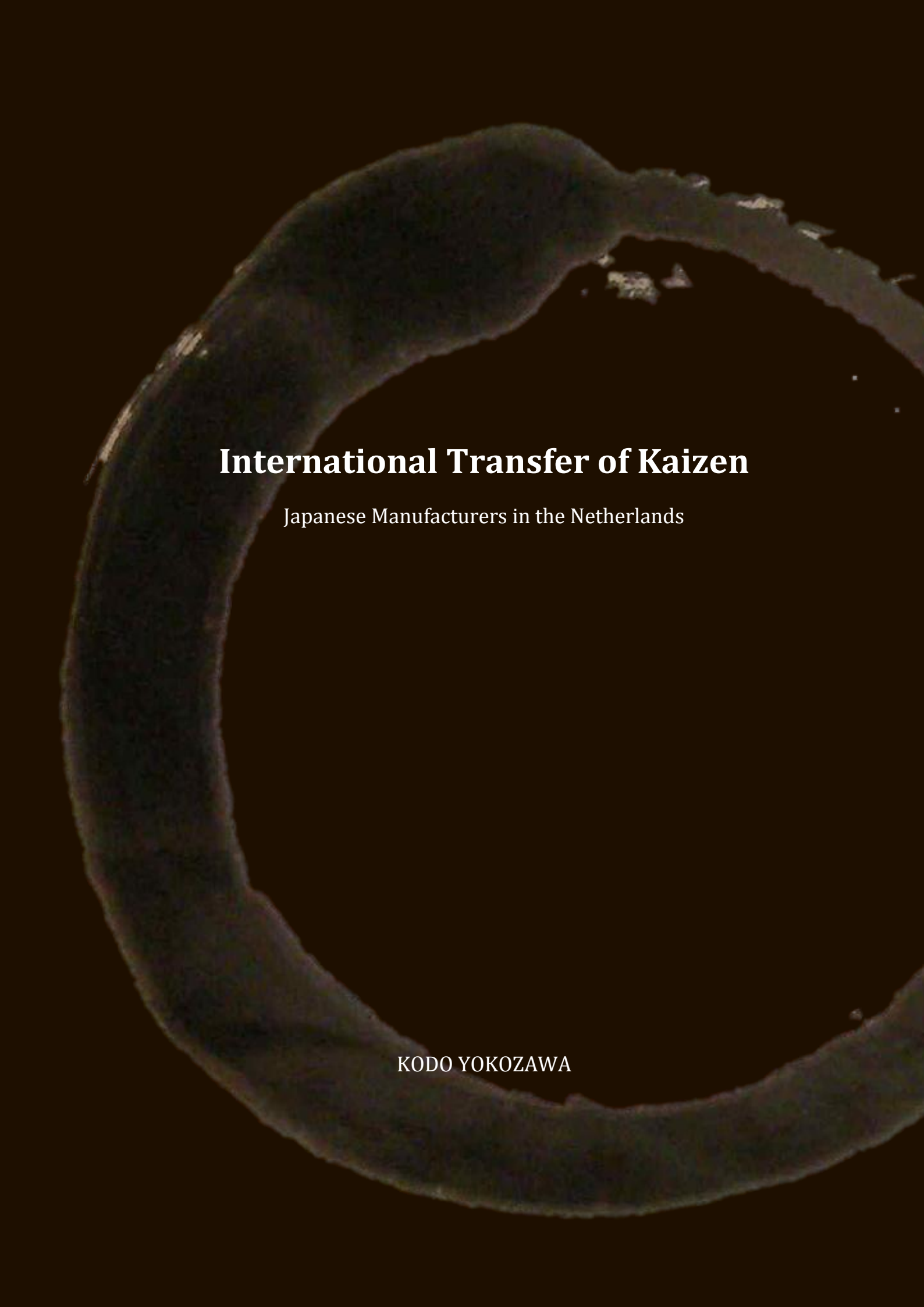

# International Transfer of Kaizen

Japanese Manufacturers in the Netherlands

KODO YOKOZAWA

# International Transfer of Kaizen

Japanese Manufacturers in the Netherlands

Kodo Yokozawa

School of Management and Governance

University of Twente, The Netherlands

Kodo Yokozawa

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# INTERNATIONAL TRANSFER OF KAIZEN

## JAPANESE MANUFACTURERS IN THE NETHERLANDS

**DISSERTATION**

To obtain

the degree of doctor at the University of Twente

under the authority of the rector magnificus

Prof. Dr. H. Brinksma,

on account of the decision of the graduation committee

to be publicly defended

on Monday the 12th of March 2012 at 12:45 hrs.

by

Kodo Yokozawa

Born on the 2nd of March 1979

in Tokyo, Japan

This dissertation is approved by the promoters:

Prof. Dr. Ir. E.J. de Bruijn

Prof. Dr. Ir. H.J. Steenhuis

Promotion Committee:

| | | |
|---|---|---|
| Chairman: | Prof. Dr. R.A. Wessel | University of Twente |
| Secretary: | Prof. Dr. R.A. Wessel | University of Twente |
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| | Dr. Katsuki Aoki | Meiji University |

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In October 2004, Professor Harm-Jan Steenhuis suggested me to start a PhD programme at the University of Twente in the Netherlands. At that time, I was in the final phase of the MBA programme at Eastern Washington University in the USA and I had a promising job at a Japanese company in Tokyo. After a long discussion with my parents and close people around, I decided to take this opportunity. There were two main reasons that this position was attractive for me. First, it was an opportunity to deepen knowledge of an interesting subject under supervision of Prof. Steenhuis. He was the toughest but for me, the most interesting teacher in the MBA programme. Pursuing a PhD degree under his supervision was very attractive. Second, I thought I could expand my horizon studying and living in the Netherlands, meeting people with different backgrounds.

Based on the information obtained from Prof. Steenhuis, I was already expecting that pursuing a PhD would be challenging but the reality was much severer than I thought. I do not know why this is the case but everything took longer than I thought it would. It may be that I was over estimating my ability. Whatever the reason though, completing even the simplest of tasks seemed routinely to take much longer than I had originally planned. There were times when everything seemed to be going wrong. A week in which the computer crashes, a paper was rejected, and someone steal my cake from the fridge. These things made the world seem a hopeless place. It made me thought that I would never be able to finish this dissertation. However when I realised that it was not just me going through this hardship suffering with me I was able to motivate myself and start working again. I would like to express my sincere gratitude to those people who went through this hardship during my PhD programme.

I would like to start with my supervisor Prof. Steenhuis. He is the person who asked me to come to the University of Twente and guided me throughout the PhD programme. During the programme, we exchanged approximately 1,000 emails and countless hours of conversation over the phone which indicates how much time and effort he put into me. He was very strict and did not compromise. We sometimes argued about the research approaches. I believe this is because he wanted me to become a skilled and independent researcher. I was not able to reach the goal without his help. From the beginning until the end, my belief that he was a true educator has never changed. It was my great pleasure to complete my thesis

under his supervision. I would like to express my genuine gratitude to Professor Steenhuis for guiding me through the PhD programme.

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made it through. I respect Alafi's diligence and patience. I never heard him complain about his tough situation with both his research and personal life. Asif and I communicated a lot since we shared a related research topic as well as personal interests. Our discussion topic varied from research methodology to politics, religion, economics, and the movies that we watched. It was a great pleasure to spend time with you as a colleague and friend.

I would also like to thank those people who provided me the emotional support and encouragement to complete this journey. To the many friends I made in Enschede or during the conferences, too many to name. I single out for mention Emile, Eric and Sandra, Chun, Séverine, Emmi, and Tatsiana, I would like to convey my sincere thanks to my great friends.

Most importantly, none of this would have been possible without the love and patience of my family. My family, to whom this dissertation is dedicated, has been a constant source of love, kindness, support and strength all these years. I would like to express heart-felt gratitude to my family.

Kodo Yokozawa,

Enschede,

July, 2011

# Summary

In recent decades, Japanese manufacturers operating in global markets have faced an increasing pressure to internationalise their manufacturing processes and activities. As their production network expands overseas, Japanese manufacturers are faced with new challenges with regard to managing and effectively operating a network of geographically dispersed factories and suppliers. One of the biggest challenges therein is to maintain the level of quality across the geographically dispersed locations. Japanese manufacturers tackle this problem through transferring their management systems and formulating new manufacturing capabilities across their overseas bases (Aoki, 2008). The objective of this research, therefore, is to enhance the understanding of the process of international transfer of Japanese management systems based on empirical evidence found at Japanese companies abroad.

The initial research was broadly oriented towards Japanese management system transfer. It questioned whether Japanese companies were still concerned with it. Thus, the first research questions were formulated as:

*Are Japanese companies still concerned with transferring Japanese management systems to overseas subsidiaries and, if so, what are the main problems that arise during the transfer process? How are Japanese manufacturers managing these problems?*

Exploratory research was conducted with 30 Japanese manufacturers around Tokyo, Japan. It was found that the transfer of Japanese management systems is still taking place. One of the key issues for these manufacturers is the transfer of the kaizen approach. Additionally, Japanese companies are trying many approaches to manage those challenges but still facing many difficulties. Hence, the rest of the research in this dissertation focuses on the international transfer of kaizen. The following research questions were formulated to investigate this subject.

- *What are the major stages in the kaizen transfer process? And what are the positive and negative factors influencing each stage?*
- *What concept can be used as a proxy of kaizen?*
- *What are the major organisational level factors that influence the kaizen transfer process?*

- *What national level factors influence the transfer of kaizen?*
- *What is the influence of Japanese expatriates on the process?*

A case study based on 15 Japanese manufacturers in the Netherlands was conducted in order to address these research questions. This research mainly focused on the transfer of kaizen to Europe. The Netherlands was selected as a target country mainly because, in Europe, it has been the biggest receiver of Japanese investment in the past several years.

Case study results showed that there were three stages in the kaizen transfer process: preparation, implementation, and integration. In addition, the study highlights several new phenomena. For instance, Japanese companies were facing the challenge of deciding whether to continue with or dismiss employees who did not fit with the culture of kaizen.

Results showed that kaizen transfer was positively associated with personal-initiative. Also successful kaizen transfer was positively related to organically structured firms and negatively associated with mechanistically structured firms. Flexibility-oriented culture leaded to positive and control-oriented culture leaded to negative outcomes. Internal-oriented culture leaded to positive and external-oriented culture leaded to negative outcome.

With regard to national level factors, two main factors not previously identified in the literature were found: the level of eagerness of employees and the level of discipline of employees. Based on these two factors, transferring kaizen to the Netherlands is a challenging task.

The major challenges that were faced by Japanese manufacturers during the process of transferring kaizen confirmed the literature findings that the major issues during the process of kaizen implementation abroad were low managerial commitment, communication, and high labour turnover. However, in-depth analysis revealed that the use of Japanese expatriates itself turned out to be the root cause for those major problems. The results suggested that an effective approach for successful kaizen transfer was to have a local managing director who was committed to kaizen implementation.

The contribution of this research is to enhance the understanding of the process of international transfer of knowledge and formulation of capabilities. This study contributes from a theoretical standpoint in several ways:

- It extends the literature by exploring the dynamic process of international kaizen transfer. It provides several new activities and positive and negative factors that influence specific phases during the management transfer. Replicated findings provide an external validity to the existing knowledge.
- It improves knowledge on the kaizen concept by finding that personal-initiative can be used as a proxy to measure the level of kaizen.
- The findings also suggest that difficulties of transferring kaizen abroad are related to organisation structure and organisation culture. In other words, the type of structure and the type of culture of the organisation which is adopting kaizen influences whether it will be successful in transferring kaizen.
- It shows that national-level factors influence kaizen transfer. This finding adds to the on-going debate on knowledge transfer regarding whether cultural difference influences knowledge transfer.
- It extends the literature on challenges that are faced by Japanese manufacturers during the process of transferring kaizen to overseas subsidiaries by suggesting that the use of Japanese expatriates causes other large problems during the international transfer of kaizen.

Contribution for practitioners is that this research develops a process model for kaizen transfer. The process model contains the phases, activities and positive and negative factors for each activity which will provide a practical and procedural aid for strategic decision making when the firm is transferring Japanese management systems abroad. Such a process model has been lacking in previous research and, hence, contributes to developing a prescriptive knowledge base for practitioners. It provides insight in the expected challenges for the Japanese manufacturers during the transfer of kaizen which they have to take into consideration. It aimed to help to plan and prepare for those challenges when they transfer kaizen abroad. It is expected that the use of this model can be extended to other management systems such as Total Quality Management and Total Production Systems because these concepts share fundamental philosophy of kaizen.

This study is exploratory research where findings resulted from a limited population in a specific national context. In order to improve the generalisability, the findings need to be tested with larger populations.

# Table of Contents

# Refereed Papers in the Thesis

*This thesis is partly composed of the following refereed journal and conference papers.*

**Chapter 2** Yokozawa, K., Steenhuis, H.J., & de Bruijn, E.J. 2010. Recent experience with transferring Japanese management systems abroad. ***Journal of Strategic Management Studies***, 2 (1): 1-15.

**Chapter 3** Yokozawa, K., Steenhuis, H.J., & de Bruijn, E.J. 2011. Process of kaizen transfer in the Netherlands. ***The Journal of Japanese Operations Management &Strategy***, 2 (1): 38-57.

**Chapter 4** Yokozawa, K., Steenhuis, H.J., & de Bruijn, E.J. 2012. Factors Affecting International Transfer of Kaizen. ***Operations & Supply Chain Management: An International Journal***, 5 (1): 1-10.

**Chapter 5** Yokozawa, K., Steenhuis, H.J., & de Bruijn, E.J. 2010. *The influence of national culture on Kaizen transfer: An exploratory study of Japanese subsidiaries in the Netherlands.* Paper presented at the 15th Cambridge International Manufacturing Symposium, Cambridge, UK.

**Chapter 6** Yokozawa, K., Steenhuis, H.J., & de Bruijn, E.J. 2012. The role of Japanese expatriates when Japanese companies transfer kaizen principles to their overseas affiliates. ***Journal of Strategic Management Studies***, 3(1): 1-16.

# Additional Publications

*The following additional publications have been accomplished during the research work:*

1. Yokozawa, K., de Bruijn, E.J., Steenhuis, H.J., & de Boer, S. 2007. *Transferability of Japanese Management Systems Overseas: A theoretical jungle.* Paper presented at the 16th International Management Development Association (IMDA) World Business Congress, Maastricht, Netherlands.

2. Yokozawa, K., Steenhuis, H.J., & de Bruijn, E.J. 2007. *A conceptual model for the international transfer of the Japanese management systems.* Paper presented at the 14th International Annual European Operations Management Association (EurOMA) Conference, Ankara, Turkey.

4. Yokozawa, K., Steenhuis, H.J., & de Bruijn, E.J. 2008. *Current issues for internationalization of Japanese manufacturing companies.* Paper presented at the 3rd World Production & Operations Management (POM) Conference, Tokyo, Japan.

5. Steenhuis, H.J., Yokozawa, K., & de Bruijn, E.J. 2009. *International transfer of kaizen: a conceptual research model.* Paper presented at the 16th International Annual European Operations Management Association (EurOMA) Conference, Gothenburg, Sweden.

6. Yokozawa, K., Steenhuis, H.J., & de Bruijn, E.J. 2010. *International transfer of kaizen: An empirical study of Japanese manufacturers in the Netherlands.* Paper presented at the 21st Annual Production and Operations Management Society (POMS) Conference, Vancouver, Canada.

7. Yokozawa, K., Steenhuis, H.J., & de Bruijn, E.J. 2010. *International transfer of kaizen: Case studies from Japanese manufacturers in the Netherlands.* Paper presented at the 17th International Annual European Operations Management Association (EurOMA) Conference, Porto, Portugal.

8. Yokozawa, K. & Steenhuis, H.J. 2011. *Implementation of kaizen*: *a 'best case' analysis*. Papers presented at the 18th International Annual European Operations Management Association (EurOMA) conference, Cambridge, UK.

# List of Tables

# List of Figures

# List of Acronyms

| | |
|---|---|
| CEO | Chief Executive Officer |
| CI | Continuous Improvement |
| EU | European Union |
| FDI | Foreign Direct Investment |
| GNP | Gross National Product |
| HQ | Headquarter |
| HRM | Human Resource Management |
| JETRO | Japan External Trade Organisation |
| JIT | Just-In-Time |
| JMS | Japanese Management System |
| MD | Managing Director |
| MNC | Multinational Corporation |
| NFIA | Netherlands Foreign Investment Agency |
| NUMMI | New United Motor Manufacturing, Inc. |
| OffJT | Off-The-Job-Training |
| OJT | On-The-Job-Training |
| OM | Operations Management |
| PDCA | Plan-Do-Check-Act |
| QC | Quality Control |
| TPS | Total Production System |
| TQC | Total Quality Control |
| TQM | Total Quality Management |

# Chapter 1

# 1. Introduction

## 1.1 Introduction to the Research

In recent decades, Japanese manufacturers operating in global markets have faced an increasing pressure to internationalise their manufacturing processes and activities in order to maintain their competitiveness. As their production network expanded overseas, Japanese manufacturers are faced with new challenges with regard to effectively managing and operating a network of geographically dispersed factories and suppliers.

The literature shows that Japanese manufacturers have been tackling this problem through transferring management systems that were unique and embedded in the Japanese context (Abo, 1994; Cole, 1979; Kenney & Florida, 1993; Kumon & Abo, 2004; Oliver & Wilkinson, 1992; Ueki, 1987). Those systems are considered the major source of competitiveness in Japanese factories, resulting in high-quality products and high productivity (Fujimoto, 1999; Imai, 1986; Monden, 1993; Schonberger, 1982; Womack, Jones, & Roos, 1990). Major systems found in the literature include, for example, lean production (Womack et al., 1990), just-in-time (JIT) (Wilson, 1992), kaizen (Imai, 1986), total quality management (TQM) (Monden, 1993), 5S (Monden, 1993), and quality control (QC) circles (Feigenbaum, 1991; Hranac, 1982).

Among those systems, one of the key concepts deployed by Japanese manufacturers, and being transferred abroad, is ‘kaizen’, which is based on the management principle of continuous improvement (Bessant, 2003; Imai, 1986). However, kaizen transfer to their overseas subsidiaries gives rise to difficulties with distance in geographic location and national context (i.e., culture and language), in addition to vagueness of the concept as well as the recognition that most of technologies and skills are embedded in human resources and organisational routine which are difficult to transfer (Aoki, 2008; Lillrank, 1995; Recht & Wilderom, 1998).

Considering that it is critical for the Japanese manufacturers to transfer kaizen to their overseas subsidiaries to achieve performance as in Japan and that they are facing difficulties transferring it abroad, kaizen is an important topic for investigation.

## 1.2 Theoretical Background

In this section, four major approaches that are used to investigate the international transfer of management systems in general are identified.

### 1.2.1 Best practice/universal management systems approach

With regard to the general theories about international transfer of management systems, major studies were initiated in the end of 1950s. At that time, the United States had a much higher per-capita Gross National Product (GNP) than any other country in the world (Koontz, 1969). Managerial know-how was recognised as a critical ingredient for economic growth. Several studies on transferability of management studies were executed by authors such as Harbison and Myers (1959); Gonzalez and McMillan (1961); Oberg (1963); Negandhi and Estafen (1965); and Koontz (1969). These studies concerned with a universality of management systems mainly asserted that particular management systems (often associated with the terms 'best practice') are applicable across all nations (Kono, 1992; Koontz, 1969; Ouchi & Jaeger, 1978). They broadly separate the science component (practices developed based on the rationale) and the artistic component (practices rooted in the culture) of management and stress that the science part of management is universally applicable. Most of the authors employed a comparative study approach to compare management systems in use among well-managed companies in order to identify similarities. When they found similar management systems used in multiple countries, they asserted that these systems were transferable across nations. When the Japanese management systems were considered one of the critical elements of rapid Japanese economic growth during that period (Monden, 1993; Schonberger, 1982; Womack et al., 1990) some authors employed the best practice approach or universal management approach and applied it to studies on international transfer of Japanese management systems (Chen, 1995; Fukuda, 1988; Kono, 1982; Ouchi & Jaeger, 1978; White & Trevor, 1983).

### 1.2.2 Hybridisation approach

Some other authors are employing the hybridisation approach (Abo, 1994; Itagaki, 1997; Kumon & Abo, 2004; Ueki, 1987) to investigate the transfer of

management systems abroad. They assert that management systems are neither rejected nor accepted but hybridised with locally used management systems. They use the 'Hybrid evaluation model' to evaluate the degree to which Japanese management systems have been adapted to locally used management systems. For instance, Itagaki (1997) mentioned that, generally speaking, aspects of 'Functional core' tend to be more smoothly adapted abroad than aspects of 'Human/organisational core' (Itagaki, 1997 :151). He further mentioned that 'Human/organisational core' is more difficult to transfer to foreign countries, where traditional institution, high mobility of labour between companies, low degree of information sharing and sense of unity are different from Japan. The general conclusion of the hybridisation theorist is that transferred management systems are hybridised with the locally practiced management systems and degree of hybridisation is determined by the situational factors during the transfer process.

### 1.2.3 Contingency theory approach

Beechler and Yang (1994), Purcell, Nicholas, Merett, and Whitwell (1999) looked into the international transfer of Japanese management systems from the contingency theory perspective. It indicates that there are multiple factors affecting the process of international management systems transfer and the successful transfer of management systems depends on the situation. The central theme of contingency theory is that a 'good fit' between strategy, policy, practices, and context will ultimately lead to good performance. Purcell *et al.* (1998) determined the transferability of Japanese human resource management to non-Japanese settings by presenting the data on the survey obtained from 69 Japanese subsidiaries established in Australia. Production related systems (i.e., quality control (QC) circles, kaizen, JIT, and formal OJT) were transferable to the Australian settings. Especially the QC circles and the OJT were highly adopted. In terms of the human resource management practices, the recruitment practices and company union were nearly the same as the Japanese parent company. Although life-time employment was not used in their subsidiaries, employees were highly secured compared to the Australian local companies. For the wage system, the survey result shows that both manufacturer and service sector emphasize not length of service but the skills and experiences to determine wage levels. Seniority based payment was not identified in the Japanese subsidiaries in Australia. Purcell *et al.* (1998) argued that the factors that affect the extent of

transferability of a management system overseas are size of the company, experience of the company, types of ownership, and sector. They mentioned that size of the company is not very significant but smaller firms were less likely to operate QC circles and job training was less intensive. Additionally, small firms were more likely to hire on the basis of specific skills while larger firms were more generalist in approach. They also found that firms operating in Australia for longer periods best adopt Japanese management practices, which suggests that experience of the company has an impact on the successful adoption of Japanese practice. Moreover, they found firms with a majority Japanese shareholding are more likely to adopt Japanese management styles as compared to those with minority Japanese shareholding. Finally, the sector has a significant influence on the adoptability of Japanese management style. For example, on the one hand, in the financial service and trading company sectors, 'The ratio of expatriate employees and Japan related business is highest, Japanese management style tends to be most intense and subsidiaries more 'clone-like' in appearance' (Purcel et al., 1998: 85). On the other hand, in the manufacturer sector, the ratio of local employees to expatriates is high and it manifests a hybrid appearance of Japanese management and local management practices.

### 1.2.4 Institution theory approach

Delbridge (1992), Oliver and Wilkinson (1992) and Turnbull (1986) investigated the transfer of Japanese management practices from the perspective of institution theory. In the 1980s, organisational shift from Fordism to Japanese organisations based methods used by many large Japanese corporations (mainly Toyota). They refer this major institutional shift from Fordism to Toyotaism as '*Japanisation*'. For instance, Oliver and Wilkinson (1992) researched the Japanisation of local British companies and Japanese subsidiaries in the UK. Based on the survey data obtained in 1987 and 1991, they confirmed that transfer of Japanese manufacturing and personnel practices in Japan were successfully transplanted in UK manufacturing (Oliver & Wilkinson, 1992: 227). Compared to the Japanese companies in the UK with local British companies that worked to emulate the Japanese practices, the Japanese subsidiaries are typically more successful transferring kaizen, especially for personnel and workplace practices. Taylor (1999) investigated the transferability of Japanese production systems to Japanese subsidiaries in China adapting the Japanisation framework. After researching

more than twenty Japanese subsidiaries in China, he concluded that there was no overall pattern, no overriding set of relations to explain the divergence of management practices found in the twenty cases. Yet, he mentioned factors such as size of plant, local market, location of plant, corporate age, share ownership, industry, place on the production chain, source of production equipment, size of parent company as having significance in explaining the shape and nature of practices in each case.

### 1.2.5 Conclusion with respect to the existing theories

Advantages and disadvantages were found for each approach. For instance, whereas the best practice/universal management approach has contributed to determine which management systems are applicable across nations, there is a major drawback to this approach. Even though the term 'transfer' is generally defined as 'move from one place to another', the comparison study approach only assumes that management systems are transferable because similar management systems are used in a different national context. The dynamic process of international transfer of management systems is not describable with this approach. The hybridisation model can illustrate to what extent foreign subsidiaries replicate the home country's management systems transferred. The result of the research across countries, industries, and firms describes particular patterns of adaptation. It can provide valuable information regarding which management systems are transferable overseas and to what extent management systems need to be modified to fit the local environment in a specific country, industry and firm. However, the authors do not connect the Japanese systems that have been modified to the performance of the subsidiaries. Humphrey (1995) pointed out:

> *'When Abo (1994) discusses the extent to which Japanese firms apply the management and production systems used in the parent plants to their subsidiaries, or alternatively adapt to local conditions (the 'adaptation-application dilemma'), attention is focused on the replication or non-replication of Japanese practices rather than the effectiveness of alternative means to achieve the same ends in alien institutional environments'* (Humphrey, 1995: 769).

The contingency approach illustrates which factors influence transfer success (i.e., hypothesis testing approach). Yet it does not provide rich description on the process of management practices transfers abroad. Finally institutional theory provides a rich description on how a dominant institution is taken over by another institution. Institutional theorists often provide the transfer process but most of the descriptions remain abstract and, despite its high theoretical contribution, the practical contributions are relatively low.

It can be established that there is a gap in the literature pertaining to in-depth description of the process of international transfer of management systems from one country to another. Recently, more studies are trying to shed light on the dynamic process of transfer of management processes (e.g., Saka, 2004; Aoki, 2008). Yet, further studies are needed in order to replicate or extend the existing theory to provide a richer picture of transfer processes to develop a prescriptive knowledge base.

The objective of this research, therefore, is to enhance the understanding of the process of international transfer of Japanese management systems based on empirical evidence found at Japanese companies abroad.

## 1.3 Research Questions

Initial research was broadly oriented towards Japanese management system transfer. The first research questions were formulated as:

1. *Are Japanese companies still concerned with transferring Japanese management systems to overseas subsidiaries and, if so, what are the main problems that arise during the transfer process? How are Japanese manufacturers managing these problems?*

This research question is aimed at updating the information of international transfer of Japanese management systems regarding three major aspects: 1) whether Japanese companies are still concerned with transferring Japanese practices abroad; 2) challenges encountered during the process of transferring Japanese management systems; and 3) their approach to manage those challenges. Japanese management systems in this thesis was defined as ‘the specific techniques of Japanese companies that lead to competitive advantage in

international competition' (Iida, 1998). ***Figure 1.1*** illustrates the main subjects of the first research question.

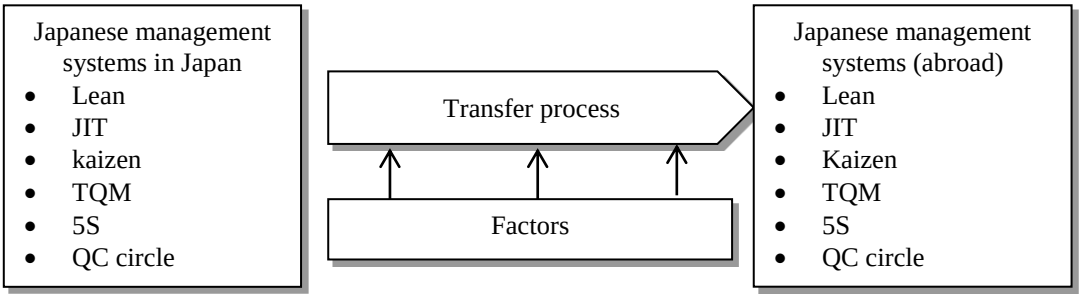


*Figure 1.1 – Main subjects in the first research question*

It was found that 1) the transfer of Japanese management systems is still taking place, 2) one of the key issues for these manufacturers is the transfer of the kaizen approach 3) Japanese companies are trying many approaches to manage those challenges but still facing many difficulties. Hence, the rest of the research in this dissertation focuses on the international transfer of kaizen.

Five additional research questions were formulated in order to acquire a comprehensive view about the process of international kaizen transfer from the Japanese companies to their overseas subsidiaries. Pettigrew (1990) offered a framework to investigate organisational changes. Since transfer of kaizen involves significant organisational changes in the overseas subsidiary, this framework was adopted for this research. He claimed 'practically useful research on change should explore the contexts, content, and process of change together with their interconnections through time' (Pettigrew, 1990: 268). Formulating the content of any new strategy inevitably entails managing its context and process. Content refers to the particular areas of change under examination, while the process of change refers to the actions, reactions and interactions of the various interested parties as they seek to move the firm from its present position to its future state (Pettigrew, 1987). Context includes outer and inner. Outer context refers to the social, economic, political, and competitive environment in which the firm operates. Inner context refers to the structure, corporate culture, and political context within the firm through which ideas for change have to proceed. In international kaizen transfer, these three dimensions are identified as:

a) The content: kaizen

b) The process: change in organisation, resources, pattern through time.

c) The context: The inner (organisational) and outer (national) influencing factors.

Three dimensions in international transfer of kaizen are illustrated in ***Figure 1.2***.

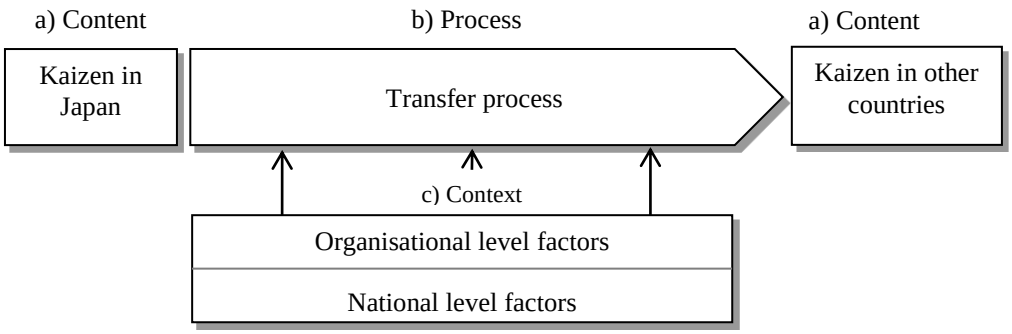


*Figure 1.2 – Framework of international transfer of kaizen*

Based on this, the second research question focuses on the transfer process of kaizen.

2. *What are the major stages in the kaizen transfer process? And what are the positive and negative factors influencing each stage?*

***Figure 1.3*** is a graphic presentation of where research question two fits within the framework of international kaizen transfer.

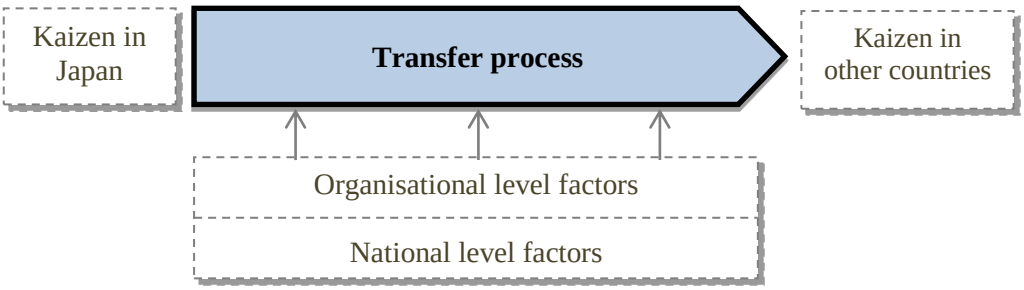


*Figure 1.3 – Focus of research question two within the research framework*

The third research question focuses on content, i.e., kaizen. A difficulty for studying the transfer of kaizen is ambiguousness of the term 'kaizen'. The ambiguousness of the concept leads to inconsistency in operationalisation of kaizen concept. This is an issue because although a variety of studies explicitly look at the transfer of kaizen, they may actually be dealing with different things. In order to address this issue, research question three was formulated as:

3. *What concept can be used as a proxy of kaizen?*

***Figure 1.4*** is a graphic presentation of research question three within the framework of international kaizen transfer.

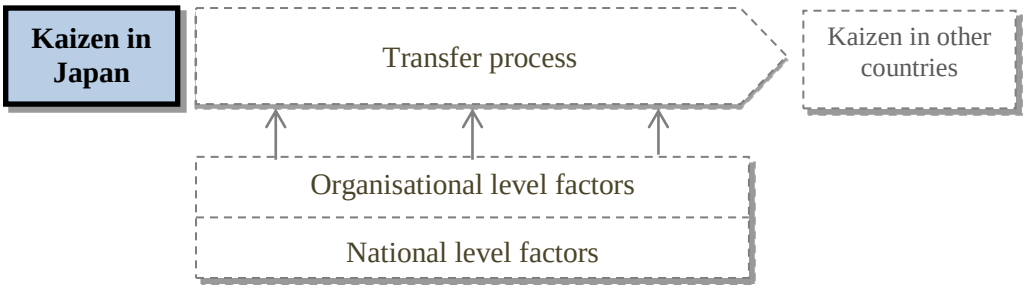


*Figure 1.4 – Focus of research question three within the research framework*

The fourth research question focuses on major organisational level factors (in Pettigrew's term, 'inner context') that have influence on the transfer process.

4. *What are the major organisational level factors that influence the kaizen transfer process?*

While the second question focuses on the specific factors that influence on each stage, this question investigates the general factors that affect the process of kaizen transfer.

***Figure 1.5*** shows the focus of research question four in the framework of international kaizen transfer.

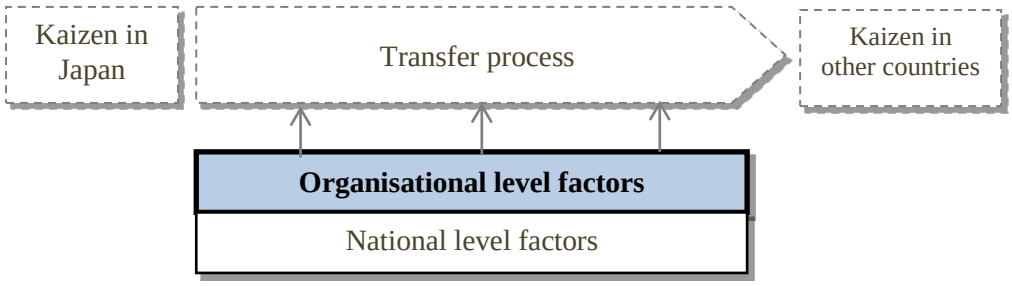


*Figure 1.5 – Focus of research question four within the research framework*

The fifth question concerns national level factors (in Pettigrew's term, 'outer context') on kaizen transfer.

*5. What national level factors influence the transfer of kaizen?*

***Figure 1.6*** illustrates the focus of research question five in the framework of international kaizen transfer.

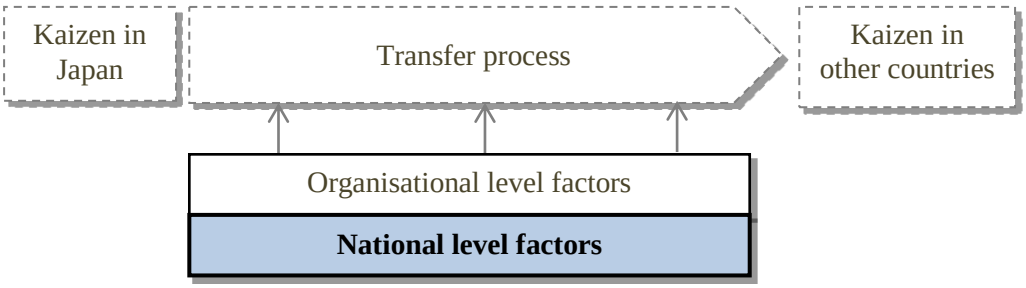


*Figure 1.6 – Focus of research question five within the research framework*

For the second research question, one of the findings was the importance of role of Japanese expatriates when transferring kaizen abroad. Hence this study delves into this issue. The last question is formulated to investigate the influence of Japanese expatriates on the kaizen transfer process.

*6. What is the influence of Japanese expatriates on the process?*

***Figure 1.7*** illustrates research question six in the framework of the international kaizen transfer. Issues regarding the Japanese expatriates relate to communication, commitment, and difference in employment systems as part of organisational context, thus it is placed under organisational level factors.

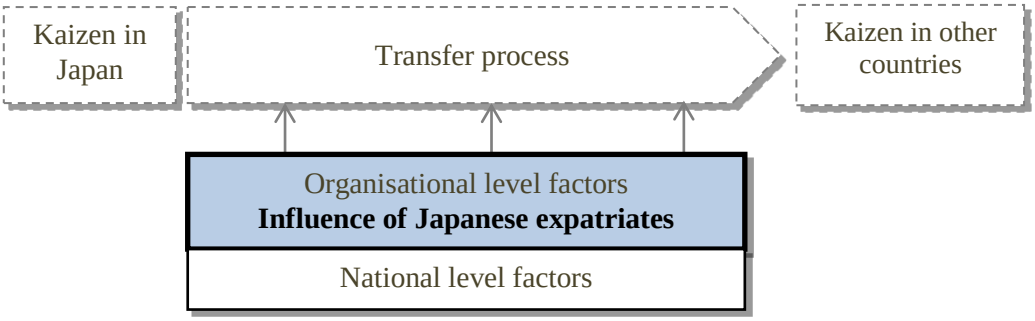


*Figure 1.7 – Focus of research question six within the research framework*

## 1.4 Research Methodology

Two projects were used to address the research questions.

### 1.4.1 Japanese field study

In order to address research question one, in-depth interviews were carried out at the headquarters of 30 Japanese companies located around the Tokyo area. These companies were mainly involved in car, car parts, and electric machinery production and located around the Tokyo area. These industries were selected because they were the largest foreign direct investors among all other industries in Japan in 2006 (Toyo-keizai-Shinposha, 2007). Another reason for selecting these industries was that well-known Japanese manufacturers, which have been the main contributors to Japanese economic development, are included among them.

### 1.4.2 Dutch field study

For addressing the rest of the research questions, 15 Japanese manufacturers in the Netherlands were studied. The Netherlands was selected for several reasons. Focus of this study is on kaizen transfer to Europe. Within Europe a further distinction was made based on where Japanese companies invest. Data from the Japan External Trade Organisation (JETRO) shows that for seven years (2003 to 2009), the Netherlands was the largest recipient of Japanese investments in Europe (http://www.jetro.go.jp/en/reports/statistics). Therefore, a choice was made to focus on Japanese manufacturers in the Netherlands. Another advantage of doing research in the Netherlands is that the Dutch have the highest proficiency in English among non-native speakers in the European Union. Eighty-seven per

cent of Dutch people can speak English well enough to have a conversation with a native speaker (European Commission, 2006).

### 1.4.3 Case study approach

The nature of the Japanese field research was to explore and describe the current challenges that are faced by the Japanese manufacturers and how they are managing them. Similarly, the Dutch field research explicitly aimed to develop understanding and insights about the transfer process and influencing factors rather than validate existing theory. Thus the empirical part of the study is based on case study design (Yin, 2003). The case study has been chosen for this research for three reasons. First, it allows researchers to describe and explain real-life phenomena that are too complex for other approaches that require rigorous designs or pre-specified data sets. Second, the case study is well equipped instrumentally for exploring a new area where few studies have been deeply investigated (Eisenhardt, 1989; Glaser & Strauss, 1967). It is suitable for extending the existing theory or breaking through the existing framework (Eisenhardt, 1989; Glaser & Strauss, 1967). Third, the choice of the case study strategy is also based on the fit between case research and operations management (OM), which is underexplored in the literature (Voss, Tsikriktsis, & Frohlich, 2002). The OM research area deals with both the physical and 'soft' elements of the organisation present in the current study. The case study strategy provides very powerful research tools for capturing those elements (Voss, Tsikriktsis, & Frohlich, 2002).

However, case study research has some drawbacks and poses significant challenges:

- There is the problem of the observer's perceptual and cognitive limitations; high probability of overlooking some key events also constitutes a threat to the quality of the case studies research
- Case studies are exposed to the challenges of generalisability
- The accuracy of some inferences can be undermined by the investigator's reliance on intuition and subjective interpretation.

To address these challenges and formulate a research design of high validity and reliability, we followed practical guidelines and steps discussed in the qualitative

methodology literature (Miles & Huberman, 1994; Yin, 2003). The current research relied on extensive use of triangulation and a research protocol. The findings were supported by multiple sources of evidence such as semi-structured interviews, documents, and direct observations. These data combined with secondary material (media material, presentation materials and annual reports) were used to build the case. One research protocol was developed to cover research questions two to six in order to enhance reliability. The research protocol can be found in the appendix. The details of the research methodology and the measures taken to enhance validity and reliability of this research are noted in the following chapters.

# Chapter 2

# 2. Recent Experience with Transferring Japanese Management Systems Abroad

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## 2.1 Introduction

When the Japanese economy gradually started to grow after the Second World War, management systems used in Japanese companies caught the attention of Western scholars. Not only were they different from those management systems developed and used in the West, they were also deemed to have an influence on the rapid economic development success of Japan (Abegglen, 1958). From the 1950s onward, the concept 'Japanese management systems (JMSs)' was studied by a number of researchers both inside and outside Japan. However, most of the studies detailing Japanese management do not provide a clear definition of it. Many authors excuse themselves from attempting to give a definition and simply describe it by listing its features and characteristics (Abe & Fitzgerald, 1995). Iida (1998) discussed the inconsistency and ambiguity of how the term JMS is defined in the literature. He studied more than 150 publications concerning or arguing about Japanese management and identified several definitions. Among those definitions, this study adopts the one which defines JMS as 'the specific techniques of Japanese companies that lead to competitive advantage in international competition' (Iida, 1998: 130). This definition was found suitable for this study because it is those specific techniques that most of the companies want to transfer to their overseas subsidiaries to achieve the same or better performance. Although the literature study reveals that most of the techniques are concentrated in the area of operations management, there is no universal model that fits the definition of JMSs. Thus, the model for the JMSs used here was developed. The literature shows that there are several major techniques used in Japanese companies that are considered their competitive advantages. The techniques and definitions are shown in ***Table 2.1***.

*Table 2.1 – Japanese management systems*

| Techniques | Definitions |
|---|---|
| Total Quality Management (TQM) | A structured system for creating organisation-wide participation in planning and implementing a continuous improvement process that meets and exceeds customer needs (Wilson, 1992). |
| Just-in-time (JIT) | A production and inventory control technique to produce the necessary units in the necessary quantity at the necessary time. It is achieved by the *Kanban* system. It is an information system which harmoniously controls the production quantities in every process (Monden, 1993). |
| Kaizen | Continuous improvement involving everyone in the company, from top management and middle management to operators (Imai, 1986). |
| Lean production | Never-ending efforts to eliminate or reduce '*muda*' (Japanese for waste or any activity that consumes resources without adding value) in design, manufacturing, distribution, and customer service processes (Womack et al., 1990). |
| Quality Control Circles (QC circle) | A small group activity involving eight to twelve members who discuss the improvement and development of the company as well as identify, analyse and solve their work-related problems such as quality, productivity, safety, work relations, cost, plant, and housekeeping (Feigenbaum, 1991; Hranac, 1982). |
| 5S | A clean-up activity at the work place. The term 5S is derived from the first letter of the five Japanese terms that are used to describe the program: 1) *Seiri* (sort), 2) *Seiton* (set in order), 3) *Seiso* (shine), 4) *Seiketsu* (standardize), and 5) *Shitsuke* (sustain) (Monden, 1993). |

In the 1980s and 1990s, a number of studies were carried out regarding Japanese manufacturers transferring JMSs to their overseas subsidiaries. Such transfers took place because those systems were considered the major source of competitiveness in Japanese factories, resulting in high-quality products (Monden, 1993; Schonberger, 1982; Womack et al., 1990). The transfer of JMSs caught academic attention because many studies concluded that the transfer of JMSs overseas faced difficulties (Abdullah & Keenoy, 1995; Dedoussis, 1995; Delbridge, 1995; Kenney & Florida, 1995; Kenney & Florida, 1993; Morris, 1995; Oliver & Wilkinson, 1992; Wilkinson, Morris, & Munday, 1995).

Today, the literature on the transfer of JMSs has decreased significantly. One of the reasons could be that most of the problems arising during the transfer process were resolved. Another possibility is that those Japanese-originated concepts are increasingly assimilated to non-Japanese countries so that the systems are no

longer unique to Japan. Once the management systems started to converge, country-specific management concepts such as JMSs or American management systems were considered out of date. A recent trend shows that researchers abstract models, such as lean production or TQM from the successful Japanese cases, and focus on the transfer of those models.

It is significant to explore or to confirm whether transferring those systems abroad is still a major concern for Japanese manufacturers so that researchers can refine or adjust their research emphasis in this study area. Furthermore, if they are still concerned with transferring those systems abroad, it is important to investigate what major problems occur during the transfer process, and to explore how they are managing these problems today. The research questions for this paper were formulated as follows:

1. Do Japanese manufacturers nowadays transfer JMSs to overseas operations?

   If so,

2. What are the main problems that arise during the transfer process of JMSs?
3. How are Japanese manufacturers managing these problems?

## 2.2 Literature Review

The literature on the first research question was already reviewed in the previous section. Thus, the literature on the second and third research question is reviewed in this section.

### 2.2.1 Major problems during the transfer process

The literature on the transfer of JMSs shows two different types of transfer. One is the transfer within a Japanese company (i.e., to an overseas subsidiary). The other is the adoption of JMSs by non-Japanese companies. This distinction is important because the problems that occur during the transfer process differ. For instance, the degree of cultural and communicational problems is considered more significant in the former than the latter type of transfer as two groups from different national backgrounds face each other in one organisation (Kono, 1982). Since the research questions are formulated from the Japanese company's perspective, literature on the first type of transfer is reviewed.

Bartlett and Ghoshal (1988) mention that Japanese companies have a high degree of centralisation in decision-making, which they indicate as 'centralised hubs'. Headquarters have a rather high degree of control over subsidiaries abroad but often lack the sensitivity and flexibility to respond to the local environment and the force of localisation. This led to difficulties in integrating local nationals into their management systems.

Jain (1990) found that cultural factors play an important role as far as the transferability of Japanese HRM practices (which include QC circles) is concerned. He found that work ethic, such as expectations of loyalty and identification with the firm is unacceptable to most operators in developing countries. Moreover, Jain (1987) and Choy and Jain (1987) noted that in Singapore and India, the QC circle was not popular because the operators' general skill level is not as high as in Japan. Several authors have looked at the influence of the external environment, for example, national culture (Fukuda, 1988; Kono, 1992; Ouchi & Jaeger, 1978; White & Trevor, 1983), and concluded that transfer is difficult due to the differences between Japan and non-Japanese countries. Dedoussis (1995) found that the commitment of top management toward the JMS in both the Japanese headquarters and the subsidiary has an impact on the transfer process. The lack of commitment can be attributed to poor planning and implementation, shortage of competent Japanese expatriates, insufficient communication between the headquarters and the overseas subsidiaries, lack of manuals in English or local languages. Hayashi (1994) found the language difference and high-context communication of Japanese hinder the transfer of JMSs overseas. Overseas operations involve people with different backgrounds in culture, discipline and/or language. Lack of fluency in English has created a disadvantage for Japanese multinational companies compared with firms from other industrialised countries (Hayashi, 1994; Legewie, 2002). Lillrank (1995) concluded that direct transfers of Japanese innovation practices often fail not because of the geographical distance but rather due to the mental distance (i.e., culture, history and strategic paradigms). Abdullah and Keenoy (1995) determined the transferability of the Japanese management employment policies and practices. From two case studies of Japanese subsidiaries in Malaysia, they concluded that transfers of those practices are significantly constrained by local economic, political and legal conditions and socio-cultural values. Taylor (1999) investigated the transferability of Japanese production systems to Japanese subsidiaries in China. After researching more than 20 Japanese subsidiaries in

China, he concluded, ‘There is no overall pattern, no overriding set of relations that explains the divergence of management practices found in the twenty cases.’ Yet, he mentioned that there are several factors that are significant in explaining the shape and nature of practices in each case. They are size of plant, local market, location of plant, corporate age, share ownership, industry, place on the production chain, source of production equipment, and size of parent company. Legewie (2002) indicates that Japanese multinationals are characterised by an insider-outsider mentality, leading frequently to a preference for Japanese-only boards. This prevents a real internationalisation of overseas operations. In short, the literature shows that most of the problems occur due to an environmental distance between Japan and non-Japanese countries.

### 2.2.2 Managing the problems

Japanese companies adapt locally used management systems in order to avoid the conflicts that arise from the differences between countries (Bartlett & Ghoshal, 1988). The process of searching for an appropriate mix of practices that ensure viability in local circumstances, rather than necessarily the transfer of established ‘best’ (parent-company) practices, is called hybridisation of management systems (Tomasz & Roger, 2008). The hybridisation of the JMSs has been studied by several authors (Abo, 1994; Itagaki, 1997; Kumon & Abo, 2004).

Additionally, there are some patterns among Japanese companies regarding how they bridge the national distances. Recht and Wilderom (1998) indicated that the Japanese companies are neutralising the national culture by setting up greenfields in non-unionised areas. Similarly, Oliver and Wilkinson (1992) found that Japanese firms which send their management systems to their overseas subsidiary tend to be more successful than the British companies emulating them. The main reason for this is that Japanese companies have advantages in terms of ‘greenfield’ sites and by implication selected ‘green’ labour, which means they are not restricted by history and traditional industrial relations in the UK (Oliver & Wilkinson, 1992). Kenny and Florida (1993) note similar findings.

Furthermore, studies show that Japanese companies are developing a teamwork- and trust-based organisational culture and flexible organisational structure which resemble the Japanese company (Hayashi, 1994; Saka, 2004). Recht and Wilderom (1998) suggest that the main factor that leads to successful kaizen

transfer is changing the practices within the company by lowering the locus of control and shared responsibility. The motivation can be enhanced by changing the organisational culture in a way that fosters intrinsic motivation (e.g., by providing change, autonomy and direct feedback from customers) and then supports that positive motivation with performance-contingent extrinsic rewards. With respect to the organisational structure, the case study at the NUMMI plant also shows that big, open office rooms facilitate open communication among employees (Shimada, 1990). Moreover, small group activities have been transferred abroad to stimulate the general communication among operators (Jain, 1990; Kenney & Florida, 1993; Purcell et al., 1999).

In brief, Japanese manufacturers are employing three approaches to manage the problems that occur during the JMS transfer process: hybridisation, setting up greenfield sites and hiring green labour, and developing organisational culture and structure that resembles the Japanese company.

## 2.3 Methodology

For this explorative study, an interview approach is selected as appropriate. Interviews were carried out with respondents at the headquarters of 30 Japanese companies. These companies were mainly involved in car, car parts, and electric machinery production and located around the Tokyo area. These industries were selected because they were the largest foreign direct investors among all other industries in Japan in 2006 (Toyo-keizai-Shinposha, 2007). Another reason for selecting these industries was that well-known Japanese manufacturers, which have been the main contributors to Japanese economic development, are included among them. They are described in ***Table 2.2***.

*Table 2.2 – Descriptions of Japanese manufacturing companies*

| | *Industry* | *No. of employees* | *Overseas experience of respondents* | *Countries worked in* |
|---|---|---|---|---|
| 1 | Car Parts | 10,596 | Yes | Taiwan/US |
| 2 | Car Parts | 14,748 | No | - |
| 3 | Car | 165,729 | Yes | US |
| 4 | Car | 167,231 | Yes | US |
| 5 | Car | 25,598 | Yes | China |
| 6 | Car | 9,980 | Yes | US |
| 7 | Electric Machine | 160,977 | No | - |
| 8 | Electric Machine | 13,013 | Yes | Malaysia |
| 9 | Electric Machine | 349,996 | Yes | China/Philippines/Thailand |
| 10 | Electric Machine | 81,939 | Yes | US |
| 11 | Electric Machine | 230 | Yes | China |
| 12 | Electric Machine | 19,958 | Yes | China |
| 13 | Electric Machine | 190,708 | Yes | China |
| 14 | Electric Machine | 102,835 | Yes | Indonesia/China/Mexico |
| 15 | Electric Machine | 21,402 | Yes | Vietnam/China/Philippines/Thailand |
| 16 | Electric Machine | 4,695 | Yes | Malaysia |
| 17 | Electric Machine | 328,645 | Yes | China |
| 18 | Electric Machine | 4,695 | No | - |
| 19 | Electric Machine | 4,757 | Yes | China |
| 20 | Machinery | 14,272 | Yes | Italy/Netherlands |
| 21 | Machinery | 62,940 | Yes | China |
| 22 | Machinery | 3,330 | Yes | Malaysia/Vietnam |
| 23 | Machinery | 110 | Yes | Taiwan/China |
| 29 | Machinery | 152 | Yes | China |
| 24 | Metal Products | 39,496 | Yes | Romania/Poland |
| 25 | Non-Ferrous Metals | 34,955 | Yes | China/Thailand |
| 26 | Precision Instruments | 4,400 | Yes | China |
| 27 | Rubber Goods | 132,272 | Yes | Iran/Turkey/South Africa |
| 28 | Rubber Goods | 15,423 | Yes | US |
| 30 | Textiles | 36,553 | Yes | China |

The interviews were organised around open-ended questions focused on the three research questions. Insights were encouraged to emerge during the interview by allowing interviewees to share their practitioner's perspective. In each company,

one respondent was interviewed. All interviews were conducted face-to-face and lasted between one and three hours. They were recorded and transcribed immediately after each interview took place. Interviews were conducted in Japanese, and the results were translated into English by the researcher.

Since the research questions are oriented towards production, respondents were sought in this area. Furthermore, because of the international aspects, respondents were sought with international experience. However, it was not possible for each company to select respondents with international experience and in the end three respondents were included with no overseas experience. Rather than removing these three companies from the analysis it was decided to include them because the three respondents were top managers who were highly familiar with the overseas operations and therefore deemed appropriate for this research.

## 2.4 Findings

With regard to the first research questions, a total of 29 companies (97%) indicated that their companies are transferring one or more JMSs in the list (***Table 2.1***) to their overseas subsidiaries. Among those 29 companies, 23 (79%) perceived that transferring JMSs is one of their major problems with international operations. In the following sections, findings from these 23 companies are presented.

### 2.4.1 Major problems during the transfer process

It was found that Japanese managers experienced various kinds of problems during the international Japanese management transfer which can be characterised as: high labour turnover, weak kaizen mentality, miscommunication, and operator capability.

*High labour turnover rate*

High employee turnover is perceived as one of the problems faced during the transfer of JMSs, see ***Table 2.3***. Particularly in Japanese companies where long-term employment is widespread, the accumulation of company-specific production skills and knowledge systems (tacit knowledge) in the plant is a considerable asset for a company to possess (Nonaka & Takeuchi, 1995). Experiencing high labour turnover limits this benefit. Additionally, when the

employees leave and have to be replaced, recruiting new staff and training them are costly for the company because the production will decrease during this time.

A high labour turnover rate occurs in many countries but particularly in the urban areas of East Asia. National governments in these regions develop industrial districts to attract foreign investors looking for cheap labour, access to the local market, and staying in touch with local needs. The increase in foreign companies leads to intensive competition for competent operators in these districts. New companies tend to set higher wages than already established firms in order to 'steal' operators. Some respondents mentioned that inside the districts, there is an unofficial agreement among Japanese companies to discourage head-hunting from each other, but this agreement does not exist between Japanese and non-Japanese companies.

*Weak kaizen mentality*

Respondents found that it is difficult to implement 5S and QC circles because local operators do not have a kaizen mentality (or at the best a very weak kaizen mentality). During the interviews, the term kaizen was frequently used by respondents. They believe that the transfer of kaizen mentality is a critical factor in achieving a good performance at their overseas plant. One respondent of an electric machinery plant said, 'We need to know whether kaizen mentality can be developed abroad through providing education and training. If not, we need to modify the international strategy.'

Kaizen is generally defined as continuous improvement involving everyone in the company, from top management and middle management to operators (Imai, 1986). More specifically, it can be interpreted as the mentality of employees in which they try to improve the company's performance continuously even when it is not part of their job description (Brunet & New, 2003). It was mentioned several times by respondents that local people typically do what they are asked to do by their boss, but they do not intrinsically look for improvement opportunities. Even the Japanese who are implementing the production techniques could only work for a short time and thus, do not integrate into the organisation.

*Miscommunication*

Miscommunication between local employees and Japanese staff is another important factor that respondents considered a problem. Communication between Japanese and local staff is often done through a translator. However, when

technical terms are involved in the conversation, the translator cannot accurately translate them to the local employees. As a result, miscommunication occurs between Japanese and local staff.

Aside from the language differences, there are also issues with conveying the meaning of the communication. During the interviews, an expression *A-un no kokyu* was frequently cited by respondents. *A-un-no kokyu* refers to 'the ability to think and behave as one and therefore anticipate what other people are going to say or do, and to agree with them' (de Mente, 2004: 39). This can be interpreted as high-context communication (Hall, 1976). In a high-context communication, most of the information is already in the person, while very little is in the coded, explicit, transmitted part of the message. In a low-context communication, the mass of the information is vested in an explicit code (Hall, 1976).

Respondents indicated that they are not able to communicate with local employees about *A-un-no kokyu*. De Mente (2004) mentioned that Japanese staff unconsciously expect that they can communicate with non-Japanese in this sense and then stated, 'It is one of the old and still entrenched cultural factors that frequently confuses and dismays Westerners' (39). Hayashi (1994) indicates that the Japanese high-context communication style is causing similar issues in the cultural interface. The finding shows that this difference in communication style may be a major problem for transferring JMSs. For example, as Japanese staffs are used to communicate in high context, they instinctively expect that they can communicate with local operators in this sense and they do not explicitly explain the benefits of using JMSs to local workers.

*Capability of operators*

Mainly for transferring to the developing economic countries, it was perceived that the general level of skill of local operators is not as high as in Japan. They often make simple mistakes and repeat them. In addition, local operators lack the domain knowledge of manufacturing. This all leads to additional time and effort required during training. It was mentioned by respondents that a high labour turnover rate is closely related to this issue. In Japanese plants where long-term employment is still prominent, there are many skilled operators who have worked on the shop floor for more than 10-20 years. On the other hand, in most non-Japanese countries where contract-based, short-term employment is prominent, the turnover of operators is higher. As a result, a situation develops in which there

are always newly hired operators who lack the skills to deal with company-specific problems.

***Table 2.3*** shows the most frequently mentioned challenges (mentioned by at least 10 respondents (43% of the sample). For illustrative purposes, ***Table 2.3*** also includes answers to the open question: 'What do you perceive as the main problems during the transfer process of JMSs?'

*Table 2.3 – International managerial problems and challenges*

| *Problems* | *Exemplary quotes* | *Number of times suggested* |
|---|---|---|
| High labour turnover rate | - '*High labour turnover in China is a very serious problem*.' (CEO/Electric Machine/China) | 24 companies |
| | - '*High labour turnover rate affects transfers of production know-how*.' (General manager production development dept./Metal products /Romania) | |
| | - '*Even though we spent a lot of resources on training and education to develop highly skilled operators, those have been a waste because many operators tend to move or be head hunted by other companies*.' (Production technology group manager/Electric Machine/China) | |
| | - '*Local operators tend to move to other companies after they have acquired production know-how*.' (Deputy general manager/Car parts/China) | |
| | - '*High labour turnover is a serious problem for us. Newly employed operators tend to quit the job after one or two months while we are teaching the basic manufacturing techniques*.' (Senior staff manager/Electric machine/Malaysia) | |

*Table 2.3 Continued*

| *Problems* | *Exemplary quotes* | *Number of times suggested* |
|---|---|---|
| Weak kaizen mentality | - '*Kaizen mentality is embedded in nature of Japanese. While Chinese and South East Asian operator[s] do what they are asked, they do not connect to kaizen mentality*.' (Senior specialist Production systems dept./Electric machine/China and Malaysia) | 22 companies |
| | - '*... improving the manufacturing process is another major source of cost reduction. However, it has been difficult to achieve this objective because it cannot implant*' (Senior manager global business support dept./Electric machine/China) | |
| | - '*We are facing difficulty developing kaizen mentality among local operators*.' (Director/Textiles /China) | |
| | - '*In the overseas plants, the operators have less kaizen mentality so there is a problem with maintaining the machine in good condition*.' (Manager production process innovation unit/Electric machine/Thailand) | |
| Miscommunication | - '*Most of the local operators come from the countryside of the nation where people do not have a good education in English. Only 10–20 % of local operators are able to communicate in English*.' (Group manager general strategy & management dept./Electric machine/Malaysia) | 19 companies |
| | - (After respondent mentioned that the communication between Japanese staff and local operators is done through translators) '*It became the cause of misunderstanding which creates distrusts among Japanese and local operators*.' (Director/Textiles /China) | |
| | - '*There is always difficulties communicating with American operators. Explaining the production procedure that only takes one minute for Japanese takes 10 minutes for an American operator*.' (Deputy general manager/Car parts/US) | |
| | - *'... I found it is difficult to develop trust between the local staff and the Japanese by communicating in non-Japanese language because the Japanese language contains many metaphors and expressions peculiar to Japanese.*' (Production technology group manager/Electric Machine /China) | |

*Table 2.3 Continued*

| *Problems* | *Exemplary quotes* | *Number of times suggested* |
|---|---|---|
| Low level of education and training | - '*Operators tend to repeat the same simple mistakes. … It affects the motivation of other operators. This kind of mistake is less likely to happen in the Japanese plant. It is a very big issue there.*' (General manager production control dept./Car/Taiwan) | 10 companies |
| | - 'Many operators have never seen screwdrivers.' (General manager/Electric machine/China) | |
| | - '*We need to spend about five to six times more time for training operators in order to achieve the target performance.'* (Manager production process innovation unit/Electric machine/Thailand) | |

### 2.4.2 Managing the problems[1]

*Managing the high labour turnover rate*

The majority of the companies use money incentives to retain local operators. The largest number of respondents suggested that a money incentive is the most effective one, and several respondents noted that it is the only approach to prevent operators from leaving the company. Providing a monetary incentive is also mentioned in the literature as used among Japanese companies but only as a supplement to the intrinsic incentives (Recht & Wilderom, 1998). Japanese manufacturers are currently setting wages at similar or slightly higher levels than their competitors to retain operators. Non-monetary incentives are also viewed as an effective method to retain operators. Some companies indicate that they conduct feasibility studies by collecting information from agencies, banks, the local Japanese chamber of commerce, or already established Japanese companies to investigate what local operators consider attractive working conditions. Even after production has started, they frequently listen to employees' feedback by conducting questionnaires regarding working conditions in order to improve them

[1] Explicit measurements of the effectiveness of these approaches were not part of the research design. The approaches discussed here were identified by respondents as methods to manage the problems that occur during the JMSs transfer process. However, since the respondents identified that the problems with transfer of JMSs exist, it follows that the approaches are not completely effective in eliminating the problems.

(e.g., food at cafeteria, dormitory rooms, installing heaters and air conditioners at the factory). Japanese manufacturers also attempt to retain their operators by providing career opportunities. This is perceived as an effective approach to motivate operators. Arranging parties and events involving the operators' family is another commonly used approach that is perceived as an effective way to enhance the operators' loyalty to the company.

In some companies, instead of putting effort into preventing employees from leaving the company, they emphasize more minimising the consequences after operators have left the company. Several respondents suggested that standardisation lowers the consequences of employee turnover. When operators unexpectedly quit their job, newly hired operators need less time to acquire production know-how and techniques.

***Table 2.4*** provides an overview and selected quotes for the high labour turnover rate.

*Table 2.4 – Managing problem: high labour turnover rate*

| *Problem* | *Management techniques* | *Exemplary quotes* | *Number of times suggested* |
|---|---|---|---|
| High labour turnover rate | Providing incentives | - '*To manage high labour turnover rate, the financial incentive is the primary thing*.' (General manager/Electric machine/China) | 13 companies |
| | | - '*It is important to provide explicit incentives to local operators in order to motivate them*.' (Senior officer in production dept./Machinery/Italy) | |
| | | - '*We set the wages a little higher than other companies do.*' (General manager/Electric machine/China)<br>- '*Around the Chinese New Year season, we provide free airplane tickets only to those operators who worked for the company for more than two years.*' (CEO/Electric machine/China) | |
| | | - '*To increase motivation, we provide financial incentive.*' (CEO/Electric machinery/Malaysia) | |
| | | - '*As a result of setting higher wages than other companies…we could keep turnover rate lower*.' (Manager of production process innovation unit/Machinery/Thailand) | |

*Table 2.4 Continued*

| *Problem* | *Management techniques* | *Exemplary quotes* | *Number of times suggested* |
|---|---|---|---|
| | Improving working environment | - '*We started installing air conditioners in each [dormitory] room*.' (Group manager of production and technology dept./Electric machine/China) | 6 companies |
| | | - '*We installed single beds instead of double beds*.' (CEO/Precision instruments/China) | |
| | Promoting local operators | - '*After we started to promote local operators to the management level, the operators were more motivated, and as a result, the labour turnover rate was reduced.*' (Section manager of management support dept./Machinery/China) | 5 companies |
| | | - '*We can prevent operators from leaving the company by promoting them to higher positions …*'(Deputy general manager/Car Parts/Malaysia) | |
| | Standardisa-tion | - '*Standardising the operation procedure is the key to managing the high labour turnover rate.*' (Vice-president/Car/USA) | 3 companies |
| | Parties events | - '*The plant manager held parties to generate loyalties among local operators towards the plant.*' (Group leader of production and technology dept./Rubber goods/Philippines) | 3 companies |

*Managing the weak kaizen mentality*

QC circles are used in overseas plants to enhance the vertical and horizontal communication and develop the kaizen mentality among the local operators. In addition, local operators are frequently sent to the factories in Japan so that they can experience the kaizen way of thinking. After several months of training in Japan, they are sent back to the overseas subsidiaries to transfer the kaizen mentality to other local operators. At the same time, Japanese expatriates motivate operators to participate in kaizen activities by explaining that they can ease their daily labour and benefit them in terms of their safety and health. Events and parties involving family to develop teamwork and bonding among operators are thought to increase loyalty to the company and enhance the kaizen mentality.

***Table 2.5*** provides an overview and selected quotes for the weak kaizen mentality.

*Table 2.5 – Managing problem: weak kaizen mentality*

| *Problem* | *Management techniques* | *Exemplary quotes* | *Number of times suggested* |
|---|---|---|---|
| Weak Kaizen mentality | QC circles | - '*QC circle was once implemented in the US plant in order to enhance the performance by developing kaizen mentality among local operators…*' (General manager of production control dept./Electric machine/ Indonesia and China/) | 16 companies |
| | | - '*We transfer the principal and the method of kaizen which are 5S and QC circle.'* (General manager of production development dept./Metal product/Romania) | |
| | | - '*We are employing the QC circle in order to enhance the kaizen mentality.'* (Group leader of production and technology dept./Rubber Goods/Philippines) | |
| | OJT & OffJT | - '*In order to implant the kaizen activities, we give the lecture first and followed by the onsite training based on OJT*.' (Chief specialist in productivity planning group/Electric machine/China) | 7 companies |
| | | - '*I think the only way to transfer the kaizen mentality to the local operators is to teach them based on OJT*.' (Senior vice-president/Non-ferrous Metals /China) | |
| | Motivating operators by explaining the benefit of doing kaizen | - '*We have to show the benefits of kaizen activities. Production is hard labour. It gives pains in muscle and contains unsafe jobs so we should convince operators that those activities can ease their jobs.'* (Vice-president/Car/USA) | 4 companies |
| | | - '*The important point is that local operators must agree upon why implementing those activities, understanding why it is important, how and why those activities can improve the productivity and how those can ease the daily labour*.' (Senior officer in production dept./Machinery/Italy) | |

*Managing the miscommunication*

Japanese companies mainly rely on translators to communicate with local employees. In order to avoid cultural conflicts and misunderstandings arising from language differences, companies employ local managers to manage the workforce. Some companies believe that it is better to hire local managers and let them manage the local operators since they have a better understanding of how to motivate them based on local customs. Additionally, on-the-job training (OJT) is used to overcome the communication barrier. As the idea of OJT is teaching by showing, this is perceived as a useful approach to convey management techniques to local operators with a minimum of verbal communication. Furthermore, the use of visual aids (e.g., colours, tags, logos or symbols) makes communication simpler and more attractive. This so-called visual management is also commonly used in Japanese factories. It is helpful for operators to share and recognize problems with just a glance (Ho, 1993; Monden, 1993).

***Table 2.6*** provides an overview and selected quotes for the communication challenges.

*Table 2.6 – Managing problem: miscommunication*

| *Problem* | *Management techniques* | *Exemplary quotes* | *Number of times suggested* |
|---|---|---|---|
| Miscommunication | Translators | - *'We communicate through the translator…'* (CEO/Machinery/China) | 7 companies |
| | Hiring or educating local managers | - *'Hires local managers'* (Section manager management for support dev./Electric machine/China) | 5 companies |
| | | - '*We think it is best to teach local middle managers Japanese culture and kaizen mentality and let them transfer this knowledge to local general operators*' (Director/Textile/China) | |
| | OJT & OffJT | - '*In order to overcome the language barrier, OJT is the effective way to train operators by showing them how to do it…*' (Vice-president/Car/USA) | 5 companies |
| | Visual management | - '*Visual management is an effective method for training quality management in the overseas plant.*' (Senor staff manager of administration dept./Car parts/USA) | 4 companies |

| | |
|---|---|
| | - '*It is possible to teach the operation techniques through photos and video*' (Senior specialist in production systems dept./Machinery/Vietnam and Malaysia) |

*Managing the lower labour skills*

Several Japanese companies perceive that OJT and other OffJT programmes are considered important instruments not only for improving operator skills at work but also for the socialisation of managers and workers in a company. The two methods of training are complementary. While OJT assists the learning of everyday operations and the understanding of basic concepts, OffJT assists the development of intellectual skills. Additionally, QC circles are employed to enhance the skills of operators. Problem-finding techniques and logical thinking are trained through QC circles. Standardised movements for production by Japanese skilled operators in the Japanese factory are captured on video and photographs and sent to overseas plants. This approach is considered effective to convey the skills to local operators with less time spent translating the standard operating procedure from Japanese to local languages. Several respondents mentioned that visual management is also an effective tool for educating operators who lack even basic skills such as understanding procedures and schedules. Visual management also allows for the visualisation of the operator's progress using figures and graphs.

***Table 2.7*** provides an overview and selected quotes for managing the lower level of skills.

*Table 2.7 – Managing problem: lower level of skills*

| *Problem* | *Management techniques* | *Exemplary quotes* | *Number of times suggested* |
|---|---|---|---|
| Lower level of skills | OJT & OffJT | - '*On-the-job training is commonly practiced to train operators on the shop floor level at overseas plant.*' (CEO/Electronic machine/China) | 4 companies |
| | | - *'Japanese staff train by showing the procedure to the local operators.'* (Senior specialist in production systems dept./Electronic machine/China) | |
| | QC Circle | - *'Even though the skills level is low, we train them through QC Circle. Although unexpected things happened, we educate them to understand the underlying cause of the problem.'* (General manager/Rubber Goods/Turkey) | 3 companies |
| | Standardisa-tion | - *'We standardize the operation procedures.'* (General manager of production and control dept./Car/USA) | 3 companies |
| | Visual management | - *'As far as I know, visual management is used for educating operators in most of the factories in the industrial park.'* (Production technology group manager/Electronic machine/Malaysia) | 3 companies |
| | | - *'We teach the working procedure by visualising it through a series of photographs.'* (CEO/Electronic machine/Taiwan) | |

## 2.5 Discussion

### 2.5.1 Problems during the transfer process

It is worth noting that many respondents stressed that the Japanese manufacturers face challenges transferring JMSs because the local operators do not have the inbred mentality for kaizen compared with Japanese employees. Accordingly, applied improvement activities diminish after a short period. These findings

suggest that the Japanese companies place great importance on the kaizen concept in managing overseas factories. The significance of kaizen was stated by Imai (1986) as 'Kaizen strategy is the single most important concept in Japanese management – the key to Japanese competitiveness success' (Imai, 1986: xxix).

The difference regarding the degree of kaizen mentality between Japan and Western countries was addressed by Imai saying that the 'Kaizen concept is non-existent, or at least very weak, in most Western companies today' (Imai, 1986: 3). This study shows that almost 25 years later this still appears to be the case. Kolm (1985) argued that the Japanese emphasis on continuous improvement is associated with Buddhism, which is based on the pessimistic idea that we know we will never be perfect. However, the findings suggest that the Japanese perceive that kaizen is weak in other non-Japanese or non-Western countries including Buddhist ones (e.g., Thailand). This means that some other reason needs to be added to describe the development of kaizen in Japan (e.g., scarcity of resources).

The Japanese managers identified the issue of weak kaizen mentality regardless of the location of the subsidiary. In contrast to the lack of kaizen mentality, the severity of other problems varied between countries. For example, the language barrier is larger in countries where English is not commonly used (e.g., Thailand, Malaysia, and China). In Malaysia, most of the local operators come from rural areas where people do not have sufficient education in English. One respondent mentioned that only 10–20% of local operators are able to communicate in English. Similarly, the labour turnover rate is higher in China in particular due to intensive competition on the labour market. Italy and Taiwan have high unemployment rates which lead to less competition on the labour market and therefore a lower employee turnover. With regard to the competency of operators, it is found that the problem is more serious in developing countries than developed countries.

### 2.5.2 Managing the problems

The data provide evidence that Japanese companies are transforming their Japanese-based teamwork- and trust-based organisational culture when transferring JMSs. Japanese companies are sending local operators to the Japanese mother plants in order to let them experience the Japanese way of working based on teams to convey the benefit of doing so. Small group activities are used to

enhance open communication among operators. Moreover, parties and social events are frequently organised to nurture a group feeling among employees.

Utilisation of specific Japanese management techniques (i.e., QC circles) is perceived as one of the solutions to the problems occurring during the transfer of JMSs. This finding is initially confusing as Japanese manufacturers are transferring JMSs to manage the problem with transferring their management systems. This can be better explained when the JMSs are viewed along three layers: philosophy, strategy, and technique. This classification can be found in earlier research on Japanese management that focused mainly on the Japanese human resource management systems (Hatvany & Pucik, 1981; Jain, 1987).

First, the philosophy layer stems from the Japanese cultural and historical background which distinguishes JMSs from other management systems developed in other national contexts. It includes welfare corporatism (Dore, 1973), trust and teamwork (Oliver & Wilkinson, 1992), long-term commitment (Abegglen, 1958), management by consensus (Sours, 1995), and focus on human resource development (Ouchi, 1981).

The second layer is the strategies, which include kaizen (Imai, 1986), lean production (Womack et al., 1990), and TQM (Schonberger, 1982). Although many other similar concepts exist, this study mainly focuses on major ones because they are treated in the literature as the primary competitive advantage of Japanese companies.

Finally, the third layer concerns the techniques and tools that are used to support achieving the objective of the strategies. These techniques include QC circles, OJT, small group activities, JIT, statistical process control, plan-do-check-act (PDCA), autonomation, visual management, voice of customer, stakeholder analysis, process mapping, root cause analysis, Pareto chart analysis, seven *muda* analysis, fish bone diagram, 5S, and *poka-yoke*. A set of tools is selected and implemented to achieve the objective of the strategy. For instance, when a company attempts to make the process more efficient by eliminating waste, it can apply the lean production strategy. Tools to support this strategy can be voice of customers, process mapping, and 7 *muda* analyses to locate the *muda* in the processes.

With this classification, it is possible to explain that the Japanese manufacturers are transferring Japanese management techniques such as QC circles, OJT and

visual management to develop the philosophy or mentality of kaizen. The data show the existing theory that JMSs develop a hybrid appearance with the locally used management systems (Abo, 1994; Itagaki, 1997; Kumon & Abo, 2004). In this study, we found that the hybridisation of management systems took place mainly at the philosophical level of JMSs. Particularly many Japanese manufacturers faced difficulties applying the long-term commitment to countries where the short-term contract based employment systems is widespread. As the philosophy level of the JMSs is embedded in the Japanese context, it is reasonable that it is difficult to apply abroad.

## 2.6 Conclusions

This paper explored whether Japanese manufacturers are still concerned with the transfer of JMSs to overseas Japanese subsidiaries and, if so, what they currently perceive as the main problems and how Japanese manufacturers manage these problems.

This study showed that almost all of the Japanese manufacturers interviewed are concerned with transferring management systems abroad. Additionally, nearly 80% of companies indicated that the transfer of JMSs is one of the problems in their overseas operations. The main problems that are evident concerned high labour turnover rate, miscommunication between Japanese and local employees, and lack of competency of operators. It was identified that kaizen is one of the most important management approaches that Japanese manufacturers are transferring today.

Japanese companies are trying to create a similar organisational environment in the overseas subsidiary (i.e., developing trust- and teamwork-based organisational culture and flexibility structure) to deal with those problems. Although these approaches to manage the problems are perceived effective by companies, it is not the ultimate solution as problems with JMSs transfer were addressed by Japanese manufacturers. It is significant to investigate the effectiveness of these approaches that are used by Japanese manufacturers to manage the problems that occur during the JMSs transfer process.

Additionally it is important to investigate why the problem with the JMSs transfer still exists despite the fact that it has been studied intensively in the past few decades. Further research is required to investigate whether theories are available

for practitioners and, if so, it is important to examine whether practitioners are utilising those theories to solve their problems.

# Chapter 3

# 3. Process of International Kaizen Transfer in the Netherlands

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## 3.1 Introduction

Continuous improvement involves improving efficiency of the process by waste elimination in small steps. It is becoming more and more important in today's complex and dramatic market where quick responses and adjustments to customers' needs are required. The concept of continuous improvement was initially developed in the USA and transferred to Japan after the Second World War (Bhuiyan & Baghel, 2005). It was adapted and further improved by Japanese companies, which even gave it a Japanese name: *kaizen* (Kenney & Florida, 1993). The concept was crystallised at Toyota (Fujimoto, 1999) and spread among Japanese manufacturers as Toyota became famous for high-quality products in the international market. Since other companies also improved their performance, it has been viewed as one of the sources of the competitiveness of Japanese manufacturers (Imai, 1986; Oliver & Wilkinson, 1992).

Several studies exist that have examined the implementation of kaizen in Japan. Imai (1986) discussed the relationship of kaizen implementation with the use of methods and tools such as quality control circles, suggestion systems, and total quality control. He discussed that those methods are closely related to kaizen but they are not the same. Imai mentioned that the kaizen is a philosophy that encompasses those methods. Fujimoto (1999) indicated that kaizen activities in the Toyota style production system emphasise: revealing the production problems on the spot, quick problem solving at all levels of the plant, standardisation of problem-solving tools, quick experimentation and implementation, reutilised retention through knowledge-manual interactions. Liker (2004) states that kaizen is a process of enhancing the individual skills such as working effectively with

teams, solving problems, documenting and improving processes, collecting and analysing data, and self-managing within a peer group. In brief, the literature on the implementation of kaizen in Japan frequently discusses the implementation in terms of the development of employees' capabilities together with use of systems, methods and tools.

The literature also indicates the key success factors for kaizen implementation. Flynn and Saladin (2006) and Power, Schoenherr, and Samson (2010) mentioned general cultural dimensions that may influence a process management program. Marksberry, Badurdeen, Gregory, and Kreafle (2010) found that most imitations of the Toyota production system fail because implemented piecemeal with little understanding of the organisational culture that is required. Adler (1999) also discussed the importance of the organisational culture. Adler (1999) introduced the concept of enabling bureaucracy to discuss how Japanese companies leverage this mixture of organic and mechanistic structure for competitive advantage. This means that Japanese organisations develop mechanistic structures, such as standardisation, to reduce variation in processes; but they are based on the organic structures, such as teamwork and employee participation. At the core of the enabling bureaucracy lies employees' involvement and empowerment, using rules and procedures as enabling tools, and hierarchical structures to support the work of the doer rather than to bolster the authority of the higher ups.

The aforementioned studies are dealing with kaizen implementation in Japan. In recent decades, Japanese manufacturers operating in global markets have faced increasing pressures to internationalise their manufacturing. Many companies transfer the kaizen philosophy, methods and tools to their overseas subsidiaries (Abo, 1994; Aoki, 2008; Kumon & Abo, 2004), for example to North American countries (Abo, 1994; Kenney & Florida, 1993), the UK (Cole, 1979; Oliver & Wilkinson, 1992), Europe (Kumon & Abo, 2004) and China (Aoki, 2008; Hong, Easterby-Smith, & Snell, 2006; Taylor, 2001). Recent, research has shown that Japanese companies are facing problems transferring kaizen internationally due to the difficulties with adjusting to different environments (Yokozawa, Steenhuis, & de Bruijn, 2010). Different from the domestic kaizen implementation, transfer of kaizen involves issues that are generated at the interface of different national contexts. Boer and Gertsen (2003) suggested that in CI studies, more process research is needed. The effectiveness of managing any process involving kaizen depends a great deal on in-depth knowledge and understanding of that process.

The goal of this study is to contribute to the understanding of the international kaizen transfer process.

A first challenge for a study on kaizen is the ambiguousness of the term. Brunet and New (2003) in their study on kaizen found that kaizen has been vaguely and inconsistently defined in the literature (Brunet & New, 2003). However, two common elements can be found. On one hand, kaizen is discussed in association with company-wide continuous improvement. For example, Imai (1986: xxix) defines it as 'ongoing improvement involving everyone – top management, managers, and workers'. Other authors share this view of equating kaizen with continuous improvement explicitly (Aoki, 2008; Malloch, 1997; Styhre, 2001) or implicitly (Bessant, Caffyn, & Gallagher, 2001; Dobosz-Bourne & Jankowicz, 2006; Jørgensen, Boer, & Gertsen, 2003). On the other hand, kaizen has been associated with going beyond formal job descriptions. For example, Brunet and New (2003: 1428) define kaizen as 'consist[ing] of pervasive and continual activities, outside the contributor's explicit contractual roles, to identify and achieve outcomes he believes contribute to the organisational goals.' A similar idea has been mentioned by Hayashi (1994), that is, in Japanese organisation a person's job description is not clearly defined and often overlaps. This vagueness weakens the notion of individual responsibility and promotes the notion of group responsibility. As a result, it is easier to go beyond formal responsibility. Thus, it can be concluded that kaizen relates to corporate-wide continuous improvement activities by employees where these activities go beyond their contractual role. This study defines kaizen as mentality of employees where they try to continuously improve the company's performance even when it is not part of their job description. For this study, two research questions are stated:

- What are the major stages in the kaizen transfer process?
- What are the positive and negative factors influencing each stage of the kaizen transfer process?

## 3.2 Literature Review

### 3.2.1 International kaizen transfer process

There is literature on international Japanese management system transfer (Ueki, 1987), technology (Miles, 1995; Teece, 1976), and knowledge transfer (Gilbert & Cordey-Hayes, 1996; Szulanski, 2000). As those concepts encompass kaizen, they are useful for describing the process of kaizen transfer.

Ueki (1987) developed a phase model for cross border transfer of the Japanese industrial management systems. The phase model contains four stages. Stage one is the establishment of a local subsidiary. Operations management techniques and know-how are introduced to host country. Stage two is where implementation of production and management techniques and know-how takes place. Japanese expatriates sent from the parent company provide training to local managers and engineers. Stage three is the localisation of management. The implemented management systems and know-how are adjusted to the local environment. Stage four is integration of management systems. Local managers and engineers improve production and the management techniques in order to correspond to the needs of the local environment.

Teece (1976) studied the international transfer of technology with emphasis on design. He identified five stages in technology transfer: 1) Pre-investment, in which need assessments and feasibility studies are conducted; 2) Stage A, in which key elements of the process or product design are transferred; 3) Stage B, in which the engineering, design, and planning of production are discussed; 4) Stage C, in which construction, tooling, and installation of the manufacturing facilities take place; and 5) Stage D, in which the recipient of the technology starts up the manufacturing process.

Miles (1995) defined technology as a combination of ‘hardware’ (i.e., plant and equipment) and ‘software’ (i.e., skills and knowledge) which are applied to solve practical problems. He identifies five phases: 1) choice of technology, 2) channels for transferring technology, 3) adapting technology, 4) integrating the technology, and 5) implementation.

Gilbert and Cordey-Hayes (1996) developed a model of the knowledge transfer process to understand the ability of organisations to innovate and successfully achieve organisational change. The model consists of five stages: 1) Acquisition

of the knowledge; 2) Communication, the distribution of the acquired knowledge; 3) Application, the knowledge acquired and communicated is applied; 4) Acceptance, the individuals in the organisation accept the new knowledge; 5) Assimilation, the knowledge becomes the core routines.

Szulanski (2000) offers a diachronic analysis of 'stickiness' (the difficulty of transferring knowledge). He presents a model of knowledge transfer which is composed of four stages: 1) initiation, 2) implementation, 3) ramp-up, and 4) integration. He divides each stage by four milestones: 1) formulation of the transfer seed, 2) decision to transfer, 3) first day of use, and 4) achievement of satisfactory performance.

At first glance, the models described seem to have several different elements. Each model has different emphases and different terms are used. However, comparing models reveals that there are comparable stages. Those are pre-investment, communication, application, and integration, see ***Table 3.1***. Those stages are further compared and analysed with the literature on international transfer of Japanese production systems in order to develop a rich picture on the kaizen transfer abroad. Particularly for application stage, studies on the evolution of CI (Bessant et al., 2001) and the Transition-to-Lean Roadmap (Nightingale & Milauskas, 1999; Nightingale & Mize, 2002) were reviewed. Although there are differences between kaizen and lean[2], both concepts were originally developed at Toyota and share the same philosophy of small continuous improvement (Womack et al., 1990).

- *Pre-investment:* This stage starts when the need for kaizen transfer is recognised. For instance, a performance gap was found between Japanese factory and overseas subsidiaries. This stage includes: feasibility study (Szulanski, 2000; Teece, 1976) and need assessment (Gilbert & Cordey-Hayes, 1996; Teece, 1976). Those are preparatory activities to make a decision whether a kaizen transfer should occur or not. The main actor of this stage is Japanese headquarters in Japan.
- *Communication:* This stage starts when a decision to transfer kaizen is made. Information and resource exchange between sender and recipient will increase

[2] While lean means nothing more or less than the reduction of waste from processes, kaizen originally means "change for better" which approach can be used to incrementally improve even if waste is not the organisational focus.

and possibly peak (Szulanski, 2000). For instance, Japanese trainers were sent to the overseas subsidiary to provide training to local managers and engineers and local employees were sent to the Japanese factory (Shimada, 1990). This stage ends when the recipients develop manufacturing capabilities (e.g., they can operate machinery or follow an organisational manual; Miles, 1995). In the case of kaizen transfer, this stage ends when local operators master the Japanese production processes and techniques. Imai (1986) mentioned that operators think about improvements once they master the standard operating procedures. The main actors in this stage are Japanese expatriates.

- *Application:* This stage starts when the managerial commitment is made for kaizen implementation. Transition-to-Lean Roadmap shows that the process of this stage consists of three mutually dependent cycles. First cycle is called Entry/Reentry Cycle. It involves the actions related to the decision to adopt the lean paradigm (e.g., build vision, establish need, foster learning, and make the commitment). The second cycle is the Long Term Cycle. In this cycle, the environment and condition that are required for successful transformation is formed (e.g., establish an operations implementation team, develop strategy, and plan to address workforce change, establish target objectives, etc.). Finally, the third cycle is the Short Term Cycle. The detailed implementation is planned, executed, and monitored. The Long Term Cycle is re-entered occasionally to capitalise on lessons learned during implementation and to accommodate changes occurring in the external environment. Through the interaction between Japanese expatriates and local employees, methods and tools are adjusted to the local context (Ueki, 1987). When the majority of the employees buy the idea of kaizen this stage is considered over (Gilbert & Cordey-Hayes, 1996). Both Japanese expatriates and local employees are the main actors of this stage.
- *Integration:* This stage starts when the local managers take over the Japanese managers' initiative and execute the kaizen activities (Szulanski, 2000; Ueki, 1987). The same processes in the application stage were performed by local employees with minimum support from Japanese expatriates (Ueki, 1987). Continuous improvement is achieved mainly by local employees.

***Table 3.1*** shows the summary of phases and activities that may exist in the international kaizen transfer process.

*Table 3.1 – Phases during the kaizen transfer process*

| | **Phase 1 Pre-investment** | **Phase 2 Communication** | **Phase 3 Application** | **Phase 4 Integration** |
|---|---|---|---|---|
| Input | Recognition of need for transferring kaizen | Decision to transfer kaizen | Managerial commitment for kaizen implementation | Local manager's commitment on the kaizen implementation |
| Process | Feasibility study and need assessment | Exchange of resources between Japanese factory and overseas subsidiaries | • Entry/Reentry Cycle<br>• Long Term Cycle<br>• Short Term Cycle | Same as phase 3 |
| Output | Decision to transfer kaizen | Operators in the international subsidiary can follow the Japanese production methods | Employees acquire the idea of kaizen | Continuous improvement |
| *Main actors* | Japanese headquarters in Japan | Japanese expatriates | Both Japanese expatriates and local employees | Local employees |

### 3.2.2 Factors influencing the kaizen transfer process

In the 1960s, studies with respect to the international transfer of management systems were initiated in the USA when managerial know-how was recognised as a critical ingredient for economic growth (Koontz, 1969; Negandhi & Estafen, 1965; Oberg, 1963). In those studies, the national context, organisational settings, and management philosophy were discussed as the major factors that affect the management transfer process. In the 1980s, this stream was succeeded by studies on the international transfer of Japanese process management systems (e.g., TQM, JIT, kaizen, etc.). (See Fukuda, 1988; Kono, 1982; White & Trevor, 1983). The transfer of those systems was studied mainly because of the high performance attained by Japanese manufacturers. However, many authors concluded that the

international transfer of kaizen is not easily accomplished. Positive and negative factors found in the literature are summarised in ***Table 3.2***.

*Table 3.2 – Overview of factors influence on kaizen transfer process*

| **Positive** | | **References** |
|---|---|---|
| Leadership/ management | Commitment /Leadership | (Bessant, 2003; Boer, 2000; Dedoussis, 1995) |
| | Implementation strategy | (Bessant, Caffyn, Gilbert, & Harding, 1994; Bessant, 2003; Boer, 2000; Hyland, Mellor, & Sloan, 2007) |
| | Managerial experience | (Albors & Hervas, 2007) |
| | Clear strategic framework | (Bessant et al., 1994; Boer, 2000) |
| | Management as a process | (Bessant et al., 1994; Bessant, 2003; Imai, 1986) |
| Organisation | Enabling infrastructure (ways of organising and operating) | (Adler, 1999; Albors & Hervas, 2007; Bessant et al., 1994; Bessant, 2003; Boer, 2000; Dedoussis, 1995; Liker, 2004) |
| | Appropriate reward | (Readman & Bessant, 2007) |
| | Methods and tools | (Albors & Hervas, 2007; Bessant et al., 1994; Bessant, 2003; Boer, 2000; Fujimoto, 1999; Imai, 1986) |
| | Supportive organisation | (Albors & Hervas, 2007; Boer, 2000; Imai, 1986; Liker, 2004; Marksberry et al., 2010; Ohno, 1988; Recht & Wilderom, 1998) |
| | Organic structure | (Bessant, 2003) |
| Culture | Low uncertainty avoidance | (Smeds, Olivari, & Corso, 2001) |
| | Low power distance | (Flynn & Saladin, 2006; Lagrosen, 2003; Smeds et al., 2001) |

*Table 3.2 Continued*

| **Negative** | | **References** |
|---|---|---|
| Leadership/ management | Lack of commitment | (Al-Khawaldeh & Sloan, 2007; Bessant, 2003; Boer, 2000; Imai, 1986) |
| | Communications | (Aoki, 2008; Bessant, 2003; Jain & Tucker, 1995; Ueki, 1987) |
| | Consistency problem | (Bessant, 2003; Boer, 2000) |
| | Lack of suitable vehicles for driving forward | (Bessant, 2003) |
| | Lack of experience and awareness | (Bessant, 2003) |
| Organisation | Lack of or inappropriate reward | (Bessant, 2003; Boer, 2000; Imai, 1986) |
| | Lack of system for handling ideas | (Bessant, 2003; Imai, 1986) |
| | Lack of suitable tools | (Bessant, 2003; Boer, 2000) |
| | Lack of supportive culture | (Al-Khawaldeh & Sloan, 2007) |
| | Lack of time and space | (Al-Khawaldeh & Sloan, 2007; Bessant, 2003) |
| | Lack of structured approach to finding and solving problems | (Bessant, 2003) |
| Culture | High uncertainty avoidance | (Flynn & Saladin, 2006; Lagrosen, 2003; Smeds et al., 2001) |
| | High power distance | (Flynn & Saladin, 2006; Lagrosen, 2003; Smeds et al., 2001) |
| Labour | Existence of labour union | (Beechler & Zhuang Yang, 1994; Choy & Jain, 1987; Kenney & Florida, 1993) |
| | High labour turnover rate | (Beechler & Zhuang Yang, 1994; Kenney & Florida, 1993; Young, 1992) |

The literature on Japanese management systems, technology and the knowledge transfer process provided insights into how kaizen is transferred abroad. It helps to understand the process of kaizen transfer. However, more research is necessary because it is too general to apply specifically to the transfer of kaizen. Research needs to elaborate particularly on international kaizen transfer. Secondly, although many articles deal with factors that influence the whole transfer process, the stage-specific factors are still largely unclear.

## 3.3 Methodology

An appropriate research methodology for exploring is a case study design (Yin, 2003). Therefore, it was applied in this study. In particular, an inductive approach after Eisenhardt (1989) was used. It follows specific steps and allows the development of theory from the empirical data. Key issues with case study design are case selection and data collection.

### 3.3.1 Case selection

In this study the focus is on kaizen transfer to Europe. Within Europe a further distinction was made based on where Japanese companies invest. Data from the Japan External Trade Organisation (JETRO) shows that for seven years (2003 to 2009), the Netherlands was the largest recipient of Japanese investments in Europe (http://www.jetro.go.jp/en/reports/statistics). Therefore, a choice was made to focus on Japanese manufacturers in the Netherlands. Another advantage of doing research in the Netherlands is that the Dutch have the highest proficiency in English among the non-native speakers in the European Union. Eighty-seven per cent of Dutch people can speak English well enough to have a conversation with a native speaker (European Commission, 2006). A list of Japanese manufacturers in the Netherlands was obtained from the website of the Netherlands Foreign Investment Agency (NFIA) and from JETRO. The two lists were combined to develop one list of 52 companies. This list of 52 companies provided the target population for the study. Since this number was relatively small, it was decided to contact all of the companies about participation in the study rather than take a sample. Initial contact with the companies was made by phone. Five companies had either recently closed or transferred their operations to other countries; this reduced the target population to 47 companies with manufacturing activities in the Netherlands. Of these, 32 companies declined to cooperate. This left 15 companies which participated in the research project. The general characteristics of these companies are shown in ***Table 3.3***.

*Table 3.3 – An overview of case companies*

| Cases | Products | Established | Employees (consolidated) | Kaizen started year |
|---|---|---|---|---|
| A | Construction machinery | 2001 | between 100 and 500 (16,117) | 2003 |
| B | Slide fasteners | 1964 | less than 100 (38,399) | 1964 |
| C | Sensors | 1990 | between 100 and 500 (35,045) | 1990 |
| D | Welding materials | 1994 | more than 500(76,358) | 1994 |
| E | Photosensitive materials | 1982 | less than 100 (34,459) | 1982 |
| F | Electrodes | 1990 | less than 100 (120) | 1995 |
| G | Safe instrumentation systems | 1982 | more than 500 | 2003 |
| H | Beverage | 1994 | less than 100 (15,822) | 1994 |
| I | Forklifts | 1992 | more than 500 (33,164) | 1996 |
| J | Molded articles of foam resin | 2008 | Less than 100 (1,372) | 2008 |
| K | Safety glass | 1996 | between 100 and 500 (19,742) | 1999 |
| L | Plastic building materials | 1974 | less than 100 (19,742) | 1995 |
| M | Polyolefin foams | 1973 | between 100 and 500 (19,742) | 1990 |
| N | Shrink labels and cap seals | 1993 | less than 100 (2,368) | 2004 |
| O | Thin steel sheets | 1992 | less than 100 (4,607) | 2009 |

### 3.3.2 Data collection

A case study protocol was developed which contained a set of questions to guide research in the field and also to increase reliability (Yin, 2003). Semi-structured interviews were employed as the main method for data collection. In each company between one and five respondents were interviewed. All the interviews were recorded and transcribed. They were selected from the three levels of the organisational hierarchy, namely, shop floor operators, middle and top managers. They included both Japanese and Dutch citizens, eliminating a potential bias from a specific national group. It included questions regarding 1) degree of kaizen completion, 2) major stages in the transfer process, and 3) characteristics of each stage that are further divided into: a) activities, b) positive and c) negative

factor(s). Degree of kaizen completion was measured by asking respondents 'in your perspective, what is the degree of completion of developing kaizen in this factory as a percentage?' after the definition of kaizen was given. Several companies provided additional internal documents. All companies provided opportunities for a factory tour, which added data from direct observation. This allowed cross-checking of the findings; thus, triangulation was used.

## 3.4 Findings

The analysis indicated that there were three successive stages during the kaizen transfer process. From their nature, they were called: preparation, implementation, and integration stage, respectively. In the following sections, the stages and their positive and negative factors will be explained.

### 3.4.1 Stage 1: Preparation

The first stage is the preparation stage. In this stage, two major activities, initial hiring and training, were identified.

*Initial hiring:* Initial training took place in this stage. Company E mentioned that they hired young operators directly from school. They tended to be not only eager to learn but also flexible in accepting concepts introduced by the Japanese because they did not have preconceived ideas about working methods in the Netherlands. Additionally, they were committed to the work because most of them did not have family obligations. The more highly educated operators were selected. They tended to use their ability to do jobs that exceeded their responsibility. Company A tried to hire young and educated employees. However, difficulties were encountered due to the nature of the industry, which requires hard labour. Similarly, Company F faced obstacles because the factory was located in the countryside where there were fewer young people around. Another challenge was hiring local operators when the Japanese management had little experience working in the Netherlands. The company hired operators with the wrong mentality for kaizen. They had to adjust this aspect in the subsequent stages, which required a lot of resources. ***Table 3.4*** shows typical quotes for the activities, positive and negative factors in this stage.

*Table 3.4 – Typical quotes for initial hiring, positive and negative factors*

| | |
|---|---|
| | **Activities** |
| Hiring | *"First, you hire people. If you selected the right people, the rest would be relatively easy because they would be able to absorb this kind of thing."* (Company C/MD) |
| | **Positive factors** |
| Hiring young and highly educated operators | *"Two things were important. Firstly, we started off with young people who had no history, directly from school […]. Secondly, this is a company with highly educated people."* (Company E/Staff Manager) |
| | **Negative factors** |
| Hiring the right operators | *"When we established the factory, we wanted to hire young and well educated people, but they preferred office work like logistics. Our industry was not popular among them."* (Company A/MD) |
| Lack of experience | *"With all due respect, the Japanese didn't understand the Western mentality, they didn't have good communication, and were a bit afraid. They hired the wrong people, not all but some of them didn't have the right attitude."* (Company C/MD) |

*Training:* Training took place after the initial hiring. Company E sent 20 operators to the Japanese factory for 6 months' training. While they were in Japan, they learned about the supportive organisational culture as well as operation techniques. When they returned, they conveyed these principles to the Dutch operators who had remained in the Dutch factory. The challenge with this approach was that the Dutch operators were away from their social life for several months. It was restricted only to operators who did not have any social obligations. Training operators immediately after they were hired was addressed. The company trained operators before they were influenced by other companies' culture or Dutch work traditions. Instead of sending operators to Japan, several companies invited Japanese trainers to their Dutch factory. The challenge was that many Japanese staff had insufficient communication skills and could not efficiently convey the kaizen philosophy and techniques to the operators.

***Table 3.5*** demonstrates typical quotes for the activities, positive and negative factors during this activity.

*Table 3.5 – Typical quotes for training, positive and negative factors*

| | |
|---|---|
| **Activities** | |
| Training | *"I think training phase. Japanese kaizen professional took the lead and created the tools for kaizen, taught the methods, and made a model line to show workers this is how things were to be done."* (Company A/Project Manager)<br>*"We sent operators to Japan, and they were trained for several months and then sent back. This was how we made this culture possible."* (Company E/MD) |
| **Positive factors** | |
| Provide training immediately after operators were hired | "*The key for making this rapid development happen depended on how fast the company could train newly hired operators."* (Company E/Internal document) |
| **Negative factors** | |
| Distance from the social life | *"The risk for this method [sending Dutch operators to Japan] is that people were away from their own social life and family."* (Company E/Plant Manager). |
| Communication | *"The language barrier. We brought the Japanese shop floor operators from Japan. The Japanese expatriates were translating for the Dutch operators but this didn't convey the message to local workers."* (Company A/Project Leader) |

### 3.4.2 Stage 2: Implementation

In this stage, kaizen is implemented. Three major factors were identified. They are managerial commitment, convey sense of urgency, execution, and maintenance.

*Commitment:* It was mentioned that the managers commit to implementing kaizen in this stage. In companies A and C, this took place when a new managing director (MD) or a production manager was sent from the headquarters. In company C, a new MD came. He used to work for another Japanese manufacturer in the Netherlands which was intensively using kaizen. He had a strategic vision of what the organisation should move towards and would become. One of his goals was to implement kaizen. An issue of low management commitment was found due to the high Japanese expatriate turnover. Japanese were sent from the mother factory on a temporary basis. They left after 2-5 years, and many of them

were not looking for major changes during their stint abroad. Some MDs did not have a production background, which made them less committed to kaizen.

***Table 3.6*** provides typical quotes for the activities, positive and negative factors in this stage.

*Table 3.6 – Typical quotes for commitment, positive and negative factors*

| | |
|---|---|
| | **Activities** |
| Commitment | *"Make the commitment. Kaizen never ever works without the involvement of the top management because it has a direct connection with the evaluation.*" (Company A/Project Leader)<br>"*Management commitment. Dealing with problems needs to involve several different departments like production, maintenance, and quality assurance. Those problems often occur in the boundaries of departments. It is critical that management coordinate them to work as one group.*" (Company E/MD) |
| | **Positive factors** |
| Management experience | *"I have 16 years of experience working with kaizen so I have a strong belief in it."* (Company A/General Manager) |
| | **Negative factors** |
| High turnover of Japanese expatriates | *"We had changes of MD. Every four years. Mr. A (current MD) was here since August last year. Before that Mr. B was here for two and a half years. MD before that was Mr. D. This is not a good strategy."* (Company B/Production Manager)<br>*"Our MD is changing every 5 years. Kaizen totally depends on the MD. If the MD changes so often, it is not so nice."* (Company D/Production Manager) |
| Lack of experience | *"I have a background in sales for 6 years […] I don't have much knowledge about kaizen."* (Company F/MD) |

*Conveying a sense of urgency:* The sense of urgency is conveyed to the employees. In Company C, the MD first conveyed the sense of urgency to senior and middle managers. Around the same period, the production manager first visited the Japanese mother plant. She brought a new prototype made in the Dutch factory for verification. She received bad feedback on its quality. Immediately after she returned, she organised a meeting with engineers to discuss what could be done to improve the product quality. It was mentioned that an effective approach to convey the sense of urgency is to visualise it using graphs, figures

and photos. The challenge mentioned by the Japanese was that they could not transfer the sense of urgency or increase the awareness among the local operators due to their inadequate communication skills.

***Table 3.7*** shows typical quotes for the activities, positive and negative factors in this stage.

*Table 3.7 – Typical quotes for conveying sense of urgency, positive and negative factors*

| | |
|---|---|
| | **Activities** |
| Convey sense of urgency | *"It's critical that people are looking at the same goal. Then it turns into the shared understanding which becomes the mentality and gradually the culture. Without a feeling of urgency, even though we pile up the methods, it does not become the culture."* (Company A/Project Leader)<br>*"It's very important that you have a burning platform, so that everyone feels okay, now we have to change otherwise my job will be lost or we have a huge problem with customers."* (Company C/Production Manager) |
| | **Positive factors** |
| Visualisation of sense of urgency | *"Everyone knew because there were pictures. They couldn't discuss it. After the meeting people were shocked because it was so clear. People were aware that we have a huge problem, we have to do something."* (Company C/Operations Manager) |
| | **Negative factors** |
| Communication | *"The biggest problem in this stage is that the Japanese cannot convey it due to their poor English ability."* (Company J/MD) |

*Execution:* Implementation stage involves execution of kaizen methods and tools. Some companies begin with a factory-cleaning activity (e.g., 5S program). This helps to locate problems as they are difficult to identify if the company is not clean and well organised. It also can increase the operators' awareness that organisational changes are about to take place.

It was found there were two cycles running in this stage. One was the longer cycle which started with the introduction of the specific area of improvement. Then the measurable target of the area for improvement was introduced. The area for improvement could be quality, cost, or lead-time, and the choice needs to be based on the customers' wishes. An example of a measurable target is a 10% reduction in rejected products. After the measurable target was established, the smaller cycle

started. This involves simultaneous plan-do-check-act (PDCA) cycles. Employees identify problems mainly about the specific area for improvement introduced in the larger cycle, prioritise them, organise teams, identify the root cause, verify corrective action, implement corrective action, and prevent recurrences. In this cycle methods and tools to achieve the target are introduced. For instance, if the goal is a reduction in rejected products (i.e., quality improvement), then PDCA cycles can focus on introducing six sigma and *poka-yoke* (fool proof system). Once the target was achieved, a new area of improvement and new target could be introduced. This approach with PDCA cycles embedded into a longer cycle is illustrated in Figure ***3.1***.

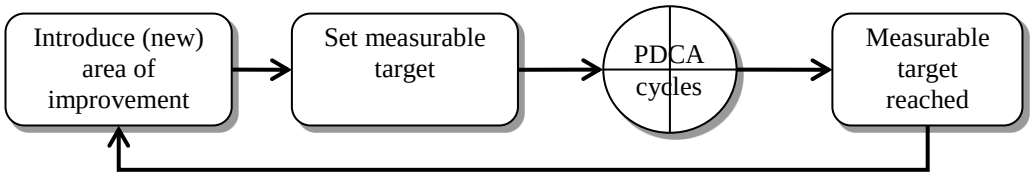


*Figure 3.1 – Two continuous cycles in the execution stage*

It was important to start the improvement with small and rapid steps. This approach provided quick feedback to the operators, encouraging learning and facilitating the identification of more complicated problems. Starting with a major improvement often took too long, and people lost their motivation for improvement. Also, it was critical to provide positive feedback even for small achievements and the activities that did not turn out to be successful. Finding a new area for improvement each time was challenging for the managers. They had to focus on the customers' wishes to determine the critical areas that needed improvement. When the problems were suggested by the operators, it was the manager's task to prioritise them based on the degree of impact that they had on the overall corporate performance. This required skill and experience, which was also identified as a challenge. Visualising the improvement idea and performance improvement and presenting it to everyone could increase the operators' motivation. The communication issue was addressed. For instance, from the Dutch side, even though they appreciated the humbleness and politeness of the Japanese, the Dutch perceived the Japanese indirectness as confusing. Moreover, there were indications that the Japanese made important decisions without involving the Dutch managers. In contrast, the Japanese mentioned that the Dutch

were often too direct, even to their boss, and felt that they lacked respect. Finally, developing trust and a teamwork-oriented culture was found to be important. Communication training was done to promote this culture. ***Table 3.8*** shows typical quotes for the activities, positive and negative factors in this stage.

*Table 3.8 – Typical quotes for execution of kaizen methods, positive and negative factors*

| | |
|---|---|
| **Activities** | |
| Implementation of kaizen methods | *'5S was implemented'* (Company B/MD)<br>*'You set the target every year and you should achieve the target. All the quality issues are brought to a quality circle to identify correct action.'* (Company G/General Manager)<br>*'Basically, this stage is about whether the PDCA cycle is running smoothly.'* (Company A/General Manager) |
| **Positive factors** | |
| Start with small improvements | *'Small steps short, quick.'* (Company C/Operations Manager)<br>*'If you want to change something in the production process, start small.'* (Company E/Plant Manager) |
| Reward/ recognition system | *'Give feedback to the employee and share the success. You have to show it. This is very stimulating and rewarding*.' (Company D/Production Manager)<br>*'The appraisal system. It needs to have a strong focus on improvement. So people are rewarded for improvement which stimulates this culture*.*'* (Company E/Staff Manager) |
| Team culture | '*Kaizen requires burden, extra efforts for operators. Good relationship is important for encouraging kaizen*' (Company D/MD).<br>*'Very important factor for Kaizen is the team activity, good relationship, and trusting each other.'* (Company F/Staff Manager). |
| **Negative factors** | |
| Finding a new area for improvement | *'I think about finding a new driver for the improvement activities.'* (Company C/Production Manager) |
| Prioritising problems | *'Difficulty is always setting the priority.*'(Company M/Production Manager)<br>*'Someone has to set the priority otherwise many actions will be taken but they will not contribute to the objective.* '(Company E/Production Manager) |
| Communication | *'When two cultures clash, I think you get a culture clash. Then communication will not go well.'* (Company C/Equipment programmer) |

*Maintenance:* The real challenge for kaizen transfer starts when kaizen was maintained. After the continuous improvement cycles have run for several rounds, the room for improvement becomes less evident. Along with this, the motivation and enthusiasm of the operators towards kaizen also decrease. Additionally, the problems grow to be more complicated. The kaizen team is often introduced at this stage. Its function is to facilitate the kaizen on the shop floor. It includes operators from different areas of expertise so that they can deal with various types of problem.

To keep kaizen alive, benchmarking with competitors and/or other overseas subsidiaries, visualisation of performance, and opening the factory to their stakeholders such as organising workshops, seminars, providing factory tours for customers (showcase factory) were identified as effective steps. Another key factor is the introduction of kaizen engineers. It is generally a group that consists of several people with different specialties. Their role is mainly to facilitate the kaizen activities at the shop floor: it is a good time to introduce the kaizen engineers because this is when people's motivation for kaizen starts to decrease. The kaizen engineers help to keep the improvement activities going.

One of the challenges faced by companies took place when new employees were hired. The company has to invest considerable resources to adjust his/her mentality. There are always some people who do not fit in the culture of kaizen. They prefer to stick to their specialised work and are not interested in outside exploration. It is important to dismiss them because they affect the other operators and can easily destroy the culture.

***Table 3.9*** shows typical quotes for the activities, positive and negative factors in this stage.

*Table 3.9 – Typical quotes for maintenance, positive and negative factors*

| | |
|---|---|
| **Activities** | |
| Maintain kaizen | *'When these activities are maintained.'* (Company K/MD) |
| | *'Maintaining.'* (Company L/Production manager) |
| **Positive factors** | |
| Benchmarking | *'Nowadays people know that we compare our costs with Japanese and Chinese factories. We all know that if we don't improve, we will lose [to] the competition.'* (Company C/MD) |
| Showcase factory | *'In this stage we opened the shop floor to our stakeholders'* (Company C/MD) |
| Introduction of kaizen engineers | *'We eliminated many functions such as team leader function, line leader function, many hierarchical levels were removed but one function was created and that was the kaizen engineer.'*(Company C/Production Manager) |
| **Negative factors** | |
| New operators | *'When a new operator comes, he must learn the total mentality from the beginning, which takes years.'* (Company C/MD) |
| Dealing with employees who do not fit in the culture | *'Some employees could not or did not like this way of working, and even managers tried to train and convince them, but some workers did not fit in. We decided to terminate their contract. They can easily distort all those processes.'* (Company C/MD) |

### 3.4.3 Stage 3: Integration

Stage 3 was identified where kaizen integrated into the Dutch subsidiary. This means that kaizen activities are replicated by Dutch managers and shop floor operators with no or minimum help from Japanese expatriates. It was mentioned that the company faced a challenge with helping people gradually start to feel comfortable working with the rules that they created. The organisation tends to become more bureaucratic. The company mentioned intensive use of visualisation to keep employees' motivation high. ***Table 3.10*** shows typical quotes for the activities, positive and negative factors in this stage.

*Table 3.10 – Typical quotes for integration, positive and negative factors*

| | |
|---|---|
| | **Activities** |
| Integration of kaizen | *'The phase where the methods of kaizen penetrate to the team leader level below the foreman level.'* (Company C/Plant Manager)<br>*'Stage where execution and maintenance of kaizen is not only a top management issue anymore but shop floor.'* (Company I/General Manager)<br>*'It is a stage where shop floor operators themselves come up with ideas.'(Company F/Plant Manager)* |
| | **Positive factors** |
| Visualisation | *"Visualisation of performance, waste, risks everything. It makes people more motivated."* (Company C/Production manager) |
| | **Negative factors** |
| Bureaucracy | *"People start to feel comfortable with the rules that they made. I think bureaucracy distracts kaizen."* (Company F/Staff Manager) |

## 3.5 Discussion

The activities, positive and negative influencing factors in each stage are summarised in ***Table 3.11***. The activities in implementation can occur simultaneously which is indicated in a broken line. For each factor, the categories of management, organisation, culture, and labour were added to clarify which factors align with the literature and which do not.

*Table 3.11 – Activities, positive and negative factors in the kaizen transfer process*

| Stages | Activities | Positive | Negative |
|---|---|---|---|
| Prepara-tion | Initial hiring | *Labour*<br>• Hiring young and well educated operators directly from school | *Labour*<br>• Hiring the right operators<br>*Management*<br>• Lack of experience |
| | Training | *Organisation*<br>• Providing training immediately after operators were hired | *Organisation*<br>• Distance from social life<br>*Management*<br>• Communication |
| Implemen-tation | Commitment | *Management*<br>• Management experience | *Organisation*<br>• High turnover of Japanese expatriates<br>*Management*<br>• Lack of experience |
| | Conveying sense of urgency | *Organisation*<br>• Visualisation of sense of urgency | *Management*<br>• Communication |
| | Execution | *Organisation*<br>• Start with small improvements<br>• Team culture<br>• Reward/recognition system | *Management*<br>• Finding a new area for improvement<br>• Prioritising problems<br>• Communication |
| | Maintenance | *Organisation*<br>• Introduction of kaizen engineers<br>• Benchmarking<br>• Showcase factory | *Organisation*<br>• New operators<br>• Dealing with employees who do not fit in with the culture |
| Integra-tion | Execution and maintenance of kaizen by shop floor operators | *Organisation*<br>• Visualisation | *Organisation*<br>• Important people leave the organisation<br>• Bureaucratic organisation |

### 3.5.1 Stages

The first research question was: what are the major stages in the kaizen transfer process? From the case study, it was found that the kaizen transfer process consists of three stages: preparation, implementation, and integration. This differed from what was found in the literature analysis, where four stages were identified: pre-investment, communication, application, and integration (see ***Table 3.1***).

The literature showed a pre-investment stage where need assessments and/or feasibility studies are conducted. However, this stage was not found in the case study. One of the reasons for this could be that the study focused on the transfer of kaizen whereas the literature was more specific for the implementation of kaizen in Japan. The difference is that in the latter case, a company may be new to kaizen and therefore faces a pre-investment stage wherein it makes a decision on the implementation of kaizen. In contrast, when it concerns the transfer of kaizen, the company is already familiar with kaizen at the Japanese location. Another possibility is that the pre-investment stage did not take place at the subsidiary but might have taken place at the Japanese headquarters. The data is not sufficient to distinguish between these two alternative explanations.

The communication and implementation stage that were addressed in the literature were also found in this study. Since the activities mostly regard setting the conditions or arranging the environment suitable for kaizen implementation, the name of the communication stage was changed to preparation stage. It was found there are new activities found in the implementation stage. In particular, conveying the sense of urgency before executing kaizen is not discussed in the kaizen or CI literature but often in the literature of change management (e.g., Kotter, 2008). The latter author indicates that a sense of urgency in organisational settings is becoming increasingly important because change is shifting from episodic to continuous in nature. He states ‘with continuous change, creating and sustaining a sufficient sense of urgency [is] always a necessity’ (xi). According to Ohio (1988), Toyota had a sense of urgency when they first initiated kaizen after the Second World War. Toyoda Kichiichiro (1894-1952), the president of Toyota at that time, said, ‘Catch up with America in three years. Otherwise, the automobile industry will not survive.’ In order to accomplish this goal, Toyota started to learn from the American way, which subsequently transformed into the infinite kaizen journey. Moreover, the case study provided in-depth insights,

particularly for the kaizen transfer. The introduction of a specific area for improvement and the relationship with employee motivation forms one of them. Wu and Chen (2006) state that any activity has its life cycle: introduction, growth, maturity and decline. Proper regenerative inputs need to be injected before an activity declines, so that the firm's improvement level can be moved up to a higher level. The finding suggests that a new area for improvement could be used as a proper regenerative input as it can provide motivation for improvement. For example, if the measurable target for improvement is a 10% reduction in rejected products, then the activity life cycle indicates that after the introduction of the target, there is a period of growth. This means that employees are energised and motivated to achieve improvements. After some time though, the growth slows, achieving more improvements becomes harder and employee motivation starts to dwindle eventually leading to a decline phase. Introducing the next target for improvement, for example, reduces the lead-time by 5%, before the onset of decline in the earlier target activity (reducing rejected products) can help to maintain high employee motivation. By properly sequentially timing activity cycles, the organisation can improve overall while maintaining employee morale. This is illustrated in ***Figure 3.2***.

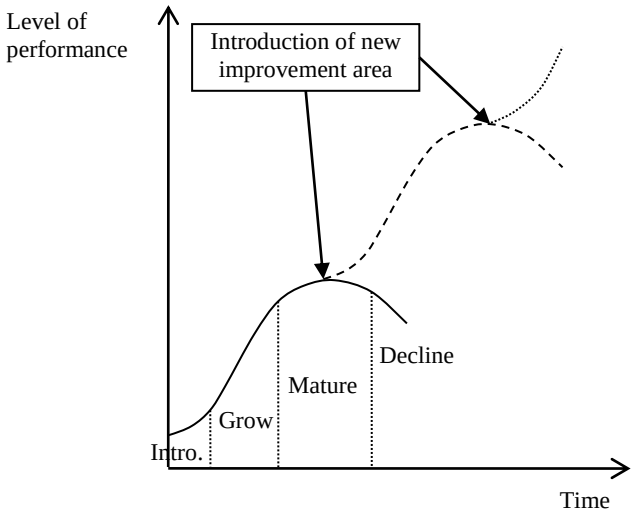


*Figure 3.2 – Timing of introduction of new area of improvement*

Finally, the integration stage where the transfer contents are incorporated in the organisation was found to correspond to the literature. In the literature, it was not

clearly defined when the whole kaizen transfer process ends. In this study, it was found that the respondents have a consensus that this stage is successful when the kaizen mentality was developed among Dutch operators at the shop floor level. This is reasonable because the successful kaizen implementation generally starts from the management and the capabilities are gradually acquired by the shop floor operators (Bessant et al., 2001; Bessant, 2003). This finding is significant because the success of kaizen transfer can be determined through shop floor operators.

### 3.5.2 Factors

The second research question was: what are the positive and negative factors in each stage of the kaizen transfer process? Results show that there are several positive and negative factors influencing each stage of the kaizen transfer process (see ***Table 3.11***). On the one hand, comparing them with what is mentioned in the literature (see ***Table 3.2***) indicates that several factors were similar: management commitment, management experience, team (supportive) culture, starting with small and quick improvements (one of the steps in the implementation strategy), showcase factory and benchmarking (discussed as one of the recognition systems), and communication. On the other hand, the in-depth nature of this study allowed researchers to find several new factors.

Our findings indicated that young operators were eager to learn and flexible about accepting new things and were more committed to work as they have fewer social obligations. Moreover, educated operators tend to use their ability to do work that goes beyond their immediate responsibility. Hiring young and well educated students directly from school is a common practice for Japanese companies abroad (Kenney & Florida, 1993). However, the link between this practice and the level of kaizen transfer is not clearly established in the literature. Similarly, the effectiveness of sending operators to the Japanese factory for several months' training is intensively discussed in the literature on practices of Japanese overseas subsidiaries (Adler, Goldoftas, & Levine, 1998; Shimada, 1990), but its link with the level of kaizen transfer is not established. Difficulties with hiring suitable operators due to the nature of the industry and the location of the factory were found to negatively influence the kaizen transfer, which receives no specific mention in the kaizen or CI literature.

Visualisation of a sense of urgency (e.g., using photographs, figure and graphs) was found to be effective in conveying the sense of urgency to operators. This matches Kotter's (2008) finding that people must actually see and feel the need for change in order to generate a sense of urgency. However, its link with the level of kaizen transfer success is again not discussed in the literature.

It was found that the high turnover of Japanese expatriates negatively influences the kaizen transfer. The literature discusses that the Japanese companies abroad tend to rely heavily on Japanese expatriates. This often results in a lack of sensitivity for the localisation of management systems (Beamish & Inkpen, 1998). Nonetheless, its negative influence on kaizen transfer success was not well discussed.

Finding a new area for improvement and prioritising the problem were challenging aspects for companies. These issues can be recognised as part of the challenges associated with the lack of a structured approach for finding and solving problems, or the lack of managerial experience and commitment (see ***Table 3.2***). However, the in-depth case study allowed more specific factors to emerge.

Challenges with adjusting the mentality of new employees to the existing culture were not explicitly indicated in the literature. This could be due to the fact that this research was conducted in Japanese companies in the Netherlands. In Japan the long-term employment system is widespread. Japanese respondents who were educated and trained in that environment perceived this aspect as a challenge. However, for non-Japanese respondents, it may not be perceived as a negative factor because the outflow of labour is normal for them.

Finally, the challenge of dealing with employees who do not fit the kaizen culture was new. Some companies addressed those operators who never fit in the culture of kaizen even after the company put great effort into adjusting their mentality. There was an indication that the company should dismiss those people because they can destroy the kaizen culture. Moreover, it was mentioned by Company F that a healthy company must have a natural outflow of labour. Since the establishment of the company, they have employed a no-firing policy. Currently, they are suffering from an increase in the employee's average age as well as their salary. These cases suggest that firing some operators is necessary to maintain the kaizen culture and the natural outflow of operators. However, this contradicts the no-firing policy that many Japanese companies have. A no-firing policy provides

security for the employees; this enhances the employees' loyalty to the company (Abegglen, 1958). This was often discussed as it promotes the employees' proactive behaviour (Campbell, 2000). In this sense, firing people may reduce the employee's loyalty to the company. This study does not have enough evidence to verify which approach is better for a successful kaizen transfer. This needs to be investigated further.

## 3.6 Conclusions

This study provides insight into the process involving the international transfer of kaizen. Two research questions were stated: 1) what are the stages in the kaizen transfer process? and 2) what are the positive and negative factors influencing each stage? The results show that it has three stages: preparation, implementation, and integration. An activity of conveying a sense of urgency to the operators in implementation was significant in that it is not well discussed in the kaizen literature. Moreover, the in-depth nature of this case study approach allowed us to identify several specific factors that are often discussed in the literature in a general sense. The challenge with dealing with employees who do not fit in the culture of kaizen is also a factor that has not been discussed extensively in the literature. Whether to continue or terminate the contract with them and its influence on the successful kaizen transfer need to be investigated further.

Classifying positive and negative factors of kaizen transfer according to the stage is another contribution made by this research. It has implications for researchers as well as practitioners. For researchers it serves as an analysis tool to determine a specific stage and the stage-specific positive and negative factors. It can potentially be applied to the transfer of other production practices such as lean production and TQM that share the underlying kaizen philosophy (Imai, 1986).

For practitioners, it provides an opportunity to assess in what stage of kaizen transfer a company finds itself. It also provides direction about how to advance to a higher level. Additionally, companies can anticipate which positive and negative factors may influence each stage of the process.

# Chapter 4

# 4. Factors Affecting International Transfer of Kaizen

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## 4.1 Introduction

Kaizen is generally defined as continuous improvement involving people in all levels of organisation (Imai, 1986). The concept of continuous improvement was originally developed in the USA and transferred to Japan after the Second World War (Bhuiyan & Baghel, 2005). It was adapted and further enhanced by Japanese companies and the Japanese provided a Japanese name for it: *kaizen* (Kenney & Florida, 1993; Oliver & Wilkinson, 1992). The concept was crystallised in Toyota (Ohno, 1988) and spread among other Japanese manufacturers as Toyota gained fame in international markets for high quality products. Since other companies also improved their performance, it has been viewed as a key component in Japanese management and has been presented as one of the sources of the competitiveness of Japanese manufacturers (Imai, 1986; Kenney & Florida, 1993; Oliver & Wilkinson, 1992).

In recent years, studies have been conducted on the transfer of Japanese production systems, including kaizen, to other countries. For example, Hong *et al.* (2006), Taylor (1999), and Aoki (2008) examined the transferability of Japanese practices to China. Saka (2004) and Oliver and Wilkinson (1992) examined the diffusion of Japanese operations, including kaizen, to the UK while Kenney and Florida (1993) looked at the transfer to the US. The results of studies on success of kaizen transfer are mixed. Fukuda (1988), Kono (1982), and White and Trevor (1983) found that kaizen was not successfully transferred. In contrast, Adler *et al.* (1998) found that kaizen was successfully transferred, in particular at NUMMI, a Toyota/General Motors joint venture.

The purpose of this study is to provide additional insight into factors that affect the successful international transfer of kaizen.

## 4.2 Conceptual Research Framework

In this section, the conceptual research framework is developed. The research framework is oriented on increasing understanding of the term kaizen as well as identifying specific factors that influence the transfer of kaizen.

### 4.2.1 Proxy of kaizen: personal-initiative

A first difficulty for studying the transfer of kaizen is the ambiguousness of the term. Brunet and New (2003) conclude that the term kaizen is inconsistently used and there is no universal definition that authors adopt. This means that although a variety of studies explicitly look at the transfer of kaizen, they may actually be dealing with different things. One objective of this study is to contribute to a better understanding of kaizen.

Kaizen has been discussed in association with continuous improvement. For example, Imai (1986: xxix) defines it as 'ongoing improvement involving everyone – top management, managers, and workers'. Other authors share this view of equating kaizen with continuous improvement explicitly (Aoki, 2008; Malloch, 1997; Styhre, 2001) or implicitly (Bessant et al., 2001; Dobosz-Bourne & Jankowicz, 2006; Jørgensen et al., 2003). Brunet and New (2003) discuss the ambiguity and inconsistency of the way kaizen is described in the literature. They define kaizen as 'consist[ing] of pervasive and continual activities, outside the contributor's explicit contractual roles, to identify and achieve outcomes he believes contribute to the organisational goals' (Brunet & New, 2003: there are some challenges but not clearly understood.). A similar idea has been mentioned by Hayashi (1994), that is, in Japanese organisation a person's job description is not clearly defined and often overlaps. This vagueness weakens the notion of individual responsibility and promotes the notion of group responsibility. As a result, it is easier to go beyond formal responsibility. Thus, it can be concluded that kaizen relates to continuous improvement activities by employees where these activities go beyond the contractual role.

Another concept with a similar emphasis on employee responsibility is the concept of personal-initiative. Personal-initiative is defined as a behavioural pattern whereby individuals take an active, self-starting approach to work and go beyond formal job requirements (Frese, Fay, Hilburger, Leng, & Tag, 1997; Frese, Kring, Soose, & Zempel, 1996). The general actions for people with personal-initiative include identifying opportunities to improve things, challenging the status quo, and creating favourable conditions. Fay and Frese (2001) mentioned that personal-initiative is characterised by five components: 1) alignment with the organisational mission; 2) long-term focus; 3) action-oriented and goal directed; 4) persistent in the face of obstacles; and 5) self-starting and proactive.

Many similarities between the concept of kaizen and personal-initiative were found. For example, both concepts include activities that are outside the employee's role and persistence in identifying and solving problems that are consistent with the organisational goal. It can therefore be argued that the measurement of kaizen, which as was discussed has been ambiguous, can potentially be accomplished by measuring personal-initiative. The advantage of this is that the concept of personal-initiative has already been operationalised and measured. Therefore, to contribute towards consistency on the definition of kaizen a first hypothesis was stated as:

*Hypothesis 1:* *Employees' personal-initiative at work is positively associated with successful transfer of kaizen.*

### 4.2.2 Factors that influence kaizen transfer

Imai (1986) indicated that kaizen is an umbrella concept covering most of the famous Japanese management systems. Factors that influence the transfer of Japanese management systems are potentially valid for the transfer of kaizen as well. The literature review was therefore not limited to factors that affect kaizen transfer but broadened to factors that affect Japanese management system transfer. This led to the identification of two main factors: organisation structure and organisation culture.

*Organisation structure*

Saka (2004) studied the transfer of Japanese work systems, including kaizen, to Japanese subsidiaries in the UK. Her focus was on companies in the automotive industry. She found that the degree to which systems was transferred differed by

company. She notes: '…the operational autonomy provided to individuals in small-group activities, strengthened by a sense of 'groupism' in large firms in the Japanese automotive industry, conflicts with the low worker discretion and sense of individualism that has traditionally strengthened the management hierarchy in the UK automotive industry' (Saka, 2004: 221). This points to how companies are organised or structured.

Various studies have shown that job classification tends to be much simpler and broader in Japanese manufacturing firms as compared with American firms (Cole, 1979; Kenney & Florida, 1993). Kenney and Florida (1993) find that Japanese organise work on the basis of just a few job classifications. For example, there are four job classifications for production workers at Nissan and NUMMI, three at Honda and Toyota, and only two at Mazda and SIA. This is significantly different from the traditional US production organisation where virtually every job has its own job classification, and where those job classifications are seen by workers and unions to provide the basis for wage increases and employment security (Aoki, 1988; Koike, 1998; Shimada, 1990).

Aside from a focus on job classifications, the literature on organisation structure identifies various aspects of structure. Main aspects identified in the literature are: the degree of specialisation, the degree of centralisation, the degree of formalisation, the degree of standardisation, and the degree of configuration (Blau, 1968; Inkson, Pugh, & Hickson, 1970; Pugh, Hickson, Hinings, & Turner, 1968; Reimann, 1974). Burns and Stalker (1961) suggest that the nature of organisational structure could be viewed as comprising one main dimension which distinguishes mechanistic versus organic organisations. Saka's (2004) findings suggest that a prime difference between the Japanese and UK companies was the more mechanistic organisation structures of the UK companies compared to the more organically oriented Japanese companies. Hayashi (1994) also found that Japanese organisations tend to have organic organisational structures.

A mechanistic form of organisation is appropriate for stable environmental conditions. It is characterised by a high degree of formalisation and centralisation, and a clear hierarchy of control in which responsibility for overall knowledge and control rests at the top. The tasks of management are broken down into specialism, with individuals carrying out the assigned and defined tasks. Vertical communication is prominent and there is a requirement for loyalty to superiors. In comparison, an organic form of organisation is appropriate for dynamic

environmental conditions, that is, when new and unexpected problems continually emerge, and where problems cannot be divided and assigned among the different specialism. In organic organisations, there is continual adaptation and redefining of individual tasks and a supportive rather than restrictive nature of specialist knowledge is emphasised. Communication and interaction can take place at any level, as determined by the need of a process, and there exists a much higher degree of commitment to the organisation than for the mechanistic organisation.

A mechanistic structure leads to a different approach to business compared to the organic structure. For example, when a problem occurs in an organic organisation there is no specific individual who covers it because of the vague job descriptions. Consequently, several people who are affected by the problem will share information to tackle the problem together. In contrast, in a mechanistic organisation, responsibility is more clearly defined. In cases where a problem occurs in an area where responsibility is not (yet) defined, people discuss and decide who should be responsible. In mechanistic organisation structures it is therefore more difficult for employees to go beyond their job responsibility. Since kaizen relates to conducting activities that fall outside of the formal job description (Brunet & New, 2003: 1428), this leads to the second hypothesis:

*Hypothesis 2:* *Organically-structured firms are more successful with transferring kaizen than mechanistically-structured firms.*

*Organisation culture*

Aside from organisation structure, culture has been identified as another important variable affecting the kaizen transfer process (Fukuda, 1988; Kono, 1982; Ouchi & Jaeger, 1978; White & Trevor, 1983). Lillrank (1995) indicated that direct transfers of Japanese innovation practices often fail not because of geographical distance but rather due to the mental distance (i.e., culture, history and strategic paradigms). Aoki (2008) also notes that 'the implementation of Japanese kaizen activities in overseas plants is situated in the cultural and social contexts' (Aoki, 2008: 519). Recht and Wilderom (1998) examined the existing literature on the transferability of kaizen oriented suggestion systems with an emphasis on the influence of cultural characteristics. Recht and Wilderom (1998: 11) point out that kaizen oriented suggestion systems are oriented on intrinsic value, that is, although in Japan some rewards are provided, these are of symbolic nature. They conclude that the main strategy of Japanese companies which set up factories abroad is to minimize cultural conflict, for example by setting up greenfield

plants. Another important notion is that for kaizen implementation to be successful it is important that an organisational culture exists where operators can admit their mistakes (Imai, 1986; Ohno, 1988; Wakamatsu, 2007). Based on the above, it can be concluded that culture plays a role in the transfer of kaizen. But the question remains how culture affects kaizen transfer.

Culture can be defined as the 'collective programming of the mind' (Hofstede, 2001). For this study it is important to identify specific cultural characteristics, i.e. those that potentially influence the ease with which kaizen can be transferred. In this research the competing values model is used (Quinn & Rohrbaugh, 1981). Quinn and Rohrbaugh's (1981) research showed that models of organisational effectiveness could be distinguished along two axes reflecting different value orientations. One axis distinguishes flexibility and discretion versus stability and control. The other axis has an internal-external focus dimension. This distinction results in four quadrants for organisational culture: clan, adhocracy, hierarchic, and market.

Clan culture: The clan culture emphasizes flexibility and maintains a focus on the internal organisation. This culture has a primary concern with human relations. The purpose of organisations with an emphasis on clan culture tends to be group maintenance and belonging, trust and participation are core values. Primary motivational factors include attachment, cohesiveness, and membership. Looking at the Toyota culture can provide insights for a suitable corporate culture for kaizen development since Toyota is an initiator of kaizen and has successfully sustained kaizen among workers (Bessant et al., 2001; Imai, 1986; Monden, 1993; Ohno, 1988; Wakamatsu, 2007). Toyota's corporate culture can be described by a group oriented and egalitarian corporate culture (i.e., similarities with the clan culture). Individuals develop identification with a group and a sense of 'community of fate', and believe that all share a common destiny with one another (Cole, 1979; Ohno, 1988). Toyota attaches significance to workers' loyalty to their companies and cultivates a sense of togetherness among them. Company uniforms, songs, morning exercises, after work social gatherings, and ceremonies are organisational mechanisms used to sustain and build Toyota's culture (Besser, 1996; Kenney & Florida, 1993; Liker, 2004; Shimada, 1990). Mutual trust among employees promotes employees' willingness to interchange or apply their knowledge and responsibilities without restrictions (Recht & Wilderom, 1998). In summary, a corporate culture that focuses on the internal improvement, group-

orientation, human resource orientation, belonging, trust, and participation can be considered suitable for developing kaizen. This leads to the following hypothesis:

*Hypothesis 3a: A higher degree of clan organisational culture leads to more success with kaizen transfer.*

Adhocracy culture: The adhocracy culture emphasizes flexibility and change, but maintains a primary focus on the external environment. This cultural orientation emphasizes growth, resource acquisition, creativity, and adaptation to the external environment. Key motivating factors include growth, stimulation, creativity, and variety. The characteristics of this culture which emphasize change match with kaizen development. For example, Toyota put its emphasis on flexibility and small and continuous changes. Katsuaki Watanabe, the former CEO of Toyota, described the corporate culture of Toyota as 'No change is bad' in a sense that everyone should not be satisfied with the status quo but should be trying to improve the situation all of the time (Osono, Shimizu, & Takeuchi, 2008). Although Toyota has primary concerns with human relations and group culture, they put equal emphasis on the adaptation of the external environment. Toyota's top management maintains a focus on environmental changes and expresses a sense of urgency which then generates a culture for continuous change in the organisation (Liker, 2004). For these reasons, it can be argued that an adhocracy organisational culture is also good for the development of kaizen. This leads to the following hypothesis:

*Hypothesis 3b: A higher degree of adhocracy culture leads to more success with kaizen transfer.*

Hierarchical culture: The hierarchical culture emphasizes internal efficiency, uniformity, coordination, and evaluation. The purpose of the organisation with an emphasis on the hierarchical culture tends to be the execution of regulations. Motivating factors include security, order, rules, and regulations. Leaders are conservative and cautious, paying close attention to technical matters. Effectiveness criteria include control, stability, and efficiency.

The underlying philosophy of kaizen requires employees to identify and diagnose quality problems and take corrective action without going through the management hierarchy (Besser, 1996; Cole, 1979; Imai, 1986; Wakamatsu, 2007). Teamwork and mutual trust among workers are critical for kaizen development. In companies that have mainly vertical coordination and control channels, it is less

likely that teamwork develops. This in turn makes it difficult to develop mutual trust among workers. For these reasons it can be inferred that hierarchical culture is not suitable for kaizen development. Thus:

*Hypothesis 3c: A higher degree of hierarchical culture leads to less success with kaizen transfer.*

Market culture: The market culture emphasizes productivity, performance, goal fulfilment, and achievement. The purpose of organisations with an emphasis on the market culture tends to be the pursuit and attainment of well-defined objectives. Motivating factors include competition and the successful achievement of predetermined ends. Leaders tend to be directive, goal oriented, instrumental, and functional, and are consistently providing structure and encouraging productivity. Effectiveness criteria include planning, productivity and efficiency. For these companies, pressure for the results comes from those external constituencies which, in turn, makes the company more short-term and explicitly results oriented. In a market culture organisation each individual is striving for the result and steep internal competition exists within the corporation (Cameron, 2006).

Competitive and independent goals are likely to undermine relationship development (Deutsch, 1949; Johnson, 1981) which is a critical element of kaizen. Deming (2000) stated, 'Harm comes from internal competition and conflict, and from the fear that is thereby generated'. Expecting that others are uninterested and may even have an orientation towards obstructing one's goals, individuals and groups undermine relationships and create doubt that they can work together. It can therefore be inferred that a market oriented culture does not lead to successful kaizen transfer. Therefore:

*Hypothesis 3d: A higher degree of market culture leads to less success with kaizen transfer.*

The overall conceptual research framework is graphically represented in ***Figure 4.1***.

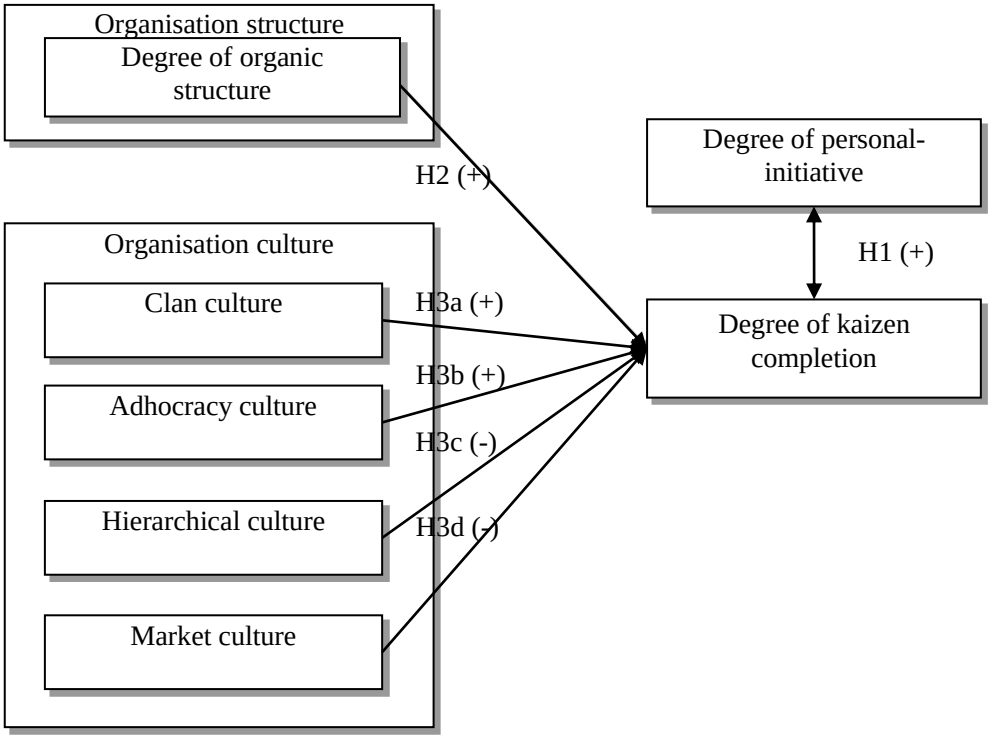


*Figure 4.1 – Conceptual research framework*

## 4.3 Methodology

This section discusses the methodology, namely, the operationalisation of the concepts from the conceptual research framework. The first section describes the concepts and their measurement; the second section describes the selection of the sample; and the third section explains procedures.

### 4.3.1 Measures and analysis

There are four main concepts identified in the conceptual research framework: degree of personal-initiative, organisation structure, organisation culture and success with kaizen transfer.

*Degree of personal-initiative*

Frese *et al.* (1997) discussed several measures of personal-initiative. One of the issues they described is that measuring self-initiative by means of a survey is subject to social desirability bias and may lead to incorrect conclusions. They

used an interview format that allowed probing in several areas. The same approach was followed in this study.

From Frese *et al.* (1996) and Frese and Fay (2000) three measures for personal-initiative were adopted. These are overcoming barriers, activeness, and initiative at work. Overcoming barriers is measured through interviewing respondents and confronting them with four difficult situations. For each situation subsequent barriers are introduced. Overall, a score ranging from 1-5 is allocated based on how many barriers are overcome. The activeness measure is related to the overcoming barriers information and in this case a rating on a scale of 1-5 is determined based upon how actively the barriers were overcome. Lastly, a retrospective measure for initiative at work is used where respondents are asked four questions about work situations and what the respondent did. For example about whether they submitted suggestions to improve work during the last year. Two ratings for each question are made. One involves rating how much quantitative initiative was involved (on a scale from 1 to 5), this means how much effort in time it involved. The other rating is how much qualitative initiative was necessary (on a scale from 1-5). This means looking at how much the activity went beyond what is expected from a person in that job. Averaging the ratings per respondent provides an indicator for personal-initiative for a respondent. Combining all respondents gives an indication for overall level of personal-initiative in the organisation. See ***Table 4.1*** for measurement of personal-initiative

*Table 4.1 – Measurement of personal-initiative*

| **Variable** | **Item adopted from Frese *et al.* (1996) and Frese and Fay (2000)** |
|---|---|
| Degree of personal-initiative | Overcoming barriers |
| | Activeness |
| | Initiative at work (quantitative and qualitative) |

In addition to adopting the existing measures from Frese *et al.* (1996) and Frese and Fay (2000), the operator's personal-initiative was also measured by asking managers about their perception of the level of personal-initiative at the shop floor. This measure was added because it was anticipated that the number of operators in the study would be limited. Also, the managers were expected to have

a good sense of how much personal-initiative exists in general at the factory. This measure was conducted later in the interviews after a definition of personal-initiative was provided and asking for an indication of what percentage of employees currently demonstrates personal-initiative.

*Organisation structure*

For organisation structure, the measurement relates to measuring how organic the organisation is. The operationalisation of this construct was provided by Covin and Slevin (1988), who adopted Khandwalla's (1977) scales. This approach was also adopted in this study. This measure includes seven questions which are measured on a seven point scale. The ratings on these items were averaged to arrive at a single index for the degree of organic structure of the firm. The higher the score on this measure, the more it was oriented to an organic style; the lower the score, the more the top management was oriented towards a mechanistic style. See ***Table 4.2*** for the measurement of organisation structure.

*Table 4.2 – Measurement of organisation structure*

| **Variable** | **Items adopted from Covin and Slevin** (1988) | |
|---|---|---|
| | One end of scale (1) | Other end of scale (7) |
| Degree of organic structure of the firm | Highly structured channels of communication and a highly restricted access to important financial and operating information | Open channels of communication with important financial and operating information flowing quite freely throughout the business unit |
| | A strong insistence on a uniform managerial style throughout the business unit | Managers' operating styles allowed to range freely from the very formal to the very informal |
| | A strong emphasis on giving the most say in decision making to formal line managers | A strong tendency to let the expert in a given situation have the most say in decision making even if this means even temporary bypassing of formal line authority |
| | A strong emphasis on holding fast to tried and true management principles despite any changes in business conditions | A strong emphasis on adapting freely to changing circumstances without too much concern for past practice |
| | A strong emphasis on always getting personnel to follow the formally laid down procedures | A strong emphasis on getting things done even if it means disregarding formal procedures |
| | Tight formal control of most operations by means of sophisticated control and information systems | Loose, informal control; heavy dependence on informal relationships and the norm of cooperation for getting things done |
| | A strong emphasis on getting line and staff personnel to adhere closely to formal job descriptions | A strong tendency to let the requirements of the situation and the individual's personality define proper on-job behaviour |

*Organisational culture*

Following the discussion, the competing values culture instrument by Quinn and Spreitzer (1991) was used in this research. In the competing cultures instrument organisation cultures are measured along two dimensions leading to four main groupings of cultures: clan, adhocracy, hierarchic, and market. The measurement is accomplished through measuring four items: company characteristics, company leaders, the 'glue' or holding agent, and company emphasis, see ***Table 4.3***. Each item contains a set of four statements and respondents are asked to divide 100

points among these four statements (for each item) to indicate emphasis. The average of these measures provides an indication of degree of organisational culture. An emphasis (i.e., more points) on statements relating to company W, X, Y and Z correspond respectively with an orientation towards the clan, adhocracy, hierarchic and market culture.

*Table 4.3 – Measurement of organisation culture*

| Item | Statements adopted from Quinn and Spreitzer (1991) |
|---|---|
| Company characteristics | Company W is a very personal place. It is like an extended family. People seem to share a lot of themselves. |
| | Company X is a very dynamic and entrepreneurial place. People are willing to stick their necks out and take risks. |
| | Company Y is a very formalised and structured place. Bureaucratic procedures generally govern what people do. |
| | Company Z is very production oriented. A major concern is getting the job done. People aren't personally involved. |
| Company leader | The head of company W is generally considered to be a mentor, a sage, or a father or mother figure. |
| | The head of company X is generally considered to be an entrepreneur, an innovator, or risk taker. |
| | The head of company Y is generally considered to be a coordinator, organizer, or an administrator. |
| | The head of company Z is generally considered to be a producer, a technician, or a hard-driver. |
| Company 'glue' or holding agent | Company W is held together by loyalty and tradition. Commitment to this company runs high. |
| | Company X is held together by a commitment to innovation and development. There is an emphasis on being first. |
| | Company Y is held together by formal rules and policies. Maintaining a smooth-running company is important here. |
| | Company Z is held together by an emphasis on tasks and goal accomplishment. A production orientation is commonly shared. |
| Company emphasis | Company W emphasizes human resources. High cohesion and morale in the company are important. |
| | Company X emphasizes growth and acquiring new resources. Readiness to meet new challenges is important. |
| | Company Y emphasizes permanence and stability. Efficient, smooth operations are important. |
| | Company Z emphasizes competitive actions and achievement. Measurable goals are important. |

*Success with kaizen transfer*

Measures for success with kaizen transfer in terms of Brunet and New's (2003) definition of kaizen have not been established in the literature. Several authors proposed general measures for kaizen or continuous improvement (Claver, Tarí, & Molina, 2003; Douglas & Judge, 2001) but these proposed general measures have been used more specifically for elements of different constructs such as TQM and quality management and are neither developed specifically to measure the concept of kaizen nor the success of its transfer. Moreover, those items do not fit to the definition from Brunet and New (2003).

In this study, it is assumed that success with kaizen transfer is logically related to accomplishing a higher level of kaizen transfer to the factory. Kaizen completion was measured after providing respondents with the definition of kaizen and asking; 'In your perspective, what is the degree of completion of developing kaizen in this factory as a percentage?'

### 4.3.2 Sample

Data for this research was collected from Japanese manufacturers in the Netherlands. Japanese manufacturers were selected because kaizen has been frequently used as one of the best practices in the Japanese manufacturing industry (Aoki, 2008). Ohmae (1985) argued that for business, there are three important regions in the world (i.e., the triad), which consists of Japan, the US and Europe. In this study, the focus is on kaizen transfer to Europe. Within Europe, a further distinction was made based on where Japanese companies invest. Based on data from the Japan External Trade Organisation (JETRO) a choice was made to focus on the Netherlands. From, 2003 until 2009, the Netherlands was the largest recipient in Europe of Japanese investments (http:// www.jetro.go.jp/en/reports/statistics/).

A list of Japanese manufacturers in the Netherlands was obtained from the website of the Netherlands Foreign Investment Agency (NFIA) and a publication from JETRO. These two lists were combined to develop one list of companies leading to one list with 52 Japanese manufacturers operating in the Netherlands. Researchers contacted each company by phone and asked for participation. In the initial stage, it was found that five companies either closed their factory or had transferred their operations to other countries. Out of the remaining 47 companies,

15 companies agreed to cooperate. During the data collection, it was found that one of the companies had recently established a factory in the Netherlands and was not (yet) implementing kaizen. Therefore, a total of 14 companies were included in the analysis.

### 4.3.3 Procedure

Each company was asked to arrange separate meetings for interviews with the managing director (MD), the production manager, and three to five shop floor operators. The interviews consisted of a series of open ended questions as well as several closed questions. The closed questions were formulated on separate pieces of paper and the respondents were, after providing a short description, asked to fill these in. They were completed in front of the researcher in a conference room at the company. ***Table 4.4*** shows the summary of measures used and questions asked to managers and shop floor operators.

*Table 4.4 – Summary of methods applied*

| | **Personal-initiative** | | **Degree of organic structure** | **Degree of organisational culture** | **Kaizen transfer success** |
|---|---|---|---|---|---|
| Measures | Perception on shop floor operators | Instrument of Frese *et al.* (1996) | Instruments of Covin & Slevin (1988) | Competing cultures instrument of Quinn & Spreitzer (1991) | Perception in percentage |
| Managers | X | | X | X | X |
| Operators | | X | X | X | |

In some companies, the managing director was not able to participate in the interview survey due to their heavy duties. In these instances, they were replaced by another top or middle manager who was deemed to have sufficient knowledge about kaizen and the organisation's characteristics. Also, in some companies it was not allowed to interview shop floor operators. The reason provided was that the operators had extensive duties and could not be missed. Characteristics of the samples are shown in ***Table 4.5*** below:

*Table 4.5 – List of surveyed plants, respondents and intre-class correlation coefficient*

| **Companies** | **Size (employee)** | **Respondents** | **Intra-class correlation coefficient**<br>**** $p < 0.01$**<br>*** $p < 0.05$**<br>**† $p < 0.10$** |
|---|---|---|---|
| A | 500-999 | • 3 middle managers (Dutch)<br>• 3 operators (Dutch) | Organisational structure 0.91**<br>Organisational culture 0.80 ** |
| B | 100-199 | • MD (Japanese)<br>• 2 middle managers (Japanese)<br>• 3 operators (Dutch) | Organisational structure 0.70*<br>Organisational culture 0.42 † |
| C | 100-199 | • MD (Dutch)<br>• 3 operators (Dutch) | Organisational structure 0.72*<br>Organisational culture 0.85 ** |
| D | 200-299 | • MD (Dutch)<br>• Middle manager (Dutch)<br>• 3 operators (Dutch) | Organisational structure 0.63†<br>Organisational culture 0.75 ** |
| E | 50-99 | • 2 middle managers (Japanese)<br>• 3 operators (Dutch) | Organisational structure 0.61†<br>Organisational culture 0.47 † |
| F | 0-49 | • MD (Dutch)<br>• Middle Manager (Dutch)<br>• 3 operators (Dutch) | Organisational structure 0.70**<br>Organisational culture 0.79 ** |
| G | 50-99 | • MD (Japanese)<br>• 2 middle managers (Dutch and Japanese)<br>• 3 operators (Dutch) | Organisational structure 0.87**<br>Organisational culture 0.58 † |
| H | 500-999 | • Middle manager (Japanese) | Not applicable |
| I | 100-199 | • MD (Japanese) | Not applicable |
| J | 0-49 | • MD (Japanese)<br>• 2 middle managers (Dutch and Japanese) | Organisational structure 0.63†<br>Organisational culture 0.77 * |
| K | 1000 and more | • Middle managers (Dutch) | Not applicable |
| L | 0-49 | • MD (Neither Dutch nor Japanese) | Not applicable |
| M | 50-99 | • Middle manager (Dutch) | Not applicable |
| N | 0-49 | • MD (Japanese) | Not applicable |

## 4.4 Results and Discussion

Kendall's tau was used to measure a correlation among variables. Kendall's tau is the non-parametric test that is suitable for testing hypotheses with small sample (Hollander, 1999). Results from the test of the hypotheses are shown in ***Table 4.6***.

*Table 4.6 – Descriptive statistics and correlations (Kendall's τ)*

| | Mean | SD | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|---|
| 1. Kaizen completion | 0.36 | 0.22 | 0.47 | 0.02 | 0.49 * | 0.49 * | 0.25 | -0.6 * | -0.1 |
| | | | n=6 | n=12 | n=12 | n=12 | n=12 | n=12 | n=12 |
| 2. Personal-initiative (OP) | 3.23 | 0.74 | | -0.3 | 0.05 | 0.48 | -0.2 | -0.3 | 0.05 |
| | | | | n=7 | n=7 | n=7 | n=7 | n=7 | n=7 |
| 3. Personal-initiative (MG) | 0.44 | 0.17 | | | -0.1 | 0.48 | 0.01 | -0.2 | -0.1 |
| | | | | | n=14 | n=14 | n=14 | n=14 | n=14 |
| 4. Degree or organic structure | 3.82 | 0.90 | | | | 0.48 * | 0.60 ** | -0.5 ** | -0.3 |
| | | | | | | n=14 | n=14 | n=14 | n=14 |
| 5. Degree of clan org. culture | 25.47 | 10.8 | | | | | 0.25 | -0.5 * | -0.4 * |
| | | | | | | | n=14 | n=14 | n=14 |
| 6.Degree of ad-hoc org. culture | 16.5 | 8.17 | | | | | | -0.5 * | 0.20 |
| | | | | | | | | n=14 | n=14 |
| 7.Degree of hierarchy org. culture | 29.62 | 9.07 | | | | | | | 0.13 |
| | | | | | | | | | n=14 |
| 8.Degree of market org. culture | 25.92 | 0.17 | | | | | | | |

** $p < 0.01$(one tailed)

* $p < 0.05$ (one tailed)

Hypothesis 1: The first hypothesis relates to the kaizen transfer success and personal-initiative. On the one hand, kaizen completion was significantly related to the manager's perspective of personal-initiative, $\tau = 0.49$, $n = 12$, $p$ (one-tailed) $< 0.05$ level. On the other hand, kaizen completion was not significantly related to the direct measure of operator's personal-initiative.

It is possible that this result occurred because the company selected the operators that participated in the study (i.e., there was no control over random selection of operators). The data collected from the operators is therefore subject to bias

because they tended to be operators who had certain characteristics (i.e., the best operators in the company). The results from the instruments of Frese *et al.* (1997) could potentially have been better if operators had been randomly selected and/or if a larger number of operators was interviewed.

This study suggests that the managers' assessment on personal-initiative can be a reliable measure and it has a significant relationship with kaizen completion. It suggests that personal-initiative may be a good proxy for measuring kaizen completion.

Hypothesis 2: The second hypothesis states that a more organically oriented organisation structure is positively related to kaizen transfer success. In other words, it will be easier for organically structured companies to implement kaizen than for mechanistic firms. It was found that there was a significant relationship between kaizen completion and degree of organic organisational structure, $\tau$ = 0.49, $n$ = 12, $p$ (one-tailed) < 0.05. Thus, the data supports the hypothesis.

One way of interpreting this finding is that one of the major reasons why Japanese companies have been facing difficulties with transferring kaizen abroad is because of different organisation structures in countries outside of Japan. Hayashi's (1994) research shows that the Japanese companies in general have more of an organic structure than that of non-Japanese companies. It can also explain why Japanese companies who set up plants abroad prefer greenfield investments rather than joint-ventures. In greenfield investments, the Japanese can develop an organic organisational structure from the start and they do not need to deal with changing an initially more mechanistic oriented organisational structure.

Hypothesis 3a, b, c, and d: The last set of hypotheses related to the influence of organisation culture. Hypothesis H3a predicts that a clan culture leads to higher success with kaizen transfer. The hypothesis was confirmed, that is, clan culture was significantly related to kaizen completion, $\tau$ = 0.49, $n$ = 12, $p$ (one-tailed) < 0.05. Hypothesis 3b predicts that an adhocracy organisation culture leads to higher success with kaizen transfer. The results indicate that there is indeed a positive correlation between adhocracy culture and kaizen completion. However, this relationship was found not significant (i.e., the hypothesis was rejected). Hypothesis 3c predicts that a hierarchical organisation culture leads to less success with kaizen transfer. This hypothesis was confirmed, that is, hierarchical culture was related negatively and significantly to kaizen completion, $\tau$ = -0.62, $n$ = 12, p (one-tailed) < 0.01. Lastly, hypothesis 3d predicted that a market

organisation culture leads to less success with kaizen transfer. Similar to Hypothesis 3b, the correlation (negative) between a market culture and kaizen completion was confirmed but the relationship was found not significant. Thus the hypothesis was rejected.

These results show that organisations with a clan culture are more likely to be successful with kaizen transfer whereas a hierarchical culture does not fit well with kaizen development. It also indicates that what affects the successful kaizen transfer is whether a company has a flexibility orientation or a control orientation and not whether it has an internal or external dimension. Similar to the findings on organisation structure, it can be inferred that one of the main reasons that Japanese companies are facing difficulties with transferring kaizen abroad could be the differences related to organisation culture. Changing the culture is considered more difficult than changing the structure because it is related to people's belief. This is furthermore influenced by the national culture and history. The clan oriented culture is especially difficult to develop in nations with a more individualistic oriented national culture (Hofstede, 2001). The Netherlands is an example of such a country. There is also evidence in previous studies that Japanese companies try to hire personnel who possess a cooperative attitude and a motivation for solving problem within teams (Oliver & Wilkinson, 1992; Shimada, 1990) and for example Recht and Wilderom (1998) who mentioned that the Japanese prefer to hire individuals without previous work experience ('uncontaminated' labour). These activities can be interpreted as Japanese companies trying to set the necessary conditions for developing a clan culture or for changing towards a clan oriented culture.

## 4.5 Conclusions

This study examined the successful implementation of kaizen by Japanese companies in Europe (i.e., the Netherlands). The purpose of this study was to provide additional insight into factors that affect the successful international transfer of kaizen. More specifically, in this study a proxy for measuring kaizen was proposed and the influence of organisation structure and organisation culture was discussed. This led to several hypotheses. First, successful kaizen transfer is positively associated with personal-initiative (H1). Second, successful kaizen transfer is positively related to organic firms (H2). Lastly, clan and adhocracy

organisational culture lead to positive (H3a, H3b) and control-oriented and market culture lead to negative kaizen outcomes (H3c, H3d). The results confirmed H1, H2, H3a, and H3c but H3b and H3d were rejected.

This research contributes to both theory and practice. It adds to the existing theories by adding clarity to the concept of kaizen. It was found that personal-initiative is correlated with kaizen. Thus, future research on kaizen may want to consider adopting measuring personal-initiative as a proxy for kaizen. The study also suggests that difficulties of transferring kaizen abroad are related to organisation structure and organisation culture. In other words, the type of structure and the type of culture of the organisation which is adopting kaizen influences whether it will be successful in transferring kaizen.

For the practical perspective, this study provides direction to practitioners who want to transfer kaizen abroad. Based on the study results, it is easier to transfer kaizen to organisations which are organic and which have a clan culture. In situations where these conditions do not exist, managers can strive to either create those conditions (greenfield investments may be appropriate) or otherwise they should anticipate a more lengthy transfer process.

Some limitations exist for this exploratory research. First, in some sample companies, there were issues with the reliability of the organisational structure and culture data because data was gathered from a limited number of respondents. Second, the small sample size restricted the use of more sophisticated statistical analyses and therefore generalisability should be cautioned. Third, the use of subjective measures such as for measuring operator level personal-initiative leaves open the possibility that respondents may have answered certain questions in what they believed were socially desirable or managerially appropriate manners. Although precautions were taken to minimize response bias by cross checking the data that are provided by respondents in the different levels in the organisation, social desirability bias may have nonetheless affected the findings. Fourth, the research design was cross-sectional. Thus, cause-effect relationship cannot be definitively inferred from the research results.

# Chapter 5

# 5. The Influence of National Level Factors in International Transfer of Kaizen

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## 5.1 Introduction

One of the advantages of multinational companies (MNC) is their ability to coordinate manufacturing practices across the manufacturing network (see, for example, Flaherty, 1986; Flaherty, 1996). In some cases, this requires the transfer of equipment or production lines but it can also relate to production philosophies. Examples of the latter are Japanese philosophies such as just-in-time and lean production.

In the 1970s and 1980s, Japanese manufacturers became prominent in several industries such as electronics and cars. Western companies tried to emulate Japanese approaches such as the Toyota Production System (see Liker, 2004), and lean manufacturing, (see Henderson & Larco, 1999). Japanese companies also transferred production systems to their overseas locations (Imai, 1986).

In line with the approaches of Western companies to emulate Japanese practices and with the approaches of Japanese companies to transfer their practices to overseas subsidiaries came an increase in research on Japanese management practices. For instance, scholars have tried to identify the keys of Japanese success (e.g., Womack et al., 1990). Subsequent research has shown that transferring Japanese practices across borders has not been easy. Babson (1995) concluded 'The Japanese model was not so easily transferred to the U.S. in any case, for many of the social and corporate structures that made worker commitment mandatory in Japan's auto industry were unique to the system's home base' (238). Despite the extensive research that goes back to the 1980s, recent research indicates that 80% of Japanese companies still find the transfer Japanese

management systems overseas problematic. Of these, kaizen is considered the most important (Yokozawa et al., 2010). Kaizen is one of the key concepts deployed by Japanese manufacturers (Brunet & New, 2003; Imai, 1986) and is defined in general terms as continuous improvement involving everyone in the company (Imai, 1986). The goal of this research is to contribute to the understanding of the influence of national level factors on the international transfer of kaizen.

## 5.2 Literature Review

The literature review is divided into three sections. In each section several studies are discussed that provide important insights for understanding international transfer of kaizen. The first section focuses on reviewing the literature on knowledge transfer. Knowledge in this research is defined as an organised combination of ideas, rules, procedures, and information (Marakas, 1999). Kaizen can be considered as knowledge because, for example, Boer *et al.* (2000) define kaizen as a planned, organised and systematic process of on-going, incremental and company-wide change of existing work practices aimed at improving company performance. The literature on knowledge transfer can therefore be relevant for the transfer of kaizen. The second section focuses on the literature dealing with the transfer of Japanese management systems. This is relevant since kaizen has been viewed as an umbrella concept of most of the famous Japanese management systems (Imai, 1986). This literature is therefore relevant for the transfer of kaizen. The third section focuses on research that has specifically been conducted on international kaizen transfer.

### 5.2.1 General literature on international knowledge transfer

Kayes, Kayes and Yamazaki (2006) examine the managers' critical competencies for cross-cultural knowledge absorption. From an intensive literature study of knowledge management and cross-cultural competency research, they identified seven competencies for knowledge absorption. Some of these competencies are related to national level factors. This study provided insight into competencies for managers but what is missing is how national factors influence knowledge transfer.

Hong, Snell, and Easterby-Smith's (2006) study examined the cross-cultural influences on organisational learning in MNCs. They conducted a qualitative study at five Japanese manufacturing companies in China. They found that there were differences between frontline Japanese and Chinese workers in terms of constructive engagement and member solidarity, thus limiting organisational learning. That is attributed to deep-seated cultural values and the frontline Chinese workers resistance to such involvement. Hong, Snell and Easterby-Smith's (2006) study confirms that national level factors are important when transferring knowledge. Similarly, Van Wijk, Jansen and Lyles (2008) examined how organisational knowledge transfer between and within organisations relates differently to their antecedents and consequences. They find that cultural distance particularly hinders knowledge transfer in terms of intraorganisational knowledge transfer.

Chen, San, and McQueen (2010) look specifically at the impact of national culture on the structured knowledge transfer from a US-based (onshore) technical support centre to an offshore support centre in China. Their findings show that knowledge tacitness, knowledge gaps, cultural and communication difficulties and weak relationships were the critical barriers to successful knowledge transfer. Several of these factors can be considered national level influences. Why those factors play a role is less clear.

Welch and Welch (2008) examined the influence of language on the knowledge transfer within the MNC. They separated language from culture and examined the influence on cost, transfer medium, terms, networks, trust, staff movements and motivation. They found that language plays a role as a 'reconfiguration agent' which means that language continually reconfigures the total international knowledge transfer system, acting as a precursor, contextual influence and even reconstructing basic messages. Similarly, Duan, Nie, and Coakes (2010) explored the factors that influence the process of international knowledge transfer. They also found that language plays a critical role.

Ambos and Ambos (2009) examined the impact of geographic distance on knowledge transfer effectiveness in multinational companies. They found that as geographic distance increases, its contribution to knowledge transfer effectiveness decreases dramatically. This is similar to previous findings from Daft and Lengel (1986) who found that when the geographic distance between knowledge sender and recipient is high, obstacles such as long transmission channels and different

time zones limit the effectiveness of transfer, as the complexity and cost of knowledge exploration and transaction increase.

In conclusion, studies on international knowledge transfer show that national level factors have a significant influence on the transfer. The deeper reasons for the occurrence of these factors (i.e., an explanation of why and how they play a role) are only superficially known. Furthermore, Van Wijk *et al.* (2008) suggest, there are relatively few studies that investigated the relationships between culture and knowledge transfer. This may be because cultural aspects are rarely 'visible' within the quantitative methods that have dominated in published studies.

### 5.2.2 General literature on Japanese management transfer

Fukuda (1988) examined the extent of the application of features of Japanese-style management (i.e., ideologies and practices) in more than one hundred Japanese subsidiaries in Hong Kong and Singapore. The result of the survey revealed that only a little over ten per cent of the companies in both Hong Kong and Singapore expressed a strong conviction that Japanese-style management could be transferred. He concluded that the Japanese management systems were difficult to transfer overseas because they were closely tied to the prevailing culture. Kono (1992) drew similar conclusions from a study on practices of Japanese subsidiaries in the UK, US, Malaysia, Philippines, and other countries. Kono (1992) found that some management practices were difficult to transfer because they were related to a deep core of cultural values. These studies illustrate that transferring Japanese management systems to other countries is not easy and that culture may play a role. How or why culture plays an important role is not established in the literature.

Other national level factors that have been identified in the literature are labour turnover, which is related to commitment of employees to the company (Beechler & Zhuang Yang, 1994; Kennly & Florida, 1995), and industrial relations which is related to the influence of unions (Beechler & Zhuang Yang, 1994; Choy & Jain, 1987; Kenney & Florida, 1993; Shimada, 1990). For example, Kenney and Florida (1995: 797) found that a higher labour turnover rate than in Japan complicates efforts to develop conformance to Japanese-style norms, behaviours and management techniques. Furthermore they found that companies followed different approaches in the US based on whether a union was present or not. Four

of the nine Japanese or Japanese-US joint ventures in their study on car assembly were non-unionised. These chose rural greenfield sites to avoid unionisation. Also, Japanese team-oriented policies and flexible work rules, a smaller number of job classifications, and the utilisation of different pay systems tended to conflict with union rules which emphasize work specialisation and individual responsibilities (Kenney & Florida, 1995).

These studies demonstrate that national level factors play an important role in the international transfer of Japanese management systems.

### 5.2.3 Literature on international kaizen transfer

Lillrank (1995) examined how the Japanese management innovation practices have been successfully transferred from one country to another. He states that management principles need to be abstracted to a high level of generality and then translated back to fit the local environment and cultures. Lillrank (1995) concludes that direct transfers of ideas and methods often fail because of geographical and more importantly mental distance that involves culture. Recht and Wilderom (1998) examined the cultural constraints on transferring Kaizen-oriented suggestion systems more in-depth. Based on Hofstede's (2001) five cultural dimensions model (power distance, uncertainty avoidance, masculinity/feminity, individualism/collectivism, and long/short term orientation), they discussed the influence of each dimension on the international kaizen transfer. They suggested that national culture is critical for international kaizen transfer (Recht & Wilderom, 1998). Both of the above mentioned studies are based on conceptual models that have not been tested empirically. Since the 1980s, many studies have been conducted that focus on kaizen or continuous improvement (see, e.g., Bessant, 2003; Boer, 2000). However, many of these studies have had a limited emphasis on the influence of national level factors even though, as in the literature review section, national level factors have been shown to have an important impact. This study is therefore focused on a further exploration of the influence of national environmental factors on international kaizen transfer.

## 5.3 Methodology

An appropriate research methodology for exploring is a case study design (Yin, 1994). In the study, an inductive case study approach following Eisenhardt (1989) was used. It follows specific steps and allows for developing theory from the empirical data. With this type of approach testable theory emerges at the end of the study, not at the beginning (Eisenhardt, 1989: 548).

### 5.3.1 Case selection

Ohmae (1985) argued that for business, there are three important regions in the world (the triad), which consists of Japan, the United States and Europe. In this study a choice was made to focus on kaizen transfer between two of the regions (i.e., transfer of kaizen from Japan-based companies to Europe). Within Europe a further distinction was made based on where Japanese companies invest. Data from the Japan External Trade Organisation (JETRO) shows that from 2003 until 2009, the Netherlands was six times the largest recipient in Europe of Japanese investments (http://www.jetro.go.jp/en/reports/statistics/). Therefore, it was decided to focus the research on the transfer of kaizen by Japanese manufacturers to the Netherlands.

A list of Japanese manufacturers in the Netherlands was obtained from the website of the Netherlands Foreign Investment Agency (NFIA). Another list of Japanese manufacturers in the Netherlands was obtained from the JETRO. The two lists were combined which led to a list of 52 companies (the population for the study). Since this number was relatively small, it was decided to contact all companies for participation in the research rather than taking a sample.

Initial contact with the companies was made by phone. Five companies had either recently closed or transferred their operations to other countries, which reduced the population to 47 companies with manufacturing activities in the Netherlands. Out of these, 32 companies declined to cooperate. Thus, fifteen companies agreed to cooperate with the research project. General characteristics of these companies are shown in ***Table 5.1***.

*Table 5.1 – General case company characteristics*

| Case | Products | Employees (consolidated) |
|---|---|---|
| A | Construction machinery | between 100-500 (16,117) |
| B | Slide fasteners | less than 100 (38,399) |
| C | FA-related apparatuses | between 100-500 (35,045) |
| D | Stainless steel welding materials | less than 100 (34,459) |
| E | Photosensitive materials for photography | more than 500 (76,358) |
| F | Electrodes | less than 100 (120) |
| G | Safe instrumentation systems | more than 500 (20,266) |
| H | Food | less than 100 (15,822) |
| I | Forklifts | more than 500 (33,164) |
| J | Molded articles of piocelan | less than 100 (1,372) |
| K | Safety glass | between 100-500 (19,742) |
| L | Plastic building materials | less than 100 (19,742) |
| M | Polyolefin foams | between 100-500 (19,742) |
| N | Attaching shrink labels and cap seals | less than 100 (2,368) |
| O | Thin Steel Sheets | less than 100 (4,607) |

### 5.3.2 Data collection methods

Three methods were used for data collection. These were, in order of increasing importance: observations at the shop floor, internal company documents, and semi-structured interviews. For the interview portion of the research, a survey was developed which contained 1) a set of structured questions to enhance consistency in approach and thus reliability, and 2) several questions that allowed probing deeper into issues identified by the respondent. The initial set of structured questions allowed the identification of the most important national level factors. The purpose of the probing questions was to reach a deeper level of understanding regarding the why and how of the identified national level factors. Examples of structured questions were: which countries do you perceive as easier or more difficult to transfer kaizen compared to the Netherlands? What are differences between Dutch and Japanese companies regarding the implementation of kaizen? Which Dutch specific national factors affect the process of international transfer of kaizen and how do these factors affect the transfer process?

In each company between one and five respondents were interviewed. All of the interviews were recorded and transcribed. Respondents were selected based upon their experience of working abroad (and thus being able to discuss national level

influences) and having sufficient knowledge of kaizen. This effectively meant that respondents were middle- and top-managers. They included both Japanese and Dutch citizens eliminating a potential bias from a specific national group.

### 5.3.3 Data analysis methods

The data was analysed by looking for patterns in the answers. Thus, a first level of analysis looked for common elements across all companies. Two factors were found that were identified across the companies as national level factors. Next, a second level of analysis was conducted to look for potential differentiating factors which included: company size, the time period the company had been implementing kaizen, the degree of completion of kaizen transfer, the number of overseas subsidiaries, and the nationality of the CEO. No patterns were found in this second level analysis but this finding should be cautiously interpreted due to the limited number of respondents overall.

## 5.4 Findings

Responses led to the identification of two main factors which influenced the success of kaizen transfer and which were perceived by the respondents as being national level factors. The two factors are *level of discipline of employees* and *eagerness of employees*. Their combined influence on kaizen transfer will be discussed.

### 5.4.1 Employees' level of discipline

Respondents indicated that the level of discipline of employees, which was perceived as a national level factor, has a big influence on the transfer of kaizen to the Netherlands. How level of discipline plays a role can be determined from the way it was identified by respondents. For example, some respondents perceived certain countries as easier for kaizen transfer compared to the Netherlands because the employees in such countries were considered more obedient. As an illustration, an executive senior production engineer from Company I indicated easier countries for transferring kaizen: 'South-East Asian countries such as Vietnam and Thailand. People in those countries are obedient like the Japanese.' This obedient aspect was not limited to Asian countries as the quote from the

production manager from company D illustrates who identified Germany as a better country for transferring kaizen compared to the Netherlands: 'In Germany, they are very strict. They are really doing what they are really told.' Similarly, the staff manager of Company E stated, 'In Germany kaizen could work because their discipline is stronger. They could do kaizen with discipline similar to in Japan.' Another example comes from the production leader from company B, who, when talking about Germany, said, 'The boss is really the boss and they knock on the door before they enter and the boss asks to do this and they are really doing this.' The general production manager of company G said something similar about Germany, 'They listen to their manager.' Some countries were perceived as having employee attitudes with less discipline than in the Netherlands and consequently they were perceived as more difficult for transferring kaizen compared to the Netherlands. For example, Southern European countries such as Italy and Spain were placed in this category.

Based on these findings it can be concluded that the 'level of discipline of employees' was considered an important national level factor. This factor relates to general attitudes of employees in a country referring to the ease with which employees do what they are told. In some countries, employees follow instructions strictly, for example in Japan and Germany. While in other countries, employees do not always follow instructions precisely or question the instructions, for example, in the Netherlands.

The reason why the level of discipline is important for the transfer of kaizen might relate especially to the aspect of *transfer* (i.e., introducing something new). When something new is introduced, it requires a change from the existing routines. In countries where employees are disciplined and strictly follow orders, the new routines can be 'enforced' through discipline. In countries where employees do not strictly follow orders it is much harder to establish the new, kaizen related, routines because when employees don't accept the new routines, they will not follow them. This leads to the following proposition:

*Proposition 1:* *It is easier to transfer kaizen to countries in which employees have a high level of discipline than to countries where employees have a low level of discipline.*

### 5.4.2 Eagerness of employees

The second common factor identified by respondents was the eagerness of employees. How level of eagerness of employees plays a role can be determined from the different ways in which respondents identified this concept. For example, several respondents noted that it is easier to transfer kaizen to East Asian countries compared to the Netherlands because employees in East Asia have a 'hungry mentality' (i.e., they are eager to do the work). As an illustration, the general manager of company D stated, 'I think that the hungry spirit is necessary. In those countries people are hungry for money so they can think about many ideas for improvement.' Another example comes from the production manager of company L who stated, 'Asian countries are easier. I think that in those countries people try to work hard to improve themselves. For instance, if the company pays for overtime work, people earn more money as they improve their ability. They have a hungry spirit to learn new things.' The eagerness of employees was not only identified for Asian countries. Some respondents mentioned that several Scandinavian countries would be easier for kaizen transfer compared to the Netherlands due to eagerness. For example, a staff manager of company E stated about employees in Scandinavian countries, 'I would say they are eager to learn.'

Differences in national levels of eagerness of employees were also identified as a difference between Japan and the Netherlands. For instance, it was connected with a perception of the employee level of commitment. A manager at company E stated, 'The commitment of the people is much higher [in Japan] towards the company. People are willing to invest also after working hours to have these events to come up with a proposal to invest time. Here [in the Netherlands] after 4:30 pm people are gone to the parking lot and gone home.' In a similar way, Germany was seen as less attractive for kaizen because job descriptions are very precise and if something is not in the job description, employees do not want to do it. The eagerness of employees in the US was viewed in a similar manner as in the Netherlands: employees were perceived to defensively define their job responsibility (limit their responsibilities to what is in the contract). This is in contrast to in particular Asian countries. The production advisor of Company D said, 'I think it is easier to develop the kaizen mentality in Asian countries like Korea, China, Singapore and Thailand. They do things which are not written down.'

Based on these findings it can be concluded that the 'eagerness of employees' was considered an important national level factor. This factor relates to general attitudes of employees in a country referring to a proactive approach of employees to not just do their job but to go above and beyond what is strictly speaking required or mentioned in their contract. Two different types of underlying motives for national level eagerness of employees were found in the case interviews. For some countries the eagerness aspect was explained by respondents in economic terms. This means that employees are residents of an economically deprived country and are motivated to improve their situation. This leads to eagerness as displayed in their jobs. Examples of countries where this occurs are Asian countries such as Thailand, urban areas in China, and East-European countries. For another set of countries eagerness was explained by respondents as being related to a certain level of commitment to the company. This level of commitment is the result of national employment systems and how people are treated. For example, in Japan, the situation of life-time employment plays a very important role. When Japanese employees start their working career, they generally expect to work in the same company for a lifetime. This mentality leads people to have a feeling that they are sharing their employment success with the success of the company they are working for. In this situation, employees are committed to the welfare of the company and tend to demonstrate an eagerness to go beyond strictly defined job descriptions. In several other economically advanced nations such as the Netherlands and Germany this eagerness is at a much lower level than in Japan.

The reason why the eagerness of employees is important for the transfer of kaizen might especially relate to specific characteristics of kaizen. Brunet and New (2003) define kaizen as continuous improvement involving activities that are outside of the contributor's explicit roles. A similar idea has been mentioned by Hayashi (1994). Thus, kaizen relates to a mentality of employees where they try to continuously improve the company's performance even when it is not part of their job description. Countries where employees stick to the exact description of their job, such as the Netherlands and Germany, will present challenges for implementing kaizen. While in countries where employees are eager to do additional things, it will be relatively easy to implement kaizen. This leads to the following proposition:

*Proposition 2:* *It is easier to transfer kaizen to countries in which employees have a high level of eagerness than to countries where employees have a low level of eagerness.*

### 5.4.3 International transfer of kaizen

The previous two sections illustrate the two main national level factors which were perceived by the respondents as influencing the transfer of kaizen. Although the interviews were set-up in an open format (i.e., any type of answer could have been provided initially by respondents), the answers are primarily culture oriented. Thus, a first finding is that cultural factors are the most important factors for the transfer of kaizen. The two factors can be combined in a graph to illustrate their combined impact on the transfer of kaizen. This is depicted in ***Figure 5.1***.

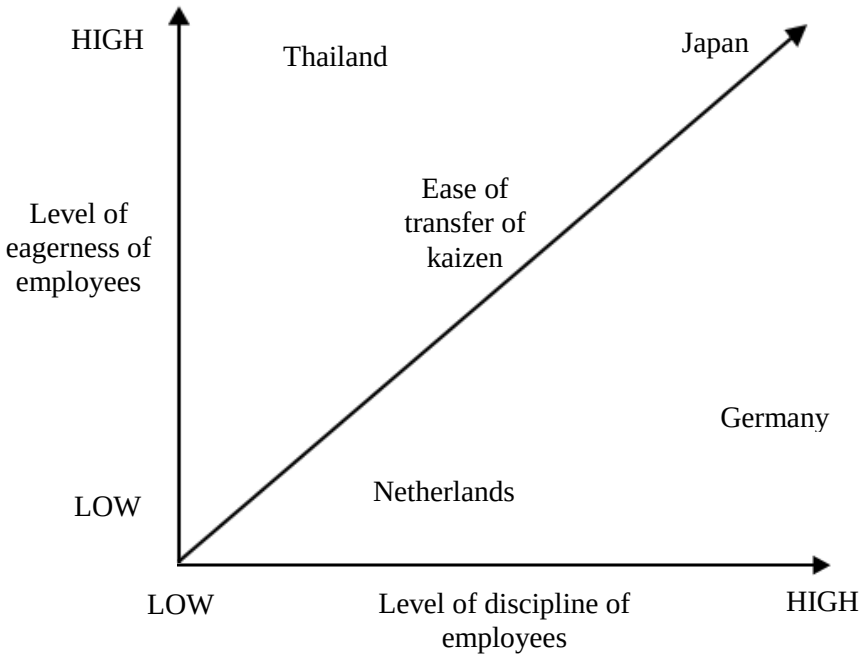


*Figure 5.1 – Ease of transferring kaizen*

***Figure 5.1*** illustrates that it is easier to transfer kaizen to another country where both the level of eagerness of employees as well as the level of discipline of employees are high. This is the situation in Japan where kaizen was developed. Based on the responses in the cases Thailand, the Netherlands and Germany have

been added in the graph. Based on a relatively low level of eagerness of employees as well as a relatively low level of discipline of employees, the Netherlands is a relatively difficult country for transfer of kaizen. Germany might be a little better due to a high level of discipline of employees but it suffers from a relatively low level of eagerness of employees. Similarly, Thailand might be attractive from a perspective of a high level of eagerness of employees but it suffers from a relatively low level of discipline of employees.

For companies that want to transfer or adopt kaizen, it is important to evaluate the level of eagerness of employees as well as the level of discipline of employees to determine the ease with which kaizen can be transferred or adopted. For countries in the lower left part of ***Figure 5.1*** this does not mean that kaizen cannot be transferred or adopted but it will take more effort than for countries who are positioned in the top right part of ***Figure 5.1***.

## 5.5 Conclusions

The purpose of this research study was to examine the international transfer of kaizen. The central research question was formulated as: What national level factors influence the transfer of kaizen? In the study, an inductive case study approach was followed with semi-structured interviews. The study focused on Japanese subsidiaries in the Netherlands. A total of 15 companies participated in the research. Although the study started with relatively open questions related to national level factors, it can be concluded that respondents perceived two factors which are related to national culture to be the most important. Two factors which were frequently mentioned by the respondents as having an influence on kaizen transfer led to two propositions: 1) the level of eagerness of employees which is positively associated with the ease of kaizen transfer, and 2) the level of discipline of employees which is also positively associated with the ease of kaizen transfer. The level of eagerness can be affected by poor economic conditions. For countries which are economically advanced, it is connected with the level of commitment that employees have to the company.

Based on these findings, it can also be concluded that the Netherlands is one of the more challenging countries for kaizen transfer. It is recommended that future research focuses on a further operationalisation of the two national level concepts in this study—eagerness and discipline—and test the relationship with ease of

kaizen transfer. Future research should also look more specifically at the two factors and how they relate to previously identified cultural dimensions (see, e.g., Hofstede, 2001). Companies benefit from this research because it contributes to understanding how easy it will be to transfer kaizen. Having this understanding allows companies to set more realistic expectations with regard to kaizen implementation.

# Chapter 6

# 6. The Role of Japanese Expatriates When Japanese Companies Transfer Kaizen Principles to Their Overseas Affiliates

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## 6.1 Introduction

Today's market is complex, and the changes faced by business firms are dramatic. Given this situation, quick responses and adjustments to the customers' needs are critical for companies to survive. Continuous improvement (CI), which involves small incremental improvements with small investments, is becoming more and more significant.

CI is defined as a 'planned, organised and systematic process of on-going, incremental and company-wide change of existing work practices aimed at improving company performance' (Boer, Berger, Chapman, & Gertsen, 2000, p. 1). The concept was originally developed in the USA and transferred to Japan after the Second World War (Bhuiyan & Baghel, 2005). It was adapted and further improved by Japanese companies, which even gave it a Japanese name: *kaizen* (Kenney & Florida, 1993; Oliver & Wilkinson, 1992). The concept was crystallised at Toyota (Fujimoto, 1999; Ohno, 1988) and spread among other Japanese manufacturers once Toyota became famous for high-quality products in the international market. As other companies also improved their performance, it has been viewed as one of the sources of the competitiveness of Japanese manufacturers (Fujimoto, 1999; Imai, 1986; Kenney & Florida, 1993; Oliver & Wilkinson, 1992).

The implementation of kaizen in the manufacturing setting has been extensively discussed in the literature (Bessant, 2003; Boer, 2000; Imai, 1986). Imai (1986) described the relationship of kaizen implementation to the use of methods and tools such as quality control circles, suggestion systems, and total quality control.

He ascertained that those methods are closely related to kaizen but not identical. Imai mentioned that kaizen is a philosophy that encompasses those methods. Fujimoto (1999) indicated that kaizen activities in the Toyota-style production system emphasize several aspects: revealing the production problems on the spot, quick problem-solving at all levels of the plant, standardisation of problem-solving tools, quick experimentation and implementation, and reutilised retention through knowledge-manual interactions. Liker (2004) states that kaizen is a process of enhancing the individual skills such as working effectively with teams, solving problems, documenting and improving processes, collecting and analysing data, and self-managing within a peer group. The on-going research project on the international CINet (Continuous Innovation Network) survey not only adds generalisability to the existing findings but also allows us to compare the results with different industries and countries. In brief, the literature on the implementation of kaizen in Japan frequently discusses it in terms of the development of employees' capabilities together with the use of systems, methods and tools.

In recent decades, Japanese manufacturers operating in global markets have faced increasing pressures to internationalise their manufacturing. Many companies transfer the Japanese philosophy, methods and tools to their overseas subsidiaries (Abo, 1994; Aoki, 2008; Kumon & Abo, 2004; Lillrank, 1995). It is known that many Japanese manufacturers work with kaizen in their daily lives, and thus their staff are more experienced and committed to it (Imai, 1986). It is assumed that it is easier for Japanese companies to transfer kaizen to their overseas subsidiaries than for non-Japanese companies to adopt the concept. However, recent research has shown that although transferring kaizen abroad is critical for their international operations, Japanese companies are facing problems with this transfer due to the difficulties adjusting their systems in different environments (Yokozawa et al., 2010).

This study explores the major challenges involved in transferring kaizen to overseas subsidiaries. It is structured as follows. First, the literature on the international transfer of kaizen is reviewed. Second, the methodology is described. Third, the findings and analysis are presented. Fourth, the discussion section emphasizes how the findings fill the gap in the literature of international kaizen transfer, and finally, conclusions are presented.

## 6.2 International Transfer of Kaizen

Studies with respect to the international transfer of management systems were initiated in the USA when managerial know-how was recognised as a critical ingredient for economic growth in the 1960s (Gonzalez & McMillan, 1961; Koontz, 1969; Negandhi & Estafen, 1965; Oberg, 1963). In those studies, the national context, organisational settings, and management philosophy were discussed as the major factors that affect the management transfer process. In the 1980s, this research stream was succeeded by studies on the international transfer of Japanese management systems (e.g., philosophy, TQM, JIT, kaizen, etc.) (Fukuda, 1988; Kono, 1982; Ouchi, 1981; White & Trevor, 1983). Those systems were studied mainly because of the high performance attained by Japanese manufacturers.

Some authors employed a best practice approach or universal management approach to the studies on the international transfer of Japanese management systems (Chen, 1995; Fukuda, 1988; Kono, 1982; Ouchi & Jaeger, 1978; White & Trevor, 1983). These studies were mainly concerned with a universality of management systems which asserts that particular management systems (often associated with the term 'best practice') are applicable across all nations (Kono, 1992; Koontz, 1969; Ouchi & Jaeger, 1978). They broadly separate the science component (practices developed based on the rationale) and the artistic component (practices rooted in the culture) of management and stress that the science part of management is universally applicable. Most of the authors employed a comparative study approach which is to compare the management systems used among well-managed companies and find the similarities. When they found similar management systems used in multiple countries, they asserted that these systems were transferable across nations.

Other authors employed a hybridisation approach (Abo, 1994; Itagaki, 1997; Kumon & Abo, 2004; Ueki, 1987) to investigate the transfer of management systems abroad. They asserted that management systems are neither rejected nor accepted but hybridised with locally used management systems. They used the 'hybrid evaluation model' to evaluate the degree to which Japanese management systems have been adapted to locally used management systems. For instance, Itagaki (1997) mentioned that, generally speaking, aspects of 'functional core' tend to be more smoothly adapted abroad than aspects of 'human/organisational core' (Itagaki, 1997: 151). He mentioned that 'Human/organisational core' are

more difficult to transfer to foreign countries, where traditional institution, high mobility of labour between companies, low degree of information sharing and sense of unity derive from social conditions different from Japan. The general conclusion of the hybridisation theorist is that transferred management systems are hybridised with the locally practiced management systems and the degree of hybridisation is determined by the situational factors during the transfer process.

There are also authors looking into the international transfer of Japanese management systems from a contingency theory perspective (Beechler & Zhuang Yang, 1994; Purcell et al., 1999). This indicates that there are multiple factors affecting the process of international management systems transfer and that the successful transfer of management systems depends on the situation. The central theme of contingency theory is that a 'good fit' between strategy, policy, practices, and context will ultimately lead to good performance. Purcell, Nicholas, and Whitwell (1998) determined the transferability of Japanese human resource management to non-Japanese settings by presenting the data on a survey obtained from 69 Japanese subsidiaries established in Australia. With regard to the production related systems (i.e., quality control (QC) circles, kaizen, JIT, and formal OJT), these were transferable to the Australian settings. Especially the QC circles and the OJT were highly adopted. In terms of the human resource management practices, recruitment practices and company union, this was almost the same as at the Japanese parent company. Although life-time employment was not used in their subsidiaries, employees were highly secured compared to the Australian local companies. For the wage system, the survey result shows that both manufacturer and service sectors emphasize not the length of service but the skills and experiences to determine the wage levels. Seniority-based payment was not identified in the Japanese subsidiaries in Australia.

Lastly, authors such as Taylor (1999), Delbridge (1992), Oliver and Wilkinson (1992) and Turnbull (1986) investigated the transfer of Japanese management practices from a perspective of institution theory. In the 1980s, an organisational shift occurred from Fordism to Japanese organisations-based methods used by many large Japanese corporations, especially Toyota. They refer to this major institutional shift from Fordism to Toyotaism as '*Japanisation*'. For instance, Oliver and Wilkinson (1992) researched the Japanisation of local British companies and Japanese subsidiaries in the UK. Based on the survey data obtained in 1987 and 1991 they confirm that the transfer of Japanese

manufacturing and personnel practices that were used in Japan had occurred and were successfully applied in the UK (Oliver & Wilkinson, 1992: 227). When comparing Japanese companies in the UK with the local British companies that are trying to emulate the Japanese practices, it was found that Japanese subsidiaries are more successful in transferring their practices, especially personnel and workplace practices.

Most of these studies found that the international transfer of kaizen is not easily accomplished. ***Table 6.1*** summarises the overview of challenges that Japanese companies faced or may face during the process of transferring kaizen abroad.

*Table 6.1 – Overview of challenges during the Kaizen transfer process*

| | |
|---|---|
| Lack of commitment from managers | (Bessant, 2003; Boer, 2000; Imai, 1986) |
| Communications problems | (Bessant, 2003; Jain & Tucker, 1995; Ueki, 1987) |
| High labour turnover | (Beechler & Zhuang Yang, 1994; Kenney & Florida, 1993; Young, 1992) |
| Existence of labour union | (Beechler & Zhuang Yang, 1994; Choy & Jain, 1987; Kenney & Florida, 1993; Shimada, 1990) |
| Low labour quality | (Humphrey, 1995; Kaplinsky, 1995) |
| Legal, economic consideration | (Humphrey, 1995; Jain & Tucker, 1995; Shimada, 1990) |
| Consistency problem | (Bessant, 2003; Boer, 2000) |
| National culture: High uncertainty avoidance | (Smeds et al., 2001) |
| Lack of time and space | (Bessant, 2003) |
| Lack of awareness | (Bessant, 2003) |
| Lack of skills/knowledge | (Bessant, 2003; Boer, 2000) |
| Lack of system for handling ideas | (Bessant, 2003; Imai, 1986) |
| Lack of or inappropriate reward/recognition system | (Bessant, 2003; Boer, 2000; Imai, 1986) |
| Lack of structured approach for finding and solving problems | (Bessant, 2003) |
| Lack of suitable vehicles for driving forward | (Bessant, 2003) |
| Lack of suitable tools | (Bessant, 2003; Boer, 2000) |

The above-mentioned literature helps to understand the challenges of kaizen transfer. However, further research is needed because despite a number of studies focusing on the challenges of domestic implementation of kaizen, research on the issues with kaizen transfer across nations is limited. Research is required to elaborate on kaizen implementation in companies outside of Japan (i.e., working in a different culture). Second, much of the literature deals with the transfer of practices that are used in Japanese companies. However, studies specifically looking at the singular process of kaizen transfer are still limited.

The goal of this research is to provide insights into the fundamental problems that Japanese companies face when transferring kaizen abroad and what measures organisations need to take to strengthen and institutionalise kaizen in their organisational setting. Accordingly, the research question for this paper was formulated as: What challenges do Japanese manufacturers face when they transfer kaizen to overseas subsidiaries?

## 6.3 Methods

The goal of this study is to explore the main challenges and the underlying issues faced by Japanese companies when transferring kaizen to overseas subsidiaries. An appropriate research methodology for an exploratory study is a case design (Yin, 2003). Since an inductive approach is in line with the goals of exploration, the case study approach developed by Eisenhardt (1989) was adopted as it has more emphasis on inductive elements compared to Yin (1994). Two main issues for this type of case study methodology are the sampling strategy and how data is analysed and collected.

### 6.3.1 Sampling strategy

Ohmae (1985) argued that for business, there are three important regions in the world (the triad), which consists of Japan, the USA and Europe. In this study, the focus is on kaizen transfer to Europe. Within Europe a further distinction was made based on where Japanese companies invest. Data from the Japan External Trade Organisation (JETRO) shows that from 2003 to 2009, the Netherlands was the largest recipient of Japanese investments in Europe (http://www.jetro.go.jp/en/reports/statistics/). Therefore, a choice was made to

focus on Japanese manufacturers in the Netherlands. Another advantage of doing research in the Netherlands is that the Dutch have the highest proficiency in English among the non-native speakers in the EU. Eighty-seven per cent of Dutch people can speak English well enough to have a conversation with a native speaker (European Commission, 2006).

A list of Japanese manufacturers in the Netherlands was obtained from the website of the Netherlands Foreign Investment Agency (NFIA) and from JETRO. The two lists were combined to develop one list of 52 companies. This list of 52 companies provided the target population for the study. Since this number was relatively small, it was decided to contact all of the companies for participation in the study rather than take a sample. Initial contact with the companies was made by phone. Five companies had either recently closed or transferred their operations to other countries; this reduced the target population to 47 companies with manufacturing activities in the Netherlands. Of these, 32 companies declined to cooperate. This left 15 companies which participated in the research project. The general characteristics of these companies are shown in ***Table 6.2***.

*Table 6.2 – An overview of case companies*

| **Companies** | **Date established (headquarters)** | **Employees (consolidated)** | **Kaizen started year** |
|---|---|---|---|
| 1. Construction machinery | 2001 (1951) | between 100 and 500 (16,117) | 2001 |
| 2. Slide fasteners | 1964 (1945) | less than 100 (38,399) | 1964 |
| 3. Sensors | 1990 (1948) | between 100 and 500 (35,045) | 1988 |
| 4. Photosensitive materials | 1994 (1911) | more than 500(76,358) | 1986 |
| 5. Welding materials | 1982 (1934) | less than 100 (34,459) | 1990 |
| 6. Electrodes | 1990 (1949) | less than 100 (120) | 2004 |
| 7. Safe instrumentation systems | 1982 (1920) | more than 500 | 1995 |
| 8. Beverage | 1994 (1955) | less than 100 (15,822) | 2003 |
| 9. Forklifts | 1992 (1950) | more than 500 (33,164) | 1994 |
| 10. Molded articles of piocelan | 2008 (1954) | Less than 100 (1,372) | 2008 |

*Table 6.2 Continued*

| Companies | Date established (headquarters) | Employees (consolidated) | Kaizen started year |
|---|---|---|---|
| 11. Safety glass | 1996 (1947) | between 100 and 500 (19,742) | 1999 |
| 12. Plastic building materials | 1974 (1947) | less than 100 (19,742) | 1995 |
| 13. Polyolefin foams | 1973 (1947) | between 100 and 500(19,742) | 2008 |
| 14. Attaching shrink labels | 1993 (1958) | less than 100(2,368) | 2004 |
| 15. Thin Steel Sheets | 1992 (1949) | less than 100 (4,607) | 2008 |

In each company, between one and five respondents were interviewed. All of the interviews were recorded and transcribed. Respondents were selected from the three levels of the organisational hierarchy: shop floor operators, middle and top managers. They included both Japanese and Dutch citizens, eliminating a potential bias from a specific national group.

### 6.3.2 Data collection and analysis

Case study research has some drawbacks and poses significant challenges. Those are:

- Case studies are exposed to the issues of generalisability,
- There is the problem of the observer's perceptual and cognitive limitations; high probability of overseeing some key issues also constitutes a risk to the quality of the case studies research,
- The accuracy of some inferences can be undermined by the dependence on subjective interpretation of a researcher.

To address these challenges and formulate a research design of high validity and reliability, this research followed practical guidelines and steps discussed in the qualitative methodology literature (see, e.g., Miles & Huberman, 1994; Swanborn, 2010; Yin, 2003). The current research relied on the extensive use of triangulation and a research protocol.

Yin (2003) and Swanborn (2010) recommend the use of triangulation, namely, the use of several methods of collecting data, to improve the validity of case study research. As a result, the improvement of validity is accomplished through the use of multiple sources of evidence: open-ended interviews, focused interviews, structured interviews and surveys, observations, documents, and archival records (Swanborn, 2010). In this research, multiple sources of evidence such as semi-structured interviews with several respondents for each company, documents, direct observations, as well as secondary material (such as media material, presentation materials and annual reports) were used.

Another issue with case study research concerns reliability (Yin, 2003). The use of a case study protocol is recommended for increasing reliability (Yin, 2003). Therefore, a case study protocol was developed which contained a set of questions to guide research in the field, which were applied for each case. The main method for data collection was semi-structured interviews with initial questions emphasising challenges and subsequent questions delving into deeper underlying issues.

Qualitative case study research also is less straight forward with regard to data analysis and reaching conclusions compared to quantitative research. To improve this part of the research process established procedures for qualitative data analysis (Miles & Huberman, 1994) were used. Miles and Huberman (1994) suggest starting with within-site analysis. This is where the case studies were built based on data and key constructs were derived. Subsequently, the data were analysed through a process of 1) data reduction, eliminating data not relevant to the analysis; 2) display, a spatial format that presents information systematically to the reader using a causal network; 3) conclusion drawing; and 4) verification through comparing the findings with existing literature (Miles & Huberman, 1994). In addition to the use of these established analysis methods, conclusions were also presented to the case study companies. Thus, a member-check was conducted which is another way to check the validity of the interpretations (Swanborn, 2010: 111).

## 6.4 Findings and Analysis

### 6.4.1 First-level analysis

The cross-site analysis revealed that the findings could be grouped into three categories. The Japanese subsidiaries in the Netherlands faced challenges with low managerial commitment (***Table 6.3***), communication problems (***Table 6.4***), and a high labour turnover rate (***Table 6.5***) as shown in the following.

*Table 6.3 – Commitment challenge*

| ***Company*** | ***Case description*** | ***Exemplary Quotes*** |
|---|---|---|
| Heavy construction machinery | When the company was established in 2003, a production manager who was not experienced and committed to kaizen was leading production. In 2008, a new production manager was sent from the Japanese plant working with kaizen for 15 years. Kaizen is working more effectively than before. However results may fade away if the current production manager was replaced by another person not committed to kaizen. | *'Now we have a current production manager who is professionalised in kaizen. The kaizen is running very well now because the managers are involved. Operators are enjoying it. I think it is working very well but just in the surface level. If the top management was replaced let's say by the previous production manager who had no interests in kaizen, it will disappear immediately.'* (Project manager) |
| Slide fastener | 5S and kaizen tools were intensively used since the company was established. However, top managers change every two to three years which led to inconsistency in strategy and support for kaizen. This affected negatively on employee motivation. | *'Level of kaizen activities is depending on MD. We had many changes of MD. Every four years. Mr. A (current MD) was here since August last year. Before that Mr. B was here for two and a half years. MD before that was Mr. D. This is not a good strategy.' (*Production manager) |
| Sensors | Kaizen started when the company was established in 1988. The kaizen philosophy and methods were introduced and supported by management. However, the level of those activities decreased after new management not committed to kaizen replaced them. | *'Kaizen started when the company was established, which means from the start. At that time the company was set up and was led by Japanese managers. Kaizen mentality was quite supported during the first 5 years. Then another management took over. These activities faded away.'* (MD) |

*Table 6.3 Continued*

| ***Company*** | ***Case description*** | ***Exemplary Quotes*** |
|---|---|---|
| Welding material | MDs change every 5 years. It is affecting negatively on the kaizen implementation due to the inconsistency in the strategy and commitment for kaizen. This was resulting negatively on kaizen implementation. | *'Our MD is changing every 5 years. Current MD is here for more than a year. Every MD is doing totally different things. So kaizen totally depends on MD. If the MD is changing, it is not so nice.'* (Production manager) |

*Table 6.4 – Communication problems*

| ***Company*** | ***Case description*** | ***Exemplary Quotes*** |
|---|---|---|
| Heavy Construction Machinery | Japanese had difficulties conveying message and sense of urgency to the employees due to the language problem. The company bought a book about Toyota production systems and asked operators to study it individually. However, the progress of kaizen was found too slow. | *'Operators didn't understand what I said with my poor English. Even though they don't come to ask me any questions so I wasn't sure whether they really understand.'* (Production manager) |
| Slide fastener | Communication was not going well between Japanese and Dutch employees. Japanese staff were continually saying to do kaizen but they did not explicitly mention the benefits of doing it. Dutch operators felt that they were forced to be involved in kaizen activities. | *'Communication was not so well between Japanese staff and our staff so at that time. It [kaizen] was quite low. Japan manager keep saying 5S!5S! 5S! No waste! No this no that!'* (Production manager) |

*Table 6.4 Continued*

| ***Company*** | ***Case description*** | ***Exemplary Quotes*** |
|---|---|---|
| Sensor | The communication issues were found when the initial Japanese were managing the factory. Although they were committed to kaizen, they could not convey the benefit of doing kaizen to Dutch employees sufficiently due to their insufficient communication skills. | *'If they can explain an advantage of kaizen in good English, and what you gain from it, you get believers. But if you cannot convince me I will never believe you. I think it is not only a communication but also a cultural problem. When culture clashes, communication will not go well. You have the feeling that you are not being understood.'* (Shop floor operator) |
| Welding material | Communication issues exist when the production manager tries to explain complicated technical. It was found that due to accumulation of small misunderstandings between Japanese and Dutch, it is difficult to develop a good relationship. | *'I cannot give detailed explanations due to my poor English. When Dutch operators face a problem, I want to give only a hint so [they] themselves can think about the solutions but this is not possible so I just give them solutions directly.'* (Production advisor) |
| Electrodes | They have issues conveying the benefit of doing kaizen manly due to the insufficient language skills of Japanese staff. As a result, trust making between Dutch and Japanese employees proved difficult. | *'There is an issue with language. I feel a distance from the Dutch employees because I cannot participate in their conversation. I cannot develop something like trust if I cannot communicate well. Kaizen is difficult without teamwork feeling.'* (Production advisor) |
| Beverage | Some Japanese staff had insufficient English speaking skills and it affected daily communication. As a result, they cannot develop a good relationship with Dutch operators. As they know, without trust development, they will face resistance; they are reluctant to introduce kaizen | *'The language issue. It affects on the daily communication. Accumulation of small misunderstanding results in difficulties developing good relationship with Dutch operators. As you know that without trust, we will face resistance. So we are reluctant to introduce kaizen'* (Production manager) |

*Table 6.4 Continued*

| ***Company*** | ***Case description*** | ***Exemplary Quotes*** |
|---|---|---|
| Plastic building material | Language issue was found to be hindering the team-working climate of the company. This was negatively affecting the transfer of kaizen. | *'There is a climate for kaizen. People think about suggestion[s] or improving performance when there is such a climate. You have to tell employees why we have to do kaizen and how kaizen ease[s] the hard labour. I believe that is easier if you understand the Dutch culture and the language.'* (MD) |

*Table 6.5 – High labour turnover rate challenge*

| **Company** | **Case description** | ***Exemplary Quotes*** |
|---|---|---|
| Heavy Construction Machinery | An issue regarding the higher labour turnover rate was found. It influenced the commitment of employees. It also hindered accumulation of knowledge in the company. | *'People don't root here. Even we spend a lot of time teaching the basics of kaizen concepts [because] people leave the company very frequently.'* (Project manager) |
| Welding material | Japanese respondents mentioned that the Netherlands is not suitable for kaizen development due to the higher labour turnover rate. In Japan, where long-term employment is widespread, the knowledge transfer took place between experienced operators to the newly hired operator. In the Netherlands, this type of training is difficult. | *'There is a problem of high labour turnover rate. Now we have two Japanese technicians working here but the operators who they trained 2 years ago already left the company […] the current situation is like training newly hired employees.'* (Production advisor) |
| Electrodes | Issues exist regarding the high mobility rate. The company is thinking to formalize the process to prepare for the situation when people leave the company. | *'Kaizen mentality or loyalty towards the company is relatively easy to develop where there is a lifetime employment. For those people who do not expect to work in the same company for long time, it is difficult to develop this mentality.'* (MD) |

*Table 6.5 Continued*

| ***Company*** | ***Case description*** | ***Exemplary Quotes*** |
|---|---|---|
| Beverage | Japanese managers think that it is very difficult to implement kaizen in the Netherlands due to the short–term employment systems and less commitment to the company. | *'The current situation is like people don't want to do anything actively until serious problems happen. Although the top management creates the system, let's say small group activity, or kaizen, they don't follow because the lifetime employment is very weak in the Netherlands.'* (Director production) |
| Forklifts | In the Japanese factory where lifetime employment is widespread, the knowledge transfer from person to person is common. In the Netherlands, where the employment systems is short term contract based, it was found that this is not possible. | *'In the lifetime employment, we can transfer know-how from person to person. With contract based short-term employment system in the Netherlands, the labour turnover rate is higher. This is difficult.'* (Executive Senior Production Engineer) |
| Safety glass | The OJT systems that are commonly used in the Japanese factory are difficult to implement in the Netherlands because the labour turnover rate is higher and there are fewer experienced operators. | *'In Japan, there are experienced senior operators who teach newly hired operators how to operate or maintain machines. In Japan, when a new operator is hired, someone trains him. I cannot find that kind of thing here. It is like you should do it by your own.'* (Vice president) |
| Plastic building materials | In the Japanese company, most of the kaizen activities took place after the work. It was difficult to practice this because people are not willing to work overtime to involve in the kaizen activities. | *'In Japan, the kaizen activities took place after work. In the Netherlands, this is not possible because people are reluctant to work overtime. Japanese tend to stay after work for kaizen or willing to work…or work without complaining.* (Production manager) |

### 6.4.2 Second-level analysis

In the next step of the research, a more in-depth analysis was conducted to look for underlying issues with the three identified challenges. This led to the identification of the use of Japanese expatriates as a common element. The following discussion focuses on four aspects of the use of expatriates: the desire for Japanese expatriates, turnover rate of expatriates, language skills of Japanese managers and the need for Dutch management involvement, and mismatch between the expatriate's experiences with lifelong employment and the Dutch labour turnover rate.

***The desire for Japanese expatriates:*** There are two reasons why Japanese companies prefer to use Japanese expatriates to manage their Dutch subsidiaries: control and communication ability. Japanese companies feel that this provides headquarters with a high degree of control over the subsidiary abroad. For example, in one of the cases, initially the managing director was Dutch. However, the Japanese headquarters recognised that it was losing control and sent a Japanese expatriate to take over the top management position.

Related to this is the ability to communicate with the subsidiary. The Japanese culture is a high context culture where communication involves a greater focus on how things are said rather than what is said. People who grow up in Japan are trained to understand the implicit message, but outsiders may have difficulty understanding the communication. A Japanese board member in Company F mentioned:

> *'We hesitate to place a non-Japanese managing director at the overseas subsidiaries because of the language issues. We are concerned that problems may occur in important situations; others might not understand the context that the Japanese language has. Also, all of the board meetings are held in Japanese because many of the members cannot speak sufficient English. This also discourages the use of a non-Japanese MD in overseas subsidiaries.'*

***Figure 6.1*** illustrates how Japanese HQ desire for control of the subsidiary and Japanese HQ desire for culturally rooted high context communication are leading to the use of Japanese expatriates

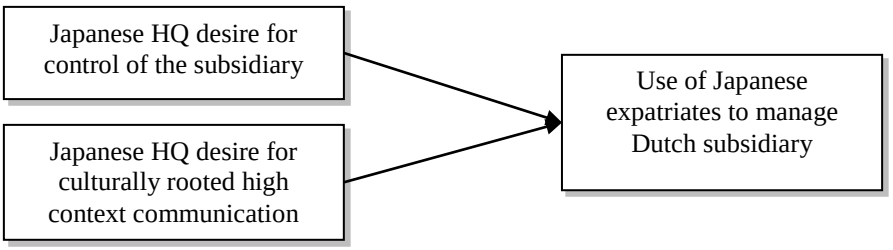


*Figure 6.1 – Control and communication leading to use of expatriates*

***Turnover rate of expatriates:*** Japanese use socialising and networking functions intensively in the business setting. Not keeping closely in touch with their network, for example by going abroad, negatively affects career development. Many Japanese managers are therefore not eager to be assigned to an overseas subsidiary. The MD in Company D said:

> *"I was very surprised that many Japanese, even young ones, in a MNC do not want to go abroad. I expected that they would like to go abroad for a few years when they start their career, but it's not true. I told them that it should be good for them because they can get experience, but they said to me clearly, 'No, it is not good for my career'."*

Thus, when they are assigned, the duration of the posting is usually limited. In these cases, the Japanese expatriates stayed for two- to five-year periods. That is why many of them do not seek major changes during their tenure but tend to maintain the status quo. In addition, while they are stationed in the Netherlands, they return to the Japanese headquarters frequently to keep in touch with their network and maintain strong communication ties. While some Japanese managers are eager to make changes, by the time they learn to manage in the Dutch context, their tenure is over, and they return to Japan. Then a new Japanese manager has to start the whole process all over again. The high turnover of Japanese expatriates results in low managerial commitment to kaizen implementation. ***Figure 6.2*** shows how the high turnover of Japanese expatriates leads to the commitment problem.

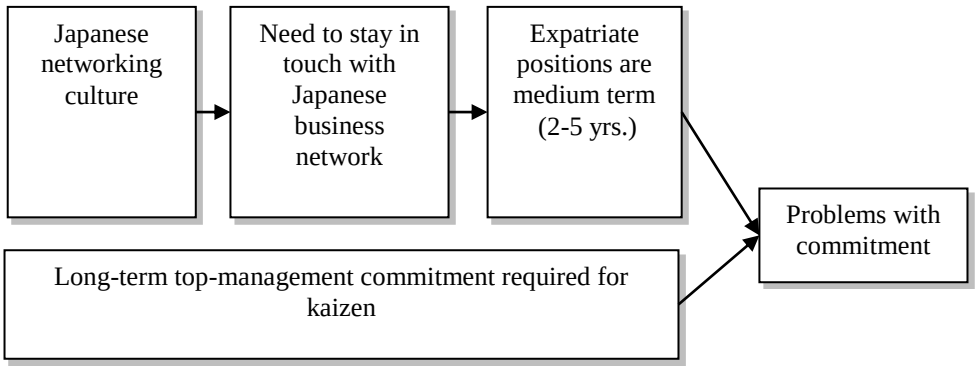


*Figure 6.2 – Expatriate turnover and commitment problem*

***Culture differences and the need for Dutch management involvement:*** There are two reasons why Japanese expatriates alone are insufficient to manage the subsidiary, which creates a need for Dutch top management involvement: cultural misunderstandings and language issues.

Both Dutch and Japanese respondents indicated that there are many small understandings on a day-to-day basis due to differences between Japan and the Netherlands (e.g., education, social status, beliefs, and language). From the Dutch perspective, even though they appreciate the humbleness and politeness of the Japanese, the Dutch perceive the Japanese indirectness as confusing. Moreover, there were indications that important decisions were made by the Japanese managers alone, while the Dutch managers were not included. From the Japanese perspective, they perceived the Dutch employee as too direct, even towards their Dutch boss, and interpreted this as a lack of respect. The accumulation of these small misunderstandings caused by cultural differences undermines the development of good relationships among employees. Involvement of Dutch managers at the top level mitigates this problem as the Dutch managers and Dutch employees have the same cultural background.

Another issue is language. In top management positions, managers must have skills to motivate employees and to develop kaizen culture. The lack of Japanese top-management fluency in English or Dutch was identified in the cases as an issue. Japanese managers were having difficulties conveying the sense of urgency and the benefits of adopting kaizen. Involvement of Dutch managers at the top level mitigates this problem as they have the same language context as the employees.

Both problems were exacerbated by the high turnover rate of Japanese expatriates. By the time the expatriates became more familiar with the Dutch context and language (i.e., they became more effective), they typically returned to Japan. The cycle then repeats as the new expatriates go through their learning process. ***Figure 6.3*** illustrates how the culture and language difference together with expatriates' turnover leads to a need for a Dutch managing director.

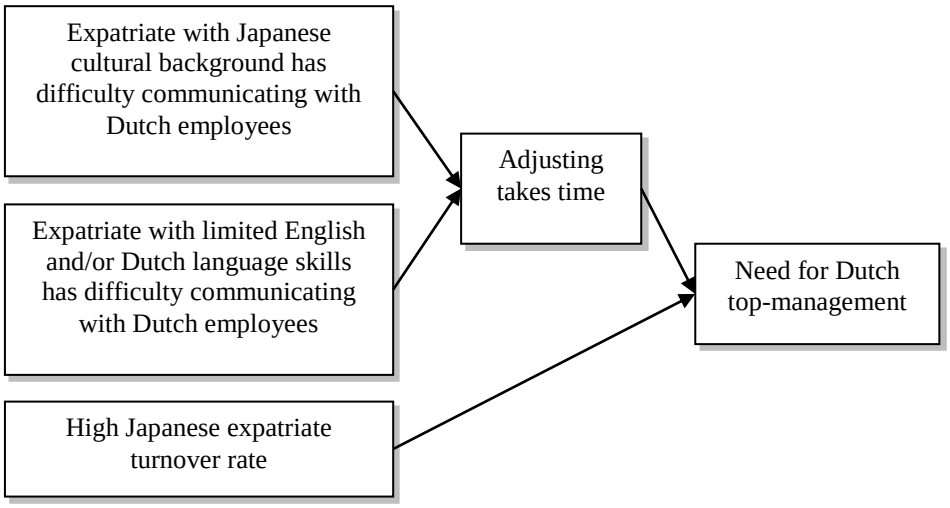


*Figure 6.3 – Culture and language differences leading to need for Dutch management*

***Mismatch between Japanese lifelong employment and Dutch labour turnover rate:*** Even after having many years of experience with transferring kaizen, the Japanese expatriates continuously implement practices that do not fit in the Dutch context. For instance, in the Netherlands, where labour mobility is higher than in Japan, formalisation of information (codifying) is practised, such as the use of a standard operating procedure or a trouble-shooting procedure. Thus, when employees leave the company, the knowledge remains in the company, and new employees can learn it relatively quickly. The Japanese expatriates continue to utilise the system they are familiar with from Japan, which is based on tacit knowledge transfer. In Japanese factories, as the individuals stay in the factory for a long time, knowledge such as on kaizen methods and tools remains in the factory. Knowledge is transferred by tacit methods such as on the job training. The case data indicates that Japanese expatriates are having difficulties letting go of the mind-set of long-term employment systems since that is the context in which they were trained and educated for many years. Moreover, as most of the

Japanese expatriates stay at the Dutch subsidiary for only a short period, by the time they understand the Dutch context and realise that the practices derived from their long-term employment context do not work in the Netherlands, their tenure is finished, and they return to Japan. Then a new Japanese expatriate has to start the same process all over again. ***Figure 6.4*** illustrates how the difference in employment system between Japan and the Netherlands is leading to a need for Dutch management.

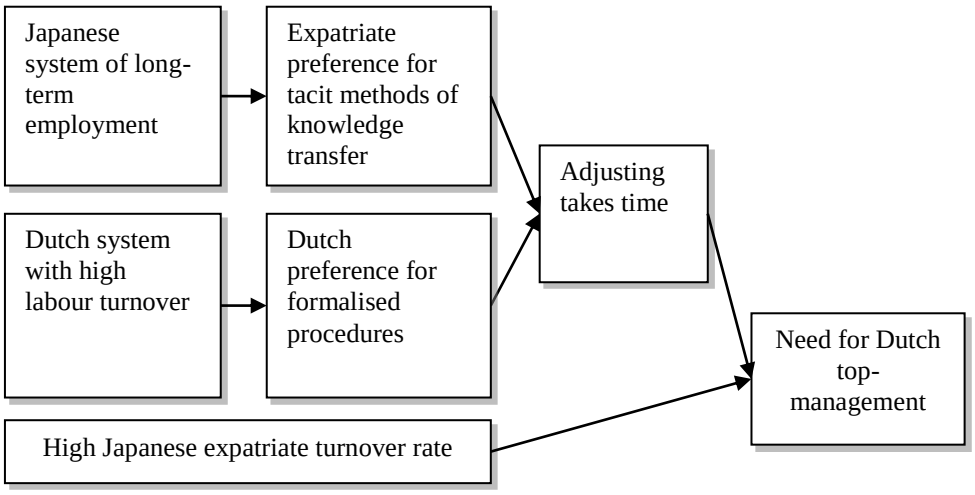


*Figure 6.4 – Employment differences leading to need for Dutch management*

***Conclusion:*** The findings and analysis show that the use of Japanese expatriates has a fundamental connection to the three main problems associated with transferring kaizen to overseas subsidiaries, namely, commitment issues, communication problems, and a high turnover rate.

On the one hand, Japanese headquarters are trying to maintain control over the Dutch subsidiary by placing Japanese expatriates in the top management positions. This also facilitates the possibility of communication between headquarters and subsidiaries in the high-context format that the Japanese language is based on. However, due to the extensive networking and socialising context in Japan, the expatriate positions are at best medium-term ones, and the turnover rate of expatriates at Dutch subsidiaries is relatively high.

On the other hand, cultural differences between the Japanese and the Dutch environment, language issues and a difference in labour practices lead to the

necessity to use Dutch managers. This is further influenced by the high turnover rate of Japanese expatriates.

Several cases showed improvements in kaizen activities after Dutch managers, who were experienced and committed to kaizen, took over the top management position. For instance in Company A, a Japanese production manager was initially facilitating kaizen. He found that the progress was slow due to the consistency and communication issues. Then the company decided to hire a Dutch kaizen consultant. Subsequently, the level of kaizen improved significantly. This suggests that one of the most effective ways for successful kaizen transfer would be to place a Dutch manager (with experience and commitment to kaizen) in the subsidiary's top management position. Even though this may reduce headquarters' control, it leads to management that is more effective.

It was indicated by several participating Dutch managers that the real challenge for Japanese companies is the internationalisation of Japanese headquarters. A Dutch MD who had experience in working with several Japanese companies made the following statement.

> *'Japanese companies are everywhere. They have a huge economy, they have sold their products everywhere, but they are not acting as international or multinational companies. For me the critical part is how Japanese companies can really change that. I have seen only a very few Japanese companies, I mean really MNC, which are really acting different than most Japanese companies. Our company is a huge multinational. It has 35,000 people all around the world and more than half are outside Japan. But still they act as a Japanese company. For instance in communication, top management only speaks Japanese.'*

To be more successful in transferring kaizen abroad, the Japanese have to realise the uniqueness of the high-context communication among Japanese and the fact that it is causing many issues for overseas management. They should gradually adopt the low-context communication style. One possible approach to achieve this is to accept more non-Japanese at the headquarters.

## 6.5 Discussion

In this research, it was found that the major challenges during the international kaizen transfer process (i.e., managerial commitment, communication, and high labour turnover rate) were mainly caused by Japanese expatriates themselves. The

broad sweep of the MNC management literature has discussed issues with Japanese expatriates in Japanese overseas affiliates.

For example, Abo (1994) investigated the local American employees' overall perception regarding 1) working in the Japanese companies and 2) the relationships between local and Japanese communities around the factory. They organised group discussions among the American employees in seven Japanese subsidiaries in the USA. During the discussions, they unexpectedly discovered the issues with Japanese expatriates. Major issues include communication and work ethic differences between American workers and Japanese staff. Communication problems include Japanese expatriates' insufficient level of English skills and a difference in high context and low context communication style (e.g., Japanese do not understand the jokes and slang used by the local employees). Issues in difference of working styles involves working hours (American workers perceived that Japanese work too many hours), Japanese are not involving American managers for important decision making procedures (Japanese insider and outsider mentality), and decision making style (*ringi system* and *nemawashi*) which was perceived to be inefficient by American employees. Abo (1994) indicated that these problems related to use of Japanese expatriates generate the frustration for both Japanese and American staff which resulted in low employee motivation.

In addition, Byun and Ybema (2005) demonstrated the ethnic boundaries of the Japanese company in the Netherlands. They used the ethnography approach to describe the interaction between Dutch and Japanese in the Japanese company in the Netherlands. The study provides important insight into the issues in the cultural interfaces between the Netherlands and Japan. For instance, they found that the attitude toward work is different between Japan and the Netherlands. A Dutch employee observed, 'The Japanese live to work and do not work to live' and for them it is difficult to understand this hard working attitude of the Japanese in general. In contrast, from the Japanese perspective, the Japanese did not appreciate the 'nine to five-mentality' that Dutch also value their private time. Additionally, the issue caused by the difference in the superior-subordinate relationship was found. It is basic etiquette in Japanese culture to show respect for seniors and superiors. However, Dutch employees see this as the submissive attitude of Japanese managers toward superiors and have difficulties understanding. Often Japanese bosses act like 'a boss', which is not accepted in

the Dutch society where the egalitarian attitude is more common. Furthermore, similar to the research conducted by Abo (1994), difference in decision making style and communication style were also found as issues. Those differences frequently result in misunderstandings which give rise to conflicts between Dutch and Japanese.

These studies describe the cultural conflicts between two parties (Japanese and non-Japanese employees) within MNCs. However, these studies do not discuss these issues in the specific realm of international kaizen transfer as it was shown in ***Table 6.1***. This research provided a plausible assumption based on the in-depth case study that the use of Japanese expatriates has a negative influence on the kaizen transfer outcomes.

Moreover, this study suggests, based on the evidence obtained from in-depth case studies, that one of the possible solutions to ease the transfer of kaizen is to us a local managing director (who is experienced and committed to implementation of kaizen). Yoshiwara (2003) indicated that the relationship between the Japanese headquarters and their overseas subsidiaries is characterised by a Japanese centre 'one-way approach' in terms of transfer of technology, know-how, information, and human resources that were transferred only from Japan to overseas subsidiaries. Yoshiwara (2003) asserts that this one-way approach is obstructing development of the overseas subsidiaries' capabilities (e.g., new product development). He asserts the importance of placing the local managing director at the overseas subsidiary to maximise the capabilities of local employees and adjust the one-way approach. However, disadvantages for placing a local managing director are mentioned by Japanese MNCs in that they do not comply with policies and strategies given by Japanese headquarters; they create conflicts with Japanese expatriates; and they generate conflict with Japanese headquarters. Yoshiwara (2003) suggests that in order to avoid these issues, it is important to select a local managing director who has sufficient management skills and has a positive feeling about Japan (i.e., people, culture and management styles).

From the perspective of international kaizen transfer, our findings align with Yoshiwara (2003) that Japanese overseas subsidiaries are recommended to use local managing directors. However, our reasoning of a need for using a local managing director at the overseas subsidiaries is different from that of Yoshiwara (2003). On the one hand, Yoshiwara (2003) asserts that a local managing director is required to maximise the capabilities of overseas subsidiaries in order to

facilitate the two-way approach. On the other hand, our research found that for successful kaizen transfer it is critical that a managing director has to be committed to kaizen and communicate explicitly the reasons and benefit of using kaizen to local employees. At most of the Japanese manufacturers that we visited, Japanese expatriates were having problems with this communication, which led to low motivation of local employee toward kaizen. This is the major reason why a local managing director is required in the overseas subsidiary. This research, therefore, adds one more critical reason to Yoshiwara's (2003) assertion that Japanese MNC should use local managing directors at their overseas subsidiary.

## 6.6 Conclusions

This chapter examined the challenges faced by Japanese manufacturers when they transfer kaizen to overseas subsidiaries. Through 15 cases in the Netherlands, the use of Japanese expatriates in combination with a high turnover was found to be a key problem. This problem led to other problems such as low management commitment, communication difficulties, and issues with adjusting to the mind-set of a Dutch environment. Japanese expatriates are in charge of the Dutch subsidiary for two to five years. During this time, they are not planning to make major changes. Due to their insufficient English skills, Japanese expatriates cannot effectively convey the messages of kaizen to Dutch employees, which results in a slow transfer of kaizen. Finally, Japanese expatriates have difficulty adjusting their mind-set from one of long-term employment to one of high employee turnover. They continue to implement practices that have a mismatch with the Dutch environment. This study suggests that a more effective approach for successful kaizen transfer to Dutch subsidiaries is to place an experienced Dutch manager with a commitment to kaizen in the subsidiary's top management position. These findings were not discussed in the specific research of international transfer of kaizen. Moreover, the reason for using a local managing director added new insight to the existing theories. This study is exploratory research where findings resulted from a limited population in a specific national context. In order to improve the generalisability, the findings need to be tested with larger populations and also in different national contexts.

# Chapter 7

# 7. Conclusions and Discussion

## 7.1 Introduction

This chapter addresses the conclusions and discussion. In the following section (7.2), conclusions of this research are presented. The research questions (RQs) and the answers to those questions based on the research findings are addressed. It is followed by discussion (7.3) which indicates the contributions to the scientific body of knowledge by comparing the research findings with existing research. The next section is reflections, (7.4) which looks back at the process of the PhD research. Last, the chapter presents recommendations (7.5) to Japanese manufacturers on transferring kaizen abroad as well as to academicians regarding future research directions.

## 7.2 Conclusions

### 7.2.1 International transfer of Japanese management systems today (RQ 1)

The first research question was formulated as follows:

*Are Japanese companies still concerned with transferring Japanese management systems to overseas subsidiaries and, if so, what are the main problems that arise during the transfer process? How are Japanese manufacturers managing these problems?*

It was found that a majority of the Japanese manufacturers researched were still concerned with transferring Japanese management systems abroad today. Among those companies that were transferring those management systems such as Lean Production, Just-In-Time, Total Quality Management, 5S, and Quality Control circles, it was identified that kaizen was one of the most important management systems that the Japanese manufacturers were transferring today. Yet, findings show that they were facing difficulties during its transfer process such as communication, high labour turnover, and low motivation of the operators. Although Japanese companies were trying to manage these difficulties by adapting the locally used management practices, still the issues exist.

### 7.2.2 Process of international kaizen transfer (RQ 2)

The second research question was formulated as follows:

*What are the major stages in the kaizen transfer process? And what are the positive and negative factors influencing each stage?*

Three stages in the international kaizen transfer were identified: preparation, implementation, and integration. In the preparation stage, companies created favourable conditions for the implementation stage. Major activities found in this stage were hiring and initial training. Successful companies tried to hire young operators directly from school. Since these operators did not have a preconceived idea about the way of working in general, they tended to accept the systems, technologies and practises that were transferred from Japanese factory. Hiring young and well educated operators directly from school was found to be a positive factor for kaizen transfer. Moreover, companies faced a challenge with hiring local operators when the Japanese management had little experience working in the Netherlands. Successful companies sent a group of Dutch operators to the Japanese factory for several months training. As they experienced the kaizen culture and learned its benefits, they could convey the value of kaizen to other Dutch operators when they were back from the Japanese factory. The challenge with this approach was that the Dutch operators were away from their social life for several months. It was restricted only to operators who did not have any social obligations. Another challenge was that many Japanese staff had insufficient communication skills so that they could not effectively convey the kaizen philosophy and techniques to Dutch operators.

The implementation stage consisted of four concurrent events: top management made a commitment; managers conveyed a sense of urgency to operators; the organisation executed kaizen; and, finally, maintained kaizen. In this stage, organisational culture and structure were developed or changed in order to support the development of kaizen. From a certain point onward during this stage, operators began to understand the benefits of adopting kaizen and started doing it by their own initiative. As they continuously improved the production processes, room for improvement became less evident. As a consequence, motivation or enthusiasm of the operators towards kaizen decreased. Thus sustaining kaizen became prominent in this stage. Benchmarking with competitors and/or other overseas subsidiaries, visualisation of performance, and opening the factory to

their stakeholders such as customers (showcase factory) were identified as effective methods to maintain kaizen among operators.

The integration stage started when kaizen was developed among the majority of operators. This means that kaizen activities were replicated by Dutch managers and shop floor operators with no or minimum help from the Japanese expatriates. The company faced a challenge with people gradually starting to feel comfortable working with the rules that they created. The organisation tended to become more bureaucratic. Intensive use of visualisation could keep employees' motivation high.

### 7.2.3 Proxy of kaizen (RQ 3)

Our literature study found that the operationalisation of kaizen has been inconsistent in the literature. This makes research for kaizen problematic because even as researchers look at the transfer of kaizen, they may actually be dealing with different things. For this reason, the third research question was formulated as follows:

*What concept can be used as a proxy of kaizen?*

In this research, Brunet and New's (2003) definition of kaizen was adopted. They defined it as 'pervasive and continual activities, outside the contributor's explicit contractual roles, to identify and achieve outcomes he believes contribute to the organisational goals' (Brunet & New, 2003: 1428). It was found that this definition of kaizen had many similar aspects to the definition of personal-initiative which referred to a behavioural pattern whereby individuals take an active, self-starting approach to work and go beyond formal job requirements (Frese et al., 1997; Frese et al., 1996). Hence, this study hypothesised that the concept of personal-initiative could be used as a proxy of kaizen. The empirical data supported that there was a significant correlation between the level of personal-initiative and level of kaizen completion. This study thus confirmed that personal-initiative can be used as a proxy.

### 7.2.4 Influencing factors on the transfer process (RQ 4)

The fourth research question was formulated as follows:

*What are the major organisational level factors that influence the kaizen transfer process?*

This study tested the influence of two factors: organisational culture and organisation structure on the international kaizen transfer process.

With regard to organisational culture, the clan culture was found suitable for kaizen development. Activities supporting kaizen involved risk, uncertainty, and even failure along the way to success. For this reason employees are often reluctant to offer suggestions for fear of being wrong or for fear of slowing team progress and creating frustration. An organisational culture which emphasises mutual trust and open communication, where everyone can admit their mistakes, is conductive to kaizen. In contrast, in a hierarchical culture that emphasises security, order, rules, and regulations is less likely to develop a mutual trust among workers. Without mutual trust, employees are discouraged to take risks to suggest ideas for correcting problems; thus, it is not suitable for promoting kaizen.

In organic organisations, there is continual adaptation and redefining of individual tasks and a supportive rather than restrictive nature of specialist knowledge is emphasised. Communication and interaction can take place at any level, as determined by the need of a process, and there exists a much higher degree of commitment to the organisation than for the mechanistic organisation.

A mechanistic form of organisation is appropriate for stable environmental conditions. It is characterised by a high degree of formalisation and centralisation, and a clear hierarchy of control in which responsibility for overall knowledge and control rests at the top.

The finding showed that successful kaizen transfer was positively related to organically structured firms and negatively associated with mechanistically structured firms.

### 7.2.5 National level influencing factors on the transfer process (RQ 5)

The fifth research question was formulated as follows:

*What national level factors influence the transfer of kaizen?*

Two national level factors were found critical for kaizen transfer: eagerness or employees and discipline of employees**.**

The level of discipline is important for the transfer of kaizen because it relates to the aspect of *transfer*, i.e., introducing something new. Introducing something new requires a modification from the existing routines. In countries where employees are disciplined and strictly follow orders and rules, the new routines can be 'enforced'. In countries where employees have less discipline, it is much harder to establish the new routines because when employees have difficulty accepting it. Literature supports the finding that employee discipline is important for transforming an organisation into a kaizen enterprise. For instance, Liker (2004) found that in Toyota, that there is discipline in how workers tend to adhere to rules and execute standard tasks. Similarly, Aoki (2008) emphasises the importance of discipline for kaizen and said 'In general, Japanese consider disciplining employees, or *shitake* in Japanese, as a part of corporate education. *Shituke*, whose meaning is to teach employees good manners, is sometimes considered to be a part of corporate responsibility' (Aoki, 2008: 532).

The eagerness of employees is another critical element for the transfer of kaizen because it especially relates to specific characteristics of kaizen. Brunet and New (2003) define kaizen as continuous improvement involving activities that are outside of the contributor's explicit roles. A similar idea has been mentioned by Hayashi (1994). Thus, kaizen relates to a mentality of employees where they try to continuously improve the company's performance even when it is not part of their job description. Countries where employees have less eagerness to go beyond what is written in the job description, such as the Netherlands and Germany, will present challenges for implementing kaizen. While in countries where employees are eager to do additional things, such as the countries in Eastern Europe and South East Asia, it will be relatively easy to implement kaizen.

### 7.2.6 Influence of Japanese expatriates on the transfer process (RQ 6)

The sixth research question was formulated as follows:

*What is the influence of Japanese expatriates on the process?*

This study described the contradiction between Japanese companies' preference to use Japanese expatriates to manage overseas factories and the negative influence of this choice on kaizen implementation. Japanese companies preferred to use

Japanese expatriates for the subsidiary's top-management positions as they felt it provided HQs with a high degree of control over the subsidiary. At home, Japanese managers use socialising and networking functions intensively in their work. Not keeping closely in touch with their network negatively affects their career development. Many Japanese managers were therefore not eager to be assigned to an overseas subsidiary. Even if they were assigned, they returned to the Japanese headquarters frequently to keep in touch with their network and maintain strong communication ties. In addition, Japanese expatriates were only assigned to work in the subsidiary for a short period (in our cases, 2-5 years). Therefore, many of them did not seek to carry out major changes during their rotation but tended to maintain the status quo. And when some Japanese managers were eager to make changes, by the time they learned to manage in the Dutch context, their tenure was over, and they returned to Japan. Then a new Japanese manager had to start the whole process all over again. The high turnover of Japanese expatriates resulted in low managerial commitment to kaizen implementation and communication problems between the Dutch and Japanese staff.

### 7.2.7 Summary

It was found that Japanese companies were still transferring their management systems to overseas subsidiaries. Perceived problems include high labour turnover rate, miscommunication, lack of competency of operators, and absence of kaizen mentality. The finding suggests that Japanese companies that transfer operations to overseas locations are still facing many difficulties. One of the key issues for these manufacturers is the transfer of the kaizen approach. It was found that there are three stages in the kaizen transfer process: preparation, implementation, and integration. In addition, several new factors were found. Japanese companies faced the challenge of deciding whether to continue with or dismiss employees who did not fit with the culture of kaizen. This research found that personal-initiative is a proxy of kaizen. It suggested that personal-initiative could be used to measure the degree of kaizen. Successful kaizen transfer was positively related to organically structured firms and negatively associated with mechanistically structured firms. Moreover, flexibility-oriented culture leaded to positive and control-oriented culture leaded to negative outcome; internal-oriented culture leads to positive and external-oriented culture leaded to negative outcome. This

research indicated that two main national level factors were found: the level of discipline of employees and level of eagerness of employees. It was also found that, based on these two factors, transferring kaizen to the Netherlands was very challenging. Finally, it was revealed that the use of Japanese expatriates itself turns out to be the root cause for the major problems faced during the process of kaizen implementation abroad. It was suggested that the best approach for successful kaizen transfer was a local managing director who is committed to kaizen implementation.

## 7.3 Discussion

This section discusses how the findings of this research relate to existing research and the contribution to theory and the scientific body of knowledge. It consists of three subsections: kaizen concept, international kaizen transfer process, and major influencing factors on the kaizen transfer process. Classifications were made based on the framework of the 'three dimensions in organisational change' (Pettigrew 1990), which was introduced in Chapter 1.

### 7.3.1 Kaizen concept

The link between personal-initiative and kaizen has been suggested by several authors. For instance, Imai (1986), Brunet and New (2003) in their work suggested that personal-initiative is one of the key determinants for kaizen. Aoki (2008) identified employee initiative, discipline, and cross functional communication as the three key organisational capabilities of kaizen. Whereas the link was suggested, it has not been empirically tested. This research made an explicit link between these concepts.

The link between personal-initiative and kaizen has two important implications. First, it suggests that the degree of kaizen can be determined by measuring the level of personal-initiative of the shop floor operators. It can be measured through shop floor operators because successful kaizen implementation generally starts from management and the capabilities are gradually acquired by the shop floor operators (Bessant et al., 2001; Bessant, 2003). Second, this research indicates that researchers can use established instruments to measure the level of kaizen development in organisations e.g., Frese *et al.* (1996) and Frese *et al.* (1997).

### 7.3.2 International transfer process of kaizen

The results show that international kaizen transfer has three major stages: preparation, implementation, and integration. These were found aligned to the existing transfer process model of knowledge, technology, and management systems that has been discussed in Chapter 3. Thus, the findings on stages of kaizen transfer add validity to the existing body of knowledge. In addition, this study extends the literature through finding several critical steps within those transfer stages.

- Before kaizen is implemented, organisation culture and structure are often not suitable for kaizen transfer. For instance, employees tend to feel comfortable both staying within their own rules and job responsibilities and defending themselves from doing work that goes beyond their responsibility. In order to unfreeze the existing situation or status quo, creating a sense of urgency among employees is found an effective step to take. Typically, once the sense of urgency becomes their own, workers start to think that they have to take action to improve things. The importance of a sense of urgency has been discussed in the literature of change management (e.g., Kotter, 2008) but overlooked in the literature of CI and kaizen implementation.
- Additionally, introduction of a specific area of improvement to maintain the employees' motivation for kaizen was found. Wu and Chen (2006) indicate that any activity has its life cycle: introduction, growth, maturity and decline. Proper regenerative inputs need to be injected before an activity declines, so that the firm's improvement level can be moved up to a higher level. The finding suggests that a new area for improvement could be used as a proper regenerative input as it can provide motivation for improvement.
- Moreover, the in-depth nature of this case study approach allowed us to identify a challenge with dealing with employees who do not fit in the culture of kaizen. This is a factor that has not been discussed extensively in the literature.

This study provided insights on the positive and negative factors that influence kaizen implementation, specifically at certain stages (See Chapter 3 ***Table 3.11***). The model which indicates the stages and the specific factors that influence at each stage has not been done in past kaizen research. Use of this model can be

extended to other management systems such as TQM and TPS because these concepts share a fundamental philosophy with kaizen (Imai, 1986).

In short, this research extended the literature of kaizen by identifying steps during the international kaizen transfer process. Those are development of sense of urgency, introduction of new area of improvement, and managerial decision to fire or keep the employees who do not match with the culture of kaizen.

### 7.3.3 Major influencing factors on the kaizen transfer process

This study investigated the influence organisational structure, organisational culture, national level factors as well as the Japanese expatriates on the international kaizen transfer process.

*Organisational level factors*

*Organisational structure:* Even though researchers in the past linked organic structure with some other production concepts such as TQM, TPS, and Lean Production (Beyer, Ashmos, & Osborn, 1997; Moore & Brown, 2006; Tata & Prasad, 1998), research specifically looking at kaizen was limited. Moreover, this finding also made a link between organic structure and personal-initiative which has not been empirically tested before. This link is aligned with Frese *et al.* (1996) who argued that high control at work can engender a passive and helpless approach toward work.

Hayashi's (1994) demonstrated figures (***Figure 7.1***) to describe how organic/mechanistic organisational structure facilitates/hinders employees who collaborate to tackle problems. In organic organisations, particularly, each person's job description is not clearly defined and often overlaps. In contrast, mechanistic organisations have rigid job descriptions and employees are expected to follow protocols.

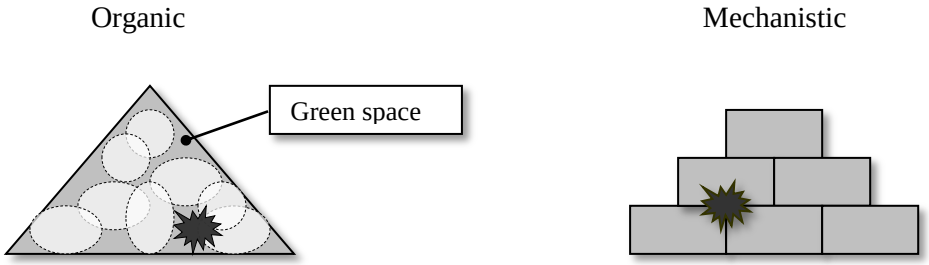


*Figure 7.1 – Organic and mechanistic organisation (Adapted from Hayashi, 1999:57)*

Hayashi (1999: 57-58) discussed that:

> *The area inside the triangle on the left or the blocks on the right covers all the work inside an organisation. In the organic organisation, strategic tasks are left undistributed to individual realms of responsibility; and only routinised and/or specialised tasks are within the circles of individual responsibilities. The strategic tasks stay in the shaded area of common responsibility called 'green space' in which everyone collaboratively participates in interaction to fulfil such new or strategic tasks. In turn, in mechanistic organisation, job description is precisely defined and all employees are expected to fulfil their responsibility according to their job description. Jobs are more complimentary to each other and the green space that is not particularly covered by one job description does not exist in this type of organisation. This vague specialisation in an organic organisation promotes the development of personal-initiative. On the one hand, in organic organisations, when a problem occurs at the star in* ***Figure 7.1****, there is no specific circle that covers it; so instead the circles or people surrounding the problem will autonomously share information to tackle the problem together. Responsibility for overseeing projects and for accepting rewards or punishments is shared collectively by all members of a sub-unit. On the other hand, in a mechanistic organisation, when a problem occurs in the area where no specific block or people cover it (indicated by a star), people logically argue to decide whose realm of responsibility the problem falls upon based on the job description. If it is found nobody's problem, then the job description is rewritten so that someone can take care of it. In this organisation design, the responsibility is more distinct. Thus, personal-initiative is more likely to be developed in the organic organisational structure than mechanistic structure.*

Kaizen is about employees work together proactively to locate and solve problems. Therefore, this can be applied to kaizen.

*Organisational culture:* This research found an association between organisational culture and the kaizen transfer process using Quinn and Rohrbaugh's (1981) Competing Values Model. This research indicates that clan culture influences positively and bureaucratic culture influence negatively the kaizen transfer outcome. This link is frequently discussed theoretically in the literature (Imai, 1986; Recht & Wilderom, 1998). This research found a significant link between organisational culture and kaizen outcome. These findings were further supported by the qualitative data obtained from the case study. Moreover, it also contributed to science by making a link between organisational culture and level of personal-initiative.

*National level factors:* The finding on two important national cultural level factors, eagerness and discipline, on the kaizen transfer process has an implication for the broader theory of knowledge transfer. Van Wijk *et al.* (2008) find that during intraorganisational knowledge transfer, cultural distance hinders knowledge transfer; they recommend that more research is needed for assessing why it is less detrimental in inter-organisational knowledge transfer. As van Wijk *et al.* (2008) suggest, there are relatively few studies that have looked at relationships between culture and knowledge transfer. This may be because cultural aspects are rarely 'visible' within the quantitative methods that have dominated in published studies, which suggests that if progress is to be made, issues of culture will best be investigated using qualitative methods and case studies. Smith-Easterby *et al.* (2008) indicated that one of the important research gaps in the study or knowledge transfer is regarding whether cultural differences between the source and recipient form barriers to knowledge transfer.

*Influence of Japanese expatriates:* In this research, it was found that the major challenges during the international kaizen transfer process (i.e., managerial commitment, communication, and high labour turnover) were mainly caused by Japanese expatriates. Abo (1994) and Byun and Ybema (2005), among others, discuss the use of expatriates in the broad sweep of MNC management in studies describing the cultural conflicts between two parties (Japanese and non-Japanese employee) within MNCs that can lead to low motivation of employees. However, the study of expatriates was overlooked in the specific literature on international kaizen transfer. This research provided a plausible assumption based on the in-

depth case study that the use of Japanese expatriates has a negative influence on kaizen transfer outcomes.

Moreover, this study suggested that one of the possible solutions to ease the transfer of kaizen is to use a local managing director (who is experienced and committed to implementation of kaizen). Our findings align with Yoshiwara (2003) that Japanese overseas subsidiaries should use local managing directors. However, our reasoning of a need for using a local managing director at overseas subsidiaries is different from that of Yoshiwara (2003). Yoshiwara (2003) asserts that a local managing director is required to maximise the capabilities of overseas subsidiaries in order to facilitate the two-way approach. This research found that for successful kaizen transfer it is critical that a managing director has to be committed to kaizen and communicate explicitly the reasons and benefit of using kaizen to local employees. At most of the Japanese manufacturers that we visited, Japanese expatriates were having problems with communication. This led to low motivation of local employee toward kaizen. This is the major reason why a local managing director is required in the overseas subsidiary. This research, therefore, added one more critical reason to Yoshiwara's (2003) assertion that Japanese MNC should use local managing directors at their overseas subsidiary.

## 7.4 Reflection

Getting an access to the companies turned out to be the most challenging tasks during the PhD programme.

There were several factors that influenced a process of getting accesses to the targeted companies. Researchers need to consider the following factors when getting access to the target companies for future field research projects.

First, it was the timing of conducting the research. Around that time, the severe economic recession hit Japanese industries and many companies were not willing to spend time for research. For instance, a large car manufacturing company responded to the proposal initially sent to all the Japanese manufacturers in the Netherlands and said that they were willing to cooperate. The researcher was able to set a date and time for appointments with the key people of the company. However, due to the economic recession, they had to cancel all appointments since all those key people had to go back to Japanese HQs.

Second, the size of the company had influence on the process of getting accesses to the companies. In case of research in Japan, since most of the companies selected were large ones, the researcher had to go through bureaucratic procedures to finally reach the person to whom he wanted to talk. In contrast, with regard to the research in the Netherlands, most of the companies were small and middle sized. Hence, the researcher was able to talk to the key person without going through bureaucratic procedures.

Third, it was a type of research. On the one hand, for the research in Japan, due to the exploratory nature of the research, the research focus was broad which makes it difficult for the researcher to define the explicit benefits to the companies. On the other hand, when the research was conducted in the Netherlands, the research topic was much more explicit and focused. Moreover, the research subject (i.e., kaizen transfer/implementation) was still a hot topic in the Netherlands and the companies showed a lot of interest to cooperate.

Fourth, skills and experience were required to describe and explain the research topic simply, explicitly, and interestingly to the key persons.

Fifth, it is more efficient to get an access to the key person if researcher knows someone inside an organisation (e.g., using the researcher's network such as friends, network of family members, and former bosses and colleagues). During the research in Japan, the most helpful event was that the researcher contacted the Japan Institute of Industrial Engineering (JIIE). This organisation expressed interest in our research topic and helped the researcher significantly with getting access to key persons in targeted companies.

Finally, during the research in the Netherlands, many Japanese were willing to accept the research request and share information to the Japanese researcher from their 'compatriot feeling'.

*Interviews*

There were some lessons learned during the interview researches.

It was found that respondents tended to talk about their personal interests instead of answering questions asked by the researcher. For example, even though the researchers were asking a question about the definition of kaizen (e.g., How do you define kaizen?), respondent started talking about the implementation process, etc. It was deemed that this happened because respondents were more interested in or more familiar with other topics at that point of time. These often resulted in

incomplete surveys within the allotted time which led to the researcher's follow-up call to the respondents or return to the company. In the beginning, it was difficult to control respondents because the researcher perceived it was impolite to stop them and tell them to answer specifically about the question. However, the researcher gradually discovered that none of the respondents were offended by doing so. Afterwards, he felt more able to control respondents.

The critical information was often mentioned after the researcher finished with all the questions. For instance, the issues in the use of Japanese expatriates (Chapter 6) were first indicated by the respondents during the informal conversation after all the questions were asked. It is valuable to ask an open ended question at the end of interview such as "do you have any more things that you would like to share?" It is also effective to have a lunch or a cup of coffee with respondent after the interview if there is a chance. Interesting information was often found during that time.

*Organising a workshop*

Workshop was organised to provide research feedback to the companies that researcher visited for collecting data. Providing feedback to the companies was found important to maintain the good relationship with industries. For the companies, they could not only get feedback but also expand their network among many other companies around the Netherlands. Organising the workshop in the company offered an extra benefit to the participants in that they were able to tour the factory. The workshop provided the researcher many opportunities for further research, consultation, and workshops.

## 7.5 Recommendations

The recommendations based on the findings in the cases are summarised in the following.

### 7.5.1 Japanese manufacturing companies

*Understand kaizen*

In order to successfully transfer kaizen from a Japanese factory to a Dutch subsidiary, it is critical to understand kaizen. However, due to the ambiguous

definition of the concept (See Chapter 4), it was found that practitioners have different interpretations. This research suggests that kaizen is simply a philosophy of continuous improvement which is influenced by personal-initiative.

*Develop a suitable environment*

Dutch subsidiaries need to be arranged according to a certain structure and culture to effectively promote personal-initiative. This research found that organic organisation structure and trust and group orientated organisation culture promoted personal-initiative. Therefore, it is recommended that the Japanese manufacturing companies develop a culture of trust and group orientation together with organic organisation structure in their Dutch subsidiaries.

*Trust and group orientated organisational culture:* The impetus for suggesting and implementing improvements sometimes involves risk that it may result in making other employees trouble or generate extra efforts and costs. In order to make employees feel secure to suggest improvement ideas, it is necessary for the organisation to have trust and team work culture. For that reason, trust and group oriented organisational culture can promote kaizen. Companies are recommended to take the following points into consideration in order to develop the trust and group oriented culture. Clan organisational culture context is shown in ***Table 7.1***.

*Table 7.1 – Clan organisational culture context (Adapted from* Quinn & Spreitzer*)*

| | |
|---|---|
| Characteristics | Company should be a very personal place. It was like an extended family. People seemed to share a lot of themselves. |
| Leader | The head of company generally considered to be a mentor, a sage, or a father or mother figure. |
| 'Glue' or Holding Agent | Company was held together by loyalty and tradition. Commitment to this company runs high. |
| Emphasis | Company needed to emphasise human resources. High cohesion and morale in the company were important. |

*Organic organisational structure*: Chapter 4 discussed that organisational structure can broadly be divided into organic and mechanistic structure. In order to promote kaizen, organisational structure needs to be an organic organisational structure. ***Table 7.2*** shows the organic organisation context.

*Table 7.2 – Organic organisation context (Adapted from Burns & Stalker, 1961)*

| |
|---|
| 1. Managers' operating styles allowed to range freely from the very formal to the very informal |
| 2. Open channels of communication with important financial and operating information flowing quite freely throughout the business unit |
| 3. A strong tendency to let the expert in a given situation have the most say in decision making even if this means even temporary bypassing of formal line authority |
| 4. A strong emphasis on adapting freely to changing circumstances without too much concern for past practice |
| 5. A strong emphasis on getting things done even if it means disregarding formal procedures |
| 6. Loose, informal control; heavy dependence on informal relationships and the norm of cooperation for getting things done |
| 7. A strong tendency to let the requirements of the situation and the individual's personality define proper on-job behaviour |

*Managing the process of international kaizen transfer*

When Japanese manufacturers are transferring kaizen to the Netherlands, it is recommended that they use the following guidelines:

*Stage 1: Pre-investment*

*1-1 Feasibility study and need assessment:* A feasibility study and need assessment needs to be conducted in this stage. A feasibility study can examine the transfer processes of kaizen to determine the likelihood of success. It helps a company to decide whether a transfer is financially, economically, and physically feasible. In this stage, it is critical to determine whether there is a human resource person who is experienced, committed to kaizen with sufficient local language and communication skills. Needs assessment helps to identify what the possible challenges are for the kaizen transfer. Company can develop a strategy to get organised to deal with challenges.

When the company finds it necessary to transfer kaizen from their company to an overseas subsidiary, it is recommended that the process starts with selecting suitable countries where people have characteristics that are aligned with kaizen capabilities (i.e., where people possess eagerness and discipline). For instance,

countries that fit these criteria include Scandinavian countries. Eastern Europe countries, such as Poland, are also suitable because people have high eagerness and moderate discipline. Germany was found suitable since people have high discipline but companies need to expect that Germans have lower levels of eagerness and flexibility. Similarly, East Asian countries such as Korea, Thailand and Vietnam were found suitable since people have a high degree of eagerness.

*Stage 2: Preparation*

*2-1 Initial hiring:* It is recommended for companies to hire young students directly from schools. They tend to be not only eager to learn but also open-minded for accepting concepts introduced by the Japanese because they do not have preconceived ideas about working methods in other countries. Additionally, they have a higher level of commitment to the work because most of them do not have family obligations. Highly educated operators are recommended. They tend to use their ability to do jobs that exceed their responsibility.

*2-2 Training:* Training can be done in two ways. One is to send a number of newly hired operators to the Japanese factory for several months training. An advantage of this approach is that while they are in Japan, they can learn both operation techniques and the supportive organisational culture. When they are back they convey techniques and culture to other local operators who are remain in the overseas subsidiary. Disadvantages of this approach are that Dutch operators are away from their social life for several months. Thus, training is restricted only to operators who do not have social obligation. Moreover, this approach requires a lot of resources for the company to set up an infrastructure to invite local operators from the overseas subsidiary. The other approach is to invite experienced and committed kaizen experts from the Japanese factory and provide training to local operators onsite. Although it is less expensive with this approach compared to sending operators to the Japanese factory, it was found that it may results in communication issues and problems due to cultural differences between Japanese trainers and Dutch employees. One of the effective approaches is to hire local kaizen consultants who can train operators without communication and cultural issues.

*Stage 3: Implementation*

*3-1 Creating sense of urgency:* It is recommended to start implementing kaizen from increasing awareness. One of the effective ways to do this is through

creating a sense of urgency among employees. Sense of urgency can be effectively conveyed to employees by using photos and figures (visualisation of sense of urgency) instead of just explaining it. Spending one whole day to clean up, sort and organise the shop floor and offices (one day 5S) and conducting a brainstorming session involving all relevant employees are also effective approaches to increasing the awareness among employees that organisational changes are going to take place.

*3-2 Execution:* It is recommended that committees follow the five steps of kaizen execution.

1) Determine the key performance indicators (KPIs) – for example, quality, cost, and delivery time.
2) Set measurable targets using those key performance indicators.
3) Select a main area of improvement based on the voice of customers and use it as a motivation driver for kaizen. For instance, if there are complaints mainly regarding quality from customers, the area of improvement can be quality improvement.
4) Organise small group activities to tackle the problems mainly related to the selected area of improvement. The small group activities are organised along with the PDCA cycle, namely:

   - Form team
   - Describe problem
   - Containment
   - Identify root cause
   - Verify corrective action
   - Implement Corrective action
   - Prevent Reoccurrence
   - Congratulate team and celebrate the success

   It is recommended that companies start solving small problems. Starting from difficult and complicated problems often takes a long time and requires experience and skills. Employees may lose their motivation for kaizen if they are not able to solve those big problems.
5) Finally, when the target which was set in the second step was achieved, then a new area of improvement needs to be introduced. If the target was either too

high or low, it needs to be adjusted based on the motivation level of employees.

The cycle of kaizen in the execution stage is illustrated in ***Figure 7.2***.

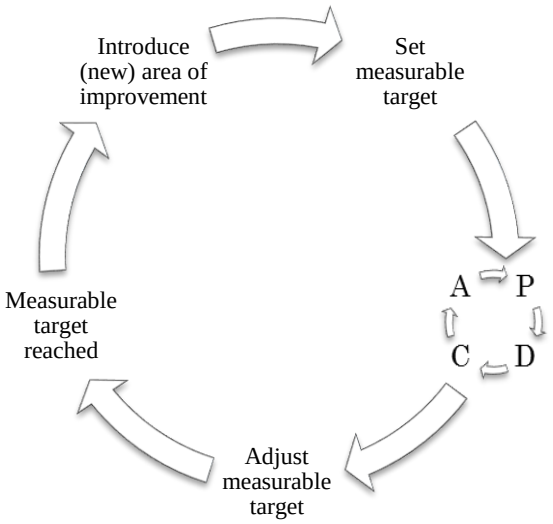


*Figure 7.2 – Cycle of kaizen*

While the cycles are running, extensive use of visual aids can help employees to maintain high motivation for kaizen. When the operators at the shop floor developed the capabilities of kaizen, the transfer of kaizen is considered completed.

### 7.5.2 Future research directions

In the following, directions for future research related to international kaizen transfer are suggested.

*Improvements on the kaizen transfer process model*

This research developed the international kaizen transfer process model based on the findings from 15 in-depth case studies. Thus, the external validity still needs to be enhanced by testing the model with a larger number of cases.

*Renewal or non-renewal contract decision*

In this research, the challenge of dealing with employees who do not fit the kaizen culture was found. Some companies addressed those operators who never fit in the culture of kaizen even after the company put great effort into adjusting their mentality. The findings in Chapter 3 suggest that the company should end the contract with employees who do not fit to the kaizen culture. However, this contradicts the no-firing policy of many Japanese companies. A no-firing policy provides security for the employees; this enhances the employees' loyalty to the company (Abegglen, 1958). Campbell (2000) discussed as it promotes the employees' proactive behaviour. In this sense, firing people may reduce the employee's loyalty to the company. This study does not have enough evidence to verify which approach is better for a successful kaizen transfer. Whether to continue or terminate the contract with them and its influence on successful kaizen transfer needs to be investigated further.

*Role of sense of urgency*

This study found that creating a sense of urgency is critical in the initial stage of the kaizen implementation process. Before kaizen was implemented, employees tended to feel comfortable with staying within rules and job responsibilities and tended to defend themselves from doing work beyond their responsibility. Eventually, the company became bureaucratic/mechanistic where the organisation had high hierarchical level, centralised decision making, high control, and people had less communication, and sectional mentality. In order to unfreeze this mindset, creating a sense of urgency among employees was found effective. Once the sense of urgency became their own, they started to think that they had to take an action to improve things. This study suggests that further research is needed to enhance the external validity regarding the link between the level of sense of urgency and the level of kaizen.

*National factors: eagerness and discipline*

It is recommended that future research focuses on operationalisation of the two concepts in this study, eagerness and discipline, and test the relationship with ease of kaizen transfer. This way, it is possible to determine which countries are easier/more difficult to transfer kaizen. It is also articulating that studies on kaizen transfer are conducted in other countries to enhance the model (***Figure 5.1***)

*Expansion of the knowledge transfer and capability formulation to global production network*

This research investigated mainly the international horizontal transfer of kaizen from a Japanese factory to a Dutch subsidiary. For future research, another direction, vertical transfer, which is the transfer of kaizen between overseas subsidiaries and suppliers is recommended.

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# Appendix

# Interview protocols for research on kaizen transfer to the Netherlands

**1. INFORMATION FOR THE INTERVIEWER**

**1.A GENERAL RULES TO BE FOLLOWED BY INTERVIEWER:**

KEY IDEA NUMBER ONE: IF OTHER INTERVIEWERS WOULD USE THE PROTOCOL AND INTERVIEW THE SAME RESPONDENT THAT THE SAME RESULTS WOULD BE ACHIEVED.

KEY IDEA NUMBER TWO: IF THE SAME INTERVIEWER INTERVIEWS TWO OR MORE DIFFERENT RESPONDENTS THAN EACH OF THESE RESPONDENTS IS ASKED THE SAME QUESTIONS AND NO DIRECTION IS PROVIDED

SO BASICALLY: ANSWERS ARE NOT BIASED BY ANYTHING THAT THE INTERVIEWER DOES.

THEREFORE:

1. READ THE QUESTIONS EXACTLY AS WORDED.
2. WHEN ANSWERS ARE INADEQUATE, YOU HAVE TO PROBE FOR MORE INFORMATION.
    a. PROBING OPEN-ENDED QUESTIONS:
        i. PROBING NEEDS TO BE NONDIRECTIVE. THAT MEANS THAT YOU AS INTERVIEWER DO NOT INNOVATE IN WAYS THAT WOULD MAKE INTERVIEWS DIFFERENT ACROSS RESPONDENTS OR INTERVIEWERS.
        ii. IN ADDITION TO REPEATING THE QUESTION, THERE ARE ONLY THREE MAIN PROBES:
            1. HOW DO YOU MEAN THAT?
            2. TELL ME MORE ABOUT THAT?
            3. ANYTHING ELSE?
3. BE SURE TO HAVE MISSING DATA CODES FOR QUESTIONS THAT ARE NOT ANSWERED. CODES SHOULD DIFFERENTIATE AMONG THE FOLLOWING:
    a. NOT ASCERTAINED INFORMATION: WHERE CODABLE INFORMATION WAS NOT OBTAINED AS A RESULT OF IMPERFECT INTERVIEWER OR RESPONDENT PERFORMANCE. CODE THIS AS NAI.

b. INAPPLICABLE INFORMATION: WHERE THE INFORMATION DOES NOT APPLY TO A PARTICULAR RESPONDENT BECAUSE OF PREVIOUS ANSWERS. CODE THIS AS II.

c. 'DON'T KNOW' ANSWERS: WHICH MAY BE TREATED AS NOT ASCERTAINED INFORMATION OR AS A DISTINCT CATEGORY OF MISSING DATA. IF YOU DISTINGUISH THIS, USE THE CODE DNK OR MAKE IT MORE SPECIFIC.

d. REFUSED TO ANSWER: USE THE CODE RTA. THIS WILL DISTINGUISH THIS TYPE FROM THE PREVIOUS TYPES ALLOWING US TO DETERMINE WHETHER CERTAIN QUESTIONS ARE MORE SENSITIVE.

4. TEXT IN CAPITAL LETTERS IS TEXT FOR THE INTERVIEWER ONLY, THAT IS, THIS SHOULD NOT BE READ TO THE RESPONDENT.

**1.B BACKGROUND FOR THE RESEARCH**

THE INTERVIEW SURVEY IS LOOKING AT THE TRANSFER OF KAIZEN TO THE NETHERLANDS. THIS PROTOCOL CONTAINS DOCUMENTS FOR TWO TYPES OF INTERVIEWS:

- A CEO INTERVIEW AND A PRODUCTION/OPERATIONS/SHOPFLOOR MANAGER INTERVIEW. THIS INTERVIEW CONSISTS OF TWO PARTS:

1. GETTING AN OVERALL SENSE ON HOW THE RESPONDENTS EXPERIENCED THE TRANSFER OF KAIZEN BY ASKING OPEN QUESTIONS ABOUT THIS PROCESS

    a. FOR THIS PART OF THE INTERVIEW, YOU NEED TO COMMUNICATE TO THE COMPANY (OR RESPONDENTS) PRIOR TO THE INTERVIEW THAT ONE OF THE THINGS YOU ARE INTERESTED IN DISCUSSING IS HOW THEY DEVELOPED THE KAIZEN MENTALITY OF OPERATORS IN THE PLANT IN THE NETHERLANDS AND THAT IT WOULD BE EXTREMELY HELPFUL IF THEY DEVELOPED OR TRIED TO DEVELOP THE KAIZEN MENTALITY ACCORDING TO A PLAN, **TO HAVE THOSE PLANS AT THE INTERVIEW. IT MIGHT BE EVEN BETTER TO GET A COPY OF THOSE PLANS PRIOR TO THE INTERVIEW.**

2. TESTING SPECIFIC ASSUMPTIONS ABOUT WHAT MIGHT INFLUENCE THE EASE OF THE TRANSFER. THIS IS ACCOMPLISHED BY ASKING CLOSED QUESTIONS. IN PARTICULAR, THESE QUESTIONS DEAL WITH:

    a. A MEASURE OF HOW ORGANIC THE ORGANISATION'S STRUCTURE WAS AT THE TIME OF THE TRANSFER

    b. A MEASURE OF THE ORGANISATION'S CULTURE AT THE TIME OF THE TRANSFER

    c. A MEASURE OF HOW WELL KAIZEN WAS TRANSFERRED

- AN OPERATOR INTERVIEW: THIS CONTAINS ONE PART AIMED AT MEASURING THE ORGANISATION'S CHARACTERISTICS.

**1.C PREPARING FOR THE FIELD STUDY**

BEFORE YOU CAN START THE INTERVIEW, YOU NEED TO HAVE DEVELOPED CONTACTS WITH COMPANIES. DURING THIS INITIAL CONTACT OR MAYBE SHORTLY BEFORE YOU GO, THE COMPANY WILL PROBABLY ASK YOU WHAT THIS STUDY IS ABOUT, WHAT THEY GAIN FROM PARTICIPATION, AND WHAT PARTICIPATION FOR THEM WOULD MEAN.

1.C.1 WHAT THE STUDY IS ABOUT

THE STUDY IS ABOUT UNDERSTANDING HOW A JAPANESE CONCEPT HAS BEEN INTRODUCED IN THE NETHERLANDS AND WHAT TYPE OF PROBLEMS OCCURRED

1.C.2 WHAT THEY GAIN

TWO PRIMARY THINGS:

- AN ANALYSIS OF THEIR SPECIFIC SITUATION
- INSIGHT INTO WHAT OTHER COMPANIES HAVE FACED
- BOTH MAY LEAD TO INCREASED INSIGHT THAT MIGHT HELP RESPONDENTS IN FUTURE SITUATIONS

1.C.3 WHAT PARTICIPATION WOULD MEAN

IN ORDER TO NOT BE DEPENDENT UPON A SINGLE RESPONDENT FOR A COMPANY BUT HAVE MORE DATA THE INTERVIEW SHOULD BE CONDUCTED WITH:

1 CEO

1 PRODUCTION OR OPERATIONS OR SHOPFLOOR MANAGER

3-5 OPERATORS WHO WENT THROUGH THE KAIZEN DEVELOPMENT EXPERIENCE

THE INTERVIEW WITH THE CEO AND PRODUCTION MANAGER ARE PROBABLY APPROXIMATELY AN HOUR

THE INTERVIEW WITH AN OPERATOR WOULD PROBABLY LAST APPROXIMATELY 45 MINUTES

WHAT YOU ARE LOOKING FOR IS ROUGHLY ONE DAY OF ACCESS TO THE FACTORY WHEREBY DURING THAT ONE DAY YOU CAN INTERVIEW THE 5-7 PEOPLE.

1.C.4 JUST BEFORE YOU GO

- PRINT OUT ONE INTERVIEW PROTOCOL FOR THE CEO, PRINT OUT ONE INTERVIEW PROTOCOL FOR THE PRODUCTION MANAGER AND PRINT OUT FIVE INTERVIEW PROTOCOLS FOR OPERATORS.

- KEEP THESE PROTOCOLS SEPARATE FROM EACH OTHER: THAT MEANS DO NOT USE THEM AS ONE SINGLE DOCUMENT BUT HAVE EACH PROTOCOL AS SEPARATE INSTRUMENT.
    - REASON: IF YOU HAVE THEM ALL IN ONE DOCUMENT, WHEN YOU START AN INTERVIEW AND PULL IT OUT, THE RESPONDENT WILL SEE THAT YOU PULL OUT A LARGE DOCUMENT AND THIS WILL HAVE A PSYCHOLOGICAL EFFECT ON THEIR PARTICIPATION AND HOW THEY WILL BE ANSWERING QUESTIONS
- PRINT OUT THE WRITTEN SURVEY QUESTIONS FOR EACH SECTION SEPARATELY SO THAT YOU CAN HAND THIS PART OVER DURING THE INTERVIEW
    - CEO/MANAGER INTERVIEW
    - OPERATOR INTERVIEW
- BRING EXTRA BLANK PAPER IN CASE THERE IS NOT ENOUGH SPACE TO WRITE YOUR ANSWER

1.C.5 DURING THE INTERVIEW

PAY ATTENTION TO THE TIME. YOU CAN PROBABLY GET ABOUT ONE HOUR FOR THE INTERVIEW. SECTION TWO OF THE CEO AND PRODUCTION MANAGER LASTS PROBABLY AROUND FIVE TO TEN MINUTES. MAKE SURE THAT YOU COVER THAT.

1.C.6 AFTER THE INTERVIEW

- WHEN A RESPONDENT BRINGS YOU TO ANOTHER RESPONDENT, YOU MAY BE ABLE TO ASK ADDITIONAL 'INFORMAL' QUESTIONS. SINCE THE 'OFFICIAL' INTERVIEW IS OVER, THIS SOMETIMES LEADS TO MORE OPENNESS AND ADDITIONAL INSIGHT.
- IMMEDIATELY AFTER: CODE THE PERSONAL INITIATIVE QUESTIONS FOR OPERATORS
- WHEN YOU GET BACK TO YOUR OFFICE: AS SOON AS POSSIBLE WRITE THE COMPLETE ANSWERS IN AN ELECTRONIC FILE BY QUESTION AND **IN ENGLISH. DO NOT DO IT IN JAPANESE FIRST.**

**2. CEO/PRODUCTION MANAGER**
**(SHOPFLOOR/OPERATIONS MANAGER)**
**INTERVIEW**

**GENERAL INFORMATION**

**Date:**

**Company:**

**Address:**

**Respondent position**

**Respondent name and phone number:**

**Name of Interviewer:**

**Introduction statement (READ ALOUD)**

This research is about transferring the kaizen mentality to the Netherlands. The purpose of this research is to learn about how kaizen is transferred and what types of challenges are faced by companies. In this interview, I will ask you several questions about Kaizen practice in your company. These questions are organised into two sections. In the first section I will ask you several open-ended questions about the experiences that you and your company have had with transferring kaizen to the Netherlands. In the second section I will ask you to fill in a short survey with closed-ended questions about how your company was organised. If there is anything that is not clear, please feel free to ask me for a clarification.

**SECTION 1:**

**OPEN QUESTIONS ABOUT KAIZEN EXPERIENCES**

Now, we will start with the first part of the interview. In this part, I will ask you several questions that relate to your experiences with kaizen in your plant in the Netherlands.

1. In your perception, how would you describe or define the term kaizen?

In this interview, I will use the term Kaizen to mean **'the mentality of operators at the shop floor level where they try to continuously improve the company's performance even when it's not part of their job description'.**

2. Did your factory try to develop this type of Kaizen mentality among operators? CIRCLE THE ANSWER PROVIDED BY THE RESPONDENT (YES GO TO QUESTION 3: NO GO TO QUESTION 21)
3. Please think back to the time when the development of the kaizen mentality was started in this factory (---PAUSE---) in which year was this?
4. At that time, how many employees did this factory have? Would you say up to 49, from 50 to 99, from 100 to 199, from 200 to 299, from 300 to 499, from 500 to 999, or 1000 or more?

THE GOAL FOR QUESTION 5 IS TO FIND OUT WHETHER THERE WAS A WRITTEN DOCUMENT WITH STEPS AND TIMELINES. **IF SO, QUESTIONS 6 UNTIL 15 SHOULD BE BASED ON THAT DOCUMENT.**

5. At that time, was there a written document or documents outlining how the kaizen mentality was going to be developed at the shop floor level? (YES: NO)
6. What were the major steps or phases to develop the Kaizen mentality among operators in this factory?

7. From your perspective, what is the degree of completion of developing kaizen in this factory as a percentage?

8. From the first step that was taken (REFERS TO QUESTION 6) to develop the kaizen mentality until this percentage was achieved how much time did this take in months?

REPEAT THIS SET OF FIVE QUESTIONS FOR EACH STEP

NOTE THAT THE FOLLOWING PROVIDES QUESTIONS FOR SEVEN STEPS OR PHASES. ADJUST HOW MANY TIMES YOU GO THROUGH THIS BASED UPON THE ANSWER FOR QUESTION 6.

9. THE FIRST STEP OR PHASE.

    9.1 For the first step or phase that you mentioned. How would you define success of that step?

    9.2 From your viewpoint, how successful was the factory with this first step or phase. Would you say very successful, successful, neither successful or unsuccessful, unsuccessful nor very unsuccessful?

    9.3 What factors contributed the most to a positive outcome in this step or phase, and why?

    9.4 What factors contributed the most to a negative outcome in this step or phase, and why?

    9.5 How long did this phase take in months?

10. THE SECOND STEP OR PHASE.

    10.1 For the second step or phase that you mentioned. How would you define success of that step?

    10.2 From your viewpoint, how successful was the factory with this second step or phase. Would you say very successful, successful, neither successful or unsuccessful, unsuccessful or very unsuccessful?

    10.3 What factors contributed the most to a positive outcome in this step or phase, and why?

    10.4 What factors contributed the most to a negative outcome in this step or phase, and why?

    10.5 How long did this phase take in months?

**Same questions were asked for third (11), fourth (12)… until seventh (15) step or phase.**

16. With the experiences that you have had with developing the kaizen mentality in this plant, if you could do this over again, would you change the approach, and if so, what or how would you change?

Part of the kaizen mentality can be viewed as personal-initiative. We use the following definition for personal-initiative:

Personal-initiative is characterised by self-starting and being proactive in nature, the actions exceed the work role, and include overcoming difficulties that arise in the pursuit of goals that are in accordance with overall organisational goals.

17. What percentage of employees at your plant demonstrated personal-initiative before the development of kaizen at your plant was initiated?

18. What percentage of employees at your plant currently (OR IMMEDIATELY AFTER KAIZEN WAS DEVELOPED) demonstrate personal-initiative?

In the previous questions you have described factors that influence the outcome of developing the kaizen mentality in your plant in the Netherlands. These factors may have been general factors that influence the development of the kaizen mentality or may have been specific factors that are related to the environment in the Netherlands. I am interested in separating these factors. The next couple of questions that relate specifically to the Netherlands may repeat some of the information that you have already provided in the previous questions but your answers are important for my research.

19. Which factors that relate specifically to the situation in the Netherlands compared to other countries contribute positively to developing the kaizen mentality of operators?
20. Which factors that relate specifically to the situation in the Netherlands compared to other countries contribute negatively to developing the kaizen mentality of operators?

IF THE RESPONDENT HAS INDICATED THAT THE KAIZEN MENTALITY WAS DEVELOPED IN THE FACTORY IN THE NETHERLANDS (QUESTION 2 AND SET 3-THROUGH 20) THEN SKIP THE NEXT QUESTION 21.

21. Were there any specific reasons for your company not to develop the kaizen mentality in the factory in the Netherlands?
22. Do you practice Kaizen in your Japanese plant? (YES:NO GO TO QUESTION 25)
23. Is there a difference of developing the kaizen mentality in your factory in the Netherlands versus Japan? (YES:NO GO TO QUESTION 25)
24. What are the main differences?
25. There might be countries in which it is easier to develop the kaizen mentality than in the Netherlands. Please identify <u>three countries</u> in which it is easier to develop the kaizen mentality compared to the Netherlands.
26. Why is it easier in those countries?
27. There might be countries in which it is more difficult to develop the kaizen mentality than in the Netherlands. Please identify three countries in which it is more difficult to develop the kaizen mentality compared to the Netherlands.
28. Why is it more difficult in those countries?

**<u>END OF THE FIRST SECTION</u>**

**SECTION 2:**

**CLOSED QUESTIONS ABOUT THE ORGANISATION**

IF THE COMPANY DID NOT TRY TO DEVELOP THE KAIZEN MENTALITY (QUESTION 2) AT THE FACTORY IN THE NETHERLANDS THEN SKIP THIS SECTION AND GO TO THE CLOSING SECTION.

**INTRODUCTION STATEMENT**

We have now concluded the first part of the interview. The purpose of the second part of the interview is to get a sense of your organisation. I am going to hand you a set of questions. Please think back to the time when the development of the kaizen mentality was started at the factory in the Netherlands and then answer the questions. After you read the questions, please circle the numbers which you think best fit to your belief and the situations in your company. If you are not clear about what is wanted, be sure to ask me. Here are the questions

THESE QUESTIONS ARE QUESTIONS 29 UNTIL 35, THAT IS, HOW THEY SHOULD BE CODED.

Please indicate on the scale by circling the appropriate number where you perceive your organisation at the time **when the development of the kaizen mentality was started** in this factory.

When kaizen was initiated my plant in the Netherlands had:

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 29. | A strong insistence on a uniform managerial style throughout the business unit | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Managers' operating styles allowed to range freely from the very formal to the very informal |
| 30. | Highly structured channels of communication and a highly restricted access to important financial and operating information | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Open channels of communication with important financial and operating information flowing quite freely throughout the business unit |
| 31. | A strong emphasis on giving the most say in decision making to formal line managers | 1 | 2 | 3 | 4 | 5 | 6 | 7 | A strong tendency to let the expert in a given situation have the most say in decision making even if this means even temporary bypassing of formal line authority |
| 32. | A strong emphasis on holding fast to tried and true management principles despite any changes in business conditions | 1 | 2 | 3 | 4 | 5 | 6 | 7 | A strong emphasis on adapting freely to changing circumstances without too much concern for past practice |
| 33. | A strong emphasis on always getting personnel to follow the formally laid down procedures | 1 | 2 | 3 | 4 | 5 | 6 | 7 | A strong emphasis on getting things done even if it means disregarding formal procedures |
| 34. | Tight formal control of most operations by means of sophisticated control and information systems | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Loose, informal control; heavy dependence on informal relationships and the norm of cooperation for getting things done |
| 35. | A strong emphasis on getting line and staff personnel to adhere closely to formal job descriptions | 1 | 2 | 3 | 4 | 5 | 6 | 7 | A strong tendency to let the requirements of the situation and the individual's personality define proper on-job behaviour |

**I am going to hand you another small set of questions. Please think back to the time <u>when the development of the kaizen mentality was started in this factory</u> and then answer the questions. After you read the questions, please distribute 100 points among the descriptions depending on how similar the description is to your organisation. If you are not clear about what is wanted, please ask me. Here are the questions**

These questions relate to the type of company that your organisation is most like. Each of these items contains four descriptions of companies. None of the descriptions is any better than the others; they are just different. Please distribute 100 points among the four descriptions depending on how similar the description is to your plant in the Netherlands when kaizen was initiated:

36. Company Characteristics (Please distribute 100 points)

_____ Company W is a very personal place. It is like an extended family. People seem to share a lot of themselves.

_____ Company X is a very dynamic and entrepreneurial place. People are willing to stick their necks out and take risks.

_____ Company Y is a very formalised and structured place. Bureaucratic procedures generally govern what people do.

_____ Company Z is very production oriented. A major concern is with getting the job done. People aren't personally involved.

37. Company Leader (Please distribute 100 points)

_____ The head of company W is generally considered to be a mentor, a sage, or a father or mother figure.

_____ The head of company X is generally considered to be an entrepreneur, an innovator, or risk taker.

_____ The head of company Y is generally considered to be a coordinator, an organizer, or an administrator.

_____ The head of company Z is generally considered to be a producer, a technician, or a hard-driver.

38. Company 'Glue' or Holding Agent (Please distribute 100 points)

_____ Company W is held together by loyalty and tradition. Commitment to this company runs high.

_____ Company X is held together by a commitment to innovation and development. There is an emphasis on being first.

_____ Company Y is held together by formal rules and policies. Maintaining a smooth-running company is important here.

_____ Company Z is held together by an emphasis on tasks and goal accomplishment. A production orientation is commonly shared.

39. Company Emphasis (Please distribute 100 points)

_____ Company W emphasizes human resources. High cohesion and morale in the company are important.

_____ Company X emphasizes growth and acquiring new resources. Readiness to meet new challenges is important.

_____ Company Y emphasizes permanence and stability. Efficient, smooth operations are important.

_____ Company Z emphasizes competitive actions and achievement. Measurable goals are important.

**CLOSING SECTION**

**CLOSING SENTENCES**

We have now ended the questions with regard to the topic that I am investigating. I do have a few more questions that will help me to place your responses in a context compared to other companies. Would you therefore please help me with the following questions?

40. What is your nationality?
41. How many years of working experience do you have in Japan?
42. How many years of working experience do you have outside of Japan?
43. How many number of employees does the factory in the Netherlands currently have?
44. Does your company have a labour union?
45. What is the type of the ownership: New wholly owned subsidiary?
46. Is there anything else with regard to your organisation or Kaizen in your organisation that you think is important for me to know and that you want to share with me?

IF DURING THE INTERVIEW PLANS FOR DEVELOPING THE KAIZEN MENTALITY WERE DISCUSSED (QUESTIONS 14-23) THEN ASK WHETHER YOU CAN HAVE A COPY OF THOSE PLANS IF YOU DID NOT YET RECEIVE THEM

**Thank you very much for your cooperation. Once my research is completed I will get back in touch with you to share the results.**

**3. SHOPFLOOR OPERATOR**

**INTERVIEW**

THIS INTERVIEW SHOULD ONLY BE CONDUCTED

IF THE COMPANY

DEVELOPED KAIZEN AT THE PLANT IN THE NETHERLANDS

RESPONDENTS SHOULD HAVE BEEN INVOLVED

FROM THE BEGINNING

**GENERAL INFORMATION**

**Date:**

**Company:**

**Address:**

**Respondent position**

**Respondent name and phone number:**

**Name of Interviewer:**

**Introduction statement (READ ALOUD)**

The purpose of this research is to learn about how kaizen mentality is transferred and what types of problems are faced by companies. In this interview, I will ask you several questions about how you approach problems as well as several questions that relate specifically to the company that you work for.

If there is anything that is not clear, please feel free to ask me for a clarification.

**SECTION 1:**

**OPEN QUESTIONS ABOUT KAIZEN EXPERIENCES**

Now, we will start the interview. In this part, I will ask you several questions about your experiences with kaizen at this plant in the Netherlands.

1. In your perception, how would you describe or define the term kaizen?

In this interview, I will use the term Kaizen to mean **'<u>the mentality of operators at the shop floor level where they try to continuously improve the company's performance even when it is not part of their job description</u>'**.

2. Please think back to the time when the development of the kaizen mentality was started at this factory (---PAUSE---) In which year was this?

3. Have you been involved with the development of kaizen since this time?

YES

NO END THE INTERVIEW

In this interview, I'm trying to get a sense of how your organisation may have changed over time. I am going to hand you a set of questions. Please think back to the time when the development of the kaizen mentality was started in this factory and then answer the following questions.

After you read the questions, please circle the numbers which you think best fit to your belief and the situations in your company. If you are not clear about what is wanted, be sure to ask me.

THESE ARE QUESTIONS 4 UNTIL 10 AND SHOULD BE CODED AS SUCH.

Please indicate on the scale by circling the appropriate number where you perceive your organic organisation when the development of the kaizen mentality was **started** in this factory.

When kaizen was initiated my plant in the Netherlands had:

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4. | A strong insistence on a uniform managerial style throughout the business unit | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Managers' operating styles allowed to range freely from the very formal to the very informal |
| 5. | Highly structured channels of communication and a highly restricted access to important financial and operating information | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Open channels of communication with important financial and operating information flowing quite freely throughout the business unit |
| 6. | A strong emphasis on giving the most say in decision making to formal line managers | 1 | 2 | 3 | 4 | 5 | 6 | 7 | A strong tendency to let the expert in a given situation have the most say in decision making even if this means even temporary bypassing of formal line authority |
| 7. | A strong emphasis on holding fast to tried and true management principles despite any changes in business conditions | 1 | 2 | 3 | 4 | 5 | 6 | 7 | A strong emphasis on adapting freely to changing circumstances without too much concern for past practice |
| 8. | A strong emphasis on always getting personnel to follow the formally laid down procedures | 1 | 2 | 3 | 4 | 5 | 6 | 7 | A strong emphasis on getting things done even if it means disregarding formal procedures |
| 9. | Tight formal control of most operations by means of sophisticated control and information systems | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Loose, informal control; heavy dependence on informal relationships and the norm of cooperation for getting things done |
| 10. | A strong emphasis on getting line and staff personnel to adhere closely to formal job descriptions | 1 | 2 | 3 | 4 | 5 | 6 | 7 | A strong tendency to let the requirements of the situation and the individual's personality define proper on-job behaviour |

Sometimes organisations change over time. I am now going to hand you a similar set of questions. Please think about the current situation in your organisation, or, if it changed since the moment that kaizen was established at your organisation, please think about the moment kaizen was established and then answer the questions.

After you read the questions, please circle the numbers which you think best fit to your belief and the situations in your company. If you are not clear about what is wanted, be sure to ask me. Here are the questions.

Please indicate on the scale by circling the appropriate number where you perceive your organisation **today or immediately when kaizen was established at your company**.

When kaizen was established, the plant in the Netherlands had:

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 11. | A strong insistence on a uniform managerial style throughout the business unit | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Managers' operating styles allowed to range freely from the very formal to the very informal |
| 12. | Highly structured channels of communication and a highly restricted access to important financial and operating information | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Open channels of communication with important financial and operating information flowing quite freely throughout the business unit |
| 13. | A strong emphasis on giving the most say in decision making to formal line managers | 1 | 2 | 3 | 4 | 5 | 6 | 7 | A strong tendency to let the expert in a given situation have the most say in decision making even if this means even temporary bypassing of formal line authority |
| 14. | A strong emphasis on holding fast to tried and true management principles despite any changes in business conditions | 1 | 2 | 3 | 4 | 5 | 6 | 7 | A strong emphasis on adapting freely to changing circumstances without too much concern for past practice |
| 15. | A strong emphasis on always getting personnel to follow the formally laid down procedures | 1 | 2 | 3 | 4 | 5 | 6 | 7 | A strong emphasis on getting things done even if it means disregarding formal procedures |
| 16. | Tight formal control of most operations by means of sophisticated control and information systems | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Loose, informal control; heavy dependence on informal relationships and the norm of cooperation for getting things done |
| 17. | A strong emphasis on getting line and staff personnel to adhere closely to formal job descriptions | 1 | 2 | 3 | 4 | 5 | 6 | 7 | A strong tendency to let the requirements of the situation and the individual's personality define proper on-job behaviour |

I am also interested in some other characteristics of your organisation. Please think back to the time when the development of the kaizen mentality was **started** in this factory and then answer the questions. After you read the questions, please distribute 100 points among the descriptions depending on how similar the description is to your organisation. If you are not clear about what is wanted, please ask me. Here are the questions

These questions relate to the type of company that your organisation is most like. Each of these items contains four descriptions of companies. None of the descriptions is any better than the others; they are just different. Please distribute 100 points among the four descriptions depending on how similar the description is to your plant in the Netherlands **when kaizen was initiated**:

18. **Company Characteristics** (Please distribute 100 points)

_____ Company W was a very personal place. It was like an extended family. People seemed to share a lot of themselves.

_____ Company X was a very dynamic and entrepreneurial place. People were willing to stick their necks out and take risks.

_____ Company Y was a very formalised and structured place. Bureaucratic procedures generally governed what people do.

_____ Company Z was very production oriented. A major concern was with getting the job done. People weren't personally involved.

19. **Company Leader** (Please distribute 100 points)

_____ The head of company W was generally considered to be a mentor, a sage, or a father or mother figure.

_____ The head of company X was generally considered to be an entrepreneur, an innovator, or risk taker.

_____ The head of company Y was generally considered to be a coordinator, an organizer, or an administrator.

_____ The head of company Z was generally considered to be a producer, a technician, or a hard-driver.

20. **Company 'Glue' or Holding Agent** (Please distribute 100 points)

_____ Company W was held together by loyalty and tradition. Commitment to this company runs high.

_____ Company X was held together by a commitment to innovation and development. There was an emphasis on being first.

_____ Company Y was held together by formal rules and policies. Maintaining a smooth-running company was important here.

_____ Company Z was held together by an emphasis on tasks and goal accomplishment. A production orientation was commonly shared.

21. **Company Emphasis** (Please distribute 100 points)

_____ Company W emphasised human resources. High cohesion and morale in the company were important.

_____ Company X emphasised growth and acquiring new resources. Readiness to meet new challenges was important.

_____ Company Y emphasised permanence and stability. Efficient, smooth operations were important.

_____ Company Z emphasised competitive actions and achievement. Measurable goals were important.

Similar to the earlier set of questions, I am interested in changes over time. Please think back to the time when the development of the kaizen mentality was developed at the factory in the Netherlands and then answer the questions. After you read the questions, please distribute 100 points among the descriptions depending on how similar the description is to your organisation. If you are not clear about what is wanted, please ask me.

These questions relate to the type of company that your organisation is most like. Each of these items contains four descriptions of companies. None of the descriptions is any better than the others; they are just different. Please distribute 100 points among the four descriptions depending on how similar the description is to your plant in the Netherlands **when kaizen was established:**

22. **Company Characteristics** (Please distribute 100 points)

_____ Company W was a very personal place. It was like an extended family. People seemed to share a lot of themselves.

_____ Company X was a very dynamic and entrepreneurial place. People were willing to stick their necks out and take risks.

_____ Company Y was a very formalised and structured place. Bureaucratic procedures generally govern what people do.

_____ Company Z was very production oriented. A major concern was with getting the job done. People weren't personally involved.

23. **Company Leader** (Please distribute 100 points)

_____ The head of company W was generally considered to be a mentor, a sage, or a father or mother figure.

_____ The head of company X was generally considered to be an entrepreneur, an innovator, or risk taker.

_____ The head of company Y was generally considered to be a coordinator, an organizer, or an administrator.

_____ The head of company Z was generally considered to be a producer, a technician, or a hard-driver.

24. **Company 'Glue' or Holding Agent** (Please distribute 100 points)

_____ Company W was held together by loyalty and tradition. Commitment to this company runs high.

_____ Company X was held together by a commitment to innovation and development. There was an emphasis on being first.

_____ Company Y was held together by formal rules and policies. Maintaining a smooth-running company was important here.

_____ Company Z was held together by an emphasis on tasks and goal accomplishment. A production orientation was commonly shared.

25. **Company Emphasis** (Please distribute 100 points)

_____ Company W emphasised human resources. High cohesion and morale in the company were important.

_____ Company X emphasised growth and acquiring new resources. Readiness to meet new challenges was important.

_____ Company Y emphasised permanence and stability. Efficient, smooth operations were important.

_____ Company Z emphasised competitive actions and achievement. Measurable goals were important.

THE NEXT SET OF FOUR QUESTIONS RELATE TO DETERMINING HOW THE RESPONDENT OVERCOMES BARRIERS AND HOW ACTIVELY THE RESPONDENT DOES THIS.

- PRESENT THE SITUATION AS DESCRIBED IN THE QUESTION. THIS IS THE FIRST BARRIER.
- WHEN THE BARRIER IS OVERCOME, REPLY: 'Imagine that this does not work out, what would you do?' TO REMIND YOU, THIS PROMPT IS PROVIDED WITH THE QUESTION. IF THE RESPONDENT IS NOT SATISFIED WITH THIS PROMPT, GIVE A MORE SPECIFIC BARRIER. SOME EXAMPLES ARE PROVIDED WITH THE QUESTION BUT YOU MIGHT GIVE OTHERS DEPENDENT UPON THE RESPONDENT'S ANSWER.
- WHEN THE SECOND BARRIER IS OVERCOME, REPLY AGAIN: 'Imagine that this does not work out, what would you do?' TO REMIND YOU THAT THIS PROMPT IS USED TWICE, THE PROMPT IS PROVIDED A SECOND TIME WITH EACH QUESTION. IF THE RESPONDENT IS NOT SATISFIED WITH THIS PROMPT, GIVE A MORE SPECIFIC BARRIER. AGAIN, SOME EXAMPLES ARE PROVIDED WITH THE QUESTION BUT YOU MIGHT GIVE OTHERS DEPENDENT UPON THE RESPONDENT'S ANSWER.
- IF THIS THIRD BARRIER IS OVERCOME, DON'T GIVE ANOTHER BARRIER, BUT ASK ONLY: 'Do you have any more ideas, what one can do?'. TO REMIND YOU THAT THIS IS THE THIRD PROMPT, THIS IS PROVIDED WITH THE QUESTION.
- WHEN THE RESPONDENT HAS NO MORE IDEAS, GO TO THE NEXT SITUATION.
- OVERALL: IF A BARRIER IS NOT OVERCOME, DON'T PRESENT A NEW BARRIER. REPEAT THE QUESTION/BARRIER AGAIN. IF THERE IS NO ANSWER, DO NOT GO FURTHER BUT START WITH THE NEXT SITUATION.
- WRITE DOWN THE RESPONDENT'S ANSWERS AND THE BARRIERS THAT YOU PROVIDED

AFTER THE INTERVIEW YOU NEED TO CODE YOUR ANSWERS. THE CODING IS NOT PRESENTED WITH EACH QUESTION BUT RATHER IS PRESENTED FOR ALL FOUR SITUATIONS ON A SEPARATE PAGE. THIS IS SO THAT YOU ARE NOT FILLING IT IN DURING THE INTERVIEW.

AFTER THE INTERVIEW, FOR EACH OF THE FOUR SITUATIONS THAT YOU PROVIDED COUNT ON THE BASIS OF THE PROTOCOL AND ANSWERS TO THE NUMBER OF BARRIERS OVERCOME AND FILL THIS IN (SCALE 0-5)

- AS QUICKLY AS POSSIBLE AFTER THE INTERVIEW; YOU SHOULD MAKE A RATING ON HOW ACTIVELY THE BARRIERS WERE OVERCOME. FILL THIS IN (SCALE 1-5). DO THIS AS QUICKLY AS POSSIBLE AFTER THE INTERVIEW BUT NOT IN THE PRESENCE OF THE RESPONDENT. 'ACTIVELY' MEANS: THE DEGREE TO WHICH THE PARTICIPANT TRIED TO SOLVE THE PROBLEM HIM/HERSELF, INSTEAD OF DELEGATING IT TO SOMEONE ELSE (GETTING A BOOK TO READ UP THE LEGAL ASPECTS ONESELF VERSUS DELEGATING THE PROBLEM TO A LAWYER).

I will now present you with a number of difficult situations. Please tell me, what you could do in such a situation. Use your creativity.

26. Pretend for a moment that your colleague always does his/her job so sloppily that you have to do additional work. What do you do?

    PROMPTS: Imagine that this does not work out, what would you do

        Imagine that this does not work out, what would you do? X 2

        Do you have any more ideas, what one can do?

    SPECIFIC SUGGESTIONS:

        If your boss does not feel responsible, what would you do?

        If your colleagues don't want to get involved, what would you do?

27. Pretend for a moment that you work on a machine and your machine breaks down. What do you do?

    PROMPTS: Imagine that this does not work out, what would you do

        Imagine that this does not work out, what would you do? X 2

        Do you have any more ideas, what one can do?

    SPECIFIC SUGGESTIONS:

        If the maintenance personnel is too busy, what would you do?

        If colleagues can't help you either?

        If you don't find your boss?

28. Pretend for a moment that you submitted a suggestion to improve work but your boss does not react. What do you do?

    PROMPTS: Imagine that this does not work out, what would you do

        Imagine that this does not work out, what would you do? X 2

        Do you have any more ideas, what one can do?

    SPECIFIC SUGGESTIONS:

        The secretary does not let you speak to the boss

        The superior of your boss does not respond either

29. Pretend for a moment that you depend upon supplies from another unit or person, and the supply is not delivered. What do you do?

    PROMPTS: Imagine that this does not work out, what would you do

        Imagine that this does not work out, what would you do? X 2

        Do you have any more ideas, what one can do?

    SPECIFIC SUGGESTIONS:

        You are not allowed to leave your work place

        You don't know anybody from the other unit personally. You don't know where the responsible unit is located

AFTER THE INTERVIEW: CODING FOR THE BARRIERS AND ACTIVENESS.

FOR EACH SITUATION:

- PLACE AN 'X' IN THE CELL THAT CORRESPONDS WITH HOW MANY BARRIERS THE RESPONDENT OVERCAME (0-5 SCORE)
- PLACE AN 'X' IN THE CELL THAT CORRESPONDS WITH THE LEVEL OF ACTIVENESS OF THE RESPONDENT (1-5 SCORE)

SITUATION 1: (QUESTION 26)

| DESCRIPTION | No barrier overcome; refused to answer | 1 barrier overcome | 2 barriers overcome | 3 barriers overcome | 4 barriers overcome | 5 or more barriers overcome |
|---|---|---|---|---|---|---|
| RATING OVERCOMING BARRIERS | 0 | 1 | 2 | 3 | 4 | 5 |
| RATING ACTIVE APPROACH | | | | | | |

| She/he is active | | | | | | She/he is inactive |
|---|---|---|---|---|---|---|

SITUATION 2: (QUESTION 27)

| DESCRIPTION | No barrier overcome; refused to answer | 1 barrier overcome | 2 barriers overcome | 3 barriers overcome | 4 barriers overcome | 5 or more barriers overcome |
|---|---|---|---|---|---|---|
| RATING OVERCOMING BARRIERS | 0 | 1 | 2 | 3 | 4 | 5 |
| RATING ACTIVE APPROACH | | | | | | |

| She/he is active | | | | | | She/he is inactive |
|---|---|---|---|---|---|---|

SITUATION 3: (QUESTION 28)

| DESCRIPTION | No barrier overcome; refused to answer | 1 barrier overcome | 2 barriers overcome | 3 barriers overcome | 4 barriers overcome | 5 or more barriers overcome |
|---|---|---|---|---|---|---|
| RATING OVERCOMING BARRIERS | 0 | 1 | 2 | 3 | 4 | 5 |
| RATING ACTIVE APPROACH | | | | | | |

| She/he is active | | | | | | She/he is inactive |
|---|---|---|---|---|---|---|

SITUATION 4: (QUESTION 29)

| DESCRIPTION | No barrier overcome; refused to answer | 1 barrier overcome | 2 barriers overcome | 3 barriers overcome | 4 barriers overcome | 5 or more barriers overcome |
|---|---|---|---|---|---|---|
| RATING OVERCOMING BARRIERS | 0 | 1 | 2 | 3 | 4 | 5 |
| RATING ACTIVE APPROACH | | | | | | |

| She/he is active | | | | | | She/he is inactive |
|---|---|---|---|---|---|---|

THE NEXT SET OF FOUR QUESTIONS RELATE TO DETERMINING GENERAL INITIATIVE AT WORK.

YOUR TASK IS TO:

- **FIND OUT WHETHER THE ACTIVITY THAT IS PRESENTED IS PART OF THE JOB/WORK ROLE OR NOT.**
- **WRITE DOWN AS PRECISELY AS POSSIBLE THE ANSWER TO MAKE RE-RATING AT A LATER RESEARCH STAGE POSSIBLE.**
- READ THE QUESTION AS IT IS PRESENTED.
- FOR EACH QUESTION, PROMPTS ARE PROVIDED.
- FOR EACH QUESTION YOU HAVE TO DETERMINE A RATING FOR QUANTITATIVE ASSESSMENT AS WELL AS QUALITATIVE ASSESSMENT AFTER THE INTERVIEW.
- USE THE FOLLOWING CRITERIA TO DETERMINE WHETHER IT IS INITIATIVE OR NOT:
    - IS IT SELF-STARTED/DOES IT GO BEYOND NORMAL DUTIES IN THE JOB?
        - PROMPTS:
            - IS THE REPORTED ACTION PART OF YOUR JOB?
            - IS THAT TYPICAL FOR YOUR JOB? DO YOUR COLLEAGUES DO THAT TOO?
            - WOULD/DO OTHER PEOPLE IN YOUR JOB LOOK ALSO INTO THESE PROBLEMS?
            - DID YOU DO THAT ON REQUEST OF SOMEONE ELSE?
    - AFTER THE INTERVIEW MAKE A RATING ON THE FOLLOWING TWO ITEMS.
        - QUANTITATIVE INITIATIVE: HOW MUCH ENERGY WENT INTO THE ACTIVITY (5-POINT SCALE)
        - QUALITATIVE INITIATIVE: HOW MUCH DID THE ACTIVITY GO BEYOND WHAT IS EXPECTED FROM THE PERSON IN THAT JOB? (FOR EXAMPLE: ADDRESSING NEW PROBLEMS, NEW IDEAS, NEW GOALS, STRATEGIES) (5-POINT SCALE)

I will now ask you some questions on things that you do or have done at work. Some of the things you could have done. Others you could not have done as you could not do in your job.

30. During the last year, did you submit suggestions to improve work?

    PROMPTS: What did you do exactly?

    What did that suggestion look like exactly?

    How much time, energy, and effort went into this? PLEASE EXPLAIN.

    Had you been asked to do so?

    How many suggestions did you make?

    Is that typical for your job? Do you colleagues do the same?

31. During the last year, did you go to see the boss because there were problems in work?

    NOTE: DO NOT CODE AN ACTIVITY HERE AGAIN THAT HAS ALREADY BEEN PRESENTED AS 'SUGGESTION SUBMITTED', THAT IS, THE PREVIOUS QUESTION

    PROMPTS: What was it about? Was it about your own problem or the problem of someone else?

    Had you been asked to do so?

    How much time, energy went into this?

    How often did you do this?

    Is that typical for your job? Do your colleagues do the same?

32. Can you remember a situation during the last year in which you have searched for causes for something that did not function correctly?

    PROMPTS: What was it about? What did you do?

    How much time, energy went into this?

    Had you been requested to do so?

    How often did you do this?

    Is that typical for your job? Do your colleagues do that as well?

33. Have you introduced changes in your work during the last year?

    IF THE RESPONDENT ASKS FOR CLARIFICATION ON THIS QUESTION YOU CAN SAY: Example of changes that might have been introduced can include changes to the sequence of activities or the addition of other activities.

    PROMPTS: what did you do?

    How much time, energy went into this?

    Had you been asked to do so?

    How often did you do this?

    Is that typical for your job? Do your colleagues do that as well?

<u>AFTER THE INTERVIEW</u>: CODING FOR GENERAL INITIATIVE AT WORK.

MAKE A RATING FOR EACH SITUATION FOR: NUMBER OF SUGGESTIONS, QUANTITATIVE AND QUALITATIVE ASPECTS.

- ASSIGN A ZERO 'NO INITIATIVE' FOR QUANTITATIVE AND QUALITATIVE INITIATIVE IF THE RESPONDENT DOES NOT REPORT ANY ACTION.
- WHEN THE ACTION IS NOT POSSIBLE IN THE JOB OF THE RESPONDENT (FOR EXAMPLE QUESTION XXX: THIS IS NOT POSSIBLE IF THE RESPONDENT HAS NO BOSS BECAUSE HE OR SHE IS SELF-EMPLOYED) ASSIGN A MISSING VALUE. THE DECISION, HOWEVER, WHETHER AN ACTION IS 'NOT POSSIBLE IN HIS/HER JOB' IS MADE BY YOU, NOT BY THE RESPONDENT.
    - THIS IMPLIES THAT IF THE SUBJECT CLAIMS THAT A CERTAIN ACTIVITY CANNOT BE DONE IN HIS/HER JOB THAT YOU HAVE TO GET MORE INFORMATION ON THAT ISSUE. IF YOU THEN COME TO THE CONCLUSION THAT THIS CERTAIN ACTIVITY IS IN PRINCIPLE POSSIBLE IN THE JOB THEN ASSIGN A ZERO (=NO ACTIVITY).
- PARTICIPANTS IN HIGHLY PROFESSIONAL JOBS TEND TO ANSWER: 'of course, everything is part of my job'. FIND OUT WHETHER PROFESSIONALS IN THE SAME FIELD WOULD ACT IN THE SAME WAY.
    - IF NO, IT IS INITIATIVE
    - IF YES, BUT THE ACTIVITY PRESENTED IS EXCEPTIONAL, THEN SCORE 'QUANTITATIVE INITIATIVE' ONLY AND ASSIGN THE LOWEST SCORE IN QUALITATIVE INITIATIVE (BUT NOT ZERO).
- IF THE RESPONDENT PRESENTS SEVERAL SITUATIONS (FOR EXAMPLE SEVERAL SUGGESTIONS WERE MADE TO IMPROVE WORK OR WENT SEVERAL TIMES TO SEE A BOSS, ETC.) THEN RATINGS SHOULD BE BASED ON THE SITUATION IN WHICH THE RESPONDENT SHOWED MOST INITIATIVE.

SITUATION 1 (QUESTION 30):

| SUBMITTED A SUGGESTION? | YES | NO | NOT POSSIBLE IN JOB | | | |
|---|---|---|---|---|---|---|
| RATING | | | | | | |
| NUMBER OF SUGGESTIONS: | | | | | | |
| | 0 | 1 | 2 | 3 | 4 | 5 |
| RATING OF HOW MUCH QUANTITATIVE INITIATIVE IS NECESSARY TO DO THIS ACTION | | | | | | |
| RATING OF HOW MUCH QUALITATIVE INITIATIVE NECESSARY TO DO THIS ACTION | | | | | | |
| RATING OF HOW CREATIVE WERE THE SUGGESTIONS | | | | | | |

SITUATION 2 (QUESTION 31):

NOTE: DO NOT CODE AN ACTIVITY HERE AGAIN THAT HAS ALREADY BEEN PRESENTED AS 'SUGGESTION SUBMITTED'

| WENT TO SEE THE BOSS? | | YES | NO | NOT POSSIBLE IN JOB |
|---|---|---|---|---|
| RATING | | | | |
| OWN PROBLEM OR OF ANOTHER'S? | OWN | OWN AND OTHER | | OTHER |
| RATING | | | | |

| | 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| RATING OF HOW OFTEN (1-5) | | | | | | |
| RATING OF HOW MUCH QUANTITATIVE INITIATIVE IS NECESSARY TO DO THIS ACTION | | | | | | |
| RATING OF HOW MUCH QUALITATIVE INITIATIVE NECESSARY TO DO THIS ACTION | | | | | | |

SITUATION 3 (QUESTION 32):

| WENT TO SEE THE BOSS? | YES | NO | NOT POSSIBLE IN JOB |
|---|---|---|---|
| RATING | | | |

| | 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| RATING OF HOW OFTEN (1-5) | | | | | | |
| RATING OF HOW MUCH QUANTITATIVE INITIATIVE IS NECESSARY TO DO THIS ACTION | | | | | | |
| RATING OF HOW MUCH QUALITATIVE INITIATIVE NECESSARY TO DO THIS ACTION | | | | | | |

SITUATION 4 (QUESTION 33):

| WENT TO SEE THE BOSS? | YES | NO | NOT POSSIBLE IN JOB |
|---|---|---|---|
| RATING | | | |

| | 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| RATING OF HOW OFTEN (1-5) | | | | | | |
| RATING OF HOW MUCH QUANTITATIVE INITIATIVE IS NECESSARY TO DO THIS ACTION | | | | | | |
| RATING OF HOW MUCH QUALITATIVE INITIATIVE NECESSARY TO DO THIS ACTION | | | | | | |

I would like to ask your perspective on how much initiative employees express within your company. Please read the following definition and then please answer the two questions.

Part of the kaizen mentality can be viewed as personal-initiative. We use the following definition for personal-initiative**:**

Personal-initiative is characterised by *self-starting* and being *proactive* in nature, the actions *exceed* the work role, and include *overcoming difficulties* that arise in the pursuit of goals that are in *accordance* with overall organisational goals.

34. From your perspective, just before the development of kaizen at your plant was initiated what percentage of employees at your plant demonstrated personal-initiative?
35. From your perspective, currently or immediately after kaizen was developed at your plant, what percentage of employees demonstrate (d) personal-initiative?

**CLOSING SECTION**

**CLOSING SENTENCES**

We have now ended the questions with regard to the topic that I am investigating. I do have a few more questions that will help me to place your responses in a context compared to other companies. Would you therefore please help me with the following questions?

36. What is your nationality?
37. How many years of working experience do you have in Japan?
38. How many years of working experience do you have outside of Japan?
39. Is there anything else with regard to your organisation or Kaizen in your organisation that you think is important for me to know and that you want to share with me?

**Thank you very much for your cooperation.**