#### CONTRIBUTIONS TO MANAGEMENT SCIENCE

Tanachart Raoprasert Sardar M. N. Islam

### Designing an Efficient Management System

Modeling of Convergence Factors Exemplified by the Case of Japanese Businesses in Thailand

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# Designing an Efficient Management System

Modeling of Convergence Factors Exemplified by the Case of Japanese Businesses in Thailand



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ISSN 1431-1941 ISBN 978-3-7908-2371-4 e-ISBN 978-3-7908-2372-1 DOI 10.1007/978-3-7908-2372-1 Springer Heidelberg Dordrecht London New York

Library of Congress Control Number: 2009935690

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### Abstract

The issue of designing an efficient management system is a central topic to study in organizational behavior. In the era of globalization, cross-cultural aspects of management, in achieving on international business management system, have been a topic of intense investigation in the contemporary management literature. Consequently, given the higher presence of Japanese businesses in Thailand, a fertile field in international management literature is the adaptation of Japanese management practices in Thailand to design an efficient Japanese management system in Thailand. In a broad sense, the relationship between Japanese managers and Thai subordinates can be considered in the agency theory framework. The desired efficient Japanese management system can overcome the organizational problems, resulting in an effective organizational structure and system.

Prior empirical studies of Japanese management practices in Thailand have mainly focused on Thai employees' perceptions of these practices and on how well they are implemented, with very little research examining factors which we call "convergence factors" that influence the adaptation and acceptance of Japanese management practices in Thailand. To fill this gap, this study develops models that are helpful in examining factors that can be introduced by Japanese organizations in Thailand to enable Thai subordinates to accept, and Japanese managers to adapt, Japanese management practices to Thai culture.

It is contended that not adapting management practices decreases the motivation and performance of Thai subordinates. It is therefore proposed that vision, leadership, structure, resources support, rewards, and relationship factors, drawing upon Weisbord's Six-Box diagnostic model, are effective factors that influence Thai subordinates to implement Japanese management practices, and Japanese managers to adapt these practices.

Structural equation modeling technique is used as the main research method for the study. Based on the sample survey of Japanese managers and Thai subordinates, two structural equation models were developed to find the relationships between motivational factors and adaptation and acceptance of Japanese management practices. The study found that vision and relationship were the significant motivational factors that influenced Japanese managers to adapt their management practices, as well as reward and relationship were the significant motivational factors that influenced Thai subordinates to accept and implement Japanese management practices. The findings imply that for developing an efficient and effective Japanese management practices and systems in Thailand, Japanese managers will need a vision and a good relationship with local staff, and some rewards and good relationships will motivate Thai subordinates to accept and implement Japanese management practices. Good relationships among Japanese managers and Thai subordinates appear to be very important factor influencing the success of Japanese management practices in Thailand.

The above organizational and managerial changes will provide an efficient Japanese management system in Thailand. This study has implications for designing efficient management systems in other cross-cultural contexts.

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# Abbreviations

AIC	Akaike information criterion
AMOS	Analysis of moment structures
CFI	Comparative fit index
CFA	Confirmatory factor analysis
CMIN/DF	Normed chi-square
CR	Critical ratio
JIT	Just in time
QCCs	Quality control circles
MLE	Maximum likelihood estimation
RMSEA	Root means square error of approximation
RNI	Relative non-centrality index
SE	Standard error of the regression estimate
SEM	Structural equation modeling
SPSS	Statistical package for social science
SRMR	Standardized root mean square residual

# Chapter 1 Introduction

#### **1.1 Background of the Study: Efficiency in Cross-Cultural** International Business Management

Efficient business management is crucial in achieving corporate (national or international/multinational) goals such as higher value, comprehensiveness, corporate governance, etc. Efficient business management can be achieved by resolving agency problems existing among different stakeholders in corporations. In international business, agency problems may exist between managers, owners, staff, and other stakeholders who come from different cultures. Therefore, there is a need in designing efficient management of international business by influencing the factors (the convergence factors) which cause differences in the interests and cultures of different stakeholders. International business refers to all commercial transactions between two or more nations. Because it comprises a large and growing portion of current world business practice, international business has received considerable attention in academic research (Daniels and Radebaugh 1998). International business differs in important ways from business conducted within national borders, and poses additional challenges to managers and investors in foreign countries (Mahoney et al. 1998). In this context, Black et al. (1999) state that effective management is increasingly recognized as a key determinant of success or failure, arguing that the success of international business in multinational companies depends most significantly on the quality of management systems (Stroh and Caligiuri 1998).

As international business involves people from different cultures, every business function including managing a workforce, marketing output, and dealing with regulators, has the potential to involve cross-cultural problems (Zineldin 2007). Cultural differences lead to differences in operating processes and management practices, because different cultural environments require different managerial actions (Mead 2005).

Daniels and Radebaugh (1998) state that adaptiveness and local acceptance need to be considered if a company wants to transfer its management systems from one

country to another country. Mead (2005) points out that effective management of disparate cultures when managing abroad will assist companies in gaining a competitive advantage. Therefore, in agreement with Dienhart (2004), in the context of this book, knowledge about how to increase the adaptability of Japanese management practices is significant, as effective management practices in Japan may be a disaster in another setting.

Japanese management practices are deeply rooted in Japanese culture (Hayashi and Baldwin 1988). A popular Japanese slogan Hakko-Ichiu, meaning "all the world under one roof", explains both the rationale for Japanese expansion and their ethnocentrism (Edwards 2003). Nationalistic pride and a preference for Japanese culture are strongly implanted in Japanese society (Starrs 2004). Hodgetts et al. (2006) state that this nationalism results in displays of high levels of ethnocentrism when dealing with overseas affiliates. This is consistent with recent empirical research by William and Onishi (2003) who found that Japanese managers try to transplant their management practices to overseas affiliates because of their familiarity and proven success.

As differences in national cultures indicate differences in management practices (Newman and Nollen 1996), conflicts emerge when Japanese managers apply their management practices in Thailand without adjustment to the local culture. Therefore, this book contends that when Japanese managers do not adapt their management practices, the motivation and performance of Thai subordinates decreases. Therefore, in order to increase the effectiveness of Japanese affiliates in Thailand, Japanese management practices need to be adapted (William and Onishi 2003; McCampbell et al. 1999; Adams and Vernon 1998; Sedgwick 1995).

Japanese models for affiliates overseas appear to follow a "headquarters-outpost" approach, where practices originating from home office directives are expected of the foreign-based Japanese managers who must act as they would in Japan (William and Onishi 2003). Thus, as many Japanese managers resist change and believe that practices that have worked well domestically can be superimposed into other cultural settings, there is an argument that Japanese management practices cannot be adapted to the local Thai culture. Similarly, another argument is that Japanese management practices may be inappropriate in Thailand (William and Onishi 2003; McCampbell et al. 1999; Adams and Vernon 1998; Sedgwick 1995).

Given that Japanese managers usually transplant their management practices to Thailand without adapting them, and that such management practices may be inappropriate for local Thai conditions, it is clear that unless certain steps in implementation are taken, such organizations may not be successful. A workforce in one culture may respond differently to a workforce in another, and the national culture of a workforce should influence how expatriates respond to the structures and systems planned and implemented by management practices (Hofstede and Hofstede 2005). Different cultural and industrial contexts emphasize different management practices (Mead 2005), but Japanese managers may refuse change because they believe it is not worth their time, effort or concentration (Wood et al. 2001).

Recognizing that the Japanese national culture deeply influences how management practices are consistently applied within affiliate organizations (Edwards 2003), this research proposes two steps to improve Japanese management practices within the cultural context of Thailand. One is to investigate motivational factors that may be introduced within expatriate organizations that enable Thai subordinates to accept Japanese management practices; and the second is to motivate Japanese managers to adapt these practices into their dealings with Thai subordinates. Huczynski (2004) explains that once such employees are motivated, they will support the organization's directions and policies because they will begin to see themselves as an integral part of the organization. When this occurs, the personal and organizational goals get closely intertwined and mutual benefits accrue. Thus, the purpose of the present book is to develop a framework for the adaptation and acceptance of Japanese management practices within a Thai cultural and workplace setting. This framework utilizes Weisbord's six-box model to underpin change management strategies for motivating Thai subordinates and Japanese managers to accept and adapt Japanese management approaches to reduces or dominate agency problems (conflict of interest, and cultures).

#### **1.2** Contribution to Knowledge

A review of relevant literature identified a range of empirical studies of Japanese management practices in Thailand. These studies mainly focused on Thai employees' perceptions of Japanese management practices and how well Japanese management practices in Thailand have been implemented (William and Onishi 2003; McCampbell et al. 1999; Adams and Vernon 1998; Sedgwick 1995). Surprisingly, little research has examined factors that influence the adaptation and acceptance of Japanese management practice in Thailand. Therefore, it has been considered important to develop a framework that examines the relationship between factors that may influence adaptation and acceptance of Japanese management practices in Thailand, and acceptance of adaptation to Thai culture in Japanese management practice. The research for the present study is original in that it investigates factors the underlying need for such adaptation and acceptance. Moreover, this study is significant in that it adds to the understandings of cultural diversity in international business management literature. An intended outcome of this study is to provide insight into improving business performance and reducing conflict between Japanese manufacturers and their Thai employees, and to formulate efficient international and cross-cultural business management systems and practices in this context.

#### **1.3 Statement of Significance**

Designing an efficient Japanese management system for adapting in Thailand through the understanding of the relationship between motivational factors and adaptation and acceptance of Japanese management practices in Thailand is significant due to the impact this could make on improving their management practices and overall business efficiency. This research will provide Japanese organizations with practical guidance on how to successfully adapt and implement Japanese management practices in Thailand. Moreover, this research is expected to enable Japanese managers to become aware of (1) the factors that instigate the successful adaptation and acceptance of Japanese management practice in Thailand, (2) how Japanese management practices can be successfully implemented, and (3) the reasons for adaptation.

#### **1.4** Scope of the Study

The research for this study was conducted in joint venture Japanese manufacturing organizations in Thailand. Thailand is a preferred location for the establishment of external Japanese manufacturing (Asano 1996), and Japanese manufacturers are the largest foreign investors in Thailand. The Thai Board of Investment (2005) reveals that the 2004–2005 foreign direct investment rate (FDI) of Japanese investment represented almost 65% of total foreign investment in Thailand. Expansion of Japanese manufacturing to overseas locations resulted in their management practices becoming well-known and regarded (Rodgers and Wong 1996), and although it may be true that some Japanese management practices have been adapted or accepted in Thailand, this study emphasizes the need for Japanese management practices to be more widely adapted and accepted in the future.

#### **1.5** Aim of the Study

The aim of this study is to investigate the factors that can be introduced to manufacturing organizations that enable Thai subordinates to accept, and Japanese managers to adapt, Japanese management practice to Thai culture, emphasizing the factors which influence the convergence of the interests and motivation of employees involved in the Japanese management practices in Thailand for reducing agency problems.

#### 1.5.1 Specific Aims

To support the general aim of this study, the specific objectives of the research are:

1. To identify which factors influence Japanese managers to adapt their management practices to operate successfully with Thai subordinates. 2. To identify which factors influence Thai subordinates to accept Japanese management practices.

#### 1.6 Research Questions and Hypotheses

The research seeks answers to the following questions;

- 1. What are the motivational factors that can influence Japanese managers to adapt their Japanese management practices to be apposite to Thai culture? (see specific aim 1)
- 2. What are the motivational factors that can influence Thai subordinates to accept Japanese management practice? (see specific aim 2)

Based on the research questions fourteen hypotheses have been developed as follows;

- H1A: vision is a positive influential factor for Japanese managers to adapt Japanese management practices.
- H1B: vision is a positive influential factor for Thai subordinates to implement Japanese management practices.
- H2A: leadership is a positive influential factor for Japanese managers to adapt Japanese management practices.
- H2B: leadership is a positive influential factor for Thai subordinates to implement Japanese management practices.
- H3A: structure is a positive influential factor for Japanese managers to adapt Japanese management practices.
- H3B: structure is a positive influential factor for Thai subordinates to implement Japanese management practices.
- H4A: reward is a positive influential factor for Japanese managers to adapt Japanese management practices.
- H4B: reward is a positive influential factor for Thai subordinates to implement Japanese management practices.
- H5A: relationship is a positive influential factor for Japanese managers to adapt Japanese management practices.
- H5B: relationship is a positive influential factor for Thai subordinates to implement Japanese management practices.
- H6A: resources support is a positive influential factor for Japanese managers to adapt Japanese management practices.
- H6B: resources support is a positive influential factor for Thai subordinates to implement Japanese management practices.
- H7A: at least one of six factors is an effective factor that positively influences Japanese managers to adapt Japanese management practices.
- H7B: at least one of six factors is an effective factor that positively influences Thai subordinates to implement Japanese management practices.

#### 1.7 Methodology

In order to investigate the links between motivational factors and adaptation and acceptance of Japanese management practices, a quantitative approach has been utilized. This approach addresses the research objectives through creation of concrete numerical descriptions of employee perceptions on a number of constructs allowing the relationships between these constructs to be examined (Neuman 2006). The organizations used for data collection were joint-venture Japanese manufacturing organizations in Thailand.

Data collection was conducted through questionnaire-surveys. The survey method was selected because there was little control over behavioral events, and the focus was to identify and develop a contemporary phenomenon within a real life context.

Quantitative data collected from the distributed questionnaires were analyzed utilizing the Statistical Package for Social Science (SPSS) computer program and the Analysis of Moment Structures (AMOS) software program. Cronbach's alpha test was conducted to assess reliability of the scale items. Descriptive statistics described and summarized profiles of the entire sample. Confirmatory factor analysis was conducted in the first stage of structural equation modeling (SEM). A composite factor model was also applied to reduce the complexity of the model and reduce the number of returns required for a reliable model. SEM was utilized to present statistical models of relationships among the latent variables and manifest variables. For this book, the AMOS software program was utilized to perform confirmatory factor analysis, and to test the model by investigating the relationships in which path coefficients were tested for significance and goodness-of-fit.

#### **1.8** Structure of the Book

In accordance with Fig. 1.1 below, this book is presented in seven chapters.

Chapter 1 provides an introduction to the issues this research is designed to address.

Chapter 2 examines and reviews all relevant literature on the issues of crosscultural management, change management, and motivational theory. It also explores six motivational factors for influencing adaptation and acceptance of Japanese management practices including vision, leadership, reward, structure, resources support and relationship.

Chapter 3 provides the research framework and relevant theory. This chapter further refines and synthesizes knowledge obtained in the literature to provide a foundation for this research. This chapter also presents the hypothesis development for the study.

Chapter 4 details the research methodology including sections relating to operationalizations of the dependent, independent, mediating and moderating variables,



Fig. 1.1 Structure of the book

and describes the scales utilized to measure each variable and the research procedures of data collection.

Chapter 5 presents results of the quantitative data analysis including descriptive statistics, reliability and normality test.

Chapter 6 reports the results of confirmatory factor analysis and structural equation modeling.

Chapter 7 discusses the issues and findings emanating from the questionnaire results. Practical implications of the findings are also provided.

Chapter 8 presents an overview of the book. It also discusses the limitations of the book and recommendations for future research.

#### 1.9 Summary

This chapter has provided an introduction to the issues that the present research has been designed to address. Japanese management approaches that work effectively in Japan may not be appropriate in Thailand. This is because of the cultural differences and differing work values in the two countries (Hofstede and Hofstede 2005; Miroshnik 2002). Two possible ways to succeed in changing current practices are to motivate Thai subordinates to accept Japanese management practices, and/or alternatively, to motivate Japanese managers to adapt their Japanese management practices in order to achieve an efficient Japanese management system in Thailand. The aim of this study is to investigate the factors that can be introduced to manufacturing organizations that enable Thai subordinates to accept, and Japanese managers to adapt, Japanese management practice to Thai culture.

The subsequent development of the main research questions and hypotheses are based on the research aim. This chapter has also presented the contribution to knowledge and significance of the study, its scope, an overview of its methodology, and finally, the overall structure of the book (Fig. 1.1). The next chapter will present a review of literature on issues related to Japanese management practices.

## Chapter 2 Literature Review

#### 2.1 Introduction

This chapter reviews the theoretical concepts related to adaptation and acceptance of Japanese management. As mentioned in Chap. 1, Japanese managers transplant their management practices to Thailand. However, conflicts in Japanese manufacturing organizations occur when the Japanese management practices which work well in Japan, are not appropriate to the Thai culture. Implicit in this assumption is the notion that failing to adapt Japanese management practices in Thailand decreases the motivation and performance of Thai subordinates, and hence decreases business efficiency. This is followed by a discussion on how these concepts and gaps within the management literature have been used to formulate the proposed research questions for the present book.

The review discusses how these concepts and gaps within the management literature have been used to formulate the research questions proposed in this book. This chapter is divided by two parts. Part 1, consisting of Sects. 2.2.1–2.2.9, discusses the differences in management practices across cultures and the needs for adaptation and acceptance. Part 2, consisting of Sects. 2.3.1–2.3.4, discusses the influential factors in adaptation and acceptance of management practices.

Section 2.1 introduces the objectives of the chapter, and outlines what will be covered in the following subsections. Section 2.2.1 discusses the general concept of efficient management and relationship between management and business efficiency. Section 2.2.2 discusses the nature of efficient cross-cultural international business management. Section 2.2.3 broadly reviews Japanese management practices and identifies the concepts underlying Japanese management style based on previous researches in the management field. Section 2.2.5 discusses the possibility of applying Japanese management practices in Thailand, comparing the differences between Thai and Japanese management practices. Section 2.2.6 provides a brief overview of Japanese management practices in other countries to see how Japanese

management practices have been implemented outside Japan. In Sect. 2.2.7 the normative management practices of Japanese in Thailand are reviewed to suggest what and how Japanese management practices should be implemented in Thailand. Section 2.2.8 indicates the possibility of Thai subordinates' performances after the modification of Japanese management practice. Section 2.2.9 provides the reasons for adaptation, discussing the reasons Japanese management practices should be adapted in order to deal with cultural diversity and business globalization. Section 2.3.1 reviews change management to extend the understanding of why Japanese management practices should be adapted, and briefly how to achieve the change. Section 2.3.2 explains the reasons why people work or do not work in organizations. The theory of reasoned action, economic models of organizational behavior, and social models of behavior are discussed to provide the reasons for employees' behaviors. Section 2.3.3 discusses the role of work motivation in organizations. It also discusses how the adaptation and acceptance of Japanese management practices may be achieved by providing motivational factors to influence the Japanese managers to adapt or change their practices, and how to inspire Thai subordinates to adapt or change their attitudes to accept Japanese management practices. Section 2.3.4 reviews the conceptualization of the need to change. This section also provides an overview of how to achieve the change. Section 2.4 describes the sixbox model used in this study, and discusses each factor of the model. This section also explains how each factor can influence the adaptation and acceptance of Japanese management practices. Section 2.5 provides the limitations of the sixbox model and the reasons why it has been appropriate for this study. In Sect. 2.6, the limitations of the literature are provided to indicate the research gap. Finally, Sect. 2.7 summarises the material discussed in Chap. 2.

#### **2.2** Part 1: The Differences in Management Practices Across Cultures and the Needs for Adaptation and Acceptance

#### 2.2.1 Efficient Management

Management is a process of working with people and resources to complete organizational goals (Bateman and Snell 2002). Management can be viewed as a function, or as a set of functions that must be carried out if an organization is to operate and survive (Buchanan and Huczynski 1985). The management function is a set of indispensable activities.

Bateman and Snell (2002) assert that organizational goals can be achieved successfully when management is done effectively and efficiently. To be effective is to attain organizational goals and to be efficient is to achieve organizational goals with minimum waste of resources to generate the best possible use of money, time, material and people. The best managers must maintain a clear focus on both effectiveness and efficiency.

Put in plain words, efficient management provides the way to produce a perfect use of resources, so that works are done efficiently and objectives are met within the time-scale laid down (Muir 1995). For example, efficient management can inspire employees to provide their best performance to reach organizational objectives. This implies that efficient management provides an approach to reduce the cost of organizations caused by conflicts in cultural diversity, interests, and values among stakeholders (agency problems and costs). In other words, efficient management policies can provide a direct and economically significant contribution to firm performance (Paauwe 2004) and help create a source of sustained competitive advantage (Clinton and Sonny 2002). Pfeffer (1997) sees sustainable competitive advantage as something that distinguishes an organization from its competitors, provides positive economic benefits, and is not readily duplicated.

#### 2.2.2 Efficient Cross-Cultural Business Management Practices: Need and Principles

Cross-cultural international business management is a comprehensive and ongoing management planning process aimed at formulating and implementing strategies that enable an organization to compete effectively internationally (Mahoney et al. 1998). To successfully implement efficient cross-cultural international business management, Causon (2007) provides six steps including how to lead people, how to manage change, how to manage information and knowledge, how to meet customer requirements, how to manage activities, and how to manage oneself. Firstly, a strong leader is about values, communication and interpersonal relationships (Landrum et al. 2000; Horner 1997). A person with triumphant leadership skills will have a clear vision and provide direction to their team (Marzec 2007; McGreevy 2003; Armenakis and Harris 2002; Harper 1998; Kotter 1996). Secondly, since the pace of change has intensified, leaders need the ability to manage their team and resources through turbulent times (Mahoney et al. 1998). Thirdly, leaders need to manage information and knowledge. Here, Causon (2007) points out that these managers need skills to manage and exploit the knowledge economy. Fourthly, effective managers need to develop a customer-facing approach to team management for long-term business survival (Causon 2007). Fifthly, leaders need to make sure their teams are efficient and motivated (Tucker and Russell 2004). Moreover, Causon points out that time spent on managing individuals and time spent optimizing financial and material resources need to be balanced. Finally, leaders need to demonstrate resilience in achieving personal goals, using appropriate levels of influence and persuasion (Causon 2007).

Daniels and Radebaugh (1998) maintain that implementation of efficient crosscultural management can be generated when managers are aware of the need for adaptativeness of their practices and acceptance of the practices by the users. They state that efficient management practices should be flexible or adaptable, as well as accepted by the people who use them.

#### 2.2.3 Japanese Management Practices

The investigation of Japanese management practices has received considerable attention because of Japan's high economic achievement. In the mid to late 1980s, Japan, the world's largest economy, was seen as an economic specter (Farrell 1999). It was seen as a mercantile animal that was buying anything and everything it could. The Nikkei stock index was at all-time highs. Japan is particularly strong in its technologies for mass production (Herbig and Palumbo 1994) and in 1990, its economy represented two-thirds of the Asian economy (Chen 1995). As a result, during the past 20 years there has been a veritable overflow of publications dealing with bits and pieces of Japanese management practices.

Japanese management practices became well known during the 1970s and 1980s because the Japanese economy survived two oil crises and sustained to show rapid growth. Japanese management practices were formed after the Second World War as a modern adaptation of American ideals, rather than having developed directly from archaic Japanese values and traditions (Sugiman 1998; Tsutsui 1998). However, although Japan took the strengths of Western culture and combined them into their own culture for suitable intentions, available confirmation indicates that Japanese management practices remain an invention of their culture (Alarid and Wang 1997).

According to Sugiman (1998), Japanese management practices have continued to attract worldwide attention because of their success, efficiency, and humanistic qualities. In terms of hard practice these management practices refer to production systems and techniques, and soft practice refers to industrial relations and humanistic management (Gill and Wong 1998). However, both practices are related, and hard practices cannot be applied successfully without soft practices (Oliver and Wilkinson 1988). Here, Japan's post-war competitive success has been based on the cooperative, group-oriented model of human relations (Alston 1986) which articulates with the Japanese soft management practices applied worldwide, emphasizing team approach, lifetime employment, consensus decision-making, bottom-up communication, job rotation, and quality control circles (Arthur 2005).

Japanese management practice is of interest because of the belief, widely held by academics and managers (e.g., Hazama 1997; Kilduff et al. 1997; Rhody and Tang 1995; Abo 1994; Keys et al. 1994; Lundberg and Peterson 1994; McNamara and Hayashi 1994; Cohen 1993; Graham 1993; Fruin 1992; Gerlach 1992a, b; Gerlach and Lincoln 1992; Lucier et al. 1992; Marsh 1992; Turnbull et al. 1992; Young 1992; Lincoln and Kalleberg 1990) that Japanese management practices are a superior way of management and work organization (Campbell and Burton 1994). Several years ago, Japanese management practices were not very popular in many business schools. Along with varying degrees of success, many U.S. companies studied and adopted Continuous Improvement (Kaizen), Just-In-Time inventory system, Lean production, and other related practices (Farrell 1999). The widely held view of Japan's superior management style is due to the success that Japan has had both as a country and with its manufacturing organizations.

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The literature delineating Japanese management practices adopts a variety of approaches. For example, Odaka (1986) describes Japanese management practices by listing their aspects and characteristics. He mentions that Japanese management practices include lifetime employment, seniority-based pay and promotion, employment of the total person, standardized training for all employees, respect for interpersonal harmony, the ringi system, omikoshi management, collective responsibility, and participative management. Studies about Japanese management practices in Thailand have shown that six of these human resource Japanese management practices have been implemented. These include seniority-based pay and promotion, quality control circles, job rotation, lifetime employment, consensual decision-making, and bottom-up communication (Onishi 2006; William and Onishi 2003; Chaisiri 1998; Goh and Pinaikul 1998; Sedgwick 1995; Kumbanaruk 1987; Kosiyanon and Yoshihara 1985).

#### 2.2.3.1 Quality Control Circles

Quality control circles (QCCs) are an approach that uses the employees' abilities, skills, knowledge, and potential problem-solving capabilities (Canel and Kadipasaoglu 2002). Quality control circles are defined generally as small group activities in which line staff voluntarily meet regularly to share ideas about how to solve minor problems in their productive lines (Canel and Kadipasaoglu 2002; Shimada et al. 1983). These groups have been called by many names including employee-involvement teams, problem-solving groups, and process-improvement teams (Olberding 1998). In general, problem-solving ideas are proved by collecting data from the line that can be analyzed by using simple statistical techniques (Cole 1984). Quality control circles are based on the instinctive logic that a worker who is thinking could make useful suggestions regarding how to work more productively. In the process of participating in quality control circles, workers are supposed to become more interested in their jobs and more committed to their firm (Sedgwick 1995). However, in order to be successful in implementing quality control circles, the quality control circles approach must be congruous with management's philosophy about how to relate to employees (Tang et al. 1989). Effective quality control circle groups also require supportive and involved management (French 1998).

Like most administrative tools, there are both advantages and disadvantages of quality control circles. The advantages include increases in productivity as employees feel empowered and respected for their thoughts (Piczak 1988). Quality control circles allow employees to show their concerns about working conditions, which instills a spirit of democracy. Employees' opinions are shared with management, meaning that they can state their ideas and feelings about their situation (Barra 1983). Other advantages of quality control circles are the possibility of advancement in the organization, increased morale, and job satisfaction (Millson and Kirk-Smith 1996). On the other hand, some disadvantages include an increase in time commitment, initial start-up costs, and resistance to change. Here the initial investment in quality control circles program requires substantial capital, including expenses for training, supplies and printing (Canel and Kadipasaoglu 2002). Furthermore, time constraints present hindrances to implementation, and some employees may feel that their authority is threatened. Managers may not accept an unfamiliar suggestion and may attempt to frustrate it.

#### 2.2.3.2 Job Rotation

Job rotation is a well-known administrative tool (Donald and Phyllis 2000) involving moving employees from one workstation to another at specific intervals (Tharmmaphornphilas and Norman 2004; Wexley and Latham 1991). Different from cross-training strategies where employees learn their co-workers' jobs to provide increased employee capacity (Burke and Moore 2000), the objective of job rotation is to enhance employees' work experience (Morrison and Hock 1986). Noe and Ford (1992) state that job rotation is viewed as providing opportunities to obtain an overall appreciation of organizational goals, to enlarge knowledge and working experience based on different functional areas, and to develop a network of organizational contracts. Campion et al. (1994) also found that job rotation is particularly useful for enhancing employees' working skills. Job rotation not only enables employees to learn a different task, but also provides them with an overview of the production process (Allwood and Lee 2004). Hence, a manager who is likely to work in a firm for long term will change tasks and learn new skills so that he will gain experience in a range of line or task areas (Sedgwick 1995) and become a more competent manager.

Job rotation is also used to enhance employees' skills and decrease boredom in the workplace (Ortega 2001); rotating workers between different types of mechanical loads or alternate between high and low energy loads to avoid exhaustion (Kuijer et al. 1999). Furthermore, quality problems can be spotted with greater effectiveness (Ebeling and Lee 1994), since more employees have skills and knowledge of a larger number of production processes. Several studies (e.g., MacLeod and Kennedy 1993; Hazzard et al. 1992; Henderson 1992; Jonsson 1988) have investigated the perceived benefits of job rotation as follows:

- · Cross-trained work forces
- Reduced boredom and monotony
- Reduced work stress
- Increased innovation/motivation
- Increased production
- Reduced absenteeism and
- Lower turnover rates

Some of the above mentioned studies (e.g., Hazzard et al. 1992; Henderson 1992) also discussed problems that can be encountered in job rotation. Here, the primary difficulties relate to work structure, organizational culture, and employee behavior. Specific problems included:

- Experienced employees do not want to learn new work
- Machine users do not want to share machines with others
- · Practical difficulties of physically moving from one job to another
- Unsuitable wage structures
- Difficulties identifying appropriate jobs
- Inappropriate use of job rotation by management

As a result, although job rotation is a useful administrative tool to manage daily exposure, due to physical stress, a poorly designed job rotation plan can lead to increases in employees' stress (Tharmmaphornphilas and Norman 2004). Anil and Brian (2004) also found that job rotation was an inappropriate administration tool, as some employees found it difficult to work on tasks for which they had no experience.

#### 2.2.3.3 Seniority Systems

Seniority systems (nenko joretsu) are based on the concept that a person or group is in charge or in command of another person or group in an organization (Hara 1997). Although such control is usually granted to senior persons based on experience or length of service in the organization, it is not uncommon for them to have less experience or length of service than their subordinates. These systems provide employees with a similar inducement to honor commitments to their organization. Seniority systems also enable employees to establish mutually beneficial long-term relationships (Michael 1990) and encourage them to stay with the organization through regular pay increases and promotions (Hasegawa 1986). However, by promoting an employee based on seniority rather than merit, the organization may risk the inefficiencies that result from promotion of less able workers, and lose the ability to maintain a promotion system based on reward for superior performance (McCampbell et al. 1999). Chen (1995) states that the seniority system is undergoing adaptations in Japan, where job-hopping is increasingly acceptable and the younger generation is increasingly impatient with trade-offs of opportunity for security. Nevertheless, seniority systems are still culturally entrenched, and probably reflect the discovery that Japanese culture is characterized by a strong need for uncertainty avoidance (Hofstede and Hofstede 2005).

#### 2.2.3.4 Lifetime Employment

The concept of family life or "*wa*" (harmony) is the most frequently emphasized element in Japanese organizational philosophy (Tang et al. 1989). Commitment of the family to the employee is contained in many company policies, providing them with a wide range of benefits and avoiding layoffs. The objectives are lifetime employment through encouraging stability and a sense of belonging and commitment to the organization (Hasegawa 1986). Lifetime employment (*shushinkoyo*)

means staying on the payroll but not necessarily in a particular job or even in a particular place for the whole of an employee's working life. Lifetime employment can be described as the practice of organizations to employ their core employees primarily from among newly graduates and other young persons, to plan their continual training and development, to stay their employment within the organizational group over a long period of time, and not to fire or layoff such employees except in very unusual circumstances (Gill and Wong 1998). However, Hampden-Tumer and Trompenaars (1993) take a pessimistic view, pointing out that lifetime employment is an act of generosity and indulgence for which the receiver is obliged, and which he/she should work as hard as possible to repay back to the organization. However, it allows the long-term development of employees, and the creation of a succession plan which is probably beneficial to both the company and the employees (Holden 1994). Alternatively, it may support employee dependency and suppress individual creativity (Odaka 1986).

#### 2.2.3.5 Consensual Decision-Making

Consensus (*ringi*) is defined as general agreement among all or most participants (Priem et al. 1995). Consensual decision-making is also defined as an attitudinal or behavior convergence of group members on a common issue (Vanlear and Mabry 1999) to bring about a desired outcome of the group decision processes. Therefore, aggregating individual ideas to form an opinion with group consensus is a key concept in consensual decision-making (Wang and Liu 2006). In short, the process consists of discussion by a group and subsequent decision-making by each individual ual (Sugiman 1998).

In a business context, the consensual decision-making technique is generally used to indicate verbal generation of ideas by a group, with the manager not making any decision until others who are involved have had sufficient time to suggest their view, feel they have been appropriately heard, and are willing to support the decision even though they may not think that it is the best decision (Satow and Wang 1994). Moreover, consensual decision-making is a process that not only looks for the agreement of most participants, but also to mitigate obstructions of the minority to obtain the most agreeable decision. For example, in his study on how to implement consensual decision-making, Winch (1995) suggested that participants in the process should listen to one another (every idea is given a hearing), be comfortable with disagreement, show no signs of conflict, and reach decisions a consensus in which they all agree and express a willingness to go forward.

One major advantage of consensual decision-making is that it provides an enormous number of ideas to assist in generating the best possible decision (Brahm and Kleiner 1996). However, although an open and free session allows every participant to involve in the creation of ideas, a possible disadvantage is that too many low quality ideas may be presented (VanGundy 1988), and as the final decision is made in agreement with all participants, a lot of time may be lost in the process.

#### 2.2.3.6 Bottom-Up Communication

Bottom-up communication begins with employees at the bottom end of an organization sending messages to those at the top of the hierarchy (Janet 1980), and consists of two elements, feed forward and feedback (Waal 2004). Feed-forward refers to employees at the bottom providing top management with planning information, allowing management to set up its strategy on a strong foundation. In addition, incorporating this lower level information increases the staff support base for the strategy. Feed-back refers to employees at the bottom of an organizational hierarchy providing top management with information on the results achieved by them, thus allowing a clear understanding of the organization's status to emerge.

A review of literature in a study by Tourish and Robson (2006) reveals that bottom-up communication from subordinates to managers occurs in four primary forms, information about the subordinate himself/herself, information about peers and their problems, information about organizational practices and strategies, and information about what needs to be done and how it can be done.

As Japanese employees want to feel involved in their companies and are willing to know if their input is appreciated, managers persuade employees to speak up when they agree or disagree with a decision. They also inform employees about what is going on in other parts of the organization (Alarid and Wang 1997). Managers persuade their subordinates to provide feedback, and even though the received feedback is more often negative then positive, they still see such feedback as useful (Barton 1996). This approach can significantly lead to increased satisfaction in communication (Karen and Menno 2007).

Although bottom-up communication can provide important information feedback to management, it is also time consuming and slow (Karen and Menno 2007). Due to communication taking place across too many organizational levels, top management can take a long time to react to information given from employees at the bottom of the organizational hierarchy. Moreover, managers may overlook their subordinates' ideas or suggestions in the mistaken belief that they must appear omniscient at all times (McMaster 1979). In both cases organization may lose quality ideas or suggestions before they can reach the top management.

#### 2.2.4 Thai Management Style

Managers and employees are a part of their national society, and understanding their society can assist in explaining the nature of their behavior (Hofstede and Hofstede 2005). This understanding is central to the context of the present study, as although Thai and Japanese cultures have many similarities leading to similar laws and regulations, there are some Japanese differences in management practices that may be unacceptable in the Thai cultural context.

In the Thai management style, Niratpattanasai (2000) states that the culture demands people to be humble and polite. Generally, they do not like confrontation,

and if they disagree with what others say, they just keep quiet. They do not make a quick decision, and prefer to talk with co-workers outside the meeting room after discussion, resulting in a low degree of commitment. Many expatriates find that Thais frequently seem to agree during meeting room, but there is no movement. When expatriates are communicating with them, Thais nod their head, but this does mean they are listening to you. It does not mean they agree or understand, but it is because they are polite and just want to accommodate the other's feelings. This is the case when Thais seem to agree, but actually do not agree. Their hidden feelings of disagreement can become an undercurrent. These characteristics are defined as benevolent paternalism (Chainuvati and Granrose 2001), collectivism, intra-group harmony, deference to authority, humility, self-restraint, and consideration for others (Dubey-Villinger 2001).

#### 2.2.4.1 Relationship-Oriented

Personal relationships and strong connections between senior and junior family members are of extreme importance in Thai society (Komin 1990), with trust being of core concern (Lawler and Atmiyanandana 2003). Therefore, personal and family relations play an integral part in business activities, and relationship-oriented behavior takes place more frequently than work-oriented behavior in Thai organizations (Sorod 1991). Thai management style in companies place significantly heavier reliance on personal connections in hiring, and they are not likely to determine promotion, wages, salary and bonus increases primarily on formal performance criteria (Lawler and Atmiyanandana 2003).

#### 2.2.4.2 Hierarchy

In Thailand, centralized control based on seniority and family relationship is commonly implemented, meaning that Thais have strong hierarchies in business and family matters (Hendon 2001). Therefore, as the Thai culture is characterized by a tight hierarchical social system, acceptance of existential inequality is very common among Thai employees (Komin 1990).

#### 2.2.4.3 Decision-Making

Thai employees are familiar with their traditional top-down approach in which they receive orders rather than think for themselves and express their own ideas (Kumbanaruk 1987). For them, decision-making revolves around a hierarchical, centralized authority with dependence of the subordinate upon the leader. The Thai decision-making process does not generally use a team approach. For example, a recent survey in Thailand found that subordinates in Thai companies accept that their leaders make decision in an authoritarian way (Holmes and Tangtongtavy 1995). However, while this management style permits managers in Thai firms to make decisions for what he or she believes is proper, the authoritarian management style used is not overbearing. As it is the leader's job to guide subordinates, the decision-making in Thailand is commonly restricted to high-level management. In other words, normal decision-making in Thai management is top-down, with the cultural norms strongly discouraging subordinates to dare, to make mistakes, or to demonstrate inventiveness.

#### 2.2.4.4 Leadership

Although typical Thai leaders are authoritarian (Holmes and Tangtongtavy 1995; Kumbanaruk 1987) they are normally non-assertive and close supervision is favored rather than general supervision (Deyo 1978). Thai subordinates accept a hierarchical order and value a strong leadership (Vance et al. 1992) in which leaders and subordinates consider one another as existentially unequal. In agreement, Redding and Casey (1975) state that the preferred Thai leadership style is essentially autocratic, with subordinates being expected to be told what to do.

#### 2.2.4.5 Harmony

Thais emphasize their relationships as being based on trust and emotion (Komin 1990). Thais prefer to have unwavering social relationships and maintain surface harmony (Rohitratana 1998), avoiding conflict between individuals if possible. Here, surface harmony means that people prefer to always be smooth, kind, pleasant, conflict-free, non-assertive, polite and humble. They typically believe that being nice helps people to be happy, and also helps build their long-term commitment (Cooper 1991).

#### 2.2.5 Possibility of Applying Japanese Management Practices in Thailand

Newman and Nollen (1996) point out that cultural norms approved by social cultures strongly influence management practices, and Japanese and Thai management practices are demonstrably different. Therefore, as different cultural environments demand different managerial actions (Mead 2005), considerations of cultural diversity should be taken into account when considering applying Japanese management practices in Thailand. The different characteristics of Japanese and Thai management practices discussed in Sects. 2.2.1 and 2.2.4 are summarised below in Table 2.1.

Hofstede and Hofstede (2005) demonstrate that there are national and regional cultural groupings that affect the behavior of societies and organizations, and that
Table 2.1 Difference	es between Japanese and I hai managements	
	Japanese management	Thai management
Wages and salary	<ul> <li>Based on seniority In general, a worker's wages are increased and he is promoted in accordance with the length of his service in one company (Hasegawa 1986).</li> </ul>	<ul> <li>Based on performance</li> <li>Employees believe that the seniority system discourages employees, particularly the younger generation, from working hard since their promotion is based on years of work instead of abilities and performance (William and Onishi 2003. McCambell et al. 1090)</li> </ul>
Decision-making	- Consensus Traditional tendency has been to make corporate decisions form bottom up rather than top down Hasegawa (1986). In the consensual decision-making process ( <i>ringi system</i> ) the manager will not make any decision until others who are involved have had sufficient time to suggest their views, feel they have been appropriately heard, and are willing to support the decision although they may not think that it is the best decision (Satow and Wang 1994).	<ul> <li>Authoritarian</li> <li>Authoritarian</li> <li>Decision-making revolves around a hierarchical centralized nature of authority in which there is dependence of the subordinate upon the leader. A recent survey in Thailand shows that subordinates in Thai companies accept that their leaders make decision in an authoritarian way (Holmes and Tangtongtavy 1995). This management style permits managers to make decisions that he or she believes is appropriate.</li> </ul>
Quality control circles	- Private life and work life are combined Quality control circles (QCCs) are small group activities in which line staff normally share ideas about how to solve minor problems in their productive lines (Chen 1995). Ideas are proved by collecting data from the line employees that can be analyzed by using simple statistical techniques. Circles are based on the instinctive logic that a worker who is thinking could make useful suggestions regarding how to work more productively. In the process of participating in circles, workers are supposed to become more interested in their jobs and more committed to their firm.	Private life and work life are separated When Thai business people talk about QCCs in Thailand, they may say that QCCs were born in America, then widely and successfully developed in Japan, but came to a dead end in Thailand (Simachokdee 1998). Sedgwick (1995) explains the practice of quality control circles in Thailand as: when a problem arises relating to customers satisfaction in a company product, the Japanese take it personally, but Thai employees do not. They differ in that they think it does not impact on them personally, so they are not interested in solving it. If the problem has to be solved right away, the Japanese try to solve it even though it is outside working hours, but Thais are not interested in solving it immediately unless they are paid overtime.

	t :-	
Hierarchy	– Equality	- Centralized control and strong
	Management emphasizes equality as the basis for competition	Centralized control based on se
	and co-operation (Thurly and Wirdenius 1989), basing	is commonly implemented, wi
	practice on collective responsibility in which all members feel	business and family matters (F
	responsible for the organization.	
Job rotation	<ul> <li>People are seen as competent to work on several tasks</li> </ul>	- People are seen as incompeten
	One popular Japanese management practice is job-rotation,	Introducing job rotation into T
	with staff being able to work in several departments within the	problematic as workers would
	organization (Farrell 1999). Employees change tasks and	change tasks, not only seeing t
	learn new skills so that they will eventually have worked on a	have been judged incompetent
	number of lines or task areas. After working in several task	they would not be willing to sl
	areas he will eventually be a competent manager.	social relationships established

Centralized control and strong hierarchy	is commonly implemented, with a strong interarchy in
Centralized control based on seniority and family relationshi	business and family matters (Hendon 2001).

Thailand is extremely de be extremely unwilling to g this as an indication that they nt in their present jobs, but split themselves from the ed with their co-workers nt in their present jobs (Sedgwick 1995).

Countries	Power distances	Uncertainty avoidance	Individualism	Masculinity	Long-term orientation
Japanese	54	92	46	95	80
Thai	64	64	20	34	56
a 11 (		1 (2007)			

Table 2.2 Differences between Japanese and Thai working values

Source: Hofstede and Hofstede (2005)

are very persistent across time. In the case of Japanese and Thai working values, these include power distance, uncertainty avoidance, individualism, masculinity and long-term orientation (see Table 2.2).

The five dimensions of Japanese and Thai national work-related values in the study of Hofstede and Hofstede (2005) are as follows:

*Power distance* is the extent to which less powerful workers in organizations expect and accept that power is dispersed unequally (Hofstede and Hofstede 2005). Power distance also portrays the extent to which employees admit that the higher positioned persons have more power than they have. In countries with high power distance, employees are not willing to reveal their disagreements to their autocratic supervisors (Cho and Padmanabhan 2005).

*Individualism* is contrasted with *collectivism* and refers to the extent to which people are supposed to stand up for themselves and be on their own or choose ways to do things independently. Daphna et al. (2002) state that individualism refers to persons being independent of each other, whereas Hofstede and Hofstede (2005) describe individualism as a focus on rights above responsibilities, a concern for oneself, and an emphasis on personal sovereignty or self-fulfilment.

*Masculinity* refers to the value placed on traditionally male or female values. Here, masculine cultures value competitiveness, assertiveness, ambition, and the accumulation of wealth and material possessions, whereas feminine cultures place prefer to place value on relationships and quality of life (Smith and Kimmel 2005).

*Uncertainty avoidance* refers to the extent to which members of a society attempt to cope with worriment by minimizing uncertainty. Those scoring high in uncertainty avoidance prefer rules and structured circumstances, and these employees likely to remain longer with their present employer (Wennekers et al. 2007).

*Long term orientation* is described as a time horizon, or importance attached to the future versus the past and present. In long-term oriented countries, pragmatism, prudence and diligence are valued more, whereas in short-term oriented countries, normative statements, respect for tradition, and reciprocation of gifts and favors are most valued (Hofstede and Hofstede 2005).

#### 2.2.6 Japanese Management Practices in Other Countries

To contextualize this study of Japanese management practices in Thailand, it is necessary to briefly overview Japanese management practices in other countries (see Table 2.3).

1	0 1
Hong Kong	Lack of adaptation in Japanese management practices has lead to many problems including high labor turnover, friction, poor communication, and complaints about glass-ceiling influence (Wong et al. 1997).
Singapore	Management practices have been adapted to take account of cultural differences (Cunningham et al. 1996; Putti and Chong 1986).
Sweden	Japanese firms have embraced some changes in home management practices to adapt their concepts of equality to Swedish concepts of individualism (Styhre 2002).
United Kingdom	Some basic features of Japanese management practices have been adapted to the local conditions, using the more flexible just-in-time system which can adapt to
Spain	changes in demand (Basu and Miroshnik 1999). No adaptation has lead to unsuccessful implementation of Japanese management practices because Spanish employees are self-focused and Japanese are group- oriented (Adapso Digg et al. 1999)
United States	Conflicts have occurred when Japanese transplanted their seniority-based pay system to replace the American performance-based pay (Johnson 1988).

Table 2.3 Japanese management practices in other countries

As can be seen in Table 2.3 above, Japanese expatriates in Hong Kong are less willing to adapt their management practices, because they fear that making a mistake will harm their careers. As a result they face many management problems, such as high labor turnover, friction, poor communication, and complaints about a glass-ceiling influence (Wong et al. 1997). In Singapore, Cunningham et al. (1996) found that most Japanese firms express the view that Singaporeans are not teamoriented. Here, Singapore employees are accustomed to sticking to their job description, whereas Japanese managers encourage multi-skilling. Consequently, when in Singapore Japanese firms maintain broad job descriptions emphasizing formal qualifications and experience rather than perceived character and personality, and try to introduce multi-skilling among their workers (Putti and Chong 1986). When Japanese organizations are in Sweden, they make changes to their management practices because most Swedish workers refuse to implement Japanese management practices. Contrasting with the collective concept that Japanese management practices are based on, they never accept being pushed around. As Swedes have been trained to think for themselves and make their own decisions, the Japanese concept of equality is adapted to embrace a concept of individualism to fit Swedish conditions (Styhre 2002). In the United Kingdom, Japanese firms have tried to implement their original practices in spite of cultural differences, namely the just-in-time approach which is more flexible in adapting to changes in demand. However, in the case of production management practices they are not completely successful because of the British cultural differences (Basu and Miroshnik 1999). In Spain, cultural differences also formed obstacles to the introduction of Japanese management practices in subsidiaries. Spanish employees are self-focused, looking to themselves to judge their actions and personal goals, while Japanese are grouporiented (Adenso-Diaz et al. 1999). In the United States of America there are increasing indications that Japanese management practices cannot be readily transplanted without adaptation (Ichniowski and Shaw 1999). For example, in California major Japanese companies have faced a range of anti-discrimination law suits including sexual discrimination, racial discrimination, and attempts to force U.S. managers into violating U.S. labor laws (Richards 1987). A common conflict between Japanese and Americans has involved the issue of equality. Japanese employees set living wages graduated by age, whereas the American labor ideology emphasizes on equal pay for equal work (Johnson 1988).

#### 2.2.7 Normative Management Practices of Japanese in Thailand

The cross-cultural international management policies that result in high levels of commitment, competence, cost effectiveness and congruence, are those that have been designed and administered through a process of mutual influence between management and employees (Herbig and Genestre 1997). This implies that when Japanese managers are in Thailand, they need to adapt their practices to suit Thai styles of working conditions. As shown previously in Table 2.1, normal Japanese management practices (including seniority-based pay and promotion, quality control circles, job rotation, lifetime employment, consensual decision-making, bottom-up communication) need to be adapted in managing their joint-venture companies in Thailand.

Thai subordinates expect performance-based pay and promotion rather than seniority-based pay and promotion (McCampbell et al. 1999). Furthermore, decision-making by Thai managers is authoritarian and Thai employees accept their leaders to make the decisions (Holmes and Tangtongtavy 1995). They prefer quick decisions and immediate results, which is not characteristic of Japanese decisionmaking processes. Thai subordinates expect more opportunities and direction from Japanese managers (Holmes and Tangtongtavy 1995). Moreover, they prefer recognition from their superiors, and expect Japanese managers to be humorous (William and Onishi 2003). Thai subordinates prefer their work and private time to be clearly delineated, which contradicts the concept underlying quality control circles. Therefore, Thais are not interested in quality control circles without overtime payment (Sedgwick 1995). A strong hierarchy is essential in Thai organizational culture (Hendon 2001), which is opposite to the Japanese concept of equality. Thai workers believe that a company should have a clear hierarchy, and management should keep a certain distance from employees. In regards to job rotation in Thailand, Thai workers are extremely unwilling to change tasks because they take it as an indication that they are judged incompetent in their present jobs, and are not willing to split themselves from social relationships established with their co-workers (Sedgwick 1995). According to William and Onishi (2003), Thai subordinates give importance to punctuality, hierarchy, freedom to adopt their own approach, clear boss and subordinate relationships and obedience, whereas Japanese managers emphasize a preference for equality, being innovative and the use of quality circles (Hasegawa 1986).

# 2.2.8 Possibility of Thai Subordinates' Performance after Modifying Japanese Management Practice

Beyond the general principles of good management, managers can better manage their subordinates if they understand what their subordinates need (Bateman and Snell 2002). Once they are aware of each individual's profile, managers can easily motivate and manage their people through initiating productive dialog about what they need in order to perform at their peak (Hiam 2003). This creation of a good match between subordinates' work motives and their work is not only an important step in maximizing individual performance, and it can also do a great deal to minimize problems in the workplace (Hiam 2003). Johns and Saks (2005) found that work satisfaction is strongly associated with enhanced performance. For example, research of Patterson and West (1998) presented a significant relationship between work satisfaction and performance. They visited 110 manufacturing sites with an average of 230 staff and found that increased workforce satisfaction leads to higher productivity and then to greater profitability. Clearly, studies such as these confirm that if Japanese managers take time to understand the work practices of Thai subordinates and adapt their management practices to fit, they will effectively motivate the Thai to work at their best production levels.

# 2.2.9 Reasons for Adaptation

Globalization of the business environment has been forced by technological and economic factors which cause an increasing number of cross-cultural interactions in organizations, firms and industries within and between countries, and consequently, within the workplace (Thomas 2001). Therefore, in order to cope with the uncertainty of constant change, companies must frequently make adjustments to their structures and work processes (Calantone and Zhao 2000). As a result, when Japanese companies expand their manufacturing to overseas, they need to respond to new environments so that their practices can be effective (Elger and Smith 1994).

Frustration, doubt and dissatisfaction resulting from poor cross-cultural adaptation are among the reasons why many expatriates return to their home countries before the official end of their foreign assignments (Jassawalla et al. 2004). Most important is the inability of expatriate managers to deal with cross-cultural adaptation in regard to differences in cultures and languages, living conditions and understandings of working harmoniously with co-workers (Yavas and Bodur 1999). Caligiuri (2000) states that expatriates must access a cognitive and emotional comfort level with the attitudes, values and behavioral practices considered to be the norm in the host culture. Expatriates must respect cultural assumptions of the host country, and adapt to differences that exist in physical, psychological and communication circumstances (Wright et al. 1996). One of the most common factors contributing to failure in global business assignments is the invalid assumption that if the application of a management practice is successful in one country it will also be successful in a different cultural context.

Recognizing that culture has a strong influence on cross-cultural management practices (Mahoney et al. 1998), it is important to define the exact meaning of culture to better understand how it influences such practices. In this book, culture is viewed as shared and commonly held beliefs, values and ways of thinking that tie a group of people together as an identifiable community (Donald and Muhammad 1997). Culture affects the way that people either consciously or subconsciously think, feel and act (Eamonn and Glenn 1994).

Cultural differences significantly impact on the way business practices can be managed, affecting all levels of business activities including manufacturing, marketing, promoting, financing and producing. The characteristics that particularly affect international organizations are language, education, social organization, attitude and religion. In the early 1980s, managers were becoming aware of the socio-cultural dynamics which develop within organizations, resulting in conceptualizations of organizational culture in terms of the relationship between organizational culture and national culture (Thomas 2001). Principally, organizational culture is the character of the organization, involving the ways people place their personal and professional objectives, achieve tasks, and manage resources to achieve them. Thus, culture includes the statements, values, norms and tangible symbols of organizational members and their managers (Schein 2004), implying that organizational culture is the culture of its members, adopted through socialization.

Most large businesses have a diversity of cultures due to the wide range of people working in the company (Nadeem et al. 2002). Different cultural environments demand different managerial actions, leading to differences in objectives, strategy implementation, operating processes, and management practices (Mead 2005). Therefore, managing between different cultures is a matter of accurate perception and appropriate adaptation. However, cultural norms often influence managers to understand people only as a group, and judge them according to the stereotype they hold. These managers blind themselves to gender, race and ethnicity, preventing them from consciously recognising that people from different cultural groups act differently – and that these differences influence their leadership styles within the organization. People from one culture are not better or worse than people from another, they are basically different, and to ignore these differences is not productive as such inattention can result in costly mistakes in management practice.

Generally, the benefits associated with international businesses are counterbalanced by a wide range of problems (Makino and Beamish 1998) which are heightened when the partners are of different nationalities and cultures. Calantone and Zhao (2000) assert that major differences with respect to management processes, management practices, and corporate culture between the foreign firm and local partner can cause serious conflict which contributes to the failure of businesses. For example, a foreign firm may request that its process of strategies and operational planning, information and control system, budgeting and accounting be used by the affiliate. However, if the local partner does not have any experience with these processes, they may consider them inappropriate. Further, a foreign firm may put emphasis on a more participatory management practice, delegation of responsibility to subordinates, profit centers and periodic evaluations of performance, but these practices may be inappropriate if the local partner is a familyowned business (common in developing countries) which has an authoritarian management strategy with no delegation of responsibility to subordinates and very little formal planning and control.

Problems in cultural diversity not only exist in convergent processes when the organization needs employees to think or act in the same way, but in misunderstandings between team members before they have had a chance to build any relationship between each other (Asherman et al. 2000). However, cultural diversity can be an advantage when the organization wants to develop new ideas and strategies, being the starting point of a new marketing plan or new operation.

# 2.3 Part 2: Factors Influencing Adaptation and Acceptance of Management Practices

#### 2.3.1 Change Management

Change is inborn in contemporary organizations and its management is not only significant to organizational success and survival but it is also a critical issue in the field of organization development (Mukherji and Mukherji 1998). Johnson-Cramer et al. (2003) suggest that adaptations and changes can lead to improved organizational performance and enhance the chances of organizational survival. Pettigrew and Massini (2003) believe that an organization's survival depends on it changing its boundaries in response to the external surroundings in which it operates.

Change may develop the present form of an organization or create a new form, both of which are permanent and pervasive (Roach and Bednar 1997). In this study, change management is defined as the process an organization applies to design, implement, and evaluate appropriate initiative to deal with demands placed on them by the interior or exterior environment (Recardo 1995), referring to any change where there is impact on organizations due to organizational adjustments. Tushman and Anderson (1997) assert that managing change involves moving an organization from its present position to its desired position through a transition period. For management adaptation, this may mean adapting from present inappropriate management practices to management practices that suitable to the users in organizations. However, in managing the change efforts there needs to be sufficient dissatisfaction with the present position (Dervitsiotis 1998; Kotter 1996), a desire to move to the future position, and the request of a well thought-out strategy for realizing the vision (Dervitsiotis 1998; Kotter 1996, 1997). Similarly, Palvia and Chervany (1995) see change as a disruption of the present work patterns with an interest in replacing undesired activities. Ackerman (1986) classifies organizational change into three kinds, developmental, transitional, and transformational. Developmental change improves what is already occurring through the improvement of skills, technical processes, and machines capability. Transitional change refers to replacing the present ways of doing things by generating new approaches over a controlled period of time. Transformational change is the adaptation of new approaches, unknown until it takes shape. All such change generally affects the majority of employees in organizations, and must be referred as strategic in nature (Chrusciel and Field 2006).

Chapman (2002) points out that change processes are designed to increase business efficiencies and provide a better adjustment to the internal or external environment. Juechter et al. (1998) suggest that several conditions need to be present when implementing major change in an organization, including a clear focus driven from top, leaders committed to systemic change, employee involvement, and external coaches or change agents to facilitate the change process. Conversely, change cannot be successfully implemented if members in the organization do not accept the change and do not change themselves (Alas 2007). Change may be resisted even though it is necessary (Goodstein and Burke 1991), and cannot occur unless employees are motivated and ready for it (Schein 1986).

#### 2.3.1.1 Resistance to Change

Resistance to change, defined as employee behavior aspiring to challenge, interrupt, or upturn prevailing assumptions, discussions and power relations (Collinson 1994), has been of concern to organizational psychologists (e.g., Plant 1987; Lewin 1951). Jermier et al. (1994) found that such resistance can be a response to employee dissatisfaction with a change program. However, although Frances (1995) sees resistance as a generalized unwillingness to change, Senge (1997) argues that employees do not actually resist change, but resist being changed. Employees normally resist social change more than technical change, and the change programs which pay no attention to the aspect of psychological resistance to change are likely to fail (Schein 1986).

Organizational change may create skepticism and resistance in employees, leading to a difficulty in implementing organizational development (Folger and Skarlicki 1999). Therefore, as employee resistance can be a significant obstruction to the success of organizational change (Cummings and Worley 1997), success relies on the willingness of employees to accept it with eagerness and implement it with attention (Dayr and Leticia 2001). The difficult and frequently ignored part of a change process is leading and managing behavioral change with those persons involved in the change process. Employees may have their own opinions about what should change and how change should be, but management frequently neglects the issue of addressing human resistance to the plan implementation (Zoller and Fairhurst 2007). Thus, employees who are targets of the change normally end up

spending their time and energy attempting to stop the change – or modify it until they feel satisfied (Dayr and Leticia 2001).

#### 2.3.2 Why People Work or Do Not Work in Organizations

Japanese managers may refuse a change because they believe it is not worth their time, attempt and concentration (Wood et al. 2001) as their national culture influences how they consistently apply their management practices to affiliates (Edwards 2003). Since most Japanese managers have to go back to their previous positions in Japan after their assignments are finished in 3 years, they are not willing to put any effort into adaptations, and typically repeat their conventional management practices which emphasize implementation of the Japanese headquarters' management policies among Thai affiliates.

#### 2.3.2.1 Economic Models of Organizational Behavior

In economic models of organizational behavior, an assumption of one's behavior is that individuals pursue their self-interest (Pfeffer 1997). People are presumed to act in a self-interested fashion to maximize their utility (Taylor 1947), and because they have a disutility for expending effort, economic models invariably view employees as effort-averse and unlikely to perform what the organization wants or needs without some form of incentive, sanction, or combination of both (Baron 1988). Therefore, giving or withholding financial rewards can control people's motivation. Basically, this model assumes that people are quiescent, likely to assert less rather than more endeavor, reluctant to take responsibility, and are only concerned with work for what they can obtain financially (Rowley 1996).

#### 2.3.2.2 Social Models of Behavior

Social models of behavior assume that self-interest is not the only contributor to an individual's action, but because humans are socially oriented, their group also affects their actions (Mayo 1949). For example, a satisfying sense of being part of something big and important plays a significant role in Japanese behavior. People at work are motivated by the social needs of friendship and acceptance from others. Moreover, people are more likely to respond to the pressures of their social groups at work than to incentive rewards and management controls (Rowley 1996). The key concept of the social model is the sense of belonging within groups. Fulfilment for a Japanese person does not come from individual activity or self-actualization, but from participation in, and acceptance by, the group (Farrell 1999).

#### 2.3.2.3 The Theory of Reasoned Action

Drawing on work from social psychology, many studies have attempted to predict behavior by understanding the attitudes that underlie that behavior (e.g., Triandis 1985; Ajzen and Fishbein 1980; Beach et al. 1979; Fishbein and Ajzen 1975; Rosenberg 1956). The theory of reasoned action by Ajzen and Fishbein (1980, 1975), is the most widely applied in social psychology (Lin 2007; Trafimow and Finlay 2001) to predict and explain a wide range of behaviors in terms of a limited set of constructs, including attitudes towards behavior, and the subjective norm (Sutton et al. 2003).

The theory of reasoned action premises that beliefs of a person influence the attitude and subjective norms that reflect on behavioral intention and the person's behavior (Randall and Gibson 1991; Harrison et al. 1985; Ajzen and Fishbein 1980). Chang (1998) states that the theory of reasoned action is based on the assumption that a person's behavior is determined by their behavioral intention to perform that behavior, which in turn offers the most accurate prediction of behavior. Basically, the theory is based on a person's intention to engage in behavior; the higher the intention, the greater chance of engaging in the behavior. The intention to engage in a specific behavior is based on attitudes toward the behavior in relation to subjective norms (Buchan 2005). For example, if a person surmises a positive outcome (attitude toward the behavior), and feels encouraged by important people to perform (subjective norm), this results in a higher intention to perform is influenced by a person's attitude, according to their subjective norms of future outcomes.

Ajzen and Fishbein (1980) assume that intentions capture the motivational factors that influence a behavior; they are indications of how hard people are willing to try and how much effort they are willing to exert in order to perform the behavior. In other words, behavioral intentions are regarded as a summary of the motivation required to perform a specific behavior, reflecting a person's decision to pursue a course of action – as well as an indication of the extent to which people are willing to perform the behavior (Fig. 2.1).

Fishbein (1967a, b) proposes a model of attitudes that underpins the theory of reasoned action. This model holds that beliefs about a specific behavior generate the



**Fig. 2.1** Model of the theory of reasoned action Adopted from Ajzen and Fishbein (1980)

development of an overall attitude towards the performance of a specific act. Sutton et al. (2003) assert that salient beliefs play an important role in the theory of reasoned action. Salient behavioral beliefs are held to decide attitude toward the behavior, and salient normative beliefs are held to decide subjective norms (Fishbein 1967a). Therefore, both attitudes and subjective norms are influenced by salient underlying beliefs. Conversely, salient behavioral beliefs are held to influence attitudes (Armitage and Christian 2003). Here, multiple beliefs may be relevant, and each is related to an expected outcome from engaging in performance of the behavior (Bright et al. 1993; Fishbein and Ajzen 1975). Buchan (2005) views that the intention of a person to perform a given behavior or not is the immediate determinant of action, and attitude is determined by the person' beliefs and evaluation of the expected outcome. For example, if a person believes that positive outcome will result from performing a specific behavior, he/she will have a positive attitude towards that behavior.

#### 2.3.3 The Role of Work Motivation in Organizations

Due to the need for increased productivity to be globally competitive, motivation has become central to success in contemporary organizations. Much of this has resulted from the rapid changes that contemporary organizations are being forced to undergo (Johns and Saks 2005). Here, the need for motivation was inferred by results of systematic analyzes of how personal, task and environmental characteristics influence behavior and job performance (Wiley 1997), showing that motivated employees help organizations survive because they are more productive (Lindner 1998). Therefore, to be effective, managers need to understand what motivates their employees within the context of the roles they perform. They need to understand the psychological processes that cause the arousal, direction and persistence of behaviors that result in performance (Mitchell 1988). For example, Robbins (1998) describes motivation as the willingness to exert high levels of effort towards organizational goals in order to satisfy some individual need. Hence, motives or motivations influence how people act (Buchanan and Huczynski 1985). They have different needs energizing and motivating them towards different goals, and the extent and ways in which a person's needs are met or not at work, affects their behavior on the job (Bateman and Snell 2002).

Cultural diversity demands different roles in motivation (Hofstede and Hofstede 2005). For example, an Indonesian may explain putting in extra effort for their job by the money received, rationalizing "French honor and Koranic mutual obligation." According to Locke and Latham (2004), the maximization of individual motivation to accomplish organizational goals can be acquired by an exhaustive understanding of motivational theories including: Law of Effect; Maslow's Hierarchy of Needs, ERG; Herzberg's Two-Factor; McClelland's; Goal Setting; Expectancy; Equity; Theory X and Y by Douglas McGregor; and finally Theory Z by William Ouchi. Those theories are divided by the following three categories.

Firstly, the fundamental motivational theory is of law of effect – behavior. In 1911, psychologist Edward Thorndike developed the theory of the law of effect, which hypothesises that a behavior that is followed by a positive consequence will probably be repeated. This law has laid the foundation for countless investigations into the effects of positive consequences or "reinforcers" that motivate behavior. Four key consequences of behavior that either encourage or discourage people's behavior are positive reinforcement, negative reinforcement, punishment, and extinction (Thorndike 1999). Positive reinforcement refers to applying a consequence that increases the likelihood that the person will repeat the behavior that led to it. Positive reinforcers include compliments, favorable performance evaluations, and pay raises. Negative reinforcement is the removal of an undesirable consequence. An example of this is when a manager takes an employee off probation. Punishment refers to the administration of an adverse consequence. Examples include criticizing or shouting at an employee, cutting off a bonus or decreasing a salary. Extinction is the withdrawal of, or failure to provide, a reinforcing consequence. When this occurs, motivation is reduced and the behavior is extinguished (Thorndike 1999). Here examples include setting impossible performance goals, or not giving a compliment for a good job. The first two consequences, positive and negative reinforcement, are generally positive for the employees who obtain them. The last two consequences punishment and extinction, are normally negative for the employees who receive them, and reduce possibility of the repetition of an undesirable behavior.

The second category of major concepts in work motivation assumes that all individuals process the same set of needs. These content theories include Maslow's Need theory; ERG theory, Two-factor theory, and McClelland's theory as follows:

Maslow's Need theory (1954) is characterized by a pyramid of five layers of needs in order of hierarchy. In order of importance these are physiological, security, esteem by others, self-esteem, and self-actualization. Physiological needs are the lowest level and self-actualization is the highest level, with all needs being satisfied in order.

ERG theory consists of three basic human needs. Similar to Maslow's lowest levels of physiological and safety needs, E stands for existence. The letter R stands for relatedness, which is parallel to Maslow's social needs, and G stands for growth, which is similar to Maslow's highest level of needs (Robbins et al. 2003)

Herzberg's motivation theory has been considered as the most influential motivation theory of the modern post-war era (Ruthankoon and Ogunlana 2003). Frederick Herzberg's two-factor theory distinguishes between two broad categories of factors that affect people working on their jobs. The first factor is hygiene, which can include characteristics of the workplace including company policies, working conditions, pay, and supervision (Beardwell and Holden 2001). These factors can make employees dissatisfied if they are poorly managed. The second category is motivators, which can include the nature of the work itself, the actual job responsibilities, opportunities for personal growth and recognition, sense of personal achievement, sense of group achievement, and the feelings of achievement the job provides (Fincham and Rhodes 2005). When these factors

are present, jobs are presumed to be both satisfying and motivating for most people.

David McClelland (1985) identified a number of basic needs that guide people. The most important needs for managers are the needs for achievement, affiliation, and power. A need for achievement is characterized by a strong orientation toward accomplishment and an obsession with success and goal attainment. The need for affiliation reflects a strong desire to be liked by other people, and the need for power is a desire to influence or control people.

Lastly, the third category is the process theories of motivation including Goal Setting theory, Expectancy theory, Equity theory, theory X and Y and theory Z, stress the differences in people's needs, focusing on the cognitive processes creating these differences (Robbins et al. 2003). One important theory of motivation relevant to the present study is goal setting - based on the idea that clear goals are themselves motivating to employees. In other words, achieving goals is a motivator, occurring when the goals are developed in a collective and participative way (Hackett and Spurgeon 1996).

Expectancy theory is based on the importance of reward forming linkages between effort and performance, good performance and reward. The main concept of expectancy theory is that people's performance will be based on both the perceived likelihood that their efforts will lead to a certain outcome and on how highly they value that outcome (Green 1992). According to expectancy theory, the reason why people like to take actions and co-operate to attain the goals of an organization depends on the following three items: (1) the value of behavior itself; (2) the probability of success and value placed in such success; and (3) the probability of obtaining rewards and the value of the rewards (Robbins et al. 2003).

Equity theory is simply based on the concept of equality - as the name suggests. The concept of the Equity theory is that people put efforts into their work that are equal to the value of their rewards (Robbins et al. 2003). If rewards are fair, people will be motivated, and unfair reward systems will result in lowered motivation.

Douglas McGregor's (1967) theory X and theory Y summarise two possible views of management in work motivation. Theory X provides a view of direction and control, theorising that employees dislike work and try to avoid it. Therefore, the function of management is to force the employees to work through coercion and threats of punishment. Theory Y is a humanistic approach to motivation, hypothesising that employees are naturally motivated when they are satisfied, and that when they are satisfied they can be well committed and motivated. Theory Y applies when management exploits employee participation in organizational decisions.

William Ouchi's (1981) theory Z describes the characteristics of Japanese companies as producing high employee commitment, motivation, and productivity. Most Japanese employees are guaranteed lifetime employment to increase their loyalty to the company. Here, the responsibility for success or failure is shared among employees and management. Generally, employees do not specialize in one skill area – being required to learn more about the company by developing several different working tasks. Many of these characteristics are similar to theory Y.

Yamaguchi (2001) asserts that motivation in Japanese employees derives from the opportunities afforded them by management to contribute to making things better, and from their perception that their job is a career providing increasingly worthy work. This motivation is said to come from new training, new jobs, rewards, and from the active participation in the process of organizing the work. Recent research by Kubo and Saka (2002) shows that there are three major motivational factors that have an impact on Japanese employees; these are monetary incentives, human resource development or personal growth, and job autonomy or task achievement. However, it has been found that Japanese are very responsive to non-monetary rewards, which often helps consolidate and promote their position within the group (Cesare and Golnaz 2003).

Japanese management provides both extrinsic and intrinsic motivations (Fukuda 1993). To enhance extrinsic motivation, Japanese management offers both job and income securities to employees through the lifetime employment system and seniority based pay and promotion system, along with comprehensive welfare system. To increase intrinsic motivation, Japanese management offers continuous on the job rotation. Chen (1995) points out that Japanese management puts more emphasis on extrinsic motivational factors, such as job security, work condition and wages, than on intrinsic motivational factors of creativity and achievement. However, creativity and achievement are normally accomplished in the form of group efforts that are accredited to the group.

Young (2004) points out that the task of management is to adapt motivational strategies to organizational conditions so that disincentives to performing well are overcome. Many ideas have been proposed to help managers motivate people to work, and good work performance is often generated from good behavior (Mitchell 1988). Therefore, to understand how behavior of people can be motivated, motivation theories need to be taken into account, and behavior modification techniques need to be developed to enhance work performance.

In this book, the above review of strategies suited to motivating employees is used to serve as the basis for understanding the interrelationships of different variables and how they may respond to adaptation. This suits the perspective of this study, which emphasizes on the area of organizational behavior which involves needs for change. Here a change model can be used as a motivational model to assist in the successful adaptation and acceptance of Japanese management practices in Thailand. However, in order to provide a basis for implementation of this model, a conceptualization of the need to change must be taken into account.

#### 2.3.4 Conceptualization of the Need to Change

Adaptation is a narrow concept of change specifically used within evolutionary change models, referring to variations and modifications in organizations or their elements in order to alter changes in the external environment (Cameron 1991). Adaptation is an event that results in a change in supposition about individuals and

organizations, and requires a corresponding change in one's expectations, behaviors, and relationships (Marks 2003; Schlossberg 1981). For the perspective of this study, it is hypothesized that adaptation and acceptance of Japanese management practices can be successfully achieved by motivating Japanese managers to adapt or change their Japanese management practices, and motivate Thai subordinates to adapt or change their attitudes to accept such practices.

There are many factors that can drive change. For example, Price and Chanal (2006) highlight several factors which are critical to successful change management including leadership and shared vision, strategic management, responsibility, vision, teamwork and collaboration, open communication, respect, support and developing others, effective problem solving, participation, and information flow. Adrianna (2001) suggests that change models need to be described in detail in order to reveal why change occurs (driving forces of change); how change will occur (stages, scale, timing and process), and what will occur (content of change, outcome and why to measure it). In order to conceptualize the need for change, ten change models are reviewed in order of historical development, the earliest of which was a fundamental model of change presented by Lawin (1952) who proposed change procedures as unfreezing, moving, and refreezing.

Of particular interest to this book, Weisbord (1978) developed a diagnostic apparatus for identifying six key factors where an organization has to perform well in order to succeed in organizational change. Weisbord's six-box model, still widely used in the development of management models, provided a diagnostic tool which identifies six areas to examine when organizational change is required (Valeie and Kim 2000).

In another view, Tichy (1983) delineated organizational change as the introduction of new patterns of performance, belief and attitudes among employees in organizations. In this model organizational change can also be the main causes of problems or opportunities that result from differences in the environment, diversification, know-how and people. Following this, Lundberg's (1985) organizational learning-cycle model of organizational change emphasized external environmental factors and internal factors in organizations. The internal factors are generally adequate resources, system readiness, apparatus for corresponding communications and control, and leadership.

Dyer's (1985) cycles of cultural evolution model advised that if there is perceived crisis followed by a collapse of pattern-maintenance symbols, a change in leadership with new values is needed for a culture change to transpire, even though there may be a conflict before the new values are admitted. Following the development of this model, Schein's (1985) life model further develops Lundberg's work and puts different stages in an organization's development against the function of culture and diverse culture change methods. However, using a different approach, Gagliardi (1986) chose to perceive the essence of culture as subconscious suppositions expressed in conscious beliefs and values. His model involved four key development stages. Firstly, leadership delineates objectives and tasks according to a particular belief and values. Second, the belief is assured by experience, and subordinates start to share the belief and values. Thirdly, subordinates agree that the belief and values are the cause of the desired results, and finally, the belief and values are shared unquestioningly by all concerned. He asserted that culture change can be revolutionary when the old culture fades or vanishes, and is transformational when the exiting new culture merges values.

Leavitt and Bahrami (1988) developed a Diamond model that emphasized the relationships between: people issues, motivation, skill and rewards; business structure, processes, organization and job definition; control processes, performance indicators and management information; and technology, operational systems, and information delivery. Next, basing their approach on the models developed by Lewin (1952), Beyer and Trice (1988), and Isabella (1990), Roberts and Brown (1992) divided change into three steps of processing including, unfreezing processes, experimentation, and refreezing. Lastly, the most recent model reviewed in this study is McKinley's Seven Ss, which presents an inclusive set of factors that have been developed to assess organizations' readiness for change (Peter and Watermann 2004), In this model seven factors including structure, strategy, systems, shared values, skills, style and staff are all of concern prior to implementing change. However, this model takes little account of external factors (Price and Chanal 2006).

As mentioned above, Weisbord's (1978) six-box (diagnostic) model including vision, leadership, rewards, resources support, structure, and relationship is of particular interest in this book as it has several highly applicable characteristics. Vakola and Nikolaou (2005) confirm that good work relationship, clear vision, leadership, allocation of resources, rewards, and training are crucial in order to increase the level of change readiness. Weisbord's model is output-focused and based on an open-system view of organizations, and is one of the most unsophisticated and straightforward systematic models available - with considerable intuitive appeal (Harrison and Shirom 1999). In addition, several studies have successfully adopted Weisbord's six-box model as motivational factors to inspire employees to change (e.g., Lin 2007; Lok and Crawford 2000; Abraham et al. 1999a, b; Chui et al. 1996; Birnbaum 1984; Preziosi 1980). Therefore, this model has been adopted for use in this book to specify the factors that influence adaptation and acceptance of Japanese management practices in a cross-cultural context, and discussed in detail in the following section.

## 2.4 The Factors for Changes

The factors needed for changes in the model of this study have been identified on the basis of Weisbord's six-box model. The six-box model is intended to assist individuals in understanding the ways in which organizations can perform more effectively, and by specifying problem areas, make suggestions and initiate procedures for reparations. This model also provides a good guideline for determining what factors need to be acquired by individuals or organizations in order to meet operational goals (Beatrice 1990), which is particularly important in facilitating the adaptation and acceptance of Japanese management practices. Therefore, for the purpose of conceptualizing need for changes in this study, Weisbord's six-box model is utilized to determine motivational factors that influence the adaptation and acceptance of Japanese management practices.

Weisbord's six-box diagnosis model, by definition, provides a way of looking over an organization to determine any problems and decide solutions for them (Dulcelina 1997). Weisbord, a change management specialist, has been associated with improved techniques including "Future Search" which have been applied to recent change management initiatives in the U.K.; for example, the King's Fund's Urban Health Partnership Project (Plamping et al. 1998).

The boxes in Weisbord's six-box model (1978) include "vision" (extent to which leaders are committed to share organizational goals); "structure" (degree to which employees in the organization are involved in governance); "reward" (level of morale and satisfaction); "resource supports" (availability of processes or tools to facilitate the adaptation); "relationship" (interactions between stakeholders); and "leadership" (effectiveness of the leaders in directing activities and providing resources). The six-box model is shown in Fig. 2.2 below.

Elements of the above model displayed in Fig. 2.2 (vision, structure, rewards, resource supports, relationship, and leadership) are discussed following.

#### 2.4.1 Vision

The vision box concerns clear mission and what is expected to be achieved in the establishment. In this, research indicates that the implementation of change requires



Fig. 2.2 Six-box model

leaders to provide the need for change and convince other members in the organization that change is necessary (Laurent 2003; Burke 2002; Armenakis et al. 1999b; Kotter 1995). The process of convincing members in the organization of the need for change often starts with crafting a compelling vision (Fernandez and Rainey 2006). Kets de Vries and Balazs (1999) suggest that leaders can easily convince members in the organization to implement a change by creating vision. Vision is a unique feature that distinguishes the business from the employees (Beatrice 1990). Here, direction needs to be provided to the business to accomplish its goals, and employees need to know what the change is all about and their role in participating such change.

Vision is defined as an idealized object that the leader wants the organization to achieve in the future (Hackett and Spurgeon 1996; Conger and Kanungo 1987). Vision also captures the worth of work, allowing employees to identify their contributions toward achieving the ideal (Tvorik and McGivern 1997), conceptualized as a tool proffering direction to facilitate organizational success (Foster and Akdere 2007). Vision is normally perceived by some members in the organization to be the future direction that all members agree to pursue (Hwang et al. 2005). Goodstein et al. (1993) advocate that vision provides the organization with a clear sense of direction and provides a powerful mobilization of vigor – also providing employees with sense of being engaged in something significant. Marzec (2007) points out that vision gives a compass to the organization to create a clear path for employees to follow and identify organizational goals.

Vision provides all members in an organization with a sense of purpose and picture of the future (Hoe 2007; Morden 1997). Similarly, many researchers (e.g., Testa 1999; Eccles 1994; Nanus 1992; Kouzes and Posner 1987) see vision as a unique, ideal image of the future. They say that without a future picture, employees cannot be drawn from where they currently are to move toward the future state (Senge 1997). Kilpatrick and Silverman (2005) assert that employees are efficient if the organization has a clear vision, and McGivern and Tvorik (1998) suggest that the key to achieving a higher degree of long-term organizational success can be ascribed to the use of a clear and effective vision. Therefore it is the leaders' responsibility to create a vision and present steps of that vision clearly so subordinates can see exactly how to achieve it (Alley 1999). However, as Kotter (1995) explains, the content of vision must be sensible and plainly understood by all members in the organization as content without elucidation is ineffectual.

Leaders can motivate their subordinates by sharing their vision for the organization to facilitate subordinates to recognize the directions needed to achieve organizational goal (Hackett and Spurgeon 1996). Awamleh and Gardiner (1999) state that motivation can arise when leaders inspire their subordinates by providing meaning and challenge to their work; for instance, giving encouragement, communicating vision, and acting in ways that inspire enthusiasm. Many studies have shown that vision is a tool that leaders use to inspire subordinates to higher levels of commitment and performance (Dvir et al. 2004; Proctor and Doukakis 2003; Bryman 1992). Thus, vision provides an interpretive framework of shared meaning for organizational members (Holladay and Coombs 1994).

Basically, the creation of vision is often seen as the starting point for strategic future development (Awamleh and Gardiner 1999), but only if it is understood and meets the challenge of the future as perceived through the eyes of all members in the organization (Hackett and Spurgeon 1996). Therefore, a shared vision is an essential component of an organizational vision (Youngdahl et al. 1998; House 1995), creating a clear organizational purpose and supporting the changes necessary for reaching desired future outcomes (Hoe 2007). Larwood et al. (1995) mention that leaders are required to clearly state their vision for their organization in order for it to be claimed or owned by all members and become part of a new social architecture within the organization (Dvir et al. 2004; Proctor and Doukakis 2003). However, employees are more likely to support a vision of the organization when it is the result of an authentic exchange of views among everyone in the organization (Licata and Harper 2001; Blase and Blase 1997). For example, a study by Barnett and McCormick (2003) suggests that leaders should recognize the need to involve those who implement and live with the result of a vision, by collaborating and providing opportunities for participation in developing the vision to give a sense of ownership. Without this shared sense of creation and shared responsibility, success is improbable (Tichy and Sherman 1994).

Employee perception of vision is essential because it is the employees who actually put the vision into action. Oswald et al. (1994), stress that vision must be salient to all members in the organization, with members sensing that a clear vision has been articulated, that the leadership of the organization shares the vision, and that the vision is appropriate. Holpp and Kelly (1988) give an instance that if employees are not absolutely sure about the vision, they will have to presume the meaning and what actions they need to take. It is leaders' responsibility to make sure that their subordinates fully understand the vision, clarify what it means in regard to each employee position, and ensure that the resources to execute the vision are in place (Foster and Akdere 2007). Furthermore, Collins and Porras (1996) note that vision must be translated from words to pictures with a description of what it will be like to accomplish the desired organizational goal.

Vision is a stimulus for change (Barnett and McCormick 2003; Smith 1996a, b; Snyder and Graves 1994), and Jones and Kahaner (1995) assert that it is the most powerful technique that an organization can utilize to implement change. Successful visionary leaders communicate their ideas to facilitate changes and widen support for their vision (Bennis and Nanus 1997; Cowley and Domb 1997; Conger and Kanungo 1987, 1988; Bass 1985) and organizations need to share their visions to enable proactive direction and sustain the adaptation process to create the future (McGivern and Tvorik 1998; Kotter 1995, 1996; Garfield 1992; Naisbitt and Aburdene 1985; Miles and Snow 1978). Many researchers (e.g., Holt et al. 2006; Armenakis and Bedeian 1999; Armenakis et al. 1993) have asserted that the primary method for creating employee change readiness, acceptance, and adaptation is a change message perceived from direct communication, and symbolic evidence as the change unfolds. Armenakis et al. (1999a) state that the message perceived from shared vision creates core sentiments in employees that they use to guide decisions about their level of support for such initiative. As shown above, one of the most steady features across diverse change is the attributed important of vision and effectiveness in its communication (McAdam 2003; Kotter 1995). One of the key sentiments to providing change readiness and supporting change is the sense that change is needed (Armenakis et al. 1999a, 1993), and vision generates much of the justification for such a sentiment. Correspondingly, Nutt and Backoff (1997) view vision as the trigger for radical transformational change. In particular, vision is a core motivational tool for organizations to use in inspiring their employees to implement a desired change (Kantabutra and Avery 2007; Cole et al. 2006; Landua et al. 2006; Hwang et al. 2005; Dvir et al. 2004; Barnett and McCormick 2003; Abraham et al. 1999a; Awamleh and Gardiner 1999; Testa 1999; Hackett and Spurgeon 1996; Bryman 1992).

#### 2.4.2 Structure

Structure refers to the degree of authority in an organization and how the work is apportioned (Beatrice 1990), identifying who is formally responsible to respond to the adaptation. Structure is defined as series of steps in change activity (Richardson 2007), and the basic underlying theory is simple. Structure is the process of change implementation, and viewed as sets of responsibilities and patterns of interactions (Hernes 2000). Structure first allocates tasks (what and how to implement the change) and then proffers coordination (how to make the whole thing work) (Waterman et al. 1980). Structure provides participants in a change process with enough interpretative plans or references to communicate the reality of their actions in the change process (Akgun et al. 2007) and indicate how the change can be best accomplished (Staber and Sydow 2002).

Graetz and Smith (2005) view structure as a process of how to change, involving investment information technology, horizontal and vertical communications, and new human resource practices. Moreover, Garg and Singh (2006) state that structure is associated with an organizational support system that assists change process, in which the support system includes span of control, manpower utilization, administration, communication, integration and coordination. Feldman and Pentland (2003) propose that this process can be characterized as abstract patterns that participants utilize to guide, account for and refer to specific performances of change process. The abstract patterns refer to the understanding of how process is achieved and who does what in particular situations in combination with formal and informal rules, shared understandings, and agreements of change process (Vilkas 2006). Structure begins with defining the process of change and addresses the key questions: How can change be done? How does information flow? What are the process and lateral capabilities? Who will drive the change process? (Williams and Rains 2007). Similarly, Jessop (2000) interprets structure as giving rise to questions of what and how to implement the change, and who is driving the change process.

Although vision offers only a broad outline of an organization's direction (Hoe 2007; Morden 1997), structure provides the narrow ways of implementation of

change process in particular situations, by specific people, and in a specific time frame (Vilkas 2006). As structure provides a roadmap that outlines a change process, it is possible that structure can be seen as a plan for change. In this, planning identifies activities in the change process (Nutt 1993). Lippert and Davis (2006) assert that planning is the collaborative creation of design specifications for change directed to specify what is needed, where and when the actions will happen, who is in charge, and how the action will start and end.

Morris and Raben (1995) suggest the needs for leaders who drive change programs as including pilot projects, experimental units, technology supports, and special task forces. In order to be successful in a change process, participants need to know what to do, how to improve upon what they do, and how to implement it effectively (Rosenberg 2003). Porras and Robertson (1992) state that a change process should be guided by information about:

- The organizational features that can be changed;
- The proposed outcomes of those changes;
- The causal mechanisms by which those changes can be accomplished; and
- The factors that successful change depends on.

O'Connor and Fiol (2006) assert that successful implementation of change can be facilitated by effective structure supports. Structure refers to the direction of how to implement the change through providing a series of steps for change activity, and identifying who is responsible for the change process (Richardson 2007; Williams and Rains 2007). When a clear direction of how to implement the change is recognized, participants will be motivated to implement such change (Hackett and Spurgeon 1996).

#### 2.4.3 Rewards

Rewards are the technique whereby the needs of the organization or individuals are fulfilled (Todd et al. 1988). According to Herzberg (1987), work rewards are the intrinsic and extrinsic benefits that employees receive from their jobs that influence their efforts to perform well (Kocabiyikoglu and Popescu 2007). This is in agreement with Locke and Latham (2004) who assert that motivation occurs not only as a result of external factors, but also as a result of "internal factors that impel action and external factors that can act as inducements to action."

Frederick Herzberg's two-factor theory distinguishes between two broad categories of rewards that affect people working on their jobs. The first category, extrinsic rewards (hygiene), includes the characteristics of the workplace including company policies, working conditions, pay and supervision (Beardwell and Holden 2001). These rewards can make employees dissatisfied if they are poorly managed. The second category is intrinsic rewards (motivators) which include the nature of the work itself, the actual job responsibilities, opportunity of personal growth and recognition, sense of personal achievement, sense of group achievement, and the feelings of achievement the job provides (Fincham and Rhodes 2005). When these factors are present, jobs are presumed to be both satisfying and motivating for most people. In other words, rewards that come from others are considered extrinsic, and rewards that are personally experienced are intrinsic.

Judson (1991) asserts that one common tactic that managers can employ to minimize resistance to change is rewards. Both extrinsic and intrinsic rewards are most frequently considered when change is being implemented (Buch and Tolentino 2006), however, from the perspective of human behavior research, extrinsic rewards most significantly affect employee participation (Fenwick and Olson 1986). Therefore, certain forms of extrinsic motivations, for instance monetary rewards, praise and recognition rewards, may best inspire employees to participate in the desired change.

Numerous studies have shown that rewards are regularly used to motivate employee behavior to achieve positive organizational outcomes (Ford and Greer 2005; Kerr and Slocum 1987; Cummings and Schwab 1973), and most managers believe that using the right motivational tools inspires employees into doing more of what management wants (Strickler 2006). Rewards can also act as a reinforcement to motivate to the performance of desired behaviors in an ongoing way (Lin 2007; Chrusciel and Field 2006; Govindarajulu and Daily 2004). In addition, Gupta and Govindarajan (2000) showed that rewards are important in assisting organizations in successful knowledge-sharing implementation, and effectively influencing employees to achieve their personal goals (Creech 1995). For example, a study by Lin et al. (2005) found that rewards affiliated the implementation of the Chronic Care Model adopted in health care organizations.

As mentioned above, rewards can be implemented in many forms, including both financial and recognition (Govindarajulu and Daily 2004). Recognition, promotion, increase in pay, benefits and incentives, are some of the systems that can be utilized to reward employees for participating in a change process (Marks 2001; Patton and Daley 1998; Leitch et al. 1995; Atwater and Bass 1994). However, monetary rewards, one of the most favorable motivators for encouraging employees to participate in change, are often utilized as a means to motivate employees to reach organizational goals (Groves et al. 1994). Stajkovic and Luthans's (2003) meta-analysis of 72 studies indicates that an organizational behavior modification intervention using monetary rewards improved task performance by 23%, whereas an intervention with social recognition did only 17%. Nevertheless, although direct monetary rewards are undoubtedly the most successful motivators, Goodpastor and Montoya (1996) suggest that in business, recognition, working conditions, the work itself, job responsibilities, opportunities for personal growth, and sense of personal achievement can also be effective. In the last instance however, Arocena and Villanueva (2003) point out that all these can ultimately be expressed in terms of money, and monetary roots are found in every case.

Monetary pay is of significant concern since this is perceived to be a manifestation of an individual's value to the organization (Appelbaum and Mackenzie 1996). The use of monetary or other financial rewards is based on the reinforcement theory (Perry et al. 2006) which emphasizes relationships between target behaviors (e.g., performance outcome) and motivational tools such as pay increases (Skinner 1969). This theory is premised on the principles and techniques of organizational behavior modification (Stajkovic and Luthans 1997; Luthans 1973).

Pearce (2007) points out that although monetary rewards motivate employees, they are not likely to be motivated by money all the time, and different employees appreciate different kinds of rewards. Innovative rewards such as paid vacations, time off from work, opportunity of personal growth and feelings of achievement the job provides can be effective in motivating employees (Fincham and Rhodes 2005; Bragg 2000). Jeffries (1997) found that there are some employees who are more motivated by recognition than anything else, and do their best when their input is recognized. Indeed, most employees expect appreciated than monetary rewards (Kohn 1991), and praise is often more appreciated than monetary rewards (Kohn 1993). Lincoln and Kalleberg 1990) showed that promotion opportunities influence employees' behaviors of motivation and organizational commitment, particularly when their employment is stable. Similarly, in a study of Japanese workers, Takahashi (2006) found that motivation can be achieved by receiving rewards of rapid achievement in gaining higher position, high levels of compensation, and engagement in interesting and challenging work.

#### 2.4.4 Resource Supports

Oakland and Tanner's (2007) study shows that resources support such as training and skill development are critical to successfully managing change within both public and private sector organizations. Here, successful change requires adequate resources to support the process (Fernandez and Rainey 2006) such as support policies for procedures and machinery that assist workers, and systems of tracking work and identifying problem areas (Beatrice 1990). Thus, Eisenberger et al. (1990) suggest that when employees perceive resources support, an atmosphere of trust in the organization's willingness to fulfill its obligations towards employees is created. However, policy implementation scholars have long recognized the need for sufficient resources to implement policy change (Matland 1995; Goggin et al. 1990; Mazmanian and Sabatier 1989). Readily available finance, communication technologies, flexible systems and responsive training and education all contribute to a supportive foundation that facilitates change process (Kerber and Buono 2005). In support of this, Boyne's (2003) study shows that resources support is one of the most significant factors for implementation of change, and substantial financial support is a major resource factor benefiting such change (Larson and Barnes 2001). Conversely, failure to provide sufficient resources in support of change leads to feeble implementation efforts, higher levels of interpersonal stress, and unsuccessful change implementation (Fernandez and Rainey 2006; Brescia 2004). Students of recent administrative reforms have also observed that scanty resources can hamper organizational change (Chackerian and Mavima 2000; Berry et al. 1999; Bringham and Wise 1996).

According to Jones et al. (2005), the advantages of improving all resources and systems are in the increased achievement of organizational goals through development of employee capabilities. This was also observed by Miller and Chen (1994) and Turner and Crawford (1998), who reported that successful change implementation was demonstrably seen as being the result of increased development of skills and capabilities among employees. However, not only is sufficient funding necessary to provide implementing agencies with the administrative and technical capacity needed to ensure the achievement of objectives (Fernandez and Rainey 2006), but time is also a necessary resource in change (Brescia 2004). Time allows employees to participate in the change process and successfully bring their skills to the process. Therefore, to be successful in change implementation, a key task for leaders is not only to allow sufficient time for the implementation, but to find a balance between the resources deployed in change process (Meyer and Stensaker 2006). They also need to overcome resistance to change by bolstering the confidence of organizational members by ensuring that their organization has adequate resource supports to ensure successful implementation of the change (Self 2007).

Fernandez and Rainey (2006) state that resources support can lead to synergies increasing the likelihood that all changes will be implemented successfully. O'Connor and Fiol (2006) suggest that when employees feel that they have resources support for change, it improves the likelihood of change implementation success. Employees' perceptions of the extent to which their organization has the sufficient resources support to achieve change (e.g., the provision of timely information, funds, and training), and the degree to which they can actively and genuinely participate in the process, are significant factors in accomplishing successful change (Jones et al. 2005; Smith 2005).

#### 2.4.5 Relationships

The importance of good company relationships both between employees in the organization and the outside environment was emphasized in a study by Todd et al. (1988). As a result, attention needs to be paid to address any matter that may cause conflict between stakeholders, calculating the interdependent effects of negative and/or positive outcomes to ensure a successful change process (Beatrice 1990). In this way, relationships are primarily concerned with maintaining warm, friendly interactions with others (Lee 1997). Thus, in today's business environment, social relations are often seen as a useful way to reach organizational goals (Neergard et al. 2005). For example, a study by Lam (1997) indicated that good relationships are a significant factor in increasing job satisfaction among quality managers. Furthermore, if employees have positive attitudes towards each other, the favorable attitudes will positively influence their behavioral intentions to act according to group decisions (Taormina and Lao 2007).

Motivation researchers have long been intrigued by the internal factors of interpersonal relationships that effectively motivate people (Steers et al. 1996).

The internal motivational factor of affiliation (Choi 2006) plays an important role in organizational behavior. According to McClelland's (1985) theory of needs, employees with a high need for affiliation tend to emphasize harmonious relationships with others, and need to feel accepted by them; they tend to conform to the norms of their work group (Veroff and Veroff 1980). Employees who have high needs for affiliation tend to gravitate to work environments where the primary focus is on developing and maintaining warm relationships with other employees (Street and Bishop 1991). These employees are highly concerned about opportunities to combine socially (Baron and Donn 2003; Stinson and Johnson 1977), tending towards enjoying company, making friends, and maintaining personal relationships (Steers 1987).

Cultural values are an important aspect that strongly influences work attitudes and behaviors (Kirkman et al. 2000). As pointed out in Hofstede's (2005) study, both Thailand and Japan are collectivist oriented, tending to define themselves as members of larger social groups which emphasize the attainment of group goals and cooperation. As collectivists have a strong need for affiliation (Hui and Villareal 1989), they will happily subjugate their needs to the needs of the group as a whole (Murphy et al. 2006). Yao and Wang (2006) point out that such collectivism focuses on the in-group as the ultimate purpose, with the interests of the group more being important than individual advancement, and obligations overriding personal pleasure.

Paul et al. (2004) state that collectivists emphasize the importance of group demands and interests over individual need and high collectivism contributes to high cooperation within group work (Wagner 1995). Therefore, in a business environment in-group relationships are more important than individual achievement (Costigan et al. 2005), with employees being satisfied that their work provides them with the opportunity to involve with others (Hui and Yee 1994). As a result, collectivists are more likely to resolve conflicts by integrating and compromising (Hui and Yee 1999).

#### 2.4.6 Leadership

Leaders are people who are able to keep all factors in balance in order to sustain the steadiness needed for their organization to meet its goals. This factor is particularly important because responsibility for the success of their organizations lies directly with them (Beatrice 1990). Therefore, strong leadership is important when a major change or development occurs in the organization (Mackay and Horton 2002; Jones et al. 1996), and the characteristics of good leaders and their relationships with fellow employees need to be fully understood. The assumption is that leaders exercise their power to positively influence organizational capacity and effectiveness. As shown earlier in Fig. 2.2, good leadership is central to linking the five boxes of vision, structure, rewards, resource supports, and relationship. It is the task of leaders to deal with factors that influence the organization's effectiveness, and

adjust relationships between the other boxes (Beatrice 1990), and if they do not clearly describe the mission or vision of their organization, employees will lose sight of their goals (Dulcelina 1997).

Organizational success or failure depends on the ability of its leaders (Zoller and Fairhurst 2007; Meindl et al. 1985). Many studies have shown that strong leadership is the most important factor for successful change (Landrum et al. 2000; Hoffman 1989; Bibeault 1982). Given the challenges of managing resistance to change, the task of top executives during the implementation of change can be extremely difficult. Therefore, where important change is involved, effective leaders who are competent to embrace and facilitate change are required (Manz et al. 1991) to influence their subordinates' attitudes (Almeida Costa and Amaro de Matos 2002; Horner 1997) and movements towards goal achievement (Robbins 2001). In agreement, Tucker and Russell (2004) point out that effective leaders influence the way their subordinates think, and introduce new processes into the organization by emphasizing perceptions of reality, influencing psychological understanding of current structures, and shaping values to facilitate comprehension of the need for growth (Brown 1994).

As recent research confirms, attitudes are significant determinants of behavior, and changing employees' behavior necessitates changing attitudes (Almeida Costa et al. 2003; Chapman 2002) by clearly presenting a vision for organizational change (Bennis and Nanus 1997). Therefore, leaders are expected to have the ability to articulate their vision to rally subordinates' support for the need of such change (Bass 2002; Conger 1998; Sashkin 1988). Further, Caldwell (2003) believes that change needs to be planned in a rational, linear manner, and the leader's ability to articulate a viable vision is critical to enhancing subordinates' openness toward the change implementation (Groves 2006). In other words, successful change occurs when leaders identify viable new pathways for organizations to follow, and build the impetus for change even when the desired future state of the organization is still undefined (Chapman 2002). Furthermore, Eisenbach et al. (1999) assert that at precarious stages in the implementation of a change process, leaders can effectively change the status quo by presenting appropriate behaviors.

McGreevy (2003) asserts that in changing attitudes in order to motivate subordinates to participate in change in a positive, proactive way, leaders play a critical key role. He maintains that in this capacity, good leaders need to be:

- Open, honest and positive in their communication style;
- Accessible and visible;
- Able to lead and motivate;
- Willing to provide support and advice; and
- Able to demonstrate an understanding and recognition of effects of the change.

As discussed, support and commitment to change from a leader is a highly influential factor in facilitating the change adaptation process (Canning and Hanmer-Lloyd 2002), and plays a crucial role in the successful motivation of employees (Burke 2002; Yukl 2002; Johnson and Leavitt 2001; Carnall 1995; Reyneirse 1994). However, Caldwell (2003) argues that although leadership is

essential to generating and supporting change, without the ability to create and sustain a motivating vision, change will simply fail to eventuate. Furthermore, in order to inspire subordinates to actively participate in change procedures, leaders need to create an attractive vision that clearly considers the underlying needs and values of the subordinates (Ford and Ford 1994). To achieve this, necessitates creative leaders who can engage their employees to higher ideals and moral values through defining and articulating a clear vision of the future (Tucker and Russell 2004), and generate a compelling vision to create quantum advances by building new realities (Harper 1998). In other words, leadership delineates what the organization's future should look like, aligns subordinates with that vision, and inspires them to believe that they will also benefit from the proposed change (Moran and Brightman 2001; Kotter 1996). Furthermore, throughout the process of change leaders are required to pass on what they know and make sure that all subordinates get the same message as they are the natural channels of information who must remain visible and accessible at all times (McGreevy 2003). Leaders have ability to influence subordinates' readiness for adapting change. Readiness refers to the term of organizational members' beliefs, attitudes, and intention (Garg and Singh 2006; Kavanagh 1999). Armenakis et al. (1993) and Beer and Walton (1987) explored the influence of leadership on organizational members for change. They find that the primary concern for generating readiness in an organization is the message, which includes organizational needs and it ability to change. Besides, Britt and Thomas (2007) view that a clear and consistent message from leaders is important for effective change.

## 2.5 Limitations of Weisbord's Six-Box Model

The six-box model assists analysts to address different groups of frequently occurring organizational problems. However, like all other models, it has limitations. For example, the model does not deal adequately with power issues. Furthermore, although leadership is truly considered as a key concern, understanding the leadership requirements of an organization depends on the specific context, the strategic challenge facing it, and the kind and size of organization. Therefore, the innate appeal of the model, with six boxes emphasizing characteristic organizational problem areas, must be balanced with the weaknesses occurring from lack of linkages between the boxes. What exactly does it mean by keeping the boxes in balance? When does its fit between formal and informal systems constitute a significant capacity potential, and when is it a constraint? The six-box model does not seem to respond to these questions, however, this model may assist analysts to put into perspective whatever theories they already know. Therefore, for the purpose of this book on conceptualizing the need for change, Weisbord's six-box model offers utilization to determine what motivational factors influence the adaptation and acceptance of Japanese management practices in Thailand.

Weisbord's six-box organizational model, a behaviorally oriented conceptual scheme, fits the study because it is output-focused and based on an open-system view of organizations. Additionally, it is one of the most uncomplicated and straightforward systematic models available with considerable intuitive appeal (Harrison and Shirom 1999). Weisbord's six-box organizational model serves as a basis for understanding the inter-relationships of different factors and which may respond to adaptation (Dana 2004), acting as a guide to determine what changes need to be made in either individual or organizational behavior in order to reach organizational goals (Beatrice 1990). Furthermore, this model has been successfully applied in many studies focussing on change management (e.g., Lok and Crawford 2000; Abraham et al. 1999a, b; Chui et al. 1996; Burke and Litwin 1992; Birnbaum 1984; Robert 1984; Tichy 1983; Preziosi 1980; Nadler and Tushman 1977). Therefore, Weisbord's six-box model has been selected as the most suitable way to guide the researcher in determining the motivational factors that influence the adaptation and acceptance of Japanese management practices in the context of Thailand.

#### 2.6 Limitations of the Literature

An extensive review of related literature has identified prior empirical studies of Japanese management practices in Thailand. These studies have focused on Thai employee's perceptions of Japanese management practices and on how well Japanese management practices have been implemented in Thailand (William and Onishi 2003; McCampbell et al. 1999; Adams and Vernon 1998; Sedgwick 1995). Surprisingly, no research has been found that examined factors that influence the adaptation and acceptance of Japanese management practice in Thailand. Moreover, although Weisbord's six-box model has been applied in many change management studies (e.g., Lok and Crawford 2000; Abraham et al. 1999a, b; Chui et al. 1996; Birnbaum 1984; Preziosi 1980), it has never been applied within the context of manufacturing in Thailand.

#### 2.7 Summary

This chapter has reviewed the theoretical concepts related to adaptation and acceptance of Japanese management. Although Japanese management practices may work effectively in Japan, their transplantation into the context of Thailand without adaptation may be inappropriate. Japanese management practices may not be appropriate because differences in work values exist between the two countries (Hofstede and Hofstede 2005; Miroshnik 2002). However, to successfully adapt current practices there are two possibilities: to motivate Thai subordinates to accept Japanese management practices; and/or to motivate Japanese managers to adapt their Japanese management practices. Therefore, in order to investigate these possibilities, Weisbord's six-box model including vision, leadership, structure, rewards, resources support, and relationship is utilized to identify motivational factors that influence Japanese managers to adapt or change their Japanese management practices, and inspire Thai subordinates to adapt or change their attitudes to accept such practices. The following chapter presents the conceptual framework and hypotheses for this study.

# Chapter 3 Theoretical Framework

#### 3.1 Introduction

The literature review in the previous chapter discussed many well-known theories and models which are useful for formulation of the theoretical background of this research. The objective of this chapter is to develop the theoretical framework and proposed hypotheses based on the two research questions listed in Chap. 1. As discussed earlier in Chap. 2, the literature specific to Weisbord's six-box model (e.g., vision, leadership, rewards, resources support, structure and relationship) stresses it as an important tool in determining change (Lok and Crawford 2000; Abraham et al. 1999a, b; Chui et al. 1996; Birnbaum 1984; Preziosi 1980). However, as there is no empirical research specifically addressing the relationship between the six-box model (adopted as motivational factors) and the adaptation and acceptance of Japanese management practices in Thailand, it is important to explore this relationship - assuming that the model's components can influence the adaptation and acceptance of Japanese management practices in Thailand. The study focus is to investigate factors that can be introduced to manufacturing organizations that enable Thai subordinates to accept, and Japanese managers to adapt, Japanese management practice in Thai culture.

This chapter has five sections beginning with Sect. 3.1 which summarizes the objectives of the chapter and outlines what will be covered in the subsections. Section 3.2 discusses the theoretical background of the study and provides brief information on how the two research aims of the study (as outlined in Chap. 1) are to be achieved. In Sect. 3.3, the conceptual framework developed in this chapter is presented, illustrating the main conceptual framework (Fig. 3.1) and two subconceptual frameworks to support the main one (Figs. 3.2 and 3.3). In Sect. 3.4, the causal relationships proposed from the framework are discussed, and hypotheses are developed. Section 3.5 summarizes the materials discussed in Chap. 3.



Fig. 3.1 Japanese management practices in Thailand: Development of good management practices



Proposed research model 1

Fig. 3.2 Model of motivational factors influencing Japanese managers

# 3.2 Theoretical Background: An Efficient Management System

Recent research in this area by William and Onishi (2003) confirms that Japanese managers generally attempt to transplant their management practices to their overseas affiliates because of their familiarity and proven success. Additionally, Hodgetts et al. (2006) state that Japanese are very nationalistic and display a high degree of ethnocentrism in overseas affiliates. As differences in national cultures demand differences in management practices (Newman and Nollen 1996), conflicts transpire when the Japanese managers apply their management practices in foreign



Proposed research model 2

Fig. 3.3 Model of motivational factors influencing Thai subordinates

countries without adjustment to the local culture. It is a contention of this study that not adapting management practices decreases the motivation and performance of Thai subordinates. It is also contended that Japanese management practices should be adapted in order to increase effectiveness of Japanese affiliates in Thailand (William and Onishi 2003; McCampbell et al. 1999; Adams and Vernon 1998; Sedgwick 1995).

Adaptation is a contracted concept of change, specifically within evolutionary change models (Cameron 1991). Garg and Singh (2006) found two perspectives of change that have generally been studied: organizational change and individual change. They maintain that organizational change refers to the visible changes in the organization where efforts have been made in different areas including structure, systems, managerial strategies, culture and technology. Conversely, individual change refers to the changes in attitude, vision and target of individuals within the organization. In this study, change is defined as a change in Japanese managers' attitudes toward adaptation of Japanese management practices, and a change in subordinates' attitudes toward acceptance of Japanese management practices.

Cornell (1996) states that change can be achieved if employees are motivated to accept it. Thus, if the motivational factors are understood, change can be successfully accomplished. Buchan (2005) views the intention of a person as either to perform a given behavior or not (the immediate determinant of action), and views attitude as determined by the person' beliefs and evaluation of the expected outcome. In this context, Buchanan and Huczynski (1985) point out that motivations influence how people act. According to Robbins (1998), motivated people are willing to exert high levels of effort towards organizational goals in order to satisfy their individual needs. Therefore, for the purposes of this study, it is presupposed that adaptation and acceptance of Japanese management practices can be achieved

by providing motivational factors to influence Japanese managers to adapt or change their usual management practices, and to inspire Thai subordinates to adapt or change their attitudes to accept Japanese management practices.

For the purposes of this study, a conceptualization of need to change, such as that proposed in Weisbord's six-box model, is utilized to determine what motivational factors influence the adaptation and acceptance of Japanese management practices. Many studies have investigated how to achieve change, several of which have adopted Weisbord's six-box model (diagnostic model) as motivational factors to inspire employees to change (e.g., Lin 2007; Lok and Crawford 2000; Abraham et al. 1999a, b; Chui et al. 1996; Birnbaum 1984; Preziosi 1980). Weisbord's six-box organizational model, a behaviorally oriented conceptual scheme, fits the study because it is output-focused and based on an open-system view of organizations. Additionally, it is one of the most unsophisticated and straightforward systematic models available and has considerable intuitive appeal (Harrison and Shirom 1999). As mentioned previously, these six boxes include vision, leadership, rewards, resources support, structure and relationship (Weisbord 1978). In support of this model, Vakola and Nikolaou's (2005) study confirms that factors such as good work relationship, clear vision, leadership, allocation of resources, rewards and training are crucial in order to increase the level of change readiness. Here, change readiness refers to the extent to which employees hold positive views about the need for organizational change (Armenakis and Harris 2002).

## 3.3 Theoretical Framework

The term theoretical framework refers to a collection of theories and models from the literature which underpin a positivistic research study (Hussey and Hussey 1997). In other words, it is a conceptual model of how the researcher theorizes or makes logical sense of the relationships among the variables that have been identified as important to their problem. However, it is essential to understand what and how those variables can affect the research problem (Kripanont 2007). After the theoretical framework has been formulated, then testable hypotheses can be developed to examine whether the theory formulated is valid or not (Sekaran 2003).

In this study, the theoretical framework has been formulated according to the research objectives in Chap. 1, and based on some aspects of the theories and models of change reviewed in Chap. 2. Having set the context and explored motivational theory and change management theory, a conceptual framework has been developed by adopting Wiesbord's six-box model as the motivational factors influencing Japanese managers to adapt, and Thai subordinates to accept, Japanese management practices (Fig. 3.1).

To fill the gap in the literature review and fulfill the aims of this study, two more detailed sub-conceptual motivational models have been designed to suit both Japanese managers (see Fig. 3.2) and their Thai subordinates (see Fig. 3.3).

Although these two proposed research models look similar, they will yield different results (adaptation and acceptance of Japanese management practices) which were suitably applied into one main theoretical framework for the study (Fig. 3.1).

#### 3.4 Hypotheses Development: Convergence Factors

Based on the two research questions formulated in Chap. 1 and the review of literature on change management and motivational theory in Chap. 2, hypotheses for the present research have been developed as follows.

#### 3.4.1 Vision

One of the important motivators to provide change readiness and support change is the sense that change is needed (Armenakis et al. 1999a; Armenakis et al. 1993). Therefore, implementation of change requires leaders to convince other members in the organization that change is necessary by demonstrating the need for change (Laurent 2003; Burke 2002; Armenakis et al. 1999b; Kotter 1995). The process of convincing members of an organization of this need normally starts with crafting a compelling vision (Fernandez and Rainey 2006) to enable a conceptualization of direction to facilitate organizational success (Foster and Akdere 2007). In agreement, Nutt and Backoff (1997) assert that vision is the trigger for radical transformational change.

Awamleh and Gardiner (1999) point out that motivation arrives when leaders inspire their subordinates by providing meaning and challenge to their work; for instance, giving encouragement, communicating vision and acting in ways that inspire enthusiasm. Hackett and Spurgeon (1996) further point out that leaders who motivate their subordinates by sharing their vision of the organization, facilitate the subordinates to recognize ways to achieve the organizational goal. This is a tool that leaders can apply to inspire their subordinates to increase levels of motivation, commitment and performance (Dvir et al. 2004; Proctor and Doukakis 2003; Bryman 1992).

Vision is seen to be the catalyst for incentive for change (Barnett and McCormick 2003; Smith 1996a, b; Snyder and Graves 1994). The most powerful technique that an organization can utilize to achieve change is for leaders to communicate their vision to widen support for their plans (Bennis and Nanus 1997; Cowley and Domb 1997; Jones and Kahaner 1995; Conger and Kanungo 1987, 1988; Bass 1985). Therefore, one of the steadiest features in successful diverse change is the attribution of importance to vision and effective communication (McAdam 2003; Kotter 1995).

The primary technique for creating employee change readiness, acceptance and adaptation to a vision, is that the change message as perceived from direct communication, and supported by symbolic evidence as the change unfolds (Holt et al. 2006; Armenakis and Bedeian 1999; Armenakis et al. 1993). Tichy and Sherman (1994) state that organizations should describe their vision and proposed destination so that all members in the organizations can share in the process. In this way the shared vision generates positive measures of organizational effectiveness through increased adaptability and flexibility (Bennis and Nanus 1997). Moreover, several studies adopting this concept have demonstrated that vision is highly influential in causing change (e.g., Lok and Crawford 2000; Abraham et al. 1999a, b; Preziosi 1980). In this study, therefore, it is assumed that vision may be a primary motivational factor for both the adaptation and acceptance of Japanese management practices in Thailand.

Based on the preceding discussion of how vision may influence change and in fulfillment of the research aims in Chap. 2, the following hypotheses are presented:

- H1A: vision is a positive influential factor for Japanese managers to adapt Japanese management practices.
- H1B: vision is a positive factor for Thai subordinates to implement Japanese management practices.

#### 3.4.2 Leadership

Although researchers have shown that vision is a primary factor in facilitating change, several researchers have shown that without strong leadership, such change may fail. Therefore, strong leadership is the most important factor in the implementation of successful change (e.g., Landrum et al. 2000; Hoffman 1989; Bibeault 1982). Leadership refers to the ability to motivate, stimulate and inspire subordinates to put extra effort into achieving organizational goals (Robbins 2001a; Landrum et al. 2000; Horner 1997). Leaders can influence the way subordinates think and introduce new processes to the organization (Tucker and Russell 2004). Furthermore, as attitudes are important determinants of behavior (Almeida Costa et al. 2003; Chapman 2002), successful leaders have the ability to change their subordinates' attitudes to work more gainfully for the organization (Almeida Costa and Amaro de Matos 2002; Horner 1997). Eisenbach et al. (1999) assert that these leaders can effectively change the status quo by presenting appropriate behaviors at the appropriate stages in change process. Thus, the leader's support and commitment to change play a crucial role in success (Burke 2002; Yukl 2002; Johnson and Leavitt 2001; Carnall 1995).

Caldwell (2003) points out that strong leaders can facilitate the process of change by specifying new pathways for organizations to follow and building stimulus for change, even when the desired future state of the organization is not defined (Chapman 2002). Therefore, leaders in organizations need to stimulate
subordinates to align their purposes, identities and understandings of the importance of change (Moran and Brightman 2001). In agreement, Canning and Hanmer-Lloyd (2002) believe that support from a leader is one of the factors that facilitate the adaptation process. In this, leaders provide explanations of their vision and desired direction to assist subordinates in understanding and following (Marzec 2007; McGreevy 2003; Armenakis and Harris 2002; Harper 1998; Kotter 1996). This demonstrates that the leaders are committed to investing the time, energy and resources necessary to make the change (Eisenbach et al. 1999), and the subordinates may feel that their participation in the change process is secured (Cowley 2007). In this sense, leadership is a mutually reinforcing component of the change. Several studies have confirmed these principles through utilizing leadership as an influential factor that causes change (e.g., Lok and Crawford 2000; Abraham et al. 1999a; Preziosi 1980).

Based on the above discussion of how leadership may influence change, and in fulfillment of the research aims in Chap. 2, the following hypotheses are presented:

H2A: leadership is a positive influential factor for Japanese managers to adapt Japanese management practices.

H2B: leadership is a positive influential factor for Thai subordinates to implement Japanese management practices.

### 3.4.3 Structure

Only convincing the members of an organization for the need for change by providing vision is not adequate to bring about the change (Fernandez and Rainey 2006). Vision must be transformed into a course of action or plan for accomplishing the change (Abramson and Lawrence 2001; Lambright 2001; Young 2001; Kotter 1995). Planning is the collaborative creation of design specifications for change directed to identify where and when the actions will happen, who is in charge, what is needed, and how the action will start and end (Lippert and Davis 2006). Nutt (1993) defines planning as identifying the specific activities needed in the change process. However, in order to be successful in a change process, employees who participate in such change need to know what to do, how to improve upon what they do, and how to achieve it effectively (Rosenberg 2003).

Structure identifies the narrow ways of how to implement plans for change in particular situations by specific people and in specific time (Vilkas 2006). It provides direction for how to implement change by providing a series of steps for change activities, and identifying who is responsible for the change process (Richardson 2007; Williams and Rains 2007). This should provide change participants with sufficient interpretative schemes or references to communicate the reality of their roles in the change process (Akgun et al. 2007) to indicate how the change can be achieved (Staber and Sydow 2002).

O'Connor and Fiol (2006) assert that successful implementation of change needs to be facilitated by effective structure supports, and when a clear direction of how to

implement the change is recognized, participants will be motivated to implement the change (Hackett and Spurgeon 1996). Furthermore, several researches have confirmed that structure is an influential factor that causes change (e.g., Lok and Crawford 2000; Abraham et al. 1999a; Preziosi 1980). In this study, therefore, it is assumed that structure may be a positive factor to assists in the adaptation and acceptance of Japanese management practices.

Based on the preceding discussion of how structure may influence change, and in fulfillment of the research aims in Chap. 2, the following hypotheses are presented:

- H3A: structure is a positive influential factor for Japanese managers to adapt Japanese management practices.
- H3B: structure is a positive influential factor for Thai subordinates to implement Japanese management practices.

# 3.4.4 Reward

Takahashi (2006) states that high level of rewards generates the enhancement of workers' motivation. Thus, rewards are a significant technique in motivating employees in an organization to implement change (Buch and Tolentino 2006). They are frequently utilized to motivate employee behavior to attain positive organizational outcomes (Ford and Greer 2005; Kerr and Slocum 1987; Cummings and Schwab 1973). In other words, the common purpose of rewards is to attract, retain and motivate employees to increase their effort and output towards the success of organizational goals (Bergmann and Scarpello 2001).

As motivation influences the intensity, duration and direction of an action (Jindal-Snape and Snape 2006), it is considered as a key determinant of successful change (Josep and Caroline 2007). Therefore most managers accept that using the right motivational techniques can inspire their employees into doing more of what they want (Strickler 2006), acting as a reinforcement to ensure desired behaviors (Lin 2007; Govindarajulu and Daily 2004). Recognition, promotion, increased pay, benefits and incentives are some of the techniques that can be utilized to reward employees for participating in change process (Marks 2001; Patton and Daley 1998; Leitch et al. 1995; Atwater and Bass 1994). Thus, as such rewards are seen to significantly affect employee participation (Fenwick and Olson 1986), certain forms of extrinsic motivation including monetary rewards, praise and recognition can be used to motivate them to participate in change. In agreement, several studies have adopted rewards as an influential factor that causes change (e.g., Lin 2007; Lok and Crawford 2000; Abraham et al. 1999b; Preziosi 1980). Therefore, for the perspective of the present study, it is assumed that if employees believe they can receive rewards, they are likely to develop more positive attitudes toward adaptation and acceptance of Japanese management practices.

Based on the preceding discussion of how rewards may influence change, and in fulfillment of the research aims in Chap. 2, the following hypotheses are presented:

- H4A: reward is a positive influential factor for Japanese managers to adapt Japanese management practices.
- H4B: reward is a positive influential factor for Thai subordinates to implement Japanese management practices.

# 3.4.5 Relationship

Interpersonal relationships are a helpful method to reach organizational goals (Neergard et al. 2005). This is because employees with high needs for affiliation are likely to be attracted by work environments where the primary focus is on developing and maintaining warm relationships with other employees (Street and Bishop 1991). It is assumed that if an employee has a positive attitude towards their relationship with other employees in the organization, this will positively influence their behavioral intentions to act according to the group's decision (Taormina and Lao 2007). Thus, the employee's behavior is more likely to be in accordance with the decision of the group they employee belong to. This will be even more so in the case of this study, as both Thai and Japanese cultures are collective (Hofstede and Hofstede 2005), emphasizing on the demands and interests of the group rather than on the individual interests (Paul et al. 2004). Collectivists have strong needs for affiliation (Hui and Villareal 1989), and are more likely to solve conflicts by integrating and compromising (Hui and Yee 1999). Therefore, both Thai and Japanese employees will be concerned about their relationships with others in the organization (Hofstede and Hofstede 2005), and may strongly refuse a change that presents conflict with other employees in the organization. Therefore, for the purposes of this study, it is proposed that interpersonal relationship or affiliation of employees may be a key factor in influencing the adaptation and acceptance of Japanese management practices.

Based on the preceding discussion of how relationships may influence change in organizations and the research aims outlined in Chap. 2, the following hypotheses are presented:

- H5A: relationship is a positive influential factor for Japanese managers to adapt Japanese management practices.
- H5B: relationship is a positive influential factor for Thai subordinates to implement Japanese management practices.

# 3.4.6 Resources Support

Several studies have adopted resources support and found it to be influential in affecting organizational change (e.g., Lok and Crawford 2000; Abraham et al. 1999a, b; Preziosi 1980). Support of available finance, communication technologies,

flexible systems and responsive training and education all contribute to a supportive foundation in facilitating change (Kerber and Buono 2005), making resources support one of the most significant factors in effective change implementation (Boyne 2003). Therefore, to overcome resistance to change, leaders need to boost the confidence of employees by ensuring that the organization has ample resource support to implement such change (Self 2007). Fernandez and Rainey (2006) found that this kind of support can lead to synergies that increase the possibility of all changes being implemented successfully. Indeed, employees' perceptions of the extent to which their organization has sufficient resources support to achieve the desired change, and the degree to which they can actively and genuinely participate in the process, are significant factors in accomplishing successful change (Jones et al. 2005; Smith 2005). Conversely, failure to provide enough resources to support change can lead to feeble implementation efforts, higher levels of interpersonal frustration, and unsuccessful change implementation (Fernandez and Rainey 2006; Brescia 2004). Therefore, it is assumed that resources support may be a motivational factor that assists adaptation and acceptance of Japanese management practices.

Based on the preceding discussion of how resources support may influence change above and in fulfillment of the research aims in Chap. 2, the following hypotheses are presented:

- H6A: resources support is a positive influential factor for Japanese managers to adapt Japanese management practices.
- H6B: resources support is a positive influential factor for Thai subordinates to implement Japanese management practices.

# 3.4.7 Acceptance and Adaptation

As discussed in Chap. 2, motivation arises when a need is aroused and the person wants to satisfy it (Solomon 1994). Motivation is determined by goal directedness, free will or human volition, and perceived needs and desires (Locke 1997). Locke and Latham (2004) assert that the concept of motivation refers to internal factors that impel action and to external factors that induce action.

Motivation has an effect on individual behavioral action (Moody and Pesut 2006). Perry et al. (2006) state that motivational factors can lead to specific behavioral outcomes including adaptation and acceptance of change. Therefore, motivation strategies are important for facilitating any organizational change management (Locke and Latham 2004) that may confront the phenomenon of resistance to change (Beer 2000). Cornell (1996) suggests that effective adaptation and acceptance of change can occur when employees are motivated to accept such change. Thus, if the motivational factors are recognized, adaptation and acceptance of change will be successful implemented.

For the purposes of this study, it is proposed that adaptation and acceptance of Japanese management practices may be successfully achieved by motivating Japanese managers to adapt or change their Japanese management practices, and by motivating Thai subordinates to adapt or change their attitudes to accept Japanese management practices.

Based on the preceding discussion of how motivation factors of vision, leadership, structure, resources support and rewards may influence change, and the research aims outlined in Chap. 2, the following hypotheses are presented:

- H7A: at least one of six factors is an effective factor that positively influences Japanese managers to adapt Japanese management practices.
- H7B: at least one of six factors is an effective factor that positively influences Thai subordinates to implement Japanese management practices.

# 3.5 Summary

Building on the review of literature in Chap. 2, Chap. 3 has developed the conceptual frameworks presented in Figs. 3.1, 3.2 and 3.3. They are designed to explore the two research aims and research questions identified in Chap. 1. The rationale for these have been determined as the constructs of vision, leadership, structure, rewards, relationship, resources support and adaptation and acceptance.

As discussed in Chap. 2, within the change management literature much research has investigated influential factors that can facilitate adaptation and acceptance of change, using Weisbord's six-box model including vision, leadership, structure, rewards, relationship and resources support (e.g., Lin 2007; Lok and Crawford 2000; Abraham et al. 1999a, b; Chui et al. 1996; Birnbaum 1984; Preziosi 1980). These factors have been utilized to make change in several different contexts; however, there is no empirical research specifically addressing the relationship between these factors and adaptation and acceptance of Japanese management practices in Thailand. Thus it is important to explore the relationship between the six-box model and the proposed adaptation and acceptance, under the assumption that this model can positively influence such adaptation and acceptance. Therefore, the focus of this study is to investigate the factors that can be introduced to manufacturing organizations that enable Thai subordinates to accept, and Japanese management practice to Thai culture.

Based on the proposed models, the 14 hypotheses developed from the framework intend to establish the influential factors in facilitating change in Japanese managers' attitudes toward adaptation of Japanese management practices, and change in subordinates' attitudes toward acceptance of such practices. The proposed models may assist Japanese manufacturing companies in Thailand to improve their management practices, and as a result, their overall business efficiency. A discussion of the research methods and procedures used in testing the above hypotheses are included in the next chapter.

# Chapter 4 Methodology, Research Process, and Computer Programs

# 4.1 Introduction

This chapter provides an overview of the methodological approach used to address the research questions proposed in Chap. 1, and to empirically examine the model developed in Sect. 3.1. Nine subsections include: Sect. 4.1 introducing the chapter objectives and Sect. 4.2 which outlines the research process. Section 4.3 discusses literature on the motivational factors adopted in Chap. 2. Section 4.4 overviews the quantitative approach of questionnaires used in the collection of data. Section 4.5 discusses the scale development process used to ensure measures of good psychometric properties, and development of the constructs. Section 4.5 also discusses translation and back-translation of the questionnaires in English, Thai and Japanese. Pre-testing of the draft survey which was checked by management academics and professionals to ensure content validity are also discussed in this section, as well as reliability testing to ensure the quality of measures. Section 4.6 discusses the population, sampling method and procedures used in the book. It overviews the screening and cleaning of data prior to analysis, and includes checking for completeness of responses, frequencies of items and underlying assumptions required as a pre-requisite for further multivariate analysis. Section 4.7 deals with the statistical procedures used to examine the research questions and test the proposed model, using structural equation modeling (SEM) and descriptive statistics to explore the hypotheses. Section 4.8 discusses the ethical issues in this research, and Sect. 4.9 summarizes the materials discussed in Chap. 4.

# 4.2 Research Process-Design and Methodology

The procedure of research adopted in this study consists of the eight steps illustrated in Fig. 4.1. These include: the research objectives, research questions the literature search; research design; questionnaire development; research setting, sampling size and procedures; and quantitative data analysis and interpretation of results.



Fig. 4.1 The research process

# 4.3 Literature Search

In formulating the research process for this book, a review of literature on motivational factors was undertaken (Chap. 2). The search involved secondary analysis of available information including academic journals, books, on-line databases, postgraduate theses and conference proceedings. Databases for accessing the academic journal articles included: EBSCOhost for academic Search Elite, Business Source Complete, Emerald Full Text, PsycArticles, Australian Digital Theses, Expanded Academic Index, Wiley InterScience and Blackwell Synergy.

# 4.4 Research Design

The research design and overview of the methodological approach taken in the present study are discussed below.

# 4.4.1 Quantitative Research

Research methods are generally categorized into two types, quantitative and qualitative (Cherry 2000). Both methods provide various approaches of gathering and interpreting information or research data, and their relative merits have been debated in the literature (Veal 2006). For example, Nunnally and Bernstein (1994) argued that research without application of quantitative approaches cannot be considered as scientific, whereas Denzin and Lincoln (2005) argue that qualitative approaches are displacing "outdated" quantitative approaches. However, each approach is appropriate or inappropriate, depending on the research being undertaken – which is most suited to the subject under investigation and provides the information best suited to the purposes of the research (Collis and Hussey 2003).

Qualitative approaches involve the collection of non-numerical data that includes large amounts of relatively rich information about relatively few subjects. This can be conducted through in-depth interviews, focus groups, participant observations and case studies (Neuman 2006; Veal 2006; Cavana et al. 2001). Moreover, qualitative approaches involve inductive hypothesis-generating research (as opposed to hypotheses testing), and tend to emphasize data that supports the researcher's argument – which is limited to indications of contrary evidence being sought. Consequently, results can vary from research to research, becoming problematic when researchers become fixated on exploratory research and do not progress beyond this to the hypotheses testing stage (Silverman 2006; Cherry 2000). Nevertheless, in practice, qualitative research can be seen as tending to identify trends and new areas to research, whereas quantitative focuses more on particular aspects to prove or disprove what has been suspected in qualitative observations. Although the quantitative approach has been criticized for its inability to produce theory or generate in-depth explanations of qualitative enquiry, it can verify hypotheses and generate strong reliability and validity (Amaratunga et al. 2002; Cavana et al. 2001).

The objective of quantitative research is to develop and employ mathematical models, theories and hypotheses pertaining to natural phenomena (Cavana et al. 2001). Quantitative approach also provides the fundamental connection between

empirical observation, and the mathematical expression of quantitative relationships (Neuman 2006). Therefore, quantitative research utilized in this book involves the measurement and testing of hypotheses based on an empirical examination of dependent and independent variables employing statistical techniques (Neuman 2006; Zikmund 2003).

Quantitative approach is considered appropriate when studying relationships between several variables (Neuman 2006; Cavana et al. 2001; Larsson 1993). As discussed in Chap. 2, needs for change literature indicates that there are relationships between motivational factors such as vision, leadership, structure, rewards, relationship, resources support and change. The book attempts to investigate these relationships in Thai culture context by testing the proposed hypotheses based on existing theory. This method is consistent with a number or quantitative researchers which have found that those motivational factors can influence change in organizations or individual attitudes (e.g. Lin 2007; Lok and Crawford 2000; Abraham et al. 1999a, b; Chui et al. 1996; Birnbaum 1984; Preziosi 1980).

Many of the scales utilized within the above studies have been tested for validity and reliability, hence claiming further scientific credibility. Besides, the scales utilized in the book were adopted from previous studies, and in order to test the hypotheses of the book, qualitative data was required. On the above justification, the researcher decided to choose a quantitative rather than qualitative approach for this book. A quantitative approach has been deemed appropriate to test validity of the hypotheses. Statistical data analysis will also allow the book to identify pertinent information such as which motivational factors influence Japanese managers to adapt and influence Thai subordinates to accept Japanese management practices in Thailand.

According to Cavana et al. (2001), "measurement of the variables in the theoretical framework is an essential part of research and a significant aspect of quantitative research design". In this book, a quantitative technique utilizing mailing questionnaire survey method was applied to measure and collect data. This method permitted the formation of concrete numerical descriptions of respondents' perceptions on a number of constructs, and allowed the relationships between constructs to be examined utilizing several statistical techniques as discussed in the following sections.

# 4.4.2 Survey Methodology

The current study is primarily a deductive and positivist approach for testing the conceptual models. The survey method was selected as the most appropriate research technique to fulfill the objectives of this study due to:

1. *Type of overall research question*. This is the first state for differentiating among manifold research strategies. The question type with "how" and "why" are

appropriate to the case study method while the questions with "who", "what", "how much", and "to what extent" are appropriate for surveys (Yin 1994). The nature of the research questions being investigated in this study, for instance "what are the motivational factors that influence Japanese managers to adapt their management practices?" is appropriate for the use of survey-based research approach.

2. The degree of focus upon contemporary as opposed to historical events. The survey approach is selected in examining contemporary events as opposed to historical events (Yin 1994). This book emphasizes on the ongoing contemporary issue of cross cultural management practices, and employee attitudes.

As noted in the Chap. 3, the objectives of the study are the motivational factors that influence Japanese managers to adapt or change their management practices, and that inspire Thai subordinates to adapt or change their attitudes to accept Japanese management practices. The survey method allows information on beliefs, attitudes and motives to be collected (Burns 2000). Furthermore, the survey method is intended to deal with the nature of people's beliefs, opinions and feelings (Shaughnessy and Zechmeister 1997), making it appropriate for collecting the type of data required to test the theoretical model put forth in the current research. A survey method utilizing questionnaires for data collection generates a quantitative description of a fraction of a population and allows the researcher to draw conclusions about generalizing the results from a sample of responses to a population (Creawell 1994). A survey is also a low-cost, fast, efficient and accurate means of assessing information about a population and can be administered to a large sample (Sekaran 2003; Churchill 1995; McClelland 1994).

# 4.4.3 Cross-Sectional Survey Research

The most popular form of survey is a cross-sectional survey (Zikmund 2003). Cross-sectional surveys involve the data collection from a sample drawn from a particularized population at a particular point in the time (Babbie 2000). These surveys are often utilized (Visser et al. 2000), and in practice most surveys fall into this category (Zikmund 2003). Cross-sectional surveys offer the opportunity to assess relations between variables (Reis and Judd 2000); therefore, this survey approach will be utilized in this book.

# 4.4.4 Mailing Questionnaire Survey

Data collection can be performed using various methods: questionnaires (including personally administered questionnaires, mail questionnaires and electronic questionnaires); personal interview; or telephone interview. Although personal interviews or telephone interviews have many unique advantages, such as opportunity for feedback and probing of complex answers, they have time and cost limitations (Zikmund 2003; Cavana et al. 2001). Moreover, respondents are not anonymous and may be reluctant to provide sensitive information to researchers. Conversely, questionnaires method have some advantages including reaching large numbers of people with a minimum of cost and minimal staff involvement (Sekaran 2003), as well as can be able to be administered electronically, if desired (Cavana et al. 2001). Questionnaire method is an efficient data collection mechanism when the researcher knows exactly what is required and how to measure the variables of interest (Sekaran 2003).

Questionnaires can be self-administered or by mail. Mailing questionnaire was mainly utilized to collect primary data for this book, because (1) this technique can cover a large geographical area. Since there are many Japanese manufacturing companies in Thailand, it was impossible to use self-administered questionnaires due to the high expense and time consumed, (2) mail survey questionnaire can be filled out whenever the respondent has time. Thus, there is a better chance that respondents will take the time to think about their replies (Zikmund 2003). Normally the response rates of mail questionnaires start relatively high for the first two weeks, then gradually taper off (Zikmund 2003). To deal with the issue of low response rates, the researcher utilized much effort in order to improve the response rates.

After considering the above advantages, the researcher determined that the mailing questionnaire survey method were most suitable to gather data required for this book, which emphasizes quantitative analysis of several variables across a relatively large sample (Larsson 1993). By utilizing the mailing questionnaire survey, respondents will be able to respondent freely to questions with the assurance that their identities remain anonymous. Allowing respondents to be anonymous is a critical factor in obtaining more valid answers, especially, compared to personal or telephone interviews (Cavana et al. 2001). It can be noted that survey methodology has been used in much previous research, and most of them used questionnaires survey (Lin 2007; Lok et al. 2005; Abraham et al. 2002; Lok and Crawford 2000; Zineldin and Jonsson 2000; Abolghasemi et al. 1999; Abraham et al. 1997, 1999a, b; Chui et al. 1996). The development of questionnaire survey for the book will be discussed in Sect. 4.4.

# 4.4.5 Unit of Analysis

The unit analysis is defined as the level of aggregation of the data collected during the subsequent data analysis stage (Sekaran 2003). For this study, the unit of analysis is an individual employee within Japanese manufacturing companies in Thailand. The researcher treated each response as an individual data source.

# 4.5 Questionnaire Development

According to Sekaran (2003), a questionnaire is a pre-formulated written set of questions to which respondents record their answers, usually within rather closely defined alternatives. It is a significant instrument in a survey when the researcher knows exactly what is required to measure the variables (Bailey 1994), and is appropriate for obtaining sensitive information such as that relating to the personal attitudes, perceptions and background of respondents. This kind of instrument is one of the most frequently utilized for data collection (Saunders et al. 2003; Clarke 1999) due to its effectiveness in collecting empirical data from large sample (McClelland 1994).

In designing a questionnaire, the sequencing of questions can affect the nature of respondents' answers and cause some errors in analysis (Kinnear and Taylor 1996). Furthermore, Tull and Hawkins (1990) suggest that the overall questionnaire should reflect the objectives of the research and move from one topic to another in a logical manner (all questions focusing on one topic completed prior to moving on to the next topic). Zikmund (2003) recommends that in order to reduce low response rates, a mailed out questionnaire should not exceed six pages.

As discussed in Chap. 3, the questionnaires for Japanese managers and Thai subordinates were developed separately (copies available in Appendix 3). Each survey instrument for this study was limited to three pages and questions classified under the same topic were grouped together in order to aid dynamics and flow. Contents of this instrument included: the purpose of the study; the importance of the study; assurance of complete confidentiality; directions on responding to each question; appreciation for the subject's participation; and the questions. Both Thai and Japanese questionnaires started with a cover letter introducing the research background and aims, disclosing the identity of the researcher and promising confidentiality and anonymity for respondents. Considerable attention was given to developing clear, unequivocal and useful questions before distributing the questionnaires to gather primary data. This was significant because designing questions that respondents can accurately answer will decrease non-response and measurement errors (De Vaus 2002). Questionnaires for both Thai and Japanese were developed similarly and presented in four sections as follows.

- Section 1: Demographic information. This section included seven questions about employees' age, gender, position, tenure and background information of their organizations.
- Section 2: Implementation of Japanese management practices. This section required the respondents to indicate whether Japanese management practices had been implemented in their organizations, and the extent to which they were being implemented.
- Section 3: Motivation to the adaptation/acceptance of Japanese management practices. This section contained six questions about motivational factors that could influence their adaptation and acceptance of Japanese management practices.

Section 4: Adaptation/acceptance of Japanese management practices. This section concerned the extent to which respondents thought they would agree to adapt/ accept Japanese management practices to local conditions if they were provided those motivational factors outlined in the Sect. 3.

# 4.5.1 Scaling Decision

Another important consideration during item generation is whether constructs should be measured by single-item or multiple-item scales. De Vaus (2002) states that the best way of raising reliability is to use multiple-item indicators and other methods involving question wording, interviewer training and suitable methods of coding. However, although single item scales are uncomplicated, Danaher and Haddrell (1996) claim that there are at least two disadvantages. Firstly, the single-item scale has considerable random measurement error (Blalock 1979) and cannot provide information on components or assess various dimensions separately. Secondly, it is difficult to assess reliability with a single-item measure, requiring test–retest formats for estimates. In contrast, multiple-item scales tend to be more representative, stable, and more likely to relate to a construct (Neuman 2006; Nunnally and Bernstein 1994; Sopector 1992), as measurement errors average out when using multiple items. As the number of items increases, measurement error decreases (Nunnally and Bernstein 1994; Sopector 1992).

As the use of multiple indicators in the survey instrument can maximize validity and reliability, the design of the questionnaire in this book was based on identifying and adapting existing multiple-item scales which had been validated and found reliable in previous research. For example, Lok and Crawford (2000) used six factors that can influence organizational effectiveness. These included five-item measures of each of the following items: leadership, measure of vision, reward, structure, relationship and helpful mechanisms. Furthermore, Abraham et al. (1999a) utilized a four-item measure of resource support and a five-item measure of vision to predict the effectiveness of cultural change in improving productivity following the introduction of total quality management. These scales have been adapted for inclusion in the survey questionnaire of this book (see Sect. 4.5.2).

In order to maximize the effectiveness of the survey instrument, a decision was made on the most appropriate way to obtain credible responses from subjects in relation to objects, so that meaningful inferences could be made (Cavana et al. 2001; Devlin et al. 1993; Anderson et al. 1983). As Likert scales are designed to allow respondents to indicate degree of agreement or disagreement of perceived object with a statement on a seven-point scale (Cavana et al. 2001; Anderson et al. 1983) they are the easiest to construct and administer, and the simplest for respondents to use (Zikmund 2003; Anderson et al. 1983). As a result, Likert scales are the most commonly used instruments for measuring opinions, beliefs and attitudes (Neuman 2006; DeVellis 2003; Anderson et al. 1983). Therefore, in order to find the perceptions of motivational factors that can influence adaptation and acceptance

of Japanese management practices based on existing experiences, respondents were asked to respond to a seven-point Likert scale ranging from 1 = not at all important, to 7 = extremely important.

# 4.5.2 Item Adoption

This section explains the process of adopting items for each of the constructs developed in the book. The methodology literature highlighted some issues needing consideration during this process. One of the important issues in designing a questionnaire is that questions should only be included if they are related to the research questions (Veal 2006). Veal also suggests that the wording of questions should avoid jargon, ambiguity and leading questions, and should ask only one question at a time. This is intended to decrease both item non-response and response errors (Veal 2006). Therefore it was important to phrase questions in a way that respondents could clearly and easily understand (Malhotra 2003). According to the above considerations, the scales were adopted with some changes to fit the context of the study.

#### 4.5.2.1 Vision

The idea that vision could used as a factor in successful change was initially measured using Abraham et al. (1999a) five-item scale, with each item scored using a seven-point Likert-type response format targeting respondents from a sample of 350 employees in 14 companies in Australia. Abraham, Crawford and Fisher reported an alpha coefficient of 0.79. In agreement with their study, the adaptations for scale items designed to elicit responses from Japanese managers in the present study were: "Provision of explanation of the advantage of the adaptation to key internal and external groups (employees, management, unions, customers, clients, etc.)"; "A clear rationale for the adaptation and beliefs needed to make the adaptation successful"; "A clear timetable devised for the various phases of the adaptation"; "Provision of a plan detailing the various steps of the adaptation"; and "A discussion of specific new ways in which structure, systems and people practices would adapt". Similarly, the items for scales used for administration to Thai subordinates in the present study were adapted as: "Providing explanation of the advantage of the Japanese management practices to key internal and external groups (employees, management, unions, customers, clients, etc.)"; "A clear rationale for the use of Japanese management practices and beliefs needed to make successful implementation"; "A clear timetable devised for the various phases of the use of Japanese management practices"; "Provision of a plan detailing the various steps of use of Japanese management practices"; and "A discussion of specific new ways in which structure, systems and people practices could implement the Japanese management practices".

### 4.5.2.2 Leadership

Leadership in the model of the present study was measured using Lok and Crawford's (2000) five-item scale, which was initially adopted from the scale developed by Preziosi (1980). Lok and Crawford scored each item using a sevenpoint Likert-type response format in a sample of 1,002 employees in two companies in Australia. These items, used to assess the extent to which organizational effectiveness existed within two companies, reported an alpha coefficient of 0.81. In agreement, Lok and Crawford's scale was used with some changes to fit the context of this study. Thus, the items for the questionnaire of Japanese managers were: "Managers set an example by modeling appropriate behaviors"; "From the beginning there is a powerful guiding executive coalition clearly in support of the adaptation"; "Once the adaptation program commences, there is clear evidence of the CEO and the senior management team attempting and championing the adaptation"; "The CEO and senior management ensure the support of key power groups for the adaptation"; and "The CEO and senior management create and communicate a sense of urgent need for adaptation throughout the organization". In a similar way, the items used in the questionnaire of Thai subordinates were adapted as: "Managers set an example by modeling appropriate behaviors"; "From the beginning there is a powerful guiding executive coalition clearly in support of the use of Japanese management practices"; "Once the use of Japanese management practices commences, there is clear evidence of the CEO and the senior management team attempting and championing the use of Japanese management practices"; "The CEO and senior management ensure the support of key power groups for the use of Japanese management practices"; and "The CEO and senior management create and communicate a sense of urgent need for implementing Japanese management practices throughout the organization".

### 4.5.2.3 Resource Support

In the present study, resource support was measured using Abraham et al. (1999a) four-item scale, with each item being scored using a seven-point Likert-type response format. As Abraham et al. (1999a) reported an alpha coefficient of 0.71 in their study, their scale was adapted to fit with the context of the present study, using only minor changes. Thus items for the scales used in this study of Japanese managers were: "Adequate financial resources are allocated in support of the adaptation"; "Adequate human resources are allocated in support of the adaptation"; "You will receive adequate and appropriate training to enable you to work in new ways"; and "Senior management are prepared to devote their time to the meetings, presentations, communication, education and training needed to support the adaptation". Likewise, the items for scales used in this study for Thai subordinates were: "Adequate financial resources are allocated in support of the use of Japanese management practices"; "You will receive adequate human resources are allocated in support of the use of Japanese management practices"; "You will receive adequate

and appropriate training to enable you to work in new ways"; and "Senior management are prepared to devote their time to meetings, presentations, communication, education and training needed to support the use of Japanese management practices".

### 4.5.2.4 Reward

In the present study reward was measured using the five-item scale of Lok and Crawford (2000), and each item was scored using a seven-point Likert-type response format resulting in an alpha coefficient of 0.73. Therefore, their scale was adopted for use with some changes to fit the context of this study. Thus, the items used in the questionnaire of Japanese managers were: "Providing the opportunity for new and exciting challenges, enabling you to develop skills and capabilities"; "Getting you more pay as a result of the adaptation"; "There is little chance of advancement in the organization unless you embrace the adaptation"; "Successful adaptation provides satisfaction for a job well done"; and "A pay system and benefits from your firm that treat each employee equally." Similarly, the items used in the questionnaire of Thai subordinates were: "Providing the opportunity for new and exciting challenges, enabling you to develop skills and capabilities"; "Getting you more pay as a result of the use of Japanese management practices"; "There is little chance of advancement in the organization unless you embraced the use of Japanese management practices"; "Successful implementation of Japanese management practices provides satisfaction for a job well done"; and "Having pay systems and benefits from your firm that treat each employee equally".

### 4.5.2.5 Structuring for Change

Structure in this book was measured using the five-item scale of Lok and Crawford (2000) who reported an alpha coefficient of 0.74. Their scale was utilized with some changes to fit the context of this study, and each item was scored using a seven-point Likert-type response format. Thus, the items used in the questionnaire of Japanese managers were: "The structure of adaptation process is flexible"; "The structure of adaptation is clear and helpful"; "The structural arrangement provides new insights for adaptation"; "The structure of adaptation process is well designed". Similarly, the items used in the questionnaire for Thai subordinates were: "The structures of Japanese management practices are flexible"; "The structural arrangement provides new insights for adaptation"; and "The structure of adaptation process is well designed". Similarly, the items used in the questionnaire for Thai subordinates were: "The structures of Japanese management practices are flexible"; "The structural arrangement provides new insights into the use of Japanese management practices," "The structural arrangement provides new insights into the use of Japanese management practices," "The structural arrangement practices for management practices," "The structural arrangement provides new insights into the use of Japanese management practices," "The structural arrangement devise for managing the use of Japanese management practices are well designed".

### 4.5.2.6 Relationship

In the model of this book, relationship was also measured using the five-item scale of Lok and Crawford (2000) who reported an alpha coefficient of 0.73. Each item was scored using a seven-point Likert-type response format, and their scale was adapted to fit the context of this study. Here, the items for Japanese managers and Thai subordinates were: "Your relationship with your supervisor will be a harmonious one after adapting Japanese management practices"; "You can feely talk with someone at work if you have a work-related problem"; "There is no evidence of unresolved conflict in the organization"; "Your relationships with peers in your work groups are friendly"; and "You have established relationships with everyone in your organization that you need to adapt to".

#### 4.5.2.7 Adaptation

In the case of adaptation, this item was measured using Zineldin and Jonsson's (2000) four-item scale, with each item being scored using a seven-point Likert-type response format. Zineldin and Jonsson initially utilized this scale on a sample of 114 purchasing managers at Swedish lumber dealers, and reported an alpha coefficient of 0.90. In their study, adaptation was examined as a factor that affects trust and commitment in supplier–dealer relationships. Their scale was adapted with only minor changes to fit the context of the present study measuring the adaptation of management practices by Japanese managers. Thus, the items were: "I am willing to customize the management practices"; "I am willing to adjust the process of management practices"; "I am willing to change the management practices to local conditions".

#### 4.5.2.8 Acceptance

Acceptance was measured by Lin's (2007) four-item scale, and each item was scored using a seven-point Likert-type response format. This scale was initially used on a sample of 500 employees in 50 organizations in Taiwan. In this study, acceptance was seen as an intention to accept knowledge sharing in organizations, reporting an alpha coefficient of 0.85. Lin's scale was adopted with some changes to fit the context of the present study, but was only used in the questionnaire of Thai subordinates in the measurement of their acceptance of Japanese management practices. Thus the items were: "I intend to accept the Japanese management practices"; "I will always make an effort to accept the Japanese management procedures"; and "I intend to accept the Japanese management practices".

#### 4.5.2.9 Japanese Management Practices

The Japanese management practices in this study were measured by Gill and Wong's (1998) six-item scale, with each item being scored using a seven-point Likert-type response format. This scale, initially used on a sample of 1,700 employees in the public and private sectors in Singapore, was adopted with minor changes for use in the questionnaires of both Thai subordinates and Japanese managers to investigate the extent to which Japanese management practices had been implemented in Thailand. The items were: "Lifetime employment"; "Consensus decision-making"; "Seniority system"; "House union"; "Job rotation"; and "Quality control circles".

### 4.5.2.10 Demographic Questions

In order to collect the personal data of each respondent, demographic questions were included in the questionnaire. These included employees' age, gender, position and tenure, as well as the organizations' background information. These questions were presented in a fixed-response multiple-choice format. The demographic information collected in the survey was used to understand the characteristics of the sample. This section included eight questions allowing description of the sample prior to undertaking more complex statistical evaluation (Polonsky and Waller 2005) in order to determine whether this sample represented the whole population (see Sect. 5.1). Percentage analysis was then performed to describe the statistical aspects of demographic data in order to describe the sample (Chap. 5).

## 4.5.3 Pre-Test

A pre-test was conducted to identify if there were any problems in the questionnaire's design or instructions (Zikmund 2003). The pre-tests were conducted in the three stages below (Table 4.1).

In stage one of the pre-test, content validity was used to evaluate the study. This refers to subjective agreement among professionals that a scale logically appears to reflect accurately what it purports to measure (Zikmund 2003; Cavana et al. 2001). Nunnally and Bernstein (1994) state that content validity is established before generating the full survey administration. Here, testing of item fit is conducted in the pre-test stage to guarantee that the items actually represent the specified definitions of constructs. Thus, the initial questionnaires were assessed by management academics and professionals who have experience with Japanese management practices. This was to identify any ambiguities, problems or weaknesses requiring further refinement of the instrument to increase content validity, and to ensure that the final questionnaire was well presented. Overall, there was no major criticism of the questionnaires. All assessors agreed that the six motivational factors could

Stage	Questionnaire version	Respondents	Purposes
1	English	<ul> <li>Five management academics</li> <li>Five professionals who have experiences with Japanese management practices</li> </ul>	To ensure that the items logically and accurately reflect what they purport to measure
2	Japanese Thai	<ul><li> Two Japanese speakers</li><li> Two Thai speakers</li></ul>	To verify back-translation and ensure that words used constitute equivalency of meanings
3	Japanese	• 50 Japanese managers who have worked in manufacturing organizations in Thailand	To ensure that questions are clear, understandable and reliable
	Thai	• 50 Thai subordinates who have worked in Japanese manufacturing companies	

Table 4.1 Three stages of pre-test

influence the adaptation and acceptance of Japanese management practices. However, although most agreed that the questionnaires were clear and understandable, one management academic suggested that question six in part three on the Japanese questionnaire was unclear. Hence, the researcher modified "managers set an example by modeling the appropriate behaviors", to "CEOs and senior management set examples by modeling the appropriate behaviors to adapt". Also a concern was raised about the Japanese management questions in part two. One professional recognized that all six Japanese management practices questions in part two might not be applicable in some companies – some may have only four or five of them. The respondents may be unfamiliar with certain Japanese management practices, which may confuse them in answering. Therefore, the researcher modified the scale from 1 = very small extent, and 7 = extreme extent, to be 1 = not at all, and 7 = extreme extent.

Stage two of the pre-test dealt with language translation and back-translation. Here, questionnaire items were first prepared in English and then translated into Thai or Japanese, depending on the targeted population. This approach is best-known approach for questionnaire translations (Brislin 1986) and was important in minimizing inaccuracies that could result in measurement errors and affect conceptual and instrument equivalence (Cavana et al. 2001; Brislin 1986).

As recommended by Brislin (1986), to confirm that item equivalency had been achieved, both questionnaires were first developed in English then translated into: (1) Thai by a Thai–English bilingual then back-translated by another Thai; and (2) Japanese by a Japanese–English bilingual then back-translated by another Japanese. Neither of the bi-lingual translators was involved in the research. Lastly, the original English questionnaires were compared with the back-translated questionnaires by the two above bilinguals, to minimize language nuances and suggest modifications. As a result, some idiomatic, colloquial English words and phrases that had been adopted into questions from previous established studies were

reworded, ensuring both clarity for respondents and translation equivalence (Mullen 1995; Hambleton 1993).

Following the above two stages, the third and final stage of the pre-test implemented the distribution of the revised instrument in order to pilot the survey. The purpose of this was not only to test the question wording, but the sequencing, questionnaire layout, field work arrangements, training and test fieldworks, estimates of response rates, and the analysis of procedures (Veal 2006). Here, the pilot test for the book was conducted using a sample of 50 Japanese manufacturing companies in Thailand. In accordance with Reynolds et al. (1993) who suggest that a pre-test sample size should range from 5–10 to 50–100, this survey was distributed to 50 Japanese managers and 50 Thai employees from the Japanese manufacturing companies in Thailand (see Table 4.1). There were no incentives for participation in this study, and respondents were all volunteers.

In distributing the pilot questionnaires to the selected companies, packages of the questionnaires included a brief letter to the human resource manager explaining the purpose of the study, copies of the three-page questionnaire, and freepost envelopes. These were mailed to each company, then distributed to Japanese managers and Thai subordinates by the human resource (HR) managers. Packages were distributed between September and November 2006. The response rate was 70% for Japanese managers (e.g. 35 usable surveys were collected from the 50 questionnaires distributed), and 82% for Thai employees (e.g. 41 usable surveys were collected from the 50 questionnaires distributed).

# 4.5.4 Reliability

The reliability analysis and validity for each of the composite constructs of the questionnaires of this book were examined to test data quality. Reliability of the scale examines its internal consistency by calculating Cronbach's alpha. This method has been used in this book to indicate the extent to which items within scales were correlated (Sekaran 2003). It was also used to reflect the consistency between different items in the scales, measuring equal attributes. Further, validity is the ability of a scale or measuring instrument to measure what is intended to be measured (Veal 2006; Zikmund 2003). Here, a measure was considered valid when the differences in observed scores reflected true differences in the characteristics being measured and on nothing else (Churchill 1979). However, although a valid (Malhotra 2003). Therefore, to explore the reliability of the constructs in order to design good scales for measurement, data was analyzed using SPSS computer program.

According to Veal (2006), reliability is the extent to which research findings would be the same if the research was to be repeated at a later date or with a different sample of subjects. Here, the examination of reliability can indicate how reliable a score on the test will be and describe the domain of each construct.

Therefore, to estimate the reliability of the items for each construct, internal consistency methods include the value of item-to-total correlation and Cronbach's alpha value ( $\alpha$ ). Gliem and Gliem (2003) suggest that a minimum value of item-to-total correlation values should be greater than 0.40, and item-to-total correlation values in each construct at the 0.05 level are of reliable significance. However, as Hair et al. (2003) point out, within the wider literature a minimum alpha of 0.60 is suggested as appropriate – therefore this measure has been utilized as the minimum required reliability level within the present book. Hence, as unreliability in these items would mean that they could not be used in any future examinations, the item-to-total-correlations and Cronbach's alpha values for items within the eight components have been analyzed (see Tables 4.2 and 4.3).

# 4.5.5 Validity

According to Malhotra (2003), the validity of a scale is defined as the extent to which differences in observed scale scores reflect true differences among objects on the characteristics being measured, rather than on systematic or random errors. Measurement validity is the extent to which an instrument measures what it is required to measure, whereas an indicator is valid to the extent that it signifies the theoretical concept it is supposed to measure (Shammout 2008; Zeidan 2006), and the better the fit between the conceptual and operational definitions, the greater the measurement validity (Neuman 2006). In this book, all of the scales had been used within previous studies (e.g. Lin 2007; Lok and Crawford 2000; Zineldin and Jonsson 2000; Abraham et al. 1999a; Preziosi 1980), and all have been tested for both content and construct validity and reliability.

Content validity is defined as the degree to which measures adequately represent a specified domain (Nunnally and Bernstein 1994). It is a subjective but systematic assessment of the content where a scale measures a construct (Malhotra 2003). An instrument has content validity if it has measurement items that adequately cover the content domains or aspects of the concept being measured (Ahire et al. 1996); however, it is not assessed statistically because it hinges on the process utilized to construct measures. Therefore, in accordance with Cooper and Schindler (1998), the present program of study uses the following procedures in ensuring content validity: the identification of relevant existing scales within the literature; and consultation with a group of experts to independently assess and test items (refer to pre-test stage one).

Construct validity refers to establishing correct and adequate operational measures for the concepts being tested (Malhotra 2003; Yin 1994), and addresses directly the question of what the instrument is truly measuring (Churchill 1995). This type of validity lies at the very heart of construct development and involves consideration of theoretical questions about why the scale works and what deductions can be made on the basis of theory (Malhotra 2003). Construct validity can be established through correlation analysis (convergent and discriminate validity),

Table 4.2 Summary	/ of	Cronbach's	alpha,	and	item-to-total-correlations	values	in	pilot	study
of Thai employees									

or mar employees			
Items	Reliability results	Item-to- total- correlations	Cronbach's Alpha if item deleted
Vision Cronbach's Alpha	0.83		
Providing explanation of the advantage of the Japanese management practices to key internal and external groups (employees, management, unions, customers, clients, etc.)		0.67	0.79
A clear timetable is devised for the various phases of the use of Japanese management practices		0.55	0.82
A clear rationale for the use of Japanese management practices and beliefs needed to make successful implementation		0.57	0.82
Provision of a plan detailing the various steps of the use of Japanese management practices		0.67	0.79
A discussion of specific new ways in which structure, systems and people practices would implement the Japanese management practices		0.71	0.78
Leadership Cronbach's Alpha	0.78		
Managers set an example by modeling appropriate behaviors to implement Japanese management practices		0.61	0.73
From the beginning there is a powerful guiding executive coalition clearly in support of the use of Japanese management practices		0.71	0.69
Once the use of Japanese management practices commences, there is clear evidence of the CEO and the senior management team attempting and championing the use of Japanese management practices		0.45	0.78
The CEO and senior management ensure the support of key power groups for the use of Japanese management practices		0.46	0.78
The CEO and senior management create and communicate a sense of urgent need for implementing Japanese management practices throughout the organization		0.59	0.73
Structuring Cronbach's Alpha	0.77		
The structural arrangement provides new insights into the use of Japanese management practices		0.53	0.73
The structure of the use of Japanese management practices is clear and helpful		0.50	0.74
The structures of Japanese management practices are flexible		0.52	0.74
The structural arrangement device for managing the use of Japanese management practices is appropriate		0.62	0.70
Structures of Japanese management practices are well designed		0.56	0.72

(continued)

Items	Reliability results	Item-to- total- correlations	Cronbach's Alpha if item deleted
Reward Cronbach's Alpha Providing the opportunity for new and exciting challenges, enabling you to develop skills and canabilities	0.77	0.58	0.71
Getting you more pay as a result of the use of		0.46	0.75
Japanese management practices There is little chance of advancement in the organization unless you embrace the use of Japanese management practices		0.44	0.76
Successful implementation of Japanese management practices provides satisfaction for a job well done		0.65	0.69
Having pay system and benefits of your firm treat each employee equally		0.58	0.71
<i>Relationship Cronbach's Alpha</i> Your relationship with your supervisor will be a harmonious one after implementing Japanese management practices	0.76	0.55	0.70
You can feely talk with someone at work if you		0.55	0.70
There is no evidence of unresolved conflict in the		0.56	0.70
Your relationships with peers in your work groups are friendly		0.46	0.77
You have established the relationships that you need to do your job properly		0.60	0.69
Resources support Cronbach's Alpha Adequate financial resources are allocated in support of the use of Japanese management practices	0.81	0.67	0.74
Adequate human resources are allocated in support of the use of Japapese management practices		0.67	0.74
You will receive adequate and appropriate training to analyze you to work in new ways		0.72	0.72
Senior management are prepared to devote their time to meetings, presentations, communication, education and training needed to support the use of Japanese management practices		0.47	0.841
Acceptance Cronbach's Alpha	0.82		
I intend to accept the Japanese management		0.58	0.80
I will always make an effort to accept the Japanese		0.60	0.79
I will try to accept the Japanese management procedures		0.72	0.73
I intend to accept the Japanese management practices		0.67	0.76

# Table 4.2 (continued)

Table 4.3	Summary	of Cronbach's	alpha, and it	em-to-total-cor	relations va	alues in pilot	study of
Japanese n	nanagers						

Items	Reliability	Item-to-	Cronbach's
	resuits	correlations	deleted
Vision Cronbach's Alpha	0.73		
Provision of explanation of the advantage of		0.44	0.70
adaptation to key internal and external groups			
(employees, management, unions, customers,			
clients, etc.)			
A clear timetable devised for the various phases of the adaptation		0.41	0.71
A clear rationale for the adaptation and beliefs needed to make the adaptation successful		0.41	0.71
Provision of a plan detailing the various steps of the adaptation		0.59	0.65
A discussion of specific new ways in which		0.62	0.63
structure, systems and people practices would adapt			
Leadership Cronbach's Alpha	0.74		
CEO and the senior management set an example by modeling appropriate behaviors to adapt		0.45	0.71
From the beginning there is a powerful guiding		0.56	0.67
adaptation			
Once the adaptation program commences, there is clear evidence of the CEO and the senior		0.57	0.66
management team attempting and championing			
the adaptation		0.61	0.64
support of key power groups for the adaptation		0.01	0.04
The CEO and senior management create and		0.42	0.76
communicate a sense of urgent need for			
adaptation throughout the organization			
Structuring Cronbach's Alpha	0.71		
The structure of adaptation process is flexible		0.40	0.70
The structure of adaptation is clear and helpful		0.41	0.68
The structural arrangement provides new insights for adaptation		0.48	0.65
The structural arrangement device for managing adaptation is appropriate		0.52	0.64
The structure of adaptation process is well designed		0.54	0.63
Reward Crophach's Alpha	0.74		
Providing the opportunity for new and exciting	0.74	0.52	0.60
challenges, enabling you to develop my skills and capabilities		0.52	0.09
Getting you more pay as a result of the adaptation		0.41	0.74
There is little chance of advancement in the		0.40	0.74
Successful adaptation provides satisfaction for a		0.66	0.64
job well done		0.00	0.0-1

(continued)

Items	Reliability results	Item-to- total- correlations	Cronbach's Alpha if item deleted
Having pay system and benefits of your firm treat each employee equally		0.63	0.65
Relationship Cronbach's Alpha Your relationship with your supervisor will be a harmonious one after adapting Japanese management practices	0.75	0.65	0.66
You can feely talk with someone at work if you have a work-related problem		0.61	0.67
There is no evidence of unresolved conflict in the organization		0.54	0.70
Your relationships with peers of your work groups are friendly		0.40	0.80
You have established relationships with everyone in your organization that you need to adapt to do your job properly		0.72	0.64
Resources support Cronbach's Alpha Adequate financial resources are allocated in	0.74	0.55	0.67
support of the adaptation Adequate human resources are allocated in support		0.59	0.64
of the adaptation You will receive adequate and appropriate training to enable you to work in new ways		0.69	0.58
Senior management are prepared to devote their time to meetings, presentations, communication, education and training needed to support the adaptation		0.42	0.76
Adaptation Cronbach's Alpha	0.77	0.40	0.50
ractices		0.40	0.79
I am willing to adjust the process of management practices		0.63	0.67
I am willing to change the management procedures I am willing to invest in tools/equipment to better adjust management practices to local conditions		0.71 0.54	0.63 0.73

Table 4.3 (continued)

factor analysis, and the multi-trait, multi-method matrix of correlations (Kripanont 2007). Others suggest that the three most widely accepted forms of validity are convergent, discriminate and monological (Peter 1981; Campbell and Fiske 1959).

Convergent validity is synonymous with criterion validity (Zikmund 2003) and correlation analysis, and is one way of creating construct validity for this research. It implies that items that are indicators of a specific construct should converge or share a high proportion of variance in common (Hair et al. 2003). In other words, it assesses the degree to which measures of the same concept are correlated, with high correlation indicating that the scale is measuring its intended concept. Hence,

reliability is also an indicator of convergent validity (Hair et al. 2003). As was discussed earlier, item-to-total correlation was conducted in the stage of reliability to indicate the correlations between items under the same concept (see the stage of reliability). Results of the item-to-total-correlation analysis for items within the eight components are reported in Tables 4.2 and 4.3.

All internal consistency reliability based on Cronbach's alpha for measurement items was found to be greater than 0.7 and considered to be good and acceptable, indicating a high degree of internal consistency. The researcher expected that the reliability would increase with the final sample size, as Pattant (2005) states that a larger sample size can increase the reliability. In Tables 4.2 and 4.3 it can be seen that most of the item–total correlations fall within the acceptable range, consistent with the suggestion that a minimum value of item-to-total correlation should be greater than 0.4 (Gliem and Gliem 2003). These results identify that all the constructs are therefore valid and reliable in describing the domain of constructs.

# 4.6 Population, Sampling Size and Procedures

The population, sampling size and procedures used in the collection of data for this book are discussed below.

### 4.6.1 Population

In quantitative research, population refers to the entire group of people, events, or things that the researcher desires to investigate (Sekaran 2003; Cavana et al. 2001). As noted in Chap. 1, this research focuses on the joint venture Japanese manufacturing organizations in Thailand, thus the population in this research includes Japanese managers and Thai subordinates who have worked in the Japanese manufacturing organizations in Thailand. According to the Japanese Chamber of Commerce Bangkok (2006), the total number of Japanese manufacturing companies in Thailand is 617 (N = 617), including metal 11.6%, machinery 11%, garment and textile 6.9%, agricultural and marine 8.1%, electric and electronic 21.8%, automobile 27.1% and chemicals 13.5%. The sample in this research is expected to assist in representing this large population.

# 4.6.2 Sampling Design

A sample is a subset of a population, containing some members selected from that population. In data collection, a selected sample from a population can be used as a tool to infer something about that population (Mason et al. 1999). Roscoe (1975)

suggests that sample sizes larger than 30 and smaller than 500 are appropriate for most research and multivariates, and the sample size should be several times as large as the number of variables in the study. In this study, the sample size has been calculated using Yamane's (1973) formula which is n = N/1 + N(e), where n is the sample size; N is the target population; and e is the percentage of error. In the present study, population refers to the Japanese manufacturing companies in Thailand. According to the list of Japanese manufacturing multinational companies in Thailand provided by the Japanese Chamber of Commerce Bangkok (2006), the total of Japanese manufacturing companies in Thailand is 617 with an 'e' of 5%, thus the calculation of sample size is n = 617/1 + 617(0.05) = 242.

The result of the preceding calculation indicates that the sample size has to be at least 242 Japanese manufacturing companies. Thus, at least 242 Japanese managers, and at least 242 Thai subordinates are required for participation, with one Japanese manager and one Thai subordinate representing one organization (see Table 4.4). For the purpose of the present study, Japanese managers in this research were the managers who had the responsibilities of administering the Japanese management practices in their organizations, and Thai subordinates were the Thai employees who had experienced using these Japanese management practices. A random sampling process allows each unit of the population to have an equal chance of being selected in the sample (Collis and Hussey 2003). The random sampling has the advantage of having the least bias and offering high generalizability of findings (Sekaran 2003).

# 4.6.3 Data Collection Procedures

This section describes details of the data collection procedures used for the final survey which was conducted in five regions of Thailand: Central, Northern, Eastern, North Eastern and Southern, within a period of 6 months from April to September 2007. The researcher was very concerned about the response rate for this survey, since the response rate associated with mailing questionnaires in Thailand is usually very low. To deal with the low response rate, therefore, the researcher decided to distribute questionnaires to all 617 Japanese manufacturing firms – for both Japanese managers and Thai subordinates. A package of the questionnaire, including a brief letter to human resource managers explaining the purpose of the study, questionnaire and freepost envelope, was sent to HR managers for participation. A survey package was mailed to each company, then distributed to Japanese managers and Thai subordinates by HR managers.

Table 4.4 Sample Size	
Population	Sample size
Japanese managers	242
Thai subordinates	242

Table 4.4 Sample size

As response rates start relatively high in the first two weeks before gradually tapering off (Zikmund 2003), to address low response rates follow-up of a duplicate questionnaire and reminder to return the original questionnaires was sent to HR managers 3 weeks later. E-mail follow-ups were also sent, and phone calls were made to HR managers two weeks after. Even so, the response rate remained low. Therefore, the researcher decided to make personal visits to some of the Japanese manufacturing companies, asking the HR managers to help. This meant that a lot of time and effort were needed to obtain the minimum usable data required to run the SEM which will be discussed in Sect. 4.6.4.

# 4.6.4 Data Preparation Prior to Analysis

Prior to data analysis, screening and cleaning the data were conducted according to procedures recommended by Pattant (2005). All the returned questionnaires were firstly manually checked for completeness of responses (Kumer 2005). As missing data normally occurs when a respondent has failed to complete all items in a questionnaire (Hair et al. 2003; Cavana et al. 2001), incomplete questionnaires containing one or more missing items were excluded from the dataset. Following this, the retained questionnaires were checked again manually prior to computer entry to identify missing items. Once the data entry was complete, the data files were carefully screened in order to minimize data entry errors. To do this, the examination of frequencies for each item was checked in order to detect out-of-range values and values greater than 7, and rectified after reconciling with the questionnaires.

Once the process of cleaning the data was complete, descriptive analyses were undertaken to determining the validity of underlying assumptions about the data required for further multivariate analysis (e.g. SEM). Examination of the data for normality of items using the Statistical Package for Social Science (SPSS) statistical software is discussed in the next section.

# 4.6.5 Test of Normality

As a pre-requisite for multivariate analysis, each item must be normality distributed (Coakes and Steed 1997). Hair et al. (2003) note that if the variation from normal distribution is large, then all statistical tests are invalid as normality is required to use F and T statistics. Assessment of the skewness and kurtosis of individual items provides an indication of normality (Tanachnick and Fidell 2007). Normality can also be determined by inspection of the histogram through a graphical method (Pattant 2005). In this book the assumption of normality will be verified by examining both the histogram shape of the data distribution and skewness and kurtosis of each item. When inspection of the histogram shape of each item appears

as a reasonable shape in a normal curve (e.g. most scores occurring in the center), this indicates a normal distribution (Pattant 2005). In this study, examination of descriptive analyses determined normality of the items, and checked the average of responses (e.g. all mean values are in the middle of the possible range of score) and spread of the data (how far an observation is away from the mean) (Cavana et al. 2001; Coakes and Steed 1997). Here, distribution is considered within a normal range when indicators of the skewness and the kurtosis values less than 2 and 3 respectively (Azzalini 2005; Hair et al. 2003).

In addition to checking univariate normality (skewness and kurtosis), it was also essential to check multivariate normality as it is an important assumption underlying multivariate analyses and SEM techniques (Shammout 2008; Zeidan 2006). Multivariate normality refers to "(1) all the univariate distributions are normal; (2) the joint distribution of any pair of the variables is bivariate normal; and (3) all bivariate scatter plots are linear and homoscedastic" (Kline 2005, pp. 48–49). In other words, the joint distributions of any combination of variables should be normal (Tanachnick and Fidell 2007). It is important to note that, although it is a prerequisite in the analysis of covariance and mean structures that data have a multivariate normal distribution, several studies of robustness of the multivariate normality assumption (e.g. Amemiya and Anderson 1990) found that the parameter estimates remain valid even when the data are not normally distributed. The results in relation to assessments and examination of normality are discussed in Chap. 5.

Multivariate normality was inspected in AMOS through inspection of the multivariate value represented by Mardia's coefficient of multivariate kurtosis. A Mardia's coefficient greater than 8 is an indication of infringement of the assumption of multivariate normality (Shammout 2008; Zeidan 2006). In such cases of multivariate non-normality in this book, Bollen–Stine's bootstrap was invoked (Kline 2005). This is discussed in following section.

# 4.7 Data Analysis

According to Coorley (1978) and Maruyama (1998), the purpose of statistical procedures is to support in establishing plausibility of the theoretical model and to assess the degree to which independent variables seem to influence the dependent variables. Data analysis in this book has been divided into two stages. The first stage involved testing the reliability and validity of the measurement (e.g. descriptive static of percent, skewness and kurtosis) using SPSS computer program. The second stage involved testing validity of the measurement of the models by testing discriminate validity, analysing data by SEM using AMOS computer program.

The widely accepted program for data analysis, SPSS (Tanachnick and Fidell 2007; Malhotra 2003; Zikmund 2003) has been used to report the descriptive analysis and reliability tests of this book. Furthermore, AMOS, one of the main software programs utilized to assess structural models, was utilized to examine the constructs and overall structural model (Byrne 2001; Ullman 2001). AMOS 7.0 provided the

researcher with powerful and easy-to-use SEM software, which helped to create a more realistic model than would have been possible through using standard multivariate statistics or multiple regression models. Moreover, utilizing AMOS 7.0, the researcher was able to estimate, specify, assess and present the model in an intuitive path diagram to show the hypothesized relationships among variables.

# 4.7.1 Descriptive Analysis

Descriptive statistics have been utilized to describe the basic features of the data in this study. They provided simple summaries of the sample, and together with simple graphics analysis they formed the basis of virtually every quantitative analysis of data (Trochim 2006). As descriptive statistics are used to present quantitative descriptions in a manageable form, descriptive statistics have been conducted for primary data analysis. As mentioned in Sect. 4.5, the demographics included eight questions incorporating employee and organizational backgrounds. These questions allowed samples to be described prior to undertaking more complex statistical evaluations (Polonsky and Waller 2005) for determining whether the sample represented the whole population. Percentage analysis was performed to describe the statistical aspects of demographic data in order to describe the sample. The results of these are outlined in Chap. 5.

# 4.7.2 Introduction to Structural Equation Modeling (SEM): Methods, Computerized Methods and Computer Program

SEM is utilized to examine complex models in which one or more independent variables can relate to one or more dependent variables (Tanachnick and Fidell 2007). In simple terms, SEM is a multivariate technique coalescing aspects of multiple regression and factor analysis to estimate a series of interrelated dependence relationships simultaneously (Hair et al. 2003; Schumaker and Lomax 1996) and depict the structural relationships among constructs (Sharma 1996). SEM is also recognized as path analysis with latent variables, regularly utilized for representing dependency relations in multivariate data in the behavioral and social sciences (McDonald and Ringo 2002). In other words, SEM is a model of relationships among variables (Hayduk 1987), using a statistical technique that takes a confirmatory (e.g., hypothesis-testing) approach to the analysis of a structural theory (Byrne 2001) relating to some phenomenon with two significant aspects: (1) causal processes under study are represented by a series of structural equations; and (2) structural relations are modeled pictorially to enable a clearer conceptualization of theory (Byrne 2001).

SEM is based on the assumption of causal relationships where a change in a variable  $(x_1)$  is expected to result in a change in another variable  $(y_1)$  (Shammout

2008). Moreover, SEM must be sustained by the theory in order to develop or modify the proposed management model (Zeidan 2006). SEM is a popular method of analysis (Byrne 2001) that allows for examining various models which could explain the data structures (Joreskog and Wold 1982) and relationship in management and organizational behavior. It is an analytical method that improves upon, and supersedes, other methods such as multiple and multivariate regression, or recursive path analysis (Holmes-Smith 2000) in management research. SEM can make a distinction between latent and observed variables, can estimate the nature of measurement error associated with the observed variables, and permits unequal weightings for the multiple indicators of a latent construct (Holmes-Smith 2000) in a management model. Moreover, SEM can examine more than one relationship within the model at a time (Hair et al. 2003). That is the causal procedures under study are represented by a series of structural equations which designate the strength of the relationships between constructs. SEM also allows an assessment of whether or not a model developed from the literature is a good fit to the observed data (Hair et al. 2003) in a management study. As the primary purpose of SEM is to describe the pattern of a series of interrelated dependence relationships simultaneously in a set of latent or unobserved constructs, each measured by one or more observed variables (Hair et al. 2003), it is highly suited for use in the present study of business management practices.

For the purpose of this study, the structural model and measurement model will be analyzed separately. Separate examination of structural and measurement components of the model allows for the assessment of measurement problems independent from the inspection of structural problems (Bagozzi 1983). This allows a comprehensive assessment of construct validity and reliability (Hair et al. 2003; Anderson and Gerbing 1988). Thus, one factor congeneric models and confirmatory factor analyses utilizing AMOS 7.0 are used to explore the statistical relationships among the items of each factor and between factors.

As confirmatory factor analysis has been considered a useful approach to assessing scale properties (Ullman 2001) it was employed prior to testing the proposed structural relationship to assess soundness of the measurement properties of the conceptual model, and utilizing fit statistics computed from comparing factor structure with sample data. Thus, to ensure sufficiency of the measurement models of individual constructs, indicators have been checked to ensure they had substantial loadings on the factors to which they belonged. Moreover, all the loading figures shown in each construct have been used to calculate the composite factor models discussed below.

### 4.7.2.1 Mathematical Representation of SEM

Structural equation models can be well explained in mathematical form. Hair et al. (2003) suggest that translating a path diagram into a series of structural equations is an uncomplicated procedure. This is shown in the proposed model below.

Endogenous Variable	= <u>Exogenous Variables</u> M1 M2 M3 M4 M5 M6	+ <u>Endogenous Variables</u> G1 G2 A1	+Error
Gl	=b1M1+b2M2+b3M3+b4M4		+e1
G2	=b5M5+b6M6		+e2
Al	=b7M2+b8M5	+b9G1+b10G2	+e3

Fig. 4.2 Translation of path diagrams into structural equation



Fig. 4.3 Representing casual relationship through path diagrams

Figure 4.2 shows the translation process for each of the path diagrams in Fig. 4.3. Each endogenous variable (A1) can be predicted either by exogenous variable(s) (M) or by other endogenous variable(s). For each hypothesized effect, a structural coefficient (b) is estimated because the prediction errors will appear just as in multiple regressions. The error term (e) is included for each equation which represents the sum of the effects due to specification error and random measurement error (Hair et al. 2003). The models of Japanese management adaptation and acceptance will not only be illustrated in path diagrams, but will be also shown in a mathematical form in Chap. 6.

#### 4.7.2.2 Model-Data Fit Examination

Testing with SEM provides allows evaluation of how well the model is supported by the sample data. The primary task in this model testing method is to determine the goodness of fit between the proposed model and the sample data. According to Hair et al. (2003), goodness of fit is defined as a measure of the correspondence of the actual input covariance matrix with that expected from the proposed model. That is to expose if the parameter evaluate in the model are consistent with theorybased expectations, and if the evaluates statistically infer goodness of fit. Here there are three kinds of goodness of fit including:

- 1. Absolute fit measures to estimate the overall model fit with no adjustment for over-fitting by determining whether the residual variance is appreciable (Maruyama 1998).
- 2. Incremental fit measures evaluate the incremental fit of a model compared to a null model.

Measures	Level of acceptable fit
Absolute fit measures	
Likelihood ratio Chi-square ( $\chi$ ) statistics ( $\rho$ ) Root Means Square Error of	$\label{eq:statistical test} \begin{array}{l} \mbox{Statistical test of significance (at least $\rho > 0.05$).} \\ \mbox{Under 0.08, preferably under 0.05} \end{array}$
Approximation (RMSEA)	
Standardized Root Mean Square Residual (SRMR)	The smaller the better-close to zero. Values less than 0.10 indicate good model fit
Incremental or comparative fit measures	
Tucker-Lewis Index (TLI)	The closer to 1.0, the better. Recommended higher than 0.90
Comparative Fit Index (CFI)	The closer to 1.0, the better. Recommended higher than 0.90. Values close to 1.0 indicate perfect fit
Parsimonious fit measures (model parsimony)	
Normed Chi-square (CMIN/DF) (also considered as an absolute fit measure)	Recommended level: lower limit 1.0, upper limit 3.0 or as high as 5 ( $1.0 \le \chi / df \le 5.0$ )
Akaike Information Criterion (AIC)	The model that fits with the smallest values of AIC is the most parsimoniously fitting model

Table 4.5 Goodness of fit measures

3. Parsimonious fit measures adjust the measures of fit to evaluate models with different numbers of coefficients and determine the fit accomplished by each coefficient (Reisinger and Turner 2000).

Hair et al. (2003) state that measures from each type are supposed to be reported to provide the best overall picture of model fit. To measure the goodness of fit in this research, three measures and guidelines adopted from both Hair et al (2003) and Kline (2005) are presented in Table 4.5. Selection and assessment of goodness-of-fit will be discussed in more detail in Chap. 6.

#### 4.7.2.3 Model Modification

By using AMOS to implement SEM analysis, the list of significant and nonsignificant parameters can be easily examined, so a determination can be made as to whether any of the non-significant parameters can be eradicated from the model without substantial loss of fit (Arbuckle and Wothke 1999). Subsequently, the initial model is tested and modified utilizing the same data and using modification indices until a theoretically parsimonious model is accomplished. Since each path in the model represents a hypothesized relationship, hypothesis testing is accomplished by assessment of the significant parameter estimates. Modification may be either theory or data driven, and the ultimate intention is to find a model that is both substantively meaningful and statistically well fitting (Joreskog 1993). Therefore, it is significant that any modification is theoretically justifiable (Kline 2005; Schumaker and Lomax 1996).

Statistical analysis	Minimum sample size
Structural equation modeling (SEM)	• Sample size as small as 50 found to provide valid results (Hair et al. 2003)
	• Recommended minimum sample sizes of 100–150 to ensure the stable Maximum Likelihood Estimation (MLE) solution (Hair et al. 2003)
	• Suggested sample sizes in a range of 150–400 (Hair et al. 2003)

 Table 4.6
 Sample size for structural equation modeling

#### 4.7.2.4 Sample Size for SEM

SEM is based on covariance, and covariance and correlations are unstable when evaluated from small sample size (Tanachnick and Fidell 2007). There are no clearcut rules or definitive recommendations when it comes to the required sample size to obtain reliable solutions and parameter estimates in SEM (Shammout 2008; Zeidan 2006). However, while utilizing large sample sizes to estimates in structural equation models with latent variables will lead to a degree of confidence about such statistics, the asymptotic statistical theory underlying parameter estimations provides clues as to how large the sample size should be (Holmes-Smith 2000). The minimum requirements for SEM are presented in Table 4.6.

#### 4.7.2.5 Composite Factor Model

A composite factor measurement model can reduce complexity and decrease the number of returns required for a reliable model (Hair et al. 2003; Holmes-Smith and Rowe 1994). Composite variables are determined by computations integrating measured values from the constituent variables and replacing the latent construct with the composite variable (Turner 2007). Once the latent variables in the model are replaced by a computed composite variable, it is then regarded as a distinct manifest or measurement variable (Hair et al. 2003).

There are several approaches to compute a composite variable. A sum of the manifest variable being utilized is the simplest, but this may generate some problems if the composite variables have different numbers making them up (Turner 2007). One approach to compute a composite variable suggested by Hair et al. (2003) is to use a simple average to calculate values; however, this approach does not consider the different factor loadings that each variable brings (Holmes-Smith and Rowe 1994). Here, strong loading factors are biased against whilst weaker loading factors have a positive bias. To overcome this, Holmes-Smith and Rowe (1994) suggest that a weighted calculation be adopted based on factor loadings. However, this approach is still influenced by different numbers in the various composite factors. Therefore, Holmes-Smith and Rowe (1994) put forward a better approach in which a weighted average calculation was taken into account for the factor loadings of each constituent. Therefore, as this approach is not

influenced by the different numbers of variables in each composite, the method utilized in this book is based on the following formula adopted from Turner (2007):

$$\text{Composite} = \frac{\sum f_i x_i}{\sum f_i}$$

where  $x_i$  is the item score and  $f_i$  is the factor loading.

The different approaches to computing composite variables adopted from Turner (2007) are presented in Table 4.7. These utilize a hypothetical set of data and two factors with different numbers of variables. Here, factor one contains five variables and factor two contains three variables, with each variable being measured on a scale of 1–5. For each of these two factors, factor loadings, scores and weighted scores are in columns 1–3. Computations for the composite variables (var. 1 and var. 2) are also given. The first two computations (average and sum) do not take into account the loading of the factors, whereas the weighted mean and weighted sum do (Turner 2007). This paradigm illustrates the problem by simply summing up the scores. In this paradigm the outcome is the same for different numbers of variables. Similarly, the weighted sum has a similar shortcoming so researcher may be lured into supposing that the contributions are similar (Turner 2007).

In this book, the latent constructs will be replaced by composite variables which are determined by computations integrating measured values from the constituent variables. A composite factor model has been preferred as appropriate to the analysis in this study for three reasons: (1) reduction of the complexity of the model, (2) decrease in the number of returns required for reliability (Hair et al. 2003; Holmes-Smith and Rowe 1994), and (3) it is widely accepted and used in many Management researches (e.g. Luthans et al. 2007; Turner 2007; Houghton et al. 2004; Hair et al. 2003; Holmes-Smith and Rowe 1994).

	6 11	1 0	1
	Loading1	Score1	Weighted
Factor 1	0.4	1	0.4
	0.5	4	2
	0.5	2	1
	0.7	4	2.8
	0.5	3	1.5
			7.7
Factor 2	0.5	1	0.5
	0.6	4	2.4
	0.7	4	2.8
	0.6	5	3
			8.7
		Var. 1	Var. 2
Composite	Sum	14	14
	Average	2.8	3.5
	Weighted sum	7.7	8.7
	Fully weighted mean	3.0	3.6

 Table 4.7 Paradigm of different approaches of computing composite factors

Adopted from Turner (2007)

#### 4.7.2.6 Bollen–Stine's Bootstrap

Bootstrapping is a statistical re-sampling method (Diaconis and Efron 1983) in which the computer draws random samples from a probability density function with parameters specified by the researcher. The Bollen–Stine option signifies a modified bootstrap method for the chi-square goodness-of-fit statistic, and provides a means of testing the null hypothesis that the specified model is correct (Bollen and Stine 1993). For a good-fitting model, Bollen–Stine  $\rho$  should be greater than 0.001. For the present program of research in which issues with multivariate non-normality are evident, the researcher requested AMOS to perform a bootstrap on 140 samples (Japanese managers) and 204 samples (Thai subordinates), both within the range suggested by Hair et al. (2003) as sufficient.

# 4.8 Ethical Considerations

The issue of ethics is an important concern in any social science research (Bodgan and Biklen 1998). In a business research such as the present one, ethics is defined as a code of conduct or expected societal norm of behavior while conducting research (Sekaran 2003). Here, the main aim is to protect all parties involved in the research from impairment or adverse consequences resulting from their involvement in the research (Cooper and Emory 1995).

This research was conducted considering ethical responsibility in accordance with the general principles of research ethics outlined by Ticehurst and Veal (2000) that: (1) no harm should occur to the research subjects, (2) subjects should take part feely, and (3) participation is based on informed consent. As the researcher must understand the basics of ethical research and how this may affect the research project (Polonsky and Waller 2005), proposal for approval for the present research was submitted to the Faculty of Business and Law Human Research Ethics Committee at Victoria University. The application addressed issues of potential risks associated with the research project, participant privacy and confidentiality and assurance that information is provided to potential participants as part of the informed consent process.

Zikmund (2003) suggests that participants should be informed of their right to be left alone or to break off their participation at any given time. Accordingly, subjects were informed of all aspects of the research project, particularly that their participation was entirely voluntary and that they could withdraw their consent to take part in the research project at any time. Moreover, participants who needed more information about the research project before taking part in it were free to contact a Victoria University representative to confirm that information.

Although the questionnaires in this research contain some demographic questions, the process of de-identification utilized in the research meant that no identifiers such as names or codes were utilized in the data. Thus, there was no way of recognizing which organizations or individual employees had completed the
questionnaires. Besides, the collected data was retained in a safe place so as to limit its access to unauthorized persons, and the researcher ensured that that data was only used for the purpose of academic research. As a result of the above considerations, the Ethics Committee at Victoria University granted its approval for this research to be conducted.

## 4.9 Summary

This chapter has presented the methodologies used in this research, including preliminary information gathering, development of the model, pre-tests, pilot study, reliability and validity of the instrument, data collection and data analysis procedures. The research instrument was developed in Australia and the pilot study was conducted in Thailand. The instrument was shown to be reliable and valid after conducting the pilot study.

Data collection methodology included a discussion of the survey procedure, population, sample size and problems encountered in collecting data. To fulfill the purpose of the study, SEM is applied as the main statistical technique used in analysis. The minimum sample size requirement and how to organize and clean data is also investigated. Finally, the issues of generalizability and ethics considerations are taken into account. Descriptive statistic analysis using SPSS will be discussed in Chap. 5, and the results of data analysis using AMOS for the SEM used in this book will be discussed in Chap. 6.

# Chapter 5 Preliminary Data Analysis and Results: Descriptive Statistics and Reliability Tests

# 5.1 Introduction

The research methodology adopted to collect and analyze data for this research was described, justified and discussed in Chap. 4. Therefore, the purpose of the present chapter is to summarize and present results of the descriptive statistics used to describe the samples. This chapter outlines the use of a computer package for analyzing data from questionnaire surveys, and presents the findings of the data analysis. The analysis of questionnaire data is described in five subsections: Sect. 5.1 summarizes the chapter objectives and outlines what will be covered in the subsections; Sect. 5.2 examines the response rate and demographic characteristics of the samples; Sect. 5.3 examines the psychometric properties of the measures utilized in terms of reliability analyses and construct validity for each construct of interest; Sect. 5.4 describes the normality check of the items; and Sect. 5.5 summarizes the chapter.

## 5.2 Descriptive Statistics

In accordance with the discussion of descriptive statistics outlined in Chap. 4, this section provides details of responses contributed in the main survey, as well as demographic characteristics of the respondents. As the first stage in data analysis, screening for data and normality was conducted. This procedure was useful in making sure that data have been correctly entered and that the distributions of variables used in analysis were normal (Coakes 2005). The total number of questionnaires collected was 210 from Thai subordinates and 143 from Japanese managers. However, six were excluded because a large part of them (motivation to adapt and accept) was not filled in, with three showing high levels of non-completion. Therefore the usable questionnaires from Thai subordinates were 204, and from Japanese managers were 140. Prior to computer entry the retained

questionnaires were manually checked once more to identify if there were any missing items.

## 5.2.1 Response Rate

The questionnaire surveys were distributed to all 617 Japanese manufacturing firms for both Japanese managers and Thai subordinates during the time period from April to September 2007. Questionnaires were distributed to seven types of Japanese manufacturing companies according the Japanese Chamber of Commerce, Bangkok (2006), including 71 metal companies, 70 machinery companies, 42 garment and textile companies, 50 agricultural and marine companies, 134 electric and electronic companies, 167 automobile companies and 83 chemical companies. Summary profiles of the main survey respondent companies are presented in Table 5.1.

The response rates for Thai subordinates and Japanese managers were 33% and 22.69%, respectively. As a 30% response rate is considered acceptable (Sekaran 2003), the response rate of 33% for Thai subordinates was deemed to be acceptable. The response rate of 22.69% for Japanese managers was low despite conducting a concerted follow-up process. However, as 100–150 (16.5–24.5%) is the recommended minimum sample size, at 140 (22.69%) and 204 (33%) the sample sizes for this study were still sufficient to perform SEM and provide a stable maximum likelihood estimation (MLE) solution (Hair et al. 2003).

## 5.2.2 Demographic Characteristics

Demographic data was collected in order to develop a profile of respondents who took part in the main survey. Demographics of Japanese managers and Thai

Types of organizations	Japanese		Thai			
	Completed	Number sent	Response rate (%)	Completed	Number sent	Response rate (%)
Metal	30	71	4.86	37	71	6
Machinery	9	70	1.46	17	70	2.8
Garment and textile	8	42	1.3	13	42	2.1
Agricultural and marine	8	50	1.3	14	50	2.2
Electric and electronic	35	134	5.67	48	134	7.8
Automobile	32	167	5.19	50	167	8.1
Chemicals	18	83	2.91	25	83	4
Total	140	617	22.69	204	617	33.0

Table 5.1 Response rate

subordinates included age, gender, position, tenure and organizations' background information.

#### 5.2.2.1 Age Grouping

Table 5.2 shows the age distribution of Thai subordinates. The majority of respondents between 26 and 30 years included 39.7%. Nearly 72% of Thai subordinates were under the age 35 and over 87% were below the age of 41.

Table 5.3 shows the age distribution of Japanese managers. The majority of these respondents were aged between 41 and 45 at 47.1%. Over 93% of Japanese managers were below 51.

#### 5.2.2.2 Gender Breakdown of Thai Subordinates and Japanese Managers

Table 5.4 indicates that of the 204 Thai subordinates there were more males than females with over 69% male and fewer than 31% female.

Table 5.5 shows that of the 140 Japanese managers there were disproportionately more males than females, with over 98% male and under 2% female.

Table 3.2 Age grouping of That subordinates			
Age Number	Percent		
20–25 23	11.3		
26–30 81	39.7		
31–35 43	21.1		
36–40 32	15.7		
41–45 18	8.8		
46–50 7	3.4		
Total 204	100		

Table 5.2 Age grouping of Thai subordinates

 Table 5.3 Age grouping of Japanese managers

Age	Number	Percent
36-40	38	27.1
41-45	66	47.1
46-50	27	19.3
51-55	7	5
56–50	2	1.4
Total	140	100

Table 5.4 Gender	breakdown of	Thai	subordinates
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Gender	Number	Percent
Male	141	69.1
Female	63	30.9
Total	204	100

Tuble etc. Sender Stealage in St Pupulese managers			
Gender	Number	Percent	
Male	138	98.6	
Female	2	1.4	
Total	140	100	

Table 5.5 Gender breakdown of Japanese managers

 Table 5.6 Position of Thai subordinates

Position	Number	Percent
Non-supervisor/non-manager	23	11.3
(not a supervisor or manager)		
First line supervisor	81	39.7
Lower level/Junior manager	43	21.1
Middle manager	32	15.7
Senior manager	21	10.3
Executive	4	2
Total	204	100

Table 5.7 Position of Japanese managers

Position	Number	Percent
Senior manager	101	72.1
Executive	34	24.3
Divisional head/general manager (not CEO)	5	3.6
Total	140	100

Table 5.8 Duration of Thai subordinates

Duration	Number	Percent
2 up to 5 years	25	12.3
5 up to 10 years	123	60.3
10 up to 15 years	49	24
15 up to 20 years	7	3.4
Total	204	100

#### 5.2.2.3 Positions

As shown in Table 5.6, the majority of Thai subordinates surveyed were either first line managers (39.7%) or lower level/junior managers (21.1%), with a small number of executives (2%).

Table 5.7 shows that the majority of Japanese managers were senior managers (72.1%). Over 27% were executives and divisional heads or general managers.

#### 5.2.2.4 Duration

Table 5.8 shows that nearly 27% of Thai subordinates had over 10 years working experience, whereas nearly 73% had less than 10 years work experience.

Table 5.9 shows that more than 93% of Japanese managers had working experience of between 10 and 25 years, whereas nearly 7% had working experience of more than 25 years.

#### 5.2.2.5 Organizational Age

Table 5.10 shows that the organizational age distribution is approximately the same for 6 to 10 years and 11-20 years, with relatively small groups of organizations aged between 31-40 years and 1-2 years.

Table 5.11 shows organizational age reported by the Japanese managers. This indicates that the organizational age distribution is the same for 6-10 years and 11-20 years, with a relatively small group of 1-2 years. This result is similar to the results presented in Table 5.10.

#### 5.2.2.6 Types of Organization

Table 5.12 indicates that of the 204 organizations, significantly more were joint venture than wholly owned Japanese subsidiary, with over 73% joint venture and fewer than 27% wholly owned Japanese subsidiary.

Tuble CD Duration of supariose managers			
Duration	Number	Percent	
10-15 years	38	27.1	
15-20 years	66	47.1	
20-25 years	27	19.3	
25-30 years	7	5	
30-35 years	2	1.4	
Total	140	100	

Table 5.9 Duration of Japanese managers

Tuble ette ofgamzational age reported by That substantiates			
Organizational age	Number	Percent	
1–2 years	7	3.4	
3–5 years	29	14.2	
6–10 years	68	33.3	
11–20 years	66	32.4	
21–30 years	29	14.2	
31-40 years	5	2.5	
Total	204	100	

Table 5.10 Organizational age reported by Thai subordinates

Table 5.11 Organizational age reported by Japanese managers

Organizational age	Number	Percent
1-2 years	2	1.4
3–5 years	15	10.7
6–10 years	45	32.1
11–20 years	45	32.1
21–30 years	18	12.9
31-40 years	15	10.7
Total	140	100

51 0 1		
Types of organization	Number	Percent
Joint venture	150	73.5
Wholly owned Japanese subsidiary	54	26.5
Total	204	100

Table 5.12 Type of organization reported by Thai subordinates

Table 5.13 Type of organization reported by Japanese managers

Types of organization	Number	Percent
Joint venture	104	74.3
Wholly owned Japanese subsidiary	36	25.7
Total	140	100

Table 5.14 Lifetime employment reported by Thai subordinates

Lifetime employment	Number	Percent
Almost never	13	6.4
Seldom	19	9.3
Sometimes	54	26.5
Frequently	47	23
Almost always	45	22.1
Always	26	12.7
Total	204	100

 Table 5.15
 Lifetime employment reported by Japanese managers

Lifetime employment	Number	Percent
Almost never	8	5.7
Seldom	13	9.3
Sometimes	38	27.1
Frequently	33	23.6
Almost always	30	21.4
Always	18	12.9
Total	140	100

Table 5.13 shows that of the 140 organizations, there were notably more joint venture organizations than wholly owned Japanese subsidiary with over 74% joint venture and under 26% wholly owned Japanese subsidiary.

#### 5.2.2.7 Lifetime Employment

Table 5.14 shows the extent to which lifetime employment had been implemented in Thailand, reported by Thai subordinates. The majority of Thai subordinates indicated that lifetime employment had been implemented in their organizations sometimes to almost always (71.6%).

Table 5.15 shows the extent to which lifetime employment had been implemented in Thailand reported by Japanese managers. Similar to the results in Table 5.14, the majority of Japanese managers indicated that lifetime employment had been implemented in their organizations sometimes to almost always (72.1%).

#### 5.2.2.8 Consensus Decision-Making

Table 5.16 shows the extent to which consensus decision-making had been implemented in Thailand, reported by Thai subordinates. Over 80% of Thai subordinates reported that consensus decision-making had been implemented in their organizations sometime to almost always. However, 4.4% reported that consensus decisionmaking had either almost never or seldom been implemented in their organizations.

Table 5.17 shows the extent to which consensus decision-making had been implemented in Thailand, reported by Japanese managers. Over 95% of Japanese managers reported that consensus decision-making had been implemented in their organizations sometime to always.

#### 5.2.2.9 Seniority System

The majority of Thai subordinates indicated that seniority systems had been used in their organizations sometimes to almost always (78.5%), while over 11% of them reported that seniority systems had almost ever or seldom been used (Table 5.18).

The majority of Japanese managers indicated that seniority systems had been used in their organizations sometimes to almost always (78.6%), while over 12% of them reported that seniority systems had seldom or almost never been used (Table 5.19).

Number	Percent	
6	2.9	
3	1.5	
59	28.9	
54	26.5	
52	25.5	
30	14.7	
240	100	
	Number           6           3           59           54           52           30           240	

Table 5.16 Consensus decision-making reported by Thai subordinates

<b>Table 5.17</b>	Consensus d	lecision-making	g reported b	oy Ja	panese managers
			/		

Consensus decision-making	Number	Percent
Almost never	4	2.9
Seldom	2	1.4
Sometimes	43	30.7
Frequently	37	26.4
Almost always	34	24.3
Always	20	14.3
Total	140	100

Seniority system	Number	Percent
Almost never	7	3.4
Seldom	17	8.3
Sometimes	65	31.9
Frequently	45	22.1
Almost always	50	24.5
Always	20	9.8
Total	240	100

Table 5.18 Seniority system reported by Thai subordinates

 Table 5.19
 Seniority system reported by Japanese managers

Seniority system	Number	Percent	
Almost never	5	3.6	
Seldom	12	8.6	
Sometimes	44	31.4	
Frequently	33	23.6	
Almost always	33	23.6	
Always	13	9.3	
Total	140	100	

Table 5.20 House union reported by Thai subordinates

House union	Number	Percent
Almost never	3	1.5
Seldom	24	11.8
Sometimes	58	28.4
Frequently	62	30.4
Almost always	39	19.1
Always	18	8.8
Total	204	100

#### 5.2.2.10 House Union

Over 58% of Thai subordinate reported that house union practices had been implemented in their organizations sometimes or frequently, while 13.3% of them reported seldom or almost never (Table 5.20).

Over 59% of Japanese managers reported that house union practices had been implemented in their organizations sometimes or frequently, while 13.5% of them reported seldom or almost never (see Table 5.21).

#### 5.2.2.11 Job Rotation

The majority of Thai subordinates agreed that rob rotation had been implemented in their organizations (51.5%), while 12.8% reported almost never or seldom use of job rotation (Table 5.22).

Number	Percent
2	1.4
17	12.1
38	27.1
45	32.1
27	19.3
11	7.9
140	100
	Number 2 17 38 45 27 11 140

 Table 5.21 House union reported by Japanese managers

Table 5.22 Job rotation reported by Thai subordinates

Job rotation	Number	Percent
Almost never	3	1.5
Seldom	22	10.8
Sometimes	43	21.1
Frequently	62	30.4
Almost always	49	24
Always	25	12.3
Total	204	100

 Table 5.23 Job rotation reported by Japanese managers

Job rotation	Number	Percent	
Almost never	2	1.4	
Seldom	14	10	
Sometimes	30	21.4	
Frequently	46	32.9	
Almost always	32	22.9	
Always	16	11.4	
Total	140	100	

The majority of Japanese managers indicated that job rotation had been used in their organizations sometimes to almost always (77.2%), while over 11.4% reported that job rotation had seldom or almost never been used (Table 5.23).

#### 5.2.2.12 Quality Control Circles

Over 30% of Thai subordinates indicated that quality control circles had been frequently implemented in their organizations, while 12.3% reported almost never or seldom (Table 5.24).

Table 5.25 shows that over 85% of Japanese managers agreed that quality control circles had been implemented in their organizations; however, 5% of them reported seldom or almost never use of quality control circles.

Quality control circles	Number	Percent
Almost never	3	1.5
Seldom	22	10.8
Sometimes	43	21.1
Frequently	62	30.4
Almost always	49	24
Always	25	12.3
Total	204	100

Table 5.24 Quality control circles reported by Thai subordinates

 Table 5.25
 Quality control circles reported by Japanese managers

Quality control circles	Number	Percent	
Almost never	1	0.7	
Seldom	6	4.3	
Sometimes	42	30	
Frequently	39	27.9	
Almost always	39	27.9	
Always	13	9.3	
Total	140	100	

## 5.3 Reliability and Validity

All internal consistency reliabilities based on Cronbach's Alphas for measurement items were better in the questionnaire survey results than they were in the pilot survey. All of them were found to be greater than 0.8, which is considered to be good (see Tables 5.26 and 5.27). All reliability tests were quite high (greater than 0.8), which indicates that the items in each factor positively correlated to one another (Sekaran 2003). In other words, items in each factor were independent measures of the same concept, and therefore indicate accuracy in measurement in the main survey.

Another internal consistency measure for the survey was the item-total-correlation values, and consistent with Robinson et al. (1991), all exceeded 0.5 (see Tables 5.26 and 5.27). Cohen (1988) suggests that correlation (r) = 0.1-0.29(small correlation in both positive and negative), r = 0.3-0.49 (medium correlation), and r = 0.5-1.0 (large correlation). These results supported those of Cronbach's Alpha coefficient, showing that the questionnaires in the main survey were a reliable measurement tool.

Convergent validity (correlation analysis) assessing the degree to which two measures of the same concept are correlated has also been used as a way to establish construct validity for this research. Hair et al. (2003) point out that high correlations indicate that the scale is measuring its intended concept. Therefore, as item-total correlations were found to be quite high (greater than 0.5 – see Tables 5.26 and 5.27) with most of the item-total correlations for the survey being better than those

Items	Reliability results:	Item-to-total-correlations	Cronbach' s Alpha
	Cronbach' s Alpha		if item deleted
Vision	0.874		
Vision1		0.573	0.877
Vision2		0.746	0.838
Vision3		0.709	0.847
Vision4		0.725	0.844
Vision5		0.775	0.830
Leadership	0.885		
Leadership1		0.562	0.893
Leadership2		0.749	0.854
Leadership3		0.704	0.864
Leadership4		0.776	0.847
Leadership5		0.825	0.835
Structure	0.852		
Structure1	0.052	0.630	0.832
Structure?		0.682	0.818
Structure3		0.082	0.810
Structure/		0.682	0.817
Structure5		0.622	0.833
	0.074	0.022	0.055
Reward	0.856	0.615	0.041
Reward		0.615	0.841
Reward2		0.646	0.833
Reward3		0.702	0.819
Reward4		0.659	0.830
Rewards		0.735	0.809
Relationship	0.802		
Relationship1		0.604	0.759
Relationship2		0.553	0.775
Relationship3		0.616	0.755
Relationship4		0.501	0.789
Relationship5		0.663	0.743
Resources support	0.885		
Resources support1		0.729	0.859
Resources support2		0.701	0.870
Resources support3		0.774	0.842
Resources support4		0.793	0.834
Acceptance	0.819		
Acceptance1	0.017	0 552	0.814
Acceptance?		0.713	0.737
Accentance3		0.724	0.736
Accentance4		0.587	0.796
Acceptance+		0.507	0.790

Table 5.26 Summary of Cronbach's alpha, and item-to-total-correlations values in main survey of Thai employees

in the pilot survey (see Chap. 4), these results indicate convergent validity of the instrument.

Convergent validity is also accomplished when the factor loading is significantly different from zero (Shammout 2008; Zeidan 2006). When the critical ratio of the parameter estimates is utilized to evaluate its statistical significance, the main

Items	Reliability results: Cronbach' s Alpha	Item-to-total-correlations	Cronbach' s Alpha if item deleted
Vision	0.885		
Vision1		0.603	0.886
Vision2		0.712	0.864
Vision3		0.723	0.860
Vision4		0.768	0.849
Vision5		0.813	0.838
Leadership	0 849		
Leadership1	0.017	0 578	0.838
Leadership?		0.618	0.829
Leadership3		0.697	0.808
Leadership4		0.689	0.810
Leadership5		0.717	0.802
Sec. 4	0.072	0.717	0.002
Structure	0.873	0.592	0.072
Structure1		0.583	0.873
Structure2		0.761	0.832
Structure3		0.695	0.847
Structure4		0.698	0.849
Structure5		0.778	0.827
Reward	0.832		
Reward1		0.686	0.782
Reward2		0.512	0.830
Reward3		0.691	0.781
Reward4		0.557	0.818
Reward5		0.719	0.774
Relationship	0.821		
Relationship1		0.590	0.793
Relationship2		0.589	0.793
Relationship3		0.566	0.799
Relationship4		0.697	0.759
Relationship5		0.628	0.781
Resources support	0.873		
Resources support1	0.075	0.751	0.829
Resources support?		0.734	0.825
Resources support2		0.679	0.862
Resources support4		0.762	0.802
A local	0.002	0.702	0.024
Adaptation	0.892	0.740	0.0(2
Adaptation 1		0.762	0.862
Adaptation2		0.753	0.866
Adaptation3		0.763	0.862
Adaptation4		0.778	0.856

 Table 5.27
 Summary of Cronbach's alpha, and item-to-total-correlations values in main survey of Japanese managers

criterion is that the estimated parameter be significantly different from zero. As all indicators specified to measure common underlying factors in this study had relatively high standardized loadings on their factors (Kline 2005), goodness of fit measures for the one-factor congeneric measurement models reported in Chap. 6 can also be viewed as confirming the convergent validity of the constructs of this research.

## 5.4 Normality

As structural equation modeling requires variables to be normality distributed, it was necessary to check the distribution of variables to be utilized in the analysis. In order to check the actual deviation from normality for this book, three methods including univariate skewness, univariate kurtosis and multivariate kurtosis were used. The univariate skewness and univariate kurtosis were conducted using an SPSS program, and the multivariate kurtosis was performed using an AMOS program. Distribution is considered within a normal range when indicators of the univariate skewness and univariate kurtosis values are less than 2 and 3, respectively (Azzalini 2005; Hair et al. 2003). As the univariate skewness and univariate kurtosis values of the questionnaires were all less than 2 (see Tables 5.28 and 5.29), this indicates that the univariate skewness and univariate kurtosis values were very small for each item. Therefore, these items of the main survey were considered to be normally distributed.

Most of the multivariate kurtosis values in Tables 5.28 and 5.29 were greater than 8, which may present a problem with implementation of structural equation modeling (Shammout 2008; Zeidan 2006). Kline (2005, p. 50) states that "absolute values of the kurtosis index greater than 10 may suggest a problem, and values greater than 20 may indicate a more serious one". However, the AMOS program provides a way to solve this problem (refer to Sect. 4.7.2).

### 5.4.1 Departure from Normality

The maximum likelihood for estimate SEM parameters requires data to be of a multivariate distribution, which may become violated in small samples (Turner 2007). For data that lacks multivariate distribution, bootstrapping may solve these problems and gives a less biased estimate. When normality assumptions are violated, Bollen–Stine chi-square correction generates a correct value (Byrne 2001). For the present study where issues with multivariate non-normality were evident, the researcher requested AMOS to perform a bootstrap on 140 and 204 samples. The results of these bootstrap tests are presented in the next chapter.

## 5.5 Summary

This chapter has presented and described the demographic characteristics of the research sample, as well as information concerned with the respondents' profiles. The response rates were sufficient to perform SEM, as a recommended minimum sample size of 100–150 is considered as stable for maximum likelihood estimation. The demographic data of Japanese managers and Thai subordinates

Itama	Universite elsevinese	Universite kurtesis	Multivoriata kurtacia
	Univariate skewness	Univariate kurtosis	Multivariate Kurtosis
Vision	0.007	0.440	13.242
Vision1	0.006	-0.118	
Vision2	0.181	-0.894	
Vision3	0.046	-0.671	
Vision4	-0.039	-0.790	
Vision5	0.091	-0.654	
Leadership			13.632
Leadership1	-0.219	0.180	
Leadership2	-0.957	0.807	
Leadership3	-0.475	-0.184	
Leadership4	-0.433	-0.343	
Leadership5	-0.382	-0.382	
Structure			12.399
Structure1	-0.227	-0.451	
Structure2	-0.055	-0.521	
Structure3	0.019	-0.318	
Structure4	-0.159	-0.541	
Structure5	-0.094	-0.907	
Reward			23.411
Reward1	-0.376	-0.086	
Reward2	-0.265	-0.150	
Reward3	-0.856	0.999	
Reward4	-0.371	-0.179	
Reward5	-0.431	-0.318	
Relationship			8.956
Relationship1	-0.589	-0.090	
Relationship2	-0.431	-0.700	
Relationship3	-0.446	-0.445	
Relationship4	-0.464	-0.243	
Relationship5	-0.546	-0.399	
Resources support			9.823
Resources support1	-0.856	0.999	
Resources support2	-0.371	-0.179	
Resources support3	-0.431	-0.318	
Resources support4	-0.433	-0.186	
Acceptance			2.851
Acceptance1	-0.029	-0.589	
Acceptance2	-0.227	-0.451	
Acceptance3	-0.055	-0.521	
Acceptance4	0.019	-0.318	

 Table 5.28
 Normality distribution in main survey of Thai subordinates

See Appendix 2 for the shape of the distribution

included age, gender, position, tenure and organizations' background information. Tables 5.14–5.25 have illustrated that Japanese management practices are utilized in both Japanese joint-venture organizations and wholly owned Japanese subsidiaries in Thailand.

Items	Univariate skewness	Univariate kurtosis	Multivariate kurtosis
Vision			13.111
Vision1	-0.342	0.595	
Vision2	-0.828	0.954	
Vision3	-0.328	-0.100	
Vision4	-0.267	-0.351	
Vision5	-0.241	-0.556	
Leadership			11.869
Leadership1	-0.274	-0.035	
Leadership2	-0.342	0.595	
Leadership3	-0.828	0.954	
Leadership4	-0.328	-0.100	
Leadership5	-0.267	-0.351	
Structure			9.798
Structure1	0.096	-0.101	
Structure2	0.317	-0.846	
Structure3	0.027	-0.485	
Structure4	-0.017	-0.739	
Structure5	0.215	-0.493	
Reward			13.450
Reward1	-0.612	0.580	
Reward2	-0.308	-0.304	
Reward3	-0.597	0.663	
Reward4	-0.303	0.280	
Reward5	-0.275	0.074	
Relationship			4.842
Relationship1	-0.303	0.280	
Relationship2	-0.275	0.074	
Relationship3	-0.131	-0.064	
Relationship4	-0.791	0.963	
Relationship5	-0.304	-0.647	
Resources support			11.763
Resources support1	0.317	-0.846	
Resources support2	0.027	-0.485	
Resources support3	-0.017	-0.739	
Resources support4	0.215	-0.493	
Adaptation			15.482
Adaptation1	-0.791	0.963	
Adaptation2	-0.304	-0.647	
Adaptation3	-0.336	-0.615	
Adaptation4	-0.356	-0.602	

 Table 5.29 Normality distribution in main survey of Japanese managers

See Appendix 1 for the shape of the distribution

Reliability and validity of the measures of motivational factors for adaptation and acceptance (vision, leadership, resources support, reward, structure and relationship), the measure of adaptation, and the measure of acceptance have been described. Additionally, examination of the data for normality prior to analysis, and the normality of items of vision, leadership, resources support, structure, relationship, reward, adaptation and acceptance, was revealed. All of these items showed normal distribution when univariate skewness and univariate kurtosis were performed; however, multivariate kurtosis did not show normal distribution. The use of bootstrapping to solve the problem of multivariate non-normality when performing structural equation modeling will be presented in the following Chap. 6. Further analysis using SEM with AMOS will also be presented in relation to assessing the relationship between motivational factors and adaptation and acceptance, the main purpose of this research.

# **Chapter 6 Structural Equation Modeling: Results and Analysis**

## 6.1 Introduction

The purpose of this chapter is to empirically examine and test the hypotheses of relationships between the motivational factors for adaptation and acceptance (vision, leadership, resources support, reward, structure, and relationship), and adaptation and acceptance as described in Chap. 3, using structural equation modeling (SEM). SEM provides the ability to measure causal relationships between unobserved (latent) variables while determining the amount of un-explained variance. SEM also has the ability to evaluate how well a proposed conceptual model containing observed indicators and hypothetical constructs explains or fits the collected data (Bollen 1989).

As stated in Chap. 4, SEM measurement and theory testing techniques are more useful than traditional statistical techniques (e.g., linear regression, multiple regressions), because they allow competing theoretical models to be examined. SEM is also preferred because it is more flexible than regression analysis. For instance, multiple predictor variables, multiple mediators, and multiple outcome variables can be included in the model, as well as other potential causes of the mediator and outcome, including longitudinal data (MacKinnon 2000; Quintana and Maxwell 1999). Furthermore, SEM is considered to be the method of analysis for this book because of the information it offers on degree of fit for the entire model after controlling for measurement error (Peyrot 1996). Here, control for measurement error is important because measurement problems remain one of the serious obstacles impeding social science research (Blalock 1979). Moreover, SEM can be utilized to examine scale validation, and probably modifies scales for better psychometric properties as well as re-specifies the hypothesized model for better model fit (Chau 1997).

SEM measurement can be conducted in either one or two-stage approaches (Hair et al. 2003). The one-stage approach processes the analysis with simultaneous estimations of both structural and measurement models, and the two-stage approach processes the measurement model first, then modifies it in the second stage when

the structural model is estimated. In this research, the two-stage approach has been selected for the analysis for three reasons. Firstly, it is widely accepted and utilized in management research (e.g., Brown et al. 2007; Kacmar et al. 2006; Rhoades et al. 2001). Secondly, the accurate representation of reliability of the indicators of each construct is best accomplished in two stages to avoid any interaction between the measurement and structural models (Hair et al. 2003). Finally, analyzing the causal relationships in the structural model initially needs performance of the measurement model due to the latter representing a condition that must be satisfied as a matter of logical necessity (Anderson and Gerbing 1988). Therefore, in this research the first stage of analysis was carried out by specifying causal relationships between the observed variables (indicators) and the underlying theoretical constructs (latent variables). The purpose of this step was to verify the unidimensionality of the latent variables and demonstrate their validity. In order to determine the underlying measurement model for this stage, confirmatory factor analysis (CFA) has been used.

As discussed in Chap. 4, the measurement model of this research was tested utilizing CFA prior to testing the structural model to ensure stability of the set of scales and to improve the fit. A critical step of SEM is the assessment of the hypothesized measurement model, thus, prior to analysis of the structural equation model, all its variables were examined for relevance. This was performed by producing one-factor congeneric models for all latent constructs.

In this book the measurement model identifies and tests the relationships between observed measures and their underlying constructs (the first stage) and provides a confirmatory assessment of construct validity (Bentler 1978), whereas the structural model (the second stage) tests the causal relationships among the latent constructs, as posited by the theory (Anderson and Gerbing 1988). As already mentioned, achieving the model-building task through using a two-stage approach has been selected as superior to using a one stage approach (Anderson and Gerbing 1988).

This chapter has eight subsections. Section 6.1 summarizes the objectives of the chapter and outlines what will be covered in the subsections. Section 6.2 describes the assessment of goodness-of-fit for the models. Section 6.3 presents the confirmation of hypothesized latent constructs and discusses how each was tested before developing the structural models. Section 6.4 illustrates how the structural models were tested and developed. Section 6.5 discusses the use of composite factor approach in this research. Section 6.6 presents the Japanese management acceptance model used in this book – examined and developed from the proposed model in Chap. 3. Section 6.7 elucidates and tests the proposed Japanese management adaptation model. Finally, Sect. 6.8 summarizes the materials that have been discussed.

# 6.2 Assessing Goodness of Fit

There is substantial literature on the assessment of goodness of fit of structural equation models, giving a wide array of fit indices along with information about their behavior (e.g., Browne and Cudeck 1993; Mulaik et al. 1989; Marsh et al. 1988).

However, Hair et al. (2003, p. 489) asserts that "structural equation modeling has no single statistical test that best describes the strength of the model's predictions." While there are various indices provided by SEM, there is no concurrence among scholars as to which fit indices should be reported. For instance, Kline (2005) recommended at least four fit tests, while Jaccard and Wan (1996) suggested the use of at least three. Anderson and Gerbing (1988) advised that researchers could assess how well the specified model accounts for data with one or more overall goodness-of-fit indices. Therefore, in order to provide the best overall picture of model fit, in agreement with Hair et al. (2003), this research reports measures which reflect the three categories of fit indices: absolute; incremental; and parsimonious (see Table 4.5, Chap. 4).

As recommended by a number of researchers, multiple criteria for goodnessof-fit were utilized in this research to evaluate the goodness of fit for models tested in CFA and SEM (Kline 2005; Byrne 2001; Bollen 1989). These criteria consist of the following measures of model fit: chi-square ( $\chi^2$ ); normed chi-square (the ratio of the  $\chi^2$  to its degrees of freedom [*df*]); standardized root mean-square residual (SRMR); Tucker–Lewis Index (TLI); comparative fit index (CFI); and Root-Mean-Square Error of Approximation (RMSEA). These indices were selected because they reflect the three categories of fit indices mentioned above.

The first index considered was the chi-square ( $\chi^2$ ) test of model fit. Chi-square  $(\chi^2)$  provides an absolute fit index, and considered by Joreskog (1969) as the fundamental measure of overall fit only obtainable in SEM (Bollen 1989). The chi-square value stands for the discrepancy between the unrestricted sample covariance matrix and the restricted covariance matrix (Joreskog and Sorbom 1993). Ideally, a statistically non-significant chi-square (at least p > 0.05) value should be observed to indicate good fit. As noted in many studies, inferring from only the chi-square test is not recommended because a statistical chi-square value can be achieved even when all other indices indicate that the specified model provides a good fit to the data. This derives from the fact that the chi-square test in very susceptible to even small deviations between the observed and reproduced data matrices, and is vulnerable to sample sizes (Marsh et al. 1988) both large and small (Hair et al. 2003). Moreover, as mentioned in Sect. 5.4, when the data violates assumptions of multivariate normality, the Bollen–Stine bootstrap p is reported. As stated above, the maximum likelihood  $\chi^2$  statistic is susceptible to sample size; as N increases so too does  $\chi^2$ , and the bigger the  $\chi^2$  the more possible it is that the specified model will be rejected. Presented as an equation it can be said that:

$$(N-1) * Fo$$
 is distributed as an  $\chi^2$  distribution with  $df = \frac{1}{2}[(p+q)(p+q+1)] - t$ ,

where N is sample size; Fo is the minimum value of discrepancy function; p is the number of endogenous indicators; q is the number of exogenous indicators; and t is the number of estimated coefficients in the proposed model.

The second fit index selected for use in this study was the normed chi-square test of model fit (NC ration =  $\chi^2$ /degree of freedom) (Wheaton et al. 1977). This index falls within the parsimonious fit indices category which examines the parsimony of the hypothesized model by evaluating the fit of the model to the number of estimated coefficients or degrees of freedom required to attain the level of fit (Hair et al. 2003). However, although models with a value close to one are accepted, it is not clear how far from one that a ratio can get before concluding that a model is unacceptable.

The third fit index utilized in this research, SRMR, is an absolute fit measure which is based on transforming both the sample covariance matrix and the expected covariance matrix into correlation matrices. The SRMR is thus a measure of the mean absolute correlation residual, which is the overall difference between the observed and expected correlations (Kline 2005, p. 141). Thus, the SRMR value represents the average discrepancy between the observed sample and the hypothesized correlation matrices. This value should be from 0 to 1 with values less than 0.10, indicating a well-fitting model (Kline 2005). This value can also be interpreted as meaning that the model elucidates the correlations to within an average error of that value (Hu and Bentler 1995).

The fourth and fifth fit indices were the TLI (Tucker and Lewis 1973), and the CFI (Bentler 1990), which are defined as incremental or comparative fit indices (Zeidan 2006). The CFI is synonymous to the relative non-centrality index (RNI), except that the CFI is truncated to fall in a range from 0 to 1. The TLI and CFI are not systematically influenced by sample size, and both reflect systematic variation in model misspecifications. The difference between them is that the TLI suitably penalizes model complexity, and appropriately rewards model parsimony (Shammout 2008; Zeidan 2006). Although the value of TLI may oscillate outside of the range between 0 and 1 under some situations, values above 0.90 are normally indicative of well-fitting models. CFI values greater than 0.90 indicate a good fit (Bentler 1992), and values close to 0.95 indicate great fit (Hu and Bentler 1999). Bollen (1989, p. 275) states that "selecting a rigid cut-off for the incremental fit indices is like selecting a minimum  $R^2$  for a regression equation. Any value will be controversial. Awareness of the factors affecting the values and good judgment is the best guide to evaluating their size."

The TLI measure coalesce a measure of parsimony into a comparative index between the proposed and null models, and is expressed as:

$$TLI = [(\chi^2 null/dfnull) - (\chi^2 proposed/dfproposed)]/(\chi^2 null/dfnull) - 1,$$

where  $\chi^2 null$  is the chi-square measure of the null model; *dfnull* is the degree of freedom of the null model;  $\chi^2 proposed$  is the chi-square measure of the proposed model being tested; and *df proposed* is the degree of freedom of the proposed model being tested.

The CFI measure is calculated as:

$$CFI = [1 - \max(chisq - df, 0)] / [\max(chisq - df), (chisqn - dfn), 0)],$$

where chisq and chisqn are model chi-square for the given and null models, and df and dfn are the corresponding degree of freedom.

The sixth fit index used in this book was the RMSEA (Steiger 1989). The RMSEA is a measure of absolute fit index which refers "how well would the model, with unknown, but optimally chosen parameter values fit the population covariance matrix if it were available?" (Browne and Cudeck 1993, pp.137–138). This index includes parsimony as a criterion in the assessment of fit. Browne and Cudeck (1993) provided guidelines for the interpretation of the value of RMSEA. By analyzing many sets of empirical data and assessing the behavior of RMSEA in relation to previous conclusions about model fit, Browne and Mels (1990) suggested that values of RMSEA less than 0.05 are considered as indicative of good fit. Browne and Cudeck (1993) recommended that values in the range of 0.05–0.08 indicate moderate fit as "value up to 0.08 represent reasonable errors of approximation in the population" (Joreskog and Sorbom 1996, p. 124). RMSEA attempts to correct the tendency of the  $\chi^2$  statistic to deny any specified model. It takes into account the error of approximation in the population and lightens up the stringent requirement on  $\chi^2$  that the model holds accurately in the population.

Browne and Cudeck (1993) have defined the RMSEA as:

RMSEA = 
$$\sqrt{Max\{[\overset{\wedge}{F} - (df/n), 0]\}/df}$$

where *Max* is the maximum value of either of the two expressions in the parentheses;  $\stackrel{\wedge}{F}$  is the minimum value of fit function; n = N - 1 (where *N* is the sample size); and *df* is degree of freedom.

As above, RMSEA is a measure of the discrepancy per degree of freedom; therefore the smaller it is the better. It is one of the fit indexed that is less influenced by sample size, although for very small sample sizes it overestimates goodness of fit.

As mentioned earlier in this section, all the above criteria were used in this research to evaluate fit of the models. These ranges of values of acceptable fit measures are consistent with the guidelines recommended by many researchers as presented in Table 4.5, Chap. 4.

# 6.3 Confirmation of Hypothesized Latent Constructs

Based on the responses received from Thai subordinates and Japanese managers in manufacturing organizations (N1 = 204, N2 = 140) one-factor congeneric models utilizing maximum likelihood CFAs were evaluated for the hypothesized latent constructs of vision, leadership, resources support, structure, reward and relationship. In this research, CFA was conducted using an AMOS 7.0 computer program. Analysis of congeneric models utilizing AMOS 7.0 allows for complex modeling whereby error associated with the measurement of indicator variables towards the

measurement of latent variables can be explicated, and the fit of these indicators as measures of the latent variables can be tested. In these models, the variances of latent variables were set to unity in order to specify the models.

### 6.3.1 Confirmation of the Vision – Thai Construct

An inspection of the modification indexes of one-factor model for the construct of vision – Thai revealed high covariances between the first, second, and third measurement errors. According to Byrne (2001), these measurement error covariances signify systematic rather than random measurement error in item responses, and can be triggered due to a high degree of overlapping in item content. Therefore the second question related to the first and third measurement error was deleted, as it was found to be highly correlated and redundant with the item associated with the first and third measurement errors. A new model was then submitted and found to have a good data fit to the model in statistics as follows: p = 0.088; Bollen–Stine bootstrap, p = 0.254; CMIN/df = 2.433; RMR = 0.035; TLI = 0.975; CFI = 0.922; and RMSEA = 0.084. All remaining items loaded highly on this factor as the factor loading range was from a low of 0.62 to a high of 0.87 (see Fig. 6.1).

This congeneric model can be explained by the following mathematical formula:

$$Vision = vision1 * 0.62 + vision 2 * 0.70 + vision 3 * 0.83 + vision 4 * 0.87.$$

Table 6.1 shows that all the regression weights were significant at a 0.001 level. As shown in Table 6.2, all variances of vision – Thai construct were also significant at a 0.001 level.



Fig. 6.1 Congeneric model of vision - Thai

			Estimate	S.E.	C.R.	Р
Vision5	$\leftarrow$	Vision	1.000			
Vision4	$\leftarrow$	Vision	1.046	0.086	12.182	***
Vision3	$\leftarrow$	Vision	0.748	0.071	10.602	***
Vision1	$\leftarrow$	Vision	0.669	0.073	9.131	***

 Table 6.1 Regression weights of vision – Thai construct

Table 6.2 Variances of vision - Thai construct

	Estimate	S.E.	C.R.	Р
Vision	1.202	0.167	7.183	***
eV5	0.397	0.077	5.157	***
eV4	0.586	0.094	6.253	***
eV3	0.691	0.081	8.568	***
eV1	0.874	0.096	9.141	***

Note: \*\*\*means significant P values



Fig. 6.2 Congeneric model of vision - Japanese

# 6.3.2 Confirmation of the Vision – Japanese Construct

For the construct of vision – Japanese, the modification indices showed high covariance between the second and third measurement errors. The second question associated with the third measurement error was deleted as it was redundant with the third item. Hence, a new model was developed showing an excellent data fit to the model in statistics as follows: p = 0.837, Bollen–Stine bootstrap p = 0.846, CMIN/df = 0.178, RMR = 0.010, TLI = 1.017, CFI = 1.000, and RMSEA = 0.000. All remaining items loaded highly on this factor, as the factor loading range ranged from a low of 0.63 to a high of 0.95 (see Fig. 6.2).

The above congeneric model of vision – Japanese can be explained by mathematic formula as:

$$Vision = vision1 * 0.63 + vision3 * 0.67 + vision4 * 0.88 + vision5 * 0.95$$

The *p* values of all the regression weights in Table 6.3 and variances in Table 6.4 were significant at 0.001. It can be noted that although the *p* value of ev5 in Table 6.4 was a little high, it was acceptable at a significant level of 0.05. The item of vision 5 could not be deleted as this would have affected the *p* value for the model.

## 6.3.3 Confirmation of the Leadership – Thai Construct

One-factor model for the construct of leadership – Thai revealed that the third item was responsible for the model misspecification. This item appeared to be highly correlated and redundant with the second item, and was thus deleted. The removal of this item resulted in a good fit of the data to the model where: p = 0.251, Bollen–Stine bootstrap p = 0.199, CMIN/df = 1.382, RMR = 0.025, TLI = 0.995, CFI = 0.998 and RMSEA = 0.043. All remaining items loaded highly on this factor, with the factor loading ranging from a low of 0.60 to a high of 0.95 (see Fig. 6.3).

The above congeneric model can be explained by mathematic formula as:

Leadership = leader1 \* 0.60 + leader2 \* 0.69 + leader4 \* 0.89 + leader5 \* 0.95.

Table 6.5 shows the unstandardized estimate of the congeneric model of leadership - Thai, indicating that the *p* values were significant at a 0.001 level.

			Estimate	S.E.	C.R.	Р
Vision5	$\leftarrow$	Vision	1.000			
Vision4	$\leftarrow$	Vision	0.898	0.063	14.222	***
Vision3	$\leftarrow$	Vision	0.665	0.071	9.412	***
Vision1	$\leftarrow$	Vision	0.592	0.069	8.563	***

 Table 6.3 Regression weights of vision – Japanese construct

Note: \*\*\*means significant P values

Table 6.4 Variances of vision – Japanese construct

		-		
	Estimate	S.E.	C.R.	Р
Vision	1.268	0.178	7.110	***
ev5	0.143	0.061	2.324	0.015
ev4	0.311	0.061	5.106	***
ev3	0.672	0.087	7.756	***
ev1	0.671	0.085	7.886	***



Fig. 6.3 Congeneric model of leadership - Thai

Fable 6.5	Regression	weights of	leadership -	- Thai	construct
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			Estimate	S.E.	C.R.	Р
Lead5	$\leftarrow$	Leadership	1.000			
Lead4	$\leftarrow$	Leadership	0.936	0.051	18.209	***
Lead2	$\leftarrow$	Leadership	0.749	0.063	11.831	***
Lead1	$\leftarrow$	Leadership	0.544	0.056	9.788	***

Table 6.6 Variances of leadership - Thai construct

	Estimate	S.E.	C.R.	Р
Leadership	1.374	0.158	8.676	***
eL5	0.147	0.052	2.807	0.004
eL4	0.313	0.054	5.779	***
eL2	0.863	0.092	9.382	***
eL1	0.712	0.074	9.650	***

Note: \*\*\*means significant P values

Although the p value of eL5 in Table 6.6 was a little high, it was acceptable at a significant level of 0.05. The rest of the p values were significant at a level of 0.001. The item of Leadership 5 could not be deleted as it had a very strong factor loading that would affect the fit of the model.

# 6.3.4 Confirmation of the Leadership – Japanese Construct

The measurement model of the construct of leadership – Japanese is also presented in the form of a one-factor congeneric model where the fourth item was deleted as it

was found to be highly correlated and redundant with the third item. The new model showed a good data fit to the model in statistics: p = 0.179, Bollen–Stine bootstrap p = 0.264, CMIN/df = 1.721, RMR = 0.031, TLI = 0.976, CFI = 0.992, and RMSEA = 0.072. All remaining items loaded highly on this factor, as factor loading ranged from a low of 0.68 to a high of 0.81 (see Fig. 6.4).

The above congeneric model can be explained by the following mathematical formula:

Leadership = leader1 \* 0.69 + leader2 \* 0.71 + leader3 \* 0.68 + leader5 \* 0.81.

Table 6.7 shows the unstandardized estimate of the congeneric model of leadership – Japanese, representing that the p values were significant at a 0.001 level. Following this, Table 6.8 shows the variances of the leadership – Japanese construct in which all p values were significant at a level of 0.001.

## 6.3.5 Confirmation of the Resources Support – Thai Construct

The congeneric model of the resources support – Thai construct was tested. Initially, this model was a very poor fit, but after re-specifying the model by



Fig. 6.4 Congeneric model of leadership - Japanese

Table 6.7	Regression	weights	of leadership -	<ul> <li>Japanese</li> </ul>	construct
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			Estimate	S.E.	C.R.	Р
Lead5	$\leftarrow$	Leadership	1.000			
Lead3	$\leftarrow$	Leadership	0.920	0.124	7.434	***
Lead2	$\leftarrow$	Leadership	0.800	0.104	7.670	***
Lead1	$\leftarrow$	Leadership	0.785	0.104	7.510	***

	1	1		
	Estimate	S.E.	C.R.	Р
Leadership	0.872	0.170	5.138	***
eL5	0.461	0.097	4.767	***
eL3	0.847	0.127	6.692	***
eL2	0.558	0.087	6.432	***
eL1	0.591	0.089	6.615	***

Table 6.8 Variances of leadership – Japanese construct



Fig. 6.5 Congeneric model of resources support - Thai

correlating two error covariances, the model had an excellent fit to the data in statistics where: p = 0.891, Bollen–Stine bootstrap p = 0.886, CMIN/df = 0.09, RMR = 0.001, TLI = 1.011, CFI = 1.000, and RMSEA = 0.000. All remaining items loaded highly on this factor, as factor loading ranged from a low of 0.62 to a high of 0.94 (see Fig. 6.5).

Correlating the error covariance approach has been suggested and used in several studies (e.g., Baharim 2007, pp. 104–115; Schumacker and Lomax 2004, pp. 189, 225; Nguyen 2003, pp. 266–280; Byrne 2001, p. 185; Arbuckle and Wothke 1999; Joreskog and Sorbom 1993). Moreover, Byrne (2001) states that correlating the error covariance approach is well justified both statistically and substantively. Therefore, eRs1 was correlated to eRs2 to improve the fit for the model.

The above congeneric model can be explained by the following mathematic formula:

$$Resource \ support = ReSS1 * 0.65 + ReSS2 * 0.62 + ReSS3 * 0.91 + ReSS4 * 0.94.$$

The regression weights shown in Table 6.9 were significant at a level of 0.001. As seen in Table 6.10, the p value of eRs4 was a little high. However it was still

			Estimate	S.E.	C.R.	Р
ReSS2	$\leftarrow$	Resource support	1.000			
ReSS1	$\leftarrow$	Resource support	1.164	0.098	11.894	***
ReSS3	$\leftarrow$	Resource support	1.611	0.162	9.975	***
ReSS4	$\leftarrow$	Resource support	1.742	0.175	9.947	***

 Table 6.9 Regression weights of resources support – Thai construct

Table 6.10 Variances of resources support - Thai construct

	Estimate	S.E.	C.R.	Р
Resources support	0.461	0.097	4.740	***
eRs4	0.177	0.065	2.704	0.005
eRs2	0.745	0.078	9.569	***
eRs1	0.832	0.088	9.460	***
eRs3	0.256	0.060	4.307	***

Note: \*\*\*means significant P values

Table 6.11 Covariances of resources support – Thai construct								
			Estimate	S.E.	C.R.	Р		
eRs2	$\leftrightarrow$	eRs1	0.435	0.068	6.426	***		

Note: \*\*\*means significant P values

tolerable at the significant level of 0.05. The covariance between eRs2 and eRs1 as shown in Table 6.11 was also significant at a 0.001 level. The item of resources support 4 could not be deleted as it had a very strong factor loading which would affect the fit of the model.

# 6.3.6 Confirmation of the Resources Support – Japanese Construct

One-factor congeneric model of resources support – Japanese construct produced a good fit of the data to the model after correlating two error covariances: p = 0.272, Bollen–Stine bootstrap p = 0.383, CMIN/df = 1.207, RMR = 0.013, TLI = 0.996, CFI = 0.999 and RMSEA = 0.039. All remaining items loaded highly on this factor, as factor loading ranged from a low of 0.63 to a high of 0.89 (see Fig. 6.6).

The above congeneric model can be explained by mathematical formula as:

 $Resource \ support = ReSS1 * 0.89 + ReSS2 * 0.85 + ReSS3 * 0.63 + ReSS4 * 0.73.$ 

Table 6.12 shows that the regression weights were significant at a level of 0.001. Moreover, all the p values of the variances in Table 6.13 were significant at



Fig. 6.6 Congeneric model of resources support - Japanese

<b>Fable 6.12</b>	Regression	weights of	of resources	support -	Japanese construct
	<i>U</i>	<i>u</i>			

			Estimate	S.E.	C.R.	Р
ReSS4	$\leftarrow$	Resources support	0.846	0.089	9.489	***
ReSS3	$\leftarrow$	Resources support	0.832	0.106	7.809	***
ReSS2	$\leftarrow$	Resources support	0.949	0.085	11.163	***
ReSS1	$\leftarrow$	Resources support	1.000			

 Table 6.13
 Variances of resources support – Japanese construct

	Estimate	S.E.	C.R.	Р
Resources support	1.079	0.173	6.229	***
eRs4	0.688	0.098	7.031	***
eRs3	1.142	0.151	7.550	***
eRs2	0.363	0.077	4.733	***
eRs1	0.269	0.077	3.483	***

Note: \*\*\*means significant P values

level 0.001. The p value of covariance between eRs4 and eRs3 in Table 6.14 was also significant at level 0.001.

# 6.3.7 Confirmation of the Structure – Thai Construct

The initial one-factor congeneric model of structure – Thai indicated a poor fit of the data to the model. After re-specifying the model by deleting the first item and correlating two error covariances, the result indicated that the data fitted the model

 Table 6.14
 Covariances of resources support – Japanese construct

			Estimate	S.E.	C.R.	Р
eRs4	$\leftrightarrow$	eRs3	0.397	0.097	4.090	***
Note: **	**means s	significant F	values			



Fig. 6.7 Congeneric model of structure - Thai

0	0				
		Estimate	S.E.	C.R.	Р
$\leftarrow$	Structure	1.000			
$\leftarrow$	Structure	1.166	0.116	10.057	***
$\leftarrow$	Structure	0.985	0.101	9.756	***
$\leftarrow$	Structure	0.701	0.098	7.117	***
		$\begin{array}{c} \leftarrow & \text{Structure} \\ \leftarrow & \text{Structure} \\ \leftarrow & \text{Structure} \\ \leftarrow & \text{Structure} \\ \leftarrow & \text{Structure} \end{array}$	$\begin{array}{c} \leftarrow \\ & \text{Estimate} \\ \leftarrow \\ & \text{Structure} \\ & 1.000 \\ \leftarrow \\ & \text{Structure} \\ & 1.166 \\ \leftarrow \\ & \text{Structure} \\ & 0.985 \\ \leftarrow \\ & \text{Structure} \\ & 0.701 \\ \end{array}$	$\begin{array}{c c} & Estimate & S.E. \\ \leftarrow & Structure & 1.000 \\ \leftarrow & Structure & 1.166 & 0.116 \\ \leftarrow & Structure & 0.985 & 0.101 \\ \leftarrow & Structure & 0.701 & 0.098 \end{array}$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$

Table 6.15 Regression weights of structure - Thai construct

very well: p = 0.632, Bollen–Stine bootstrap p = 0.564, CMIN/df = 0.333, RMR = 0.007, TLI = 1.013, CFI = 1.000 and RMSEA = 0.000. All remaining items loaded highly on this factor, as factor loading ranged from a low of 0.55 to a high of 0.87 (see Fig. 6.7).

The above congeneric model can be explained by mathematic formula as:

Structure = structure2 \* 0.55 + structure3 \* 0.76 + structure4 \* 0.87 + structure5 \* 0.73.

All the *p* values of regression weights and variances shown in Tables 6.15 and 6.16 were significant at level 0.001, while the *p* value of the covariance in Table 6.17 was a little high, but still acceptable. The covariance between eSt3 and eSt2 could not be deleted as it would affect the fit of the model.

	Estimate	S.E.	C.R.	Р
Structure for change	0.727	0.131	5.569	***
eSt5	0.626	0.082	7.633	***
eSt4	0.324	0.080	4.070	***
eSt3	0.529	0.075	7.070	***
eSt2	0.808	0.090	9.000	***
6512	0.000	0.070	2.000	

Table 6.16 Variances of structure - Thai construct

Table 6.17 Covariances of structure – Thai construct	
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Fig. 6.8 Congeneric model of structure - Japanese

#### 6.3.8 Confirmation of the Structure – Japanese Construct

A one-factor congeneric model of the structure – Japanese variable was tested. Initially the model had a poor fit, but the good fit of the data to the model was improved after deleting the third item. This resulted in a good fit of the data to the model: p = 0.268, Bollen–Stine bootstrap p = 0.403, CMIN/df = 1.318, RMR = 0.027, TLI = 0.992, CFI = 0.997 and RMSEA = 0.048. All remaining items loaded highly on this factor, as factor loadings range from a low of 0.65 to a high of 0.88 (see Fig. 6.8).

This congeneric model can be explained by mathematic formula as:

$$Structure = structure1 * 0.65 + structure2 * 0.74 + structure4 * 0.78 + structure5 * 0.88.$$

			Estimate	S.E.	C.R.	Р
Struct5	$\leftarrow$	Structure for change	1.000			
Struct4	$\leftarrow$	Structure for change	1.003	0.101	9.959	***
Struct2	$\leftarrow$	Structure for change	0.811	0.086	9.485	***
Struct1	$\leftarrow$	Structure for change	0.718	0.089	8.113	***
		ÿ				

 Table 6.18 Regression weights of structure – Japanese construct

Table 6.19 Variances of structure - Japanese construct

Estimate	S.E.	C.R.	Р
1.133	0.186	6.098	***
0.327	0.083	3.922	***
0.749	0.120	6.269	***
0.602	0.090	6.698	***
0.779	0.105	7.387	***
	Estimate 1.133 0.327 0.749 0.602 0.779	Estimate         S.E.           1.133         0.186           0.327         0.083           0.749         0.120           0.602         0.090           0.779         0.105	Estimate         S.E.         C.R.           1.133         0.186         6.098           0.327         0.083         3.922           0.749         0.120         6.269           0.602         0.090         6.698           0.779         0.105         7.387

Note: \*\*\*means significant P values

Tables 6.18 and 6.19 illustrate the p values of regression weights and variances of structure – Japanese construct as all significant at level 0.001.

## 6.3.9 Confirmation of the Reward – Thai Construct

A one-factor congeneric model of reward was found to provide a modest fit of the data to the model, with correlating error covariances: p = 0.045, Bollen–Stine bootstrap p = 0.154, CMIN/df = 2.439, RMR = 0.038, TLI = 0.969, CFI = 0.988 and RMSEA = 0.084. All remaining items loaded highly on this factor, as factor loading ranged from a low of 0.62 to a high of 0.84 (see Fig. 6.9).

This congeneric model can be explained by mathematic formula as:

$$Rewards = rewards1 * 0.73 + rewards2 * 0.73 + rewards3 * 0.67 + rewards4 * 0.62 + rewards5 * 0.84.$$

The p values represented in Tables 6.20, 6.21 and 6.22 were all significant at level 0.001.

### 6.3.10 Confirmation of the Reward – Japanese Construct

The one-factor congeneric model for reward – Japanese showed that the data fit the model well: p = 0.049, Bollen – Stine bootstrap p = 0.383, CMIN/df = 2.226, RMR = 0.44 TLI = 0.951, CFI = 0.975 and RMSEA = 0.094. All remaining items loaded highly on this factor, as factor loading ranged from a low of 0.62 to a high of 0.79 (see Fig. 6.10).



Fig. 6.9 Congeneric model of reward - Thai

 Table 6.20 Regression weights of reward – Thai construct

			Estimate	S.E.	C.R.	Р
Reward5	$\leftarrow$	Rewards	1.000			
Reward4	$\leftarrow$	Rewards	0.674	0.078	8.587	***
Reward3	$\leftarrow$	Rewards	0.806	0.085	9.474	***
Reward2	$\leftarrow$	Rewards	0.777	0.075	10.359	***
Reward1	$\leftarrow$	Rewards	0.805	0.078	10.331	***

Table 6.21 Variances of reward - Thai construct

	Estimate	S.E.	C.R.	Р
Rewards	1.020	0.152	6.709	***
eRw5	0.433	0.077	5.586	***
eRw4	0.743	0.084	8.829	***
eRw2	0.536	0.068	7.858	***
eRw1	0.582	0.074	7.886	***
eRw3	0.794	0.094	8.459	***

Note: \*\*\*means significant P values

Table 6.22 Covariances reward - Thai construct

			Estimate	S.E.	C.R.	Р
eRw4	$\leftrightarrow$	eRw3	0.417	0.074	5.665	***

This congeneric model can be explained by mathematic formula as:

#### Rewards = rewards1 \* 0.79 + rewards2 \* 0.57 + rewards3 \* 0.76 + rewards4\* 0.62 + rewards5 \* 0.79.

Tables 6.23 and 6.24 show the unstandardized estimate of regression weights and variances in the congeneric model of leadership – Japanese as representing all p values at a significant level of 0.001.



Fig. 6.10 Congeneric model of reward - Japanese

Tał	ole	6.23	Regression	weights	of reward	1 – Japanes	e construct
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			Estimate	S.E.	C.R.	Р
Reward5	$\leftarrow$	Rewards	1.000			
Reward4	$\leftarrow$	Rewards	0.698	0.098	7.091	***
Reward3	$\leftarrow$	Rewards	1.027	0.117	8.793	***
Reward2	$\leftarrow$	Rewards	0.700	0.109	6.449	***
Reward1	$\leftarrow$	Rewards	1.118	0.122	9.153	***

Note: \*\*\*means significant P values

Table 6.24 Variances of reward - Japanese construct

	Estimate	S.E.	C.R.	Р
Rewards	0.825	0.158	5.233	***
eRe5	0.482	0.083	5.771	***
eRe4	0.645	0.087	7.429	***
eRe3	0.644	0.102	6.323	***
eRe2	0.851	0.111	7.648	***
eRe1	0.613	0.105	5.816	***

## 6.3.11 Confirmation of the Relationship – Thai Construct

The initial model for the one-factor congeneric model of relationship – Thai was found to show a very poor fit of the data to the model: p = 0.000, Bollen–Stine bootstrap p = 0.005, CMIN/df = 5.785, RMR = 0.116 TLI = 0.845, CFI = 0.923 and RMSEA = 0.154. Deleting the fourth item and correlating two error covariances, as suggested by the modification indices and re-specifying the model, led to an excellent model fit: p = 0.494, Bollen–Stine bootstrap p = 0.418, CMIN/df = 0.467, RMR = 0.015 TLI = 1.013, CFI = 1.000 and RMSEA = 0.000. All remaining items loaded highly on this factor, as factor loading ranged from a low of 0.52 to a high of 0.88 (see Fig. 6.11).

This congeneric model can be explained by mathematic formula as:

$$\begin{aligned} Relationship &= relation1 * 0.73 + relation2 * 0.52 + relation3 * 0.56 + relation5 \\ &* 0.88. \end{aligned}$$

The *p* values illustrated in Table 6.25 were significant at level 0.001, while the *p* value of eR5 in Table 6.26 was a little high, but still acceptable at a significant



Fig. 6.11 Congeneric model of relationship - Thai

<b>Table 6.25</b>	Regression	weights	of relationship -	Thai	construct
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			Estimate	S.E.	C.R.	Р
Relation5	$\leftarrow$	Relationship	1.000			
Relation3	$\leftarrow$	Relationship	0.697	0.102	6.853	***
Relation2	$\leftarrow$	Relationship	0.677	0.105	6.454	***
Relation1	$\leftarrow$	Relationship	0.942	0.116	8.112	***
		1				
--------------	----------	-------	-------	-------		
	Estimate	S.E.	C.R.	Р		
Relationship	1.363	0.220	6.187	***		
eR5	0.387	0.146	2.647	0.004		
eR3	1.469	0.164	8.936	***		
eR2	1.667	0.182	9.143	***		
eR1	1.069	0.164	6.517	***		

Table 6.26 Variances of relationship - Thai construct

Table 6.27 Covariances of relationship - Thai construct

			Estimate	S.E.	C.R.	Р
eR3	$\leftrightarrow$	eR2	0.566	0.135	4.210	***

Note: \*\*\*means significant P values

level of 0.05. The p value of covariance between eR3 and eR2 was also significant at level 0.001 (Table 6.27). The item of relationship 5 could not be deleted as it had a very strong factor loading which would affect the fit of the model.

#### 6.3.12 Confirmation of the Relationship – Japanese Construct

The one-factor congeneric model of the relationship – Japanese variable was tested. Although the model initially had a poor fit, after deleting the fourth item as suggested by the modification indices, the model was re-specified and an excellent fit of data to the model was obtained: p = 0.196, Bollen–Stine bootstrap p = 0.343, CMIN/df = 1.631, RMR = 0.036 TLI = 0.972, CFI = 0.991 and RMSEA = 0.067. All remaining items were loaded on this factor, as the factor loading ranged from a low of 0.52 to a high of 0.79 (see Fig. 6.12).

This congeneric model can be explained by mathematic formula as:

 $\begin{aligned} \textit{Relationship} &= \textit{relation1} * 0.67 + \textit{relation2} * 0.79 + \textit{relation3} * 0.70 + \textit{relation5} \\ &* 0.52. \end{aligned}$ 

Table 6.28 represents the regression weights of relationship – Japanese constructs, with significance of the p values at level 0.001. Table 6.29 also shows that variance of relationship – Japanese construct had significance of the p values at 0.001.

#### 6.3.13 Confirmation of the Acceptance Construct

An initial run for the one-factor congeneric model of acceptance revealed that the model had been a bad fit. However, the model was a good fit to the data after



Fig. 6.12 Congeneric model of relationship - Japanese

<b>Fable 6.28</b>	Regression	weights of	relationship	o – Ja	panese	construct
-------------------	------------	------------	--------------	--------	--------	-----------

			Estimate	S.E.	C.R.	Р
Relation5	$\leftarrow$	Relationship	1.000			
Relation3	$\leftarrow$	Relationship	1.313	0.255	5.144	***
Relation2	$\leftarrow$	Relationship	1.483	0.281	5.278	***
Relation1	$\leftarrow$	Relationship	1.125	0.224	5.024	***

Table 6.29 Variances of relationship - Japanese construct

	Estimate	S.E.	C.R.	Р
Relationship	0.327	0.083	3.922	***
eRe5	1.010	0.135	7.502	***
eRe3	0.645	0.109	5.928	***
eRe2	0.502	0.112	4.498	***
eRe1	0.583	0.091	6.422	***

Note: \*\*\*means significant P values

conducting the Bollen–Stine bootstrap where: p = 0.021, Bollen–Stine bootstrap p = 0.080, CMIN/df = 3.854, RMR = 0.035 TLI = 0.943, CFI = 0.981 and RMSEA = 0.119. All remaining items loaded highly on this factor, as factor loading ranged from a low of 0.59 to a high of 0.85 (see Fig. 6.13).

This congeneric model can be explained by mathematic formula as:

Acceptance = acceptance1 \* 0.59 + acceptance2 \* 0.83 + acceptance3 \* 0.85 + acceptance4 \* 0.65.



Fig. 6.13 Congeneric model of acceptance

Table 6.30 Regression weights of acceptance construct

			Estimate	S.E.	C.R.	Р
Accept1	$\leftarrow$	Acceptance	1.000			
Accept2	$\leftarrow$	Acceptance	1.464	0.175	8.368	***
Accept3	$\leftarrow$	Acceptance	1.330	0.158	8.415	***
Accept4	$\leftarrow$	Acceptance	1.037	0.144	7.209	***

 Table 6.31
 Variances of acceptance construct

	Estimate	S.E.	C.R.	Р
Acceptance	0.480	0.111	4.325	***
eA1	0.891	0.097	9.171	***
eA2	0.456	0.079	5.758	***
eA3	0.316	0.062	5.114	***
eA4	0.719	0.081	8.857	***

Note: \*\*\*means significant P values

All p values of regression weights and variances of the acceptance construct shown in Tables 6.30 and 6.31 were significant at level 0.001.

# 6.3.14 Confirmation of the Adaptation Construct

While the initial model for the latent variable of adaptation resulted in a poor fit of the model to the data, as a consequence of correlating two error covariances, the respecified model indicated that the data was a good fit to the model: p = 0.186,

Bollen–Stine bootstrap p = 0.259, CMIN/df = 1.746, RMR = 0.011 TLI = 0.988, CFI = 0.998 and RMSEA = 0.073. All remaining items loaded highly on this factor, as factor loading ranged from a low of 0.68 to a high of 0.91 (see Fig. 6.14).

This congeneric model can be explained in mathematic formula as:

 $\begin{aligned} Adaptation &= adaptation 1 * 0.70 + adaptation 2 * 0.68 + adaptation 3 * 0.88 \\ &+ adaptation 4 * 0.91. \end{aligned}$ 

Regression weights of the adaptation construct represented in Table 6.32 were all significant at 0.001, as were the variances and covariance of the adaptation construct (Tables 6.33 and 6.34).

# 6.4 Structural Models: Development Empirical Analysis of the Model of Japanese Management Acceptance and Adaptation

Structural model is defined as "the portion of the model that specifies how the latent variables are related to each other" (Arbuckle 2005, p. 90). Similarly, Byrne (1989)



Fig. 6.14 Congeneric model of adaptation

Table 6.32 Regression weights of adaptation construct

	0	0	1			
			Estimate	S.E.	C.R.	Р
Adapt4	$\leftarrow$	Adaptation	1.496	0.167	8.985	***
Adapt3	$\leftarrow$	Adaptation	1.475	0.165	8.965	***
Adapt2	$\leftarrow$	Adaptation	1.000			
Adapt1	$\leftarrow$	Adaptation	1.063	0.088	12.010	***

Note: \*\*\*means significant P values

	-			
	Estimate	S.E.	C.R.	Р
Adaptation	0.639	0.146	4.378	***
eAd4	0.314	0.095	3.313	***
eAd3	0.399	0.097	4.114	***
eAd2	0.737	0.099	7.479	***
eAd1	0.763	0.103	7.406	***

Table 6.33 Variances of adaptation construct

Table 6.34 Covariances of adaptation construct

			Estimate	S.E.	C.R.	Р
eAd2	$\leftrightarrow$	eAd1	0.459	0.085	5.387	***

Note: \*\*\*means significant P values

states that a structural model aims to specify which latent variables directly or indirectly influence the values of other latent variables in a model. In this research, once all latent variables in the measurement model were validated and a satisfactory fit accomplished, the structural models were tested and presented as a second stage. The SEM technique is especially useful when one has multiple indicators for the latent variables under investigation, as has been the case in this research. The purpose of this stage was to examine relationships through determining the significant paths between the latent variables.

In a path diagram, manifest variables are presented in a rectangular shape. In this research, these variables are presented as scale items. The variables for errors are enclosed in circles to signify that they are unmeasured variables. The single-headed arrows in the diagram stand for causal paths. For example, the arrow leading from vision to adaptation in Fig. 6.16 implies that the adaptation depends on vision. The double-headed arrows illustrate correlations or covariances. An important requirement in linear regression is that error variables are assumed to be not correlated with any other predictor variable. Predictor variables such as vision, leader, structure, resources support, reward, and relationship, are referred to as exogenous, while criterion variables (e.g., adaptation and acceptance) are referred to as endogenous. All endogenous variables have at least one single-headed path going out from them. The error terms represent random fluctuations that have occurred due to measurement error in the variables they are attached to. The measurement errors can sometimes be correlated to each other by the double-headed arrow (Byrne 2001, p. 186).

In the output presented (Tables 6.37 and 6.41 in Sect. 6.6), non-standardized regression weights are displayed under the heading of Maximum Likelihood Estimate. In Table 6.37, the S.E. column is an estimate of standard error of the regression, and the C.R. column is the critical ratio (an observation of a random variable that has approximate standard distribution). Utilizing a significance level of 0.05, any critical ratio that exceeds 1.96 in magnitude is significant (Byrne 2001). In this study, critical ratios associated with the latent mean estimates were reported, following Kaplan's (2000) and Kline's (2005) recommendation that once the



Fig. 6.15 Proposed model of Japanese management acceptance

research model fits to the data, it is important to interpret parameter estimates and critical ratios for specific effects.

After all the congeneric one-factor models had been tested, the initial proposed models of Japanese management acceptance and adaptation (see Figs. 6.15 and 6.16) were tested in AMOS 7.0. However, these two models were not able to be tested as the AMOS program indicated that the sample moment matrix was not positively definite. Another possibility for this is related to the multivariate non-normality issue. As discussed in Chaps. 4 and 5, SEM requires variables to be normality distributed, but the results of multivariate normality showed that most of the variables were multivariate non-normality. This could increase some problems when performing the full model in SEM using AMOS.

The reconfigured model of Japanese management acceptance was tested using AMOS. However, this program indicated that the sample moment matrix was not positive definite. Therefore, a composite factor model technique was requested to develop the model.



Fig. 6.16 Proposed model of Japanese management adaptation

The model of Japanese management adaptation was also tested using AMOS. However, as before, the program indicated that the sample moment matrix was not positive definite. Hence, a composite factor model technique was requested to develop the model. This model is discussed in the following section.

### 6.5 Composite Factor Model

Given that the model of Japanese management acceptance and adaptation could not be tested, the researcher decided to use a composite factor approach to deal with this problem using following reasons: firstly it is widely accepted and used in many management researches (e.g., Luthans et al. 2007; Turner 2007; Houghton et al. 2004; Hair et al. 2003; Holmes-Smith and Rowe 1994); and secondly, it has been suggested by Holmes-Smith and Rowe (1994), Hair et al. (2003), and Hughes et al. (1986) that composite factor measurement models can reduce the complexity of the model and reduce the number of returns required for a reliable model.

Composite variables which are referred to as item parceling, have a number of advantages over the use of individual scale items as indicators of latent variables (Turner 2007). A composite factor approach can improve reliability over individual items leading to: less biased estimates of parameters and better model fit; reduced effects of non-normality (Holt 2004; Bandalos 2002; Bandalos and Finney 2001), parsimony (Bandalos and Finney 2001); and the ability to use smaller samples (Taylor et al. 2004). On the other hand, the penalty for this approach is the loss of detail on individual constructs which the composite variable reasonably depends upon (Taylor et al. 2004).

The creation of composite variables is achieved by combining scores of two or more items on a unidimensional scale. The factors of vision, leadership, resources support, reward, structure and relationship were used to calculate composite variables for use in developing and testing the structural model. In structural modeling, factor scores are defined as latent variables. The method for calculating latent variables has been outlined in Chap. 4.

The composite variables were also determined using the method outlined in Chap. 4, and the component questions utilized for these computings are listed in Tables 6.35 and 6.36.

# 6.6 Development of the Japanese Management Acceptance Model

Once composite variables were achieved, a new model of Japanese management acceptance was achieved. This is presented in the following Fig. 6.17.

Factor name	Components
VisionY	V1,V2, V3, V4, V5
LeaderY	L1, L2, L3, L5
ReSSY	Re1, Re2, Re3, Re4
StructureY	S1, S2, S4, S5
RewardY	R1, R2, R3, R4, R5
RelationY	R11, R13, R14, R15

 Table 6.35
 Structure of composite variables (Japanese)

Table 6.36 Structure of composite variables (Thai)

Factor name	Components
VisionX	V1, V3, V4, V5
LeaderX	L1, L2, L3, L5
ReSSX	Re1, Re2, Re3, Re4
StructureX	S2, S3, S4, S5
RewardX	R1, R2, R3, R4, R5
RelationX	R11, R12, R13, R15



Fig. 6.17 Composite model of Japanese management acceptance



Fig. 6.18 Model of Japanese management acceptance

This model of Japanese Management Acceptance was tested. However, the result still showed that the data did not fit the model: p = 0.000, Bollen–Stine bootstrap p = 0.005, CMIN/df = 32.502, RMR = 0.304, TLI = 0.147, CFI = 0.318 and RMSEA = 0.476 (see Fig. 6.18). Modifications were required for the model to improve the fit.

The modification indices indicated that the latent variables of VisionX, LeaderX, ReSSX, StructureX, RewardsX, and RelationX needed to be related. Two error

covariances also needed to be correlated to improve fit of the model to the data. Thus, covariances between these latent variables were drawn (Fig. 6.19).

The model of Japanese management acceptance was tested again after six covariances were drawn but the model still had a poor fit: p = 0.000, Bollen–Stine bootstrap p = 0.005, CMIN/df = 2.590, RMR = 0.102, TLI = 0.957, CFI = 0.971 and RMSEA = 0.107. The modification indices indicated that some exogenous variables had directly influenced the endogenous variables. The modification suggested that VisionX and LeaderX needed to be correlated. ReSSX and StructureX had a relationship. RewardsX and RelationX needed to be related. VisionX had a direct influence to Acceptance 4. RewardsX and RelationX also had directive influences to Acceptance 1 and 2. Lastly e3 and e4 also needed to be corrected. Therefore, the model was developed again with directive influences from exogenous variables to endogenous variables as presented in Fig. 6.20.

Finally, the model of Japanese management acceptance produced a good fit of the data to the model after six directive paths and four covariances were drawn: p = 0.216, Bollen–Stine bootstrap p = 0.299, CMIN/df = 1.202, RMR = 0.073, TLI = 0.995, CFI = 0.997, and RMSEA = 0.038.

Notes	for	Model:	Computation	of degrees	of freedom
INDICS	101	widder.	Computation	or ucgrees	

28
27



Fig. 6.19 Re-specified model of Japanese management acceptance



Fig. 6.20 Final model of Japanese management acceptance

			Estimate	S.E.	C.R.	Р
Acceptance	$\leftarrow$	VisionX	-0.048	0.187	-0.256	0.798
Acceptance	$\leftarrow$	LeaderX	0.048	0.201	0.242	0.809
Acceptance	$\leftarrow$	ReSSX	0.085	0.201	0.420	0.674
Acceptance	$\leftarrow$	StructureX	-0.063	0.212	-0.295	0.768
Acceptance	$\leftarrow$	RelationX	1.000			
Accept1	$\leftarrow$	Acceptance	1.018	0.417	2.441	0.015
Accept3	$\leftarrow$	Acceptance	1.082	0.091	11.927	***
Accept4	$\leftarrow$	Acceptance	0.983	0.128	7.652	***
Accept4	$\leftarrow$	RewardsX	0.673	0.340	1.979	***
Accept4	$\leftarrow$	VisionX	-0.132	0.063	-2.080	0.038
Accept1	$\leftarrow$	RelationX	0.644	0.430	1.497	0.134
Accept1	$\leftarrow$	RewardsX	-0.580	0.109	-5.344	***
Accept2	$\leftarrow$	RewardsX	-0.613	0.115	-5.340	***
Accept2	$\leftarrow$	Acceptance	1.000			
Accept2	$\leftarrow$	RelationX	0.580	0.119	4.860	***

Table 6.37 Regression weights of the model of Japanese management acceptance

The motivational factors (VisionX, LeaderX, ReSSX, StructureX, RelationX, RewardsX) were initially expected to have direct links to acceptance (H1B–H7B). As can be seen in Table 6.37, there is no motivational factor that can significantly influence the acceptance of Japanese management practices. However, vision, relationship, and reward have direct effects to acceptance of 1, 2 and 4 at levels 0.05 and 0.001, respectively.

Therefore, in testing the hypothesis (Motivational factors  $\rightarrow$  Acceptance), in the relationships (Vision  $\rightarrow$  Acceptance, Rewards  $\rightarrow$  Acceptance, Relationship  $\rightarrow$  Acceptance), it can be concluded that the variance in acceptance of Japanese

management practices by Thai subordinates as a result of motivational factors, such as vision, rewards, and relationship, is highly significant since the respective C.R. values of -2.080, -5.340, -5.344, and 4.860 are greater than the critical value of 1.96. As such, the results strongly support the hypotheses 2B, 5B, and 6B within the limits of the model.

All the covariances of the model of Japanese Management Acceptance in Table 6.38 were significant at level 0.001. This indicates that the constructs and error measurements mentioned in Table 6.38 need to be correlated.

Most of variances in Table 6.39 were significant at level 0.001, except the variance of Z which was significant at level 0.05.

Table 6.40 shows that the multivariate kurtosis normality of the model of Japanese management acceptance was greater than 8, which indicated multivariate

Table 6.38 Covariances of the model of Japanese management acceptance

			Estimate	S.E.	C.R.	Р
RelationX	$\leftrightarrow$	RewardsX	0.660	0.087	7.598	***
ReSSX	$\leftrightarrow$	StructureX	1.015	0.123	8.258	***
VisionX	$\leftrightarrow$	LeaderX	0.832	0.101	8.228	***
e3	$\leftrightarrow$	e4	0.360	0.081	4.475	***

Note: \*\*\*means significant P values

	Estimate	S.E.	C.R.	Р
VisionX	0.914	0.110	8.337	***
LeaderX	0.797	0.096	8.337	***
ReSSX	1.091	0.131	8.337	***
StructureX	0.980	0.118	8.337	***
RelationX	0.757	0.091	8.337	***
RewardsX	0.810	0.097	8.337	***
Z	0.108	0.045	2.374	0.018
e1	0.289	0.064	4.476	***
e2	0.338	0.058	5.847	***
e3	0.771	0.106	7.251	***
<u>e4</u>	0.651	0.090	7.239	***

Table 6.39 Variances of the model of Japanese management acceptance

Note: \*\*\*means significant P values

Table 6.40 Assessment of normality of the model of Japanese management acceptance

Variable	Min	Max	Skew	C.R.	Kurtosis	C.R.
RewardsX	2.600	6.800	-0.215	-1.038	-0.376	-0.909
RelationX	2.600	7.000	-0.176	-0.850	-0.156	-0.376
StructureX	3.000	7.000	0.450	2.176	-0.713	-1.722
ReSSX	3.000	7.000	0.459	2.219	-0.768	-1.854
LeaderX	2.600	7.000	-0.423	-2.042	-0.041	-0.100
VisionX	2.400	7.000	-0.370	-1.789	-0.232	-0.561
Accept4	2.000	7.000	-0.352	-1.702	-0.623	-1.505
Accept3	2.000	7.000	-0.333	-1.607	-0.636	-1.537
Accept2	2.000	7.000	-0.300	-1.451	-0.667	-1.611
Accept1	1.000	7.000	-0.783	-3.781	0.983	2.374
Multivariate					18.046	6.891

Endogenous Variable	= <u>ExogenousVariables</u> VisionX LeaderX ReSSX StructureX RewardX RelationX	+ <u>Endogenous Variables</u> Acceptance Acceptance1 Acceptance2 Acceptance3	+ <u>Error</u> e
Acceptance	= (-0.05*VisionX) + (0.05*LeaderX) + (0.10*ReSSX) + (-0.07*StructureX) + (0.94* RelationX)	Acceptance4	+Z
Acceptance1	= $(-0.43$ *RewardY) + $(0.11$ *RelationY)	+ (0.78* Acceptance)	+e1
Acceptance2	= (-0.47*RewardY) + (0.46*RelationY)	+ (0.80* Adaptation)	+e2
Acceptance3	=	+ (0.75* Adaptation)	+e3
Acceptance4	= (-0.10*VisionX) + (0.43*Reward)	+ (0.69* Adaptation)	+e4

Fig. 6.21 Translation of model of Japanese management acceptance into structural equation

non-normality. The multivariate non-normality problem was resolved using the Bollen–Stine's bootstrap to increase the p value.

The model of Japanese management acceptance can be formally illustrated in a mathematical form as shown in Fig. 6.21.

# 6.7 Development of the Japanese Management Adaptation Model

As discussed in Sect. 6.3, composite variables for the model of Japanese management adaptation were achieved (see in Fig. 6.22).

From the above model (Fig. 6.22), a new model of Japanese management acceptance was tested as presented in the following Fig. 6.23.

However, when this model of Japanese management adaptation was tested, results indicated that the data did not fit the model: p = 0.000, Bollen–Stine bootstrap p = 0.005, CMIN/df = 33.508, RMR = 0.298, TLI = 0.193, CFI = 0.355 and RMSEA = 0.484 (see Fig. 6.23). Therefore, the model required some modifications to improve the fit to the data.

The modification indices indicated that latent variables of VisionY, LeaderY, ReSSY, StructureY, RewardsY, and RelationY needed to be correlated. Two error covariances also needed to be linked to improve the fit of the model to the data. Adaptation 2 was required to be deleted. Thus, covariances between these latent variables were drawn, and one measurement item was deleted as shown in Fig. 6.24.

The model of Japanese management adaptation was tested again after eight covariances were drawn and one measurement item was deleted; however, the model still had a poor fit: p = 0.000, Bollen–Stine bootstrap p = 0.005, CMIN/



Fig. 6.22 Composite model of Japanese management adaptation



Fig. 6.23 Model of Japanese management adaptation

df = 3.712, RMR = 0.099, TLI = 0.938, CFI = 0.961 and RMSEA = 0.140. The modification indices indicated that some exogenous variables had direct paths to endogenous variables. The modification suggested that VisionY had directive influences to Adaptations 1, 3, and 4. RewardsY had had a directive influence to Adaptation 4 as well as RelationY had a directive influence to Adaptation 1.



Fig. 6.24 Re-specified model of Japanese management adaptation

Therefore, the model was again modified by drawing the directive influences from exogenous variables to endogenous variables as presented in Fig. 6.25.

Finally, the model of Japanese management adaptation had a good fit of the data to the model after five directive paths and eight covariances were drawn: p = 0.557, Bollen–Stine bootstrap p = 0.602, CMIN/df = 0.971, RMR = 0.058, TLI = 1.001, CFI = 1.000 and RMSEA = 0.000.

Notes for model: computation of degrees of freedom	
Number of distinct sample moments	45
Number of distinct parameters to be estimated	28
Degrees of freedom $(45 - 28)$	17
Result	
Minimum was achieved	
Chi-square = 16.499	
Degrees of freedom = $17$	
Probability level = 0.489	

The motivational factors (VisionY, LeaderY, ReSSY, StructureY, RelationY, RewardsY) were initially predicted to have direct influence on acceptance (H1A-H7A). As shown in Table 6.41, although there is no motivational factor that can significantly influence adaptation, vision, relationship, and reward, they have direct effects on adaptations 1, 3, and 4 at 0.001 and 0.05 level, respectively. Hence, in testing the hypothesis (Motivational factors  $\rightarrow$  Adaptation), in the relationships (Vision  $\rightarrow$  Adaptation, Rewards  $\rightarrow$  Adaptation, Relationship  $\rightarrow$  Adaptation), it can be concluded that the variance in adaptation of Japanese management practices by Japanese managers as a result of motivational factors such as vision, rewards, and relationship, is highly significant since the respective C.R. values of 4.503, 6.473, -3.994, 5.099, and -2.147 are greater than the critical value of 1.96. As such,



Fig. 6.25 Final model of Japanese management adaptation

			Estimate	S.E.	C.R.	Р
Adaptation	$\leftarrow$	RelationY	1.000			
Adaptation	$\leftarrow$	RewardsY	0.088	0.157	0.559	0.576
Adaptation	$\leftarrow$	StructureY	0.112	0.218	0.511	0.609
Adaptation	$\leftarrow$	ReSSY	-0.097	0.208	-0.465	0.642
Adaptation	$\leftarrow$	LeaderY	-0.098	0.168	-0.585	0.559
Adaptation	$\leftarrow$	VisionY	0.010			
Adapt1	$\leftarrow$	Adaptation	1.000			
Adapt3	$\leftarrow$	Adaptation	0.600	0.115	5.204	***
Adapt4	$\leftarrow$	Adaptation	0.604	0.107	5.645	***
Adapt3	$\leftarrow$	VisionY	0.538	0.120	4.503	***
Adapt1	$\leftarrow$	RelationY	0.347	0.054	6.473	***
Adapt1	$\leftarrow$	VisionY	-0.048	0.187	-0.256	0.798
Adapt4	$\leftarrow$	RewardsY	-0.135	0.063	-2.147	0.032
Adapt4	$\leftarrow$	VisionY	0.566	0.111	5.099	***

Table 6.41 Regression weights of the model of Japanese management adaptation

the results strongly support that hypotheses 2A, 5A, and 6A are within the limits of the model.

The covariances of the model of Japanese management adaptation in Table 6.42 were all significant at levels of 0.001 and 0.05. This implies that all the constructs and error measurements in Table 6.42 need to be linked to improve the model fit to the data.

All variances of the model of Japanese management adaptation were significant at level 0.001 (see Table 6.43).

The multivariate kurtosis normality of the model of Japanese management acceptance shown in Table 6.44 was greater than 8, which indicated multivariate

			Estimate	S.E.	C.R.	Р
VisionY	$\leftrightarrow$	RelationY	0.612	0.090	6.803	***
LeaderY	$\leftrightarrow$	StructureY	0.151	0.071	2.135	0.033
LeaderY	$\leftrightarrow$	ReSSY	0.144	0.074	1.956	0.050
StructureY	$\leftrightarrow$	ReSSY	0.832	0.101	8.228	***
LeaderY	$\leftrightarrow$	RewardsY	0.849	0.103	8.231	***
ReSSY	$\leftrightarrow$	RewardsY	0.155	0.079	1.967	0.049
StructureY	$\leftrightarrow$	RewardsY	0.162	0.076	2.147	0.032
e3	$\leftrightarrow$	e4	0.421	0.076	5.545	***

Table 6.42 Covariances of the model of Japanese management adaptation

 Table 6.43
 Variances of the model of Japanese management adaptation

	Estimate	S.E.	C.R.	Р
VisionY	0.841	0.101	8.337	***
RelationY	0.892	0.107	8.337	***
LeaderY	0.816	0.098	8.340	***
Structure Y	0.874	0.013	69.413	***
ReSSY	0.954	0.014	69.413	***
RewardsY	0.932	0.112	8.340	***
Z	0.289	0.064	4.476	***
e1	0.172	0.050	3.421	***
e3	0.823	0.100	8.216	***
e4	0.711	0.087	8.176	***

Note: \*\*\*means significant P values

 Table 6.44
 Assessment of normality of the model of Japanese management adaptation

Variable	Min	Max	Skew	C.R.	Kurtosis	C.R.
RewardsY	2.316	7.000	-0.340	-1.644	-0.303	-0.731
ReSSY	3.000	7.000	0.463	2.238	-0.754	-1.821
StructureY	3.000	7.000	0.463	2.235	-0.724	-1.749
LeaderY	2.479	7.000	-0.455	-2.196	0.025	0.062
RelationY	2.152	7.000	-0.423	-2.043	0.143	0.345
VisionY	2.547	6.785	-0.261	-1.261	-0.287	-0.692
Adapt4	2.000	7.000	-0.352	-1.702	-0.623	-1.505
Adapt3	2.000	7.000	-0.333	-1.607	-0.636	-1.537
Adapt1	1.000	7.000	-0.783	-3.781	0.983	2.374
Multivariate					11.144	4.686

non-normality. Therefore, Bollen–Stine's bootstrap was conducted to deal with the multivariate non-normality problem of the model. The resulting model of Japanese management adaptation can be formally illustrated in mathematical form as shown in Fig. 6.26.

Endogenous Variable	= <u>ExogenousVariables</u> VisionY LeaderY ReSSY StructureY RewardY RelationY	+ <u>EndogenousVariables</u> Adaptation Adaptation1 Adaptation3 Adaptation4	+ <u>Error</u> e
Adaptation	= (0.01*VisionY) + (-0.09*LeaderY) + (-0.10*ReSSY) + (0.11*StructureY) + (0.09* RewardY) + (0.99*RelationY)		+Z
Adaptation1	= (-0.17*RewardY) + (0.27*RelationY)	+ (0.78* Adaptation)	+e1
Adaptation3	= (0.37*VisionY)	+ (0.43* Adaptation)	+e3
Adaptation4	= (0.39*VisionY) + (-0.10*RewardY)	+ (0.44* Adaptation)	+e4

Fig. 6.26 Translation of model of Japanese management adaptation into structural equation

# 6.8 Summary

The overall objective of this chapter has been to determine support for the hypothesized models by statistically testing them. The choice of SEM as the main technique used to test the hypothesized models has also been discussed. Hence, SEM was implemented in two stages including measurement models and structural models, and motivational factors were found to have some relationship with the adaptation and acceptance of Japanese management practices. These findings suggest that vision, rewards, and relationship have significant effects on the adaptation and acceptance of Japanese management practices. Significance of the theoretical and practical implications of these findings is discussed in the following Chap. 7.

# Chapter 7 Discussion and Implications

## 7.1 Introduction

The objective of this chapter is to show the results of hypotheses testing and discuss significant theoretical and practical implications of the findings. In Chap. 6, two models, one of Japanese management acceptance and one of Japanese management adaptation suited to influencing Thai subordinates to accept such management practices, were developed. These models illustrate the motivational factors that influenced both Thai subordinates and Japanese management in Thailand. In this chapter, the relationship between Japanese management acceptance and adaptation and motivational factors, including vision, rewards, relationship, structure, leadership and resources support are discussed. The significant theoretical and practical implications of the findings are also provided.

This chapter has seven subsections. Section 7.1 summarizes the objectives of the chapter and outlines what will be covered in the subsections. Section 7.2 discusses the results of descriptive statistics in Chap. 5. Section 7.3 provides the results of hypotheses testing; the results of all fourteen hypotheses are also discussed and summarized. Section 7.4 provides the significant theoretical and practical implications of the findings. The relationship between Japanese management adaptation and acceptance and each motivational factor are also discussed, along with the theoretical support from Chaps. 2 and 3. Section 7.5 discusses ways to achieve efficient cross-cultural business management in Thailand. Section 7.6 shows the results of the study, comparing them with previous studies in the field. Finally, Sect. 7.7 summarizes the materials discussed in the previous sections.

#### 7.2 Descriptive Statistical Results

In Chap. 5, descriptive statistics were conducted to describe basic features of the data used in this study. Based on six demographic questions and six questions of Japanese management practices, results of findings from the survey questionnaire are discussed below.

Firstly, demographic responses to questions asked respondents about their employee background, and results of the findings indicate that a large percentage of Japanese expatriates were aged between 41 and 45 (47.1%). Surprisingly, the numbers of male Japanese expatriates were a much higher than the female Japanese expatriates (98.6% male and 1.4% female). Their positions mostly included senior manager or executive (96.4%), and their working experience was in a range of 10 to 25 years (93%). According to descriptive statistics results, it can be concluded that the sample group of Japanese expatriates in this study represent the whole population.

Thai employees were also asked to provide their background information. Their results showed that over 60% of Thai employees were aged between 26 and 35, and that there were more males than females (69.1% male and 30.9% female). Their positions were mainly first line supervisor and junior manager (over 60%), and their working experience was in a range of 2–10 years (72.6%). These results indicated that the sample group of Thai employees in this study represents the whole population.

Thai employees and Japanese expatriates were also asked the extent to which Japanese management practices had been implemented in Thailand. The results of these findings showed that lifetime employment, consensus decision-making, seniority system, house union, job rotation and quality control circles had been existent and frequently implemented in Thailand. These results pointed to supporting the main research purpose, that the adaptation and acceptance of Japanese management practices are significantly required due to the fact that the current Japanese management practices are inappropriate to Thai culture (William and Onishi 2003; McCampbell et al. 1999; Adams and Vernon 1998; Sedgwick 1995) (refer to Chaps. 1 and 2).

## 7.3 Hypotheses Testing

Based on the research questions 1 and 2 (see Chap. 1), the 14 hypotheses developed in Chap. 3 are tested in this section. To test these hypotheses, structural equation modeling (SEM) was used to examine the relationships between motivational factors and the adaptation of Japanese management practices for the selected group of Japanese managers in Thailand, and the relationships between motivational factors and acceptance of Japanese management practices for the selected group of Thai subordinates.

## 7.3.1 Hypotheses H1A–H7A

Research question one asked:

• What are the motivational factors that can influence Japanese managers to adapt their Japanese management practices to be apposite to Thai culture?

The results of hypotheses testing are presented as follows:

Hypothesis H1A: vision is a positive influential factor for Japanese managers to adapt Japanese management practices. (VisionY  $\rightarrow$  Adaptation)

According to Table 6.41, vision had a direct positive relation with adaptations 3 and 4 at 0.001 significant level. This result indeed supports hypothesis H1A, which means that vision is a motivational factor that positively influences Japanese managers to adapt their management practices. Thus hypothesis H1A has been accepted.

Hypothesis H2A: leadership is a positive influential factor for Japanese managers to adapt Japanese management practices. (Leadership  $\rightarrow$  Adaptation)

This result indicated that leadership had a relationship with the adaptation of Japanese management practices; however, it was only a slight relationship and was therefore deemed as not significant. It could be said that leadership was a factor that influenced the adaptation of Japanese management practices, but it was not a positive and significant influential factor. Therefore, hypothesis H2A was rejected.

Hypothesis H3A: structure is a positive influential factor for Japanese managers to adapt Japanese management practices. (Structure  $\rightarrow$  Adaptation)

Based on the result shown in Table 6.41, the structure of adaptation process was not a significant factor that influenced the adaptation of Japanese management practices, although it has a positive link to the adaptation. Hence, hypothesis H3A was rejected.

Hypothesis H4A: reward is a positive influential factor for Japanese managers to adapt Japanese management practices. (Reward  $\rightarrow$  Adaptation)

Reward was a significant factor that influenced the adaptation of Japanese management practices at 0.05 significant level; however, it was a negative influential factor. Thus, hypothesis H4A was rejected.

Hypothesis H5A: relationship is a positive influential factor for Japanese managers to adapt Japanese management practices. (Relationship  $\rightarrow$  Adaptation)

The results presented in Table 6.41 indicate that relationship had a direct positive to adaptation 1 at 0.001 significant level. This means that relationship was a positive influential factor for Japanese managers to adapt their management practices. Therefore, the hypothesis H5A was accepted.

Hypothesis H6A: resources support is a positive influential factor for Japanese managers to adapt Japanese management practices. (Resources support  $\rightarrow$  Adaptation)

Although the Fig. 6.25 shows that resources support had a link to adaptation, it was a negative influential factor and not deemed as a significant factor at 0.001 and 0.05 levels. Thus hypothesis H6A was rejected.

Hypothesis H7A: at least one of six factors is an effective factor that positively influences Japanese managers to adapt Japanese management practices. (Motivational factors  $\rightarrow$  Adaptation)

From the hypothesis H1A to H6A, vision and relationship were found to be positive influential factors at the significant level of 0.001, thus suitable for Japanese managers to adapt into their Japanese management practices. Therefore, hypothesis H7A was accepted.

# 7.3.2 Hypotheses H1B–H7B

Research question two asked:

• What are the motivational factors that can influence Thai subordinates to accept Japanese management practice?

The results of hypotheses testing are presented as follows:

Hypothesis H1B: vision is a positive influential factor for Thai subordinates to implement Japanese management practices.

Based on the results shown in Table 6.37, vision was a negative influential factor for Thai subordinates to accept Japanese management practices at 0.05 significant level. Hence, hypothesis H1B was rejected.

Hypothesis H2B: leadership is a positive influential factor for Thai subordinates to implement Japanese management practices.

Leadership was a positive influential factor for Thai subordinates to implement Japanese management practices; however it was not a significant factor at levels 0.001 and 0.05. Thus, hypothesis H2B was rejected.

Hypothesis H3B: structure is a positive influential factor for Thai subordinates to implement Japanese management practices.

Results showed that structure was not a positive influential factor for Thai subordinates to implement Japanese management practices, and it was also not significant at levels 0.001 and 0.05. Therefore hypothesis H3B was rejected.

Hypothesis H4B: reward is a positive influential factor for Thai subordinates to implement Japanese management practices.

As shown in Table 6.37, reward had direct positive relationships with acceptances 3 and 4. This result indicated that the reward factor was a positive influential factor for Thai subordinates to implement Japanese management practices at a significant level of 0.001. Hence, hypothesis H4B was accepted.

Hypothesis H5B: relationship is a positive influential factor for Thai subordinates to implement Japanese management practices.

Figure 6.20 showed that the relationship factor had a direct positive link to acceptance 2, and as shown in Table 6.37, the relationship factor was significant at level 0.001. Therefore, hypothesis H5B was accepted.

Hypothesis H6B: resources support is a positive influential factor for Thai subordinates to implement Japanese management practices.

Although the resources support factor had a positive link to acceptance of Japanese management practices, it was not significant at levels 0.001 and 0.05 as shown in Table 6.37. Thus, hypothesis H6B was rejected.

Hypothesis H7B: at least one of six factors is an effective factor that positively influences Thai subordinates to implement Japanese management practices.

Based on the results presented in Table 6.37, reward and relationship factors were positive influential factors for Thai subordinates to implement Japanese management practices at a significant level of 0.001. Therefore, the hypothesis H7B was accepted.

The results of research in this book suggest that adaptation and acceptance of Japanese management practices are genuinely related to motivational factors (particularly vision, rewards, and relationship). Based on the theory of reasoned action by Ajzen and Fishbein (1980), beliefs of a person can influence attitude and subject norms and reflect on behavioral intention, and therefore the person's behavior. In other words, an action or behavior of a person depends on the intention which comes from the attitude of that person towards a future outcome. Results of the present research suggest that adaptation and acceptance of Japanese management practices can be created via the use of motivational factors. In agreement with Ajzen and Fishbein (1980), intentions are assumed to capture the motivational factors that influence a behavior; they are indications of how hard people are willing to try and of how much effort they are willing to exert in order to perform the behavior. Consistent with this statement, results of the present research confirm links between the six motivational factors and adaptation of Japanese management practices in one model, and the same factors with acceptance of such practices in another model. These results are also in agreement with the few studies that relied on the theory of reasoned action for developing hypotheses about relationships among the motivational factors of vision, leadership, rewards, resources support, structure and relationship (e.g., Lin 2007; Lok and Crawford 2000; Abraham et al. 1999a) and the adaptation and acceptance of Japanese management practices.

In this study, Figs. 6.20 and 6.25 show that certain motivational factors have played a determining role in the acceptance and adaptation of Japanese management practices. Specifically, organizations that provide a clear vision of adaptation and acceptance, rewards for adaptation and acceptance, and good relationships among employees, have greater likelihoods of developing higher levels of adaptation and acceptance of Japanese management practices.

As shown in Fig. 6.25, all the motivational factors had some relations to the adaptation of Japanese management practices; however, only vision and good relationship were significant at level 0.001 (see Table 7.1). Therefore, it can be

Hypotheses	Effect	Hypothesis accepted
Model of Japanese Management Adaptation		-
$VisionY \rightarrow Adaptation$ H1A: vision is a positive influential factor for Japanese managers to adapt Japanese management practices	Direct effect (1) $0.538^{***}$ (VisionY $\rightarrow$ Adaptation3) (2) $0.566^{***}$ (VisionY $\rightarrow$ Adaptation 4)	$\checkmark$
LeaderY $\rightarrow$ Adaptation H2A: leadership is a positive influential factor for Japanese managers to adapt Japanese management practices	(Vision $r \rightarrow Adaptation4)$ Not sig.	Х
Structure $Y \rightarrow Adaptation$ H3A: structure is a positive influential factor for Japanese managers to adapt Japanese management practices	Not sig.	Х
Rewards $Y \rightarrow Adaptation$ H4A: reward is a positive influential factor for Japanese managers to adapt Japanese management practices	Direct effect (1) $-0.135^{**}$ [negative effect] (RewardsY $\rightarrow$ Adaptation4)	Х
Relation $Y \rightarrow Adaptation$ H5A: relationship is a positive influential factor for Japanese managers to adapt Japanese management practices	Direct effect (1) $0.347^{***}$ (RelationY $\rightarrow$ Adaptation1)	$\checkmark$
ReSSY $\rightarrow$ Adaptation H6A: resources support is a positive influential factor for Japanese managers to adapt Japanese management practices	Not sig.	Х
Motivational factors $\rightarrow$ Adaptation H7A: at least one of six factors is an effective factor that positively influences Japanese managers to adapt Japanese management practices	Direct effect (1) $0.538^{***}$ (VisionY $\rightarrow$ Adaptation3) (2) $0.566^{***}$ (VisionY $\rightarrow$ Adaptation4) (3) $0.347^{***}$ (RelationY $\rightarrow$ Adaptation1)	$\checkmark$
***C::C		

Table 7.1	Hypotheses	testing	for	$H1\Delta_{-}$	H7Δ
Table 7.1	nypomeses	testing	101	nia-	·n/A

\*\*\*Significant at the 0.001 level (one-tailed)

\*\*Significant at the 0.05 level (one-tailed)

 $\sqrt{-}$  Hypothesis accepted

X - Hypothesis rejected

stated that clear vision and good relationships were very important in influencing Japanese managers to adapt their management practices.

Although vision, leadership, structure, and resources support had some slight links to the acceptance of Japanese management practices (see Fig. 6.20), they were not significant factors in the context of Japanese manufacturing organizations in Thailand. On the other hand, good relationships and rewards for the acceptance of Japanese management practices were significant at level 0.001, as shown in Table 7.2. Therefore it can be concluded that good relationships and rewards are motivational factors that could influence Thai subordinates to accept and implement Japanese management practices. Therefore, hypotheses H4B, H5B and H7B were accepted.

Hypotheses	Effect	Hypothesis accepted
Model of Japanese Management Acceptance		
$VisionX \rightarrow Acceptance$ H1B: vision is a positive influential factor for Thai subordinates to implement Japanese management practices	Direct effect (1) $-0.132^{**}$ [negative effect] (VisionX $\rightarrow$ Acceptance4)	Х
LeaderX $\rightarrow$ Acceptance H2B: leadership is a positive influential factor for Thai subordinates to implement Japanese management practices	Not sig.	Х
Structure $X \rightarrow Acceptance$ H3B: structure is a positive influential factor for Thai subordinates to implement Japanese management practices	Not sig.	Х
RewardsX $\rightarrow$ Acceptance H4B: reward is a positive influential factor for Thai subordinates to implement Japanese management practices	Direct effect (1) $0.673^{***}$ [positive effect] (RewardsX $\rightarrow$ Acceptance4)	$\checkmark$
Relation $X \rightarrow Acceptance$ H5B: relationship is a positive influential factor for Thai subordinates to implement Japanese management practices	Direct effect (1) $0.580^{***}$ [positive effect] (RelationX $\rightarrow$ Acceptance2)	$\checkmark$
$ReSSX \rightarrow Acceptance$ H6B: resources support is a positive influential factor for Thai subordinates to implement Japanese management practices	Not sig.	Х
Motivational factors $\rightarrow$ Acceptance H7B: at least one of six factors is an effective factor that positively influences Thai subordinates to implement Japanese management practices	Direct effect (1) $0.673^{***}$ (RewardsX $\rightarrow$ Acceptance4) (2) $0.580^{***}$ (RelationX $\rightarrow$ Acceptance2)	$\checkmark$

 Table 7.2 Hypotheses testing for H1B–H7B

\*\*\*Significant at the 0.001 level (one-tailed)

\*\*Significant at the 0.05 level (one-tailed)

 $\sqrt{-}$  Hypothesis accepted

X - Hypothesis rejected

# 7.4 Implications for Theory and Practice

The set of above convergence factors have implications relevant to benefiting Japanese manufacturing organizations in Thailand in achieving efficient Japanese management system. This research has focused on the six motivational factors including vision, reward, good relationship, leadership, structure and resources support, discussed earlier in Chaps. 2 and 3. However, the results indicated that only vision, reward, and good relationship were significant motivational factors in the context of Thailand. The significant theoretical and practical implications of the findings are discussed following.

#### 7.4.1 Vision as a Motivational Factor

When there is a need for adaptation, vision can be a tool that inspires employees to higher levels of commitment and performance (Dvir et al. 2004; Proctor and Doukakis 2003; Bryman 1992). Therefore, organizations need to communicate this need through a vision that convinces members that acceptance of such adaptation is necessary and good (Fernandez and Rainey 2006; Laurent 2003; Burke 2002; Armenakis et al. 1999b; Kotter 1995). In this way, organizations can motivate their subordinates by sharing the organizational vision to facilitate subordinates to recognize suitable ways of achieving the specified goal (Hackett and Spurgeon 1996). Thus, a shared vision creates a clear organizational purpose and supports the necessary changes to reach desired future outcomes (Hoe 2007).

Results of this study have confirmed the hypothesis that adaptation of Japanese management practices can be achieved by providing vision to Japanese managers. These results showed that the Japanese managers intended to adapt their management practices to be appropriate to Thai local culture, possibly because they had become informed of the reasons for adaptation, and the direction of how adaptation could be achieved. In other words, in agreement with Forster and Akdere (2007) who stated that vision is conceptualized as a technique which provides a direction to facilitate organizational success, they had developed a vision. If adaptation of Japanese managers could be motivated by gaining a clear vision of their organization and recognizing the way to achieve its goals.

# 7.4.2 Role of Reward for Acceptance of Japanese Management Practices

Reward is a primarily technique used in organizations to attain positive organizational outcomes (Ford and Greer 2005; Kerr and Slocum 1987; Cummings and Schwab 1973). Rewards are a reinforcement to strongly motivate subordinates to perform desired behaviors (Lin 2007; Buch and Tolentino 2006; Govindarajulu and Daily 2004), often utilized to motivate employees to attain positive organizational outcomes (Ford and Greer 2005; Kerr and Slocum 1987; Cummings and Schwab 1973). Rewards attract, retain and motivate employees to increase their effort and output towards the success of organizational goals (Bergmann and Scarpello 2001), and high level rewards provide even stronger enhancement of motivation (Takahashi 2006), significantly affecting employee participation (Fenwick and Olson 1986). Therefore, certain forms of extrinsic motivation, for instance monetary rewards, praise and recognition may motivate employees to participate in the implementation of Japanese management practices.

Results of this study have confirmed the hypothesis that the acceptance of Japanese management practices can be achieved if Thai subordinates are provided some rewards. Rewards were seen as an influential factor for Thai subordinates to accept Japanese management practices, possibly because most Thai subordinates were young adults (20–30 years old – refer to Table 5.2) looking for opportunities to improve their opportunities for a better future. Therefore Thai subordinates could be motivated to accept and implement Japanese management practices by giving them a sense of achievement through providing them with opportunities of new and exciting challenges, development of new skills and capabilities, or providing them with money incentives.

## 7.4.3 Good Relationship as a Motivational Factor

Interpersonal relationship is an important motivational factor in reaching organizational goals (Neergard et al. 2005). Employees with high needs for affiliation may be attracted by work environments in which there is a primary focus on developing and maintaining warm relationships between employees (Street and Bishop 1991). It is presumed that if an employee has a positive attitude toward their relationship with others in the organization, this should positively influence their behavioral intentions to act according to the group's decision (Taormina and Lao 2007). Thus, employees' behaviors may vary according to the decision of the group that they belong to.

In context of the present study, both Thai and Japanese are collectivist, emphasizing on the demands and interests of the group rather than on individual interests (Hofstede and Hofstede 2005; Paul et al. 2004). As a result they have strong needs for affiliation (Hui and Villareal 1989) and are more likely to solve conflicts by integrating and compromising (Hui and Yee 1999). These employees are very concerned with their relationships with others in their organization (Hofstede and Hofstede 2005), and may strongly refuse to change if that change could result in conflict with their workmates. In other words, not only can a Thai employee fail to accept and implement Japanese management practices they feel that a conflict may eventuate, but a Japanese manager may not adapt his management practices if there is a poor relationship between himself and his employees. Therefore, in agreement with the hypotheses of this study, questionnaire results have strongly confirmed that the acceptance and adaptation of Japanese management practices can be achieved if Thai subordinates and Japanese managers can maintain good relationships with each other.

## 7.4.4 Leadership as a Motivational Factor

Leaders' support and commitment to change can play an important role in organizational change (Burke 2002; Yukl 2002; Johnson and Leavitt 2001; Carnall 1995). Canning and Hanmer-Lloyd (2002) believe that support from a leader is a factor in facilitating an adaptation process. Leaders have the ability to influence followers' movements (Robbins 2001a) by providing messages to help them understand the vision and direction to follow (Marzec 2007; McGreevy 2003; Armenakis and Harris 2002; Harper 1998; Kotter 1996) and motivate the way they think in order to introduce new processes into their organization (Tucker and Russell 2004). In this way, subordinates may be assured that their leaders are committed to investing the time, energy and resources necessary to implement the change (Eisenbach et al. 1999).

However, although several researchers believe that strong leadership is the most important factor for successful change in organizations (e.g., Landrum et al. 2000; Hoffman 1989; Bibeault 1982), results of the present research indicate that leadership had only a little relationship with the change of Japanese management practices in Japanese manufacturing organizations in Thailand (see Figs. 6.20 and 6.25). This implies that Thai subordinates and Japanese managers did not seriously take leadership as an important factor that could influence them to accept and adapt Japanese management practices. This may be due to leadership not playing an important role in the context of manufacturing organizations in Thailand, as influence from leaders may always exist and be very commonplace for employees in their manufacturing organizations.

# 7.4.5 Structure for Adaptation and Acceptance of Japanese Management Practices

Fernandez and Rainey (2006) believe that only providing vision is insufficient to bring about change. Vision must be altered into a course of action or plan for achieving the change (Abramson and Lawrence 2001; Lambright 2001; Young 2001; Kotter 1995). In order to be successful in change, employees who participate in a change process need to know what to do, how to improve upon what they do, and how to achieve it effectively (Rosenberg 2003). Here, structure provides a direction of how to perform the change through a series of steps in change activities,

and identifying who is in charge of the change process (Richardson 2007; Williams and Rains 2007).

However, structure for adaptation and acceptance of Japanese management practices was not a significant factor in motivating Thai subordinates and Japanese managers; it only had a small effect on the acceptance and adaptation of Japanese management practices (see Figs. 6.20 and 6.25). It is possible that Thai subordinates and Japanese managers did not believe that structure was as important as vision, rewards and good relationship, in their acceptance and adaptation of Japanese management practices. Moreover, they were probably already endeavoring to perform the acceptance and adaptation of Japanese management practices. Thus, the structure factor was not an important factor that influenced Thai subordinates and Japanese managers to accept and adapt their management practices.

## 7.4.6 Role of Resources Support to Motivate Employees

To overcome resistance to change, leaders need to improve their employees' confidence by ensuring that the organization has sufficient resources to support the change program (Self 2007). Resources support can lead to synergies increasing the possibility that all changes will be successfully implemented (Fernandez and Rainey 2006). Employees' perceptions of the extent to which their organization has sufficient resources to support change, and the degree to which they can actively and genuinely participate in the process, are significant factors in accomplishing successful change (Jones et al. 2005; Smith 2005). However, results of the present research indicated that resources support was not a significant factor to motivate Japanese managers to change and Thai subordinates to change their attitudes to accept Japanese management practices (see Tables 6.37 and 6.41). Resources support for the adaptation and acceptance of Japanese management practices was seen as an insignificant factor because it was ordinarily provided in Japanese manufacturing organizations in Thailand. Therefore, although resources support has been seen by some as important to the change process (Fernandez and Rainey 2006; Jones et al. 2005; Smith 2005), in this study it was not an important factor in influencing Thai subordinates and Japanese managers to accept and adapt their management practices.

# 7.5 Towards an Efficient Cross-Cultural and International Business Management Practices

Daniels and Radebaugh (1998) state that efficient management practices should be flexible, and adaptable and acceptable to those who use them. This study has confirmed that by providing vision, reward and good relationship, Japanese managers and Thai subordinates can be motivated to adapt and accept the Japanese management practices. When there is a clear vision and good relationship among employees, Japanese managers will adapt their management practices. Furthermore, Thai subordinates will accept and implement Japanese management practices in Thailand if reward and good relationships occur. Therefore, efficient Japanese management practices can be engendered if Thai subordinates and Japanese managers are provided with a clear vision and reward, and there are good relationships among them.

This research is groundbreaking in that it examines the factors that cause adaptation and acceptance of Japanese management practices in Thailand. Moreover, it has significance in adding to the cross-cultural and international business management literature in which vision, reward and good interpersonal relationships need to be taken into account when transplanting management practices from one country to another. The outcome of the present study could lead to improved business performance and reduction in conflict between Japanese manufacturers and their Thai employees, and assist in formulating efficient international and crosscultural business management systems and practices.

#### 7.6 Findings and Supports from Previous Studies

The findings of this study indicate that clear vision, rewards and good relationship could significantly influence the adaptation and acceptance of Japanese management practices in Thailand. This strongly supports the results of several researches in change management studies where vision, reward, and relationship have been significantly influential factors for change in organizations (e.g., Lin 2007; Lok et al. 2005; Abraham et al. 2002; Abraham et al. 1999a; Abraham et al. 1997). Table 7.3 shows the similar findings provided from previous studies which have been conducted in different contexts to results of the present study.

In Lin's (2007) study, SEM was developed to examine the relationships between motivational factors (reward and interpersonal relationship) and employee knowledge-sharing intentions. The findings in her study indicate that interpersonal relationship and rewards are associated with employee knowledge-sharing intentions.

Lok et al. (2005) developed an integrative framework for measuring the extent to which organizational variables influence the success of process improvement programs. Their results indicate that vision and leadership are necessary for the success of process-improvement programs.

Author(s)	Vision	Reward	Relationship
Lin (2007)		$\checkmark$	
Lok et al. (2005)			
Abraham et al. (2002)	, V		
Abraham et al. (1999a)	, V	·	
Abraham et al. (1997)		$\checkmark$	

Table 7.3 Supports from the previous studies

Abraham et al. (2002) found that vision, resources support, leadership and reward are critical factors in implementing the effective management of legislated change in museums.

The study of Abraham et al. (1999a) indicated that vision, resources and management supports are the important factors in managing organizational change. Abraham et al. (1997) also found that vision, leadership, structure and reward are the key factors predicting effectiveness of cultural change and improved productivity in the implementation of total quality management.

## 7.7 Summary

This chapter has discussed the results of the research findings by utilizing the descriptive statistics and structural equation modeling techniques outlined in Chaps. 5 and 6. The significant theoretical and practical implications of the research findings are also discussed in this chapter.

Regarding the results of descriptive statistics, it can be concluded that the sample group of Thai employees and Japanese expatriates represents the whole population of Thai subordinates and Japanese managers who work in joint-venture Japanese manufacturing organizations in Thailand. Furthermore, these results show that Japanese management practices have frequently been implemented in Thailand, and that in order to generate good management practices that are able to more fully reflect the efficiency and capability of these organizations, adaptation and acceptance of Japanese management practices is required.

This chapter has summarized and discussed the results of findings and implications for cross-cultural management practices. It has also outlined the results of hypotheses testing for the book, along with implications for theory and practice. Vision, reward and good relationship were found to be positive significant motivational factors that influence Thai subordinates to accept, and Japanese managers to adapt, Japanese management practices. The next chapter presents the conclusion of the book.

# Chapter 8 Summary, Findings, and Conclusion

## 8.1 Introduction

In summarizing the present book, this chapter presents the following eight sections. Section 8.2 discusses the purpose of the study and research questions, and overviews the research. Section 8.3 summarizes the results of the study. Section 8.4 describes potential uses for the models of Japanese management adaptation and acceptance. Section 8.5 discusses the limitations of the research. Section 8.6 suggests recommendations for further research. Finally, Sect. 8.7 summarizes the present research program.

## 8.2 Research Design

This research was designed to assess the relationships between motivational factors, adaptation and acceptance of Japanese management practices in Thailand which are crucial in designing ad efficient Japanese management system applicable to Thailand. The aim of the research was to investigate the motivational factors that can influence Japanese managers to adapt, and Thai subordinates to accept, Japanese management practices in Thailand for the convergence of the interests and behaviors of these stakeholders in Japanese businesses. While prior empirical studies of Japanese management practices in Thailand have mainly focused on Thai employees' perceptions of these practices and on how well they are implemented, there has not yet been any research undertaken to examine factors that influence the adaptation and acceptance of Japanese management practices in Thailand. In essence, it was assumed that motivational factors, such as vision, leadership, structure, rewards, resources support, and relationship are the positive influential factors in Thai subordinates accepting, and Japanese managers adapting, Japanese management practices for providing and efficient management system.

## 8.2.1 Research Questions

In order to develop efficient cross-cultural management practices, this research sought answers to the following questions:

- What are the motivational factors that can influence Japanese managers to adapt their Japanese management practices to be apposite to Thai culture?
- What are the motivational factors that can influence Thai subordinates to accept Japanese management practice?

# 8.2.2 Overview of the Research

To address the research questions and establish a framework and development of models, a comprehensive literature review of change management in organizations was undertaken in Chap. 2. Given that many Japanese management practices have not been successfully implemented in Thailand, this chapter established the foundation of the present research by emphasizing how to create good management practices that can satisfy all members of organizations or reduce/eliminate possible agency problems. However, in reviewing the literature it became apparent that motivational factors of vision, leadership, resources support, structure, reward and relationship could be important in implementing changes of current Japanese management practices – but what appeared to be lacking was a detailed use of motivational factors that can be used to influence Japanese managers to adapt, and Thai subordinates to accept, Japanese management practices.

Although many studies have reported that motivational factors can influence employees in organizations, there has not yet been any research undertaken to investigate which of these factors can influence the adaptation and acceptance of Japanese management practices in Thailand. Therefore, to enable Japanese organizations in Thailand to understand how to create good management practices, the research framework adopted six motivational factors to develop and test in structural equation models, using composite variables that allowed the relative importance of attributes to be identified.

For the purpose of the present research, two sets of questionnaires were developed, pilot-tested and revised before being distributed to Japanese managers and Thai subordinates. Chapter 4 discussed justification of the research design, the questionnaire development, the sample surveyed, and the method of data collection. Statistical analysis supported the results of other studies reported in the literature, and two new models including one of motivational factors (the convergence factors) that influence acceptance of Japanese management practices and the other of motivational factors that influence adaptation of Japanese management practices, were presented. Hypotheses testing and results of the findings using the structural equation modeling technique were described in Chap. 6.

#### 8.3 Results and Implications for Efficient Management

As discussed in Chap. 7, vision and good relationship were seen as positive motivational factors that influence Japanese managers to adapt their management practices to be appropriate to Thai culture, whereas Thai subordinates considered reward and good relationship as positive motivational factors that influence them to accept and implement Japanese management practices. The structural equation models of Japanese management adaptation and acceptance were developed and tested in Chap. 6. These models demonstrate the relationship between motivational factors and adaptation and acceptance in path diagrams (see Chap. 6, Figs. 6.20 and 6.25). These two models were also formally illustrated in mathematical forms (see Chap. 6, Figs. 6.21 and 6.26). These results imply that in order to develop efficient cross-cultural management practices, good relationships along with rewards and vision play an important role.

## 8.4 Potential Uses for the Models

The two models of motivational factors for adaptation and acceptance of Japanese management practices presented in Chap. 6, Figs. 6.20 and 6.25, may not only be used in the context of manufacturing organization, but also for other types of organization to motivate their employees to achieve organizational goals and efficient international cross-cultural management practices. Moreover, these two models may be used to compare the differences between motivational factors of managers and their subordinates

## 8.5 Limitations of the Research

In identifying the motivational factors that affect organizational change and are relevant for Japanese managers to adapt and Thai subordinates to accept Japanese management practices, the motivational factors and six-box model of Weisbord (1978), were adopted. However, in the present book, Weisbord's model which initially studied relationships between six factors that affect organizational change, was adapted to identify the particular motivational factors that affect the adaptation and acceptance of Japanese management practices; it did not follow investigation of the relationships among six factors as did Weisbord.

As discussed in Chap. 1, the aim of the study was to examine motivational factors that can influence Japanese managers to adapt, and Thai subordinates to accept, Japanese management practices in Thailand. Therefore, comparisons of the two models presented in Chap. 6 were found to be irrelevant to this study.

Although the results of findings indicated that vision, rewards and good relationship were significant in motivating Japanese managers to adapt and Thai subordinates to accept Japanese management practices in Thailand, other motivational factors such as resources support, and structure and leadership were only slightly relative to the adaptation and acceptance of Japanese management practices in Thailand. However, these results may prove to be different when applying the models in other contexts.

The selection of Japanese manufacturing organizations for the present study was based on a freely available list through the Japanese Chamber of Commerce, Bangkok (2006). As this list was dated 2006, the sample size based on this list may be out of date; however, it was still used in this study since it was the only reliable information available during the period of undertaking this research.

As discussed in Chap. 5, although the response rates in this book were sufficient to perform structural equation modeling, at 204 (Thai subordinates) and 140 (Japanese managers) they were not high. According to the calculations in Sect. 4.6.2, ideally they should have been at least 242 each. However, the results of the study were satisfactory in terms of the standard statistical tests of structural equation modeling and information requirements for analyzing the research questions of the book (refer to Sect. 5.2.1).

#### **8.6 Recommendations for Further Research**

The models of adaptation and acceptance of Japanese management were developed based on small sample groups of Japanese managers and Thai subordinates in manufacturing organizations in Thailand. These two models have that identified vision, rewards and good relationships can motivate Japanese managers and Thai subordinates in manufacturing organizations to adapt and accept Japanese management practices. However, much published research has stated that not only vision, reward, and good relationship can motivate employees in organizations, but also resources support, structure, and leadership. It is therefore possible that resources support, structure, and leadership could be significant motivational factors when applying the models in a different sample. Therefore, the proposed model of motivational factors for adaptation and acceptance of Japanese management practices needs to be tested in different types of organizations or different groups of respondents to confirm the results of this research.

#### 8.7 Contributions and Concluding Remarks

Differences in national cultures suggest the need for differences in management practices (Newman and Nollen 1996). Several researches have indicated that Japanese management practices are inappropriate in the Thai local culture (e.g., William and Onishi 2003; Tannock et al. 2001; McCampbell et al. 1999; Goh and Pinaikul 1998; Holmes and Tangtongtavy 1995; Sedgwick 1995). Consequently, when Japanese managers apply their management practices in Thailand without adjustment to the local culture, conflicts emerge. Therefore, it has been a contention of this book that failure to adapt management practices in Thailand decreases the motivation and performance of Thai subordinates. It has also contended that Japanese management practices should be adapted in order to increase the effectiveness of Japanese affiliates in Thailand (William and Onishi 2003; McCampbell et al. 1999; Adams and Vernon 1998; Sedgwick 1995).

At present, literature on cross-cultural management provides insufficient understanding on how to motivate Thai employees to accept and implement transplanted Japanese management practices, and how Japanese managers need to adapt their management practices to be appropriate in Thai culture. However, several research studies identifying factors that can influence employees to implement change in organizations may be applicable (e.g., Lin 2007; Lok et al. 2005; Abraham et al. 2002; Lok and Crawford 2000; Abraham et al. 1977, 1999a, b). Therefore, as previous studies have shown how to motivate employees to perform the change in organizations, it was considered necessary in this study to identify how to motivate Thai employees to accept, and Japanese managers to adapt, Japanese management practices in Thailand.

The present research began with the goal of investigating motivational factors that can influence employees in organizations. By using structural equation modeling to specify the relationships between motivational factors and adaptation and acceptance of Japanese management practices, the findings indicate that clearer vision and an emphasis on rewards and good relationships can create an increased perception of Japanese management adaptation and acceptance. This study has added to the body of knowledge in the cross-cultural management literature by suggesting vision, rewards, and good relationship are significant motivational factors that can influence employees in Japanese manufacturing organizations in Thailand.

Most importantly, the *central claim* of this book is that Japanese management practices in Thailand can be successfully implemented when vision, reward and good relationship are a central focus. This emphasis will assist Japanese businesses in Thailand to develop efficient international management practices in which Thai subordinates accept, and Japanese managers adapt Japanese management practices.
# Chapter 9 Appendices

## 9.1 Appendix 1

## 9.1.1 Descriptive Statistical Results of Japanese Expatriates

Statistics

	Age	Gender	Position	Organization age	Duration	Joint venture or wholly owned	Kind of organizations
Ν							
Valid	140	140	140	140	140	140	140
Missing	0	0	0	0	0	0	0
Mean	5.06	1.01	5.31	4.76	6.06	1.26	4.26
Median	5.00	1.00	5.00	5.00	6.00	1.00	5.00
Mode	5	1	5	$4^{\mathrm{a}}$	6	1	5
Variance	0.794	0.014	0.289	1.390	0.794	0.192	4.527
Skewness	0.801	8.275	1.493	0.256	0.801	1.123	-0.466
Std. error of skewness	0.205	0.205	0.205	0.205	0.205	0.205	0.205
Kurtosis	0.699	67.442	1.330	-0.367	0.699	-0.749	-1.243
Std. error of kurtosis	0.407	0.407	0.407	0.407	0.407	0.407	0.407
Range	4	1	2	5	4	1	6
Minimum	4	1	5	2	5	1	1
Maximum	8	2	7	7	9	2	7
Percentiles							
25	4.00	1.00	5.00	4.00	5.00	1.00	2.00
50	5.00	1.00	5.00	5.00	6.00	1.00	5.00
75	6.00	1.00	6.00	5.00	7.00	2.00	6.00

<sup>a</sup>Multiple modes exist. The smallest value is shown

T. Raoprasert and S.M.N. Islam, *Designing an Efficient Management System*, Contributions to Management Science, DOI 10.1007/978-3-7908-2372-1\_9, © Springer-Verlag Berlin Heidelberg 2010















9.1.2 Japanese Management Practices in Thailand: Answered by Japanese Expatriates

Statistics						
	Lifetime employment	Consensus decision- making	Seniority system	House union	Job rotation	Quality control circles
N						
Valid	140	140	140	140	140	140
Missing	0	0	0	0	0	0
Mean	4.84	5.11	4.83	4.79	5.00	5.06
Median	5.00	5.00	5.00	5.00	5.00	5.00
Mode	4	4	4	5	5	4
Variance	1.874	1.434	1.568	1.360	1.439	1.191
Skewness	-0.172	-0.158	-0.094	0.026	-0.152	-0.014
Std. error of skewness	0.205	0.205	0.205	0.205	0.205	0.205
Kurtosis	-0.639	-0.309	-0.540	-0.503	-0.512	-0.612
Std. error of kurtosis	0.407	0.407	0.407	0.407	0.407	0.407
Range	5	5	5	5	5	5
Minimum	2	2	2	2	2	2
Maximum	7	7	7	7	7	7
Percentiles						
25	4.00	4.00	4.00	4.00	4.00	4.00
50	5.00	5.00	5.00	5.00	5.00	5.00
75	6.00	6.00	6.00	6.00	6.00	6.00













## 9.1.3 Motivational Factors for Adaptation of Japanese Management Practices

## Vision

Statistics

	Vision1	Vision2	Vision3	Vision4	Vision5
N					
Valid	140	140	140	140	140
Missing	0	0	0	0	0
Mean	5.11	5.17	5.18	5.05	5.06
Median	5.00	5.00	5.00	5.00	5.00
Mode	5	5	5	5	6
Variance	1.124	1.596	1.241	1.343	1.421
Skewness	-0.342	-0.828	-0.328	-0.267	-0.241
Std. error of skewness	0.205	0.205	0.205	0.205	0.205
Kurtosis	0.595	0.954	-0.100	-0.351	-0.556
Std. error of kurtosis	0.407	0.407	0.407	0.407	0.407
Range	6	6	5	5	5
Minimum	1	1	2	2	2
Maximum	7	7	7	7	7
Percentiles					
25	4.00	5.00	4.00	4.00	4.00
50	5.00	5.00	5.00	5.00	5.00
75	6.00	6.00	6.00	6.00	6.00

#### Vision1

Valid	Frequency	Percent	Valid percent	Cumulative percent
Not at all	1	0.7	0.7	0.7
Seldom	5	3.6	3.6	4.3
Sometimes	34	24.3	24.3	28.6
Frequently	48	34.3	34.3	62.9
Almost always	40	28.6	28.6	91.4
Always	12	8.6	8.6	100.0
Total	140	100.0	100.0	

Vision2

Valid	Frequency	Percent	Valid percent	Cumulative percent
Strongly disagree	2	1.4	1.4	1.4
Moderately disagree	3	2.1	2.1	3.6
Slightly disagree	9	6.4	6.4	10.0
Neither agree nor disagree	18	12.9	12.9	22.9
Slightly agree	49	35.0	35.0	57.9
Moderately agree	41	29.3	29.3	87.1
Strongly agree	18	12.9	12.9	100.0
Total	140	100.0	100.0	

Vision3				
Valid	Frequency	Percent	Valid percent	Cumulative percent
Moderately disagree	2	1.4	1.4	1.4
Slightly disagree	7	5.0	5.0	6.4
Neither agree nor disagree	27	19.3	19.3	25.7
Slightly agree	48	34.3	34.3	60.0
Moderately agree	40	28.6	28.6	88.6
Strongly agree	16	11.4	11.4	100.0
Total	140	100.0	100.0	
Vision4				
Valid	Frequency	Percent	Valid percent	Cumulative percent
Moderately disagree	2	1.4	1.4	1.4
Slightly disagree	12	8.6	8.6	10.0
Neither agree nor disagree	28	20.0	20.0	30.0
Slightly agree	47	33.6	33.6	63.6
Moderately agree	37	26.4	26.4	90.0
Strongly agree	14	10.0	10.0	100.0
Total	140	100.0	100.0	
Vision5				
Valid	Frequency	Percent	Valid percent	Cumulative percent
Moderately disagree	2	1.4	1.4	1.4
Slightly disagree	12	8.6	8.6	10.0
Neither agree nor disagree	32	22.9	22.9	32.9
Slightly agree	39	27.9	27.9	60.7
Moderately agree	40	28.6	28.6	89.3
Strongly agree	15	10.7	10.7	100.0
Total	140	100.0	100.0	











# 9.1.4 Leadership

Statistics

	Leadership1	Leadership2	Leadership3	Leadership4	Leadership5
N					
Valid	140	140	140	140	140
Missing	0	0	0	0	0
Mean	4.85	5.11	5.17	5.18	5.05
Median	5.00	5.00	5.00	5.00	5.00
Mode	5	5	5	5	5
Variance	1.136	1.124	1.596	1.241	1.343
Skewness	-0.274	-0.342	-0.828	-0.328	-0.267
Std. error of skewness	0.205	0.205	0.205	0.205	0.205
Kurtosis	-0.035	0.595	0.954	-0.100	-0.351
Std. error of kurtosis	0.407	0.407	0.407	0.407	0.407
Range	5	6	6	5	5
Minimum	2	1	1	2	2
Maximum	7	7	7	7	7
Percentiles					
25	4.00	4.00	5.00	4.00	4.00
50	5.00	5.00	5.00	5.00	5.00
75	5.75	6.00	6.00	6.00	6.00

Leadership1

Valid	Frequency	Percent	Valid percent	Cumulative percent
Moderately disagree	2	1.4	1.4	1.4
Slightly disagree	15	10.7	10.7	12.1
Neither agree nor disagree	27	19.3	19.3	31.4
Slightly agree	61	43.6	43.6	75.0
Moderately agree	28	20.0	20.0	95.0
Strongly agree	7	5.0	5.0	100.0
Total	140	100.0	100.0	

Leadership2						
Valid	Frequency	Percent	Valid percent	Cumulative percent		
Strongly disagree	1	0.7	0.7	0.7		
Slightly disagree	5	3.6	3.6	4.3		
Neither agree nor disagree	34	24.3	24.3	28.6		
Slightly agree	48	34.3	34.3	62.9		
Moderately agree	40	28.6	28.6	91.4		
Strongly agree	12	8.6	8.6	100.0		
Total	140	100.0	100.0			

Leadership3				
Valid	Frequency	Percent	Valid percent	Cumulative percent
Strongly disagree	2	1.4	1.4	1.4
Moderately disagree	3	2.1	2.1	3.6
Slightly disagree	9	6.4	6.4	10.0
Neither agree nor disagree	18	12.9	12.9	22.9
Slightly agree	49	35.0	35.0	57.9
Moderately agree	41	29.3	29.3	87.1
Strongly agree	18	12.9	12.9	100.0
Total	140	100.0	100.0	
Leadership4				
Valid	Frequency	Percent	Valid percent	Cumulative percent
Moderately disagree	2	1.4	1.4	1.4
Slightly disagree	7	5.0	5.0	6.4
Neither agree nor disagree	27	19.3	19.3	25.7
Slightly agree	48	34.3	34.3	60.0
Moderately agree	40	28.6	28.6	88.6
Strongly agree	16	11.4	11.4	100.0
Total	140	100.0	100.0	
Leadership5				
Valid	Frequency	Percent	Valid percent	Cumulative percent
Moderately disagree	2	1.4	1.4	1.4
Slightly disagree	12	8.6	8.6	10.0
Neither agree nor disagree	28	20.0	20.0	30.0
Slightly agree	47	33.6	33.6	63.6
Moderately agree	37	26.4	26.4	90.0
Strongly agree	14	10.0	10.0	100.0
Total	140	100.0	100.0	



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## 9.1.5 Resources Support

Statistics				
	ResourceSupport1	ResourceSupport2	ResourceSupport3	ResourceSupport4
N				
Valid	140	140	140	140
Missing	0	0	0	0
Mean	5.05	5.09	4.94	4.86
Median	5.00	5.00	5.00	5.00
Mode	$4^{\mathrm{a}}$	5	4	5
Variance	1.357	1.345	1.902	1.471
Skewness	0.317	0.027	-0.017	0.215
Std. error of skewness	0.205	0.205	0.205	0.205
Kurtosis	-0.846	-0.485	-0.739	-0.493
Std. error of kurtosis	0.407	0.407	0.407	0.407
Range	4	5	5	5
Minimum	3	2	2	2
Maximum	7	7	7	7
Percentiles				
25	4.00	4.00	4.00	4.00
50	5.00	5.00	5.00	5.00
75	6.00	6.00	6.00	6.00

<sup>a</sup>Multiple modes exist. The smallest value is shown

ResourceSupport1						
Valid	Frequency	Percent	Valid percent	Cumulative percent		
Slightly disagree	8	5.7	5.7	5.7		
Neither agree nor disagree	44	31.4	31.4	37.1		
Slightly agree	44	31.4	31.4	68.6		
Moderately agree	21	15.0	15.0	83.6		
Strongly agree	23	16.4	16.4	100.0		
Total	140	100.0	100.0			

## ResourceSupport2

Valid	Frequency	Percent	Valid percent	Cumulative percent
Moderately disagree	2	1.4	1.4	1.4
Slightly disagree	5	3.6	3.6	5.0
Neither agree nor disagree	41	29.3	29.3	34.3
Slightly agree	43	30.7	30.7	65.0
Moderately agree	29	20.7	20.7	85.7
Strongly agree	20	14.3	14.3	100.0
Total	140	100.0	100.0	

Valid	Frequency	Percent	Valid percent	Cumulative percent
Moderately disagree	6	4.3	4.3	4.3
Slightly disagree	10	7.1	7.1	11.4
Neither agree nor disagree	45	32.1	32.1	43.6
Slightly agree	31	22.1	22.1	65.7
Moderately agree	22	15.7	15.7	81.4
Strongly agree	26	18.6	18.6	100.0
Total	140	100.0	100.0	

## ResourceSupport3

Re	esc	urceSupport4	
* 7	1.	1	

Moderately disagree21.41.41.4Slightly disagree139.39.310.7Neither agree nor disagree4330.730.741.4Slightly agree4532.132.173.6Moderately agree1812.912.986.4Strongly agree1913.613.6100.0Total140100.0100.0100.0	Valid	Frequency	Percent	Valid percent	Cumulative percent
Slightly disagree 13 9.3 9.3 10.7   Neither agree nor disagree 43 30.7 30.7 41.4   Slightly agree 45 32.1 32.1 73.6   Moderately agree 18 12.9 12.9 86.4   Strongly agree 19 13.6 13.6 100.0   Total 140 100.0 100.0 100.0	Moderately disagree	2	1.4	1.4	1.4
Neither agree nor disagree   43   30.7   30.7   41.4     Slightly agree   45   32.1   32.1   73.6     Moderately agree   18   12.9   12.9   86.4     Strongly agree   19   13.6   13.6   100.0     Total   140   100.0   100.0   100.0	Slightly disagree	13	9.3	9.3	10.7
Slightly agree   45   32.1   32.1   73.6     Moderately agree   18   12.9   12.9   86.4     Strongly agree   19   13.6   13.6   100.0     Total   140   100.0   100.0	Neither agree nor disagree	43	30.7	30.7	41.4
Moderately agree   18   12.9   12.9   86.4     Strongly agree   19   13.6   13.6   100.0     Total   140   100.0   100.0	Slightly agree	45	32.1	32.1	73.6
Strongly agree   19   13.6   13.6   100.0     Total   140   100.0   100.0	Moderately agree	18	12.9	12.9	86.4
Total 140 100.0 100.0	Strongly agree	19	13.6	13.6	100.0
	Total	140	100.0	100.0	









## 9.1.6 Rewards

Sta	tist	ics
~		

	Rewards1	Rewards2	Rewards3	Rewards4	Rewards5
N					
Valid	140	140	140	140	140
Missing	0	0	0	0	0
Mean	4.92	5.24	4.97	4.95	5.01
Median	5.00	5.00	5.00	5.00	5.00
Mode	4 <sup>a</sup>	5	5	5	5
Variance	1.656	1.264	1.524	1.055	1.316
Skewness	-0.612	-0.308	-0.597	-0.303	-0.275
Std. error of skewness	0.205	0.205	0.205	0.205	0.205
Kurtosis	0.580	-0.304	0.663	0.280	0.074
Std. error of kurtosis	0.407	0.407	0.407	0.407	0.407
Range	6	5	6	5	5
Minimum	1	2	1	2	2
Maximum	7	7	7	7	7
Percentiles					
25	4.00	5.00	4.00	4.00	4.00
50	5.00	5.00	5.00	5.00	5.00
75	6.00	6.00	6.00	6.00	6.00

<sup>a</sup>Multiple modes exist. The smallest value is shown

Rewards1	
----------	--

Valid	Frequency	Percent	Valid percent	Cumulative percent
Strongly disagree	2	1.4	1.4	1.4
Moderately disagree	7	5.0	5.0	6.4
Slightly disagree	2	1.4	1.4	7.9
Neither agree nor disagree	40	28.6	28.6	36.4
Slightly agree	40	28.6	28.6	65.0
Moderately agree	36	25.7	25.7	90.7
Strongly agree	13	9.3	9.3	100.0
Total	140	100.0	100.0	

#### Rewards2

Valid	Frequency	Percent	Valid percent	Cumulative percent
Moderately disagree	1	0.7	0.7	0.7
Slightly disagree	9	6.4	6.4	7.1
Neither agree nor disagree	23	16.4	16.4	23.6
Slightly agree	48	34.3	34.3	57.9
Moderately agree	40	28.6	28.6	86.4
Strongly agree	19	13.6	13.6	100.0
Total	140	100.0	100.0	

#### Rewards3

Valid	Frequency	Percent	Valid percent	Cumulative percent
Strongly disagree	1	0.7	0.7	0.7
Moderately disagree	7	5.0	5.0	5.7
Slightly disagree	4	2.9	2.9	8.6
Neither agree nor disagree	30	21.4	21.4	30.0
Slightly agree	53	37.9	37.9	67.9
Moderately agree	31	22.1	22.1	90.0
Strongly agree	14	10.0	10.0	100.0
Total	140	100.0	100.0	

#### Rewards4

Valid	Frequency	Percent	Valid percent	Cumulative percent
Moderately disagree	3	2.1	2.1	2.1
Slightly disagree	5	3.6	3.6	5.7
Neither agree nor disagree	37	26.4	26.4	32.1
Slightly agree	53	37.9	37.9	70.0
Moderately agree	35	25.0	25.0	95.0
Strongly agree	7	5.0	5.0	100.0
Total	140	100.0	100.0	

#### Rewards5

Valid	Frequency	Percent	Valid percent	Cumulative percent
Moderately disagree	4	2.9	2.9	2.9
Slightly disagree	7	5.0	5.0	7.9
Neither agree nor disagree	32	22.9	22.9	30.7
Slightly agree	52	37.1	37.1	67.9
Moderately agree	31	22.1	22.1	90.0
Strongly agree	14	10.0	10.0	100.0
Total	140	100.0	100.0	



Rewards2







## 9.1.7 Structure

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	Structure1	Structure2	Structure3	Structure4	Structure5
N					
Valid	140	140	140	140	140
Missing	0	0	0	0	0
Mean	4.67	5.05	5.09	4.94	4.86
Median	5.00	5.00	5.00	5.00	5.00
Mode	4	4 <sup>a</sup>	5	4	5
Variance	1.373	1.357	1.345	1.902	1.471
Skewness	0.096	0.317	0.027	-0.017	0.215
Std. error of skewness	0.205	0.205	0.205	0.205	0.205
Kurtosis	-0.101	-0.846	-0.485	-0.739	-0.493
Std. error of kurtosis	0.407	0.407	0.407	0.407	0.407
Range	5	4	5	5	5
Minimum	2	3	2	2	2
Maximum	7	7	7	7	7
Percentiles					
25	4.00	4.00	4.00	4.00	4.00
50	5.00	5.00	5.00	5.00	5.00
75	5.00	6.00	6.00	6.00	6.00

<sup>a</sup>Multiple modes exist. The smallest value is shown

#### Structure1

Valid	Frequency	Percent	Valid percent	Cumulative percent
Moderately disagree	5	3.6	3.6	3.6
Slightly disagree	12	8.6	8.6	12.1
Neither agree nor disagree	49	35.0	35.0	47.1
Slightly agree	43	30.7	30.7	77.9
Moderately agree	20	14.3	14.3	92.1
Strongly agree	11	7.9	7.9	100.0
Total	140	100.0	100.0	

#### Structure2

Valid	Frequency	Percent	Valid percent	Cumulative percent
Slightly disagree	8	5.7	5.7	5.7
Neither agree nor disagree	44	31.4	31.4	37.1
Slightly agree	44	31.4	31.4	68.6
Moderately agree	21	15.0	15.0	83.6
Strongly agree	23	16.4	16.4	100.0
Total	140	100.0	100.0	

#### Structure3

Valid	Frequency	Percent	Valid percent	Cumulative percent
Moderately disagree	2	1.4	1.4	1.4
Slightly disagree	5	3.6	3.6	5.0
Neither agree nor disagree	41	29.3	29.3	34.3
Slightly agree	43	30.7	30.7	65.0
Moderately agree	29	20.7	20.7	85.7
Strongly agree	20	14.3	14.3	100.0
Total	140	100.0	100.0	

#### Structure4

Valid	Frequency	Percent	Valid percent	Cumulative percent
Moderately disagree	6	4.3	4.3	4.3
Slightly disagree	10	7.1	7.1	11.4
Neither agree nor disagree	45	32.1	32.1	43.6
Slightly agree	31	22.1	22.1	65.7
Moderately agree	22	15.7	15.7	81.4
Strongly agree	26	18.6	18.6	100.0
Total	140	100.0	100.0	

#### Structure5

Valid	Frequency	Percent	Valid percent	Cumulative percent
Moderately disagree	2	1.4	1.4	1.4
Slightly disagree	13	9.3	9.3	10.7
Neither agree nor disagree	43	30.7	30.7	41.4
Slightly agree	45	32.1	32.1	73.6
Moderately agree	18	12.9	12.9	86.4
Strongly agree	19	13.6	13.6	100.0
Total	140	100.0	100.0	











## 9.1.8 Relationship

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	Relationship1	Relationship2	Relationship3	Relationship4	Relationship5
Ν					
Valid	140	140	140	140	140
Missing	0	0	0	0	0
Mean	4.95	5.01	5.04	5.41	5.37
Median	5.00	5.00	5.00	6.00	5.00
Mode	5	5	5	6	6
Variance	1.055	1.316	1.286	1.496	1.386
Skewness	-0.303	-0.275	-0.131	-0.791	-0.304
Std. error of	0.205	0.205	0.205	0.205	0.205
skewness					
Kurtosis	0.280	0.074	-0.064	1.063	-0.647
Std. error of	0.407	0.407	0.407	0.407	0.407
kurtosis					
Range	5	5	5	6	5
Minimum	2	2	2	1	2
Maximum	7	7	7	7	7
Percentiles					
25	4.00	4.00	4.00	5.00	4.00
50	5.00	5.00	5.00	6.00	5.00
75	6.00	6.00	6.00	6.00	6.00

#### Relationship1

Valid	Frequency	Percent	Valid percent	Cumulative percent
Moderately disagree	3	2.1	2.1	2.1
Slightly disagree	5	3.6	3.6	5.7
Neither agree nor disagree	37	26.4	26.4	32.1
Slightly agree	53	37.9	37.9	70.0
Moderately agree	35	25.0	25.0	95.0
Strongly agree	7	5.0	5.0	100.0
Total	140	100.0	100.0	

## Relationship2

Valid	Frequency	Percent	Valid percent	Cumulative percent
Moderately disagree	4	2.9	2.9	2.9
Slightly disagree	7	5.0	5.0	7.9
Neither agree nor disagree	32	22.9	22.9	30.7
Slightly agree	52	37.1	37.1	67.9
Moderately agree	31	22.1	22.1	90.0
Strongly agree	14	10.0	10.0	100.0
Total	140	100.0	100.0	

#### Relationship3

Valid	Frequency	Percent	Valid percent	Cumulative percent
Moderately disagree	3	2.1	2.1	2.1
Slightly disagree	6	4.3	4.3	6.4
Neither agree nor disagree	35	25.0	25.0	31.4
Slightly agree	51	36.4	36.4	67.9
Moderately agree	29	20.7	20.7	88.6
Strongly agree	16	11.4	11.4	100.0
Total	140	100.0	100.0	

## Relationship4

Valid	Frequency	Percent	Valid percent	Cumulative percent
Strongly disagree	2	1.4	1.4	1.4
Slightly disagree	6	4.3	4.3	5.7
Neither agree nor disagree	21	15.0	15.0	20.7
Slightly agree	40	28.6	28.6	49.3
Moderately agree	43	30.7	30.7	80.0
Strongly agree	28	20.0	20.0	100.0
Total	140	100.0	100.0	

## Relationship5

Valid	Frequency	Percent	Valid percent	Cumulative percent	
Moderately disagree	1	0.7	0.7	0.7	
Slightly disagree	6	4.3	4.3	5.0	
Neither agree nor disagree	29	20.7	20.7	25.7	
Slightly agree	35	25.0	25.0	50.7	
Moderately agree	42	30.0	30.0	80.7	
Strongly agree	27	19.3	19.3	100.0	
Total	140	100.0	100.0		











9.1.9 Adaptation

Statistics

	Adaptation1	Adaptation2	Adaptation3	Adaptation4	
N					
Valid	140	140	140	140	
Missing	0	0	0	0	
Mean	5.41	5.37	5.23	5.20	
Median	6.00	5.00	5.00	5.00	
Mode	6	6	5	6	
Variance	1.496	1.386	1.803	1.758	
Skewness	-0.791	-0.304	-0.336	-0.356	
Std. error of skewness	0.205	0.205	0.205	0.205	
Kurtosis	1.063	-0.647	-0.615	-0.602	
Std. error of kurtosis	0.407	0.407	0.407	0.407	
Range	6	5	5	5	
Minimum	1	2	2	2	
Maximum	7	7	7	7	
Percentiles					
25	5.00	4.00	4.00	4.00	
50	6.00	5.00	5.00	5.00	
75	6.00	6.00	6.00	6.00	

#### Adaptation1

Valid	Frequency	Percent	Valid percent	Cumulative percent
Strongly disagree	2	1.4	1.4	1.4
Slightly disagree	6	4.3	4.3	5.7
Neither agree nor disagree	21	15.0	15.0	20.7
Slightly agree	40	28.6	28.6	49.3
Moderately agree	43	30.7	30.7	80.0
Strongly agree	28	20.0	20.0	100.0
Total	140	100.0	100.0	

### Adaptation2

Valid	Frequency	Percent	Valid percent	Cumulative percent
Moderately disagree	1	0.7	0.7	0.7
Slightly disagree	6	4.3	4.3	5.0
Neither agree nor disagree	29	20.7	20.7	25.7
Slightly agree	35	25.0	25.0	50.7
Moderately agree	42	30.0	30.0	80.7
Strongly agree	27	19.3	19.3	100.0
Total	140	100.0	100.0	

Adaptation3

Valid	Frequency	Percent	Valid percent	Cumulative percent	
Moderately disagree	4	2.9	2.9	2.9	
Slightly disagree	10	7.1	7.1	10.0	
Neither agree nor disagree	28	20.0	20.0	30.0	
Slightly agree	37	26.4	26.4	56.4	
Moderately agree	30	21.4	21.4	77.9	
Strongly agree	31	22.1	22.1	100.0	
Total	140	100.0	100.0		

Adaptation4					
Valid	Frequency	Percent	Valid percent	Cumulative percent	
Moderately disagree	4	2.9	2.9	2.9	
Slightly disagree	10	7.1	7.1	10.0	
Neither agree nor disagree	30	21.4	21.4	31.4	
Slightly agree	33	23.6	23.6	55.0	
Moderately agree	36	25.7	25.7	80.7	
Strongly agree	27	19.3	19.3	100.0	
Total	140	100.0	100.0		









Statistics							
	Age	Gender	Position	Organization age	Duration	Joint venture or wholly owned	Kind of organizations
Ν							
Valid	204	204	204	204	204	204	204
Missing	0	0	0	0	0	0	0
Mean	2.81	1.31	2.80	4.47	4.19	1.26	4.32
Median	2.00	1.00	2.00	4.00	4.00	1.00	5.00
Mode	2	1	2	4	4	1	6
Std. Deviation	1.281	0.463	1.249	1.085	0.684	0.442	2.066
Variance	1.640	0.215	1.560	1.176	0.468	0.196	4.267
Skewness	0.681	0.834	0.601	-0.041	0.399	1.075	-0.485
Std. error of skewness	0.170	0.170	0.170	0.170	0.170	0.170	0.170
Kurtosis	-0.252	-1.318	-0.433	-0.228	0.364	-0.854	-1.172
Std. error of kurtosis	0.339	0.339	0.339	0.339	0.339	0.339	0.339
Range	5	1	5	5	3	1	6
Minimum	1	1	1	2	3	1	1
Maximum	6	2	6	7	6	2	7
Percentiles							
25	2.00	1.00	2.00	4.00	4.00	1.00	2.00
50	2.00	1.00	2.00	4.00	4.00	1.00	5.00
75	4.00	2.00	4.00	5.00	5.00	2.00	6.00

## 9.2.1 Descriptive Statistical Results of Thai Employees














# 9.2.2 Japanese Management Practices in Thailand: Answered by Thai Subordinates

Statistics						
	Lifetime employment	Consensus decision-making	Seniority system	House union	Job rotation	Quality control circles
N						
Valid	204	204	204	204	204	204
Missing	0	0	0	0	0	0
Mean	4.83	5.14	4.85	4.80	5.01	5.07
Median	5.00	5.00	5.00	5.00	5.00	5.00
Mode	4	4	4	5	5	$4^{\mathrm{a}}$
Std. deviation	1.387	1.201	1.259	1.183	1.230	1.103
Variance	1.923	1.443	1.584	1.400	1.512	1.217
Skewness	-0.201	-0.225	-0.093	0.062	-0.173	-0.092
Std. error of skewness	0.170	0.170	0.170	0.170	0.170	0.170
Kurtosis	-0.664	-0.281	-0.598	-0.553	-0.625	-0.551
Std. error of kurtosis	0.339	0.339	0.339	0.339	0.339	0.339
Range	5	5	5	5	5	5
Minimum	2	2	2	2	2	2
Maximum	7	7	7	7	7	7
Percentiles						
25	4.00	4.00	4.00	4.00	4.00	4.00
50	5.00	5.00	5.00	5.00	5.00	5.00
75	6.00	6.00	6.00	6.00	6.00	6.00

<sup>a</sup>Multiple modes exist. The smallest value is shown













### 9.2.3 Motivational Factor for Acceptance of Japanese Management Practices

### Vision

Statistics

	Vision1	Vision2	Vision3	Vision4	Vision5
N					
Valid	204	204	204	204	204
Missing	0	0	0	0	0
Mean	4.73	5.13	5.14	4.99	4.94
Median	5.00	5.00	5.00	5.00	5.00
Mode	5	5	5	4	4
Std. deviation	1.191	1.167	1.171	1.382	1.268
Variance	1.420	1.363	1.370	1.911	1.607
Skewness	0.006	0.181	0.046	-0.039	0.091
Std. error of skewness	0.170	0.170	0.170	0.170	0.170
Kurtosis	-0.118	-0.894	-0.671	-0.790	-0.654
Std. error of kurtosis	0.339	0.339	0.339	0.339	0.339
Range	5	4	5	5	5
Minimum	2	3	2	2	2
Maximum	7	7	7	7	7
Percentiles					
25	4.00	4.00	4.00	4.00	4.00
50	5.00	5.00	5.00	5.00	5.00
75	5.00	6.00	6.00	6.00	6.00

Valid	Frequency	Percent	Valid percent	Cumulative percent
2	8	3.9	3.9	3.9
3	16	7.8	7.8	11.8
4	65	31.9	31.9	43.6
5	67	32.8	32.8	76.5
6	30	14.7	14.7	91.2
7	18	8.8	8.8	100.0
Total	204	100.0	100.0	
Vision2				
Valid	Frequency	Percent	Valid percent	Cumulative percent
3	12	5.9	5.9	5.9
4	56	27.5	27.5	33.3
5	65	31.9	31.9	65.2
6	36	17.6	17.6	82.8
7	35	17.3	17.0	100.0
, Total	204	100.0	100.0	100.0
Vision3				
Valid	Frequency	Percent	Valid percent	Cumulative percent
2	2	1.0	1.0	1.0
3	8	3.9	3.9	4.9
4	58	28.4	28.4	33.3
5	61	29.9	29.9	63.2
6	42	20.6	20.6	83.8
7	33	16.2	16.2	100.0
Total	204	100.0	100.0	
Vision4				
Valid	Frequency	Percent	Valid percent	Cumulative percent
2	8	3.9	3.9	3.9
3	14	6.9	6.9	10.8
4	64	31.4	31.4	42.2
5	45	22.1	22.1	64.2
6	32	15.7	15.7	79.9
7	41	20.1	20.1	100.0
Total	204	100.0	100.0	
Vision5				
Valid	Frequency	Percent	Valid percent	Cumulative percent
2	4	2.0	2.0	2.0
3	18	8.8	8.8	10.8
4	60	29.4	29.4	40.2
5	59	28.9	28.9	69.1
6	31	15.2	15.2	84.3
7	32	15.7	15.7	100.0
Total	204	100.0	100.0	

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Vision1

Total











9.2.4 Leadership

Statistics

	Leadership1	Leadership2	Leadership3	Leadership4	Leadership5
N					
Valid	204	204	204	204	204
Missing	0	0	0	0	0
Mean	5.18	5.33	5.33	5.19	5.18
Median	5.00	6.00	5.00	5.00	5.00
Mode	5	6	6	5	6
Std. deviation	1.060	1.281	1.155	1.235	1.236
Variance	1.125	1.642	1.335	1.525	1.529
Skewness	-0.219	-1.057	-0.475	-0.433	-0.382
Std. error of skewness	0.170	0.170	0.170	0.170	0.170
Kurtosis	0.180	1.507	-0.184	-0.343	-0.489
Std. error of kurtosis	0.339	0.339	0.339	0.339	0.339
Range	6	6	5	5	5
Minimum	1	1	2	2	2
Maximum	7	7	7	7	7
Percentiles					
25	4.00	5.00	5.00	4.00	4.00
50	5.00	6.00	5.00	5.00	5.00
75	6.00	6.00	6.00	6.00	6.00

Valid	Frequency	Percent	Valid percent	Cumulative percent
1	1	0.5	0.5	0.5
3	6	2.9	2.9	3.4
4	49	24.0	24.0	27.5
5	68	33.3	33.3	60.8
6	58	28.4	28.4	89.2
7	22	10.8	10.8	100.0
Total	204	100.0	100.0	
Leadership	52			
Valid	Frequency	Percent	Valid percent	Cumulative percent
1	4	2.0	2.0	2.0
2	3	1.5	1.5	3.4
3	10	4.9	4.9	8.3
4	23	11.3	11.3	19.6
5	61	29.9	29.9	49.5
6	70	34.3	34.3	83.8
7	33	16.2	16.2	100.0
Total	204	100.0	100.0	
T an daunh in	-2			
Valid	Frequency	Dercent	Valid percent	Cumulative percent
	ricqueriey	1.5		
2	3	1.5	1.5	1.5
3	9	4.4	4.4	5.9
4 5	5/	18.1	18.1	24.0
5 6	33	27.0	27.0	51.0 94.9
0	09	33.8 15 2	55.8 15.0	84.8 100.0
7 Total	204	100.0	100.0	100.0
	-			
Leadership	04			
Valid	Frequency	Percent	Valid percent	Cumulative percent
2	4	2.0	2.0	2.0
3	18	8.8	8.8	10.8
4	31	15.2	15.2	26.0
5	63	30.9	30.9	56.9
6	58	28.4	28.4	85.3
7	30	14.7	14.7	100.0
Total	204	100.0	100.0	
Leadership	5			
Valid	Frequency	Percent	Valid percent	Cumulative percent
2	4	2.0	2.0	2.0
3	15	7.4	7.4	9.3
4	42	20.6	20.6	29.9
5	51	25.0	25.0	54.9
6	63	30.9	30.9	85.8
7	29	14.2	14.2	100.0
Total	204	100.0	100.0	

Leadership1









# 9.2.5 Resources Support

Statistics

	ResourceSupport1	ResourceSupport2	ResourceSupport3	ResourceSupport4
N				
Valid	204	204	204	204
Missing	0	0	0	0
Mean	5.30	5.29	5.15	5.17
Median	5.00	5.00	5.00	5.00
Mode	6	5 <sup>a</sup>	6	5 <sup>a</sup>
Std. deviation	1.210	1.101	1.208	1.257
Variance	1.464	1.212	1.460	1.581
Skewness	-0.856	-0.371	-0.431	-0.433
Std. error of skewness	0.170	0.170	0.170	0.170
Kurtosis	0.999	-0.179	-0.318	-0.186
Std. error of kurtosis	0.339	0.339	0.339	0.339
Range	6	5	5	6
Minimum	1	2	2	1
Maximum	7	7	7	7
Percentiles				
25	5.00	5.00	4.00	4.00
50	5.00	5.00	5.00	5.00
75	6.00	6.00	6.00	6.00

<sup>a</sup>Multiple modes exist. The smallest value is shown

Valid	Frequency	Percent	Valid percent	Cumulative percent
1	2	1.0	1.0	1.0
2	3	1.5	1.5	2.5
3	12	5.9	5.9	8.3
4	24	11.8	11.8	20.1
5	65	31.9	31.9	52.0
6	69	33.8	33.8	85.8
7	29	14.2	14.2	100.0
Total	204	100.0	100.0	

ResourceSupport1

### ResourceSupport2

Valid	Frequency	Percent	Valid percent	Cumulative percent
2	2	1.0	1.0	1.0
3	9	4.4	4.4	5.4
4	36	17.6	17.6	23.0
5	65	31.9	31.9	54.9
6	65	31.9	31.9	86.8
7	27	13.2	13.2	100.0
Total	204	100.0	100.0	

ResourceSupport3

Valid	Frequency	Percent	Valid percent	Cumulative percent
2	4	2.0	2.0	2.0
3	17	8.3	8.3	10.3
4	35	17.2	17.2	27.5
5	61	29.9	29.9	57.4
6	62	30.4	30.4	87.7
7	25	12.3	12.3	100.0
Total	204	100.0	100.0	

### ResourceSupport4

Valid	Frequency	Percent	Valid percent	Cumulative percent
1	1	0.5	0.5	0.5
2	3	1.5	1.5	2.0
3	16	7.8	7.8	9.8
4	39	19.1	19.1	28.9
5	57	27.9	27.9	56.9
6	57	27.9	27.9	84.8
7	31	15.2	15.2	100.0
Total	204	100.0	100.0	

0

2

4

ResourceSupport2

6



Mean = 5.29 Std. Dev. = 1.101 N = 204

8





# 9.2.6 Rewards

Statistics

	Rewards1	Rewards2	Rewards3	Rewards4	Rewards5
N					
Valid	204	204	204	204	204
Missing	0	0	0	0	0
Mean	4.94	5.24	5.30	5.29	5.15
Median	5.00	5.00	5.00	5.00	5.00
Mode	5	5	6	5 <sup>a</sup>	6
Std. deviation	1.117	1.075	1.210	1.101	1.208
Variance	1.248	1.156	1.464	1.212	1.460
Skewness	-0.376	-0.265	-0.856	-0.371	-0.431
Std. error of skewness	0.170	0.170	0.170	0.170	0.170
Kurtosis	-0.086	0.150	0.999	-0.179	-0.318
Std. error of kurtosis	0.339	0.339	0.339	0.339	0.339
Range	5	6	6	5	5
Minimum	2	1	1	2	2
Maximum	7	7	7	7	7
Percentiles					
25	4.00	4.00	5.00	5.00	4.00
50	5.00	5.00	5.00	5.00	5.00
75	6.00	6.00	6.00	6.00	6.00

<sup>a</sup>Multiple modes exist. The smallest value is shown

Rewards1						
Valid	Frequency	Percent	Valid percent	Cumulative percent		
2	4	2.0	2.0	2.0		
3	20	9.8	9.8	11.8		
4	36	17.6	17.6	29.4		
5	81	39.7	39.7	69.1		
6	50	24.5	24.5	93.6		
7	13	6.4	6.4	100.0		
Total	204	100.0	100.0			

Rewards2						
Valid	Frequency	Percent	Valid percent	Cumulative percent		
1	1	0.5	0.5	0.5		
3	6	2.9	2.9	3.4		
4	46	22.5	22.5	26.0		
5	66	32.4	32.4	58.3		
6	60	29.4	29.4	87.7		
7	25	12.3	12.3	100.0		
Total	204	100.0	100.0			

Valid	Frequency	Percent	Valid percent	Cumulative percent
1	2	1.0	1.0	1.0
2	3	1.5	1.5	2.5
3	12	5.9	5.9	8.3
4	24	11.8	11.8	20.1
5	65	31.9	31.9	52.0
6	69	33.8	33.8	85.8
7	29	14.2	14.2	100.0
Total	204	100.0	100.0	

Rewards3

#### Rewards4

Valid	Frequency	Percent	Valid percent	Cumulative percent
2	2	1.0	1.0	1.0
3	9	4.4	4.4	5.4
4	36	17.6	17.6	23.0
5	65	31.9	31.9	54.9
6	65	31.9	31.9	86.8
7	27	13.2	13.2	100.0
Total	204	100.0	100.0	

#### Rewards5

Valid	Frequency	Percent	Valid percent	Cumulative percent
2	4	2.0	2.0	2.0
3	17	8.3	8.3	10.3
4	35	17.2	17.2	27.5
5	61	29.9	29.9	57.4
6	62	30.4	30.4	87.7
7	25	12.3	12.3	100.0
Total	204	100.0	100.0	









# 9.2.7 Structure

Statistics

	Structure1	Structure2	Structure3	Structure4	Structure5
N					
Valid	204	204	204	204	204
Missing	0	0	0	0	0
Mean	5.02	5.04	4.99	4.96	4.99
Median	5.00	5.00	5.00	5.00	5.00
Mode	5	4	5	5	6
Std. deviation	1.221	1.082	1.114	1.148	1.166
Variance	1.492	1.171	1.241	1.319	1.360
Skewness	-0.227	-0.055	0.019	-0.159	-0.094
Std. error of skewness	0.170	0.170	0.170	0.170	0.170
Kurtosis	-0.451	-0.521	-0.318	-0.541	-0.907
Std. error of kurtosis	0.339	0.339	0.339	0.339	0.339
Range	5	5	5	5	4
Minimum	2	2	2	2	3
Maximum	7	7	7	7	7
Percentiles					
25	4.00	4.00	4.00	4.00	4.00
50	5.00	5.00	5.00	5.00	5.00
75	6.00	6.00	6.00	6.00	6.00

Structure1

Valid	Frequency	Percent	Valid percent	Cumulative percent
2	4	2.0	2.0	2.0
3	20	9.8	9.8	11.8
4	40	19.6	19.6	31.4
5	68	33.3	33.3	64.7
6	47	23.0	23.0	87.7
7	25	12.3	12.3	100.0
Total	204	100.0	100.0	

Structure2

Valid	Frequency	Percent	Valid percent	Cumulative percent
2	2	1.0	1.0	1.0
3	8	3.9	3.9	4.9
4	62	30.4	30.4	35.3
5	57	27.9	27.9	63.2
6	58	28.4	28.4	91.7
7	17	8.3	8.3	100.0
Total	204	100.0	100.0	

Valid	Frequency	Percent	Valid percent	Cumulative percent
2	2	1.0	1.0	1.0
3	14	6.9	6.9	7.8
4	51	25.0	25.0	32.8
5	76	37.3	37.3	70.1
6	39	19.1	19.1	89.2
7	22	10.8	10.8	100.0
Total	204	100.0	100.0	

Structure3

Structure4

Valid	Frequency	Percent	Valid percent	Cumulative percent
2	2	1.0	1.0	1.0
3	21	10.3	10.3	11.3
4	46	22.5	22.5	33.8
5	66	32.4	32.4	66.2
6	52	25.5	25.5	91.7
7	17	8.3	8.3	100.0
Total	204	100.0	100.0	











# 9.2.8 Relationship

Statistics

	Relationship1	Relationship2	Relationship3	Relationship4	Relationship5
Ν					
Valid	204	204	204	204	204
Missing	0	0	0	0	0
Mean	5.12	5.19	5.16	5.02	5.50
Median	5.00	5.00	5.00	5.00	6.00
Mode	5	7	7	6	7
Std. deviation	1.514	1.518	1.464	1.381	1.326
Variance	2.292	2.303	2.143	1.906	1.759
Skewness	-0.589	-0.431	-0.446	-0.464	-0.546
Std. error of skewness	0.170	0.170	0.170	0.170	0.170
Kurtosis	-0.090	-0.700	-0.445	-0.243	-0.399
Std. error of kurtosis	0.339	0.339	0.339	0.339	0.339
Range	6	6	6	6	5
Minimum	1	1	1	1	2
Maximum	7	7	7	7	7
Percentiles					
25	4.00	4.00	4.00	4.00	4.25
50	5.00	5.00	5.00	5.00	6.00
75	6.00	7.00	6.00	6.00	7.00

#### Relationship1

Valid	Frequency	Percent	Valid percent	Cumulative percent
1	5	2.5	2.5	2.5
2	7	3.4	3.4	5.9
3	14	6.9	6.9	12.7
4	41	20.1	20.1	32.8
5	50	24.5	24.5	57.4
6	40	19.6	19.6	77.0
7	47	23.0	23.0	100.0
Total	204	100.0	100.0	

### Relationship2

Valid	Frequency	Percent	Valid percent	Cumulative percent
1	1	0.5	0.5	0.5
2	11	5.4	5.4	5.9
3	13	6.4	6.4	12.3
4	48	23.5	23.5	35.8
5	36	17.6	17.6	53.4
6	40	19.6	19.6	73.0
7	55	27.0	27.0	100.0
Total	204	100.0	100.0	

Valid	Frequency	Percent	Valid percent	Cumulative percent	
1	3	1.5	1.5	1.5	
2	4	2.0	2.0	3.4	
3	19	9.3	9.3	12.7	
4	46	22.5	22.5	35.3	
5	39	19.1	19.1	54.4	
6	46	22.5	22.5	77.0	
7	47	23.0	23.0	100.0	
Total	204	100.0	100.0		

Relationship3

#### Relationship4

Valid	Frequency	Percent	Valid percent	Cumulative percent
1	2	1.0	1.0	1.0
2	8	3.9	3.9	4.9
3	15	7.4	7.4	12.3
4	48	23.5	23.5	35.8
5	46	22.5	22.5	58.3
6	55	27.0	27.0	85.3
7	30	14.7	14.7	100.0
Total	204	100.0	100.0	

### Relationship5

Valid	Frequency	Percent	Valid percent	Cumulative percent
2	6	2.9	2.9	2.9
3	5	2.5	2.5	5.4
4	40	19.6	19.6	25.0
5	46	22.5	22.5	47.5
6	45	22.1	22.1	69.6
7	62	30.4	30.4	100.0
Total	204	100.0	100.0	











# 9.2.9 Acceptance

Statistics

	Acceptance1	Acceptance2	Acceptance3	Acceptance4
Ν				
Valid	204	204	204	204
Missing	0	0	0	0
Mean	4.89	5.02	5.04	4.99
Median	5.00	5.00	5.00	5.00
Mode	5	5	4	5
Std. deviation	1.174	1.221	1.082	1.114
Variance	1.377	1.492	1.171	1.241
Skewness	-0.029	-0.227	-0.055	.019
Std. error of skewness	0.170	0.170	0.170	0.170
Kurtosis	-0.589	-0.451	-0.521	-0.318
Std. error of kurtosis	0.339	0.339	0.339	0.339
Range	5	5	5	5
Minimum	2	2	2	2
Maximum	7	7	7	7
Percentiles				
25	4.00	4.00	4.00	4.00
50	5.00	5.00	5.00	5.00
75	6.00	6.00	6.00	6.00

\_\_\_\_\_

Acceptance1

Valid	Frequency	Percent	Valid percent	Cumulative percent
2	2	1.0	1.0	1.0
3	24	11.8	11.8	12.7
4	49	24.0	24.0	36.8
5	67	32.8	32.8	69.6
6	43	21.1	21.1	90.7
7	19	9.3	9.3	100.0
Total	204	100.0	100.0	

Acceptance2

Valid	Frequency	Percent	Valid percent	Cumulative percen		
2	4	2.0	2.0	2.0		
3	20	9.8	9.8	11.8		
4	40	19.6	19.6	31.4		
5	68	33.3	33.3	64.7		
6	47	23.0	23.0	87.7		
7	25	12.3	12.3	100.0		
Total	204	100.0	100.0			

Valid	Frequency	Percent	Valid percent	Cumulative percent	
2	2	1.0	1.0	1.0	
3	8	3.9	3.9	4.9	
4	62	30.4	30.4	35.3	
5	57	27.9	27.9	63.2	
6	58	28.4	28.4	91.7	
7	17	8.3	8.3	100.0	
Total	204	100.0	100.0		

Acceptance3

Acceptance4

Valid	Frequency	Percent	Valid percent	Cumulative percent		
2	2	1.0	1.0	1.0		
3	14	6.9	6.9	7.8		
4	51	25.0	25.0	32.8		
5	76	37.3	37.3	70.1		
6	39	19.1	19.1	89.2		
7	22	10.8	10.8	100.0		
Total	204	100.0	100.0			









### 9.3 Appendix 3

### 9.3.1 For Japanese Expatriates

### Questionnaires for Japanese Managers and Thai Subordinates

#### Demographic Information

This information is collected to classify who you are. (For question 1-7, please circle the appropriate answer)

Q1.	What is your age?	
	20–25	1
	26–30	2
	31–35	3
	36–40	4
	41–45	5
	46–50	6
	51–55	7
	56–60	8
	61–65	9
	65+	10

Q2.	What is your gender?	
	Male	1
	Female	2
Q3.	Which best describes your managerial level? (please circle the response describes you)	that best
	Non-supervisor/non-manager (not a supervisor or manager)	1
	First Line supervisor	2
	Lower level/Junior Manager	3
	Middle Manager	4
	Senior Manager	5
	Executive	6
	Divisional Head/General Manager (not CEO)	7
	Chief Executive Officer/President	8
Q4.	About how old is your organization?	Year
	1_2 years	2
	3–5 years	3
	6–10 years	4
	11_20 years	5
	21-30 years	6
	31–40 years	7
	41–50 years	8
	51–60 years	9
	61–70 years	10
	71–80 years	11
	81–90 years	12
	91–100 years	13
	More than 100 years old	14
05.	How many years have you been in full time employment for	Year
-	Less than one year	1
	1 up to 2 years	2
	2 up to 5 years	3
	5 up to 10 years	4
	10 up to 15 years	5
	15 up to 20 years	6
	20 up to 25 years	7
	25 up to 30 years	8
	30 up to 35 years	9
	35 years or more	10
Q6.	Is this subsidiary a joint venture or a wholly owned Japanese subsidiar	·y?
	Joint venture	1
	Wholly owned Japanese subsidiary	2
Q7.	What is your present industry?	
	Metal	1
	Machinery	2
	Garment and textile	3
	Agricultural and marine	4
	Electric and electronic	5
	Automobile	6
	Chemicals	7
	Other. (please write in)	

The Implementation of Japanese Management Practices

The following questions relate to how Japanese management practices have been implemented in your organization, and the attitude of Japanese expatriates towards implementation of Japanese management practices in Thailand.

Q8.	Please indicate whether the following Japanese management practices have been
	implemented at this subsidiary (Yes or No), and if yes, the extent to which they have
	been implemented.

Please circle the appropriate answer		Not at all extent	•					To an extremely extent
1.	Lifetime employment	1	2	3	4	5	6	7
2.	Consensus decision-making	1	2	3	4	5	6	7
3.	Seniority system	1	2	3	4	5	6	7
4.	House union	1	2	3	4	5	6	7
5.	Job rotation	1	2	3	4	5	6	7
6.	Quality control circles	1	2	3	4	5	6	7

Motivation to the Adaptation of Japanese Management Practices

Q9	If you were required to adapt Japanese management practices,	Not at all Important		•		-	•	Extremely Important
	which of the following factors would	1						1
	be important in assisting you to							
	adapt? (please circle the appropriate							
	answer)							
Vis	ion							
Th	e introduction of adaptation is							
acc	ompanied by:							
1.	Provision of explanation of the advantage	1	2	3	4	5	6	7
	of the adaptation to key internal and							
	external groups (employees,							
	management, unions, customers, clients,							
	etc.).							
2.	A clear rationale for the adaptation and	1	2	3	4	5	6	7
	beliefs needed to make the adaptation							
	successful.							
3.	A clear timetable is devised for the	1	2	3	4	5	6	7
	various phases of the adaptation.							
4.	Provision of a plan detailing the various	1	2	3	4	5	6	7
	steps of the adaptation.							
5.	A discussion of specific new ways in	1	2	3	4	5	6	7
	which structure, systems and people							
	practices would adapt.							
Lea	ndership							
Th	e adaptation of Japanese management							
pra	ctices can be successfully implemented if:							
6.	CEO and the senior management set an	1	2	3	4	5	6	7
	example by modeling appropriate							
	behaviors to adapt.							
7.	From the beginning there is a powerful	1	2	3	4	5	6	7
	guiding executive coalition clearly in							
	support of the adaptation.		_	_		_		_
8.	Once the adaptation program	1	2	3	4	5	6	7
	commences, there is clear evidence of the							
	CEO and the senior management team							
	attempting and championing the							
	adaptation.							
9.	The CEO and senior management ensure the support of key power groups for the	1	2	3	4	5	6	7
------------	-----------------------------------------------------------------------------------------------	---	---	---	---	---	---	---
10.	adaptation. The CEO and senior management create and communicate a sense of urgent need	1	2	3	4	5	6	7
	for adaptation throughout the							
_	organization.							
Res	ource support							
The	e adaptation of Japanese management							
pra	ctices can be supported by:					_		_
11.	Adequate financial resources are	1	2	3	4	5	6	1
	allocated in support of the adaptation.		_	-		_		_
12.	Adequate human resources are allocated	1	2	3	4	5	6	7
	in support of the adaptation.							
Res	ource support							
The	e adaptation of Japanese management							
pra	ctices can be supported by:		_	-		_		_
13.	You will receive adequate and	1	2	3	4	5	6	7
	appropriate training to enable you to work in new ways.							
14.	Senior management are prepared to	1	2	3	4	5	6	7
	devote their time to meetings,							
	presentations, communication, education							
	and training needed to support the							
	adaptation.							
Rev	vards							
The	e adaptation of Japanese management							
pra	ctices can be facilitated by:							
15.	Providing the opportunity for new and	1	2	3	4	5	6	7
	exciting challenges, enabling you to							
	develop my skills and capabilities.							
16.	Getting you more pay as a result of the	1	2	3	4	5	6	7
	adaptation.		_	_		_		_
17.	There is little chance of advancement in	1	2	3	4	5	6	7
	the organization unless you embrace the							
	adaptation.		_	-		_		_
18.	Successful adaptation provides	1	2	3	4	5	6	7
	satisfaction for a job well done.					_		_
19.	Having pay system and benefits of your	1	2	3	4	5	6	1
<i>a</i> .	firm treat each employee equally.							
Str	ucturing for change							
The	e adaptation is supported because:					_		_
20.	The structure of adaptation process is flexible.	1	2	3	4	5	6	7
21.	The structure of adaptation is clear and helpful	1	2	3	4	5	6	7
22.	The structural arrangement provides new	1	2	3	4	5	6	7
	insights for adaptation.							
23.	The structural arrangement devise for	1	2	3	4	5	6	7
	managing adaptation is appropriate.							
24.	The structure of adaptation process is well designed.	1	2	3	4	5	6	7

#### Relationship

Per rela	ceived extent to which the following tionship approaches are used to facilitate							
the	adaptation:	_				_		_
25.	Your relationship with your supervisor will be a harmonious one after adapting	1	2	3	4	5	6	1
	Japanese management practices.							
26.	You can feely talk with someone at work	1	2	3	4	5	6	7
	if you have a work-related problem.							
27.	There is no evidence of unresolved conflict in the organization.	1	2	3	4	5	6	7
28.	Your relationships with peers of your work groups are friendly.	1	2	3	4	5	6	7
29.	You have established relationships with everyone in your organization that you	1	2	3	4	5	6	7
	need to adapt to do your job properly.							

Adaptation of Japanese Management Practices

 Q10. Please indicate the extent to which you think that you will agree to adapt your management practices to local conditions if you are provided by those motivational factors mentioned above.

 Please circle the appropriate answer
 Totally

1 16	ase circle the appropriate answer	disagre	ee 🔶					agree
1.	I am willing to customize the management practices.	1	2	3	4	5	6	7
2.	I am willing to adjust the process of management practices.	1	2	3	4	5	6	7
3.	I am willing to change the management procedures.	1	2	3	4	5	6	7
4.	I am willing to invest in tool/ equipment to better adjust management practices to local condition.	1	2	3	4	5	6	7
Th	ank you for your participation							

# 9.3.2 For Thai Staffs

Demographic Information

This information is collected to classify who you are. (For question 1-7, please circle the appropriate answer)

$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Q1.	What is your age?	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		20–25	1
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		26–30	2
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		31–35	3
$\begin{array}{ccccccc} 41-45 & & 5 \\ 46-50 & & 6 \\ 51-55 & & 7 \\ 56-60 & & 8 \\ 61-65 & & 9 \\ 65+ & & 10 \end{array}$		36–40	4
$\begin{array}{cccc} 46-50 & 6 \\ 51-55 & 7 \\ 56-60 & 8 \\ 61-65 & 9 \\ 65+ & 10 \\ \end{array}$		41-45	5
$\begin{array}{ccccc} 51-55 & & 7\\ 56-60 & & 8\\ 61-65 & & 9\\ 65+ & & 10 \end{array}$		46–50	6
56-60       8         61-65       9         65+       10		51–55	7
61–65 9 65+ 10		56–60	8
65+ 10		61–65	9
		65+	10

Q2.	What is your gender?	
	Male	1
	Female	2
Q3.	Which best describes your managerial level? (please circle the response describes you)	that best
	Non-supervisor/non-manager (not a supervisor or manager)	1
	First Line supervisor	2
	Lower level/Junior Manager	3
	Middle Manager	4
	Senior Manager	5
	Executive	6
	Divisional Head/General Manager (not CEO)	7
	Chief Executive Officer/President	8
Q4.	About how old is your organization?	Year
	Less than 1 year	1
	1–2 years	2
	3–5 years	3
	6–10 years	4
	11–20 years	5
	21–30 years	6
	31–40 years	7
	41–50 years	8
	51–60 years	9
	61-70 years	10
	71-80 years	11
	81–90 years	12
	01 100 years	12
	91–100 years More than 100 years old	13 14
05	91–100 years More than 100 years old How many years have you been in full time employment for	13 14 Vear
Q5.	91–100 years More than 100 years old <b>How many years have you been in full time employment for</b> Less than one year	13 14 Year
Q5.	91–100 years More than 100 years old <b>How many years have you been in full time employment for</b> Less than one year	13 14 Year 1 2
Q5.	91–100 years More than 100 years old <b>How many years have you been in full time employment for</b> Less than one year 1 up to 2 years 2 up to 5 years	13 14 Year 1 2 3
Q5.	91–100 years More than 100 years old <b>How many years have you been in full time employment for</b> Less than one year 1 up to 2 years 2 up to 5 years 5 up to 10 years	13 14 Year 1 2 3 4
Q5.	91–100 years More than 100 years old <b>How many years have you been in full time employment for</b> Less than one year 1 up to 2 years 2 up to 5 years 5 up to 10 years 10 up to 15 years	13 14 Year 1 2 3 4 5
Q5.	91–100 years More than 100 years old <b>How many years have you been in full time employment for</b> Less than one year 1 up to 2 years 2 up to 5 years 5 up to 10 years 10 up to 15 years 15 up to 20 years	13 14 Year 1 2 3 4 5 6
Q5.	91–100 years More than 100 years old <b>How many years have you been in full time employment for</b> Less than one year 1 up to 2 years 2 up to 5 years 5 up to 10 years 10 up to 15 years 15 up to 20 years 20 up to 25 years	13 14 Year 1 2 3 4 5 6 7
Q5.	91–100 years More than 100 years old <b>How many years have you been in full time employment for</b> Less than one year 1 up to 2 years 2 up to 5 years 5 up to 10 years 10 up to 15 years 15 up to 20 years 20 up to 25 years 20 up to 25 years 25 up to 30 years	13 14 Year 1 2 3 4 5 6 7 8
Q5.	91–100 years More than 100 years old <b>How many years have you been in full time employment for</b> Less than one year 1 up to 2 years 2 up to 2 years 5 up to 10 years 10 up to 15 years 15 up to 20 years 20 up to 25 years 25 up to 30 years 30 up to 35 years	13 14 Year 1 2 3 4 5 6 7 8 9
Q5.	91–100 years More than 100 years old How many years have you been in full time employment for Less than one year 1 up to 2 years 2 up to 2 years 5 up to 10 years 10 up to 15 years 15 up to 20 years 20 up to 25 years 25 up to 30 years 30 up to 35 years 35 years or more	13 14 Year 1 2 3 4 5 6 7 8 9 10
Q5. Q6.	91–100 years More than 100 years old How many years have you been in full time employment for Less than one year 1 up to 2 years 2 up to 2 years 5 up to 10 years 10 up to 15 years 15 up to 20 years 20 up to 25 years 25 up to 30 years 30 up to 35 years 35 years or more Is this subsidiary a joint venture or a wholly owned Japanese subsidiar	13 14 Year 1 2 3 4 5 6 7 8 9 10 <b>y</b> ?
Q5. Q6.	91–100 years More than 100 years old How many years have you been in full time employment for Less than one year 1 up to 2 years 2 up to 2 years 5 up to 10 years 10 up to 15 years 15 up to 20 years 20 up to 25 years 25 up to 30 years 30 up to 35 years 35 years or more Is this subsidiary a joint venture or a wholly owned Japanese subsidiar Joint venture	13 14 Year 1 2 3 4 5 6 7 8 9 10 <b>y?</b> 1
Q5. Q6.	91–100 years More than 100 years old <b>How many years have you been in full time employment for</b> Less than one year 1 up to 2 years 2 up to 2 years 5 up to 10 years 10 up to 15 years 15 up to 20 years 20 up to 25 years 25 up to 30 years 30 up to 35 years 35 years or more <b>Is this subsidiary a joint venture or a wholly owned Japanese subsidiar</b> Joint venture Wholly owned Japanese subsidiary	13 14 Year 1 2 3 4 5 6 7 8 9 10 <b>'y?</b> 1 2
Q5. Q6. Q7.	91–100 years More than 100 years old <b>How many years have you been in full time employment for</b> Less than one year 1 up to 2 years 2 up to 5 years 5 up to 10 years 10 up to 15 years 15 up to 20 years 20 up to 25 years 25 up to 30 years 30 up to 35 years 35 years or more <b>Is this subsidiary a joint venture or a wholly owned Japanese subsidiar</b> Joint venture Wholly owned Japanese subsidiary <b>What is your present industry?</b>	13 14 Year 1 2 3 4 5 6 7 8 9 10 <b>y?</b> 1 2
Q5. Q6. Q7.	91–100 years More than 100 years old How many years have you been in full time employment for Less than one year 1 up to 2 years 2 up to 5 years 5 up to 10 years 10 up to 15 years 15 up to 20 years 20 up to 25 years 25 up to 30 years 30 up to 35 years 35 years or more Is this subsidiary a joint venture or a wholly owned Japanese subsidiar Joint venture Wholly owned Japanese subsidiary What is your present industry? Metal	13 14 Year 1 2 3 4 5 6 7 8 9 10 <b>y</b> ? 1 2
Q5. Q6. Q7.	91–100 years More than 100 years old How many years have you been in full time employment for Less than one year 1 up to 2 years 2 up to 5 years 5 up to 10 years 10 up to 15 years 15 up to 20 years 20 up to 25 years 25 up to 30 years 30 up to 35 years 35 years or more Is this subsidiary a joint venture or a wholly owned Japanese subsidiar Joint venture Wholly owned Japanese subsidiary What is your present industry? Metal Machinery	13 14 Year 1 2 3 4 5 6 7 8 9 10 <b>y</b> ? 1 2 1 2
Q5. Q6. Q7.	91–100 years More than 100 years old How many years have you been in full time employment for Less than one year 1 up to 2 years 2 up to 5 years 5 up to 10 years 10 up to 15 years 15 up to 20 years 20 up to 25 years 25 up to 30 years 30 up to 35 years 35 years or more Is this subsidiary a joint venture or a wholly owned Japanese subsidiar Joint venture Wholly owned Japanese subsidiary What is your present industry? Metal Machinery Garment and textile	13 14 Year 1 2 3 4 5 6 7 8 9 10 <b>y?</b> 1 2 1 2 3
Q5. Q6. Q7.	91–100 years More than 100 years old How many years have you been in full time employment for Less than one year 1 up to 2 years 2 up to 5 years 5 up to 10 years 10 up to 15 years 15 up to 20 years 20 up to 25 years 25 up to 30 years 30 up to 35 years 35 years or more Is this subsidiary a joint venture or a wholly owned Japanese subsidiar Joint venture Wholly owned Japanese subsidiary What is your present industry? Metal Machinery Garment and textile Agricultural and marine	13 14 Year 1 2 3 4 5 6 7 8 9 10 <b>y?</b> 1 2 1 2 3 4
Q5. Q6. Q7.	91–100 years More than 100 years old How many years have you been in full time employment for Less than one year 1 up to 2 years 2 up to 5 years 5 up to 10 years 10 up to 15 years 15 up to 20 years 20 up to 25 years 25 up to 30 years 30 up to 35 years 35 years or more Is this subsidiary a joint venture or a wholly owned Japanese subsidiar Joint venture Wholly owned Japanese subsidiary What is your present industry? Metal Machinery Garment and textile Agricultural and marine Electric and electronic	13 14 Year 1 2 3 4 5 6 7 8 9 10 <b>y?</b> 1 2 1 2 3 4 5
Q5. Q6. Q7.	91–100 years More than 100 years old How many years have you been in full time employment for Less than one year 1 up to 2 years 2 up to 5 years 5 up to 10 years 10 up to 15 years 15 up to 20 years 20 up to 25 years 25 up to 30 years 30 up to 35 years 35 years or more Is this subsidiary a joint venture or a wholly owned Japanese subsidiar Joint venture Wholly owned Japanese subsidiary What is your present industry? Metal Machinery Garment and textile Agricultural and marine Electric and electronic Automobile	13 14 Year 1 2 3 4 5 6 7 8 9 10 <b>vy?</b> 1 2 1 2 3 4 5 6
Q5. Q6. Q7.	91–100 years More than 100 years old How many years have you been in full time employment for Less than one year 1 up to 2 years 2 up to 5 years 5 up to 10 years 10 up to 15 years 15 up to 20 years 20 up to 25 years 25 up to 30 years 30 up to 35 years 35 years or more Is this subsidiary a joint venture or a wholly owned Japanese subsidiar Joint venture Wholly owned Japanese subsidiary What is your present industry? Metal Machinery Garment and textile Agricultural and marine Electric and electronic Automobile Chemicals	13 14 Year 1 2 3 4 5 6 7 8 9 10 <b>y</b> ? 1 2 1 2 3 4 5 6 7

The Implementation of Japanese Management Practices

The following questions relate to how Japanese management practices have been implemented in your organization, and the attitude of Thai staffs towards implementation of Japanese management practices in Thailand

# Q8. Please indicate whether the following Japanese management practices have been implemented at this subsidiary (Yes or No), and if yes, the extent to which they have been implemented.

Ple	ase circle the appropriate answer	Not at all extent	←					To an extremely extent
1.	Lifetime employment	1	2	3	4	5	6	7
2.	Consensus decision-making	1	2	3	4	5	6	7
3.	Seniority system	1	2	3	4	5	6	7
4.	House union	1	2	3	4	5	6	7
5.	Job rotation	1	2	3	4	5	6	7
6.	Quality control circles	1	2	3	4	5	6	7

Motivation to the Acceptance of Japanese Management Practices

Q9	. If you were required to accept Japanese management practices, which of the following factors would	Not at all Important	•					<b>→</b>	Extremely Important
	<b>be important in assisting you to</b> <b>accept?</b> (please circle the appropriate answer)								
Vis	ion								
Th	e introduction of the use of Japanese								
ma	nagement practices is accompanied by:								
1.	Providing explanation of the advantage of the Japanese management practices to key internal and external groups (employees, management, unions, customers,	1		2	3	4	5	6	7
2.	A clear rationale for the use of Japanese management practices and beliefs needed to make successfully implementation	1		2	3	4	5	6	7
3.	A clear timetable is devised for the various phases of the use of Japanese management practices	1		2	3	4	5	6	7
4.	Provision of a plan detailing the various steps of the use of Japanese management practices.	1		2	3	4	5	6	7
5.	A discussion of specific new ways in which structure, systems and people practices would implement the Japanese management practices.	1		2	3	4	5	6	7
Lea	adership and management practice								
Th	e use of Japanese management								
pra	ctices can be successfully								
im	plemented if:								
6.	Managers set an example by modeling appropriate behaviors to implement	1		2	3	4	5	6	7

Japanese management practices.

7.	From the beginning there is a powerful guiding executive coalition clearly in support of the use of Japanese	1	2	3	4	5	6	7
	management practices							
8	Once the use of Japanese management	1	2	3	4	5	6	7
0.	practices commences, there is clear	•	-	U		U	0	
	evidence of the CEO and the senior							
	management team attempting and							
	championing the use of Japanese							
	management practices.							
9.	The CEO and senior management	1	2	3	4	5	6	7
	ensure the support of key power							
	groups for the use of Japanese							
	management practices.							
10.	The CEO and senior management	1	2	3	4	5	6	7
	create and communicate a sense of							
	urgent need for implementing							
	Japanese management practices							
	throughout the organization.							
Res	ource support							
The	use of Japanese management							
pra	ctices can be supported by:							
11.	Adequate financial resources are	1	2	3	4	5	6	7
	allocated in support of the use of							
	Japanese management practices.							
12.	Adequate human resources are	1	2	3	4	5	6	7
	allocated in support of the use of							
	Japanese management practices.							
13.	You will receive adequate and	1	2	3	4	5	6	7
	appropriate training to enable you to							
	work in new ways.							
14.	Senior management are prepared to	1	2	3	4	5	6	7
	devote their time to meetings,							
	presentations, communication,							
	education and training needed to							
	support the use of Japanese							
	management practices.							
Mo	tivation and rewards							
The	e use of Japanese management							
pra	ctices can be facilitated by:							
15.	Providing the opportunity for new and	1	2	3	4	5	6	7
	exciting challenges, enabling you to							
	develop my skills and capabilities.							
16.	Getting you more pay as a result of the	1	2	3	4	5	6	7
	use of Japanese management practices.							
17.	There is little chance of advancement	1	2	3	4	5	6	7
	in the organization unless you embrace							
	the use of Japanese management							
	practices.							
18.	Successful implementation of	1	2	3	4	5	6	7
	Japanese management practices							
	provides satisfaction for a job well							
	done.							

19.	Having pay system and benefits of your firm treat each employee equally.	1	2	3	4	5	6	7
Str	ucturing for change							
The	use of Japanese management							
pra	ctices is supported because:							
20.	The structures of Japanese	1	2	3	4	5	6	7
	management practices are flexible.							
21.	The structure of the use of Japanese	1	2	3	4	5	6	7
	management practices is clear and							
	helpful.							
22.	The structural arrangement provides	1	2	3	4	5	6	7
	new insights into the use of Japanese							
	management practices.							
23.	The structural arrangement devise for	1	2	3	4	5	6	7
	managing the use of Japanese							
	management practices is appropriate.							
24.	The structures of Japanese	1	2	3	4	5	6	7
	management practices are well							
	designed.							
Rel	ationship							
Per	ceived extent to which the following							
rela	tionship approaches are used to							
faci	litate the use of Japanese							
mar	nagement practices:							
25.	Your relationship with your supervisor	1	2	3	4	5	6	7
	will be a harmonious one after							
	implementing Japanese management							
	practices.							
26.	You can feely talk with someone at	1	2	3	4	5	6	7
	work if you have a work-related							
	problem.							
27.	There is no evidence of unresolved	1	2	3	4	5	6	7
	conflict in the organization.							
28.	Your relationships with peers in your	1	2	3	4	5	6	7
	work groups are friendly.							
29.	You have established the relationships	1	2	3	4	5	6	7
	that you need to do your job properly							

#### Acceptance of Japanese Management Practices

Q10. Please indicate the extent to which you think that you will agree to accept the use of Japanese management practices to local conditions if you are provided by those motivational factors mentioned above.

Ple	ase circle the appropriate answer	Totally disagree	•					Totally
	agree							
1.	I intend to accept the Japanese management practices in the future.	1	2	3	4	5	6	7
2.	I will always make an effort to accept the Japanese management practices.	1	2	3	4	5	6	7
3.	I will try to accept the Japanese management procedures.	1	2	3	4	5	6	7
4.	I intend to accept the Japanese management practices.	1	2	3	4	5	6	7
Th	ank you for your participation							

## 9.4 Appendix 4



## 9.4.1 Information for Participants in the Adaptation of Japanese Management Practices Survey

Dear Potential Participant,

We would like to invite you to be part of a study into:

Factors Influencing the Adaptation and Acceptance of Japanese Management Practices in Thailand.

This study is part of a Doctor of Business Administration degree. The objectives of this study are to explore the application of Japanese management practices in a Thai cultural context, to examine the extent to which Japanese transplant their management style to Thai culture and to investigate the factors that can be introduced to manufacturing organizations that enable Thai subordinates to accept, and Japanese managers to adapt, Japanese management practice to Thai culture. Your participation is completely voluntary and all information obtained will be completely anonymous and confidential. We will establish only an anonymous data file, so no individual's opinions will be identified. There will be no negative consequences to you not participating, as we will not be mentioning any individuals in the research.

With your permission we would like you to answer each question as reliably as you can. There are no rights or wrong answers. This questionnaire is about your perceptions of Japanese management practices to what you feel about the Japanese management practices and how the Japanese management practices can be adapted and accepted to Thai local condition. It should take you around 15–20 min to complete the entire questionnaire.

Thank you for considering participating in this research. If you have any questions in relation to our study please contact Professor Sardar M.N. Islam (+ 61-3-9919 1338 or Sardar.Islam@vu.edu.au) or myself at the contact details above. Should you have any concerns with the operation of survey please contact the secretary of the Victoria University Human Research Ethics Committee (Tina. Jeggo@vu.edu.au or + 61-3-9919 4128).

Thank you for your assistance in this research,

Tanachart Raoprasert

Doctor of Business Administration Candidate

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