goldhaber, Rogers, Lesniak, & Porter, 1978). The RI scale is comprised of 13 pairs (current vs. needed) of items concerned with various topic areas pertinent to the provision of organizational information. Daniels and Spikers (1983) factor analyzed data from the ICA Communication Audit Data Bank and found a three-dimensional structure of information adequacy, including organizational performance, personal performance or job performance, and policies and benefits.

According to Zhu, May, and Rosenfeld (2004), the RI scale should be adapted for use in an organizational change context. Thus, for this study, some items were reworded to have participants assess information adequacy in the context of organizational change (e.g., "my job duties" was adapted to read "changes in my job duties"). The reported reliability of this subscale (coefficient alpha) is .88 for the "current" subscale and .85 for the "needed" subscale (Goldhaber, Rogers, et al., 1978). For each item, respondents were asked to give responses to the amount of information they need and the amount of information they currently receive on the 13

topics in their organization on a five-point Likert scale form 1 (very little) to 5 (very great).

For the statistical purpose, to identify the level of information adequacy in this study, raw discrepancy scores (d) provided the primary data, where $d = (current_i - needed_i)$. Thus, a discrepancy score for any items pair in the RI scale can assume one of nine values from -4 (inadequate) to +4 (adequate).

Instrument Reliability and Validity

Reliability estimates the consistency of measurement while validity is the accuracy of the measurement. According to Sumser (2001) validity is more important than reliability because if an instrument does not accurately measure what it is supposed to, there is no reason to use it even if it measures reliably. However, the reliability and validity of the measurements used in this study received special attention as discussed in the proceeding section.

A major concern to enhance the reliability of the measurement is the translation accuracy from the US-based measurements to another culture and language. To ensure the reliability of the translation, all of the research instruments were translated and backtranslated by two independent translators and the researcher. First, the English questionnaires were translated into the Thai language by the researcher. Second, a bilingual Thai professional reexamined the translated versions of the questionnaire for more accuracy and clarity. Then, a third person, fluent in both Thai and English, translated the Thai version back into English. The original and translated versions were compared, and any discrepancies in meanings and terminology between the two were noted. Modifications were made in the translations until the two versions of questionnaire were relatively consistent.

However, it should be acknowledged that when scales developed in one culture are used in another culture, discrepancies in meaning are unavoidable. In this study, there is a potential difference in meanings associated with the name of the scale between the American and Thai versions. The RTC scale was translated to "attitude and behavior toward resistance to change questionnaire" in using Thai language. The underlying reason for this discrepancy is that from the western perspective, employee resistance to change is more likely to be viewed as a constructive conflict (Roongerngsuke & Chansuthus, 1998). Employees in the western culture have more confidence to either argue or disagree with leaders. However, the Thai culture is oriented toward non-confrontation and conflict avoidance. Employee resistance to change, in the Thai culture, could be considered a destructive form of conflict and confrontation between a leader and follower. Thais believe that confrontation is rude and conflict within an organization is disruptive and can ruin organization and individual achievement (Roongerngsuke & Chansuthus, 1998). As such, the name of the questionnaire may lead a distortion or underestimate on the part of respondent. In addition, the resistance to change scale was originally designed to assess an employee disposition as an inclination to resist change that comprises a tri-dimensional attitude: cognitive, affective, and behavioral dimensions (Oreg, 2003). Therefore, although the discrepancy between the labels arises, its name under Thai language also conveys the underlying construct of the measurement and can be used to measure employee disposition to resist change as it was originally developed.

Pilot Study

A pilot study was conducted to examine the application of the instruments that were developed using the U.S. samples when they were used in a Thai culture. Since

the instruments have never been used in Thai organizations, four major objectives for implementing the pilot study were: 1) to examine the procedure of data collection including the time needed for completing the questionnaire and the effective method of achieving a response; 2) to determine whether the translation of the instruments to Thai culture allowed for valid interpretation; 3) to ensure the understandability of the respondents to the Thai version of the questionnaire; and, 4) examine validity and the internal consistency of the measurements.

The influence of a questionnaire collector, especially the Human Resources (HR) manager is regarded as one of the major problems that may lead to the distortion in the answers. Since the questionnaire was aimed to assess employee inclination to resist change through their perception of leadership styles, influence strategies, and information adequacy, the researcher was aware that the HR manager and the contact persons may have an influence upon the responses if the respondents perceive their ability to access the questionnaire and its response. Thus, to prevent this potential problem and to potentially increase the number of the return rate, the researcher provided an envelope and asked the respondents to put the questionnaire in the envelope and seal it before dropping in the sealed box or returning it directly to the questionnaire collectors.

To encourage more participation in the study, the respondents were informed about the anonymity of their response and their name. In addition, an incentive was employed to motivate the companies to give permission for the distribution of the questionnaire, and participants to complete to the questionnaire. An executive summary of the findings was offered for participating companies and respondents who indicated their interest on the questionnaire.

The pilot sample of this study was divided into two groups. The purpose of the first group, which were the organizations participating in this study, was mainly to test the process of data collection. The second group of respondents was selected from a variety of industries, including a film production industry, an office furniture industry, telecommunication industry, health care industry, a bank industry, and information and technology industry. The main purpose of the second group was to test the validity of the instrument interpretation. In addition, it was also intended to check understandability of the items on the questionnaire.

According to Light , Singer, and Willett, (1990), the representativeness of the sample to the target population should receive more concern than the size of the pilot sample during a pilot study. Thus, to achieve the representativeness of the target population, the respondents had to reach the criteria of inclusion discussed in the population and samples section. A total of 200 questionnaires were sent to the respondents by means of random sampling. Twenty-seven questionnaires were sent to either an HR manager or an identified contact person in each participating company. The remaining 173 sets of the questionnaire were sent to an identified contact person in the second group. The HR manager and the contact person were told by the researcher the criteria for qualified respondents and the advantages and disadvantages of random sampling to collect data. This was to ensure that the respondents would be a diverse group in sex, age, education, and department. The researcher gave the respondents 14 days to complete the questionnaire. The respondents were asked to voluntarily rate the questionnaires and demonstrate their open comments regarding any doubts, problems, or objections which might cause confusion to any item(s) on the questionnaire. Only the respondents from the second group were given a space to

fill in their name and contact number if they were willing to voluntarily participate in a small group discussion with regard to the clarity of the questions.

Due to the length of the questionnaire (118 items), the respondent's tiredness might have an effect on the results. Regarding this problem, the researcher decided to have two versions of the questionnaire which were different in the sequence of the scales. The Resistance to Change scale (RTC) and the RI scale were respectively arranged in the first and second order in both versions of the questionnaire. The RTC scale was set up front in both versions because the researcher believed that if it followed the scales that ask them to rate their leader, the respondents may underestimate their level of resistance and rate themselves lower than what it was supposed be. The RI scale was put after the RTC because this scale asked the respondents to give two responses to the amount of information they currently receive now and the amount of information that they need to receive. Therefore, it required full attention from the respondents to read and understand the instructions before marking their answers. The difference between the two sets of questionnaire was the arrangement of the POIS scale and the MLQ. The POIS and MLQ scales could be placed differently either in the third or forth order because the instructions for completing both scales were similar and easy to understand.

To return the questionnaire, the first group of respondents was asked to put the questionnaire in a provided envelop, seal it, and insert it into a drop-off box. The second group of the pilot sample was asked to put the questionnaire in a self-addressed, stamped envelope, provided by the researcher, seal it, and give it to the contact person or return it to the researcher via a postal service. Respondents in the pilot study were excluded from the full-blown study.

There were 122 respondents who completed the questionnaire. However, there were only 104 usable questionnaires for a return rate of 52%. This return rate suggested that approximately 490 questionnaires would need to be distributed if the expected sample was 255 usable responses.

As a result of the pilot study, some comments were given concerning the wording of the questionnaire in the Thai version such as the interpretation of the phrase, "an individual." The researcher decided to give both the dictionary meaning and commonly used meaning in parentheses. In addition, in the introduction part of the pilot study questionnaire, the researcher asked the respondents to think about communication and interaction between the respondents and their current supervisor during the organizational change period. Some comments were provided about the ambiguity of 'organizational change' as a context of the study, thus, the researcher provided some examples of the change context in that it can be changes to overall work procedures, changes in organizational image, or the increase in service and product lines.

Based on a suggestion from the small group discussions, the researcher put the words, "My boss…," on the top of the Profile of Organization Influence Strategies scale (POIS), the Multifactor Leadership Questionnaire (MLQ), and in front of every item of the Receiving Information scale (RI) in order to facilitate the understanding of the respondents. In other words, the words, "My boss…," were added to remind the respondents that they were rating their boss. One suggestion was made about the font size. To facilitate the readability, the research enlarged the font size in the main study. Modification to the problems of language ambiguity and non-equivalence was also made in response to suggestions of the respondents. An example of such

modifications included the choice of how the word "I" was translated into Thai. While some respondents preferred the translation of this word to be "*Chan*", the others wanted it to be "*Kha-pa-chao*." The decision was finally made for the word "*Chan*" because it is used in everyday speech by people of equal ranks. The word "*Kha-pa-chao*", is used in formality and perhaps reflects the social hierarchy.

Two collection procedures were found effective. The first procedure was to ask the respondents to put the completed questionnaire into the sealed box. The second method was to put and seal the completed questionnaire in the provided envelope and directly return it to the identified contact persons. The researcher opted for canceling the postal service method in the main study because the return rate was very low (26%). The length of 14 days to complete the questionnaire was found appropriate.

Satisfactory reliability was found for the full scales of all measurements. The reliability coefficient was 0.75 for the RTC scale, 0.87 for the MLQ, 0.88 for the POIS sale, and 0.86 for the RI "current" subscale and 0.91 for the RI "needed" subscale. (See Appendices C through F for detailed analyses of reliability tests based on the data from the pilot study.)

When the internal consistency of the subscales was assessed, low coefficients of reliability were found for some subscales. The criterion used to determine the reliability of a measurement is based on Aron, Aron, and Coups (2005). They suggested the Cronbach's alpha of a good measure should be at least 0.6 or above. The reliability scores of the RTC subscales were 0.33 for the routine seeking subscale, 0.75 for the emotional reaction subscale, 0.72 for the short-term thinking subscale, and 0.67 for cognitive rigidity subscale.

The reliability scores for the subscales of the MLQ were 0.80 for idealized influence, 0.70 for intellectual stimulation, 0.61 for individualized consideration, 0.72 for inspirational motivation, 0.55 for laissez-faire, 0.63 for contingent reward, 0.68 for active management by exception, and 0.28 for passive management by exception.

The reliability scores for the subscales of the POIS scale were 0.70 for friendliness, 0.73 for bargaining, 0.71 for reason, 0.73 for assertiveness, 0.82 for sanctions, 0.80 for higher authority, and 0.45 for coalition.

In sum, the pilot study indicated a sufficient internal consistency only for the RI scale. However, to confirm the reliability score of the RI scale, the internal consistency was assessed again using the data from the main study. And the result revealed that the reliability score increased to .92. Since some of the subscales of the RTC scale, the MLQ, and the POIS scale indicated low reliability scores, these results suggested a need for language revision to the questionnaire. In addition, a concern was also given to the analysis of internal structure using a factor analysis for each of the scale to determine if the factor structure held for Thai samples. The results and discussion are provided in the factor analysis and reliability testing section.

Data Collection

The package of questionnaire consisting of the instruments, the cover letter, and the envelopes were randomly distributed to the participants either by the Human Resource and Development manager or the identified contact person in each company. The cover letter explained the purpose of the study, specified the last date for returning the questionnaire and how to return it, and reaffirmed the confidentiality of their responses. Most importantly, the cover letter informed the respondents that their participation in the study was voluntary.

A total of 1,200 questionnaires were distributed to the five organizations. These included 300 questionnaires for each of Alpha, Delta, and Gamma Companies. Two-hundred sets of questionnaire were sent to Beta Company and 100 sets of questionnaire were distributed to Epsilon Company. At the end, 538 (44.83%) were returned. See table 1 for the rate of returned questionnaire.

Table 1: Return Rate of the Questionnaire

Company	Distributed Questionnaire	Returned Questionnaire	%
Alpha	300	92	17.1
Beta	200	133	24.7
Delta	300	115	21.4
Epsilon	100	63	11.7
Gamma	300	135	25.1
Total	1200	538	100

To collect the data, the respondents were asked to complete, seal, and return the questionnaire either to the contact person or in the sealed drop-box within two weeks. A phone call was made to the HRD managers and the contact persons in the third week reminding them to collect the questionnaires and to motivate those who did not answer the questionnaire to complete it. A one-week extension of the data collection was offered. As surveys were returned, the researcher kept a record of them

– through the numerical code written on each returned questionnaire – so that data verification could be made.

Demographic Information

In this section, the demographic data from the 538 participants are discussed. Six individual characteristics were queried including sex, age, education, years of work in the company, years of work with an immediate supervisor, and years of work in the present position.

Two-thirds of respondents (66.1%) were female and one-third (31.6%) were male. Approximately, half of the respondents were between 21 to 30 year old (52%) and had completed a bachelor's degree (49.1%). Approximately, 40% of the respondents had spent more than six years working in the company and had more than six months to one year working with their immediate supervisor. Regarding the length of time in the current position, 36.6% of the respondents reported having held their present position for between one and three years. Table 2 presents frequency distributions and percentages of the demographic information.

Factor Analysis and Reliability Testing

Data from the entire sample of 538 respondents were subjected to factor and reliability analyses in order to determine the dimensions and internal consistency of the four research instruments used in this study. The major objective of this part was to critically examine whether the instruments, originally created using samples of American workers, grouped together and formed consistent dimensions in the Thai culture, or whether they required further modification to be used in a cross-cultural setting.

Table 2 : Demographic Information of the Respondents

		Frequency (475)	Percent (%)
Sex	Male	150	31.6
	Female	314	66.1
	Unidentified	11	2.3
Age	20 year or under	14	2.9
	21 to 30 years	247	52.0
	31 to 40 years	134	28.2
	41 to 50 years	55	11.6
	51 to 60 years	23	4.8
	Over 60 years	1	0.2
	Unidentified	1	0.2
Education	High School	79	16.6
	Vocational Level	98	20.6
	Bachelors	233	49.1
	Masters	41	8.6
	Others	20	4.2
	Unidentified	4	0.8
Length of time in a company	> 6 months – 1 year	92	19.4
	> 1 year – 3 years	127	26.7
	> 3 years – 6 years	64	13.5
	> 6 years	192	40.4
Length of time with a supervisor	> 6 months – 1 year	206	43.4
	> 1 year – 3 years	142	29.9
	> 3 years – 6 years	63	13.3
	> 6 years	64	13.5
Length of time in a current position	6 months	1	0.2
	> 6 months – 1 year	150	31.6
	> 1 year – 3 years	174	36.6
	> 3 years – 6 years	79	16.6
	> 6 years	71	14.9

Before factor analyzing the scales, it should be noted that when scales are developed in one culture and then used in another culture, problems commonly arise relating to language equivalence (Ervin & Bower, 1952). In this regard, the problems of non-equivalence of language may impact on the factor analysis, especially the item deletion, when the underlying construct of the scales developed using the American samples cannot be transferred when they are used to assess Thai samples.

Principle component analysis and varimax were the extraction and rotation methods used to analyze unique dimensions of the scales. These statistical approaches allowed the researcher to investigate the factor structure comprising each of the four measurement devices. In so doing, comparisons are possible to determine whether previously observed dimensions are replicable in the Thai context. In addition, the results from the component analysis provided an empirical reason to remove items that exhibited a conceptually poor representation of unique structures observed with Thai workers. Consequently, exploratory factor analysis provided a way of identifying observable variables for use in subsequent analyses.

Assumptions and Procedure of the Principal Component Analysis

Sample size is one of the critical issues to be concerned about when the principal component analysis is used. Hair, Black, Babin, Anderson, and Tatham (2006) recommended a sample size of at least 5 participants per variable. They added that the minimum absolute sample size should be 50 participants but preferably the sample size should be 100 or larger. Given these suggestions, the sample of this study is large relative to the number of variable ($N = 538$ for the highest number of 36 variables in the MLQ); this means that results of the analyses are more likely to be statistically meaningful.

With regard to the issue of assumptions of factor analysis, Hair, Black, Babin, Anderson, and Tatham, (2006) stated that the assumptions of factor analysis can be thought of in two ways. First, conceptual issue is the critical assumption because underlying structures of a factor are more conceptual than statistical. Concerning the measurements used in this study, a strong conceptual foundation lends credibility to support the assumption that a structure does exist before performing factor analysis.

The second assumption sheds the light on statistical issue. Because factor analysis provides tools for analyzing the structure of the interrelationships (correlations) among variables, some degree of multicollinearity is desirable (Hair et al., 2006). To ensure that all items included in the four scales (RTC, MLQ, POIS, and RI scales) had sufficient correlations to justify the application of exploratory factor analysis, correlation matrix, the Kaiser-Meyer Olkin (K-M-O), and the Bartlett's test of sphericity were used. In addition, Hair et al. stated that the assumptions of normality, homoscedasticity, and linearity are less concerned when the application of the latter two assumptions is beneficial to the extent that they diminish the observed correlations. For the normality assumption, it is necessary if a statistical test is applied to the significance of the factors.

Regarding criteria for correlation of a data matrix, Steven (2002) suggested that if there are no correlations or if correlations are low among scale items, the principal component analysis is considered an inapplicable approach and should not be conducted because an expectation for a cluster or clusters of coherent items cannot be met. In addition, by visually examining the correlation matrix, if there are a substantial number of correlations greater than 0.30, then principal components analyses are appropriate (Hair et al., 2006). The Kaiser-Meyer Olkin Measurement

and the Bartlett's test of sphericity were used to determine whether the principal

components analysis was justified based on the sample. Based on the K-M-O criteria,

if it is less than 0.5, then the component analysis should not be conducted on the data

set. The Bartlett's test of sphericity provides a statistical test showing whether the

correlation matrix had significant correlations ($p \le .05$) among at least some of the

variables (Hair, et al., 2006). The Bartlett's test of sphericity was expected to be

significant if sufficient correlations exist among the variables.

After testing assumptions of the procedure, the next step was to perform the

principal component analysis to extract factors from the item correlation matrix; this

step allowed the researcher to make initial decisions about the number of factors

represented in the measurement model. In this stage, this study employed the most

commonly used techniques which are the Kaiser's criterion with an eigenvalue of

greater than one; a scree plot is typically used in conjunction with the Kaiser criterion.

Eigenvalues greater than 1 are considered meaningful and are retained as viable

components in the measurement model. Hair et al. (2006) noted that the Kaiser's

criterion is most reliable when the number of items or variables is between 20 and 50.

The scree plot is also used as a complement criterion to determine the optimum

number of factors for extraction. The scree plot is a graphical method derived by

plotting the eigenvalues (vertical axis) against the number of factors (horizontal axis)

(Stevens, 2002). The shape of the curve is used to establish the cutoff point. The

common recommendation is "to retain all eigenvalues (and hence components) in the

shape decent before the first one on the line where they start to level off" (Stevens,

2002, p. 389).

The next step of the principal component analysis is to rotate the factors. Green and Salkind (2005) stated that factors will be more meaningful and interpretable when they are rotated. To rotate the factors, the varimax rotational approach was employed. The logic for factor interpretation is that "interpretation is easiest when the variable-factor correlations are (1) close to either +1 or −1, thus indicating a clear positive or negative association between the variable and the factor; or (2) close to 0, indicating a clear lack of association" (Hair et al., 2006, p.126). The varimax rotation method simply maximizes loadings to be closer to 1, -1, or zero, thus improving interpretability.

After rotating factor loadings to aid interpretation, the next step was to identify which items loaded onto which factors and then to assess the meaningfulness of each factor. Two commonly used criteria to determine item loadings are 60/40 and 70/30. The more common criterion requires the primary loading of an item to be at least .60 and the secondary loadings on other factors not greater than .40. The less common and more stringent criterion requires a primary factor loading of at least .70 and no secondary loadings on other factors of greater than .30. Using the more common criterion, if the primary factor loading is lower than .60 and/or the secondary factor loading is higher than .40, the item will be excluded from further analysis. Yet another approach is the liberal .50 criterion which loads an item where the primary loading is at least .50. This is the most liberal of the criteria because the primary loading is comparatively small and larger secondary loadings are allowed. In some circumstances a liberal criterion can make replication of factor structures difficult.

Although there are several criteria available, this study opted for the liberal criterion where factor loadings greater than .50 were considered meaningful. The

motivation for using the more liberal criterion was twofold. First, the sample size of this study is considered sufficiently large ($N = 538$) to allow using a liberal criterion while still having some confidence in the robustness of the results (see Hair et al., 2006). Second, because the instruments used in this study had not previously been translated and tested in the Thai culture, the more liberal criterion is best for discovering a potentially new underlying structure that could be (re)tested in subsequent research. However, it should be noted that conceptual foundation developed in the prior studies also played a major role in interpretation of the factors. Consistent with the preceding explanation, assumption, and criteria discussed in this section, the results of the principal component analysis are presented in the following sections.

<u>Correlation Matrix</u>

The examination of the correlation matrix (See Appendices G through J) showed a substantial number of correlations greater than 0.30, either positive or negative. The Bartlett's test of sphericity suggested that the data met the assumptions necessary for factor analysis, $\chi^2 = 2203.02$ (522), $p < .001$ for the RTC scale, $\chi^2 = 8291.33$ (494), $p < .001$ for the MLQ scale, $\chi^2 = 7648.74$ (528), $p < .001$ for the POIS scale, and $\chi^2 = 3675.39$ (518), $p < .001$ for the RI scale. In addition, the K-M-O was more than 0.5 for all measurements. The results of these tests confirmed that the data met the primary assumptions of the principal component analysis to the extent that each measurement likely contained one or more underlying dimensions. Therefore, further dimensionality study of the factor structure was appropriate.

Principal Component Analysis and Reliability Test—Resistance to Change

The Resistance to Change (RTC) scale asked the respondents to indicate their level of resistance to each statement. After 538 respondents completed the scale, items were analyzed through factor analysis and reliability tests. Through the principal components approach, the initial analysis revealed four components that were extracted from the original 17-item scale. Then, a varimax rotation was employed to aid the interpretation. The scree plot (Figure 2) and eigenvalue identified four components.

Figure 2: Scree Plot of Eigenvalues for Resistance to Change Scale
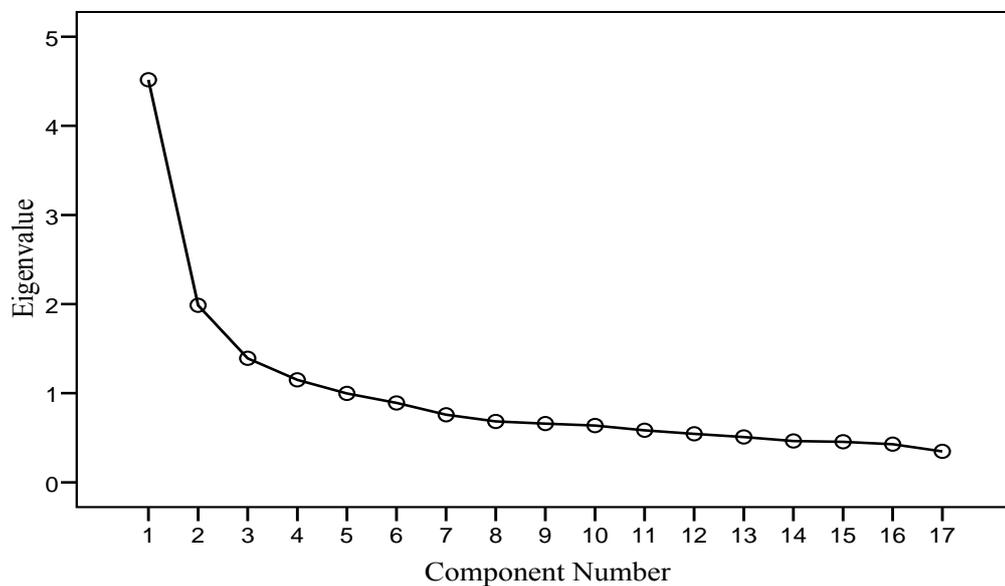
Based on the scree plot, eigenvalue, and the item loadings for each factor, the four components were retained (see Table 3 for the detailed analysis of factors). Some components were renamed from the original labels used in Western versions of the

scales because they were constructed differently. In addition, items 1 and 4 were dropped because they did not meet the criteria for factor loadings. Item 14 were also deleted to increase the reliability score of emotional reaction subscale.

The first component contained four items (items 9, 10, 11, 12) and was labeled *risk intolerance* because they emphasized an individual's level of tolerance towards changes. Individuals with high scores on this subscale are less tolerant or intolerant of change and risky situations. The second component contained three items (items 3, 5, 13) which concerned *stimulation-avoidanc*e. A higher score on this subscale represents a greater desire to avoid stimulation. Even though item 13 showed a high secondary factor loading (.44), it was considered conceptually similar to other items in this factor and, therefore, retained in the factor. The third component consisted of four items (items 2, 6, 7, 8) which addressed emotional reaction to proposed change. Although item 14 met the criteria for factor loadings, the communality score was lower than .50, indicating a small amount of variance the item shared with all other variable included in the analysis. Thus, it showed insufficient explanation. In addition, the subscale reliability test also suggested that the exclusion of this item would increase the reliability score from .19 to .69; therefore, item 14 was cut off. The fourth component comprised three items (items 15, 16, 17) which emphasized *cognitive rigidity.* Individuals with high scores on the cognitive rigidity subscale have difficulty changing the cognitive processes underlying their responses to organizational change.

Table 3 : Component Matrix for the Resistance to Change Scale

Question	Risk Intolerance	Stimulation -Avoidance	Emotional Reaction	Cognitive Rigidity
10. Changing plans seems like a real hassle	.67	.31	.08	.12
11. ... I feel a bit uncomfortable even...	.67	.08	.30	.05
9. If my boss changed the criteria, it would probably make me feel uncomfortable …	.64	.03	.24	.16
12. When someone pressures me to changes something, I tend to resist...	.62	.27	.18	.05
3. I like to do the same old things	.10	.72	.07	.04
5. I would rather be bored than surprised to new and different ones.	.19	.70	.07	.07
13. I sometimes find myself avoiding changes..	.44	.59	.17	-.07
8. When things do not go according to plans, it stresses me out.	.27	-.11	.68	.17
7. When I am informed of a change plans, I tense up a bit.	.18	.16	.64	.13
6. If … there is going to be a significant change…, I would probably feel stressed.	.22	.39	.53	.01
2. I will take a routine day over a day full of unexpected events any time.	-.40	.22	.50	.24
16. I do not change my mind easily.	.02	.02	.03	.83
17. My views are very consistent over time.	.13	.10	-.03	.78
15. Once I have come to a conclusion, I am not likely to change my mind.	.11	-.16	.38	.61
1. …consider changes negatively	.23	.47	.39	.02
4. Whenever my work life forms a stable routine, I look for ways to change it.	-.14	.39	.01	-.14
14. I often change my mind.	-.29	-.05	-.58	.20
Eigenvalue	2.49	2.40	2.24	1.91
% of Variance	14.64	14.11	13.17	11.27
Cronbach's Alpha	.73	.67	.69	.67

Note: Underlined factor coefficients show which factor the item loaded on. Items 1

and 4 did not load on any item. Item 14 was eliminated to enhance the alpha level. To

preserve space, some questions were truncated with eclipses.

When comparing results from the Thai sample to results from Western samples, there were broad similarities but also several specific differences. For the first factor, one item of the original emotional reaction dimension (item 9) was loaded with the three items of short-term thinking (items 10, 11, 12). Regarding the underlying construct, this factor emphasized the affective dimension of individuals who are less tolerant of change and are afraid of losing control over their present tasks and responsibilities. Thus, this component was labeled risk intolerance. The second component comprised two items of routine seeking (items 3, 5) and one item of short-term thinking (item 13). This component was named as stimulation-avoidance because its construct revealed the disposition of employees who are more likely to avoid stimulation. The second component was also considered as the behavioral dimension. Regarding the third component, three items of the original emotional reaction (items 7, 8, 9) were loaded with one item (item 2) from routine seeking and named emotional reaction. Item 2 stated that "I will take a routine day over a day full of unexpected events any time." Based on a culture of confrontation or conflict avoiding, this item could be regarded as emotional resistance among the Thai respondents rather than behavioral resistance perceived by the Western samples. The fourth component contained three items (items 15, 16, 17) that were consistent with the structure of original factor and was named cognitive rigidity. The four components collectively accounted for 53.20% of variance in the scale. Although cross-cultural conclusions are not yet possible, results of this analysis suggest that while Resistance to Change is present in both Western and Thai cultures, the exact dimensions underlying the variable are not consistent.

The analysis of reliability was conducted on each factor comprising the revised RTC scale. Using Cronbach's alpha, reliability estimates were .73, .67, .69, and .67 for the risk intolerance, stimulation-avoidance, emotional reaction, and cognitive rigidity factors, respectively. All items on the revised scale were analyzed to determine an overall reliability. As a result, the overall reliability for the RTC scale was.75, which was similar to the overall reliability found in the pilot study.

Based on the results of the principal components and reliability analyses, this study uses the four reconstituted subscales: a) risk intolerance, b) stimulation-avoidance, c) emotional reaction, and d) cognitive rigidity. Table 4 presents the final variables loaded for the Thai component as compared with the original RTC scale.

Table 4 : Compared Resistance to Change Scale

Question	Original Component				Thai Component			
	Routine Seeking	Emotional Reaction	Short-term Thinking	Cognitive Rigidity	Risk Intolerance	Stimulation-Avoidance	Emotional Reaction	Cognitive Rigidity
1. …consider changes negatively	X							
2. I will take a routine day over a day full of unexpected events any time.	X						X	
3. I like to do the same old things	X					X		
4. Whenever my work life forms a stable routine, I look for ways to change.	X							
5. I would rather be bored than surprised to new and different ones.	X					X		
6. If … significant change…		X					X	
7. When I am informed of a change plans, I tense up a bit.		X					X	
8. When things do not go according to plans, it stresses me out.		X					X	
9. If my boss changed the criteria for evaluating employees, it would probably make me feel uncomfortable…		X			X			
10. Changing plans seems like a real			X		X			
11. Often, I feel a bit uncomfortable even about changes that may improve			X		X			
12. When someone pressures me to changes something, I tend to resist…			X		X			
13. I sometimes find myself avoiding changes that I know will be good for			X			X		
14. I often change my mind.				X				
15. … come to a conclusion, …				X				X
16. I do not change my mind easily.				X				X
17. My views are very consistent over				X				X

Principal Component Analysis and Reliability Test—Multifactor Leadership

Questionnaire

The MLQ contains 36 items that identify leadership styles on a five-point

Likert-type scale. Data obtained from the main data collection were used to determine

the meaningfulness of the factor structure through factor analysis and reliability

testing. Based on the orthogonally rotated option for factor analysis, the scree plot

(see Figure 3) and eigenvalue score indicated seven components. However, the

criteria for factor loadings (.50) and the underlying conceptual structure of the

construct suggested only four meaningful components.

Figure 3 : Scree Plot of Eigenvalues for Multifactor Leadership Questionnaire
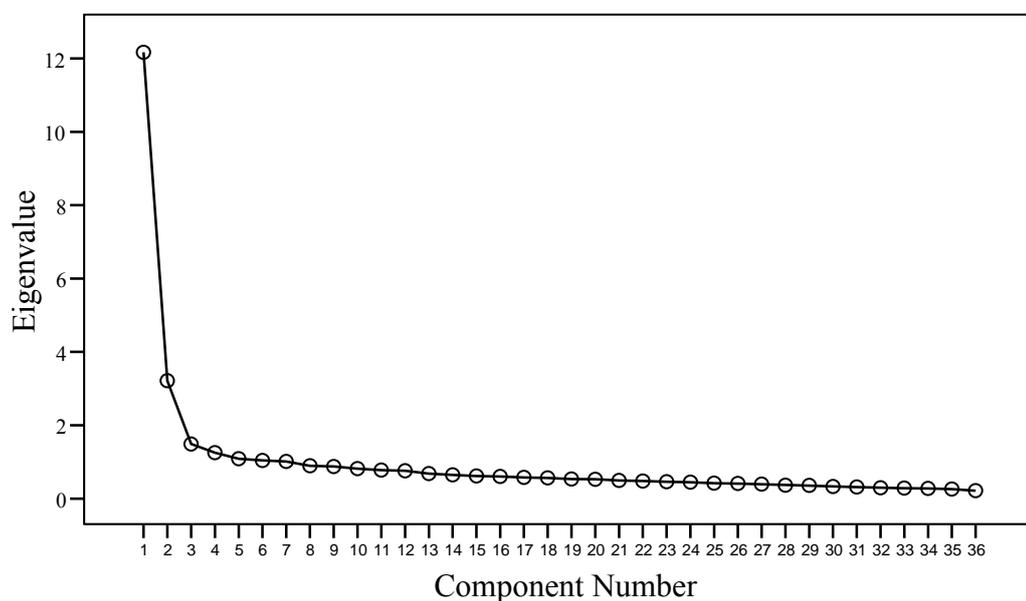
Factor extraction and factor rotation were conducted again by specifying a four factor structure at the extractions stage and using the varimax rotational approach. Four meaningful factors were derived and five items were candidates for deletion (items 3, 13, 14, 18, 26) (see Table 5 for the detailed analysis of factors). In this regard, the exclusion of 5 items possibly occurred as a result of the discrepancy of the meaning between the English and Thai versions of the questionnaire. This issue is discussed in greater detail in the foregoing section.

The first component contained ten items (items 22, 23, 24, 25, 27, 30, 32, 34, 35, 36) which addressed *management-by-exception: Active* (MBEA). Although item 25 showed a slightly lower factor loading (.42), this item was included due to its conceptual construct that represents the leader's power and authority. Leaders with a high score on this subscale identify the standards for compliance. In addition, in the changing environment, this style of leadership uses their legitimate power to emphasize new ideas and creative solutions to problems, monitor deviations from standards, and takes corrective actions for goal achievement. The second component was comprised of ten items (items 1, 2, 4, 6, 8, 9, 10, 11, 15, 16) which described the *charismatic* style of leadership. This component included items 4 and 6, which showed slightly low factor loadings at .49 and .45, respectively because the items indicated leader's enthusiasm through their attention on mistakes and deviations from standards. In the Thai culture, if leaders pay attention to irregularities, it can be implied that they will help subordinates to get through the problems. Leaders who were rated high on this subscale reflect a high standard of moral and ethical conduct including stimulating enthusiasm, building confidence, and inspiring subordinates using symbolic actions and persuasive language.

Table 5 : Component Matrix for the Multifactor Leadership Questionnaire

Question	MBEA	Charisma	Passive Avoidance	Individual-Consideration
V36	.79	.17	-.09	.12
V35	.72	.21	-.07	.10
V34	.71	.27	-.13	-.01
V30	.61	.19	-.09	.34
V32	.60	.34	-.14	.34
V24	.55	.27	-.26	.17
V22	.54	.36	-.26	.21
V27	.54	.36	-.18	.27
V23	.53	.35	-.22	.35
V25	.42	.38	-.04	-.03
V1	.08	.63	.12	.31
V9	.28	.62	-.12	.19
V10	.28	.62	-.20	.37
V11	.37	.62	-.17	.06
V8	.33	.57	-.29	.20
V15	.31	.55	-.20	.28
V2	.26	.51	.11	.25
V16	.41	.50	.11	.06
V4	.40	.49	-.22	-.04
V6	.09	.45	.28	.09
V12	-.13	.06	.70	-.06
V20	-.18	-.10	.70	.10
V7	-.10	-.05	.67	-.14
V5	-.22	-.02	.64	.15
V28	-.13	-.29	.60	.15
V33	-.03	-.36	.54	.05
V17	.16	.27	.53	-.11
V19	.02	.10	.24	.67
V29	.36	.18	.04	.59
V31	.49	.25	-.01	.53
V3	.38	.09	.28	.11
V13	.50	.55	-.01	-.15
V14	.53	.57	-.06	-.17
V18	.46	.30	-.15	.33
V26	.49	.50	-.13	.25
Eigenvalue	6.44	5.58	3.40	2.51
% of Variance	17.88	15.51	9.99	6.97
Cronbach's Alpha	.90	.86	.77	.63

Note: To preserve space, some questions were truncated with eclipses.

The third component contained seven items (items 5, 7, 12, 17, 20, 28, 33) which seemed to create a *passive avoidance* style. A high score on passive avoidance means the leader intentionally avoids involvement or confrontation until procedures and standards for task accomplishment are unmet and problems become serious. The fourth component consisted of three items (items 19, 29, 31) which was the *individual-consideration*. A high score indicates a leadership style where leaders acknowledge each individual difference either in need or desire. Leaders pay attention to employee's skill improvement. New learning opportunities are created along with a supportive environment in which to grow. The four factors accounted for 50.35% of the common variance in the scale.

In comparison to the Western version of the MLQ, similarities and differences in terms of factor structures are identified among results from Western samples and Thai samples. The first component (MBEA) of the factor analysis of Thai employee perceptions of leadership styles comprised three items (items 22, 24, 27) of the MBEA, three items of idealized influence (attributes and behavior) (items 23, 25, 34), two items of intellectual stimulation (items 30, 32), one item of contingent reward (item 35), and one item of inspirational motivation. With regard to the idealized influence style, intellectual stimulation, and inspirational motivation, they were originally categorized as the transformational style of leadership. However, in this study, the items identified earlier loaded with the transactional styles of the MBEA and contingent reward. In contrast to the original construct of transformational leadership, the exhibition of power and confidence and desire for creative ways to problem solving reflects the value of face threatening, ambition, and masculinity and cannot be perceived in the admirable, respected and trusted behaviors among Thai

subordinates (Chaidaroon, 2004; Hofstede, 1998). The underlying construct of this factor is embedded in the Thai culture where leaders are respected and have much mpre experience than subordinates in every work-related aspect. The MBEA style can be identified as actively monitoring for deviances and mistakes and then taking corrective actions when things go wrong. In addition, because of the changing environment, this style of leadership reflects leader's autocratic demand for new or creative solutions and the emerging of a collective sense of mission. Thus, this factor was named *management-by-exception: active* (MBEA) with a different conceptual framework from the original Western-based construct.

The second component was compounded of three items (items1, 11, 16) of contingent reward, two items (items 2, 8) of intellectual stimulation, one item (item 6) of idealized influence (behavior), one item of (item 9) inspirational motivation, one item (item 10) of idealized influence (attributes), one item (item 15) of individual consideration, and one marginal factor loading of MBEA (item 4). This factor was labeled as *charisma* because all items described the styles of leaders who are concerned with how they present themselves while offering encouragement and interaction with subordinate. Although three items of contingent reward and one MBEA are included in the transformational style, these items are perceived by the Thai workers as a helpful manner when the leaders provide assistance, pay attention to irregularities or mistake, and provide clear communication to their subordinates.

The third component consisted of four items (items 5, 7, 28, 33) of laissez-faire and three items (items 12, 17, 20) of passive management-by-exception. All of the items loaded on this factor reflected a passive approach or the avoidance of

leadership responsibilities. Because these leaders do not take any actions until the problems occur, this factor was labeled as *passive avoidance*.

The fourth component contained three items (item 19, 29, 31) of individual consideration. This factor was labeled as *individual-consideration* because it primarily describes leaders who recognize individual differences. This style of leadership creates a supportive climate, help develop subordinate's strengths, and pay attention to individual's need for goal achievement. Although the leadership styles are widely studied across cultures, the dimensional analysis of the MLQ in this study reveals the variability of its underlying structure from one culture to another.

The reliability for the overall MLQ was found to be satisfactory at .88, a little higher than the pilot test. The satisfactory reliability scores were also revealed for each subscale on the MLQ. The reliability for the MBEA, charisma, passive avoidance, and individual consideration respectively, were at .90, .86, .77, and .63. In sum, the factor solutions of MLQ revealed the four factors that would be used for further calculation in this study. Table 6 summarizes the final variables loaded for the unique structure observed with Thai workers as compared with the original MLQ.

Table 6 : Compared Multifactor Leadership Questionnaire

Question	Original Component									Thai Component			
	1	2	3	4	5	6	7	8	9	MBEA	Charisma	Passive avoidance	Individual - Con.
V1						X							
V2				X									
V3								X					
V4							X						
V5									X				X
V6		X											
V7									X				X
V8				X									
V9			X									X	
V10	X											X	
V11						X							
V12								X					X
V13			X										
V14		X											
V15					X							X	
V16						X							
V17								X					X
V18	X												
V19					X								
V20								X					X
V21	X												
V22							X				X		
V23		X											
V24							X				X		
V25	X										X		
V26			X										
V27							X				X		
V28									X				
V29					X								

(Continued)

Question	Original Component									Thai Component			
	1	2	3	4	5	6	7	8	9	MBEA	Charisma	Passive avoidance	Individual - Con.
V30				X						X			
V31					X								
V32				X						X			
V33									X				
V34		X								X			
V35						X				X			
V36			X							X			

Note: 1 = Idealized Influence (attributed), 2 = Idealized Influence (behavior), 3 =

Inspiration Motivation, 4 = Intellectual Stimulation, 5 = Individualized

Consideration, 6 = Contingent Reward, 7 = Active management -by-exception,

8 = Passive management-by-exception, 9 = Laissez faire

Principal Component Analysis and Reliability Test—Profile of Organizational

Influence Strategies

The Profile of Organizational Influence Strategies scale (POIS) is a 33-item

instrument using which indicates the strategies a leader used to influence new

behaviors. Similar to the RTC and MLQ scales, the data from 538 respondents were

analyzed through factor analysis and reliability tests.

The scree plot (Figure 4) and eigenvalue score indicate six factors. The

(rotated) factor loadings for each variable were evaluated to justify variable's role and

contribution in determining the factor structure. The evaluation resulted in four factors

to extract.

Figure 4 : Scree Plot of Eigenvalues for the Profile of Organizational Influence

Strategies Scale
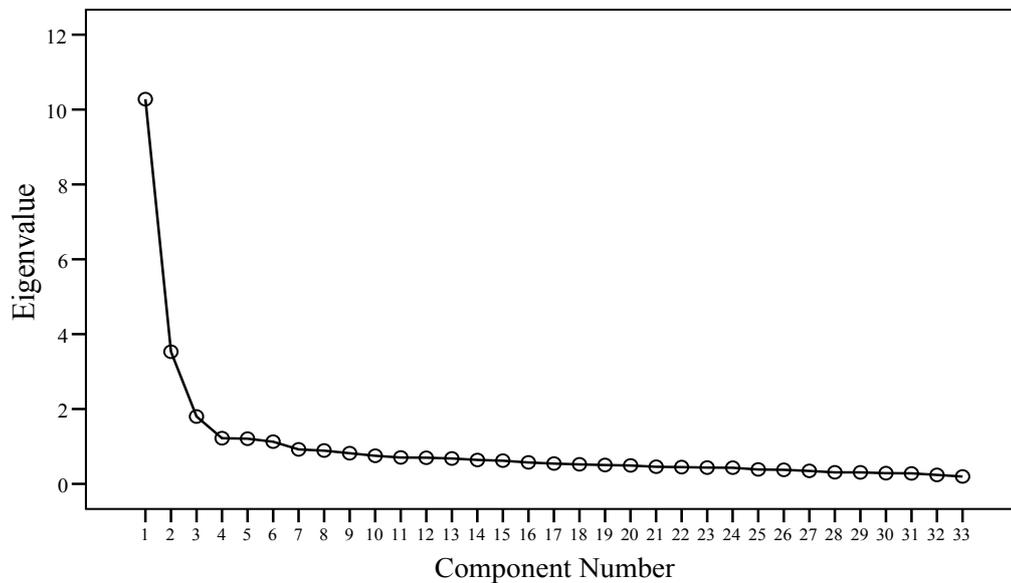
To aid factor interpretation, four factor structures were assigned for the

extraction and the varimax rotational approach was used. Table 7 presents the detailed

analysis of the four meaningful factors. This finding revealed the underlying structure

using samples of Thai workers. In all, 5 items were dropped (items 5, 22, 23, 24, 31).

Items 5 and 24 were deleted because they did not meet the criterion for factor

loadings. Items 22, 23, and 31 were dropped because they were found to have more

than one significant loading (cross-loading) and cannot represent a distinct concept

(Hair, Black, Babin, Anderson, & Tatham, 2006).

Table 7: Component Matrix for the Profile of Organizational Influence Strategies

Scale

Question	Legitimizing	Assertiveness	Friendliness	Inspiration-Control
8. Appealed to higher management…	.80	.08	-.03	.06
11. Filed a report with high management…	.80	.10	-.03	.07
15. Threatened me with loss of promotion…	.79	.04	.10	.08
13. …unsatisfactory performance…	.78	.13	-.01	.05
25. Threatened to terminate (fire) me…	.75	-.02	.17	-.03
7. No salary increase…	.71	.07	.11	.21
14. Sent me to higher management…	.70	.08	.12	.05
10. Reminded me of how he/she had helped me…	.70	.12	.07	.20
29. Promised (or gave) me a salary increase…	.67	.08	.36	.07
26. …informal support of higher management…	.67	.22	.13	-.11
27. Offered to make a personal sacrifice…	.62	.09	.33	.10
28. Scolded me…	.62	.34	-.05	-.02
30. Offered to help me if …	.60	.11	.38	.14
19. Provided job-related personal benefits…	.55	.15	.31	.12
9. Simply directed me…	.51	.37	-.12	-.05
21. Set a date or time deadline…	.04	.66	.03	.03
33. Pointed that organizational rules required…	.22	.66	.17	.13
4. …I did exactly what he or she wanted.	.21	.66	-.25	.27
32. Repeatedly reminded me…	.27	.61	.11	.12
18. Used logic arguments to convince me…	.08	.56	.34	.10
17. …the work had to be done as specified…	.02	.46	.15	.26
20. Waited … a receptive mood…	.30	.13	.57	.16
16. Sympathized with me about added problem…	.25	.14	.49	.26
12. Made me feel good before asking me…	.14	.23	.55	.22
6. Acted very humble and polite…	-.03	.06	.49	.34
3. Wrote a detailed action plan for me…	.05	.19	.14	.73
2. Made me feel important …	-.04	-.01	.34	.64
1. Obtained the support of other subordinates…	.19	.25	.06	.60

(Continued)

Table 7 (continued) : Component Matrix for the Profile of Organizational Influence

Strategies Scale

Question	Legitimizing	Assertiveness	Friendliness	Inspiration-Control
5. Offered an exchange…	.37	.17	.24	.44
22. Acted in a friendly manner toward me…	.06	.53	.50	-.05
23. Presented facts, figures, or information…	.03	.59	.50	.06
24. Obtained the support of his/her co-workers…	.40	.44	.38	.01
31. Carefully explained the reasons…	.10	.55	.42	.08
Eigenvalue	7.84	3.93	2.94	2.12
% of Variance	23.75	11.90	8.91	6.42
Cronbach's Alpha	.93	.76	.64	.60

Note: Underlined factor coefficients show which factor the item loaded on.

Items 5 and 24 did not load on any item. Item 22, 23, and 31 were

excluded due to their cross-loadings on an item. To preserve space,

every question was truncated with eclipses.

The first component contained fifteen items (items 7, 8, 9, 10, 11, 13, 14, 15,

19, 25, 26, 27, 28, 29, 30) that emphasized the use of higher authority, organizational

policies, and exchange. This component was assigned the name as *legitimizing*. A

high score on this subscale indicated greater use of higher authority, the leader's

inherent power, and organizational rules and policies as a means of influencing new

behaviors. Rewarding and exchanging were included. The second component

included six items (items 4, 17, 18, 21, 32, 33) which were concerned with

assertiveness. Leaders who scored high on this subscale relied heavily on the use of

repeated demands, threats, frequent checking up or persistent reminders to influence

subordinates. Leaders expect compliance with his or her request through the use of this forceful strategy.

Four items (items 6, 12, 16, 20) were retained in the third component and it was labeled *friendliness* to emphasize the implementation of friendliness tactics. Leaders who were rated high on these tactics relied heavily on friendliness as primary tactics to create a favorable impression of his or her subordinates so that the subordinates will comply with them. The fourth component contained three items (items 1, 2, 3) which addressed *inspiration-control* strategies. A high score on these tactics implied a major emphasis on the inspiration-control strategies as an important means to initiate new behavior.

When comparing results based on the Thai samples to those of the Western samples, the first component comprised four items of higher authority (items 8, 11, 14, 26), four items of sanctions (items 7, 13, 15, 25), three items of assertiveness (items 9, 10, 28) and three item of bargaining (items 19, 27, 30). Through the analysis of the underlying dimensions, this factor was labeled *legitimizing* because it contained items that emphasized the higher authority either formally (the chain of command) or informally (personal connection) and the use of policies, procedures, and traditions of the organization to influence subordinates. Based on the social norms of obligation and reciprocity, legitimizing is also the strategy used to influence subordinates by means of negotiation and the exchange of benefits or favors.

The second component contained five items of assertiveness (items 4, 17, 21, 32, 33) and one item (item 18) of reason. Although item 17 was loaded with a slightly lower factor loading (.46) than the cut off value, it was conceptually defined with this factor. After carefully examining the item loaded on this factor, the name

assertiveness was assigned. This component represents a forceful manner, including the use of demands, the setting of deadlines, and the expression on strong emotion as influence strategies to obtain compliance with leader's need. One item of reason tactics was included in this component. In Thai culture, the use of reason or logical argument to support and convince subordinates were also regarded a forceful manner. Subordinates have no choice but to agree and comply with the leaders.

The third component, with four items (items6, 12, 16, 20) loaded, was found to transfer well between cultures but in a slightly different form its original American based structure. The name *friendliness* was utilized to represent similar strategies explained in the original POIS scale that explained a leader's attempt to influence subordinates such as acting friendly and being sympathized by causing favorable impression among employees as a means to obtain compliance.

The fourth component included one item each of coalition (item 1), friendless (item 2), and reason (item 3), and was renamed *inspiration-control*. The coalition item was considered in the Thai context as gaining support from co-workers. Thus, this factor emphasized strategies that supervisors employed to inspire and convince their target to comply with their request. The four components collectively accounted for 50.98% of variance in the scale. Inconsistencies of the underlying dimensions were specified, when comparing results from American and Thai samples. Therefore, in this study, the POIS scale was unable hold its structure and required a modification in order to be applicable to the Thai context.

The overall reliability for the reconstructed POIS was found to be higher than for the pilot test or equivalent to .92. Items comprising each factor were also analyzed

for reliability. The reliabilities were satisfactory with legitimizing, .93, assertiveness, .76, friendliness, .64, and, impression-control, .60.

Based on the discussion on the underlying structure of each factor, the revised subscales of the POIS to be used in this study were a) legitimizing, b) assertiveness, c) friendliness, and d) impression-control. Table 8 presents the comparison of the original scale to the Thai component of the POIS scale.
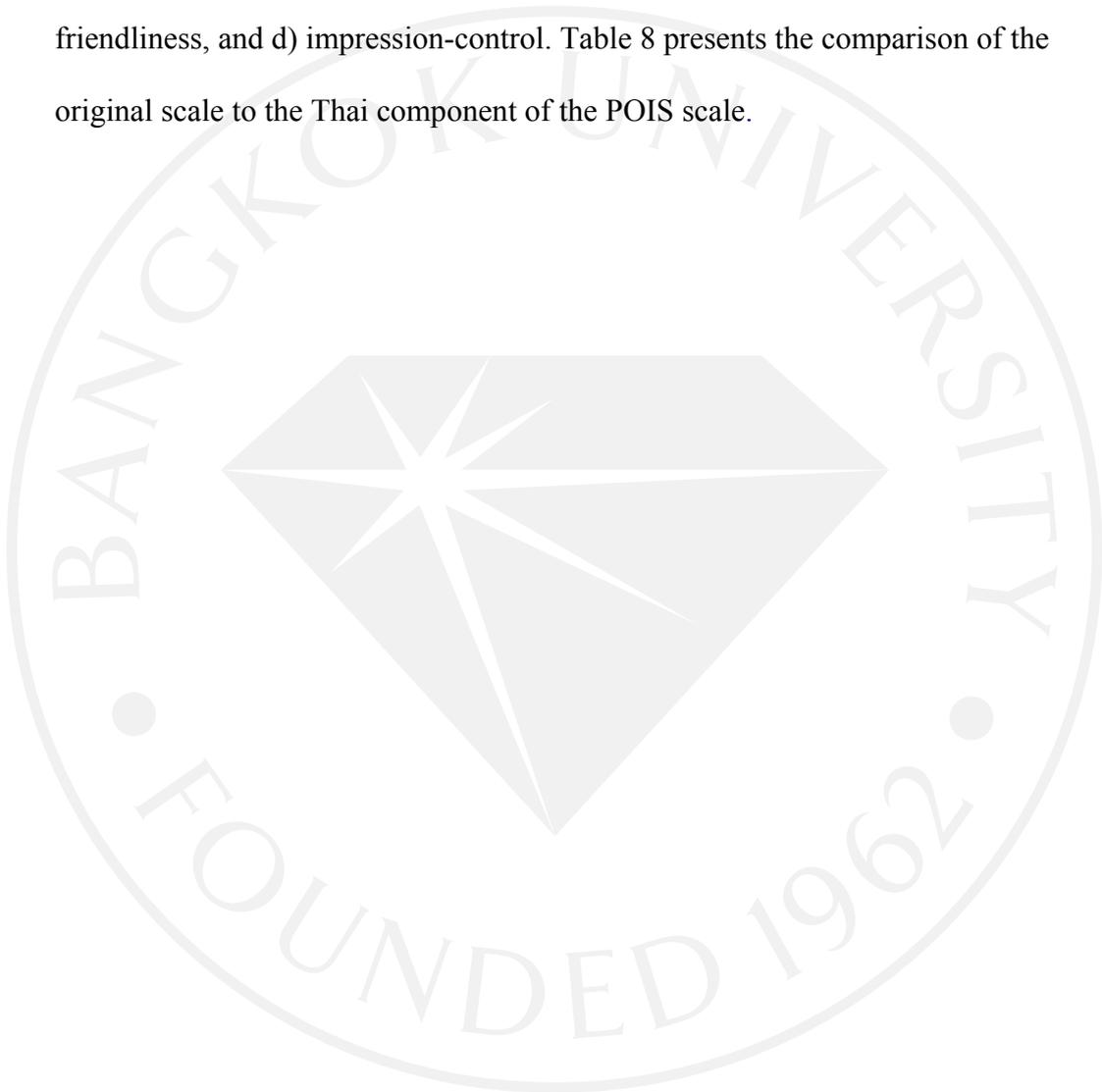
Table 8 : Compared Profile of Organizational Influence Strategies Scale

Question	Original Component							Thai Component			
	1	2	3	4	5	6	7	Legitimizing	Assertiveness	Friendliness	Impression-Control
1. Obtained the support of other							X				X
2. Made me feel important	X										X
3. Wrote a detailed action plan for			X								X
4. I did exactly what he or she				X					X		
5. Offered an exchange		X									
6. Acted very humble and polite	X									X	
7. no salary increase					X			X			
8. Appealed to higher management						X		X			
9. Simply directed me				X				X			
10. Reminded me of how he/she had		X						X			
11. Filed a report with high						X		X			
12. Made me feel good before	X									X	
13. Unsatisfactory performance					X			X			
14. Sent me to higher management						X		X			
15. Threatened me with loss of					X			X			
16. Sympathized with me about	X									X	
17. The work had to be done as				X					X		
18. Used logic arguments to			X						X		
19. Provided job-related personal		X						X			
20. Waited … a receptive mood	X									X	
21. Set a date or time deadline				X					X		
22. Acted in a friendly manner	X										
23. Presented facts, figures, or		X									
24. Obtained the support of his/her							X				
25. Threatened to terminate (fire)					X			X			
26. Informal support of higher						X		X			
27. Offered to make a personal		X						X			
28. Scolded me				X				X			
29. Promised (or gave) me a salary					X			X			
30. Offered to help me if …		X						X			
31. Carefully explained the reasons			X								
32. Repeatedly reminded me				X					X		
33. Pointed that organizational rules				X					X		

Note: 1 = Friendliness, 2 = Bargaining, 3 = Reason, 4 = Assertiveness, 5 = Sanctions, 6 = Higher Authority, 7 = Coalition

Principal Component Analysis and Reliability Test—Receiving Information

The Receiving Information (RI) scale contains 13 items that are used to assess participant perceptions of the adequacy of information they receive on the job. Some items on the scale were slightly modified for this study. In addition to asking participants to respond to the amount of information they currently receive (i.e., current information adequacy), they were also asked to indicate how much information they need (i.e., information need) for each of the 13 items. The data from 538 participants were used for the principle component analysis as well as the reliability analysis to examine the dimensional structure and reliability of the measurement using the Thai samples.

Prior to the factor analysis, discrepancy values were calculated for each of the 13 dimensions. For each item, respondents were asked to indicate how much information they needed and how much information they were presently receiving. The raw discrepancy between these values on a given topic is a measure of perceived information adequacy. Therefore, the discrepancy score for each item was derived by subtracting the score on the amount of information as being needed from the score on the amount of information indicated as being presently received ($d = current_i - needed_i$). The derived discrepancy score for each item in pair ranges from $- 4$ (under adequate) to $+ 4$ (over adequate) where 0 is the adequate amount of information. In this sense, the greater the negative score, the greater the discrepancy between what

employees need and what they are actually receiving; the discrepancy scores were used in subsequent statistical analyses.

The scree plot (Figure 5) and eigenvalue suggested one component, or a unidimensional construct for the RI scale with the retention of all 13 items; 53.54% of variance was explained (see Table 9 for the detailed analysis of factors). Total scale reliability, using Cronbach's alpha, was high at .92. Table 10 illustrates the Thai component of RI scale as compared to the original RI scale.

Figure 5 : Scree Plot of Eigenvalues for Receiving Information Sale
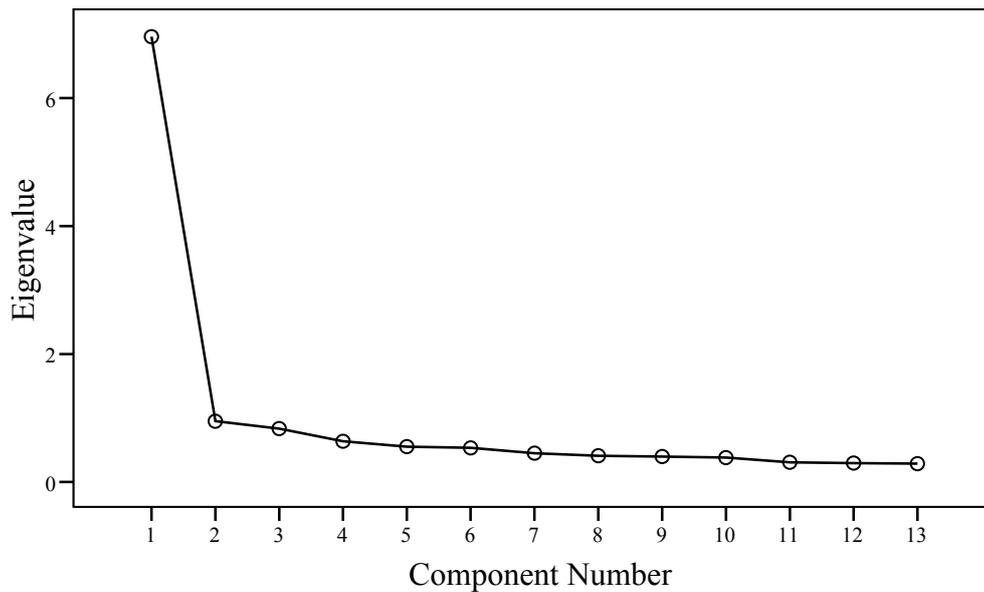
Table 9 : Component Matrix for the Derived Discrepancy Score on the RI Scale

Question	Component
	1
10. Promotion and advancement opportunities in my organization	.79
9. How organization decisions are made that affect my job.	.78
12. How my job relates to the total operation of organization.	.78
7. How I am being judged.	.77
11. Important new product, service or program development in my organization.	.76
4. Changes in pay and benefits	.75
8. How my job-related problems are being handled.	.74
13. Specific problems faced by management.	.74
2. Changes in my job duties	.68
5. How technological changes affect my job.	.68
6. Mistakes and failures of my organization.	.68
1. How well I am doing in my job	.66
3. Changes in organizational rules and policies	.60
Eigenvalue	6.96
% of Variance	53.54
Cronbach's Alpha	.92

Table 10 : Compared Receiving Information Scale

Question	Original Component			Thai Component
	Job-related Info.	Org.-wide Concern	Policies & Benefits	Receiving Info. (Unidimensional construct)
1. How well I am doing in my job	X			X
2. Changes in my job duties	X			X
3. Changes in organizational rules and policies			X	X
4. Changes in pay and benefits			X	X
5. How technological changes affect my job.				X
6. Mistakes and failures of my organization.		X		X
7. How I am being judged.	X			X
8. How my job-related problems are being handled.	X			X
9. How organization decisions are made that affect my job.		X		X
10. Promotion and advancement opportunities in my organization			X	X
11. Important new product, service or program development in my organization.				X
12. How my job relates to the total operation of organization.				X
13. Specific problems faced by management.		X		X

Note: The facture structure of the original RI scale is based on Daniels and Spiker's

(1983) factor results.

The Revised Research Instruments

This section concerns the revised versions and the underlying structures of the

research instruments used for the analysis of the data. According to the factor analysis

results in the foregoing section, the four instruments, the Resistance to Change scale

(RTC), the Multifactor Leadership Questionnaire (MLQ), the Profile of Organizational Influence Strategies scale (POIS), and the Receiving Information scale (RI) revealed different dimensional constructs from the original Western scales. Given that the factor analyses caused some changes to the underlying dimensions of the scales, some research hypotheses needed to be adjusted. The discussion below presents the new factor structures of the four measurements and reviews the hypotheses and restates those that were changed.

The Resistance to Change Scale (RTC)

The factors analysis revealed four factors of an employee disposition to resist change on the RTC scale. The first factor was identified as risk intolerance, the second factor as stimulation-avoidance, the third factor as emotional reaction, and the fourth factor as cognitive rigidity. As discuss in the factor analysis section, emotional reaction and cognitive rigidity were found to reveal similar underlying constructs while risk intolerance and stimulation-avoidance compounded new structures. However, both risk intolerance and stimulation-avoidance were used to capture affective and behavioral responses as they were with short-term thinking and routine seeking. These four reconstituted subscales reflected three different indicators of individuals' evaluation of a change situation including behavioral, affective, and cognitive components. Table 11 shows the original and revised component of the RTC scale.

Table 11 : The Original Component versus Revised Component of Resistance to

Change Scale

The Original Component (# of items)	The Revised Component (# of items)
Short-term thinking (Affective, 4)	Risk intolerance (Affective,4)
Routine seeking (Behavioral, 5)	Stimulation-avoidance (Behavioral, 3)
Emotional reaction (Affective, 4)	Emotional reaction (Affective, 4)
Cognitive rigidity (Cognitive, 4)	Cognitive rigidity (Cognitive, 3)

Risk intolerance is the affective dimension that concerns an individual's

tendency to perceive risky situations or change as a threat. This individual feels fear

and anxiety when encountering with a risky situation that is inherently embedded in a

change environment. This factor also includes a sense of locus of control or a fear of

losing control over one's work situation.

Stimulation-avoidance is the factor describing the behavioral reaction to

change. This subscale explains an individual's preference for low levels of stimulation

and novelty. In addition, reluctance to give up old habits and withdrawal from risk-

oriented situation is also categorized in this factor.

Emotional reaction revealed similar structure to those of the Western culture.

This subscale is the affective aspect of the resistance to change reflecting an

individual's lack of psychological resilience and reluctance to lose control over the

environment. Employees who are high in emotional reaction are stressed, unhappy,

and perceive change as a stressor. They also are not willing to accept change because the openness to change may cause them face threats.

Cognitive rigidity is the resistance to change at the cognitive level. According to Oreg (2003), resistance to change at this level can be thought of as employees' thinking processes about whether to adjust their beliefs and values and comply with the change or to stick to those beliefs and values and resist the change.

The Multifactor Leadership Questionnaire (MLQ)

Based on the Thai samples, four unique dimensions were revealed through the principle component analysis of the MLQ. Management-by-exception: Active (MBEA) and passive avoidance were categorized as transactional leadership style whereas charisma, and individual-consideration were grouped as transformation style of leadership. Table 12 presents the original and revised component of the MLQ scale.

Management-by-exception: Action is the transactional style of leadership. Under a changing circumstance, MBEA leadership displays the legitimate authority over subordinates by expecting creativity in dealing with problems and new ways to accomplish assignment. Leaders set the standards for compliance and identify the actions that may result in poor performance. The leaders are also alert for mistakes and discursive behaviors and then immediately correct the problems.

Passive-avoidance is indicative of the transactional leadership style. Passive leaders avoid being involved in work processes such as specifying agreements, clarifying expectations, and providing goals and standards to be achieved by their subordinates. In addition, passive-avoidant leadership is regarded as no leadership because of the absence of the leaders when they are needed.

Table 12 : The Original Component versus Revised Component of Multifactor

      Leadership Questionnaire

The Original Component (# of items)	The Revised Component (# of items)
Transactional leadership	Transactional leadership
Contingent Reward (4)	Management-by-exception: active (10)
Management-by-exception: active (4)	Passive avoidance (7)
Management-by-exception: passive (4)	
Laissez (4)	
Transformational leadership	Transformational leadership
Idealized influence (attributed) (4)	Charisma (10)
Idealized influence (behavior) (4)	Individual-consideration (3)
Individual consideration (4)	
Inspiration motivation (4)	
Intellectual stimulation (4)	

Charisma is the style of leadership identified in the transformational

dimension. Charismatic leaders are admired, respected, and trusted. Based on skills in

persuading, convincing, and mobilizing their subordinates, charismatic leaders are

considered role models. They pay attention to subordinates by acting as coaches and

mentors. Charismatic leaders clarify expectations and offer recognition when goals

are achieved.

Individual-consideration is considered in this study as the transformational style of leadership. Individual-consideration leadership recognizes the importance of the individual rather than just as a member of the group. Subordinates are encouraged with an assistance of the leaders to improve their strengths. Learning opportunities also became an important factor that receives attention because they enhance employee's working skills.

The Profile of Organizational Influence Strategies scale (POIS)

Factor analysis identified four meaningful factor loadings of the POIS scales which were legitimizing, friendliness, assertiveness, and inspiration-control. Compared with the U.S. samples based component, only two forceful (legitimizing and assertiveness) and two subtle (friendliness and inspiration-control) managerial influence tactics can be found with the Thai samples. Table 13 presents the POIS scale constructed based upon the U.S. samples and the Thai samples.

Table 13 : The Original Component versus Revised Component of Profile of

Organizational Influence Strategies

The Original Component (# of items)	The Revised Component (# of items)
Higher authority (4)	Legitimizing (15)
Sanction (5)	Assertiveness (6)
Assertiveness (7)	Friendliness (4)
Bargaining (6)	Impression-control (3)
Coalition (2)	
Reason (3)	
Friendliness (6)	

Legitimizing tactics are regarded as the forceful influence strategies that leaders use including higher authority, traditions, organizational policies, rules, and procedures to establish the legitimacy of a request. Explicit job responsibilities and forceful behaviors are also implemented to increase the likelihood of compliance.

Assertiveness is an attempt to influence subordinates by means of directive, confrontative, and authoritative manners. It involves the use of orders, repeated demands, and frequent checking up on subordinates.

Inspiration-control is the strategy of attempting to increase employee's self-confidence by appealing to their values and ideas. Through this strategy, leaders display sense of control by being submissive to their subordinates' expertise to gain

support, as well as conformity, from subordinates. In addition, leaders also make logical action plans for an outline of work.

Friendliness are subtle and indirect tactics that leaders use to create favorable impression of them and make subordinates feel good before seeking compliance. Leaders may use praise, flattery, friendly manner, or show sympathy to get employees in a good mood before asking for something.

The Receiving Information scale (RI)

The factor analysis reported a unidimensional scale on the RI measurement where 13 areas of information adequacy are assessed. These include "how well I am doing in my job", "organizational policies", "pay and benefits", "promotion and advancement opportunities", and "specific problems faced by management". Table 14 shows the original component of RI scale compared with the revised component of RI scale.

Table 14 : The Original Component versus Revised Component of Receiving Information Scale

The Original Component (# of items)	The Revised Component (# of items)
Job-related information (4) Organizational wide concern (3) Policies and Benefits (3)	Receiving Information (13)

The Revised Research Hypotheses

As discussed, while the factor analyses of the four research instruments resulted in changes to the underlying dimensions reported from Western samples, the analyses revealed several meaningful factor structures for the modified version of each measurement. As a result, some hypotheses need to be modified. In this section, the research hypotheses are reviewed and those that were changed are restated.

Hypotheses 1a to 1d were intended to assess the relationship between each factor of the employee resistance to change and leadership styles. However, two factors of the resistance to change were changed from routine-seeking and short-term thinking to stimulation-avoidance and risk intolerance. The transformational styles of leadership included only inspiration-innovation and charisma and the transactional styles included only management-by-exception: active and passive-avoidance. The new structure of the RTC scale was applied in every hypothesis in this study; therefore, the restated research hypotheses are:

H1a: Regarding organizational change in the Thai context, transactional leadership styles will be more significant predictors of stimulation-avoidance than will a transformational leadership style.

H1b: Regarding organizational change in the Thai context, transactional leadership styles will be more significant predictors of emotional reactions than will a transformational leadership style.

H1c: Regarding organizational change in the Thai context, transactional leadership styles will be more significant predictors of risk intolerance than will a transformational leadership style.

H1d: Regarding organizational change in the Thai context, transactional

leadership styles will be more significant predictors of cognitive

rigidity than will a transformational leadership style.

Hypotheses 2a to 2d examined the relationship between influence tactics and

employee resistance to change after the leadership styles accounted for some variance

in the resistance to change. The prior hypotheses assumed the rationality, pressure,

and upward appeals as hard and forceful strategies to produce resistance to change.

Because of a new dimension of the POIS in the Thai culture, the assumption of the

three forceful tactics was changes to be legitimizing and assertiveness that might be

able to predict employee's dispositional resistance to change. The restated research

hypotheses are:

H2a: Regarding organizational change in the Thai context, legitimizing and

assertiveness will be significant predictors of stimulation-avoidance

after leadership styles have been accounted for.

H2b: Regarding organizational change in the Thai context, legitimizing and

assertiveness will be significant predictors of emotional reactions after

leadership styles have been accounted for.

H2c: Regarding organizational change in the Thai context, legitimizing and

assertiveness will predict greater risk tolerance after leadership styles

have been accounted for.

H2d: Regarding organizational change in the Thai context legitimizing and

assertiveness will be significant predictors of cognitive leadership

styles have been accounted for.

Hypotheses 3a to 3d investigated the importance of information adequacy in the employee resistance to change after accounting for leadership styles and influence tactics. Therefore, the restated research hypotheses are:

H3a: Regarding organizational change in the Thai context, information inadequacy will be a significant predictor of stimulation-avoidance after leadership styles and information adequacy have been accounted for.

H3b: Regarding organizational change in the Thai context, information inadequacy will be a significant predictor of emotional reactions after leadership styles and information adequacy have been accounted for.

H3c: Regarding organizational change in the Thai context, information inadequacy will be a significant predictor of risk tolerance after leadership styles and information adequacy have been accounted for.

H3d: Regarding organizational change in the Thai context, information inadequacy will be a significant predictor of cognitive rigidity after leadership styles and information adequacy have been accounted for.

Data Preparation: ANOVA

Data preparation was undertaken to explore whether there were mean differences among the five participating organizations with respect to employee resistance to change, leadership styles, influence tactics, and information adequacy. Specifically the intention for conducting a ONEWAY ANOVA was to investigate if it was possible to conduct regression analyses using the aggregated data obtained from the five organizations or whether some organizations should be split apart. In

essence, it was important to determine whether the five companies provided a

relatively homogeneous sample with which to progress.

The results of homogeneous subsets were employed to justify the grouping of

the organization(s) that did not reveal the similar pattern of mean differences.

According to Garson (2008), homogeneous subsets provided groupings for the means.

Means within the same subset do not differ significantly ($p < .05$) and subsets that

differ significantly ($p > .05$) go into separate columns. The subsets that overlap can be

implied that a group or an organization belongs to more than one subset. A separate

ONEWAY ANOVA was performed for each variable in the study.

The ANOVA for Employee's Dispositional Resistance to Change and Organization

Data from the 583 respondents were subjected to a ONEWAY ANOVA to

evaluate differences between the organizations in terms of employee resistance to

change. The independent variable, the organization factor, included five levels: Alpha,

Beta, Delta, Epsilon, and Gamma Companies. The dependent variable was the overall

employee resistance to change as well as its four subscales, stimulation avoidance,

emotional reaction, risk intolerance, and cognitive rigidity.

As Table 15 reports, mean differences for employee resistance to change

among the five organizations were not significant for the overall employee resistance

to change, $F (4, 533) = 1.54$, $p = .189$, and emotional reaction, $F (4, 533) = 1.81$, $p

= .125$. However, a significant mean difference was found for stimulation-avoidance,

$F (4, 533) = 12.49$, $p < .001$, risk intolerance, $F (4, 533) = 3.80$, $p = .005$, and

cognitive rigidity, $F (4, 533) = 3.64$, $p = .006$.

Table 15 : One-way Analysis of Variance for the Employee Resistance to Change

versus Organizations

Source	SS	df	MS	F
Organizations	1.70	4	.42	1.54
Resistance to Change	146.79	533	.28	
Total	148.49	537		
Organizations	26.91	4	6.79	12.49**
Stimulation Avoiding	287.25	533	.54	
Total	314.16	537		
Organizations	4.30	4	1.08	1.81
Emotional Reaction	315.87	533	.59	
Total	320.17	537		
Organizations	7.69	4	1.92	3.80*
Risk Intolerance	269.96	533	.506	
Total	277.65	537		
Organizations	7.65	4	1.91	3.64*
Cognitive Rigidity	280.07	533	.523	
Total	287.72	537		

**p < .01, * p < .05

Because significant differences were found among the organizations, *post-hoc*

analyses using Tukey's HSD tests with alpha set at .05 were performed. In this study,

the results of the *post-hoc* tests, specifically the homogeneous subsets were used

because the emphasis on this data preparation stage was to examine if there was any

consistent pattern of mean differences among the five participating organizations

rather than to determine the pairwise comparison between two means. Therefore, the

consistent pattern of mean difference derived from the analysis of the *post-hoc*

analysis of homogeneous subsets guided the grouping among organizations. Tables 16

through 18 show the results of the Tukey analyses in terms of identifiable

homogeneous subsets. These included the *post-hoc* tests between (1) stimulation-

avoidance and the five participating organizations, (2) risk intolerance and the five

participating organizations, and (3) cognitive rigidity and the five participating

organization.

Table 16 presents the homogeneous subsets from the Tukey's multiple

comparisons among stimulation-avoidance and the five organizations. The analysis of

the results revealed that the mean of Epsilon Company (M = 2.04) in subset 2 was

significantly different from the mean of Delta Company (M = 2.70), indicating that

Epsilon Company showed a significantly lower response in stimulation-avoidance

than Delta Company. In subset 2 and subset 3, there was the overlap of the group

means among Gamma (M = 2.15) and Alpha (M = 2.30), indicating that Gamma and

Alpha Companies belong to more than one subset. Similar interpretation can be

applied to Beta Company (M = 2.42) in subset 3 and subset 1 where Beta Company

could be grouped in either subset 3 or subset 1.

Table 16 : A *Post-hoc* Analysis (Homogeneous Subsets) for Stimulation-Avoidance

versus Organizations

Company	N	Subset for alpha = .05			
		1	2	3	1
Epsilon	63		2.04		
Gamma	92		2.15	2.15	
Alpha	135		2.30	2.30	
Beta	115			2.42	2.42
Delta	133				2.70
Sig.			.089	.064	.057

As Table 17 reports, the results of homogeneous subsets between risk intolerance and organizations revealed that in subset 2, Epsilon Company ($M = 2.63$) was significantly different from Delta ($M = 2.91$) and Beta ($M = 3.01$) Companies because their means have been standing in their own subset. Non-significance was found for Gamma ($M = 2.77$) and Alpha ($M = 2.82$) when their means appeared in both subsets 1 and 2.

Table 17 : A *Post-hoc* Analysis (Homogeneous Subsets) for Risk Intolerance versus

Organizations

Company	N	Subset for alpha = .05		
		1	2	1
Epsilon	63		2.63	
Gamma	135		2.77	2.77
Alpha	92		2.82	2.82
Delta	115			2.91
Beta	133			3.01
Sig.			.311	.137

Table 18 presents the Tukey post-hoc test for cognitive rigidity and the five

participating organizations. The two homogeneous subsets were found. The

inspection of the subsets revealed that response to change through cognitive rigidity

from Delta Company (M =2.98) was significantly lower than those of Alpha (M =

3.27) and Epsilon (M =3.34) Companies. There was no significantly different in other

companies.

Table 18 : A *Post-hoc* Analysis (Homogeneous Subsets) for Cognitive Rigidity versus

    Organizations

Company	N	Subset for alpha = .05		
	1	1	2	1
Delta	115	2.98		
Alpha Beta	133	3.23		3.23
Gamma	135	3.24		3.24
Alpha	92			3.27
Epsilon	63			3.34
Sig.			.082	.793

The ANOVA for Leadership Styles and Organization

    The ONEWAY ANOVA was used to test for organizational difference among the leadership styles. As with the previous tests, the five organizations constituted the independent variable and the dependent variable was the leadership styles. The test also provided the analysis of leadership styles subscales which were management-by-exception: active, passive avoidance, charisma, and individual consideration. As presented in Table 19, the results revealed that the means of overall leadership styles, $F(4, 533) = 3.78$, $p = .005$, management-by-exception: active, $F(4, 533) = 7.26$, $p < .001$, passive avoidance, $F(4, 533) = 6.83$, $p < .001$, and charisma, $F(4, 533) = 4.85$, $p = .01$), differed significantly across the five organizations. There was non-significant difference between individual consideration and the five organizations, $F(4, 533) = 2.11$, $p = .078$.

Table 19 : One-way Analysis of Variance for Leadership Styles versus Organizations

Source	SS	df	MS	F
Organizations	3.24	4	.81	3.78*
Overall Leadership Styles	114.15	533	.21	
Total	117.39	537		
Organizations	14.12	4	3.53	7.26**
Management-by-exception	259.31	533	.49	
Total	273.43	537		
Organizations	13.53	4	3.38	6.83**
Passive Avoidance	264.07	533	.50	
Total	277.60	537		
Organizations	9.23	4	2.31	4.85*
Charisma	253.27	533	.48	
Total	262.50	537		
Organizations	4.97	4	1.24	2.11
Individual Consideration	314.17	533	.59	
Total	319.14	537		

**p < .01, * p < .05

Follow-up tests were conducted to determine the groups in homogeneous subsets. Tables 20 to 23 below reported the homogeneous subsets for the statistical significance found in the test of ANOVA performing above. Table 20 presents the two homogeneous subsets of the five organizations versus the overall leadership styles. The mean of Epsilon Company (M = 2.84) in subset 2 differed significantly from the means of both Delta (M = 3.03) and Gamma (M = 3.10) Companies in subset 1. The analysis of results also suggested that the means of Beta (M = 2.96) and Alpha

(M= 2.97) Companies showed up in each column, indicating that there was no

significant difference between these companies.

Table 20 : A *Post-hoc* Analysis (Homogeneous Subsets) for Overall Leadership

Styles versus Organizations

Company	N	Subset for alpha = .05		
		1	2	1
Epsilon	63	2.84		
Beta	133	2.96		2.96
Alpha	92	2.97		2.97
Delta	115			3.03
Gamma	135			3.10
Sig.			.27	.24

Table 21 provides two groups of means in homogeneous subsets for

management-by-exception: active and the five organizations. The results indicated

that subset 2 that was comprised of Epsilon (M = 3.17), Delta (M = 3.20), Alpha (M =

3.24), and Beta (M = 3.28) Companies were not significantly different from each

other (p = .27) but significantly differed from Gamma Company (M = 3.60).

Table 21 : A *Post-hoc* Analysis (Homogeneous Subsets) for Management-by-

Exception (Active) versus Organizations

Company	N	Subset for alpha = .05	
		1	2	1
Epsilon	63	3.17	
Delta	115	3.20	
Alpha	92	3.24	
Beta	133	3.28	
Gamma	135		3.60
Sig.		.81	1.00

The two homogeneous subsets for passive avoidance and the organizations are

performed in Table 22. Delta Company (M = 3.60) was in a subset of its own. It was

significantly different from all of the other companies in subset 2, including Alpha (M

= 2.54), Gamma (M = 2.56), Beta (M = 2.58), and Epsilon (M = 2.59).

Table 22 : A *Post-hoc* Analysis (Homogeneous Subsets) for Passive Avoidance

versus Organizations

Company	N	Subset for alpha = .05	
		1	2	1
Alpha	92	2.54	
Gamma	135	2.56	
Beta	133	2.58	
Epsilon	63	2.59	
Delta	115		2.95
Sig.		.99	1.00

Table 23 presents the two subsets of mean for charisma and organizations. Epsilon (M = 2.97) and Delta (M = 3.06) Companies were significantly different from Gamma Company (M = 3.36). Non-significant differences existed among Beta (M = 3.19) and Alpha (M = 3.22) Companies since their means showed up in both subsets.

Table 23 : A *Post-hoc* Analysis (Homogeneous Subsets) for Charisma versus

Organizations

Company	N	Subset for alpha = .05	
		1	2	1
Epsilon	63	2.97	
Delta	115	3.06	
Beta	133	3.19	3.19
Alpha	92	3.22	3.22
Gamma	135		3.36
Sig.		.08	.37

The ANOVA for Influence Tactics and Organization

The ONEWAY ANOVA was conducted to compare the mean difference of the influence tactics and the organizations. The independent variable was the organizations with the five levels and the dependent variable was influence tactics. The ANOVA also provided for the influence tactics subscales including legitimizing, assertiveness, friendliness, and inspiration-control.

Table 24, the analysis of variance showed that the five organizations differed significantly for the overall influence tactics, $F(4, 533) = 8.10$, $p < .001$, legitimizing, $F(4, 533) = 21.52$, $p < .001$, assertiveness, $F(4, 533) = 6.37$, $p < .001$, and inspiration-control, $F(4, 533) = 4.85$, $p = .001$. However, the five organizations did not differ significantly for friendliness tactics, $F(4, 533) = 4.85$, $p = .056$.

Table 24 : One-way Analysis of Variance for Influence Tactics versus Organizations

Source	SS	df	MS	F
Organizations	9.57	4	2.39	8.10**
Overall Influence Tactics	157.48	533	.30	
Total	167.04	537		
Organizations	52.14	4	13.03	21.52**
Legitimizing	322.81	533	.61	
Total	374.94	537		
Organizations	11.76	4	2.94	6.37**
Assertiveness	245.84	533	.46	
Total	257.06	537		
Organizations	5.21	4	1.30	2.321
Friendliness	299.16	533	.56	
Total	304.38	537		
Organizations	10.50	4	2.63	4.85*
Impression-Control	287.95	532	.54	
Total	298.45	536		

**p < .01, * p < .05

Table 25, the *post-hoc* analysis was undertaken for paired comparison between the overall influence tactics and the five organizations. Using Tukey's HSD test with alpha = .05, two homogeneous subsets were derived. Subset 2, including Epsilon (M = 2.46) and Alpha (M = 2.57) were statistically different from subset 1 that consisted of Gamma (M = 2.78), Beta (M = 2.79), and Delta (M = 2.85).

Table 25 : A *Post-hoc* Analysis (Homogeneous Subsets) for the Overall Influence

       Tactics versus Organizations

Company	N	Subset for alpha = .05		
		1	2	1
Epsilon	63		2.46	
Alpha	92		2.57	
Gamma	135			2.78
Beta	133			2.79
Delta	115			2.85
Sig.			.63	.89

       Table 26 presents the *post-hoc* analysis for legitimizing and the organizations. Values forming the three homogeneous subsets were significantly different between different subsets ($p < .05$).

Table 26 : A *Post-hoc* Analysis (Homogeneous Subsets) for Legitimizing versus

       Organizations

Company	N	Subset for alpha = .05			
		1	2	3	1
Epsilon	63		1.80		
Alpha	92			2.13	
Gamma	135			2.14	
Beta	133			2.28	
Delta	115				2.81
Sig.			1.00	.64	1.00

Table 27 reports three groups of means in homogeneous subsets for assertiveness and the five organizations. In subset 2, Alpha (M = 2.92) and Epsilon (M = 2.92) Companies were significantly different for the assertiveness tactic from Gamma (M = 3.27) in subset 1. There were no other significant paired comparisons.

Table 27 : A *Post-hoc* Analysis (Homogeneous Subsets) for Assertiveness versus

      Organizations

Company	N	Subset for alpha = .05		
		1	2	3	1
Alpha	92	2.92		
Epsilon	63	2.92		
Delta	115	3.00	3.00	
Beta	133		3.21	3.21
Gamma	135			3.27
Sig.		.93	.18	.97

As Table 28 presents, Epsilon Company (M = 2.51) was significantly different from Gamma Company (M = 2.93). Non-significance was found among the other companies.

Table 28 : A *Post-hoc* Analysis (Homogeneous Subsets) for Inspiration-Control

versus Organizations

Company	N	Subset for alpha = .05		
		1	2	3	1
Epsilon	63	2.51		
Alpha	92	2.63	2.63	
Delta	115	2.77	2.77	2.77
Beta	132		2.87	2.87
Gamma	135			2.93
Sig.		.10	.17	.56

The ANOVA for Information Adequacy and Organization

The ONEWAY ANOVA was used to test for the differences between

organizations as the independent variable and information adequacy as the dependent

variable (see Table 29). The test was found to be statistically significant, $F(4, 533) =$

$13.76, p < .001$.

Table 29 : ONEWAY Analysis of Variance for Information Adequacy versus

Organizations

Source	SS	Df	MS	F
Organizations	36.31	4	9.08	13.78**
Information Adequacy	350.58	532	.66	
Total	386.89	536		

**$p < .01$

Follow-up test was conducted to evaluate pairwise differences among the means using a Tukey HSD test. The result of the test is reported in Table 30. Two groups of mean forming two homogeneous subsets were presented. Delta (M = -1.20) and Epsilon (M = -1.19) Companies in subset 2 were significantly different from the group of mean in subset 1 that comprised Gamma (M = -.75), Alpha (M = -.60), and Beta (M = -.60).

Table 30 : A *Post-hoc* Analysis (Homogeneous Subsets) for Information Adequacy
versus Organizations

Company	N	Subset for alpha = .05		
		1	2	1
Delta	115		-1.20	
Epsilon	63		-1.19	
Gamma	135			-.75
Alpha	91			-.60
Beta	133			-.60
Sig.			1.00	.65

The Analysis of the ANOVA Results

The ONEWAY ANOVAs were conducted to determine organizational difference, particularly the consistent pattern of mean difference among four variables of interest, employee resistance to change, leadership styles, influence tactics, and information adequacy. The thorough inspection of the homogeneous subset tables revealed that the Epsilon Company seemed to consistently be different from the other

companies across several of the variables. In this sense, Epsilon Company tended to be uniquely set off by itself to the extent that its mean showed up separately in its own column and usually differ significantly from other companies. Given these results it was concluded that Epsilon Company should be excluded from the group of companies included in the overall regression equation.

<div align="center">Data Analysis</div>

To examine the relationship between employee resistance to change and the three tested variables, data analysis was conducted in two stages. In the first stage, testing the assumptions of regression was undertaken. Stevens (1999) noted that a slight violation to the assumptions of regression analysis can cause the Type I error rate to be several times greater than what might be expected. In doing so, the standard assumptions of regression, including variance, normality, multicollinearity, outliers, and influential points, were verified using the following statistical plots and procedures: residual plots, normal probability plots, the Tolerance and Variance Inflection Factor (VIF), standardized residual, the leverage points, and Cook's distance.

In the second stage, the raw scores obtained from the questionnaires were analyzed using the Statistical Package for the Social Sciences (SPSS). Hierarchical regression is the primary statistical analysis employed in this study since it focuses on the order in which variables are entered into the equation to assess the importance of the independent variables in relation to one another. Leadership style was the first predictor to enter the regression model to assess how much of the variance leadership could explain on the employee resistance to change. Then, influence tactics was the second predictor to enter in the model to see how much of the variance influence

tactics could add to the overall variance accounted for in employee resistance to change. Finally, by entering information adequacy as the third predictor, it is interesting to see whether information inadequacy had an influence on employee resistance to change beyond what is earlier provided by leadership style and influence tactics. The importance and usefulness of each predictor of employee resistance was captured by the R square change (ΔR^2), which represents the incremental variance explained by that variable. The ΔR^2 was also used to support the hypotheses.

The null hypothesis for each research hypothesis can be written as $H_0: \rho^2 = 0$ at the significant level of .05. For each statistical hypothesis, the null hypothesizes that there is no relationship (the proportion of shared variance) between the dependent variable and the predictors.

For the research hypotheses H1a through H1d, four multiple regression analyses were conducted to test the linear relationship between each of the dependent variables and leadership styles as the predictors. For each analysis, the four factors of leadership styles including individual-consideration, charisma, management-by-exception, and passive avoidance were forced into the equation to test whether the transactional style of leadership would be significantly related to each of the resistance to change variables. For H1a to H1d, the dependent variables were stimulation-avoidance, emotional reactions, risk intolerance and cognitive rigidity, respectively.

To test H2a to H2d, four hierarchical multiple regressions were performed to examine the possibility that employee resistance to change was attributable to the influence tactics, especially the legitimizing and assertiveness, after accounting for leadership styles. Similar to the first group of the hypothesis, the four dependent

variables for each of the hypotheses were stimulation-avoidance, emotional reaction, risk intolerance, and cognitive rigidity.

For the research hypotheses H3a through H3d, the execution of the four hierarchical multiple regression analyses was conducted to assess the importance of information adequacy on the four aspects of employee resistance to change beyond those of leadership styles and influence tactics. To test the hypotheses, the derived discrepancy score on RI scale was entered into the third block after leadership styles were entered in the first block and influence tactics were in the second block.

To inspect nonlinear relationship, curve estimation was performed as an exploratory tool in model selection, especially to test for linear, quadratic, and cubic. Results from the curvefit tests will lead to the conclusion that whether a relationship between predictor and outcome is mostly linear or mostly curvilinear.

A Summary

The methodology for this research has been presented in this chapter. It contained (a) the discussion of the population, research sites, sampling design, and procedures, (b) instrumentation, (c) the pilot study and the tests for the reliability and validity of the instruments (d), data collection procedures, (e) demographic information, (f) factor analysis,(g) tests of ANOVA, and (h) data analysis. In the following chapter, the results for the research hypotheses are presented.

CHAPTER 4

RESULTS

Results from the data collected for this study are presented in this chapter.

This chapter is divided into four sections: (a) a presentation and discussion of the

descriptive statistics and intercorrelations, (b) data assessing and assumption testing,

(c) the analyses of the responses to the hypotheses, and (d) a summary of the findings.

Descriptive Statistics

Descriptive statistics and the intercorrelations for all of the study variables

were derived from the four transformational organizations, Alpha, Beta, Delta, and

Gamma Companies (see Table 31). For each of the Resistance to Change subscale, the

mean of stimulation-avoidance was 2.39, and emotional reaction was 3.19, risk

intolerance was 2.88, and cognitive rigidity was 3.18. The mean scores suggested

emotional reaction and cognitive rigidity as the most important dimensions of

employee response to change.

For the Multifactor Leadership Questionnaire, the mean of management-by-

exception: active was 3.34, passive avoidance was 2.66, charisma was 3.21 and

individual-consideration was 2.86. Of the four underlying dimensions, the highest

mean for MBEA suggested that it was the strongest indicator of leadership styles in

this study.

For the Profile of Organizational Influence Strategies, the mean of legitimizing

was 2.34, assertiveness was 3.12, friendliness was 2.77, and inspiration-control was

2.82. In all, the highest mean score of assertiveness strategies suggested that leaders

were perceived to implement assertiveness tactics more than other influence tactics.

Table 31 : Means, Standard Deviations, and Correlations among Variables of the Four Scales

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Stimulation-Avoidance	2.39	.77	–												
2. Emotional Reaction	3.19	.79	.36	–											
3. Risk Intolerance	2.88	.71	.50	.56	–										
4. Cognitive Rigidity	3.18	.74	.09	.30	.27	–									
5. MBEA	3.34	.66	-.08	.03	-.08	.14	–								
6. Passive avoidance	2.66	.69	.27	.17	.29	-.01	-.27	–							
7. Charisma	3.21	.67	-.03	-.02	-.04	.09	.73	-.15	–						
8. Individual-Consideration	2.86	.76	.07	-.06	-.01	.04	.54	.07	.52	–					
9. Legitimizing	2.34	.83	.41	.17	.37	-.01	-.23	.63	-.12	.12	–				
10. Assertiveness	3.12	.68	.07	.19	.18	.14	.22	.22	.19	.14	.41	–			
11. Friendliness	2.77	.74	.16	.10	.15	.02	.27	.19	.35	.37	.44	.42	–		
12.Inspiration-Control	2.82	.71	.07	.12	.13	.12	.31	.11	.31	.33	.26	.36	.45	–	
13.Receiving Information	-.79	.83	-.05	-.16	-.04	.04	.32	-.19	.36	.27	- .05	.01	.11	.12	–

Note: Correlations above .11 are significant at the $p < 0.01$ while correlations at .08 to .10 are significant at the $p <. 0.05$.

$N = 475$

The mean score of the Receiving Information scale was -.79. As discussed in the foregoing section, the derived discrepancy score for each pair can be ranged from -4 (under adequate) to $+4$ (over adequate) where 0 is the perceived adequate amount of information. Therefore, the value of mean at -.79 indicated a slightly inadequate amount of information received by the respondents.

Multicollinearity Assessing

Based on the results of all multicollinearity tests for all hypotheses, the recommended thresholds of the VIF values of less than 10 and the Tolerance values of more than .01 were satisfied. Also, by visually screening, the correlation values were below .80. Therefore, multicollinearity did not pose problems for regression analyses.

Outliers and Influential Data Assessing

Prior to the report of the results for each hypothesis, data screening for the outliers and influential points were undertaken to identify outlier cases that have strong influence on the regression models. Hair, Black, Babin, Anderson, and Tatham (2006) stated that even a small number of outlier can decrease the generalizability of the results and distort the substantive conclusions of the study. Such outliers can be identified through the standardized residual, the leverage points, and Cook's distance. Reports of the influential observation are presented in the hypothesis testing section. To make the results best reflect the population from which it was drawn, in the next section, if the outliers are identified, the regression model will compute without the identified outliers.

Hypothesis Testing

Multiple regression and hierarchical multiple regression analyses were used to test the hypothesized models describing causal relationships between various

independent variables and the dependent variable, employee resistance to change. For improved readability, this chapter is organized according to the research hypotheses guiding this study.

Hypotheses H1a to H1d

The observation through the plots of residuals and the four plots of normality probability revealed no sign of model violations. The residual plots were relatively scattered about a horizontal line of zero, indicating the linearity of the overall equation. For the normal distribution assumption, the normal probability plots exhibited the relative straight diagonal line representing a normal distribution. Therefore, the assumptions of regression analysis are met for the four regression models.

Data screening for the outliers and influential points was undertaken for H1a to H1d. For these four hypotheses, the leverage values indicated 8 cases that exceeded the critical value of 3 p/n = 3(5)/475 = .031. This suggested that the 8 unusual cases may effect the prediction equation and should receive careful examination. Cook's distance was found below the critical values of 1 in all hypotheses. However, the inspection of the standardized residual revealed 1 case in H1b and 3 cases in H1d that showed the standardized residual greater than 3 in absolute value. This informed a deviation of the predicted scores from their actual scores of the dependent variable. Cases that identified as outliers were deleted before executing the regression analysis.

Hypothesis 1a

Hypotheses 1a stated, regarding organizational change in the Thai context, transactional leadership style will be a more significant predictor of stimulation avoiding than will transformational leadership style.

To test Hypothesis 1a, the data were evaluated by combining the four companies, including Alpha, Beta, Delta, and Gamma Companies into a group that represents transformational organization. A regression equation was computed with stimulation-avoidance as the dependent variable and the four leadership style factors as predictor variables; those factors included MBEA, passive-avoidance as the transactional styles and charisma and individual-consideration as the transformational styles.

Table 32 shows an analysis of the relationship between stimulation-avoidance and leadership style. The overall leadership style was significantly related to stimulation-avoidance, $R^2 = .083$, *adjusted* $R^2 = .075$, $F(4, 462) = 10.49$, $p < .001$. From this result, approximately 8% of the variance of stimulation-avoidance can be accounted for by the linear combination of the four leadership styles variables. An individual analysis of the coefficients revealed that only the relationship between the stimulation-avoidance and passive avoidance was significant with a beta coefficient (β) at .27, $t = 6.53$, $p < .001$. On the basis of the regression coefficients, passive avoidance is the only significant predictor of stimulation-avoidance or a behavioral component of employee's dispositional resistance to change.

Because hypothesis 1a focused the relationship between stimulation-avoidance and transactional leadership, which includes MBEA and passive avoidance, this hypothesis received partial support because passive avoidance was significantly related to stimulation-avoidance. None of the transformational leadership styles explained significant variance for stimulation-avoidance.

Table 32 : Summary of Multiple Regression Analysis for Variables Predicting

Stimulation-Avoidance ($N = 467$)

Variable	B	$SE\ B$	β
MBEA	-0.07	0.09	-0.06
Passive Avoidance	0.30	0.06	0.27**
Charisma	0.02	0.08	0.01
Individual-Consideration	0.05	0.06	0.05
R^2		.083	
Adjusted R^2		.075	
F for change in R^2		10.49**	

**$p < .01$.

Hypothesis 1b

Hypothesis 1b stated, regarding organizational change in the Thai context, transactional leadership styles will be more significant predictors of emotional reaction than will transformational leadership styles.

To test Hypothesis 1b, a regression equation was computed with emotional reaction as the dependent variable and the four leadership style factors as predictor variables. As described in the previous section, these predictor variables contained outliers; consequently, the regression model was computed with the outliers excluded. Results reported in Table 33.

Table 33 : Summary of Multiple Regression Analysis for Variables Predicting

Emotional Reaction ($N = 466$)

Variable	B	$SE\ B$	β
MBEA	0.30	0.09	0.25*
Passive Avoidance	0.28	0.06	0.24**
Charisma	-0.10	0.09	-0.08
Individual Consideration	-0.19	0.06	-0.18*
R^2		.062	
Adjusted R^2		.053	
F for change in R^2		7.57**	

**$p < .01$, * $p < .05$.

As Table 33 reports, the linear combination of leadership styles was

significantly related to emotional reaction, $R^2 = .062$, *adjusted R^2* = .053, $F(4, 461) =$

7.57, $p < .001$. Approximately 6% of the variance of emotional reaction was accounted

for by the linear combination of the four leadership styles variables. In addition, of the

leadership styles, MBEA ($\beta = .25$, $t = 3.38$, $p = .001$), passive avoidance ($\beta = .24$, $t =$

4.90, $p < .001$), and individual-consideration ($\beta = -.18$, $t = -3.09$, $p = .002$) were

significantly related to emotional reaction. This analysis indicated that MBEA,

passive avoidance, and individual-consideration are the reasonable predictors of

emotional reaction.

Hypothesis 1b predicted that transactional leadership styles will more strongly

predict emotional reactions than will transformational leadership style. Based on the

results, H1b received support because the transactional styles of MBEA and passive avoidance were found to be the significant predictors of emotional reaction. The inverse relationship between individual-consideration and emotional reaction emphasized a greater influence of transaction leadership over transformational leadership.

Hypothesis 1c

Hypothesis 1c stated, regarding organizational change in the Thai context, transactional leadership styles will be more significant predictors of risk intolerance than will transformational leadership styles.

To test Hypothesis 1c, a regression equation was computed with risk-intolerance as the dependent variable and the four leadership style factors as predictor variables. Data with the outliers deleted was entered into the regression equation. The results indicated that leadership styles accounted for a significant variance of the risk intolerance, $R^2 = .093$, $adjusted$ $R^2 = .086$, $F(4, 462) = 11.90$, $p < .01$ (see Table 34). Collectively, the predictors accounted for 9% of the common variance between risk intolerance and leadership styles. The regression model was further analyzed through regression coefficients. Passive avoidance explained significant variance for risk intolerance, $\beta = .32$, $t = 6.49$, $p < .001$. These results suggested only the style of passive avoidance was related to employees' risk intolerance during change situations.

Hypothesis 1c hypothesized that transactional leadership styles would have greater predictive value than transformational leadership styles on risk intolerance during an organizational change. This hypothesis received partial support to the extent that only one of the transactional passive avoidance explained a proportion of variance on risk intolerance.

Table 34 : Summary of Multiple Regression Analysis for Variables Predicting Risk

Intolerance ($N = 467$)

Variable	B	$SE\ B$	β
MBEA	0.01	0.08	0.01
Passive Avoidance	0.33	0.05	0.32**
Charisma	0.04	0.08	0.04
Individual-Consideration	-0.06	0.05	-0.07
R^2		.093	
Adjusted R^2		.086	
F for change in R^2		11.90**	

**$p\ <\ .01$.

Hypothesis 1d

Hypothesis 1d stated, regarding organizational change in the Thai context, transactional leadership styles will be more significant predictors of cognitive rigidity than will transformational leadership styles.

To test Hypothesis 1d, a regression equation was computed with cognitive rigidity as the dependent variable and the four factors of leadership styles as the predictors. The regression equation included the data without the outliers. See Table 35 for the results of the analysis.

Table 35 : Summary of Multiple Regression Analysis for Variables Predicting

Cognitive Rigidity ($N = 467$)

Variable	B	$SE\ B$	B
MBEA	0.27	0.08	0.25*
Passive Avoidance	0.09	0.05	0.09
Charisma	0.02	0.08	-0.02
Individual-Consideration	-0.08	0.06	-0.08
R^2		.036	
Adjusted R^2		.028	
F for change in R^2		4.32*	

*$p < .05$.

As presented in Table 35, the results revealed a significant relationship

between the overall leadership styles and cognitive rigidity, $R^2 = .036$, *adjusted R^2*

$= .028$, $F(4, 459) = 4.32$, $p = .002$. The coefficients performed that MBEA was a

significant predictor of cognitive rigidity, $\beta = .25$, $t = 3.35$, $p = .001$. Because

hypothesis 1d predicted significant variance of transactional leadership styles on

cognitive rigidity, this hypothesis was partially supported.

Hypotheses H2a to H2d

Similar to the assumptions testing procedures used for the first group of

hypotheses, plots of residuals and the four plots of normality probability were

reviewed for H2a through H2d. The residual plots showed no systematic pattern or

clustering of the residuals. The normal probability plots revealed relatively straight

diagonal lines. On the basis of these analyses, the assumptions of the regression model were met.

A possible source of error was detected by examining the regression diagnostics for the outliers. Only the leverage values and the standardized residuals showed unusual cases that warranted additional investigation. For each hypothesis (H2a to H2d), there were 8 cases that reported leverage values greater than $3(9)/475 = .057$. In addition, based on the reports of the standardized residuals, there were 2 cases in H2a (cases 160, 188) and H1d (cases 287, 390). One case in H2b (case 183) and H1c (case 361) flagged as outliers.

Hypothesis 2a

Hypothesis 2a stated, regarding organizational change in the Thai context, legitimizing and assertiveness will predict greater stimulation avoiding after leadership styles have been accounted for.

To test Hypothesis 2a, aggregated data from the four companies was used. Stimulation-avoidance was first regressed on the four predictors of leadership styles. Then, the four predictors of influence tactics were added to the first model to assess their incremental contributions to stimulation-avoidance. The four predictors of influence tactics were legitimizing, assertiveness, friendliness, and inspiration-control. Table 36 presents the hierarchical regression analysis of variable predicting stimulation-avoidance.

Table 36 : Summary of Hierarchical Regression Analysis for Variables Predicting

Stimulation-Avoidance ($N = 464$)

	Model 1			Model 2		
Variable	B	$SE\ B$	B	B	$SE\ B$	B
MBEA	-0.06	0.08	-0.06	0.72	0.08	0.06
Passive Avoidance	0.29	0.06	0.25**	-0.02	0.06	-0.02
Charisma	0.01	0.08	0.01	0.03	0.08	0.03
Individual-Consideration	0.10	0.06	0.09	0.01	0.06	0.01
Legitimizing				0.50	0.06	0.54**
Assertiveness				-0.11	0.06	-0.10
Friendliness				-0.04	0.06	-0.04
Inspiration-Control				-0.02	0.06	-0.02
R^2		.082			.212	
R^2 change		.082			.130	
F for change in R^2		10.30**			18.76**	

**$p < .01$.

As Table 36 reports, in Model 1, overall leadership styles was significantly
related to stimulation-avoidance, $R^2 = .082$, adjusted $R^2 = .074$, $F(4, 459) = 10.29$, p
<.001, with approximately 8% of the variance for stimulation-avoidance accounted
for by the overall leadership styles. In Model 2, the four predictors of influence tactics
accounted for a significant proportion of stimulation-avoidance after controlling for
the effects of leadership styles, R^2 change (ΔR^2) = .130, $F(4, 455) = 18.76$, p <.001.
Thirteen percent of the variance in stimulation-avoidance was accounted for after

controlling for leadership styles. These results suggest that influence tactics showed a significant additional power in predicting the likelihood of employee stimulation-avoidance after leadership styles were partialed out. The regression model was further analyzed through regression coefficients for an individual analysis of each predictor. Although passive avoidance was a significant predictor of stimulation-avoidance in the Model 1, $\beta = .25$, $t = 5.24$, $p < .001$, it did not explain the variance after it had been controlled for in the second step, $\beta = -.02$, $t = -.37$, $p = .71$. Of the eight predictors in Model 2, legitimizing was the only predictor that showed a strong positive association with stimulation-avoidance, $\beta = .54$, $t = 8.14$, $p < .001$.

Hypothesis 2a predicted a significant variance of legitimizing and assertiveness on stimulation avoiding after leadership styles had been controlled for. This hypothesis received partial support because only legitimizing explained a unique variance on stimulation avoiding after controlling for the leadership styles.

Hypothesis 2b

Hypothesis 2b stated, regarding organizational change in the Thai context, legitimizing and assertiveness will predict greater emotional reaction after leadership styles have been accounted for.

To test this hypothesis, a similar procedure to the one performed with H2a was conducted. However, emotional reaction was entered into the equation as the criterion variable instead of stimulation avoiding. Table 37 provides the results from the group of four transformational companies.

Table 37 : Summary of Hierarchical Regression Analysis for Variables Predicting

Emotional Reaction ($N = 465$)

Variable	Model 1			Model 2		
	B	$SE\ B$	β	B	$SE\ B$	β
MBEA	0.31	0.09	0.26**	0.28	0.09	0.23*
Passive Avoidance	0.29	0.06	0.25**	0.18	0.07	0.15*
Charisma	-0.11	0.08	-0.09	-0.16	0.09	-0.13
Individual-Consideration	-0.19	0.06	-0.18*	-0.21	0.06	-0.20*
Legitimizing				0.06	0.07	0.07
Assertiveness				0.10	0.06	0.08
Friendliness				0.04	0.07	0.03
Inspiration-Control				0.12	0.06	0.10
R^2		.066			.097	
R^2 change		.066			.031	
F for change in R^2		8.06**			3.93*	

**$p < .01$, *$p < .05$.

As presented in Table 37, the linear combination of leadership styles was significantly related to emotional reaction in the first model, $R^2 = .066$, *adjusted R^2* $= .057$, $F(4, 460) = 8.06$, $p < .001$, indicating about 7% overlapping variance between the first variate pair. In Model 2, the ΔR^2 was significant at .031, $F(4, 456) = 3.93$, $p = .004$. Overall, the influence tactics accounted for 3% of the variance in emotional reaction. Thus, after the leadership styles had been controlled, the additional predictive power of influence tactics was significant. Concerning the detailed analysis

of regression coefficients, in Model 1, three of the leadership styles were the significant predictors of emotional reaction. These included MBEA, $\beta = .26$, $t = 3.55$, $p = .000$, passive avoidance, $\beta = .25$, $t = 5.07$, $p = .000$, and individual-consideration, $\beta = -.18$, $t = -3.14$, $p = .002$. After leadership styles were taken into account in Model 2, none of influence tactics was a significant predictor of emotional reaction.

On the basis of the hierarchical regression analysis, after leadership styles were accounted for, none of the four factors of influence tactics explained a variance on employee's emotional reaction toward a change event. As discussed, H2b was not supported.

Hypothesis 2c

Hypothesis 2c stated, regarding organizational change in the Thai context, legitimizing and assertiveness will predict greater risk intolerance after leadership styles have been accounted for.

To test Hypothesis 2c, the regression equation was computed similarly to the equation described in H2a but the criterion variable was risk intolerance. The results of H2c were assessed using the data from respondents of the four companies (see Table 38).

Table 38 : Summary of Hierarchical Regression Analysis for Variables Predicting

Risk Intolerance ($N = 465$)

Variable	Model 1			Model 2		
	B	$SE\ B$	β	B	$SE\ B$	β
MBEA	0.02	0.08	0.02	0.05	0.08	0.05
Passive Avoidance	0.33	0.05	0.32**	0.12	0.06	0.12*
Charisma	0.01	0.07	0.01	0.01	0.07	0.01
Individual-Consideration	-0.05	0.05	-0.06	-0.11	0.05	-0.11*
Legitimizing				0.27	0.06	0.31**
Assertiveness				0.02	0.06	0.02
Friendliness				-0.03	0.06	-0.03
Inspiration-Control				0.08	0.05	0.08
R^2		.095			.160	
Adjusted R^2		.095			.065	
F for change in R^2		12.04**			8.80**	

**$p < .01$, *$p < .05$.

As presented in Model 1 of Table 38, the linear combination of leadership

styles was significantly related to risk intolerance, $R^2 = .095$, *adjusted* $R^2 = .087$, $F(4,$

$460) = 12.04$, $p < .001$. The influence tactics predicted significantly over and above the

leadership styles, $\Delta R^2 = .065$, $F(4, 456) = 8.80$, $p < .001$. Overall, the predictors

accounted for 6% of the common variance between risk intolerance and influence

tactics. This indicated a significant additional predictive power beyond that

contributed by leadership styles. Regression coefficients were presented for the

individual diagnostic of the predictors. In Model 1, passive avoidance was the significant predictor of risk intolerance, $\beta = .32$, $t = 6.56$, $p < .001$. In Model 2 of regression coefficients reported that legitimizing was a significant predictor of risk intolerance after partialling out the effect of leadership styles, $\beta = .31$, $t = 4.60$, $p < .001$. On the basis of the hierarchical regression analysis, legitimizing was a significant predictor of employee risk intolerance towards change even after leadership styles were accounted for.

Hypothesis 2c hypothesized that legitimizing and assertiveness would have greater predictive value in risk intolerance over and above leadership styles after they were taken into account. The results provided partial support for the hypothesis. Only legitimizing was a significant predictor of risk intolerance even when the leadership styles were taken into account.

Hypothesis 2d

Hypothesis 2d stated, regarding organizational change in the Thai context, legitimizing and assertiveness will predict greater cognitive rigidity after leadership styles have been accounted for.

To test this hypothesis, the replication of the statistical approach and the regression equation in H2a were executed but the criterion variable was cognitive rigidity. The regression equation included the aggregated data from the four transformation companies. Results are presented in Table 39.

Table 39 : Summary of Hierarchical Regression Analysis for Variables Predicting

Cognitive Rigidity ($N = 465$)

Variable	Model 1			Model 2		
	B	$SE\ B$	β	B	$SE\ B$	β
MBEA	0.30	0.08	0.27**	0.24	0.09	0.22*
Passive Avoidance	0.08	0.05	0.07	0.02	0.07	0.02
Charisma	-0.06	0.08	-0.06	-0.08	0.08	-0.07
Individual-Consideration	-0.06	0.06	-0.07	-0.05	0.06	-0.05
Legitimizing				-0.01	0.06	-0.01
Assertiveness				0.15	0.06	0.14*
Friendliness				-0.08	0.06	-0.08
Inspiration-Control				0.11	0.06	0.10
R^2		.039			.066	
R^2 change		.039			.027	
F for change in R^2		4.65*			3.27*	

$**p < .01, *p < .05.$

As presented in Table 39, the results reported a significant relationship

between the overall leadership styles and cognitive rigidity, $R^2 = .039$, *adjusted R^2*

$= .031$, $F(4, 459) = 4.64$, $p = .001$ in the first model. In model 2, a significant

relationship between the overall influence tactics and cognitive rigidity after the

leadership styles were accounted for, $\Delta R^2 = .027$, $F(4, 455) = 3.27$, $p = .012$. The

regression coefficients showed that in the first model, MBEA was a significant

predictor of cognitive rigidity, $\beta = .27$, $t = 3.70$, $p < .001$. After leadership styles were

accounted for in model 2, assertiveness, $\beta = .14$, $t = 2.56$, $p = .011$, reported as significant predictor of cognitive rigidity.

Because the hypothesis 2d hypothesized a significant variance of legitimizing and assertiveness on cognitive rigidity even when the leadership styles were taken into account, this hypothesis was partial supported. Of the two hypothesized predictors, assertiveness explained a significant variance in cognitive rigidity after the leadership styles was controlled for.

Hypotheses H3a to H3d

Tests for the assumptions of regression analysis were performed for each hypothesis testing. The residual plots and the normal provability plots presented the non-violated patterns which suggested that the assumptions of linearity and normality were tenable. Thus, the regression models are satisfied.

The tests for outliers identified a variety of the unusual cases in each hypothesized relationship of the criterion variable and predictors. For H3a to H3d, the leverage values greater than 3 p/n = 3(10)/475 = .063 were found in the total of 7 cases numbers. The standardized residuals greater than the absolute value of 3 were identified in the 2 cases for H3a and H3d and 1 case for H3b.

Hypothesis 3a

Hypothesis 3a stated, regarding organizational change in the Thai context, information inadequacy will predict additional variance in stimulation avoiding after leadership styles and influence tactics have been accounted for.

To test Hypothesis 3a, the first regression equation was assessed with stimulation-avoidance as the dependent variable and the four leadership style factors as predictors. The influence tactics variables were then added to the hierarchical

model in Model 2. After that, information inadequacy variable was added to the third

regression equation to access its additional contribution to stimulation-avoidance.

As indicated in Table 40, in Model 1, the overall leadership styles was significantly

related to stimulation-avoidance, $R^2 = .080$, *adjusted R^2 = .072, F(4, 459) = 9.97, p*

<.001. In Model 2, the overall influence tactics accounted for a significant proportion

of stimulation-avoidance after controlling for the effects of leadership styles, the ΔR^2

$= .128$, $F(4, 455) = 18.44$, p <.001. Collectively, the influence tactics explained 13%

of variance in stimulation-avoidance. In Model 3, information inadequacy was unable

to add a significant contribution on the variance in stimulation avoiding, $\Delta R^2 = .002$,

$F(1, 454) = 1.366$, $p = .243$. These results suggest that information inadequacy cannot

add the incremental contribution in predicting stimulation avoiding. Concerning the

regression coefficients for an analysis of each predictor, passive avoidance was a

significant predictor of stimulation-avoidance in Model 1, $\beta = .24$, $t = 4.99$, $p < .001$.

In Model 2, legitimizing was a significant predictor of stimulation-avoidance, $\beta = .54$,

$t = 8.10$, $p < .001$. The expected incremental contribution of information inadequacy

in stimulation-avoidance was not achieved, as demonstrated in Model 3, $\beta = -.05$, $t =$

1.17, $p = .243$. Thus, information inadequacy was not a significant predictor of

stimulation-avoidance after leadership styles and influence tactics were partialed out.

Hypothesis 3a predicted that information inadequacy would explain a

significant variance in stimulation-avoidance after leadership styles and influence

tactics had been accounted for. This hypothesis was not supported because the after

the two control variables were taken into account, information inadequacy was unable

to increase any additional contribution in stimulation-avoidance.

Table 40 : Summary of Hierarchical Regression Analysis for Variables Predicting Stimulation-Avoidance ($N = 464$)

Variable	Model 1			Model 2			Model 3		
	B	$SE\ B$	β	B	$SE\ B$	β	B	$SE\ B$	β
MBEA	-0.10	0.08	-0.09	0.03	0.08	0.03	0.04	0.08	0.03
Passive Avoidance	0.27	0.06	0.24**	-0.04	0.06	-0.03	-0.05	0.07	-0.05
Charisma	0.04	0.08	0.03	0.06	0.08	0.05	0.08	0.08	0.07
Individual-Consideration	0.11	0.06	0.10	0.02	0.06	0.02	0.03	0.06	0.03
Legitimizing				0.50	0.06	0.54**	0.51	0.06	0.55**
Assertiveness				-0.11	0.06	-0.10	-0.11	0.06	-0.10
Friendliness				-0.05	0.06	-0.04	-0.05	0.06	-0.05
Inspiration-Control				-0.02	0.06	-0.02	-0.02	0.06	-0.02
Information Inadequacy							-0.05	0.05	-0.05
R^2		.080			. 208			.211	
R^2 change		.080			.128			.002	
F for change in R^2		9.97**			18.44**			1.37	

**$p < .01$.

Hypothesis 3b

Hypothesis 3b stated, regarding organizational change in the Thai context, information inadequacy will predict additional variance in emotional reactions after leadership styles and influence tactics have been accounted for. To test this hypothesis, the regression equation was similar to that of H3a but the criterion variable was emotional reaction.

The results revealed that the overall leadership styles were significant related to emotional reaction, $R^2 = .058$, *adjusted R^2* = .050, $F(4, 461) = 7.09$, $p < .001$ (see Table 41). In Model 2, after controlling for leadership styles, the overall influence tactics added the significant variance in emotional reaction, $\Delta R^2 = .030$, $F(4, 457) = 3.77$, $p = .005$. In the final model, information inadequacy was significantly related to emotional reaction after partialling out the effects of leadership styles and influence tactics, $\Delta R^2 = .016$, $F(1, 456) = 8.17$, $p = .004$. Approximately 2% of variance in emotional reaction was explained by information inadequacy. These results suggest that the additional predictive power of information inadequacy over and above that contributed by leadership styles and influence tactics was achieved; however, the R^2 change is rather small.

Table 41 : Summary of Hierarchical Regression Analysis for Variables Predicting Emotional Reaction ($N = 466$)

Variable	Model 1			Model 2			Model 3		
	B	$SE\ B$	β	B	$SE\ B$	β	B	$SE\ B$	β
MBEA	0.29	0.08	0.24*	0.25	0.09	0.21*	0.26	0.09	0.22*
Passive Avoidance	0.27	0.06	0.23**	0.15	0.07	0.13*	0.11	0.07	0.09
Charisma	-0.09	0.08	-0.08	-0.14	0.09	-0.11	-0.09	0.09	-0.08
Individual-Consideration	-0.18	0.06	-0.17*	-0.20	0.06	-0.19*	-0.18	0.06	-0.17*
Legitimizing				0.07	0.07	0.08	0.10	0.07	0.10
Assertiveness				0.11	0.07	0.09	0.10	0.07	0.08
Friendliness				0.03	0.07	0.03	0.02	0.07	0.02
Inspiration-Control				0.10	0.06	0.09	0.10	0.06	0.09
Information Inadequacy							-0.14	0.05	-0.14*
R^2		.058			.088			.104	
R^2 change		.058			.030			.016	
F for change in R^2		7.09**			3.77*			8.17*	

**$p < .01$, *$p < .05$.

Further analysis was regarded to regression coefficients, in Model 1, three factors of leadership styles, MBEA, $\beta = .24$, $t = 3.30$, $p = .001$, passive avoidance, $\beta = .23$, $t = 4.72$, $p < .001$, and individual-consideration, $\beta = -.17$, $t = -2.97$, $p = .003$, were the significant predictors of emotional reaction. After leadership styles were controlled for in Model 2, none of influence tactics was shown as a significant predictor of emotional reaction. Model 3 indicated that information inadequacy was a significant predictor of employee's emotional reaction, $\beta = -.14$, $t = -2.86$, $p = .004$. The negative correlation was reported from this variate pair, indicating the inadequacy of the amount of information.

As discussed, the results supported the H3b because information inadequacy could add the significant proportion of variance in emotional reaction over and beyond that explained by leadership styles and influence tactics.

Hypothesis 3c

Hypothesis 3c stated, regarding organizational change in the Thai context, information inadequacy will predict additional variance in risk tolerance after leadership styles and influence tactics have been accounted for. To test Hypothesis 3c, the regression equation was similarly to those of the previous hypotheses. However, the criterion variable was risk intolerance. As Table 42 presents, Model 1 of H3c presented the statistically significant relationship between the overall leadership styles and risk intolerance, $R^2 = .094$, $adjusted\ R^2 = .087$, $F(4, 460) = 12.00$, $p < .001$. In Model 2, the statistically significant relationship was also found after influence tactics was entered to the hierarchical regression, $\Delta R^2 = .064$, $F(4, 456) = 8.71$, $p < .001$. Collectively, influence tactics in Model 2 accounted for approximately 6% of variance in risk intolerance. In Model 3, the significant relationship could not be achieved after

information inadequacy was entered to the hierarchical, $\Delta R^2 = .000$, $F(1, 455) = 0.006$, $p = .941$. These results suggested that the expectation for a significant additional predictive power of information inadequacy beyond that contributed by leadership styles and influence tactics could not be achieved.

Regarding regression coefficients diagnostic in Model 1, passive avoidance were the significant predictors of risk intolerance, $\beta = .31$, $t = 6.53$, $p < .001$. In Model 2, legitimizing, $\beta = .31$, $t = 4.55$, $p < .001$, were reported the predictor of risk intolerance after the leadership styles was accounted for. Although the significant relationship between information inadequacy and risk intolerance was expected, it could not be found in the third model, $\beta = .01$, $t = 0.08$, $p < .941$.

Hypothesis 3c hypothesized that information inadequacy would have greater predictive value in risk intolerance over and above leadership styles and influence tactics after they were taken into account. This hypothesis was not supported. After leadership styles and influence tactics were controlled for, information inadequacy was not able to increase any predictive value in employee risk intolerance during the organizational change.

Table 42 : Summary of Hierarchical Regression Analysis for Variables Predicting Risk Intolerance ($N = 465$)

Variable	Model 1			Model 2			Model 3		
	B	$SE\ B$	β	B	$SE\ B$	β	B	$SE\ B$	β
MBEA	0.01	0.08	0.01	0.04	0.08	0.04	0.04	0.08	0.04
Passive Avoidance	0.33	0.05	0.31**	0.12	0.06	0.11	0.12	0.06	0.11
Charisma	0.02	0.07	0.02	0.01	0.07	0.01	0.01	0.07	0.01
Individual-Consideration	-0.05	0.05	-0.06	-0.10	0.05	-0.11*	-0.10	0.05	-0.11*
Legitimizing				0.27	0.06	0.31**	0.27	0.06	0.31**
Assertiveness				0.02	0.06	0.02	0.02	0.06	0.02
Friendliness				-0.03	0.06	-0.03	-0.03	0.06	-0.03
Inspiration-Control				0.08	0.05	0.08	0.08	0.05	0.08
Information Inadequacy							0.01	0.04	0.01
R^2		.094			.159			.159	
R^2 change		.094			.064			.000	
F for change in R^2		12.00**			8.71**			0.01	

**$p < .01$, *$p < .05$.

Hypothesis 3d

Hypothesis 3d stated, regarding organizational change in the Thai context, information inadequacy will predict additional variance in cognitive rigidity after leadership styles and influence tactics have been accounted for. To test this hypothesis, the replication of the regression equation described in H3a was executed but the criterion variable was cognitive rigidity.

Table 43 reveals that the linear combination of leadership styles was significantly related to cognitive rigidity in Model 1, $R^2 = .036$, *adjusted* $R^2 = .027$, $F(4, 459) = 4.26$, $p = .002$. In Model 2, the overall influence tactics was significantly related to cognitive rigidity after partialling out leadership styles, $\Delta R^2 = .026$, $F(4, 455) = 3.15$, $p = .014$. For the third hierarchical model, the information inadequacy was not significantly related to cognitive rigidity, $\Delta R^2 = .001$, $F(1, 454) = 0.25$, $p = .616$. These results suggested that expectation for the additional predictive power of information inadequacy over and beyond that explained by leadership styles and influence tactics was unsatisfied. Given the regression coefficients, in Model 1, MBEA was a significant predictor of cognitive rigidity, $\beta = .25$, $t = 3.41$, $p = .001$. In Model 2, the regression coefficient reveal that assertiveness, $\beta = .14$, $t = 2.56$, $p = .011$, was the predictor of cognitive rigidity after leadership styles were accounted for. The results of the regression coefficients indicated that information inadequacy was not a predictor of cognitive rigidity after controlling for leadership styles and influence tactics, $\beta = -.03$, $t = -.50$, $p = .616$.

Based on the foregoing discussion, H3d was not supported. Information inadequacy did not explain any proportion of variance in cognitive rigidity after the leadership styles and influence tactics were accounted for.

Table 43 : Summary of Hierarchical Regression Analysis for Variables Predicting Cognitive Rigidity ($N = 465$)

Variable	Model 1			Model 2			Model 3		
	B	$SE\ B$	β	B	$SE\ B$	β	B	$SE\ B$	β
MBEA	0.27	0.08	0.25*	0.21	0.08	0.19*	0.21	0.08	0.19*
Passive Avoidance	0.07	0.05	0.06	0.01	0.07	0.01	0.01	0.07	0.01
Charisma	-0.04	0.08	-0.04	-0.05	0.08	-0.04	-0.04	0.08	-0.04
Individual-Consideration	-0.06	0.06	-0.06	-0.04	0.06	-0.04	-0.04	0.06	-0.04
Legitimizing				-0.01	0.06	-0.01	0.01	0.06	0.01
Assertiveness				0.15	0.06	0.14*	0.15	0.06	0.14*
Friendliness				-0.08	0.06	-0.08	-0.08	0.06	-0.08
Inspiration-Control				0.11	0.06	0.10	0.11	0.06	0.10
Information Inadequacy							-0.02	0.05	-0.03
R^2		.036			.062			.062	
R^2 change		.036			.026			.001	
F for change in R^2		4.26*			3.15*			0.25	

*$p < .05$.

A Summary of the Hierarchical Regression Results

The foregoing section was intended to present the results from the hierarchical regression analyses. As the first order in the regression model, the overall leadership styles were found to be significantly correlated with each subscale of employee's dispositional resistance to change. However, the detailed analysis of this group of predictors revealed diverse results when each subscale of leadership styles to change was considered separately. The transactional passive avoidance style seemed to be the influential style of leadership that stimulates resistance to change. The style of MEBA was more likely to produce the inclination to resist change at emotional and cognitive levels.

As the second order in the hierarchical regression model, the overall influence tactics were significantly related to each subscale of employee resistance to change. Through the individual diagnostic, legitimizing appeared to demonstrate the most additional predictive power to dispositions as stimulation-avoidance, emotional reaction, and risk intolerance while cognitive rigidity can be predicted by the managerial tactics of assertiveness.

As the third order in the hierarchical regression model, the overall information inadequacy was significantly related to only emotional reaction while non of the significant variance was found in other subscales of employee dispositional resistance to change.

In summary, hypotheses H1b and H3b were fully supported while H1a, H1c, H1d, H2a, H2b, H2c, and H2d were partially supported. Hypotheses H3a, H3c, and H3d were not supported.

Post Hoc Trend Analyses

Although linearity was assumed in the hierarchical regression in the former section, this study further assessed the data to determine whether any of the hypothesized relationships were nonlinear. Post hoc trend analyses were undertaken to examine types of relationships which may be fitted to the data. Using the SPSS Curvefit procedure, linear, quadratic, and cubic models were tested against each other for each of the hypothesized relationships. Results for the curvefit led to the conclusion that the relationship between each pair of variable is best characterized as linear.

Even though significant quadratic and cubic models were observed for some of the relationships, visual inspection of scatterplots coupled with inspection of R^2 values led to the conclusion that all relationships were best described as linear. While some elements of nonlinear models were present, the overall relationship was dominated by a linear trend to such an extent that inserting nonlinear power-vectors into any of the regression models would add little, if any predictive power. Therefore, from the curve estimation results, the comparison among the unstandardized beta values for the quadratic and cubic and linear models revealed the largest proportion of variance was accounted for by the linear model and warrant that linearity is a better way to describe the relationships hypothesized in this study.

CHAPTER 5

DISCUSSION AND CONCLUSION

This chapter reviews the purposes and presents a summary of the study. A discussion of the results is provided and organized in the order in which variables were entered into the hierarchical regression equation. Also, the limitations of the study and implications for future study and practitioners are discussed.

Summary of the Study

The open systems theory was used to conceptually explain organizational change as well as its interrelationship to the likelihood of employee tendency to resist change. For the input process, this study assumed that external and internal change, which can include technological, economic, legal, societal changes, and change plans, influenced organizations to respond to these phenomena. In the throughput process, which is the focus of this study, leadership styles, influence tactics, and information adequacy were believed to play a crucial role in enhancing employee resistance to change, which is regarded as an output of the system. Based on these fundamental relationships, especially in the throughput and output processes, three research objectives were established.

The first objective was to examine whether transactional styles of leadership have an impact on employee inclination to resist change. The second objective of the study was to investigate the additional predictability of influence tactics in explaining the multidimensional disposition of employee resistance to change. Finally, this study sought to examine the incremental power of information adequacy. The study posed questions concerning the extent to which information adequacy added to the

prediction of employee resistance to change after accounting for leadership style and influence tactics.

Twelve research hypotheses were developed in alignment with the objectives of the study. Employee resistance to change was conceptualized to include affective, behavioral, and cognitive dimensions and was operationalized into four aspects of employee personality deemed relevant to resisting change: stimulation-avoidance, emotional reaction, risk intolerance, and cognitive rigidity. To prevent restriction of the conclusion and limitation to a specific population, data were collected from five companies representing different dimensions of the Thai economy, ranging from banking to construction. The report of the results was aggregated. The measurement tools used in this study were the Resistance to Change Scale (Oreg, 2003), the Multifactor Leadership Questionnaire (Avolio & Bass, 2004), the Profile of Organizational Influence (Kipnis & Schmidt, 1982), and the Receiving Information Scale (Goldhaber, Rogers, et al., 1978).

Given that this study was conducted in the Thai context, all the US sample based measurements were examined using exploratory factor analysis to investigate the dimensional property of each scale and to determine whether modifications to these Western constructed measurements were needed. The results revealed different factor structures for all the measurements. Consequently, some of the research hypotheses were revised. A ONEWAY analysis of variance was conducted to examine the homogeneity of means, particularly to determine whether the five companies provided a relatively homogeneous sample with which to progress. Results from the ANOVA led to the aggregation of four companies, and the exclusion of the fifth company.

Based on the research hypotheses explored and presented in Chapter Four, three major findings were emphasized. Overall, the results of this study strongly support the hypotheses claim that transactional leadership styles, the influence tactics of legitimizing and assertiveness, and information inadequacy significantly influenced the four behavioral components of employee resistance to change.

First, the results revealed that the transactional passive avoidance leadership style and Management-by-exception: active significantly influenced employee resistance to change. Second, the additional contribution of influence tactics, specifically legitimizing and assertiveness, helped predict employees' generalized disposition to resist change. Third, the incremental predictive power of information inadequacy was observed to be significant only for employees' emotional reaction to change. Statistically significant predictive power for information inadequacy was not observed for stimulation avoiding, risk intolerance and cognitive rigidity after controlling for leadership styles and influence tactics.

Discussion

The discussion in this section provides more details to explain the three major results presented in the foregoing summary. The sequence of the discussion will focus on the impact of leadership styles, downward influence tactics, and information adequacy, respectively on each of the employee dispositions in resisting change: stimulation-avoidance, emotional reaction, risk intolerance, and cognitive rigidity. Figure 6 shows results of the hierarchical regression analysis reporting from all research hypotheses.

Figure 6 : Variables Predicting Employee's Dispositional Resistance to Change
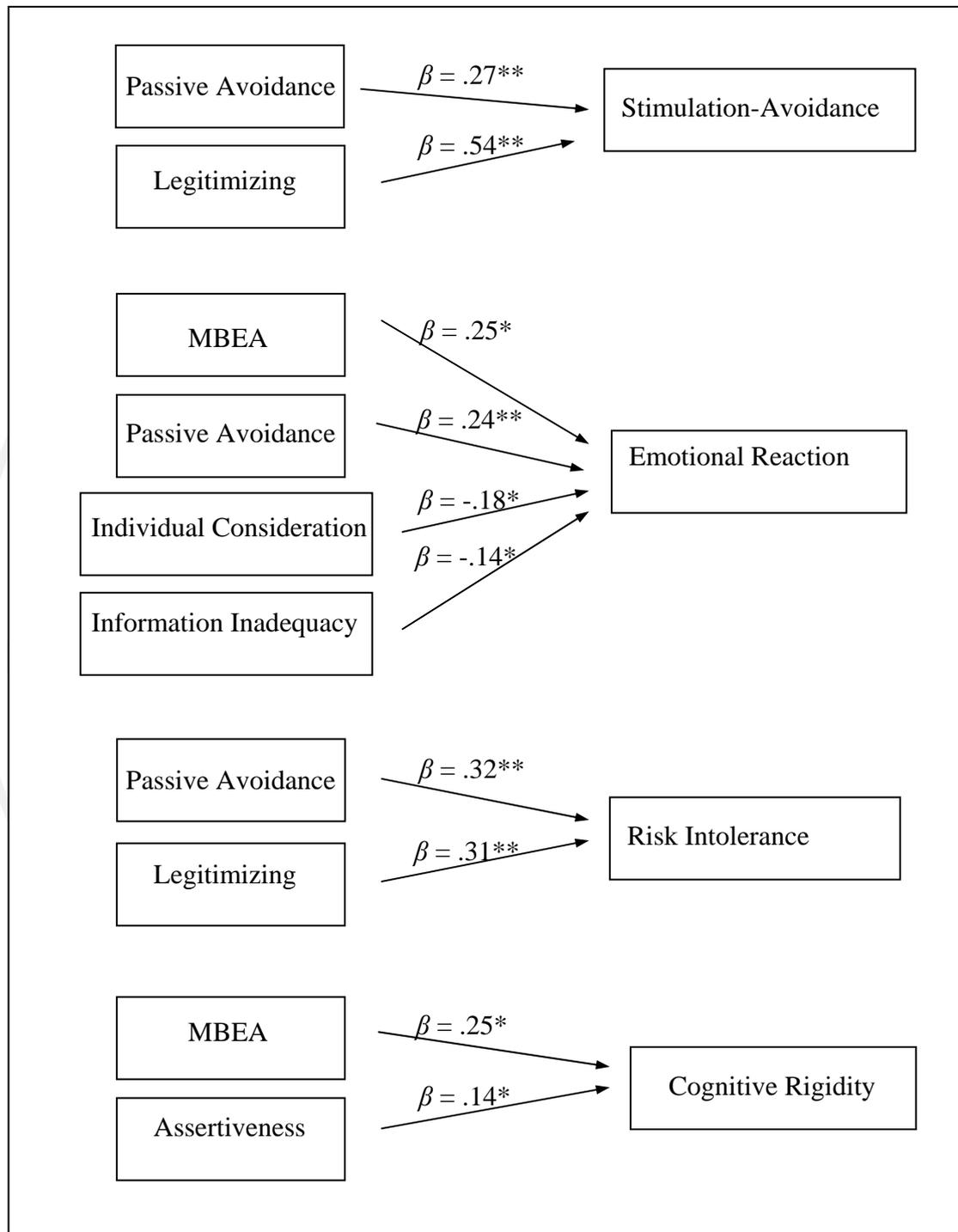
The Impact of Leadership Styles on Employee's Dispositional Resistance to Change

The first finding showed that transactional leadership styles were significantly correlated with employee resistance to change. The regression coefficients revealed the broad differences between relationships among the two types of transactional style and each of the employee dispositions in resisting change. Regarding stimulation-avoidance, the behavioral component in responding to organizational change, the multiple regression analysis showed that passive avoidance was the only significant predictor in this dimension. In the affective response to change, emotional reaction can be predicted by passive avoidance and MBEA. Results also reported that emotional reaction showed a negative relationship with individual-consideration, indicating that emotional response to change would be higher when the transformational individual-consideration style was low. With regard to risk intolerance during a change period, passive avoidance showed a positive correlation with this affective response. To explain the tendency to resist change from a cognitive level, only MBEA showed a significant contribution to cognitive rigidity.

Passive avoidance leadership

While previous leadership studies focused extensively on the relationship, especially between transformational leadership style and organizational performance or employee satisfaction (i.e., Bass, 1985, Hater & Bass, 1988, Howell & Avolie, 1993), this study extended the findings of previous research and placed an emphasis on the relationship between transactional leadership styles and employee's dispositional resistance to change. Results suggested that transactional passive avoidance leadership was a significant predictor of employee's dispositional resistance to change, especially in predicting employee affective (emotional reaction

and risk intolerance) and behavioral (stimulation-avoidance) reactions toward organizational change. In line with Oreg's (2003) research, which found that the nature of change was less relevant to individuals' cognitive evaluation, this study reported that, of the two styles of transactional leadership, only MBEA contributed some variance in cognitive rigidity while passive avoidance leadership was unable to influence resistance to change at this level.

Generally, passive avoidance leadership is regarded as no leadership. Passive avoidance leaders are usually absent when a situation calls for them. They do not take any action required in a change situation, especially specifying work direction, clarifying expectations, or providing goals and standards to be achieved. Therefore, to work with leaders who are characterized as passive avoidance leaders, employees might feel uncertainty and lose a sense of control. In the Thai organizational culture, where paternalism is placed first and foremost, employees expect guidance and a detailed work plan in order to complete their tasks and finally achieve organizational goals. Without an outline, employees might not know how to effectively deal with new work or where to move on during a transitional period. In addition to resistance to change caused by the employee's psychological malfunction, leaders with the passive avoidance style are unable to create a future vision, build integrity, commitment and trust, use appropriate communication, and empower their people to participate change plans when the demand for these actions are high (Burdett, 1999; Staw, Sandelands, & Dutton, 1981). Thus, in a change context, passive or non-leadership styles are considered ineffective and possibly provoke negative deviant behaviors among employees.

Given a lack of leadership skills, passive avoidance leadership style was a significant predictor of emotional reaction, risk intolerance, and stimulation avoiding. In dealing with passive avoidance leaders, employees might feel frustration, anxiety, and stress and, in turn, exhibit impatience and undesirable actions at the behavioral level. To illustrate a relationship between emotional response and behavioral response during the transitional period, it is possible that employees feel insecure and fear a loss of control over their work and responsibility since any previously acceptable approaches to work might be invalid after implementing a change plan. In addition, the degree of tolerance to risk that has been brought about by change and a challenging situation is decreased. These feelings will become worse when the ways the leaders respond to change is directly toward the external and internal change such as technologies, new management processes, rules, directions to meet the standard, and overlook their role as coaches and mentors. Thus, the feelings of fear, anxiety, frustration, and stress are intense and lead to behaviors that pose constraints to a change plan.

Management-by-exception: Active (MBEA)

The MBEA leaders assume their legitimate authority over subordinates to set the standards for compliance and identify the actions that might result in ineffective outcomes. The MBEA leaders look for creativity and new ways to solve problems and accomplish assignment. In addition, they are alert for mistakes and discursive behaviors. As such, actions are taken after mistakes and failures are found. Based on the underlying concept that formed the MBEA construct, the MBEA style was found to be a predictor of emotional reaction and cognitive rigidity because this leadership

style places more concern on the product or expectations for effective outcomes rather than paying attention to the process of change.

With respect to the Thai organizational culture, the legitimate authority of MBEA leaders could engender anxiety and frustration and possibly violate employee's cognitive evaluation toward change. To illustrate the correspondence between affective and cognitive responses to change, such emotional resistance as anger, pressure, and frustration, and such cognitive responses as negative thoughts and beliefs toward change can be formed when leaders only set new standards for organizational achievement while personal achievement, self-fulfillment, individual's requirement, and employee's adjustment process during a changing circumstance are disregarded. In addition, the MBEA leaders seek creativity when it is relatively low, especially during the change circumstance (Amabile & Conti, 1999).

Some discrepancies were identified. While previous research reported that employee dissatisfaction and failure in performance were the consequences of the transactional MBEA style (i.e., Bass, 1985; Hater & Bass, 1988, Howell & Avolie, 1993), this study found that the MBEA style was a significant predictor of employee emotional and cognitive resistance to change. Discrepancy between the results of previous studies adds a nuanced understanding of Piderit's assumption of ambivalent resistance to change (Piderit, 2000). Basically, employee resistance to change can be identified only when deviant or negative behaviors were found. This study brought a more complicated view and pointed out that MBEA leaders explain some variances in employee emotional and cognitive resistance. One possible explanation to this phenomenon was through the use of organizational culture, especially high power distance in the Thai culture.

In the Thai organizational culture, following and agreeing with leader's ideas have become widely acceptable while challenging leaders is discouraged and harm individual work stability (Sriussadaporn-Charoenngam & Jablin, 1999). Thus, by following the MBEA leaders' guidelines and exhibiting obedience, particularly through action, employees are more likely to feel security in their career. In addition, what makes the non-significance among MBEA and other aspects of resistance (stimulation-avoidance and risk intolerance), but significance for emotional and cognitive resistance is clear standards for compliance, actions that may result in poor performance, and leader's prompt reaction in dealing with mistake. Through these interactions, although employees disbelieve in the outcome of change to their personal benefit, they need to conduct themselves to show behavioral compliance because the work outline has already been set. Besides, they acknowledge that their leaders will take action when mistakes are found. However, under the change circumstance, it is possible that employee might work just to meet the requirement. Expectation for an extra effort, high commitment, and creativity might be in the far distance (Amabile & Conti, 1999; Fedor, Caldwell, & Herold, 2006).

Individual-consideration leadership

The transformational individual-consideration leaders place much concern on each individual in the work unit rather than regarding members of a group as a whole. Each member of the organization is considered as having different abilities, needs, and values. Furthermore, employees are encouraged with opportunities and assistance to improve their personal skills. Results from the present study presented a negative relationship between transformational individual consideration and emotional response to change which indicated similarity but some degrees of difference to the

previous studies. While findings from previous research revealed that

transformational leadership predicted satisfaction and high unit performance (i.e.,

Hater & Bass, 1988; Howell & Avolie, 1993; Waldman, Bass, & Einstein, 1987),

findings of this study similarly pointed out that a lack of individual concern was

related to the construction of a more subtle form of resistance, emotional reaction.

During a change period, employees' sense of pride and locus of control are

relatively low (Judge, Thoresen, Pucik, & Welbourne, 1999; Weber & Weber, 2001).

Subordinates might feel reluctant and uncomfortable when they are encouraged to

alter their skills and create alternative approaches to accomplish new goals. Because

individual-consideration leaders create an enthusiastic environment and are believed

to help lessen employees' tension and ambiguity at work, demands for individual-

consideration leaders are relatively high. According to the results, it is interesting that

emotional response to a lack of individual-consideration leaders did not relate to

behavioral resistance in dealing with the demand for assistance from individual-

consideration leaders. Explanation of this subtle form of resistance could be related to

the culture. Thai subordinates are deeply embedded in the Thai organizational culture

where communication competence requires a respectful manner to superiors or

leaders, acknowledging their experience, and controlling emotion (Sriussadaporn-

Charoenngam & Jablin, 1999). In this regard, controlling one's emotions is viewed as

a means to prohibit negative behavioral response. However, emotional resistance in

this study is an independent reaction and do not associate with behavior when the

appearance and involvement of individual-consideration leaders is needed. One

possible explanation to the complexity of this ambivalent resistance is to gain

organizational communication competence and enthusiasm when dealing with individual-consideration leaders.

As discussed, results of this study supported the ambivalent responses to change as proposed by Piderit (2000). This study agreed that to separately investigate employee attitude to change into the three dimensions which included affective, cognitive, and behavior allowed for more sophisticated findings, discussion, and implications.

Charismatic leadership

Charisma is the transformational style of leadership. Charismatic leaders are admired, respected, trusted, and regarded as coaches, mentors, and role models. They communicate clear expectations and offer recognition when goals are achieved. In this study, the transformational charismatic leadership could not explain a significant variance in any form of employee dispositional resistance to change. These results confirmed the findings in the earlier research that the transformational styles of leadership were a more effective style during an organizational change (Hater & Bass, 1988; Howell & Avilio, 1993; White, Hodgson, & Crainer, 1996).

Regarding the Thai organizational culture, Komin (1990) suggested that employees' trust and respect were the critical factors in the organizational contexts because Thai people valued social relationship over task achievement. Charismatic leaders tend to show personal concern for employee's needs, make interpersonal relationships, and eventually gain trust and respect from their subordinates. Therefore, this style of leadership could not predict significant variance on employee resistance to change through stimulation-avoidance, emotional reaction, risk intolerance, or cognitive rigidity.

The Impact of Influence Tactics on Employee's Dispositional Resistance to Change

This study provided additional information about the influence tactics used by leaders. Previous studies of influence tactics have focused on the relationship of influence tactics and the managerial work roles (Lamude & Scudder, 1995), on the use of influence tactics in the different direction (Schermerhorn & Bond, 1991; Yukl & Falbe, 1990), and on commitment and effectiveness as the outcomes of influence tactics (Yukl & Tracy, 1992). In contrast, this study dealt with the influence tactics that successfully added additional predictability to employee resistance to change at various dimensions of individual personalities.

In general, results showed that legitimizing and assertiveness tactics were related to employee resistance. The individual analyses of regression coefficients contributed more details to the discussion between the four different factors of influence tactics and the four different characteristics of employee's dispositional resistance to change. With regard to the behavioral dimension, stimulation-avoidance can be predicted by legitimizing. For the affective response to change a significant variance of legitimizing was found in risk intolerance; but, interestingly, neither legitimizing nor assertiveness could predict emotional reaction. At a cognitive level, the results revealed that assertiveness was the influence tactic that successfully stimulated cognitive rigidity.

Legitimizing tactics

Legitimizing seemed to be the critical influence tactic that brought great consequences in employee's dispositional resistance to change even after accounting for the effect of leadership styles. Results of the study revealed that legitimizing showed a strong association with stimulation-avoidance and risk intolerance.

A factor analysis of Kipnis and Schmidt's (1982) Profile of Organizational Influence Strategies (POIS) revealed that the factor comprised of legitimizing was a combination of higher authority and sanction, which were in alignment with the Thai organizational culture. With regard to the culture which is mainly characterized by the acceptance of authority and hierarchy, results of the present study extended the results of the previous studies. Pasa (2000) found that granted power or authority were the effective influence strategies used to achieve compliance in a high power distance and collective culture. The findings of this study further explained that the influence tactic of legitimizing could predict the inclination to resist change through individual behavior of stimulation-avoidance and affective dimension of risk intolerance.

According to the open systems framework, when the complexity of external change and internal change forced an organization and its members to alter themselves, interaction and organizational communication between leader and subordinates became more complicated. In this sense, it is possible that the solely conventional influence approach that relies on organizational rules and policies and the granted authority is unable to deal with employees, especially with those who are struggling through the transitional period. Instead, legitimizing intensifies personal stress and anxiety. Thus, when the focus to initiate participation in a change plan is through the use of legitimizing and disregards the intrinsic problems and employees' demands, resistance to change is the potential outcome of this interaction.

When change has become the common situation and organizational demands exceed what regulations, rules, and policies state, employees are obligated to move out of their comfort zone. While day-to-day routine becomes invalid by change, employees suffer from adapting to an innovation (Bardwick, 1995). To handle this

situation, legitimizing tactics turns out to be an ineffective managerial strategy because it does not provide proper responses to the situation and employees' requirements. This forceful approach had its strong relationship with employee's tension and the reduction of one's level of tolerance. Eventually, affective responses to change may lead to some defensive behaviors such as stopping or delaying any motivation to participate in a change plan.

Assertiveness

In the Thai context, assertiveness involves tactics that the leaders use including orders, repeated demands, and frequent checking up to influence new behaviors and participation in a change plan. The results of the current study found that assertiveness was a tactic that exerted the impact only on the cognitive level of resistance. Through a literature review, perception toward assertiveness was found to be different across cultures. Assertiveness was found to be a widely used forceful tactic to control employees who resisted to a change plan in the western culture (Gravenhorst & Boonstra, 1998). However, concerning the Thai organizational culture, a study by Noypayak and Speece (1998) found that assertiveness or pressure was not considered as threat or pressure among Thai managers. Instead, they frequently used assertiveness or pressure as the influence tactics to check up whether their subordinates worked and followed the guideline properly. For this reason, assertiveness was a directive but non-confrontative strategy by its nature in a Thai culture.

Assertiveness is the managerial strategy that brings up the issue of ambivalent response to change when the regression results reported a significant variance of assertiveness in cognitive rigidity. Rooted in the Thai organizational culture,

employees do not disclose their true feelings and confront their leader even when they feel oppressed and look for the autonomy over their tasks (Sriussadaporn-Charoenngam & Jablin, 1999). Although cognitive reactions are constructed because of employees' disbelief in change, securing one's presence in the current job is more important and might be one possible reason for this ambiguity. Another possible reason for the non-significance of the affective and behavioral dimensions of resistance to change in assertiveness might be that the employees feel more secure when they follow the demands and guidelines and allow the leader to repeatedly check the accuracy of their work. Therefore, this study suggested the use of assertiveness should receive much concern since cognitive responses to change were hardly identified and communicate in the Thai culture.

Inspiration-control

Factor analysis of the POIS revealed inspiration-control as the influence strategy used among Thai leaders. This tactic represented the managerial strategies that leaders used to arouse subordinates enthusiasm by appealing to their values, ideas, and personal skills. In addition, action plans were used as a means for controlling and communicating leaders' demands. In this study, the results revealed that none of the predictors were significant related to the tactic of inspiration-control.

Inspiration-control seemed to be culturally unique strategies that best fitted in a context of Thai organizational culture. Through the use of inspiration-control tactics, building interpersonal relationships seemed to be an important factor for organizational achievement. Leaders make the subordinates feel important and acknowledge their qualifications in the working area. Meanwhile, a detailed action plan is also made to justify the ideas that need to be implemented. As a result,

employees may form positive attitudes toward leaders because these tactics are obviously beneficial not only in creating self-confidence, but in reducing uncertainty, anxiety, and ambiguity when working in a changing circumstance. Therefore, cognitive and affective responses to change possibly lead to positive attitudes toward change and finally result in participation in a change plan.

Friendliness

Friendliness is a strategy used to create good impressions and increase confidence before asking subordinates to do what leaders want. In this study, friendliness was considered as one of the tactful strategies that seemed to be an effective tactic to gain commitment. Friendliness reflected its cultural uniqueness that placed relationship and harmony over task achievement (Chaidaroon, 2004; Sriussadaporn-Charoenngam & Jablin, 1999). In the present study, friendliness was also the managerial influence tactic that was unable to predict dispositional resistance to change.

Because the influencing behavior of friendliness consisted of creating a favorable impression, expressing sympathy, and stimulating self-confidence among employees rather than adding components of threat and uncertainty into the change circumstance, it is conceivable that the increase in self-confidence and motivation stimulates high self-esteem and locus of control which directly relate to the reduction of feelings of hopelessness, uncertainty, and psychological reactance. Therefore, a sign of the dispositional resistance to change cannot be found. In support of this finding, several studies have found that control over one's environment and positive self-concept, such as high self-esteem and self-efficacy, facilitate employees to cope with change (Eilam & Shamir, 2005; Judge, Thoresen, Pucik, & Welbourne, 1999; Paulsen et al., 2005).

The Impact of Information Adequacy on Employee's Dispositional Resistance to
Change

The examination of information adequacy in the present study broadened the research in this area (see, Daniels & Spiker, 1983; Goldhaber, Rogers, Lesniak, & Porter, 1978; Penley, 1982; Spiker & Daniels, 1981; Zhu, May, & Rosenfeld, 2004) to incorporate its consequences on employee resistance to change. As expected, results of the study reported that inadequate amounts of information statistically related to emotional resistance among employees. However, practical significance was not warranted when the magnitude of R^2 change was reported at 2%. The significant relationship could not be achieved between information inadequacy and other components of dispositional resistance to change. Therefore, in line with Piderit (2000), incongruity of individual responses to change was highlighted.

In this study, information adequacy referred to the discrepancy of employees' perception of the amount of information they currently received and the amount of information they wanted to receive. With regard to information alone, it was considered by many organizational scholars (e.g., Goldhaber, Yates, Porter, & Lesniak, 1978; Keen, 1981; Nadler & Tushman, 1989b; Penly, 1982) as an important factor in coordinating internal mechanisms and adaptation to changes in the external environment. Through open systems theory, information was brought into a system to accelerate organizational change and actions related to change. Generally, almost every organizational change consists of components that harm an employee's psychological well-being. As such, efforts to resist the implementation of change were always constituted in the workplace.

With regard to employees' information processing capacity, results of this study were consistent with Covin and Kilmann (1990), del Val and Fuentes (2003), and Tushman and Nadler (1978) that employees' perception of information inadequacy was one of the sources of a negative emotion. A negative perception towards change can also contribute to misunderstandings or distorted information (del Val & Fuentes, 2003). In addition, information about change usually conveys messages that threaten employees' status quo because many innovative organizations emphasize change, creative actions, and innovative technologies. Thus, those who expect information that is consistent with their values, beliefs, or skills are more likely to feel under pressure. As a result, information inadequacy leads to the perception of change as a stressor. In the end, employees feel frustrated and oppressed.

Another possible explanation for the relationship between information inadequacy and emotional resistance to change is central to uncertainty during a change. Many scholars deemed that uncertainty was a major source of stress (Alexandar, Helms, & Curran, 1987; Sheer & Cline, 1995; Tushman & Nadler 1978) and resistance to change (Bordia, Hunt, Paulsen, Tourish, & Difonzo, 2004). In addition, a sense of uncertainty can also be viewed as instability and insecurity in a current job. To reduce uncertainty and threats to psychological well-being, information plays its important role. When information such as a reason for change, clear work guidelines, clear future vision, and feedback are not sufficiently communicate to employees, individuals' psychological strain is formed and influences resistance to change among employees (Covin & Kilmann, 1990).

In today workplace, information is symbolized authority and control to change leaders (Keen, 1981). Based on the political behaviors and the symbolization of

information, not only was information inadequacy perceived because the subordinates received only information that leaders thought t was enough for them to work properly, but also a pattern of organizational communication that was deep rooted in Thai organizations discouraged subordinates from acquiring information. The emotional component of resistance is somehow unavoidable when the two parties have their own limitations in giving and asking for information.

To achieve communication competence in Thai organizations, Sriussadaporn-Charoenngam and Jablin (1999) suggested that organizational members should "know how to avoid conflict with others, control their emotions, display respect, tactfulness, modesty and politeness, and use appropriate pronouns in addressing others" (p. 409). Thai subordinates avoid asking for more information and/or clarity to the objective of change and/or the upcoming expectations of what they are required to do and accomplish. These types of question might bring trouble and conflict to interpersonal relationships because they can be perceived by the leader as a challenge or aggressiveness (Chaidaroon, 2004). As a result, when solutions to problems are not provided and questions in mind cannot be asked, employees encounter difficulty in working, especially in a changing circumstance. In addition, consistent with Berger (1987), when the provision of information was insufficient, employees may feel hopeless since a clear vision for their future career could not be viewed, predicted, or explained.

The concern about the communication competence in Thai organizations also provided explanation for the incongruity of the reactions to change. Given the significance of information inadequacy in emotional reaction, Thai people are taught when they are young to behave in a proper manner even though they encountered

emotional tiredness (Roongrengsuke & Chansuthus, 1998). This norm also applies in the organizational context. During the implementation of change, the inadequate amount of information can cause emotional resistance such as frustration or stress among employees. However, through the cultural boundary, employees know how to control their behavior and project themselves in the manners that make them more favorable among leaders and colleagues. Therefore, regardless of leadership styles and influence tactics, the perceived information inadequacy is frequently translated into frustration and emotional reaction rather than resistant behavior. Interestingly, a link between cognitions or reasons that enhance affective responses cannot be found.

Conclusion

Based on the communication standpoint, it had been shown in this study that the theoretical structures of employee's dispositional resistance to change, leadership styles, influence tactics, and information adequacy were different between the scales that were originally developed using the Western samples and those uniquely constructed using the Thai samples. The inconsistency of the theoretical construct of each scale importantly indicated that the national culture might have an effect on the ways employee perceived change, their tendency to formulate resistance to change, the interaction between leader and subordinate, and perceived information adequacy.

This study also suggested that employee resistance to change was inherent in today's organizations. The predisposition to resist change among employees could be accounted for by passive avoidance and management-by-exception: active leadership styles. As for the influence tactics, such tactics as legitimizing and assertiveness were significant predictors of the dispositional tendency to resist change. Perceived information adequacy indicated its potential benefit to avoid the formation of

resistance to change. However, what this study importantly manifested was the multidimensional disposition responses to change. Some deviant behaviors could be identified because they were obviously exhibited through behavioral reactions. Other responses, such as cognitive responses and affective reactions to change, could not be or were difficult to be identified. Thus, proper communication and management approaches to deal with resistance to change were difficult to plan and achieve.

<div align="center">Limitations</div>

There were several limitations that should be noted for this study. The first limitation that might affect the factor analysis, reliability of the instruments, and results of the study involved problems in translating the research instruments. Although the back translation method was employed to reduce the language discrepancy between Thai and English versions of the questionnaire, achieving a complete equivalence in translations was difficult. As is often the case when employing scales across cultures, respondents could have responded to questions using different, culturally-based assumptions relevant to the questions (Ervin & Bower, 1952). In this regard, the meaning of words in one culture might have a larger range of referents than another or an idiom in one culture might not make sense when being translated into another culture.

Given the possible nonequivalence in the translation, a discrepancy in the translation of the name of the Resistance to Change scale was one of the limitations that received much concern when it was translated to "attitude and behavior toward resistance to change questionnaire". What motivated the researcher to employ this slight meaning shift in translation was sensitivity in cultural differences. While the term "resistance to change questionnaire" could be literally translated into Thai, it

might bring distortion to the respondent's answers because resistance to change is regarded as a negative reaction to a leader in the Thai culture. Given the power distance and uncertainty avoidance, Thai employees are discouraged from opposing or resisting change. In addition, with regard to the nature of a self-rate questionnaire, Thai employees were likely to underestimate themselves and showed a lower level of resistance in the questionnaire.

The idiom "if it ain't broke, don't fix it" was another cause of a non-equivalent in the translation. The discovery of this idiomatic expression, which showed the expressive of though, met with difficulty when there was not any equivalence in Thai language. In English, this idiom is used to refer to something that people say which means it is a mistake to try to improve or change a system that works well (*Cambridge Dictionary of American Idioms*, 2003). It also refers to risk or loss when one tries to improve on a system that already works. In this study, the English idiom "if it ain't broke, don't fix it" was literally translated to "*tha mai sear kor mai tong som*" to insure that they were equivalent in meaning to the idiom used in the original.

The second limitation that prevented the assumption of random sampling and limited the variation of information available for the regression analysis was access to data gathering. Through the data collection process, it was found that to get permission to distribute the questionnaire to the organizations undergoing change was very difficult although incentives such as an exclusive summary of the study and facilities to have the questionnaire distributed and collected were provided.

Third, because this survey study was administered after the organizational change had been undertaken, the respondents were asked to think back in time to when change plans were introduced. When the retrospective approach was employed,

the researcher and those who would like to apply the findings of this study need to keep in mind that the retrospective reports may relatively distort what was actually happened. However, Oreg (2006) noted that although the respondent's retrospective sense making could distort the information, the theoretical framework of the study could not be distorted by this information.

Fourth, while it is believed that the change phenomenon is an endless process where problems are transformed from time to time (Moran & Brightman, 2001), this survey study might limit the holistic understanding of the employee's dispositional resistance to change and other communication activities when the data were collected in one survey instead of observing change over time.

Fifth, this study had framed the theory such that leadership styles preceded influence tactics and both leadership styles and influence tactics preceded information adequacy. Practically, it was possible that the three variables were reciprocally related to influence resistance to change among employees.

Lastly, perhaps, low beta weights on linearity may result from some elements of non-linearity in the regression lines. Thus, practical implications of the results of this study should be of more concern when the small effect of R^2 resulted from the hierarchical regression analysis.

Recommendations for Practitioners

This study provided a more sophisticated understanding of the relationship between the four dispositions of employee resistance to change and the three main variables: leadership styles, influence tactics, and information adequacy. Based on the results, some practical implications for change leaders are presented.

First, during the change period, learning how to break down the view of each department as an isolated context and seeing the organization as an open system where change in one unit will have an impact to the others will enhance change leaders ability to understand and correctly interpret the complex systems of change. The open system concept can help leaders to critically consider task, control, structure, technology, individuals in subsystems, and their interrelationship with each other, the entire system, and the external environment for an effective design of either change plans or change management.

Second, although considering employee resistance to change through a multidimensional view is more difficult than identifying responses to change as a dichotomous view of resistance or acceptance, this approach is more beneficial in helping change leaders to the understanding of the ambivalence responses. For example, when passive avoidance and legitimizing are likely to stimulate resistance at emotional and behavioral levels, more ambivalence is found when information inadequacy influences resistance only at the emotional level. Thus, to plan the internal communication and management during the change period, the ambivalence view of resistance aids change leaders in being more proactive to different dispositional components of employee resistance to change. Furthermore, it guides change leaders to put an emphasis on workplace relationships, especially prior to the beginning of a change process.

Third, effective leadership styles in a change context are those that emphasize interpersonal relationships in gaining trust and respect which, in turn will decrease an intention to resist change. As was discovered in this study, not only will the use of individual-consideration leadership style supports the leaders' ability to obtain trust

and respect but they also instill pride and confidence in employees. Perhaps, in addition to an investment in high technology and any available packages of management tools, change leaders should be considerate to individuals' need and coach them on accomplishing organizational goals.

Fourth, another important issue in dealing with resistance to change is to understand that managing change is about managing the personal side of management. When change violates a personal sense of fulfillment and integrity, employees' psychological well-being is threatened. The effective influence strategies in handling this psychological violation is to act in a friendly manner and praise personal values.

Fifth, failure in communication, especially employee resistance to change will be pervasive in an organization if the granted power obscures a leader's awareness of ongoing adaptation and disregard of the importance of motivation. To adapt oneself to a new environment, an individual usually needs time in learning new things, thinking about how to deal with them, trying several approaches, solving problems, rethinking what should be another solution, and retrying new approaches. Thus, when change enforces employees to alter their skills and behavior, change leaders should take the adaptation process into consideration as well as motivate and inspire trust and commitment to avoid any potential to resist change.

Sixth, the more an organization is regarded as an open system, the more change leaders need to take the role of change facilitators who incorporate the external resources into internal information. Change facilitators should be able to synthesize a variety of sources of information to fit their organizational demands and disseminate the well-designed information in a proper time. Also, individuals' desire

is another important source of information that change facilitators should

acknowledge and include this information in the design of communication and

information systems.

Seventh, when communication is seen as a tool for providing information

related to change in this context, change leaders should utilize this tool and offer

employees sufficient information. Perhaps it is possible that perceived information

adequacy will facilitate a change process when it is associated with employees'

understanding, working autonomy, positive attitude, sense of stability, and locus of

control.

Eighth, because of the interconnectedness function of the system, all

leadership styles, influence tactics, and information adequacy are important issues that

should not be treated separately if change leaders expect some prevention for

employee resistance to change. The consequences of each of the variable are related

to one another and impact on an employee's perception toward change plans.

Last, the findings of this study suggested to non-Thai managers that

employees' perceptions of leadership styles and the influence tactics used by their

leaders are inconsistent with those perceptions and the interpretation of the

interaction, especially in the Western culture. Therefore, to successfully execute

change management in the different cultural context, the non-Thai managers should

learn and adjust themselves to the Thai culture where relationship is valued over

individual achievement.

Recommendations for Future Research

There are several areas worthy of further research. Some suggestions for

future study discussed in this section have been briefly noted in the limitation of the

study. While more details are presented, new issues for the further investigation are provided.

Because data was collected at one point of time in this study, future research should provide an assessment at the several points of time in order to obtain more nuances of information. For example, if one year is set as the time for data collection, the examination can be taken before the implementation of change, at the middle of the year, and at the end of the year.

As discussed in the limitation of the study, limited access to the transformational organizations prevented the variability of the data. This study suggested that future studies targeting this population should ask for permission through personal connection or institutions that provide consultants or seminars related to human resource, management, or change management to make the request directly to the key person in an organization.

Another research implication is based on the fact that the measurement tools used in this study were derived from scales that were developed in a Western culture. Thus, the development of the research survey specially tailored to the Thai organizational culture and the organizational change is highly recommended.

Employee's dispositional resistance to change, a pattern of leader-subordinate communication, and the demand for change information are believed to be different in different kind of business. With regard to this nature, a large sample within one industry will also provide specific information to any particular industry of interest.

Future research might also pay attention to respondents' age, educational level, work tenure, and income to examine whether differences are presented when employees are encountering a change circumstance. In addition, the investigation for

the other antecedents of employee inclination to resist change such as motives, trust, commitment, and job satisfaction are recommended.

Furthermore, because this study viewed employees' intention to resist change as the constraint to successful change management, future studies might take an opposite side and consider change as a constructive effort. Discursive behaviors or resistance to change might indicate employee's concern for mistakes or an inappropriate innovation that has been brought into the system.

Lastly, additional research should be aware of the inclusion of the outliers in the analysis. Quantitative researchers can explore whether the inclusion and exclusion of the outliers have an effect on the results either pragmatically or theoretically. Thus, it might be worth following up on those outliers to see if there are some underlying variables that have not been accounted for in the model.

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APPENDIX A

Questionnaire

Dear Employee of _____

My name is Ratchanee Lertdechdecha, a current Ph. D. candidate of a joint program between Bangkok University and Ohio University at Athens. I am seeking your participation in a research project concerning your perception of the distribution of information and leadership in a transformational organization. The purpose of this study is to gain a better understanding about leadership communication styles, influence tactics, perceived information adequacy, and their influence on the tendency to resist change. Therefore, the information you provide will benefit the development of the participating companies as well as the improvement of knowledge concerning organizational development and change management. Your participation is voluntary and very important.

To participate in this research, please complete the attached questionnaire and return it within dated on _____, 2007 to _____. Please answer all questions. Please choose only one answer for each question by considering the answer that mostly reflects your opinion. This survey is not a test, so your opinion is the only right answer.

Your answers will be kept completely confidential. The results of this study will be reported in the aggregate data and will not be personally identifiable to you nor affect your department in any way.

If you would like to receive a summary of the results, please complete the enclosed request form provided on the last page of the questionnaire and return it with the questionnaire. In addition, if you have any questions, please contact me at 0-2634-3045 or e-mail: ohrachiest@gmail.com.

Thank you for your time and your participation

Sincerely,

Ratchanee Lertdechdecha
Ph.D. Candidate
Joint Program between Bangkok University and Ohio University

Questionnaire

This questionnaire is divided into 5 sections:

Section 1: Resistance to Change Questionnaire

Section 2: Information Adequacy Questionnaire

Section 3: Leadership Questionnaire

Section 4: Influence Tactics Questionnaire

Section 5: Demographic Data

While completing this questionnaire please think about **the communication between you and your direct superior** who presently supervises you after the implementation of change. The implementation of change may occur in forms of change in the total working systems, and/or change in organizational image, and/or the increase of products and services for instance. Please read the instructions for each section before completing the questionnaire.

SECTION 1: Resistance to Change Questionnaire

Instructions:

This set of questions includes several statements describing your attitudes and behavior toward the change in your organization. Please make X in the "answer column" for each statement that best indicates your behavior by using the frequency scale below.

Strongly Disagree 1	Disagree 2	Neutral 3	Agree 4	Strongly Agree 5

Statement Column	Answer Column				
1. I generally consider changes to be a negative thing.	1	2	3	4	5
2. I will take a routine day over a day full of unexpected events any time.	1	2	3	4	5
3. I like to do the same old things rather than try new and different ones.	1	2	3	4	5
4. Whenever my life forms a stable routine, I look for ways to change it.	1	2	3	4	5
5. I would rather be bored than surprised to new and different ones.	1	2	3	4	5
6. If I were to be informed that there is going to be a significant change regarding the way things are done at work, I would probably feel stressed.	1	2	3	4	5
7. When I am informed of a change of plans, I tense up a bit.	1	2	3	4	5
8. When things do not go according to plans, it stresses me out.	1	2	3	4	5
9. If my boss changed the criteria for evaluating employees, it would probably make me feel uncomfortable even if I thought I would do just as well without having to do any extra work.	1	2	3	4	5
10. Changing plans seems like a real hassle to me.	1	2	3	4	5
11. Often, I feel a bit uncomfortable even about changes that may potentially improve my life.	1	2	3	4	5
12. When someone pressures me to change something, I tend to resist it even if I think the change may ultimately benefit me.	1	2	3	4	5
13. I sometimes find myself avoiding changes that I know will be good for me.	1	2	3	4	5
14. I often change my mind.	1	2	3	4	5
15. Once I have come to a conclusion, I am not likely to change my mind.	1	2	3	4	5
16. I do not change my mind easily.	1	2	3	4	5
17. My views are very consistent over time.	1	2	3	4	5

SECTION 2: Information Adequacy

Instructions:

The purpose of this questionnaire is to assess the amount of information you receive and need to receive while you are working in your organization. There are two answer columns in the section. Please give your response by making X to both columns for each statement listed below that best indicates: (1) the amount of information you **are receiving** on that topic and (2) the amount of information you **need to receive** on that topic, that is, the amount you *have to have* in order to do your job. Please use the scale below:

1 Very Little	2 Little	3 Some	4 Great	5 Very Great

Topic Area	This is the amount of information I receive now	This is the amount of information I need to receive
1. How well I am doing in my job.	1 2 3 4 5	1 2 3 4 5
2. Changes in my job duties.	1 2 3 4 5	1 2 3 4 5
3. Changes in organizational rules and policies.	1 2 3 4 5	1 2 3 4 5
4. Changes in pay and benefits.	1 2 3 4 5	1 2 3 4 5
5. How technological changes affect my job.	1 2 3 4 5	1 2 3 4 5
6. Mistakes and failures of my organization.	1 2 3 4 5	1 2 3 4 5
7. How I am being judged.	1 2 3 4 5	1 2 3 4 5
8. How my job-related problems are being handled.	1 2 3 4 5	1 2 3 4 5
9. How organization decisions are made that affect my job.	1 2 3 4 5	1 2 3 4 5
10. Promotion and advancement opportunities in my organization.	1 2 3 4 5	1 2 3 4 5
11. Important new product, service or program development in my organization.	1 2 3 4 5	1 2 3 4 5
12. How my job relates to the total operation of my organization.	1 2 3 4 5	1 2 3 4 5
13. Specific problems faced by management.	1 2 3 4 5	1 2 3 4 5

SECTION 3: Leadership Questionnaire

Instructions:

For each statement, please judge how frequently each statement fits your current immediate superior while a change plan is implementing. Please make X "answer column" for each statement that best indicates your perception by using the rating scale below.

SECTION 4: Influence Tactics Questionnaire

Instructions:

In the following pages are statements describing influence tactics that occur between you and your supervisor. Please make X "answer column" for each statement that best indicates your perception toward the influence tactics that your current supervisor uses to influence new behaviors.

1	2	3	4	5
Never	Seldom	Occasionally	Frequently	Almost Always

The leader….	Answer Column				
1. Obtained the support of other subordinates in getting me to act on his or her request.	1	2	3	4	5
2. Made me feel important by noting that I have the brains, talent, and experience to do what he or she wants.	1	2	3	4	5
3. Wrote a detailed action plan for me to justify the ideas that he or she wanted to implement.	1	2	3	4	5
4. Demanded in no uncertain terms that I did exactly what he or she wanted.	1	2	3	4	5
5. Offered an exchange in which he or she would do something that I wanted if I will do what he or she wanted.	1	2	3	4	5
6. Acted very humble and polite while making a request.	1	2	3	4	5
7. Gave no salary increase until I complied with his or her request.	1	2	3	4	5
8. Appealed to higher management to put pressure on me.	1	2	3	4	5
9. Simply directed me to do what he or she wanted.	1	2	3	4	5
10. Reminded me of how he or she had helped me in the past and implied that now he or she wanted compliance with his or her request.	1	2	3	4	5

1	2	3	4	5
Never	Seldom	Occasionally	Frequently	Almost Always

The leader….	Answer Column
11. Filed a report with high management as a means of pressuring me to do what he or she wanted.	1 2 3 4 5
12. Made me feel good about him or her before asking me to do what he or she wanted.	1 2 3 4 5
13. Threatened me with an unsatisfactory performance appraisal unless I did what he or she waned.	1 2 3 4 5
14. Sent me to higher management to let me deal with the problem.	1 2 3 4 5
15. Threatened me with loss of promotion (or recommend me for promotion) unless I complied with him or her.	1 2 3 4 5
16. Sympathized with me about the added problems that his or her request could cause.	1 2 3 4 5
17. Told me that the work had to be done as he or she specified, unless I should propose a better way.	1 2 3 4 5
18. Used logic arguments in order to convince me to do what he or she wanted.	1 2 3 4 5
19. Provided me with job-related personal benefits such as a work-schedule change, in exchange for doing what he or she wanted.	1 2 3 4 5
20. Waited until I appeared to be in a receptive mood before asking me to do what he or she wanted.	1 2 3 4 5
21. Set a date or time deadline for me to do what he or she wanted.	1 2 3 4 5
22. Acted in a friendly manner toward me before making his or her request.	1 2 3 4 5
23. Presented facts, figures, or other information to me in support of his or her position.	1 2 3 4 5
24. Obtained the support and cooperation of his or her co-workers to back up his or her request.	1 2 3 4 5
25. Threatened to terminate (fire) me if I could not do what her or she wanted.	1 2 3 4 5
26. Obtained the informal support of higher management to back him or her up in getting what he or she wanted.	1 2 3 4 5
27. Offered to make a personal sacrifice such as giving up his or her free time if I would do what he or she wanted.	1 2 3 4 5

1	2	3	4	5
Never	Seldom	Occasionally	Frequently	Almost Always

The leader….	Answer Column
28. Scolded me so that I would realize that he or she was serious about his or her request.	1 2 3 4 5
29. Promised (or gave) me a salary increase so that I would do what he or she wanted.	1 2 3 4 5
30. Offered to help me if I would do what he or she wanted.	1 2 3 4 5
31. Carefully explained to me the reasons for his request.	1 2 3 4 5
32. Repeatedly reminded me of what he or she wanted.	1 2 3 4 5
33. Pointed out to me that organizational rules required that I comply with his or her request.	1 2 3 4 5

SECTION 5: Demographic Data

Instructions:

Please make X in the square box that corresponds to the correct answer.

1. You have worked with this organization for…..

☐ 6 months or under   ☐ More than 6 months to 1 year

☐ More than 1 year to 3 years   ☐ More than 3 years to 6 years

☐ More than 6 years

2. You have worked with your present supervisor for…..

☐ 6 months or under   ☐ More than 6 months to 1 year

☐ More than 1 year to 3 years   ☐ More than 3 years to 6 years

☐ More than 6 years

3. You have worked with the present position for…

☐ 6 months or under   ☐ More than 6 months to 1 year

☐ More than 1 year to 3 years ☐ More than 3 years to 6 years

☐ More than 6 years

4. Your sex is ..…

☐ Male   ☐ Female

5. Your age is …..

☐ 20 year or under   ☐ 21 to 30 years

☐ 31 to 40 years   ☐ 41 to 50 years

☐ 51 to 60 years   ☐ over 60 years

6. Your highest education level is …..

☐ High school   ☐ Vocational level

☐ Bachelor's degree   ☐ Master's degree

☐ Ph.D./Ed.D.   ☐ Other (please specify) _____

THANK YOU FOR YOU KIND COOPERATION

I would like to receive a copy of the summary of the results of this study.

Name: _____

Address: _____

_____

If you indicate that you are interested in obtaining a summary of the results, it will be mailed to you in _____, 2008.

APPENDIX B

Questionnaire in Thai

วันที่ ___ เดือน _____ 2550

เรียน พนักงานบริษัท ....

ดิฉัน นส. รัชนี เลิศเดชเดชา ปัจจุบันกำลังศึกษาในระดับปริญญาเอกสาขานิเทศศาสตร์
โครงการร่วมระหว่างมหาวิทยาลัยกรุงเทพฯ และมหาวิทยาลัยโอไฮโอ (Ohio University)
ผู้วิจัยใคร่ขอความร่วมมือจากท่านในการตอบแบบสอบถามสำหรับวิทยานิพนธ์ เกี่ยวกับ
กระบวนการรับรู้ในเรื่องของปริมาณข้อมูลข่าวสารที่ท่านได้รับ และความเป็นผู้นำในองค์กรที่มี
การเปลี่ยนแปลง วัตถุประสงค์หลักของวิทยานิพนธ์นี้เพื่อก่อให้เกิดความเข้าใจในรูปแบบการ
สื่อสารของผู้นำ กลวิธีการโน้มน้าวของผู้นำ การกระจายข้อมูลข่าวสาร และทัศนคติของผู้ตอบ
แบบสอบถามที่มีต่อการเปลี่ยนแปลงขององค์กร ทั้งนี้ข้อมูลที่ได้รับจากท่านจะมีประโยชน์ต่อการ
พัฒนาองค์ความรู้ทางด้านการสื่อสารระหว่างหัวหน้างานและลูกน้องในองค์กร ผลจากการวิจัย
สามารถนำไปประยุกต์ใช้เพื่อประโยชน์ต่อองค์กรของท่าน และต่อการศึกษาในภาควิชาการสื่อสาร
อนึ่งความร่วมมือจากท่านถือเป็น<u>ความสมัครใจ</u>และมีความสำคัญอย่างมากต่อการศึกษาครั้งนี้

ผู้วิจัยจึงขอความร่วมมือจากท่าน เพื่อโปรดตอบแบบสอบถามที่แนบมาพร้อมกับจดหมายฉบับนี้
และส่งคืนภายในวันที่ ___ เดือน _____ 2550 โดยใส่ซองจดหมาย ปิดผนึก และส่งคืนมาที่
_____ โปรดตอบคำถามทุกข้อโดยเลือกเพียงคำตอบเดียวในแต่ละ
ข้อ โดยพิจารณาตัวเลือกที่ตรงกับความคิดเห็นของท่านมากที่สุด แบบสอบถามชุดนี้ไม่ใช่
แบบทดสอบ ดังนั้นความคิดเห็นของท่านเป็นคำตอบที่ถูกต้องที่สุด

ผู้วิจัยขอรับรองว่าคำตอบที่ได้รับจากแบบสอบถามของท่าน จะไม่ถูกนำไปเปิดเผยและถือเป็น
ความลับอย่างยิ่ง อนึ่งผลที่ได้จะถูกรายงานเป็นผลรวม ดังนั้นคำตอบของท่านจะไม่ส่งผลกระทบ
ต่อตัวท่านหรือต่อแผนกงานของท่าน

หากท่านต้องการรับสำเนาบทสรุปของผลการศึกษา โปรดกรอกชื่อและที่อยู่ของท่านลง
แบบฟอร์มตามที่แนบมาพร้อมนี้ ทั้งนี้หากท่านมีข้อสงสัยใดๆกรุณาติดต่อผู้วิจัยที่ โทร 08-
7670-8998 หรือ อีเมล์ (email) ohrachiest@gmail.com ขอขอบคุณที่ท่านสละเวลา
และให้ความร่วมมือจากท่านมา ณ โอกาสนี้

ขอแสดงความนับถือ

(รัชนี เลิศเดชเดชา)
นักศึกษาปริญญาเอกสาขานิเทศศาสตร์

<u>**แบบสอบถามเพื่อการวิจัย**</u>

แบบสอบถามนี้แบ่งออกเป็น 5 ส่วนดังนี้:

<u>**ส่วนที่ 1**</u>: แบบสอบถามวัดทัศนะคติและพฤติกรรมที่มีต่อการเปลี่ยนแปลง

<u>**ส่วนที่ 2**</u>: แบบสอบถามวัดความเพียงพอของข้อมูล

<u>**ส่วนที่ 3**</u>: แบบสอบถามเกี่ยวกับผู้นำ

<u>**ส่วนที่ 4**</u>: แบบสอบถามวัดกลวิธีในการโน้มน้าว

<u>**ส่วนที่ 5**</u>: ข้อมูลทั่วไปเกี่ยวกับผู้ตอบแบบสอบถาม

ขณะที่ท่านตอบแบบสอบถามชุดนี้ โปรดนึกถึงการสื่อสารระหว่าง
หัวหน้างานโดยตรงที่ดูแลงานของท่านอยู่ ณ ปัจจุบันและตัวท่านเอง หลังจากมี
การเปลี่ยนแปลงเกิดขึ้นในองค์กร การเปลี่ยนแปลงในองค์กรอาจเกิดขึ้นใน
รูปแบบของการเปลี่ยนแปลงแผนการปฏิบัติงานโดยรวม และ/หรือ การ
เปลี่ยนแปลงภาพลักษณ์ขององค์กร และ/หรือ การเพิ่มสินค้าและบริการเป็นต้น
ทั้งนี้โปรดอ่านข้อแนะนำก่อนตอบแบบสอบถามแต่ละส่วน

ส่วนที่ 1: แบบสอบถามวัดทัศนคติและพฤติกรรมที่มีต่อการเปลี่ยนแปลง

ข้อแนะนำ: *แบบสอบถามในส่วนนี้ ได้รวมข้อความต่างๆ ที่อธิบายทัศนคติและพฤติกรรมของผู้ตอบ*
แบบสอบถาม เกี่ยวกับการเปลี่ยนแปลงภายในองค์กร โปรดทำเครื่องหมายกากบาท (X) ในช่องคำตอบของแต่
ละข้อความที่แสดงถึงระดับความคิดเห็นและพฤติกรรมของท่าน โดยใช้มาตราส่วนแสดงข้างล่างนี้

ไม่เห็นด้วยอย่างยิ่ง 1	ไม่เห็นด้วย 2	ปานกลาง 3	เห็นด้วย 4	เห็นด้วยอย่างยิ่ง 5

1. ฉันมักจะมองการเปลี่ยนแปลงในเชิงลบ	1	2	3	4	5
2. แม้ว่าจะมีเหตุการณ์ที่ไม่ได้คาดหมายเกิดขึ้นในวันใดก็ตาม ฉันจะถือว่ามันเป็นวันปกติ	1	2	3	4	5
3. ฉันชอบทำงานในรูปแบบเดิมๆ มากกว่าจะลองในสิ่งๆที่ใหม่และแตกต่างออกไป	1	2	3	4	5
4. ฉันมองหาหนทางที่จะเปลี่ยนแปลงรูปแบบชีวิตการทำงาน แม้ว่ารูปแบบชีวิตการทำงานของฉันจะลงตัวแล้วก็ตาม	1	2	3	4	5
5. เมื่อมีสิ่งที่ใหม่และแตกต่างเกิดขึ้น ฉันรู้สึกเบื่อมากกว่าที่จะรู้สึกประหลาดใจ	1	2	3	4	5
6. ฉันอาจจะรู้สึกถูกกดดัน เมื่อได้รับการบอกกล่าวว่า จะเกิดการเปลี่ยนแปลงครั้งสำคัญซึ่งเกี่ยวกับวิธีการปฏิบัติงาน	1	2	3	4	5
7. ฉันเกิดความเครียดเล็กน้อย เมื่อทราบถึงการเปลี่ยนแปลงของแผนงาน	1	2	3	4	5
8. ฉันเกิดความเครียด เมื่อสิ่งต่างไม่ได้เป็นไปตามแผน	1	2	3	4	5
9. ถ้าหัวหน้างานของฉันเปลี่ยนเกณฑ์การประเมินพนักงาน มันจะทำให้ฉันรู้สึกไม่สบายใจ แม้ว่าฉันจะมั่นใจว่าฉันจะทำงานอยู่ในเกณฑ์ดีอยู่แล้ว	1	2	3	4	5
10. การเปลี่ยนแปลงแผนงาน จะเป็นการรบกวนจิตใจของฉันอย่างแท้จริง	1	2	3	4	5
11. แม้ว่าการเปลี่ยนแปลงนั้นอาจจะช่วยพัฒนาชีวิตการทำงานของฉัน แต่บ่อยครั้งที่มันทำให้ฉันรู้สึกค่อนข้างไม่สบายใจ	1	2	3	4	5
12. ฉันอาจจะต่อต้านการเปลี่ยนแปลง เมื่อมีคนบางคนกดดันให้ฉันเปลี่ยนในบางสิ่งบางอย่าง แม้ว่าการเปลี่ยนแปลงนั้นจะส่งผลให้เกิดประโยชน์อย่างมากต่อฉันก็ตาม	1	2	3	4	5
13. บางครั้งฉันพบว่าฉันหลีกเลี่ยงการเปลี่ยนแปลง ทั้งที่รู้ว่ามันจะส่งผลดีต่อฉัน	1	2	3	4	5
14. ฉันเปลี่ยนใจบ่อยๆ	1	2	3	4	5
15. เมื่อฉันได้ข้อสรุปแล้ว ฉันมักจะไม่เปลี่ยนใจ	1	2	3	4	5
16. ฉันไม่เปลี่ยนใจง่ายๆ	1	2	3	4	5
17. มุมมองของฉัน มั่นคงตลอดเวลา	1	2	3	4	5

ส่วนที่ 2: แบบสอบถามวัดความเพียงพอของข้อมูล

ข้อแนะนำ: *แบบสอบถามส่วนนี้มีวัตถุประสงค์ในการวัดปริมาณข้อมูลในหัวข้อต่างๆที่ท่านได้รับและต้องการ ได้รับขณะที่ท่านทำงานในองค์กร* **ช่องคำตอบอยู่ 2 ช่อง โปรดตอบทั้ง 2 ช่อง** *โดยทำเครื่องหมายกากบาท (X) บนตารางแสดงระดับความคิดเห็น ที่แสดงได้ใกล้เคียงที่สุดกับข้อมูลที่ท่านได้รับในหัวข้อต่างๆ โดยช่องที่ (1) คือ ปริมาณของข้อมูลที่ท่าน**กำลังได้รับ** และช่องที่ (2) คือ ปริมาณของข้อมูลที่ท่าน**ต้องการได้รับ** โปรดใช้มาตรา ส่วนแสดงระดับความคิดเห็น ที่แสดงข้างล่างนี้*

น้อยมาก 1	น้อย 2	ปานกลาง 3	มาก 4	มากที่สุด 5

ข้อมูลที่ได้รับในหัวข้อต่างๆ	1.ปริมาณของ ข้อมูลที่ฉัน<u>ได้รับ</u> ในขณะนี้					2. ปริมาณของ ข้อมูลที่ฉัน <u>ต้องการได้รับ</u>				
1. หัวหน้างานแสดงให้ฉันรู้ว่าฉันทำหน้าที่ของฉันได้ดีอย่างไร	1	2	3	4	5	1	2	3	4	5
2. หัวหน้างานให้ข้อมูลที่เกี่ยวกับการเปลี่ยนแปลงในหน้าที่การงาน ของฉัน	1	2	3	4	5	1	2	3	4	5
3. หัวหน้างานให้ข้อมูลที่เกี่ยวกับการเปลี่ยนแปลงในนโยบายต่างๆ ขององค์กร	1	2	3	4	5	1	2	3	4	5
4. หัวหน้างานให้ข้อมูลที่เกี่ยวกับการเปลี่ยนแปลงในเรื่องอัตราค่าจ้าง และ ผลประโยชน์	1	2	3	4	5	1	2	3	4	5
5. หัวหน้างานให้ข้อมูลที่เกี่ยวกับการเปลี่ยนแปลงทางด้านเทคโนโลยี มี ว่าจะมีผลกระทบต่องานของฉันอย่างไร	1	2	3	4	5	1	2	3	4	5
6. หัวหน้างานให้ข้อมูลที่เกี่ยวกับความผิดพลาดและความล้มเหลว ต่างๆขององค์กร	1	2	3	4	5	1	2	3	4	5
7. หัวหน้างานให้ข้อมูลที่เกี่ยวกับหลักเกณฑ์และวิธีการประเมินผล งานของฉัน	1	2	3	4	5	1	2	3	4	5
8. หัวหน้างานให้ข้อมูลที่เกี่ยวกับการเข้าไปจัดการกับปัญหาต่าง�ที่ เกี่ยวกับงานของฉัน	1	2	3	4	5	1	2	3	4	5
9.หัวหน้างานให้ข้อมูลที่เกี่ยวกับการตัดสินใจต่างๆขององค์กร ว่ามี ผลกระทบต่อหน้าที่การงานของฉันอย่างไร	1	2	3	4	5	1	2	3	4	5
10. หัวหน้างานให้ข้อมูลที่เกี่ยวกับโอกาสในการเลื่อนขั้นและ ความก้าวหน้าในองค์กร	1	2	3	4	5	1	2	3	4	5
11. หัวหน้างานให้ข้อมูลที่เกี่ยวกับการพัฒนาผลิตภัณฑ์ บริการ หรือ โครงการใหม่ๆที่สำคัญในองค์กร	1	2	3	4	5	1	2	3	4	5
12. หัวหน้างานให้ข้อมูลว่า การปฏิบัติงานของฉันมีความสัมพันธ์ต่อ การปฏิบัติงานโดยรวมขององค์กรอย่างไร	1	2	3	4	5	1	2	3	4	5
13. หัวหน้างานให้ข้อมูลที่เกี่ยวกับปัญหาต่างที่ฝ่ายบริหารกำลังเผชิญ อยู่	1	2	3	4	5	1	2	3	4	5

ส่วนที่ 3: แบบสอบถามเกี่ยวกับผู้นำ

ข้อแนะนำ: *โปรดพิจารณาว่า แต่ละข้อเกิดขึ้นระหว่างท่านกับหัวหน้างานของท่านบ่อยเพียงใด ในระหว่างการ เปลี่ยนแปลงต่างๆ ที่เกิดขึ้นในองค์กร โดยทำเครื่องหมายกากบาท (X) ในข้อที่แสดงได้ใกล้เคียงกับความ คิดเห็นของท่านมากที่สุด โดยใช้มาตราส่วนแสดงระดับความคิดเห็นที่จัดให้ข้างล่างนี้*

ส่วนที่ 4 แบบสอบถามวัดกลวิธีในการโน้มน้าว

ข้อแนะนำ: *กรุณาระบุความถี่ของกลวิธีที่ ท่านคิดว่าหัวหน้างานของท่านใช้ในการโน้มน้าวพฤติกรรมของท่าน ในระหว่างการเปลี่ยนแปลงต่างๆ ที่เกิดขึ้นในองค์กร โดยทำเครื่องหมายกากบาท (X) ในแบบสอบถามข้างล่าง นี้ สำหรับแต่ละข้อความ กรุณาพิจาณาความถี่ของแต่ละข้อความ ให้เหมาะสมกับหัวหน้างานโดยตรงที่ดูแลงาน ของท่านอยู่ ณ ปัจจุบันโดยใช้มาตราส่วนความถี่ที่จัดให้นี้*

ไม่เคยใช้กลวิธีนี้เลย	ใช้กลวิธีนี้น้อยมาก	ใช้กลวิธีนี้เป็นบางครั้ง	ใช้กลวิธีนี้ค่อนข้างบ่อย	ใช้กลวิธีนี้บ่อยมาก
1	2	3	4	5

หัวหน้างานของฉัน….	ระดับความถี่				
1. อาศัยการสนับสนุนจากลูกน้อง เพื่อโน้มน้าวให้ทำตามคำเรียกร้องของหัวหน้างาน	1	2	3	4	5
2. ทำให้ฉันรู้สึกถึงความสำคัญของตัวฉันเอง โดยกล่าวว่าฉันมีความฉลาด มีความสามารถ พิเศษ และมีประสบการณ์ ในการทำงานตามที่หัวหน้างานต้องการ	1	2	3	4	5
3. เขียนรายละเอียดของแผนการปฏิบัติงานตามแนวความคิดของหัวหน้างานให้ฉัน เพื่อชี้แจง ในสิ่งที่ท่านต้องการ ให้ฉันนำเอาไปปฏิบัติ	1	2	3	4	5
4. ออกคำสั่งอย่างที่มีความชัดเจนว่า ฉันต้องทำตามที่หัวหน้างานต้องการทุกประการ	1	2	3	4	5
5. เสนอข้อแลกเปลี่ยน โดยยื่นข้อเสนอว่าจะทำบางสิ่งบางอย่างให้ตามที่ฉันต้องการ ถ้าฉัน ทำบางสิ่งบางอย่างให้ตาม ที่หัวหน้างานต้องการ	1	2	3	4	5
6. ขอร้องให้ทำงานให้ด้วยท่าทีที่สุภาพและอ่อนน้อม	1	2	3	4	5
7. ไม่เสนอเพิ่มเงินเดือนให้ จนกว่าฉันยอมจะทำตามในสิ่งที่หัวหน้างานต้องการ	1	2	3	4	5
8. ร้องเรียนต่อผู้บริหารในระดับที่สูงกว่าหัวหน้างาน เพื่อเพิ่มความรู้สึกกดดันให้แก่ฉัน	1	2	3	4	5
9. เพียงแต่สั่งให้ฉันทำงานตามที่หัวหน้างานต้องการเท่านั้น	1	2	3	4	5
10. ทบทวนให้ฉันนึกถึงความช่วยเหลือในอดีตของหัวหน้างาน โดยมีนัยว่าขณะนี้ท่านต้องการ ให้ฉันทำตามที่ท่านขอ	1	2	3	4	5
11. ใช้วิธีรายงานการกระทำของฉันต่อบุคคลในระดับสูง เพื่อเป็นการกดดันให้ฉันทำในสิ่งที่ ท่านต้องการ	1	2	3	4	5

ไม่เคยใช้กลวิธีนี้เลย	ใช้กลวิธีนี้น้อยมาก	ใช้กลวิธีนี้เป็นบางครั้ง	ใช้กลวิธีนี้ค่อยข้างบ่อย	ใช้กลวิธีนี้บ่อยมาก
1	2	3	4	5

หัวหน้างานของฉัน. . . .	ระดับความถี่				
12.ทำให้ฉันรู้สึกดีต่อหัวหน้างาน ก่อนที่จะร้องขอให้ฉันทำในสิ่งที่ท่านต้องการ	1	2	3	4	5
13.ขู่ว่าจะทำการประเมินว่า ผลงานของฉันไม่เป็นที่ไม่น่าพอใจ ถ้าหากฉันไม่ทำในสิ่งที่หัวหน้างานต้องการ	1	2	3	4	5
14.ส่งฉันไปยังบุคคลที่มีอยู่ในระดับสูงกว่าหัวหน้างาน เพื่อปล่อยให้ฉันจัดการกับปัญหา	1	2	3	4	5
15.ขู่ฉันว่าจะไม่เลื่อนขั้นให้ (หรือเสนอชื่อให้ฉันได้เลื่อนขั้น) เว้นแต่ว่าฉันจะยินยอมทำตามที่หัวหน้างานต้องการ	1	2	3	4	5
16. แสดงความเห็นใจต่อฉันเมื่อฉันประสบปัญหามากขึ้น อันเนื่องมาจากคำร้องของหัวหน้างาน	1	2	3	4	5
17. บอกให้ฉันทำงานให้เสร็จตามรายละเอียดที่หัวหน้างานกำหนดไว้ หรือไม่ก็ให้เสนอวิธีที่ดีกว่า	1	2	3	4	5
18. แสดงเหตุผลเพื่อโน้มน้าวให้ฉันทำในสิ่งที่หัวหน้างานต้องการ	1	2	3	4	5
19. ให้ประโยชน์ส่วนตัวที่เกี่ยวข้องกับหน้าที่การงานแก่ฉัน เช่นการเปลี่ยนตารางเวลาทำงาน โดยแลกเปลี่ยนกับการทำในสิ่งที่หัวหน้างานต้องการ	1	2	3	4	5
20. รอให้ฉันมีความพร้อมที่จะยอมรับสิ่งต่างๆ ก่อนที่จะขอให้ฉันทำในสิ่งที่หัวหน้างานต้องการ	1	2	3	4	5
21. กำหนดวันหรือเวลา ที่ต้องทำงานที่หัวหน้างานต้องการให้เสร็จ	1	2	3	4	5
22. แสดงท่าทีที่เป็นมิตรต่อฉัน ก่อนที่จะขอให้ฉันทำตามความต้องการของหัวหน้างาน	1	2	3	4	5
23. แสดงข้อเท็จจริง ตัวเลข หรือข้อมูลอื่นๆให้แก่ฉัน เพื่อให้ฉันสนับสนุนในความคิดของหัวหน้างาน	1	2	3	4	5
24. อาศัยการสนับสนุนและความร่วมมือจากเพื่อนร่วมงานในระดับเดียวกันกับหัวหน้างาน เพื่อเป็นการสนับสนุน ความต้องการของหัวหน้างาน	1	2	3	4	5
25. ขู่ว่าจะให้ออกจากงาน (ไล่ออก) ถ้าฉันไม่สามารถทำตามในสิ่งที่หัวหน้างานต้องการ	1	2	3	4	5
26. อาศัยการสนับสนุนอย่างไม่เป็นทางการจากผู้บริหารในระดับสูงกว่าหัวหน้างาน เพื่อให้ได้มาในสิ่งที่ท่านต้องการ	1	2	3	4	5
27. เสนอว่าจะเสียสละเป็นการส่วนตัว เช่นสละเวลาว่าง ถ้าหากฉันทำตามที่ในสิ่งที่หัวหน้างานต้องการ	1	2	3	4	5
28. กล่าวตำหนิฉัน เพื่อให้ฉันตระหนักว่าหัวหน้างานจริงจังกับคำสั่งของท่าน	1	2	3	4	5
29. ให้สัญญา (หรือ เสนอให้) ขึ้นเงินเดือนให้ฉัน เพื่อให้ฉันทำในสิ่งที่หัวหน้างานต้องการ	1	2	3	4	5

ไม่เคยใช้กลวิธีนี้เลย	ใช้กลวิธีนี้น้อยมาก	ใช้กลวิธีนี้เป็นบางครั้ง	ใช้กลวิธีนี้ค่อยข้างบ่อย	ใช้กลวิธีนี้บ่อยมาก
1	2	3	4	5

หัวหน้างานของฉัน. . . .	ระดับความถี่				
30. เสนอว่าจะให้ความช่วยเหลือแก่ฉัน ถ้าฉันทำในสิ่งที่หัวหน้างานต้องการ	1	2	3	4	5
31. อธิบายอย่างละเอียดถี่ถ้วน ถึงเหตุผลที่หัวหน้างานขอร้องให้ฉันทำ	1	2	3	4	5
32. คอยเตือนอยู่บ่อยๆ ในสิ่งที่หัวหน้างานต้องการให้ทำ	1	2	3	4	5
33. ชี้ให้ฉันเห็นถึงกฎ/ระเบียบ/ข้อบังคับ ที่กำหนดให้ฉันปฏิบัติตามความต้องการของหัวหน้างาน	1	2	3	4	5

ส่วนที่ 5: แบบสอบถามข้อมูลส่วนตัว

ข้อแนะนำ: *โปรดทำเครื่องหมายกากบาท* (X) *หน้าช่องสี่เหลี่ยมที่มีคำตอบที่สอดคล้องกับท่านมากที่สุด*

1. ท่านทำงานในบริษัทนี้มานาน.

☐ 6 เดือน หรือ ต่ำกว่า ☐ มากกว่า 6 เดือน ถึง 1 ปี

☐ มากกว่า 1 ปีถึง 3 ปี ☐ มากกว่า 3 ปีถึง 6 ปี

☐ มากกว่า 6 ปี

2. ท่านทำงานร่วมกับหัวหน้างานโดยตรงของท่านมานาน. . . . .

☐ 6 เดือน หรือ ต่ำกว่า ☐ มากกว่า 6 เดือน ถึง 1 ปี

☐ มากกว่า 1 ปีถึง 3 ปี ☐ มากกว่า 3 ปีถึง 6 ปี

☐ มากกว่า 6 ปี

3. ท่านทำงานในตำแหน่ง ณ ปัจจุบันมานาน. . . . .

☐ 6 เดือน หรือ ต่ำกว่า ☐ มากกว่า 6 เดือน ถึง 1 ปี

☐ มากกว่า 1 ปีถึง 3 ปี ☐ มากกว่า 3 ปีถึง 6 ปี

☐ มากกว่า 6 ปี

4. เพศ ☐ ชาย ☐ หญิง

5. อายุ. . . . .

☐ 20 ปี หรือต่ำกว่า   ☐ 21-30 ปี

☐ 31-40 ปี   ☐ 41-50 ปี

☐ 51-60 ปี   ☐ มากกว่า 60 ปี

6. การศึกษาสูงสุดของท่าน. . . . .

☐ มัธยมศึกษาตอนปลาย   ☐ ปวช./ปวส

☐ ปริญญาตรี   ☐ ปริญญาโท

☐ ปริญญาเอก   ☐ อื่นๆ โปรดระบุ _____

ขอขอบคุณในความร่วมมือของท่าน

ข้าพเจ้ามีความประสงค์ที่จะรับสำเนาบทสรุปของผลการศึกษาครั้งนี้

ชื่อ: _____

ที่อยู่: _____

_____

หากท่านระบุรับสำเนาผลการศึกษาครั้งนี้ บทสรุปจะส่งถึงท่านประมาณเดือน _____ 2551
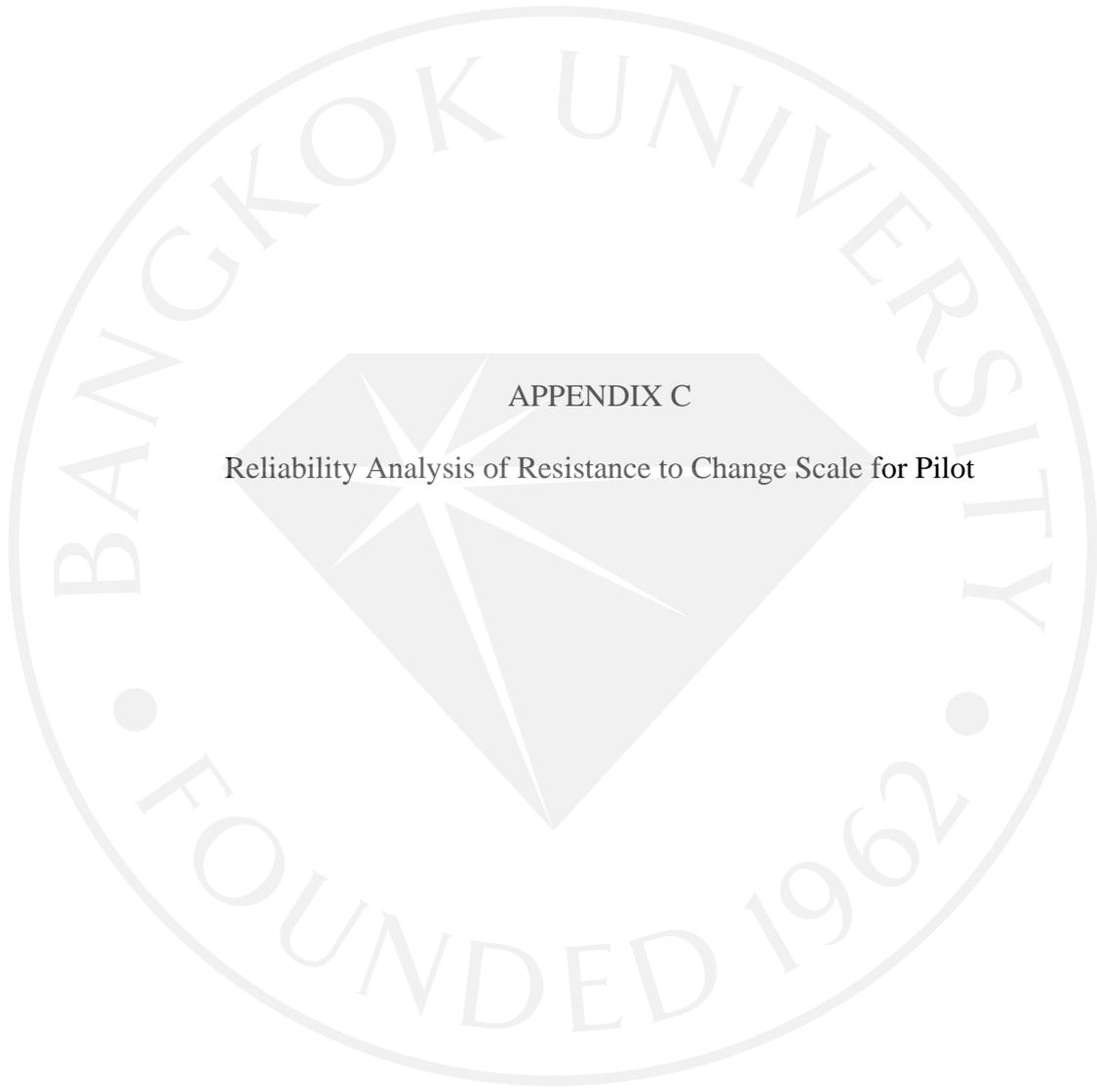
APPENDIX C

Reliability Analysis of Resistance to Change Scale for Pilot

Appendix C : Reliability Analysis of Resistance to Change Scale for Pilot

	Item-Total Statistics	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1	Consider change negatively	47.52	47.06	0.31	0.74
2	Take a routine day any time	47.11	54.43	-0.26	0.78
3	Like to do the old things	47.84	43.51	0.52	0.72
4	Look for ways to change*	47.37	48.68	0.15	0.75
5	Be bored than surprised	47.83	45.28	0.41	0.73
6	Feel stressed if things	46.98	44.11	0.48	0.72
7	Tense up when being informed of	46.75	44.35	0.53	0.72
8	Stress me out when things do not go according to plans	46.45	46.38	0.38	0.73
9	Feel uncomfortable when evaluating criteria change	47.00	44.12	0.54	0.72
10	Chang plan seems like a hassle	47.17	42.33	0.66	0.70
11	Feel uncomfortable even change improve life	47.06	43.86	0.54	0.72
12	Resist change even it benefit	47.18	45.82	0.35	0.73
13	Avoid change that will be	47.62	45.47	0.41	0.73
14	I often change my mind*	46.59	53.40	-0.19	0.77
15	Not likely to change my	46.63	47.08	0.27	0.74
16	Do not change mind easily	46.75	47.27	0.29	0.74
17	My view are consistent	46.98	47.14	0.27	0.74

Note: * These items were reversed coded prior to running the analysis.

APPENDIX D

Reliability Analysis of Multifactor Leadership Questionnaire Scale for Pilot

Appendix D : Reliability Analysis of Multifactor Leadership Questionnaire for Pilot

	Item-Total Statistics	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1	V1	112.98	221.35	0.48	0.86
2	V2	113.04	221.47	0.55	0.86
3	V3	113.04	221.43	0.49	0.86
4	V4	112.35	227.09	0.36	0.86
5	V5	113.50	236.80	0.01	0.87
6	V6	113.24	225.30	0.39	0.86
7	V7	113.44	246.38	-0.32	0.88
8	V8	112.35	222.66	0.50	0.86
9	V9	112.26	220.80	0.54	0.86
10	V10	112.42	217.79	0.62	0.86
11	V11	112.42	222.01	0.52	0.86
12	V12	113.39	244.47	-0.23	0.88
13	V13	112.33	223.10	0.47	0.86
14	V14	112.30	222.5	0.49	0.86
15	V15	112.48	213.93	0.69	0.86
16	V16	112.71	217.73	0.58	0.86
17	V17	113.19	239.13	-0.07	0.87
18	V18	112.45	220.27	0.51	0.86
19	V19	113.26	232.64	0.13	0.87
20	V20	113.43	242.20	-0.16	0.88
21	V21	112.78	223.75	0.48	0.86
22	V22	112.38	222.43	0.52	0.86
23	V23	112.51	221.48	0.54	0.86
24	V24	112.47	221.64	0.54	0.86
25	V25	112.42	219.89	0.57	0.86
26	V26	112.59	216.53	0.69	0.86
27	V27	112.44	220.97	0.60	0.86
28	V28	113.64	248.42	-0.33	0.88
29	V29	112.91	224.90	0.45	0.86
30	V30	112.60	219.41	0.57	0.86
31	V31	112.83	218.41	0.62	0.86
32	V32	112.45	217.72	0.56	0.86
33	V33	113.59	247.87	-0.31	0.88
34	V34	112.50	219.58	0.62	0.86
35	V35	112.45	220.27	0.60	0.86
36	V36	112.33	223.89	0.50	0.86
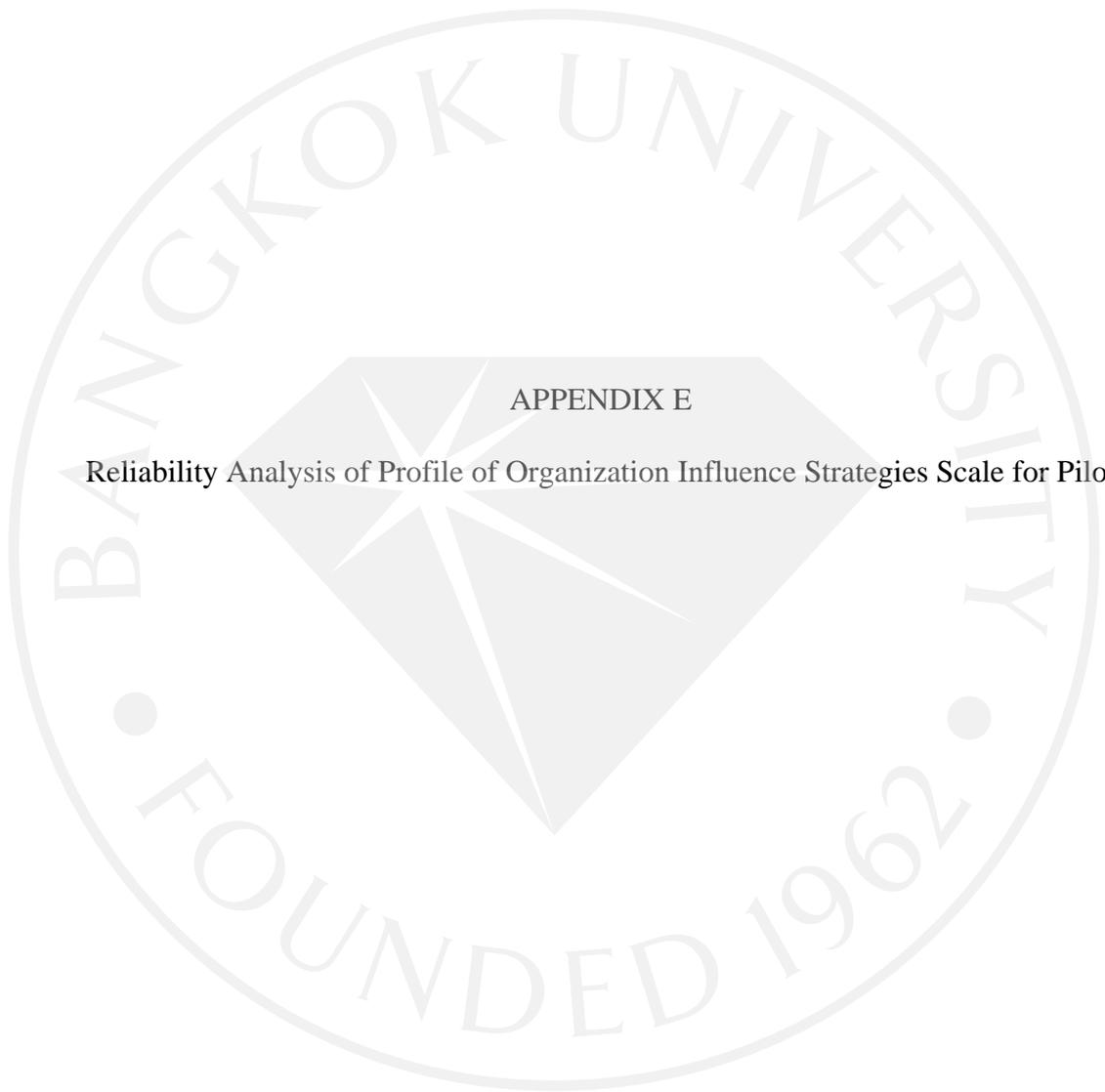
APPENDIX E

Reliability Analysis of Profile of Organization Influence Strategies Scale for Pilot

Appendix E : Reliability Analysis of the Profile of Organization Influence Strategies

Scale for Pilot

	Item-Total Statistics	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1	Obtain support from subordinates	82.60	269.00	0.32	0.88
2	Make me feel important	82.49	267.70	0.30	0.88
3	Write a detailed action plan	82.39	270.45	0.22	0.88
4	Demand in no uncertain terms	82.29	267.26	0.33	0.88
5	Offer an exchange	83.01	267.64	0.31	0.88
6	Act very humble	82.10	271.25	0.19	0.88
7	Give no salary increase	83.55	260.73	0.49	0.87
8	Appeal to higher management	83.49	256.87	0.56	0.87
9	Simply direct me	82.44	269.36	0.26	0.88
10	Remind me how he/she help me	83.15	260.15	0.48	0.87
11	File a report with higher management	83.36	260.09	0.48	0.87
12	Make me feel good	82.66	261.57	0.50	0.87
13	Threaten me with unsatisfactory performance appraisal	83.63	267.19	0.32	0.88
14	Send me to higher management	83.27	258.98	0.52	0.87
15	Threaten me with loss of promotion	83.74	262.97	0.45	0.88
16	Sympathize with me	82.66	267.75	0.33	0.88
17	The work had to be done as specified	82.07	268.73	0.30	0.88
18	Use logic argument	82.17	260.96	0.52	0.87
19	Provide me with personal benefit	83.39	260.43	0.52	0.87
20	Wait until I appear to be in a receptive mood	82.85	268.10	0.29	0.88
21	Set a date or time deadline	81.86	270.00	0.27	0.88

	Item-Total Statistics	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
22	Act in a friendly manner	82.17	263.87	0.41	0.88
23	Present fact, figures or information	82.37	262.74	0.42	0.88
24	Obtain the support from co-workers	82.67	263.02	0.41	0.88
25	Threaten to terminate (fire) me	84.02	271.30	0.30	0.88
26	Obtain informal support of higher management	83.13	254.05	0.62	0.87
27	Offer to make a personal sacrifice	83.47	265.76	0.39	0.88
28	Scold me	83.05	262.42	0.41	0.88
29	Promise me a salary increase	83.83	265.94	0.43	0.88
30	Offer to help me	83.69	260.1	0.65	0.87
31	Carefully explain to me the reasons	82.28	264.92	0.37	0.88
32	Repeatedly remind me	82.27	261.29	0.48	0.87
33	Point out to me that organizational rules require	82.30	261.17	0.48	0.87
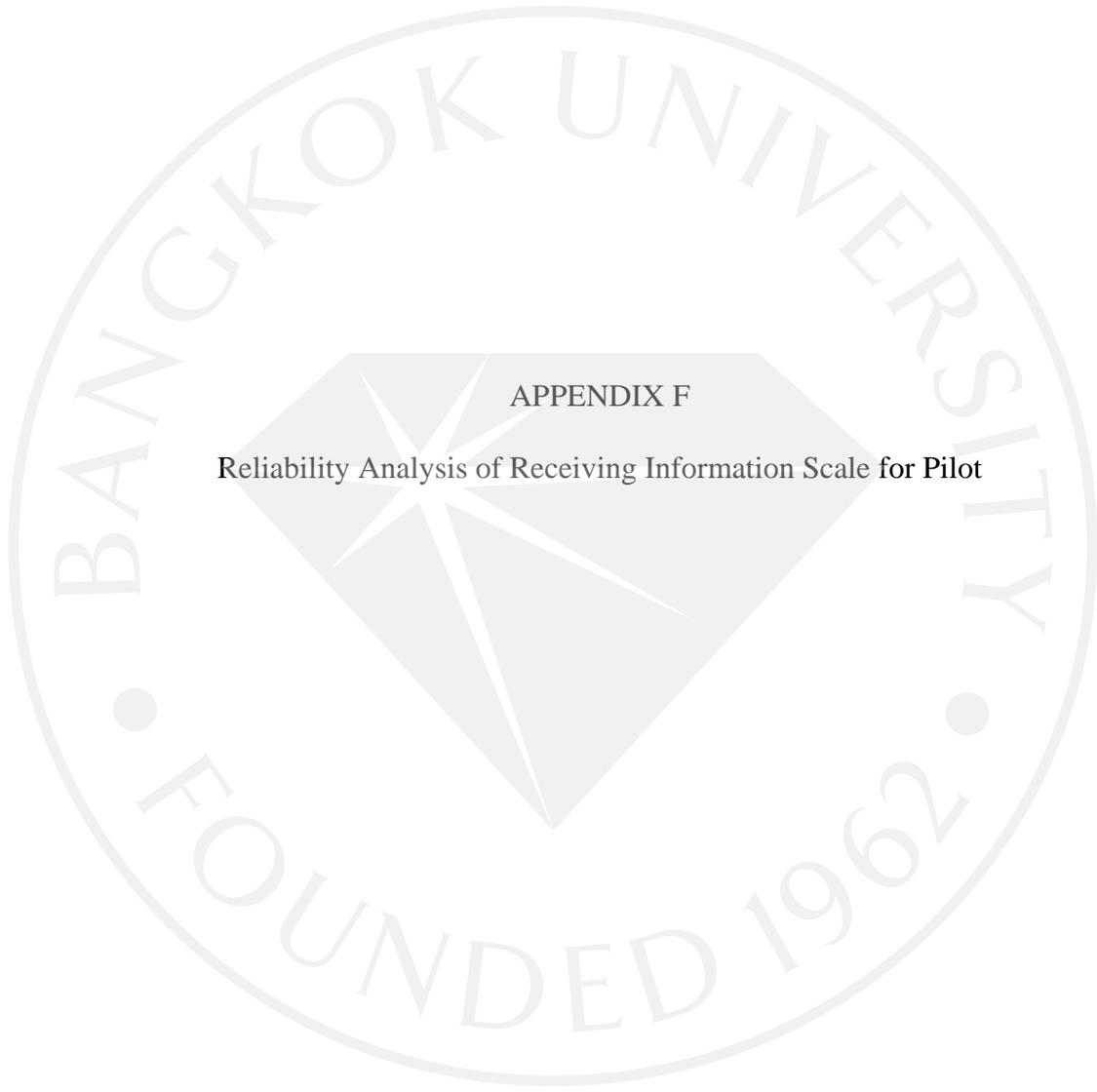
APPENDIX F

Reliability Analysis of Receiving Information Scale for Pilot

Appendix F : Reliability Analysis of the Receiving Information Scale for Pilot

	Item-Total Statistics	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1	How well I am doing in my job.	36.56	47.09	0.37	0.85
2	Changes in my job duties.	36.54	45.38	0.49	0.85
3	Changes in rules and policies.	36.56	44.34	0.52	0.85
4	Changes in pay and benefits.	36.84	44.62	0.48	0.85
5	How technological changes affect my job.	36.71	46.00	0.44	0.85
6	Mistakes and failures	37.07	45.07	0.40	0.85
7	How I am being judged.	36.83	44.00	0.53	0.85
8	How my job-related problems are being handled.	36.72	44.53	0.56	0.84
9	How organization decisions are made that affect my job.	36.90	42.73	0.65	0.84
10	Promotion and advancement opportunities in my organization.	37.03	43.76	0.57	0.84
11	Important new product, service or program development	36.65	44.24	0.58	0.84
12	How my job relates to the total operation of my organization.	36.68	43.05	0.60	0.84
13	Specific problems faced by management.	36.86	43.19	0.56	0.84
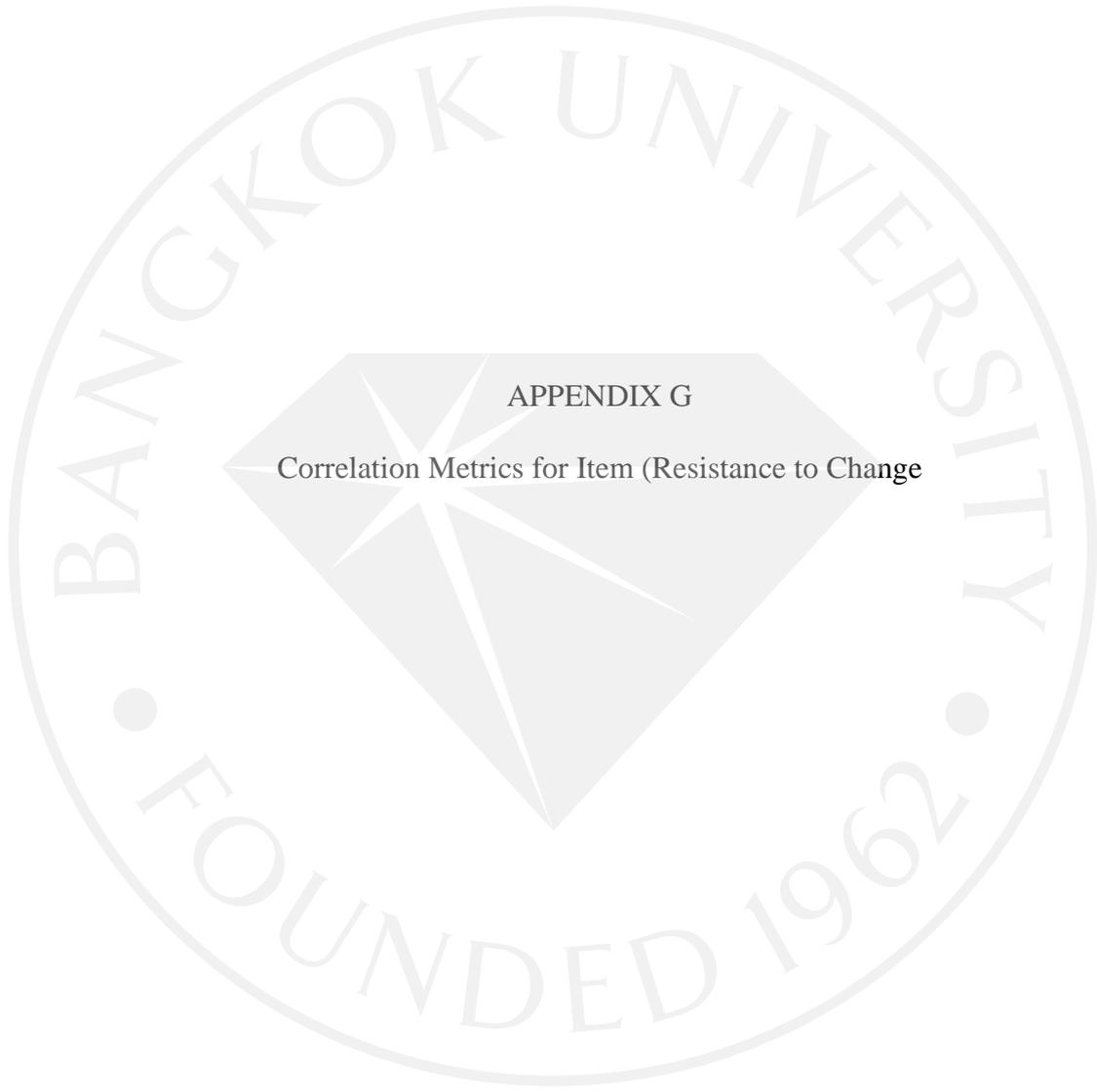
APPENDIX G

Correlation Metrics for Item (Resistance to Change

Appendix G : Correlation Metrics for Item (Resistance to Change)

Correlation	RS1	RS2	RS3	RS4	RS5	ER6	ER7	ER8	ER9	STT10	STT11	STT12	STT13	CR14	CR15	CR16	CR17
RS1	1.00	.124	.280	.030	.307	.365	.299	.251	.298	.286	.302	.276	.426	-.282	.099	.067	.118
RS2	.124	1.00	.108	-.129	.083	.110	.134	.146	.039	-.032	.020	.059	.081	-.108	.169	.171	.110
RS3	.280	.108	1.00	.098	.404	.294	.186	.067	.148	.289	.195	.239	.410	-.080	-.013	.000	.095
RS4	.030	-.129	.098	1.00	.049	-.010	-.083	-.195	-.104	-.013	-.128	-.121	.096	.056	-.156	-.097	-.065
RS5	.307	.083	.404	.049	1.00	.366	.203	.056	.149	.350	.211	.331	.396	-.146	.004	.062	.122
ER6	.365	.110	.294	-.010	.366	1.00	.470	.330	.285	.344	.349	.303	.274	-.278	.163	.067	.057
ER7	.299	.134	.186	-.083	.203	.470	1.00	.459	.316	.255	.318	.228	.238	-.230	.252	.136	.137
ER8	.251	.146	.067	-.195	.056	.330	.459	1.00	.352	.247	.315	.202	.181	-.357	.326	.159	.188
ER9	.298	.039	.148	-.104	.149	.285	.316	.352	1.00	.439	.414	.364	.285	-.204	.186	.139	.164
STT10	.286	-.032	.289	-.013	.350	.344	.255	.247	.439	1.00	.426	.381	.409	-.256	.099	.120	.182
STT11	.302	.020	.195	-.128	.211	.349	.318	.315	.414	.426	1.00	.461	.338	-.302	.206	.075	.118
STT12	.276	.059	.239	-.121	.331	.303	.228	.202	.364	.381	.461	1.00	.510	-.280	.174	.062	.105
STT13	.426	.081	.410	.096	.396	.274	.238	.181	.285	.409	.338	.510	1.00	-.326	-.002	.002	.068
CR14	-.282	-.108	-.080	.056	-.146	-.278	-.230	-.357	-.204	-.256	-.302	-.280	-.326	1.00	-.196	.077	.021
CR15	.099	.169	-.013	-.156	.004	.163	.252	.326	.186	.099	.206	.174	-.002	-.196	1.00	.427	.346
CR16	.067	.171	.000	-.097	.062	.067	.136	.159	.139	.120	.075	.062	.002	.077	.427	1.00	.458
CR17	.118	.110	.095	-.065	.122	.057	.137	.188	.164	.182	.118	.105	.068	.021	.346	.458	1.00

APPENDIX H

Correlation Metrics for Item (Multifactor Leadership Questionnaire)

Appendix H : Correlation Metrics for Item (Multifactor Leadership Questionnaire)

Correlation	L.S 1	L.S. 2	L.S. 3	L.S. 4	L.S. 5	L.S. 6	L.S. 7	L.S. 8	L.S. 9	L.S. 10	L.S. 11	L.S. 12	L.S. 13	L.S. 14	L.S. 15	L.S. 16	L.S. 17	L.S. 18	L.S. 19	L.S. 20	L.S. 21	L.S. 22	L.S. 23	L.S. 24	L.S. 25	L.S. 26	L.S. 27	L.S. 28	L.S. 29	L.S. 30	L.S. 31	L.S. 32	L.S. 33	L.S. 34	L.S. 35	L.S. 36
L.S 1	1.00	.567	.193	.330	.022	.275	-.008	.366	.385	.442	.323	.047	.307	.282	.355	.352	.157	.311	.208	.012	.355	.318	.301	.259	.223	.312	.343	-.056	.287	.262	.334	.325	-.101	.274	.273	.267
L.S 2	.567	1.00	.242	.344	-.022	.257	-.023	.396	.337	.412	.310	-.036	.370	.378	.344	.309	.176	.336	.174	-.040	.325	.333	.319	.237	.225	.379	.345	-.104	.381	.322	.365	.377	-.067	.352	.360	.370
L.S 3	.193	.242	1.00	.163	.035	.149	.037	.145	.188	.182	.104	.139	.188	.204	.151	.160	.187	.260	.100	.155	.155	.157	.215	.127	.122	.197	.184	.019	.206	.205	.239	.229	.027	.198	.192	.242
L.S 4	.330	.344	.163	1.00	-.208	.213	-.185	.478	.379	.399	.468	-.191	.458	.423	.362	.243	.043	.305	.010	-.260	.380	.454	.414	.488	.307	.394	.434	-.299	.204	.318	.313	.395	-.219	.424	.394	.368
L.S 5	.022	-.022	.035	-.208	1.00	.145	.434	-.244	-.136	-.158	-.174	.399	-.142	-.235	-.137	.029	.214	-.179	.168	.406	-.141	-.254	-.177	-.195	-.141	-.123	-.189	.396	-.006	-.126	-.037	-.137	.241	-.233	-.159	-.173
L.S 6	.275	.257	.149	.213	.145	1.00	.150	.181	.171	.242	.218	.064	.233	.200	.195	.316	.206	.140	.167	.038	.213	.153	.163	.141	.206	.256	.177	.050	.227	.112	.211	.230	-.012	.124	.224	.179
L.S 7	-.008	-.023	.037	-.185	.434	.150	1.00	-.240	-.209	-.242	-.197	.390	-.086	-.150	-.235	.005	.170	-.167	.020	.417	-.161	-.256	-.229	-.139	-.047	-.158	-.206	.370	-.100	-.168	-.110	-.191	.296	-.214	-.184	-.162
L.S 8	.366	.396	.145	.478	-.244	.181	-.240	1.00	.552	.574	.485	-.184	.446	.474	.481	.325	-.015	.399	.118	-.245	.437	.458	.472	.475	.352	.504	.439	-.330	.329	.402	.417	.520	-.308	.434	.423	.427
L.S 9	.385	.337	.188	.379	-.136	.171	-.209	.552	1.00	.560	.500	-.049	.426	.478	.466	.432	.111	.339	.117	-.153	.407	.411	.450	.372	.263	.514	.440	-.205	.267	.418	.438	.415	-.227	.363	.394	.360
L.S 10	.442	.412	.182	.399	-.158	.242	-.242	.574	.560	1.00	.538	-.132	.389	.458	.554	.430	.050	.444	.177	-.184	.489	.490	.565	.383	.294	.547	.433	-.261	.405	.442	.473	.526	-.252	.417	.383	.437
L.S 11	.323	.310	.104	.468	-.174	.218	-.197	.485	.500	.538	1.00	-.131	.468	.534	.467	.411	.130	.379	.123	-.222	.456	.482	.469	.429	.422	.547	.397	-.248	.273	.359	.397	.495	-.291	.468	.388	.414
L.S 12	.047	-.036	.139	-.191	.399	.064	.390	-.184	-.049	-.132	-.131	1.00	-.055	-.050	-.128	-.027	.290	-.162	.114	.526	-.101	-.262	-.151	-.242	-.085	-.142	-.205	.305	-.040	-.101	-.085	-.164	.296	-.143	-.128	-.162
L.S 13	.307	.370	.188	.458	-.142	.233	-.086	.446	.426	.389	.468	-.055	1.00	.652	.420	.422	.105	.359	.036	-.134	.380	.431	.384	.399	.428	.428	.402	-.223	.257	.374	.361	.415	-.184	.447	.384	.433
L.S 14	.282	.378	.204	.423	-.235	.200	-.150	.474	.478	.458	.534	-.050	.652	1.00	.461	.463	.167	.348	.018	-.186	.411	.434	.441	.358	.409	.514	.386	-.257	.250	.408	.336	.469	-.210	.494	.462	.446
L.S 15	.355	.344	.151	.362	-.137	.195	-.235	.481	.466	.554	.467	-.128	.420	.461	1.00	.435	.095	.488	.155	-.262	.455	.395	.490	.388	.313	.506	.483	-.243	.346	.455	.394	.479	-.255	.388	.380	.370
L.S 16	.352	.309	.160	.243	.029	.316	.005	.325	.432	.430	.411	-.027	.422	.463	.435	1.00	.281	.303	.143	-.146	.361	.369	.402	.302	.246	.431	.346	-.109	.298	.361	.386	.411	-.177	.432	.402	.436
L.S 17	.157	.176	.187	.043	.214	.206	.170	-.015	.111	.050	.130	.290	.105	.167	.095	.281	1.00	.084	.166	.233	.104	.093	.029	-.008	.111	.127	.085	.154	.074	.063	.039	.067	.140	.113	.138	.043
L.S 18	.311	.336	.260	.305	-.179	.140	-.167	.399	.339	.444	.379	-.162	.359	.348	.488	.303	.084	1.00	.206	-.145	.458	.463	.478	.427	.337	.462	.417	-.236	.345	.436	.374	.429	-.206	.408	.373	.448

| Correlation	L.S 1	L.S. 2	L.S. 3	L.S. 4	L.S. 5	L.S. 6	L.S. 7	L.S. 8	L.S. 9	L.S. 10	L.S. 11	L.S. 12	L.S. 13	L.S. 14	L.S. 15	L.S. 16	L.S. 17	L.S. 18	L.S. 19	L.S. 20	L.S. 21	L.S. 22	L.S. 23	L.S. 24	L.S. 25	L.S. 26	L.S. 27	L.S. 28	L.S. 29	L.S. 30	L.S. 31	L.S. 32	L.S. 33	L.S. 34	L.S. 35	L.S. 36
L.S 19	.208	.174	.100	.010	.168	.167	.020	.118	.117	.177	.123	.114	.036	.018	.155	.143	.166	.206	1.00	.236	.276	.119	.196	.111	.135	.185	.166	.139	.285	.172	.338	.204	.093	.043	.112	.092
L.S 20	.012	-.040	.155	-.260	.406	.038	.417	-.245	-.153	-.184	-.222	.526	-.134	-.186	-.262	-.146	.233	-.145	.236	1.00	-.114	-.250	-.233	-.257	-.124	-.195	-.215	.351	-.046	-.171	-.096	-.214	.360	-.225	-.211	-.199
L.S 21	.355	.325	.155	.380	-.141	.213	-.161	.437	.407	.489	.456	-.101	.380	.411	.455	.361	.104	.458	.276	-.114	1.00	.539	.505	.390	.360	.494	.433	-.230	.368	.429	.414	.501	-.215	.423	.407	.395
L.S 22	.318	.333	.157	.454	-.254	.153	-.256	.458	.411	.490	.482	-.262	.431	.434	.395	.369	.093	.463	.119	-.250	.539	1.00	.593	.563	.355	.482	.519	-.238	.314	.455	.412	.496	-.253	.499	.439	.447
L.S 23	.301	.319	.215	.414	-.177	.163	-.229	.472	.450	.565	.469	-.151	.384	.441	.490	.402	.029	.478	.196	-.233	.505	.593	1.00	.563	.352	.560	.526	-.251	.413	.458	.466	.557	-.254	.462	.453	.508
L.S 24	.259	.237	.127	.488	-.195	.141	-.139	.475	.372	.383	.429	-.242	.399	.358	.388	.302	-.008	.427	.111	-.257	.390	.563	.563	1.00	.370	.454	.545	-.222	.312	.414	.345	.468	-.256	.414	.431	.444
L.S 25	.223	.225	.122	.307	-.141	.206	-.047	.352	.263	.294	.422	-.085	.428	.409	.313	.246	.111	.337	.135	-.124	.360	.355	.352	.370	1.00	.436	.369	-.157	.177	.333	.263	.401	-.204	.368	.238	.353
L.S 26	.312	.379	.197	.394	-.123	.256	-.158	.504	.514	.547	.547	-.142	.428	.514	.506	.431	.127	.462	.185	-.195	.494	.482	.560	.454	.436	1.00	.599	-.225	.368	.483	.464	.582	-.267	.461	.427	.492
L.S 27	.343	.345	.184	.434	-.189	.177	-.206	.439	.440	.433	.397	-.205	.402	.386	.483	.346	.085	.417	.166	-.215	.433	.519	.526	.545	.369	.599	1.00	-.241	.323	.480	.442	.488	-.139	.437	.454	.464
L.S 28	-.056	-.104	.019	-.299	.396	.050	.370	-.330	-.205	-.261	-.248	.305	-.223	-.257	-.243	-.109	.154	-.236	.139	.351	-.230	-.238	-.251	-.222	-.157	-.225	-.241	1.00	.027	-.179	-.105	-.225	.462	-.236	-.211	-.225
L.S 29	.287	.381	.206	.204	-.006	.227	-.100	.329	.267	.405	.273	-.040	.257	.250	.346	.298	.074	.345	.285	-.046	.368	.314	.413	.312	.177	.368	.323	.027	1.00	.428	.476	.444	-.089	.305	.354	.345
L.S 30	.262	.322	.205	.318	-.126	.112	-.168	.402	.418	.442	.359	-.101	.374	.408	.455	.361	.063	.436	.172	-.171	.429	.455	.458	.414	.333	.483	.480	-.179	.428	1.00	.516	.551	-.154	.477	.418	.520
L.S 31	.334	.365	.239	.313	-.037	.211	-.110	.417	.438	.473	.397	-.085	.361	.336	.394	.386	.039	.374	.338	-.096	.414	.412	.466	.345	.263	.464	.442	-.105	.476	.516	1.00	.595	-.071	.388	.450	.468
L.S 32	.325	.377	.229	.395	-.137	.230	-.191	.520	.415	.526	.495	-.164	.415	.469	.479	.411	.067	.429	.204	-.214	.501	.496	.557	.468	.401	.582	.488	-.225	.444	.551	.595	1.00	-.253	.497	.542	.563
L.S 33	-.101	-.067	.027	-.219	.241	-.012	.296	-.308	-.227	-.252	-.291	.296	-.184	-.210	-.255	-.177	.140	-.206	.093	.360	-.215	-.253	-.254	-.256	-.204	-.267	-.139	.462	-.089	-.154	-.071	-.253	1.00	-.204	-.187	-.179
L.S 34	.274	.352	.198	.424	-.233	.124	-.214	.434	.363	.417	.468	-.143	.447	.494	.388	.432	.113	.408	.043	-.225	.423	.499	.462	.414	.368	.461	.437	-.236	.305	.477	.388	.497	-.204	1.00	.564	.580
L.S 35	.273	.360	.192	.394	-.159	.224	-.184	.423	.394	.383	.388	-.128	.384	.462	.380	.402	.138	.373	.112	-.211	.407	.439	.453	.431	.238	.427	.454	-.211	.354	.418	.450	.542	-.187	.564	1.00	.683
L.S 36	.567	1.00	.242	.368	-.173	.179	-.162	.427	.360	.437	.414	-.162	.433	.446	.370	.436	.043	.448	.092	-.199	.395	.447	.508	.444	.353	.492	.464	-.225	.345	.520	.468	.563	-.179	.580	.683	1.00

APPENDIX I

Correlation Metrics for Item (Profile of Organizational Strategies)
.

Appendix I : Correlation Metrics for Item (Profile of Organizational Strategies)

Correlation	Inf T1	Inf T2	Inf T3	Inf T4	Inf T5	Inf T6	Inf T7	Inf T8	Inf T9	Inf T10	Inf T11	Inf T12	Inf T13	Inf T14	Inf T15	Inf T16	Inf T17	Inf T18	Inf T19	Inf T20	Inf T21	Inf T22	Inf T23	Inf T24	Inf T25	Inf T26	Inf T27	Inf T28	Inf T29	Inf T30	Inf T31	Inf T32	Inf T33
Inf T1	1.00	.321	.358	.248	.248	.257	.276	.217	.157	.225	.206	.234	.222	.203	.194	.239	.206	.284	.190	.240	.221	.220	.264	.271	.150	.219	.175	.182	.225	.216	.178	.181	.255
Inf T2	.321	1.00	.363	.049	.236	.255	.077	-.005	-.059	.119	.022	.243	.035	.123	.050	.278	.212	.166	.098	.249	.087	.202	.184	.109	.014	.014	.129	-.026	.160	.187	.203	.115	.122
Inf T3	.358	.363	1.00	.231	.327	.230	.188	.056	.043	.163	.100	.301	.092	.078	.122	.222	.234	.185	.247	.287	.163	.125	.227	.188	.065	.024	.218	.104	.181	.218	.272	.240	.281
Inf T4	.248	.049	.231	1.00	.337	.021	.190	.231	.324	.185	.234	.141	.263	.121	.177	.163	.256	.278	.220	.091	.348	.234	.269	.302	.093	.221	.185	.315	.179	.221	.277	.377	.401
Inf T5	.248	.236	.327	.337	1.00	.286	.370	.344	.160	.383	.321	.281	.311	.254	.323	.279	.115	.243	.351	.294	.104	.246	.288	.320	.274	.267	.318	.238	.376	.446	.263	.273	.292
Inf T6	.257	.255	.230	.021	.286	1.00	.173	.082	.004	.102	.055	.321	.014	.017	.055	.204	.088	.229	.109	.222	.082	.250	.283	.190	.040	.088	.145	-.019	.127	.146	.238	.142	.176
Inf T7	.276	.077	.188	.190	.370	.173	1.00	.613	.358	.554	.516	.226	.535	.519	.553	.271	.155	.193	.390	.301	.123	.145	.183	.314	.572	.447	.472	.397	.459	.441	.188	.267	.221
Inf T8	.217	-.005	.056	.231	.344	.082	.613	1.00	.402	.603	.713	.144	.616	.515	.573	.209	.001	.087	.403	.240	.074	.154	.086	.343	.556	.537	.412	.437	.453	.431	.177	.257	.249
Inf T9	.157	-.059	.043	.324	.160	.004	.358	.402	1.00	.411	.485	.203	.381	.394	.383	.181	.115	.233	.215	.175	.200	.198	.147	.309	.264	.388	.288	.349	.312	.243	.145	.256	.259
Inf T10	.225	.119	.163	.185	.383	.102	.554	.603	.411	1.00	.623	.242	.480	.507	.485	.305	.184	.170	.447	.256	.080	.174	.173	.358	.468	.472	.461	.413	.430	.402	.154	.280	.287
Inf T11	.206	.022	.100	.234	.321	.055	.516	.713	.485	.623	1.00	.219	.579	.602	.568	.207	.048	.133	.437	.250	.082	.128	.096	.385	.503	.545	.438	.473	.465	.437	.131	.234	.244
Inf T12	.234	.243	.301	.141	.281	.321	.226	.144	.203	.242	.219	1.00	.166	.215	.172	.414	.189	.306	.274	.309	.168	.384	.379	.380	.119	.167	.290	.149	.259	.254	.265	.215	.309
Inf T13	.222	.035	.092	.263	.311	.014	.535	.616	.381	.480	.579	.166	1.00	.600	.710	.206	.069	.167	.435	.255	.101	.161	.145	.381	.559	.497	.417	.493	.485	.449	.129	.271	.255
Inf T14	.203	.123	.078	.121	.254	.017	.519	.515	.394	.507	.602	.215	.600	1.00	.584	.310	.111	.148	.363	.337	.132	.195	.129	.361	.438	.435	.391	.449	.425	.406	.180	.217	.208
Inf T15	.194	.050	.122	.177	.323	.055	.553	.573	.383	.485	.568	.172	.710	.584	1.00	.304	.144	.171	.439	.312	.097	.100	.104	.303	.630	.452	.498	.493	.575	.487	.182	.217	.224
Inf T16	.239	.278	.222	.163	.279	.204	.271	.209	.181	.305	.207	.414	.206	.310	.304	1.00	.323	.267	.271	.369	.105	.278	.304	.268	.260	.177	.363	.201	.307	.326	.312	.245	.242
Inf T17	.206	.212	.234	.256	.115	.088	.155	.001	.115	.184	.048	.189	.069	.111	.144	.323	1.00	.425	.165	.200	.299	.235	.283	.244	.071	.058	.208	.191	.129	.124	.270	.266	.251
Inf T18	.284	.166	.185	.278	.243	.229	.193	.087	.233	.170	.133	.306	.167	.148	.171	.267	.425	1.00	.244	.311	.346	.425	.414	.331	.121	.194	.184	.237	.219	.213	.420	.297	.359
Inf T19	.190	.098	.247	.220	.351	.109	.390	.403	.215	.447	.437	.274	.435	.363	.439	.271	.165	.244	1.00	.366	.154	.218	.232	.444	.385	.388	.521	.357	.511	.508	.202	.319	.275
Inf T20	.240	.249	.287	.091	.294	.222	.301	.240	.175	.256	.250	.309	.255	.337	.312	.369	.200	.311	.366	1.00	.169	.309	.315	.381	.283	.261	.312	.210	.387	.416	.326	.241	.249

Correlation	Inf T1	Inf T2	Inf T3	Inf T4	Inf T5	Inf T6	Inf T7	Inf T8	Inf T9	Inf T10	Inf T11	Inf T12	Inf T13	Inf T14	Inf T15	Inf T16	Inf T17	Inf T18	Inf T19	Inf T20	Inf T21	Inf T22	Inf T23	Inf T24	Inf T25	Inf T26	Inf T27	Inf T28	Inf T29	Inf T30	Inf T31	Inf T32	Inf T33
Inf T21	.221	.087	.163	.348	.104	.082	.123	.074	.200	.080	.082	.168	.101	.132	.097	.105	.299	.346	.154	.169	1.00	.335	.376	.295	.086	.185	.088	.238	.137	.097	.306	.283	.304
Inf T22	.220	.202	.125	.234	.246	.250	.145	.154	.198	.174	.128	.384	.161	.195	.100	.278	.235	.425	.218	.309	.335	1.00	.490	.412	.085	.251	.156	.155	.215	.239	.381	.308	.395
Inf T23	.264	.184	.227	.269	.288	.283	.183	.086	.147	.173	.096	.379	.145	.129	.104	.304	.283	.414	.232	.315	.376	.490	1.00	.446	.126	.183	.198	.165	.230	.221	.493	.307	.416
Inf T24	.271	.109	.188	.302	.320	.190	.314	.343	.309	.358	.385	.380	.381	.361	.303	.268	.244	.331	.444	.381	.295	.412	.446	1.00	.284	.432	.401	.343	.387	.381	.306	.334	.388
Inf T25	.150	.014	.065	.093	.274	.040	.572	.556	.264	.468	.503	.119	.559	.438	.630	.260	.071	.121	.385	.283	.086	.085	.126	.284	1.00	.498	.517	.472	.579	.473	.208	.201	.196
Inf T26	.219	.014	.024	.221	.267	.088	.447	.537	.388	.472	.545	.167	.497	.435	.452	.177	.058	.194	.388	.261	.185	.251	.183	.432	.498	1.00	.466	.411	.472	.446	.213	.278	.301
Inf T27	.175	.129	.218	.185	.318	.145	.472	.412	.288	.461	.438	.290	.417	.391	.498	.363	.208	.184	.521	.312	.088	.156	.198	.401	.517	.466	1.00	.461	.576	.520	.285	.297	.279
Inf T28	.182	-.026	.104	.315	.238	-.019	.397	.437	.349	.413	.473	.149	.493	.449	.493	.201	.191	.237	.357	.210	.238	.155	.165	.343	.472	.411	.461	1.00	.462	.399	.210	.370	.317
Inf T29	.225	.160	.181	.179	.376	.127	.459	.453	.312	.430	.465	.259	.485	.425	.575	.307	.129	.219	.511	.387	.137	.215	.230	.387	.579	.472	.576	.462	1.00	.668	.269	.292	.288
Inf T30	.216	.187	.218	.221	.446	.146	.441	.431	.243	.402	.437	.254	.449	.406	.487	.326	.124	.213	.508	.416	.097	.239	.221	.381	.473	.446	.520	.399	.668	1.00	.324	.382	.321
Inf T31	.178	.203	.272	.277	.263	.238	.188	.177	.145	.154	.131	.265	.129	.180	.182	.312	.270	.420	.202	.326	.306	.381	.493	.306	.208	.213	.285	.210	.269	.324	1.00	.486	.497
Inf T32	.181	.129	.240	.377	.273	.142	.267	.257	.256	.280	.234	.215	.271	.217	.217	.245	.266	.297	.319	.241	.283	.308	.307	.334	.201	.278	.297	.370	.292	.382	.486	1.00	.610
Inf T33	.255	-.026	.281	.401	.292	.176	.221	.249	.259	.287	.244	.309	.255	.208	.224	.242	.251	.359	.275	.249	.304	.395	.416	.388	.196	.301	.279	.317	.288	.321	.497	.610	1.00
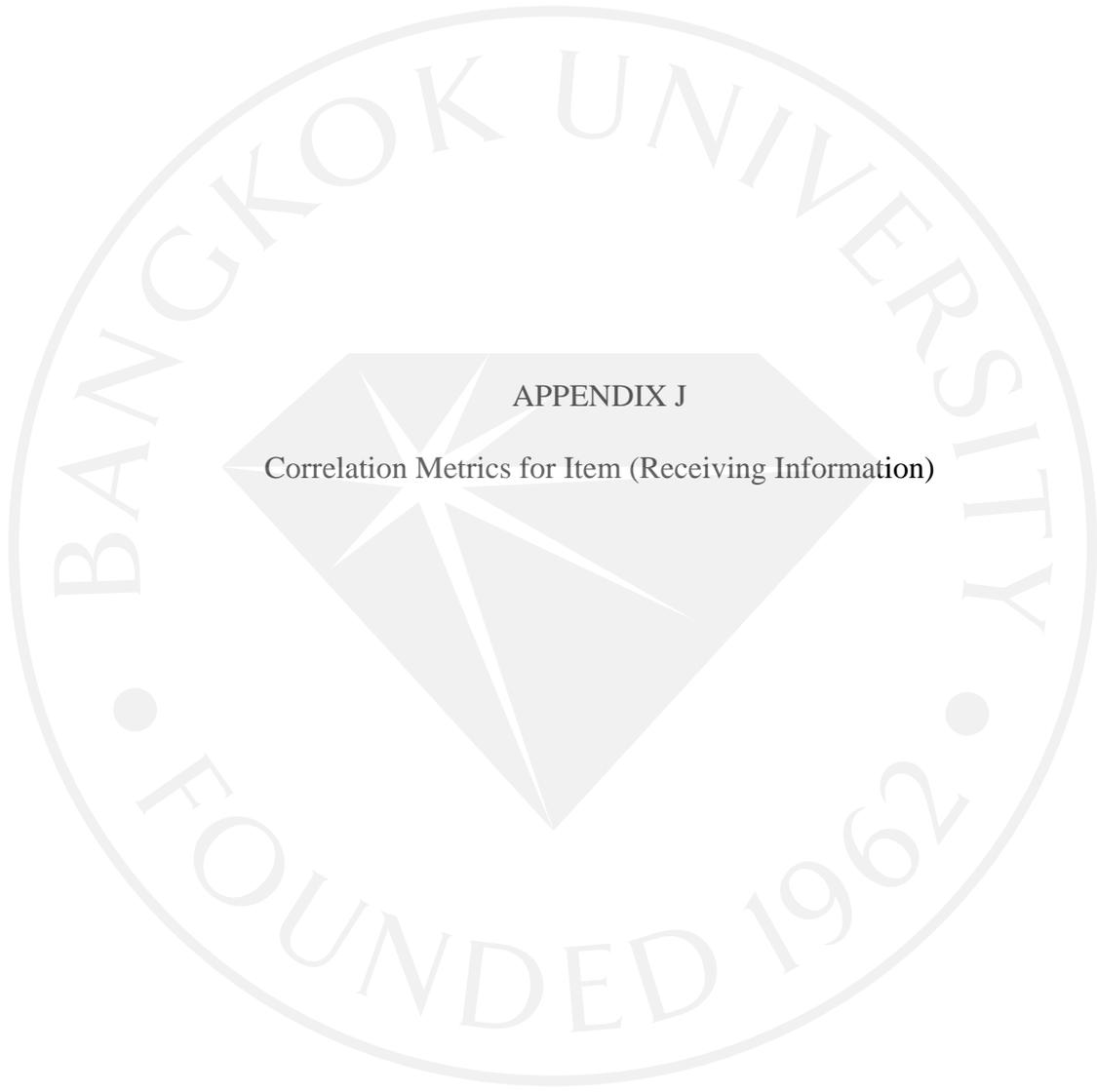
APPENDIX J

Correlation Metrics for Item (Receiving Information)

Appendix J : Correlation Metrics for Item (Receiving Information)

Correlation	Info 1	Info 2	Info 3	Info 4	Info 5	Info 6	Info 7	Info 8	Info 9	Info 10	Info 11	Info 12	Info 13
Info 1	1.00	.689	.384	.461	.342	.385	.470	.444	.434	.460	.448	.470	.416
Info 2	.689	1.00	.463	.510	.399	.411	.471	.464	.457	.474	.433	.443	.402
Info 3	.384	.463	1.00	.411	.439	.395	.381	.411	.427	.435	.402	.407	.354
Info 4	.461	.510	.411	1.00	.564	.544	.543	.526	.552	.554	.494	.532	.485
Info 5	.342	.399	.439	.564	1.00	.554	.443	.493	.469	.482	.437	.450	.477
Info 6	.385	.411	.395	.544	.554	1.00	.456	.426	.466	.467	.486	.471	.491
Info 7	.470	.471	.381	.543	.443	.456	1.00	.577	.581	.662	.551	.637	.522
Info 8	.444	.464	.411	.526	.493	.426	.577	1.00	.578	.526	.511	.565	.552
Info 9	.434	.457	.427	.552	.469	.466	.581	.578	1.00	.623	.626	.566	.602
Info 10	.460	.474	.435	.554	.482	.467	.662	.526	.623	1.00	.600	.632	.540
Info 11	.448	.433	.402	.494	.437	.486	.551	.511	.626	.600	1.00	.644	.576
Info 12	.470	.443	.407	.532	.450	.471	.637	.565	.566	.632	.644	1.00	.598
Info 13	.416	.402	.354	.485	.477	.491	.522	.552	.602	.540	.576	.598	1.00