Can Efficient Technology Transfer Be Achieved through a Hybrid Corporate Culture? A Study on Japanese Manufacturing Subsidiaries in Vietnam

Nguyen Thi Duc Nguyen (Corresponding author)
Graduate School of Technology Management, Ritsumeikan University
〒525-8577 Noji-higashi 1-1-1, Kusatsu Shiga, Japan
Tel: 81-803-831-3168 E-mail: ntducnguyen@yahoo.co.jp

Chikako Takanashi
Graduate School of Technology Management, Ritsumeikan University
〒525-8577 Noji-higashi 1-1-1, Kusatsu Shiga, Japan
Tel: 81-77-561-3709 E-mail: takanash@mot.ritsumei.ac.jp

Atsushi Aoyama
Graduate School of Technology Management, Ritsumeikan University
〒525-8577 Noji-higashi 1-1-1, Kusatsu Shiga, Japan
Tel: 81-77-561-2889 E-mail: aoyama@mot.ritsumei.ac.jp

Received: February 1, 2012 Accepted: February 13, 2012 Published: April 1, 2012
doi:10.5539/ijbm.v7n7p24 URL: http://dx.doi.org/10.5539/ijbm.v7n7p24

Abstract

This study aims to explore the positive manners of dealing with cultural differences to efficiently implement technology transfer for Japanese subsidiaries in Vietnam. Based on Hofstede's cultural dimensions theory, the study, which employed qualitative data collection approaches, including in-depth interviews, focus group discussions, and observations, was conducted at thirteen Japanese manufacturing subsidiaries in Vietnam. The data were further analyzed using Adler's framework on intercultural interaction synergy. The results were: (1) Differences between Vietnamese and Japanese management existing in implementing technology transfer are traced back to each national culture fundamental, mainly lie on dimensions of Collectivism and Power Distance; and (2) strategic activities directly convincing Vietnamese staff behaviors and addressing the mindset of Japanese and Vietnamese staff were taken to minimize the above differences. This study proposes the working framework towards hybrid corporate culture that flexibly incorporates local practices while maintaining core Japanese management. It can help achieve efficiently technology transfer performance for Japanese firms doing business in developing countries, especially Vietnam.

Keywords: Technology transfer performance, National culture, Hybrid corporate culture, Japanese subsidiaries, Vietnam

1. Introduction

In an era of intensifying international business, Vietnam has to directly face the global competitive challenges. They must address not only the "hard" but also the "soft" aspects of these challenges, including issues of culture, organizational learning, knowledge management, operating management, and so on, switching gradually from a source of cheap, intensive labor into a site of intensive capital. Currently, the major interest is how to catch up with the great speed of technological change in a situation where the capacity for technological investment remains insufficient. Strategic alliance between companies from developed and developing countries is considered an appropriate way to increase productivity and flexibly respond to the market and technological

changes (Cherunilam, 2007). Technology transfer via the formal channels of joint ventures or foreign direct investment continues to be an integral part of this process (Cohen, 2004).

In this light, according to Beamish, Delios, & Lecraw (1997), Japanese companies could make greater efforts to enter into alliance networks as equity-based partnerships. But practically, these companies have encountered many difficulties in transferring technology into Vietnam. They have not been able to achieve high efficiency in productivity and quality in the early years of an investment. This has a significant impact on their ability to compete. Meschi (1997) pointed that most of the obstacles mentioned in international projects can be traced back to cultural differences, both national and organizational. However, cross-cultural technology transfer research focusing on Japanese firms in Vietnam is inadequate.

For these reasons, this study firstly clarifies what are the hindering issues of international technology transfer in a cross-cultural context within insight national cultural fundamental. The qualitative approaches including in-depth interview, focus group discussion, and observation are more effective, especially when the boundaries between phenomenon and context are not clearly evident (Goulding, 2002; Yin, 2009). It is also useful to convey a basic definition, description of research problem to the respondents and helps others thoroughly understand the study (Dey, 1993; Creswell, 2003). And we utilize it to develop comprehensive descriptions of the phenomenon under research questions and to interconnect research concepts. The approaches lead us to explore the following problem: "How can the impact of cultural differences be minimized efficiently to improve the performance of technology transfer projects from Japan to a developing country?" And here in this paper, we consider technology transfer as a complex process to transfer technological knowledge, information and know-how across organizational border from developed to less technologically developed countries, discussed in the section 3.

The paper is organized as follows. After a quick introduction to the issues, the prevailing researches on cross-cultural technology transfer are briefly presented in section 2. Section 3 describes the empirical design framework used, which is based on the two theoretical foundations: Hofstede (2010)'s national culture dimensions and Adler (2008)'s framework on intercultural interaction synergy. The qualitative data collection types including—in-depth interview, group discussion, and observation—, and data collection site on Japanese subsidiaries as the basis of empirical interviews are also presented in this section. In section 4, the differences between Vietnamese and Japanese management prevailing to become problems in technology transfer are traced back to the national culture of each country, mainly lie on the dimensions of Collectivism and Power Distance. Section 5 explains managerial efforts to convince Vietnamese staff behaviors and looks at both Japanese and Vietnamese mindset involved. The section 6 is discussion part where this study proposes working framework to move toward a hybrid corporate culture for achieving efficiently international technology transfer performance in a context of cultural difference. Finally, some practical conclusions are offered in section 7.

2. Literature review

Following the approach of Creswell (2003), the current literature on international technology transfer within a cross-cultural context can be summarized as follows.

The research on international technology transfer has matured by emphasizing the technology itself (Li-Hua, 2004). Recently, knowledge has been identified as the key to control technology transfer performance (Li-Hua, 2004). This research trend continues to be explored; treating the knowledge based view to underlie technology transfer models, but mainly built on three previous research streams: the resource-based view, information processing theory, and organizational learning.

In this light, much prior quantitative research has investigated the factors inhibiting and facilitating knowledge and technology transfer in cross-cultural business contexts, but these works have exclusively covered a few dimensions, such as the characteristics of the knowledge, the suppliers and recipients, and their relationships (e.g., Rebentisch & Ferretti, 1995; Pak & Park, 2004; Hau & Evangelista, 2007; Sazali, 2009). Some researches indicate the importance of national culture in the cross-cultural knowledge transfer process (e.g., Simonin, 1999; Holden, 2002; Pauleen, Wu, & Dexter, 2007). Others point out cultural difference and its distances are the key obstacles and roots of cultural conflicts and misunderstandings to inter-firm knowledge and technology transfer (e.g., Lyles & Salk, 1996; Mowery, Oxley, & Silverman, 1996; Lin & Berg, 2001, Hau & Evangelista, 2007). However, relatively few exploratory researches have suggested theoretical frameworks to explain how cultural difference affect knowledge transfer using Hofstede's culture dimensions (e.g., Bhagat, Kedia, & Triandis, 2002; Lucas, 2006, Chen & McQueen, 2010).

It has been seen that prior works on cross-cultural technology transfer mainly aimed to explain nature of international technology transfer, and lacked a synthetic and systematic view incorporating both theoretical and empirical approaches. The prevailing issues, which have yet to be conceptualized adequately, are how

differences in national culture constrains technology transfer performance, how can minimize them effectively, and what significant activities promote technology transfer implementation in the context of cultural difference. This study, using empirical inquiry, seeks to examine those problems and identify a pattern working toward a hybrid corporate culture to achieve efficient technology transfer across national cultures.

3. Field research

3.1 Theoretical foundation

3.1.1 Hofstede's national culture

Although subject to some criticisms, Hofstede's work explaining the differences in work-related values has been used for subsequent studies in cross-cultural management (Adler & Gundersen, 2008; Schlunze, Hyttel-Srensen, & Ji, 2011). This study utilized Hofstede (2010)'s theory of five cultural dimensions as one of fundamental reference points to explore the differences between Vietnamese and Japanese management through a national culture lens. They are Individualism, Power distance, Uncertainty avoidance, Long term orientation, and Masculinity. (1) Individualism refers the degree to interdependence between the members of a society and the strength of the ties individuals into cohesive groups, or social networks. It describes personal relationships, teamwork skills, individual success compared to that of colleagues, the importance of keeping up harmony and saving face, loyalty, and the sense of duty towards the work community, superiors, and subordinates. (2) Power distance refers to the degree that the society's members can tolerate inequality distribution of power within organizations. It mentions the significance of status differences, the acceptance of the leader's authority, the necessity for guidance and leadership, values attached to age, and manners of presenting feedbacks. (3) Uncertainty avoidance describes the society's need to control unknown situations and the society's ability to handle uncertainty and keep up balance. It refers to the sense of timing and punctuality, the plan in advance, the reaction to planning changes and breaking the rules, the ways expressing emotions in public, the acceptance of different opinions and people, and the necessity for rules, models, standards, and rituals in the working environment. (4) Long term orientation explains how much society values long term strategies. It refers to setting objectives, vision and timing planning of tasks and goals. (5) Masculinity defines what roles the society assigns to the two sexes and attitudes towards masculine and feminine leadership styles. It also refers to valuing achievement, confidence, material wealth, personal relations; dividing work time and free time; defining quality of working life, importance of work for an individual, expectations and methods of promotion.

In brief, the highly significant differences in behaviors and attitudes of employees and managers from each country mainly varied on five above primary cultural dimensions (Adler & Gundersen, 2008). Therefore, to summarize the most important differences, this study has focused on mentioned dimensions; the remaining dimensions are out of this scope.

3.1.2 Adler's intercultural interaction synergy

Simultaneously, in cross-cultural management research, intercultural interaction synergy as an approach to managing the impact of cultural diversity involves a new way of thinking and processing organizational activities (Adler & Gundersen, 2008). According to Adler, cultural synergy creates optimal forms of management and organization that transcend the impact of distinct culture from originals. Adler mentions five situations to evaluate intercultural interactions: (1) cultural dominance situation happens when one partner has more powerful position than the other; managers strongly believe their appropriate way and continue do the same ways as in their home culture, especially in situation involving the fundamental ethical issues, (2) cultural accommodation approach is implemented when managers attempt to imitate the host culture, (3) cultural compromise approach combines the abilities of both sides to work together successfully; the most powerful partner gives up less, but both sides make concessions, (4) cultural avoidance situation emphasizes saving face and is often used when unresolved issues are less important than the final outcome, and (5) cultural synergy approach develops new solutions that respect all cultures to increase the options available for cross-cultural working effectively.

Intercultural synergy has been well integrated into various field, e.g., international human resource management (Schlunze, Hyttel-Srensen, & Ji, 2011), cross border merger and acquisition (Ran, 2008), but in the field of technology transfer, it has not yet reached its potential. This study takes advantages of Alder's framework to analytically generalize, and check the coherence of collected data from Hofstede's framework.

3.1.3 Efficiency of technology transfer

The concept of technology transfer is defined according to the context and the research (Bozeman, 2000). The previous researches defined it in several ways: (1) the process of transferring the combination of research, development and engineering across national borders (Jeannet & Liander, 1978); (2) the activities of transferring

the needed technical knowledge, know-how, and concepts from developed to less-technically developed countries (Williams & Gibson, 1990; Bozeman, 2000); (3) the process whereby technical information originating in one institutional setting is adapted for use as the same purpose in another institutional setting (Ando, Kawashima, & Kan, 2005); (4) an intentional, oriented interaction between two or more social entities, by which technological knowledge remains stable or increases through the transfer of the components of technology (Autio & Laamanen, 1995); and (5) a learning process where technological knowledge is continually acquired, developed, utilized by other country from knowledge originated and deeper accumulated into human resources; are engaged in production activities (Derakhsahani, 1984; Yamashita, 1991; Sazali, 2011).

Indeed, the above definitions of technology transfer are similar and complementary. This study considers technology transfer in the context of cultural difference and the phenomena of the geographic expansion for production activities. Therefore, technology transfer is defined as the transfer of technological knowledge, information and know-how across organizational border from developed to less technologically developed countries where the technology recipients have effectively acquired, learned, absorbed, and applied knowledge to reach the execution conditions of production activities and management as same as those at original economic entities (Derakhsahani, 1984; Williams & Gibson, 1990; Yamashita, 1991; Bozeman, 2000; Ando, Kawashima, & Kan, 2005; Sazali, 2011).

The efficiency of technology transfer in this study based on the viewpoint of Mansfield et al. (1982), Lin (2007) and the basis of interviews with Japanese and Vietnamese managers that was concentrated on acquiring technological knowledge from partner, enhancing knowledge application, improving innovative capacity of process and product quality.

3.2 Empirical inquiry framework

The national culture dimensions provided by Hofstede (2010) are used as a foundation for designing the empirical inquiry framework (Figure 1) to guide the interviews and discussions. Based on this framework, semi-structured questions were designed to address two core research questions:

Research question 1: What differences prevail to become problems between Vietnamese and Japanese management, based on the national culture of each country, and affect technology transfer at Japanese subsidiaries in Vietnam?

Research question 2: What efforts have Japanese companies made to minimize the above differences? How have these efforts improved technology transfer performance?

3.3 Data collection site

A purposeful sampling method is used to select companies to which to apply the research methodology. The site selected for this study is Japanese manufacturing subsidiaries in mechanical industry, has located in the tech parks of Southern Vietnam. The criteria for selecting these companies were primarily based on their business fields in Vietnam. They are as follows: equipment for asphalt road-building, butt-welding fittings used in various infrastructural capacities, aluminum extrusion dies, stamping dies, internal components for hydraulic equipment, precision parts, steel ball welding, plastic mold segments, and multidisc torque converters for cars.

The study was conducted with eight official in-depth interviews (two Japanese senior managers and six Vietnamese production managers) and five focus group discussions. Totally, seven Japanese senior managers and twenty three Vietnamese engineering and production managers at several departments in thirteen Japanese subsidiaries took part in in-depth interviews, focus group discussions. These individuals being around 45 years old have a mean 11 years of experience with international technology transfer. The mean time for in-depth interviews was 2 hours, and for focus group discussions was 3.5 hours.

3.4 Data collection technique

This study employed multiple specific methods of qualitative data collection approaches—in-depth interview, focus group discussion, and observation—to investigate a contemporary phenomenon within real-life contexts of cross-cultural technology transfer. These approaches are effective, especially when the boundaries between phenomenon and context are not clearly evident (Goulding, 2002; Yin, 2009). It uncovers what people know, think, feel and do by observing, interviewing, and analyzing data (Patton, 2002). The core set of semi-structured questions was introduced via interview techniques such as introductory questions, probing questions, direct and indirect questions, and interpretive questions, together with the explanation of unclear issues.

Before the main research began, the firstly three in-depth interviews were conducted to access a rich source of first-hand knowledge, building a systematic picture of all aspects of technology transfer performance in a

cross-cultural scenario. Results of this pilot studies help check whether the research method and questions could achieve research objectives, revise ambiguous questions and improve the necessary techniques for later official in-depth interviews. The direct observation technique was added to the interviews, in order to gain insightful information from subjects' actions rather than their words, in the situation where subjects did not express their feelings meaningfully about the cross cultural technology transfer experience.

Additionally, to get a more synthetic view of potential issues (the lack of which is a downside of conversational discussion and observation), small focus group discussions (from three to six people) were undertaken at the working location in the middle stages of research and at neutral locations in the final stages. This method creates an environment of discussion and argument, allows observation of the interaction of many participants, stimulates new ideas, and obtains information on subconscious behavior (Goulding, 2002). The group discussion in a neutral location separates the interviewees from the real working environment, and creates a comfortable opportunity to express information (Goulding, 2002). Diverse locations and observers were used to gain rich insight through comparing the similarities and differences between different contexts, and complementing the research concepts found in previous stages.

3.5 Data analysis framework

Data from in-depth interviews, focus group discussions, and observations were compiled by taking extensive notes at the time and rewriting them later the same day. The data were analyzed and interpreted by a circular process of description, classification, and connection in Dey (1993). Specifically, the collected data were (1) described, classified, and conceptually ordered upon Hofstede's dimensions; and (2) compared in detail, analytically generalized, and checked for coherency using Adler's intercultural synergy framework, Hofstede's dimensions (Figure 1). To extend the research concepts that developed through analytical framework, the number of companies was increased gradually as the findings grew. During the period of five months in research investigation intensively, the new findings moved toward stability, no more new information could be gathered.

4. Analyzing differences between Vietnamese and Japanese management with insight into national cultural fundamentals

On the basis of the interviews, discussions, and observations, this section presents the differences between Japanese and Vietnamese management and behavior that were stressed as being major influences on technology transfer performance. The discovered differences are conceptually ordered upon Hofstede's dimensions of Individualism, Power Distance, Uncertainty Avoidance, Long-Term Orientation, and Masculinity (Table 1) and analyzed in detail in terms of national cultural fundamentals. Only on Collectivism dimension, the discovered differences in management have a little different in considering with the Hofstede's work. Especially, obvious differences originate mainly in the dimensions of Collectivism and Power Distance. Two contradictory original characteristics— community spirit and autonomy—shape Vietnamese culture (Tran, 1999) supporting to these findings are discussed in the following parts.

4.1 Collectivism/Individualism (IDV)

In IDV dimension, according to Hofstede (2010), the IDV for Japan (46) and Vietnam (20) shows that both countries are collectivist societies, but Vietnam has stronger group cohesion. However, with respect to our interview results, the discovered differences in management have a little incongruous and are explained in three categories as follows (Table 1). These findings are also supported by the research on Vietnamese culture of Tran (1999), who acknowledged that although Vietnamese people have high community spirit due to the importance of the family and village life, actual observations show that adherence to these values is ambivalent and contradictory.

Firstly, despite various modes of cooperation and strong solidarity, Vietnamese management and behavior tend toward the emergence of personal play or room for individual discretion in work. This has a major influence on the process of technical on-the-job training, especially in terms of sharing experience or skills through actual practices. Why does individualism emerge? Because two contradictory original characteristics, community spirit and autonomy, which are both advantageous and disadvantageous, coexist in the Vietnamese culture (Tran, 1996). Circumstances determine which characteristic are more prominent. In addition, the basis of Vietnamese community spirit is an autonomous village where each village only feels this intimacy and mutual support within itself; exist quite independently of each other.

Secondly, the Vietnamese management rewards individual success and character individually. The success of an organization is usually associated with individual initiative. Indeed, these perspectives originate from traditional root of Vietnamese autonomy, which creates a fortified and emphasizes on differentiation. At the same time, the

contrast perspective is homogeneity that obscures the sense of individual humanity (Tran, 1999). Every person relies upon the special group, lacking personal responsibility for achieving general goals, fearing conflict (Tran, 1996). Thus, rewarding performance is less recognized in the positive way. The problems are solved through similar and consistent methods. In contrast, the Japanese management is more likely to reward group success rather than individual success. Rewards are done for positive attitude, including long tenure, enthusiasm for the job, and so on. It is necessary in Japan to evaluate people's work openly, frankly, and fairly. The company should not lessen their accomplishments by simply handing out rewards. Everyone knows that struggling and winning is the most important thing. This spirit is the descendant of the samurai philosophy of bushido, which developed in the twelfth century (Pham, Vu, & Tran, 2001). Markedly, these almost opposite viewpoints lead many Vietnamese technical staff that has been trained in technology in Japan to leave the company that trained them. They wish to receive personal rewards or incentives for their efforts.

Thirdly, both Japanese and Vietnamese communities have been influenced by the East Asian concept of loyalty which derives from the Confucian ideal of Analects of Confucius (c. 5th–3rd century BCE). But in Vietnam, personal character is the central virtue; in Japan, loyalty is the central virtue that has manifested in the Spartan discipline of the samurai (Pham, Vu, & Tran, 2001). Therefore, the Japanese management emphasizes the basis of individual success in working life on seniority rather than talent. Personal income is also based on seniority, rather than on capability. Even at an older age, they are seen as productive people with a future in the company. Thus, the Japanese often have loyalty to their companies.

For these reasons, in Japanese companies, Vietnamese staff starting their careers with a high level of education are treated the same as lower-educated employees at the same stage of working life. Due to the Vietnamese emphasis on autonomy, the Vietnamese management approach emphasizes individual initiative and recognition. Thus, high-level employees often have trouble at work, leave their jobs, and start again in other companies. The end result is that Japanese companies in Vietnam cannot keep staffs that receive transferred technology in long term working and often hire unremarkable workers, then train them into skilled managers.

4.2 Power Distance (PDI)

The discovered differences on the PDI dimension can be broken down into three aspects: participation in decisions, manager accessibility, and openness (Table 1). They can be explained as follows.

A Vietnamese worker who takes on a managerial role will experience this separation between the management team and other staff. The management team or individuals usually hold on to their own information or keep their own counsel to protect their own power in executive management. This has an effect on technical sharing, communication, and information feedback for continuous improvement of technology transfer. By emphasizing autonomy, Vietnamese firms can have problems with selfishness, balkanization, factions, and "local village spirit" (Tran, 1996). Each village only pays attention to itself. Another aspect of this is the patriarchal and hierarchical mind. Hierarchy combines with a patriarchal society to create the idea that "your elder brother replaces your father," imposing responsibilities, encouraging "long life to the aging" (Tran, 1996).

In contrast, in Japanese management, the manager always consults the opinions of subordinates to make decisions. As much information is dispensed as possible to company staff so they can share in knowledge and work together. The role of group manager involves distributing information to subordinates. The group manager and other employees work in a unified harmony and maintain a close family style, for good or bad. This can be seen in Confucius, who says that a benevolent man who helps others establish what he himself wishes to establish helps others achieve something he wishes to achieve (Pham, Vu, & Tran, 2001). Moreover, the Japanese nation owns a "polychrome" culture whose characteristic is high information density and continuous information flow (Pham, Vu, & Tran, 2001; Nguyen, 2011).

4.3 Uncertainty Avoidance (UAI)

The discovered differences upon UAI dimension mainly involving production control and adventurousness are summarized in Table 1 and discussed as followings.

Synthesis and dialectical thinking combined with the group principles of Vietnamese people lead to flexibility (Tran, 1996). The downside of flexibility is arbitrary behavior, which is expressed in difficulty with regulated timeframes and a lack of respect for the law (Tran, 1999). This has led to a division of work based on emotion. Synthetic thinking and a flexible style also define a receptive attitude (Tran, 1999). Therefore, Vietnamese managers are always flexible, welcoming in response to risk, and willing to get a chance. They solve problems at the time they happen, repair a machine at the time it broken, and so on. This affects the value chain of the technology transfer process.

In contrast, Japanese management is more conscientious about risk and chance. Japanese managers pay more attention to maintaining the machinery, controlling product quality, ensuring delivery time correctly, and so on before something bad happens.

4.4 Long-Term Orientation (LTO)

The discovered differences upon LTO dimensions are summarized in Table 1 relating to strategic objective such as production plan, company's motto, sense of profit and safety.

On the basis of synthesis, flexibility and dialectical thinking points, it is clear that the Vietnamese management pays less attention to making a long-term business plan or to quality practices. In contrast, Japanese companies use the loyalty and enthusiasm of employees, with their long working lifetimes at the company to organize the company in a stable way. Japanese managers pay more attention to developing a plan for the business, and taking care of products, production, the living and working environment, and so on. These influence on developing the long term orientation in utilizing the transferred technology, building company's image in customer mind, stabling human resource for innovation as well.

4.5 Masculinity (MAS)

Different management perspectives ordered on MAS dimension concerns mainly show two aspects of attitude towards work and human resource training.

In Japanese companies, most technical improvement is derived from team work. Japanese managers always promote the spiritual growth of the employees; create a feeling of confidence, creativity, and voluntary contribution to the development of society. Japanese laborers work hard with a low salary to ensure the survival and victory of the company, customer satisfaction, and winning against competitors. They work not only to get a salary but also to get a good evaluation from their leaders.

Vietnam, with its philosophy of balance and high adaptability to all circumstances, has great optimism and confidence in the future (Pham, Vu, & Tran, 2001). Moreover, Vietnamese workers, with the traits derived from agricultural life and the habit of dialectical thinking, form positive and negative principles and exhibit dualistic and synthetic behavior (Tran, 1996). The Vietnamese management is also balanced in this way—emphasis is placed on working to receive value worth the effort spent, balancing personal life, and working life, and so on. This spirit impacts in particular on the technological operation where the working strength is required to catch up the time schedule of technology transfer process.

In the final analysis, the differences in management practice between the Japanese and the Vietnamese have created many difficulties for Japanese companies in terms of technology transfer, and will continue if they do not have strategic solutions to overcome these cultural issues.

5. Developing methods and making efforts for cross-cultural technology transfer

This section presents the solutions Japanese firms have developed to minimize the discovered differences in management and behavior stemming from national cultural differences, that influencing on technology transfer and how they promote technology transfer in Vietnam. Figure 2 provides a general view of efforts including: managerial commitment and support, quality practice, team-based work, training, frequent interaction.

5.1 Managerial commitment and support

From the interviewees' point of view, the discovered differences on rewards and incentives (IDV), loyalty (IDV), and strategic objective (LTO) had been minimized by practicing managerial commitment (Table 1). Firstly, in any management system, rewards and incentives for superior performance and innovative ideas are very important. Japanese companies always keep these points in mind to retain experienced employees. Secondly, through the committed work of managers, staff has been able to understand the production plan, company motto, and the necessity of taking care in beginning manufacturing with transferred technology. Thirdly, product quality itself depends on management quality. The biggest mistake made in quality education is only targeting lower grade workers. If there is less support and managerial commitment at the top levels, the overall quality solutions is corrupt, technology transfer has not achieved successfully.

Additionally, the interviewees stressed that technology transfer requires the adoption of not only new technical information and knowledge but also a new way of thinking and doing. Managerial commitment is a major concern in technology transfer performance in process and after completion. Thus, there must be continuous management and evaluation for long-term technology transfer to work.

5.2 Quality Practice

Solutions aiming at quality practices can minimize the differences in management on rewards and incentives (IDV), openness (PDI), production control (UAI) and strategic objective (LTO) (Table 1).

First, both Vietnamese and Japanese managers stated that technology transfer performance at Japanese companies in Vietnam is mainly a result of operations and maintenance. Therefore, quality activities mainly focus on controlling product quality without defects to ensure delivery time, practicing machinery maintenance, continuous improvement, including the Kaizen, plan–do–check–act (PDCA) cycle. Through it, the company recognizes and rewards for good innovative ideas and superior individual and group contributions in a positive way.

Second, quality practice emphasizes company-wide quality control to unify the efforts of all members to create an effective, rhythmic system and improve product quality. The concepts of "doing it right the first time" and "zero defects," along with a high sense of responsibility, help technology transfer programs be implemented quickly.

Third, the interviewees emphasized that in order to facilitate effective quality practices, additional 5S-practice can mobilize the participation of all people, improve the working environment, enhance teamwork and provide encouragement and opportunities to practice smoother technology transfer.

Fourth, with quality activities, information is exchanged in a timely and accurate fashion to meet working requirements. Managers cannot keep their own information close to their chests to protect their own power. They must disclose the information to achieve company goals.

Finally, through quality activities, staff will thoroughly understand the production plan, company motto; and develop awareness of production needs and long-term operational requirements.

5.3 Team-Based Work

The differences minimized by team-based work are category of group spirit (IDV), participation in decisions (PDI), manager accessibility (PDI), and adventurousness (UAI) (Table 1).

On the basis of the interviews, it is clear that both Japanese and Vietnamese managers believe team-working is the key point for overcoming the impact of cultural differences on technology transfer. Through it, workers have the chance to work on tasks collaboratively and their ideas are fleshed out into actions, and consensus in decisions for manufacturing as well as seizing innovative opportunities is achieved. Through team-based structure, group managers and other employees can work together and maintain this unified harmony in pursuing great technology transfer achievements with least risks and conflicts.

5.4 Training

Most Japanese and Vietnamese managers interviewed said that the strongest aspect of the Japanese management as applied to technology transfer performance is human resource training. Thus, training is considered to minimize the differences between Japanese and Vietnamese management in the area of production control (UAI), strategic objective (LTO), attitude towards work (MAS), and human resource training (MAS) (Table 1).

Firstly, it should be noted that most Japanese managers are not good at conversation with local workers in the foreign languages. Training workshops and on-the-job training have been chosen as the major ways to transfer manufacturing technologies, including operational technology, maintenance, process control, and quality control... Actual practice, which is considered more beneficial than classroom training, gives Vietnamese workers the chance to have working time with Japanese staff so they can learn to understand each other. Additional fact, the Vietnamese technicians can read the written technical manuals well, but the contents of the transferred knowledge cannot be understood and applied in line with the expectations of the Japanese technology provider without hands-on personal training.

Furthermore, training, including language programs, is an important part. Vietnamese staff not only studies the Japanese language itself but also learns about communication style, practical work methods and imagine the actual work environment in Japanese companies. Thus, though most Vietnamese workers have never been to Japan, they can understand the communication and codes of conduct while absorbing the language lessons. Consequently, both language skills and mutually understanding national culture are improved, and the Japanese working spirit is instilled in Vietnamese workers.

In short, through training, staff can practice production control in term of delivery timely, maintenance of machinery, understanding the master production plan, company's motto, and how to ensure the production of high-quality products. They will understand the importance of their contribution, separate personal matters more

strongly from work time, and pay more attention to training for the long-term development of the company and of themselves as workers.

5.5 Frequent Interaction

From the interviewees' point of view, communication problem and cultural differences should be improved through interactive activities. The differences minimized by frequent interaction are loyalty (IDV), strategic objective (LTO), attitude towards work (MAS), and human resource training (MAS) (Table 1).

Firstly, through interactive communication between Japanese managers and Vietnamese staff, a sense of mutual understanding is established and staff feel at ease and loyal to the company. Thus, Vietnamese staff makes efforts to respond to working requirements and adjust their attitude toward work. They have the chance to exchange knowledge in all the areas mentioned above, and come to recognize the necessity of technology transfer for long-term business success.

Secondly, in order to achieve successful technology transfer in an environment of cultural differences, the goals of employees have to be taken into account. Japanese companies need to have a thorough understanding of local culture. Even though the most active role is in Japanese expatriates, but Vietnamese staffs who attends training workshops in Japan provide great support in building interactive relations.

Thirdly, among the Vietnamese, any working relationship inevitably becomes a personal relationship in time. Thus, a lot of time is spent discussing matters outside of working time. Partners make up their minds to deal with technology transfer problems on a personal basis, and promote it more quickly as a result when going back to workplace.

Finally, to encourage local workers to engage in more successful technology transfer, subtle and delicate methods of dealing with them are very important, particularly with individuals who have produced defective products. Through interactive conversations, Vietnamese workers have been encouraged to continue doing what is right, learned from experience and have not stumbled with the same mistakes twice.

6. Discussion: Framework moving toward a hybrid corporate culture for efficient technology transfer

On the basis of line-by-line analysis in above sections, we found empirical evidences to prove that means of feasible activities in section 5, directly convince Vietnamese staff behavior, address into the mindset of both Japanese and Vietnamese staff; minimize the differences between Vietnamese and Japanese management from cultural origins and achieve technology transfer performance successfully. This section extends to present the framework moving towards hybrid corporate culture for efficient technology transfer.

Based on discussed findings and close comparison with Adler's framework on intercultural interaction synergy, this study emphasizes that the process of minimizing cultural differences and their impact on technology transfer leads towards a hybrid corporate culture for achieving efficient technology transfer performance in a context of cultural differences. The proposed framework below provides a systematic and synthetic view of: (1) the structured solutions to minimize differences in management from the national culture origins; (2) how those feasible solutions minimize the cultural distance; and (3) how cultural synergy can be formed to contribute its advantages in achieving cross-cultural technology transfer efficiently.

The framework works through three steps: (1) cultural domination and cultural avoidance; (2) cultural compromise; and (3) culture synergy (Figure 3). The graphical interpretation expresses progress minimizing the distance from both cultural origins by means of feasible solutions. The following sections guide and explain the ways that Japanese subsidiaries in Vietnam can develop a hybrid corporate culture.

Step 1: Cultural domination and cultural avoidance

In order to achieve technology transfer into Vietnam in the early business stage, Japanese companies should focus on activities that directly convince local staff behaviors, such as quality practices, managerial commitment and support, team-based work, and on-the-job training. These activities aim to do the same things done at home culture. At the individual level, this cultural dominance approach is appropriate, because managers strongly believe in their own approach (Adler & Gundersen, 2008). At the same time, Japanese and Vietnamese staff work and manage to defuse conflict. Their efforts can result in a change from a situation of cultural differences into a scenario of Japanese cultural domination and cultural avoidance. They save face on issues that may be thorny but are nevertheless less important in comparison with the final outcome. Essentially, technology transfer can operate in a production framework up to this stage.

Step 2: Cultural compromise

In order to gain long term business achievements in Vietnam with transferred technology, Japanese companies

should address the mindset of both Japanese and Vietnamese staff through activities combining both their abilities. The appropriate training programs, such as language training, social knowledge training, and the Kaizen spirit, and frequent interaction should be focused. These activities motivate the Vietnamese mind, promote technology transfer more successfully, and help Japanese side perceive local staff's mindset at the same time. Although both sides can make concessions, the Japanese side most often remains more powerful management. In this step, cultural dominance turns into cultural compromise. These approaches support the high uncertainty avoidance characterized in Japanese culture according to Hofstede. Up to this stage, technology transfer can be implemented smoother; essentially, everyone in the company can understand each other, and mutual trust and the awareness of staff develop.

Step 3: Cultural synergy

Interaction through a continuous improvement circle aimed at convincing local staff behaviors and addressing the mindset of both Japanese and local staff should be implemented during the first three to five years period. The initial scenario of cultural difference will gradually evolve to a cultural synergy. In this stage, Japanese managers can develop optimal solutions that respect both cultures and integrate the efforts of both sides to achieve effective technology transfer in a cross-cultural business. Technology transfer in this ideal state can create value through higher productivity and quality, and enhance local staff' knowledge acquisition for innovation. A hybrid corporate culture or a new management culture will be created.

We recommend that cultural learning between host and home-country managers should be done to promote the progress of cultural compromise and cultural synergy, quickly overcoming cultural differences. Working towards a hybrid corporate culture, companies can achieve technology transfer effectively and efficiently, and increase their global competitive advantage.

7. Conclusion

The investigation resulted in the discovery of three major findings: (1) differences between Vietnamese and Japanese management existing in implementing technology transfer are traced back to each national culture fundamental, mainly lie on dimensions of Collectivism and Power Distance; (2) the above differences should be minimized through strategic actions such as: managerial commitment and support, quality practice, training, team-working, frequent interaction. They have the direct impact on the behavior and mindset of local staffs and help Japanese side perceive cultural mind for at the same time; and (3) a working approach towards a hybrid corporate culture to achieve efficient technology transfer in a context of cultural differences should be outlined.

We argued that if Japanese companies wish to develop manufacturing in collaboration with Vietnam and other countries, they should not confine their management within their cultural box, but they should develop a new corporate culture and open minds to accomplish the work. With a proper attitude, they will learn more quickly the dynamics of other cultures and have deeper cross-cultural understanding. Through efforts moving to hybrid corporate culture that directly convince local staff behaviors and address the mindset of both Japanese and local staff, Japanese companies can achieve: (1) efficiency of technology transfer performance on acquiring technological knowledge from partner, enhancing knowledge application, and on improving innovative capacity of process and product quality; and (2) values created through efficient technology transfer in term of highly productivity, human resource quality, competitive advantage and continuous product and process innovation, customer satisfaction.

Correspondingly, this study captures the prevailing issues, such as: (1) significant activities helping Japanese management flexibly adapt itself to cross-cultural technology transfer performance, overcome the impact of management differences stemming from national cultural differences and establish better mutual trust between Japanese and local managers; and (2) how cultural synergy can be formed to minimize the impact of cultural differences and achieving efficient technology transfer performance.

From these results, we propose two comprehensive points for further researches:

Firstly, although this study fully utilizes the main strength of a qualitative approach to provide a brief insight into the technology transfer performance under the cultural different context, however, these findings have primary limitation of statistical demonstration. Therefore, the further directions for empirical studies in advance can be as: the factors of management practice promoting international technology transfer efficiency, which cultural aspects of Japan and Vietnam are potential advantages for implementing technology transfer, and so on. Especially, worthy of further research is to prove the hybrid corporate culture can help to achieved technology transfer efficiently with statistical evidences.

Second, the discovered differences in management practice and the proposed feasible solutions for achieving

efficiently cross cultural technology transfer can be more optimal if further cultural features are considered, for example: individual behavior (friendship, agreements, relationship to nature, etc.); values (intellectual and affective autonomy, harmony, utilitarian interactions vs. loyalty-based interactions, etc.), and leadership values (orientation of performance, assertiveness, future, human orientation, etc.) (Hall, 1960; Matsumoto & Yoo, 2006). According to the situation, the managers and researchers can decide which elements are relevant.

Above all, this study sheds light on issues hindering international technology transfer in a cross-cultural context within insight national cultural fundamentals that researches to date has not solved adequately.

Acknowledgement

We would like to acknowledge the invaluable support of the Vietnamese production managers and Japanese directors for their intensive interviews. We also would like to acknowledge Prof. Bui Nguyen Hung, Prof. Atsushi Abe, Dr. Tran Thi Kim Loan for their internal and external assistance. Finally, we would like to express our deep gratitude to Prof. Eugene Choi, for his valuable comments in the earlier drafts.

References

Adler, N. J., & Gundersen, A. (2008). *International dimensions of organizational behavior* (5th ed.). Mason, Ohio: South-Western.

Ando, T., Kawashima, M., & Kan, K. (2005). *Technology development and technology transfer in China: Theoretical and empirical analysis* (in Japanese). Kyoto: Minerva Shobo.

Autio, E., & Laamanen, T. (1995). Measurement and evaluation of technology transfer: Review of technology transfer mechanisms and indicators. *International Journal of Technology Management*, 10 (7,8), 643-664. http://dx.doi.org/10.1504/IJTM.1995.025647

Beamish, P. W., Delios, A., & Lecraw, D. J. (1997). *Japanese multinationals in the global economy*. Cheltenham, U. K.: Edward Elgar Publishing Limited.

Bhagat, R. S., Kedia, B. L., Harveston, P. D., & Triandis, H. C. (2002). Cultural variations in the cross-border transfer of organizational knowledge: An integrative framework. *The Academy of Management Review, 27* (2), 204-221.

Bozeman, B. (2000). Technology transfer and public policy: A review of research and theory. *Research Policy*, 29, 627-655. http://dx.doi.org/10.1016/S0048-7333(99)00093-1

Chen, J., Sun, P., & McQueen, R. (2010). The impact of national cultures on structured knowledge transfer. *Journal of Knowledge Management, 14* (2), 228-242. http://dx.doi.org/10.1108/13673271011032373

Cherunilam, F. (2007). *International business: text and cases* (4th ed.). New Delhi: Prentice Hall of India Private Limited.

Cohen, G. (2004). *Technology transfer: strategic management in developing countries*. New Delhi: Sage Publications India Pvt Ltd.

Creswell, J. W. (2003). *Research design: qualitative, quantitative and mixed methods approaches* (2nd ed.). Thousand Oaks, California: Sage Publications.

Derakhshani, S. (1984). Factors affecting success in international transfers of technology: A synthesis, and a test of a new contingency model. *Developing Economies,* 22 (1), 27–46.

Dey, I. (1993). *Qualitative data analysis: A user-friendly guide for social scientists.* London: Routlege.

Goulding, C. (2002). *Grounded theory: A practical guide for management, business and market researchers*. London: Sage Publications Ltd.

Hall, E. (1960). The silent language in overseas business. *Harvard Business Review,* 38 (3), 87-96.

Hau, L. N., & Evangelista, F. (2007). Acquiring tacit and explicit marketing knowledge from foreign partners in IJVs. *Journal of Business Research,* 60, 1152-1165. http://dx.doi.org/10.1016/j.jbusres.2007.04.006

Hofstede, G., Hofstede, G. J., & Minkov, M. (2010). *Cultures and organizations: Software of the mind: Intercultural cooperation and its importance of survival (* 3rd ed.). New York: McGraw-Hill .

Holden, N. (2002). *Cross-cultural management: A knowledge management perspective*. Harlow: Financial Times Prentice Hall

Jeannet, J. P., & Liander, B. (1978). Some patterns in the transfer of technology within multinational corporations. *Journal of International Business Studies*, 9, 108–118.

http://dx.doi.org/10.1057/palgrave.jibs.8490672

Li-Hua, R. (2004). *Technology and knowledge transfer in China*. Aldershot, England: Ashgate Publishing Limited.

Lin, B. W., & Berg, D. (2001). Effects of cultural difference on technology transfer projects: An empirical study of Taiwanese manufacturing companies. *International Journal of Project Management,* 19, 287-293. http://dx.doi.org/10.1016/S0263-7863(99)00081-2

Lin, W. B. (2007). Factors affecting the correlation between interactive mechanisms of strategic alliance and technological knowledge transfer performance. *The Journal of High Technology Management Research*, 17, 139-155. http://dx.doi.org/10.1016/j.hitech.2006.11.003

Lucas, L. M. (2006). The role of culture on knowledge transfer: The case of the multinational corporation. *The Learning Organization, 13* (2, 3), 257-275.

Lyles, M. A., & Salk, J. E. (1996). Knowledge acquisition from foreign parents in international joint ventures: An empirical examination in the Hungarian context. *Journal of International Business Studies,* 27 (5), 877-903. http://dx.doi.org/10.1057/palgrave.jibs.8490155

Mansfield, E., Romeo, A., Schwarts, M., Teede, D., Wagner, S., & Brach, P. (1982). *Technology transfer, productivity, and economic policy* (1st ed.). New York: W W Norton & Co Inc.

Matsumoto, D., & Yoo, S. H. (2006). Toward a new generation of cross cultural research. *Association for Psychological Science,* 1 (3), 234-250. http://dx.doi.org/10.1111/j.1745-6916.2006.00014.x

Meschi, P. X. (1997). Longevity and cultural differences of international joint ventures: Toward time based cultural management. *Human Relations*, 50 (2), 211-227. http://dx.doi.org/10.1177/001872679705000207

Mowery, D. C., Oxley, J. E., & Silverman, B. S. (1996). Strategic alliances and inter-firm knowledge transfer. *Strategic Management Journal,* 17 (Winter Special Issue), 77-91.

Nguyen, T. T. (2011). *Japanese cultures* (in Vietnamese). Ho Chi Minh city: Culture Information Publication.

Pak, Y., & Park, Y. (2004). A framework of knowledge transfer in cross-border joint ventures: An empirical test of the Korean context. *Management International Review,* 44 (4), 435-455.

Patton, M. Q. (2002). *Qualitative evaluation and research methods* (3rd ed.). Thousand Oaks, California: Sage Publications.

Pauleen, D. J., Wu, L. L., & Dexter, S. (2007). Exploring the relationship between national and organizational culture, and knowledge management. In D. J. Pauleen (Ed.), *Cross-cultural perspectives on knowledge management* (pp. 3-19). London: Libraries Unlimited Press.

Pham, V. N., Vu, H., & Tran, T. T. (2001). *Culture in business* (in Vietnamese). Ho Chi Minh city: Labor Publication.

Ran, Z. (2008). "Dual different cultures" integration: An integration performance measuring model of corporate cross-border M & A. *International Journal of Business and Management*, 3 (3), 30-34.

Rebentisch, E. S., & Ferretti, M. (1995). A knowledge asset-based view of technology transfer in international joint ventures. *Journal of Engineering and Technology Management,* 12, 1-25. http://dx.doi.org/10.1016/0923-4748(95)00002-4

Sazali, A. W., & Raduan, C. R. (2011). *The inter-firm technology transfer in Malaysia– A holistic approach*. Saarbrucken: VDM Verlag Dr. Muller.

Sazali, A. W., Raduan, C. R., Jegak, U., & Haslinda, A. (2009). Effects of inter-firm technology transfer characteristics on degree of inter-firm technology transfer in international joint ventures. *European Journal of Scientific Research,* 35 (3), 474-491.

Schlunze, R. D., Hyttel-Srensen, J., & Ji, W. (2011). Working towards hybrid solutions: The possibility of an IHRM model in Japan. *Ritsumeikan Business Journal,* 5, 99-118.

Simonin, B. L. (1999). Ambiguity and the process of knowledge transfer in strategic alliances. *Strategic Management Journal, 20* (7), 595-623. http://dx.doi.org/10.1002/(SICI)1097-0266(199907)20:7<595::AID-SMJ47>3.0.CO;2-5

Tran, N. T. (1996). *Discovering the identity of Vietnamese culture: Typological-systematic views* (in Vietnamese). Ho Chi Minh city: Ho Chi Minh Publication.

Tran, N. T. (1999). *Vietnam's fundamental culture* (in Vietnamese). Ho Chi Minh city: Education Publication.

William, F., & Gibson, D. V. (1990). *Technology transfer: A communication perspective*. Newbury Park, California: Sage Publications.

Yamashita, S. (1991). *Transfer of Japanese technology and management to the ASEAN countries*. Tokyo: University of Tokyo Press.

Yin, R. K. (2009). *Case study research: Design and method* (4th ed.). Thousand Oaks, California: Sage Publications.

Table 1. The discovered differences and solutions upon Hofstede's dimensions

Cultural dimension	Category	Vietnamese management	Japanese management	Solution
Collectivism/ Individualism (IDV)	Group spirit	-Turn to a special group at significant times.	-Mainly focus on groups.	- Team-based work
	Reward, incentives	-The success of the organization usually depends on individual initiative. -Less recognize individual rewards for individual success in positive way.	-More likely to reward group success rather than individual success. -Company recognizes and rewards employees in a positive way.	- Managerial commitment and support - Quality practice
	Loyalty	-Workers often change companies a few times during their working life.	-Loyalty to company. -Company first. -Individual, family second.	- Managerial commitment and support -Frequent interaction
Power Distance (PDI)	Participation in decisions	-Group management's role is to lead the company.	-Group management leads; they just need information from their subordinates. -Manager always consults the opinion of subordinates to make decisions.	- Team-based work
	Manager accessibility	-There is a separation between the management team and other staff.	-Group management and other employees work in unified harmony. -Management and employees maintain the traditional close family style, whether the situation is good or bad.	- Team-based work
	Openness	Management team or individuals usually keep their own counsel.	Disclosure of information is common; people share their knowledge and work together.	- Quality practice

Uncertainty Avoidance (UAI)	Production control	-Less attention paid to delivery time -Loose sense of time -Less attention paid to preventive maintenance of machinery	-Ensure delivery time -Understand the meaning of time for every activity -Pay more attention to preventive maintenance of machinery	- Training - Quality practice
	Adventurousness	-Eager to take opportunities	-More conscious of the risk than the opportunity	- Team-based work
Long-Term Orientation (LTO)	Strategic objective	-Less knowledge of the production plan/year -Less clear understanding of the company's motto -Less care taken of products, production. -Profit takes precedence over safety and preventing environmental damage	-Easy to show the annual plan -Understand the motto of the company in a positive way -More care taken of products and production. -Safety takes precedence over profit	- Managerial commitment and support - Quality practice - Training - Frequent interaction
Masculinity (MAS)	Attitude towards work	-Work to enjoy life -Personal matters mix with working matters	-The work ethic tends more toward live in order to work than work in order to live. -Managers don't think about personal matters during work hours.	- Training - Frequent interaction
	Human resource training	-Less pay attention to training	-Extensive training for long hours under strict supervision	

Table 1 orders the discovered differences in management practice and solutions upon Hofstede's dimensions

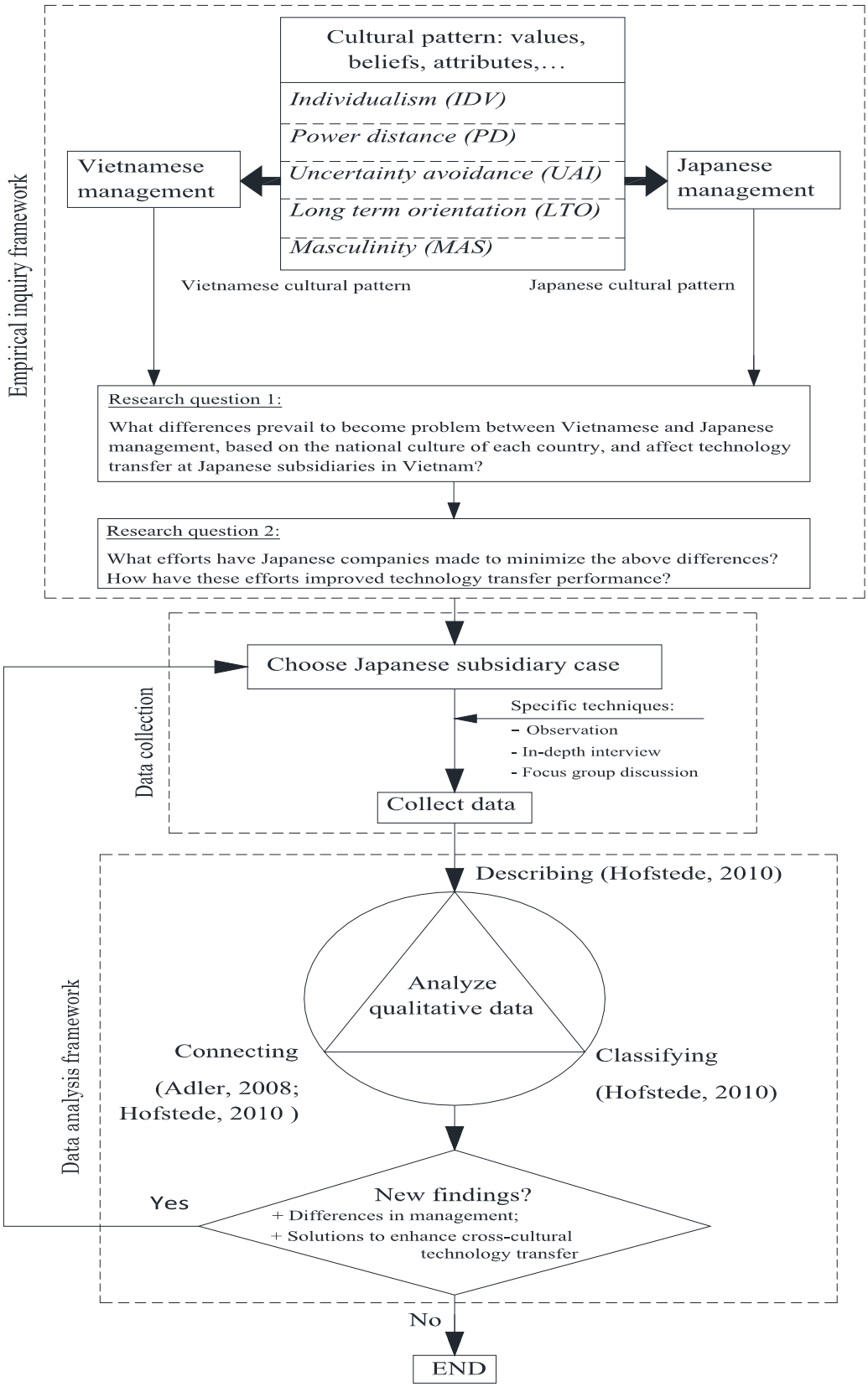

Figure 1. Analytical research framework

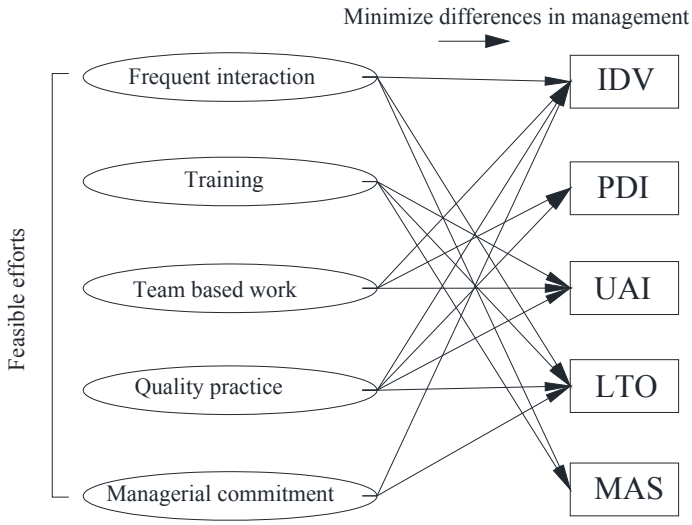

Figure 2. Efforts to minimize difference in management style based on cultural difference

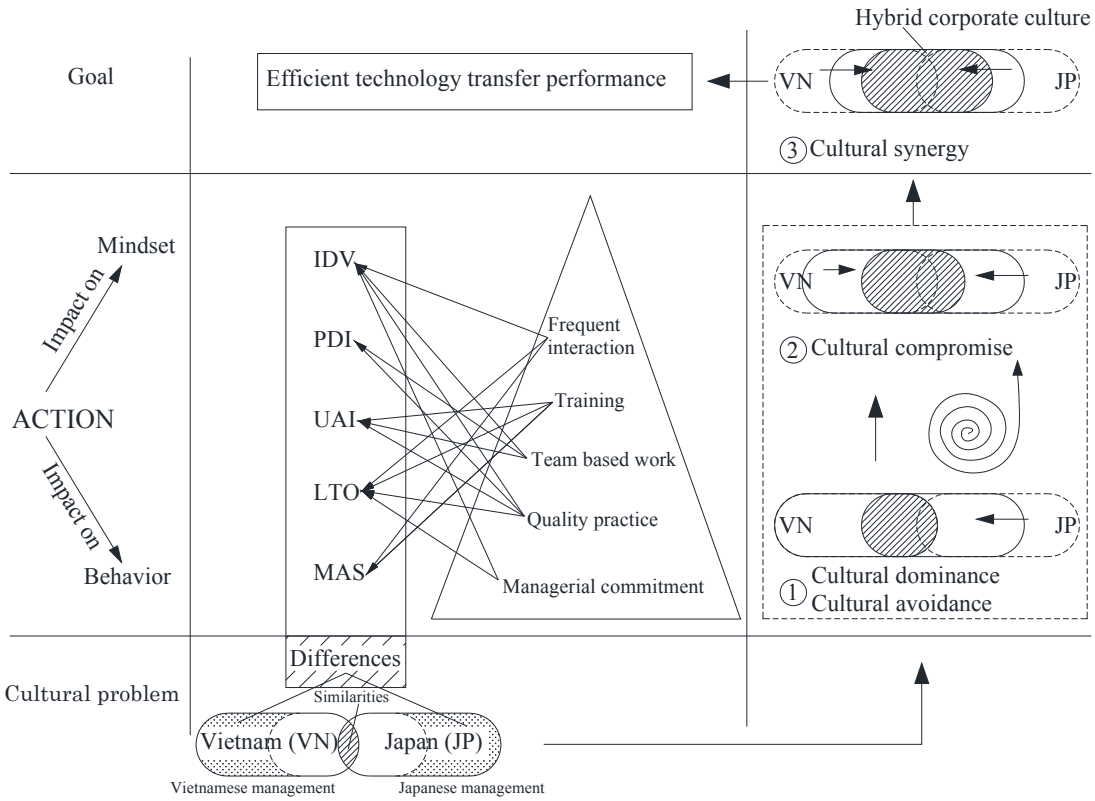

Figure 3. Achieving efficient technology transfer with hybrid corporate culture