FUNCTIONAL MULTINATIONAL TEAM LEADERSHIP AND TEAM EFFCTIVENESS FROM A DYNAMIC CAPABILITY PERSPECTIVE

by

CHITOSE FURUKAWA

A thesis submitted to The University of Birmingham

for the degree of

DOCTOR OF PHILOSOPHY

College of Social Sciences
Birmingham Business School
The University of Birmingham

December 2010

ABSTRACT

Multinational teams (MNTs) have traditionally consisted of members from different nationalities, and such teams have attempted to capitalise on the diversity of the members to create innovative solutions. Currently, dynamic capabilities, by which is meant the ability to integrate, coordinate and upgrade capabilities to respond to environmental changes and dynamic demands, have been urged on multinational companies. However, very limited attention has been paid to how functional MNT leaders utilise team capabilities, including the diversity of the members, to enhance team effectiveness in organisational processes. To address that research gap, this study investigates functional MNT leadership skills aligned with dynamic capabilities and McGrath's Input–Process–Output (IPO) model (1964). First, it explores organisational processes and roles of functional MNT leaders from a perspective of dynamic capabilities. Second, it examines the mediation effect of functional MNT leadership skills by testing the proposed IPO model, and investigates similarities and differences between functional MNTs in two locations, Japan and Germany. The findings show that the right combination of functional MNT leadership skills – intra-team and extra-team relational skills, communication skills, setting clear goals, managing differences of

national cultures, and technical competences – is required depending on the type of

functional MNT and the location.

ACKNOWLEDGEMENTS

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

CHAPTER 1

INTRODUCTION

1.1 Research Background and Motivation

Current global competition creates pressure for diversity of skills, high levels of expertise, rapid response and adaptability (Konrad, 2003; Teece, 2009). Teece (2009:165) states, in relation to multinational companies (MNCs), that 'the greater the diversity and rate of change in business environments, the more critical are dynamic capabilities for the financial performance of MNCs'. Existing studies have shown that, to respond to environmental changes, organisations have altered their organisational design from functionalised structures to teams embedded in more complex workflow systems (e.g. Lawler *et al.*, 1992; Lawler *et al.*, 1995; Devine *et al.*, 1999; Mathieu *et al.*, 2001). Therefore, Kozlowski and Ilgen (2006) have proposed a dynamic view of team effectiveness combining environmental dynamics and complexity and/or organisational systems and contextual contingencies with the traditional McGrath Input-Process-Output (IPO) model (1964). Current studies on diverse teams have focused on cross-functional project teams (e.g. Keller, 2001) and global virtual teams (e.g. Maznevski and Chudoba, 2000) to examine the effect of diversity from various perspectives.

Although the researcher has acknowledged the importance of these types of teams, this study focuses on functional multinational teams (MNTs) which consist of members from different nationalities but share the same functional area. The reason is that the researcher is interested in how functional MNT leaders manage team dynamics from a perspective of dynamic capabilities.

As Teece stated, the notion of dynamic capabilities has been urged as a way of coping with global competition. Dynamic capabilities are conceptualised as the ability to integrate, coordinate and upgrade resources to respond to environmental changes and dynamic demands (Ambrosini and Bowman, 2009; Luo, 2000). Eisenhardt and Martin (2000) argue that dynamic capabilities are the processes by which firms integrate, reconfigure, gain and release resources. In the theory of dynamic capabilities, capabilities are considered as being the same thing as resources, able to be controlled by management to adjust demands and environmental changes (Helfat *et al.*, 2007). Therefore, dynamic capabilities are considered as an expanded version of the theory of resource-based view which addresses the way to generate distinctive resources and to upgrade current resources in a changing environment (Ambronisi and Bowman, 2009). In speaking of dynamic capabilities, Luo (2000) has stated that there are three essential

elements which make up a cycle, starting from capability possession and moving through capability deployment to capability upgrading. Kogut and Zander (1992) have mentioned that the combination of these components is critical for the growth of a firm. Furthermore, the importance of asset orchestration under management, including leaders, has been argued by Helfat *et al.* (2007) and Teece (2009). However, there is a lack of empirical studies into two areas in particular: firstly how organisational processes work to utilise different types of teams in an organisation and secondly how functional MNT leaders play roles from a dynamic capability perspective.

Studies of team effectiveness have been developed by referring to McGrath's IPO model (1964), which proposes the logic of the input-process-output heuristic (Kozlowski and Ilgen, 2006). Kozlowski and Ilgen (2006) argue that the IPO model is useful to analyse the teams underlying a dynamic view of team effectiveness. By referring to the IPO model, Borrill and West (2005) add input variables (e.g. diversity with the characteristics of individuals, teams and tasks), process variables (e.g. communication, leadership and coordination) and output variables (e.g. performance outcomes, productivity, effectiveness and satisfaction). Studies have shown that a diverse team has a broader range of information, networks and perspectives which can

3

enhance creativity and innovation (e.g. Weick, 1969; Blau, 1977; Katz, 1982; Pfeffer, 1983; Cox and Blake, 1991; Ancona and Caldwell, 1992; Cox, 1994; Jackson, 1992; Watson *et al.*, 1993). Yet, because of the complexity of diversity, employees have found that it is difficult to have collective identity to their group/team in an organisation (Wagner, 1995; Eby and Dobbins, 1997; Kirkman and Shapiro, 2001; Tata and Prasad, 2004; Gundlach *et al.*, 2006). Also, studies on teamwork (Earley, 1994; Wagner, 1995; Gibson, 1996; Earley and Gibson, 1998; Kirkman and Shapiro, 1997; 2001; Stone-Romero and Stone, 2002, cited in Gundlach *et al.*, 2006) have shown that values of individualism–collectivism have a significant and unique influence on team performance. The reason is assumed to be that the act of identifying oneself as a member of either an in-group or an out-group has been affected by the personal values of individualism–collectivism related to self-concept (Gundlach *et al.*, 2006). Hogg (2001) has argued that an important role of leadership is to facilitate the social categorisation and depersonalisation process which will create the social identity (either in-group or out-group) of members. However, there are only limited studies that explore how functional MNT leadership skills have affected members' diversity, especially personal values of individualism–collectivism, in bringing about team effectiveness. This research focuses on how leadership plays a mediating role in moving towards team

4

effectiveness as a team process.

In sum, there are several research gaps in the field of functional MNT leadership. Firstly, there is a lack of empirical studies to reveal organisational processes with functional MNT leadership skills from a dynamic capability perspective (Teece, 2009). Secondly, there is a lack of empirical studies of how functional MNT leaders leverage and manage the diversity of its team members toward team effectiveness. Furthermore, functional MNT leadership skills have not been investigated in different locations with comparison of different types of functional MNTs.

There are four considerations which motivate this research, as follows: 1) the present lack of empirical research on organisational processes to utilise different types of teams, 2) the desire to look at the roles of functional MNT leaders from a perspective of dynamic capabilities, 3) the lack of empirical studies on functional MNT leadership skills to do with the relationship between diversity, especially personal values of individualism–collectivism and team effectiveness, and 4) the lack of studies on functional MNT leadership which compare differences in functional MNTs and locations. Keeping in mind these research gaps, this research explores functional MNT

leadership skills from a dynamic view of team effectiveness.

1.2 Research Aim and Objectives

In light of the above research motivations, this research aims to explain functional MNT

leadership and how it can manage team capabilities to enhance team effectiveness. The

research aim will be achieved by setting four objectives. The first is to understand

functional MNT leadership from a dynamic view of team effectiveness by referring to

the literature on dynamic capabilities, a matrix organisation, McGrath's IPO model and

MNT leadership. Literature on dynamic capabilities and a matrix organisation is used to

understand the types of teams in a matrix organisation and investigate roles of

functional leadership, whereas the literature on McGrath's IPO model and leadership is

used to explore functional MNT leadership toward team effectiveness. The second

objective is to develop a research framework to study functional MNT leadership

toward team effectiveness. The third objective is to collect primary data by carrying out

fieldwork. This research has undertaken two studies, a pilot study and a main study. The

pilot study was conducted in a research institute (Organisation B) in Japan, part of a

multinational food ingredient company (Company A), and was intended to detect and

select the influential variables of team input, team process and team output by referring to existing studies on team effectiveness. The main study was conducted in a global matrix organisation (Organisation Y), part of a global software company (Company X), at its local offices in Japan and Germany. The reasons why this main study was conducted in both Japan and Germany are 1) that many cross-cultural studies show that Japanese culture has a significantly unique culture compared to others and 2) that Company X is established in Germany. The fieldwork has applied survey research methods which consist of two parts: 1) questionnaires on the personal values of individualism and collectivism, perceptions of functional MNT leadership skills and team effectiveness (productivity, customer service, innovation, collective behaviour and learning orientation in a current functional MNT) and 2) semi-structured interviews with managers at the Japanese local office, functional MNT leaders and members of functional MNTs at both Japanese and German offices in Organisation Y. Finally, the fourth objective of the research is to make a contribution to existing theory and business practice in the area of functional MNT leadership, and to achieve the research aims.

1.3 Research Questions

The key questions which this research attempts to answer are as follows:

1. How does Organisation Y utilise different types of teams (both functional and cross-functional) as organisational processes that underpin dynamic capabilities?

2. What roles do functional MNT leaders play in building dynamic capabilities?

3. How do members of functional MNTs respond to local customer demands in order to provide satisfactory services for global customers?

4. How does the set of functional MNT leadership skills mediate the relationship between personal values of individualism–collectivism and team effectiveness, in different locations?

5. How do members of functional MNTs perceive diversity? What do they consider to be the level of team integration? What do they expect of the functional MNT leaders? What do they consider are the ideal measurements for team effectiveness?

This study examines how functional MNT leaders manage team capabilities by leveraging diversity of members toward team effectiveness from a dynamic capability perspective.

1.4 Research Design

This research has applied a mixed research methodology (Hurmerinta-Peltomaki and Nummela, 2006; Creswell and Clark, 2007) which uses both quantitative and qualitative data to explore functional MNT leadership skills from a pragmatic point of view that forms a paradigm (Murphy, 1990; Howe, 1988). Firstly, the literature on dynamic capabilities and the dynamic view of team effectiveness with McGrath's IPO model was reviewed. Secondly, a pilot study was conducted in Organisation B to detect significant influential variables from the modified IPO model for the main study to be carried out in Organisation Y. Thirdly, a main conceptual framework of this study was designed, based on the results of the pilot study, using the literature on dynamic capabilities and MNT leadership. Finally, hypotheses were developed to reveal a mediator effect of functional MNT leadership skills on the relationship between the personal values of individualism–collectivism and team effectiveness. Semi-structured interviews were

used to explore organisational processes as part of dynamic capabilities and perceptions

of four factors: 1) diversity in functional MNTs, 2) expected skills for functional MNT

leaders, 3) team integration 4) ideal measurements for team effectiveness in

Organisation Y. Self-administered questionnaires were used for testing hypotheses. This

study used two steps to investigate how leaders of functional MNTs leverage diversity

to build team effectiveness. In the first instance, organisational processes to utilise

different types of teams and roles of functional MTN leaders are explored from a

dynamic perspective. Secondly, the leadership skills needed to manage intra-team

dynamics involving diversity of members, especially personal values of individualism–

collectivism, are investigated by testing hypotheses. The reason why this research

focuses on personal values is that these values in functional MNTs have a wider

spectrum than in the case of a mono-national team. This study applied content analysis

for the qualitative data and statistical techniques (e.g. t-test and regression analysis) for

the quantitative data as the chosen methods of data analysis. The content analysis was

carried out using NVivo 8, whereas statistical survey was carried out using SPSS 15 and

SPSS 17.

1.5 Research Contributions

This research attempts to make several empirical contributions to both theory and business practice. Firstly, it explores dynamic capabilities at a micro-level by analysing the organisational processes undertaken to utilise different types of teams which can contribute to the achievement of dynamic capabilities. Secondly, it explores the roles of functional MNT leaders in these organisational processes to develop dynamic capabilities. Thirdly, it investigates functional MNT leadership skills to mediate diversity, especially personal values of individualism–collectivism, toward team effectiveness. Finally, it integrates functional MNT leadership skills from a dynamic view of team effectiveness with the theory of dynamic capabilities and the modified McGrath IPO model.

1.6 Structure of Thesis

In this section, a brief outline of each chapter of this thesis is presented, as displayed in Figure 1.1.

Chapter 2 provides a literature review related to the main concepts of this study. The aims of the chapter are to examine the contribution of existing theories that address

functional MNT leadership to leverage diversity toward team effectiveness from a dynamic capability perspective. This chapter will review theories of dynamic capabilities, McGrath's IPO model (1964) and functional MNT leadership toward team effectiveness, thus developing a research framework.

Chapter 3 gives the research framework and conceptualisation for this main study, based on Chapter 2.

Chapter 4 details the methodological approaches and choice of methods adopted in this research and describes the way in which the fieldwork was conducted. The chapter explains how the measurements of conceptual variables were created, giving consideration to their validity. These variables were used in the questionnaire for the main study. The chapter gives in detail the procedure by which the data were analysed.

Chapter 5 presents an analysis of the pilot study, carried out in Organisation B, which preceded the main study. The pilot study was conducted with the aim of helping the researcher to choose the appropriate concepts and variables from McGrath's IPO model (1964) for a main study and to practise the techniques for interviews and analysis of data. The first aim of chapter 5 is to test McGrath's IPO model in order to detect the influential variables of team input and process toward team effectiveness. The second is to perform an in-depth analysis of MNTs in terms of members' perceptions of 1) team

diversity, 2) team members' behaviours, 3) expectations of the team leaders, 4) team atmosphere and 5) team effectiveness. Finally, the chapter describes how the researcher selected the conceptual variables of the main study from the results of the pilot study, which are closely connected to the concepts of the main study.

 Chapter 6 gives an analysis of Organisation Y, where the main study was conducted. The first part of the chapter analyses organisational structure and types of teams in Organisation Y. The second explores the organisational processes employed to make use of different types of teams in Organisation Y, looking at the three essential elements of dynamic capabilities: capability possession, capability deployment and capability upgrading. The chapter explores the roles of functional MNT leaders.

Chapter 7 presents a comparative analysis between locations. The first part of the chapter identifies the differences in customers between Japan and Europe in order to understand the dynamic demands of global customers. The second part of the chapter analyses differences between locations by using t-test and discriminant analysis, and then tests the hypothesis suggested in Chapter 3 in each location.

Chapter 8 offers an in-depth analysis of teams by focusing on the perceptions of functional MNT members in terms of 1) diversity in the team, 2) expected functional MNT leadership skills, 3) team integration and 4) ideal measurements, in order to

evaluate their team effectiveness. The common factors of interviewees were counted and calculated as percentages in order to make comparisons between teams in each location.

Chapter 9 provides a summary of the findings from multilevel analysis involving Organisation Y's local offices in Japan and Germany, and functional MNTs. Next follows a discussion of functional MNT team leadership skills.

Chapter 10 presents the conclusions of this research, their implications for practice and theory, and the limitations of the research. This chapter also gives recommendations for future study.

Appendix 1 illustrates the background of Company A for Organisation B. Appendices 2-5 give the interview guides and questionnaires which were used in the pilot study in Organisation B.

Appendix 6 illustrates the background of Company X for Organisation Y. Appendices 7-9 give the interview protocols and questionnaires which were used in the main study in Organisation Y.

Figure 1.1 Thesis structure

Introduction Chapter 1	o Research background o Research objectives and questions o Research design and contribution o Structure of thesis
Literature review Chapter 2	o Dynamic capabilities o Dynamics of functional multinational team o Dynamic capabilities and functional MNT leadership
Research framework Chapter 3	o Research framework o Hypotheses for the modified IPO model
Methodology Chapter 4	o Research design o Study sample o Data collection and analysis method o Measurements of construct
Pilot study Chapter 5	o Analysis of Organisation B o Hypothesis-testing :McGrath IPO model to deduct variables o Discussion of findings in pilot study
Analysis of organisation Chapter 6	o Organisational processes in Organisation Y o Roles of functional MNT leaders
Comparative analysis between locations Chapter 7	o Customer demands in Japan and Europe o Quantitative differences (T-test, discriminant analysis) o Hypothesis-testing in Japan and Germany
Comparative analysis between functional MNTs Chapter 8	Perception of team members in functional MNTs 1) Diversity, 2) team integration, 3) expected team leadership skills, 4) ideal measurements of team effectiveness o Similarities/differences between functional MNTs in each location o Similarities/differences between functional MNTs across locations
Discussion Chapter 9	o Discussion of findings o Integrated analysis
Conclusions Chapter 10	o Theoretical contribution o Implication for practices o Research limitations o Recommendations for future studies o Concluding remarks

1.7 Summary

This study assumes that functional MNT leaders leverage diversity to increase team effectiveness. The leaders of functional MNTs are assumed to be capable of managing team capabilities in organisational processes as part of their dynamic capabilities. Also, the leaders of functional MNTs are assumed to play an important role in team effectiveness. As its particular contribution, this study aims to add knowledge to the dynamic view of team effectiveness by exploring functional MNT leadership from a dynamic capabilities perspective, making use of the traditional McGrath IPO model.

This chapter has provided an overview of this research. Section 1.1 dealt with the research background and motivation. Section 1.2 illustrated the research aim and objectives. Section 1.3 laid out the research questions. The design of this research was briefly described in Section 1.4. Section 1.5 provided a short summary of the contributions of this research to theory. Finally, Section 1.6 summarised the structure of the thesis.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

As studies show that teams are dynamic entities embedded in a multilevel system (individual, team and organisation), team effectiveness depends on how an organisation structures such a system and responds to contextual contingencies and environmental dynamics (Kozlowski and Ilgen, 2006). That implies that in order to enhance team effectiveness and explore the reality of a team, it is vital for multinational companies (MNCs) to create and develop dynamic capabilities, which were originally defined as 'the firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments' (Teece *et al.,* 1997:516). As a part of fostering dynamic capabilities, MNCs design corporate architecture as a strategy process, 'mechanisms, and invariably these mechanisms involve administrative systems and organisational practices ' (Helfat *et al.*, 2007:33), to respond to environmental changes and global customers (e.g. Teece *et al.*, 1997; Luo, 2000; Helfat *et al.*, 2007). In aiming to have flexible organisational processes to integrate, coordinate and upgrade

capabilities from different organisational functional units, organisations tend to apply a

matrix structure (e.g. Davis and Lawrence, 1977; Webber, 2002). The matrix

organisation consists of different types of team, each of which has unique dynamics

with regard to the inputs, processes and outputs shown in McGrath's IPO model (1964).

As stated in Chapter 1, this study examines functional MNT leadership as a team

process, and refers to diversity as team input, and team effectiveness as team output,

based on the results from the pilot study. Taking into consideration the background to

functional MNTs, Section 2.2 will examine dynamic capabilities involving a resource-

based view of an organisation, market dynamics and organisational processes. Section

2.3 illustrates the internal dynamics of functional MNTs and functional MNT leadership

by referring to the McGrath IPO model and studies on MNT leadership. Section 2.4

explores the combination of three essential elements of dynamic capabilities (capability

possession, capability deployment and capability upgrading) and functional MNT

leadership.

2.2 Dynamic Capabilities

Studies have offered various definitions of dynamic capabilities and have still not come up with a concrete definition (e.g. Ambrosini and Bowman, 2009; Easterby-Smith *et al*., 2009). Helfat *et al.* (2007:4) define dynamic capabilities as 'the capacity of an organisation to purposefully create, extend, or modify its resource base'. From an international business perspective, dynamic capabilities are regarded as 'an MNC's ability to create, deploy, and upgrade organisationally embedded and return-generating resources in pursuit of sustained competitive advantages in the global market place' (Luo, 2000:355). Eisenhardt and Martin regard dynamic capabilities as 'the firm's processes that use resources – specifically the processes to integrate, reconfigure, gain and release resources – to match and even create market change. Dynamic capabilities thus are the organisational and strategic processes by which firms achieve new resource configurations as markets emerge, collide, split, evolve and die' (2000:1107). From referring to these studies, Ambrosini and Bowman (2009) summarise that dynamic capabilities allow a company to respond to rapid environmental changes as an organisational process, in order to change its resource base. In order to understand

dynamic capabilities, the literature on the resource-based view of an organisation is described below.

2.2.1.1 Resource-based View

According to Eisenhardt and Martin (2000), the resource-based view assumes that resources involving physical, human and organisational assets are important elements in achieving competitive advantage by implementing value-creating strategies (Barney, 1991, 1995). Resources are considered as being heterogeneous across organisations (Ambrosini and Bowman, 2009), and include local abilities or competencies to address specific markets and customers for competitive advantage (Eisenhardt and Martin, 2000). Helfat *et al.* (2007:4) regard 'capabilities which an organisation owns, controls and has access to on a preferential basis' as representing resources in the wider sense. Therefore, the diversity of employees, including their skills, knowledge, experience and background, can be resources as well as capabilities.

A dynamic capability perspective has expanded and developed the resource-based view, making it possible to address the way to generate distinctive resources and to upgrade current resources in a changing environment (Ambrosini and Bowman, 2009). The dynamic capability perspective emphasises the dynamics of resource utilisation

(Easterby-Smith *et al.*, 2009). As a distinct difference from the resource-based view, the dynamic capability perspective focuses on strategy, and on managerial and organisational processes, to integrate, coordinate and alter the resources mix – including diversity of employees – depending on the dynamics of the environmental changes by top management to implement value-created strategies (Pisano, 1994; Grant, 1996; Ambrosini and Bowman, 2009). The key to management is to have and develop dynamic capabilities by aiming at the effective deployment of capabilities and resources involving the diversity of members on a global basis in order to respond to environmental changes and dynamic demands (Luo, 2000; Teece, 2009).

A study by Teece *et al.* (1997) shows that successful companies in the global marketplace have responded to rapid and flexible innovation by coordinating, redeploying and developing internal and external resources effectively with strategies and organisational processes. It is said that depending on an organisation's ability to be open to different races, different ethnic groups and the values of different cultures, the degree to which that organisation will be effective will also differ (Triandis, 1980). In the current business environment, there are three main reasons for diversity (Konrad,

2003; Teece, 2009). Firstly, because of competition to seek out the best talent, companies are increasing the diversity of their labour pool (*ibid.*). Secondly, as a result of the global economy, companies need to have a diverse workforce to deal effectively with their global customers; the diverse workforce may actually increase market share (*ibid*.). Finally, diversity enhances creativity and innovation and improves problem-solving: thus potentially it brings distinctive resources and increases the competitive advantage of the company (*ibid*.). As a part of corporate strategy, diversity management is crucial for companies to gain competitive advantage in the global competition (Cox and Blake, 1991; Triandis and Bhawuk, 1994; Church, 1995; Fernandoez, 1995; Sonnenschein, 1997; Thomas and Inkson, 2004).

However, various studies have demonstrated the advantages and the disadvantages of diversity (e.g. Cox and Blake, 1991; Armitage, 1993; Cox, 1993; May *et al*., 1993; Watson *et al*., 1993; Thomas, 1999; Ely and Thomas, 2001; Watson *et al*., 2002; Kirkman and Shapiro, 2005). Stahl and Maznevski *et al.* (2010) summarise these advantages and disadvantages from existing studies. As the advantage of diversity, a diverse team has a broader range of information, networking links and perspectives, and

is therefore able to enhance creativity and innovation (e.g. Weick, 1969; Blau, 1977; Katz, 1982; Pfeffer, 1983; Cox and Blake, 1991; Ancona and Caldwell, 1992; Cox, 1994; Jackson, 1992; Watson *et al.*, 1993). On the other hand, the disadvantage is that members of a diverse team are unlikely to have positive social activities since people tend to categorise themselves into the group similar to themselves (Tajfel, 1982) and be attracted to cooperating with those who have similar values, beliefs and attitudes (Williams and O'Reilly, 1998). Stahl and Maznevski (2010) summarise that culturally diverse teams had higher team satisfaction than teams with a similar culture among their members. That suggests that members of diverse teams are likely to be motivated to work together and overcome the potential process losses (*ibid.*). Also, Stahl *et al.* (2010) have stated that communication is effective if diversity is measured using psychological characteristics including personalities, values and attitudes. Therefore, companies need to consider how they manage diversity to maximise its advantages and eliminate its disadvantages through understanding the differences among people (Thomas and Inkson, 2004). Adler (1997) too has argued that global firms need to coordinate cultural diversity within themselves, but also between themselves and other firms, and in their environment.

Since multinational companies (MNCs) operate globally by using a network of organisational units such as subsidiaries, divisions, departments and teams across the world (Teece, 2009), they need to accept and integrate the heterogeneity of institutions, cultures and markets as well as capturing economies and leveraging the advantages of assets and process (Morgan, 2001). Managerial integration is a source of competitive and cooperative relations for those MNCs to facilitate and transfer competences and practices from one business environment to others internationally (Whitely, 2001). In other words, MNCs continuously shape, reshape, configure and align their resources domestically and internationally so as to adapt to changes in the environment by creating dynamic capabilities.

In short, resources and capabilities are integrated, coordinated and upgraded in organisational processes, depending on the market dynamics, to create and sustain competitive advantages from the dynamic capability perspective. The next section describes market dynamics, especially in a customer–oriented market, in greater detail in order to investigate extra-team dynamics.

2.2.2 Customer-oriented Market Dynamics

Currently, the world economy has been increased by expansion of the service sector, especially in developed nations (Ueltschy *et al.*, 2007), and MNCs realise the importance of creating sustainable competitive advantages by understanding, meeting and anticipating customer demand in customer-oriented markets (Vilares and Coelho, 2003). This tendency to shift from products to services is anticipated to continue over the long term (Jiang and Rosenbloom, 2005). In customer-oriented markets, the structures and the boundaries between stakeholders are becoming blurred, as is seen in the characteristics of highly dynamic markets as a result of dynamic demands from global customers (*ibid.*).

Eisenhardt and Martin (2000) investigate effective patterns of dynamic capabilities by comparing moderately dynamic markets with highly dynamic markets. In the moderately dynamic markets, the environmental changes occur frequently in predictable and linear patterns: therefore, dynamic capabilities rely on existing knowledge and create predictable outcomes (*ibid.*). On the other hand, in the highly dynamic markets, the changes are unpredictable and form non-linear patterns: thus dynamic capabilities

rely on newly created knowledge and produce adaptive but unpredictable outcomes (*ibid.*). The dynamic capabilities in such highly dynamic markets are best seen as simple and unstable processes that rely on interactive execution to produce adaptive outcomes (Eisenhardt and Martin, 2000).

Effective dynamic capabilities in a customer-oriented market depend upon consumer performance (Vilares and Coelho, 2003). Consumer performance in its turn is measured by perception of service quality (Hoffman and Ingram, 1992; Cran, 1994), superior value (Gale, 1992; Slater and Narver, 1995), enhancement of customer satisfaction (Kelley, 1992) and favourable behavioural outcomes (Hoffman and Ingram, 1992; Kelley, 1992). Service quality especially is difficult to evaluate due to a lack of visible evidence by customers (Hong and Goo, 2004), since service quality is defined as 'the outcome of an evaluation process where the consumer compares his expectations with the service has received' (Gronroos, 1982:37, cited in Ueltschy *et al.*, 2007:411). Furthermore, MNCs are likely to face difficulties in interpreting the evaluation from global customers, since these customers may have different needs and perceptions (Brady and Cronin, 2001). Therefore, MNCs should be cautious when they interpret

customer satisfaction surveys that may not always be what they appear to be, because of

differences in customer behaviours between nations (Ueltschy *et al.*, 2007).

A study conducted by Watkins and Liu (1996) shows a relationship between national

cultural values of individualism–collectivism and global customer satisfaction. For

example, in individualistic countries like Germany it tends to be open to everybody,

including out-group members, to express their opinions directly, even if this is

dissatisfaction (*ibid.*). On the other hand, people in collectivistic countries such as Japan

need to develop a relationship over time if they are to feel able to express their opinions

on customer services, since they tend to be open only with their in-group members

(*ibid.*). Therefore, companies need to be careful in interpreting feedback from customers

in collectivistic national cultures such as Japan (Ueltschy *et al.*, 2007).

Studies show that a successful organisation must have a customer-oriented business

culture (e.g. Houston, 1986; Parasuraman, 1987; Shapiro, 1988; Webster, 1988;

Deshpandé *et al.*, 1993; Athanassopoulos, 2000). Customer-oriented organisations are

likely to carry out their strategic planning and execution by reflecting demands from

customers (Deshpandé *et al.*, 1993; Jaworski *et al.*, 2000; Steinman *et al.*, 2000). A

study shows that successful companies in the global marketplace have responded to rapid and flexible innovation by coordinating and redeploying internal and external competences effectively, aligned with strategic management (Teece *et al.*, 1997). Strategy is the broad set of commitments by a company which defines its objectives and how to pursue them, and which may be both explicit and implicit in its culture and values (Teece, 2009).

Customer-oriented organisations have the set of beliefs which induces companies to put the customers' interest first and then also considers all other stakeholders, including owners, managers and employees, so as to develop long-term profit as a corporate culture (Deshpandé *et al.*, 1993). The organisations need to be responsive to information from customers (Narver and Slater, 1990) and to have learning capacity so as to identify and adjust to anticipated customer needs (Slater and Narver, 1995; Sinkula *et al.*, 1997; Brady and Cronin, 2001). As a result, a successful customer-oriented organisation has a culture which is open, employee-oriented, result-oriented, professional and also pragmatic, and balances a tight and a loose control system (Kasper, 2002).

In short, in order to understand and respond to the dynamics of customer-orientated markets, MNCs need to have a well-designed strategy of managerial and organisational processes. In the next section, strategy and managerial processes in dynamic environments are described in greater detail.

2.2.3   Organisational Processes

Organisational processes as part of dynamic capabilities are likely to be influenced by market dynamics, since dynamic capabilities have been embedded in companies over time (Helfat and Peteraf, 2003; Ambrosini and Bowman, 2009) and are affected by the level of market dynamics (Makdok, 2001). That implies a need for dynamic capabilities as processes to assemble and enable firm-specific assets (Teece *et al.*, 1997) by coordinating and integrating organisational units embedded with sub-units, teams and individuals within an organisation (Helfat *et al.*, 2007). MNCs attempt to establish strategies and structures that allow flexibility in order to decentralise organisational units (Grant, 2002). Strategies need to be drawn up which involve close coordination of activities in the organisation, activities such as the management of assets and capabilities (Hedlund and Rolander, 1990; Bartlett and Ghoshal, 2000). Depending on the level of uncertainty in the industry in which a company operates, the requirement

level of diversity for innovation differs and strategic management should be modified

accordingly (*ibid.*). Especially in a highly dynamic market, it has been argued that

MNCs are better off employing hybrid management in order to deploy their capabilities

by responding to dynamic changes (Morgan, 2001). MNCs design an organisational

structure with small organisational units which make it possible to allocate

responsibilities to different employees with identifying tasks and functions, as well as

working with the size and complexity of the market by having a flexible structure with

such features as networking, teamwork and self-organising groups (Child, 1984; Doz *et

al.*, 1990; Lorange and Probst, 1990). In order to have the flexibility to respond to

environmental changes, some MNCs have employed a matrix structure. The next

section describes a matrix organisation and the types of team in such an organisation.

2.2.3.1 Matrix Organisation

Responding to environmental changes and dynamic demands, many MNCs introduce a

matrix structure to make use of different types of teams, setting up temporary cross-

functional project teams staffed by members from functional teams (Davis and

Lawrence, 1977; Webber, 2002). Organisations increasingly use cross-functional

project teams which require special skills from different specialised functional teams

(Yukl, 2006). The main advantage of a matrix organisation is that it can optimise the use of specialists by setting up temporary teams in order to obtain high-quality and innovative solutions to complex technical issues (Knight, 1976).

Studies have found other advantages, which include lateral communication (Davis and Lawrence, 1977; Galbraith, 1971; Joyce, 1986; Larson and Gobeli, 1987; Randolph and Posner, 1992), increased information flow (Davis and Lawrence, 1977; Kolodny, 1979; Denis 1986; Larson and Gobeli, 1987), efficient utilisation of resources involving diversity of members (Davis and Lawrence, 1977; Kolodny, 1979; Stuckenbruck, 1983; Denis, 1986; Larson and Gobeli, 1987), flexibility to cope with change and uncertainty (Knight, 1976), technical expertise (Galbraith, 1971; Davis and Lawrence, 1977; Kolodny, 1979), balancing of conflicting objectives (Knight, 1976), management of long-term plans (Knight, 1976), improvement in commitment, and opportunities for personal development (Knight, 1976; Davis and Lawrence, 1977; Kolodny , 1979; Denis, 1986; Larson and Gobeli, 1987).

However, there are also potential disadvantages to a matrix organisation. These include violating the principle of a single line of authority (Greiner and Schein, 1981; Katz,

1985; Denis, 1986; Joyce, 1986; Barker *et al.*, 1988), creating ambiguity over resources,

technical issues and personal assignments (Davis and Lawrence, 1977; Greiner and

Schein, 1981; Katz and Allen, 1985; Denis, 1986; Posner, 1986; Larson and Gobeli,

1987), creating organisational conflicts between functional and cross-functional leaders

(Kerzner, 1983, Wilemon and Thamhain, 1983; Barker *et al.*, 1988; Denis, 1986; Katz

and Allen, 1985), creating conflicts among members as a result of their diversity (Smith,

1978; Stuckenbruck, 1983; Dill and Pearson, 1984; Katz and Allen, 1985; Joyce, 1986;

Posner, 1986; Meredith and Mantel.S.J.,Jr., 1989), creating insecurity for functional

leaders (Davis and Lawrence, 1977; Wall, 1984) and administrative costs (Knight,

1976; Davis and Lawrence, 1977; Denis, 1986; Jerkovsky, 1983; Kerzner, 1984; Larson

and Gobeli, 1987; Meredith and Mantel, S.J., Jr., 1989). Because of dual team

membership in a matrix organisation, there is uncertainty about commitment and

communication with other team members in functional teams (Knight, 1976). Since

individuals have different understandings of what it means to work in a matrix

organisation, the manager needs to guide members in the correct direction through the

ambiguities and conflicts inherent in such an organisation (*ibid.*). Therefore, in order to

make use of capabilities in functional teams to obtain economic returns in cross-

functional project teams, a clear definition of key roles for members of functional teams in a matrix structure is important to encourage communication and cooperation and avoid conflict through high commitment from the members.

These characterises of a matrix organisation are likely to affect the effective design of managerial and operational processes to implement corporate strategy from a dynamic capability perspective. Especially in highly dynamic markets such as a customer-oriented market, organisational processes should be designed to be flexible so as to adjust to rapid environmental changes (Eisenhardt and Martin, 2000). Since interrelationships between teams are necessary in a matrix organisation to adjust to environmental changes and dynamic demands, functional interdependence – mutual reliance, influence and shared interest – occurs between teams as managerial and operational processes in order to accomplish work activities (*ibid.*). Hence, the matrix organisation is able to develop the technical capability for the future as well as to balance requirements for project and cost control for economic operation (Kingdon, 1973). In order to understand the organisational processes needed to use different types of team in a matrix structure, first a functional team and then a cross-functional project team will now be explained in greater detail.

Functional teams and cross-functional teams

A functional team, as a type of team in a matrix structure, has the same or a similar area of expertise and function among its members (Yukl, 2006). Functional teams are permanent organisational homes for members *(ibid.)*. That implies that after the members have finished their tasks in cross-functional project teams, they come back to their own functional team. During their task assignments in temporary cross-functional project teams, functional team members accumulate experience and expand their social relationships by working with members in temporary cross-functional project teams (Kingdon, 1973). It is likely, therefore, that when the team members feel a positive team atmosphere in a functional team, they are likely to share their experiences and knowledge since these relate to a level or area of expertise similar to their own. These capabilities in functional teams are likely to have an impact on how and whether cross-functional project teams will be effective and successful, because these teams are built up by using the capabilities from functional teams so as to respond to specific customer requests and demands.

On the other hand, a cross-functional team is generally formed temporarily for special tasks: solving technical problems, planning events or coordinating activities among

organisations (Yukl, 2006). These types of team allow flexibility and efficient development of personnel and resources by solving problems among team members from different specialties *(ibid.)*. When team members work in a cross-functional team, they retain functional expertise and maintain close contact with team members in their functional teams *(ibid.)*. The diversity of members' backgrounds increases the frequency of communication with members in terms of ideas, information and creativity (Keller, 2001). Cross-functional project teams offer economic returns and benefits to an organisation (Ford and Randolph, 1992; Manz and Sims, 1993). A problem-solving team is formed when an organisation needs to deal with particular problems (Yukl, 2006). Depending on how critical these issues are, a problem-solving team may consist of multinational members who have different functional knowledge and who are likely to be working in widely distributed locations. That type of team can be described as a global virtual team (Maznevski and Chudoba, 2000).

In any type of team, it is likely that multinational teams will be formulated which consist of members from different nationalities, such as members of functional MNTs and cross-functional project MNTs. As in other types of cross-functional teams, there are problem-solving teams and global teams (Yukl, 2006). In other words, even if the

members of a functional multinational team are of different nationalities they share the

same functional skills and knowledge. However, there is a lack of empirical studies

which explore the detail of functional MNTs in a matrix structure.

As we have noted, managerial and operational processes are critical to the formation of

temporary cross-functional project teams made by utilising the resources of functional

teams as a part of the dynamic capabilities in a matrix organisation. Therefore, it is clear

how important the roles of functional team leaders are for a matrix organisation. The

next section explains the roles of functional managers and leaders in such an

organisation.

2.2.3.2 Roles of Functional Managers and Leaders

From a dynamic capability perspective, managers play an important part in managerial

and organisational processes in MNCs, since, as Eisenhardt and Martin (2000:1107)

have pointed out, dynamic capabilities are 'the antecedent organisational routines by

which managers alter their resources base, acquire and shed resources, integrate them

together, and recombine them to generate new value-creating strategies'. These

processes are mechanisms of development and implementation of company strategy

which ensure a balance among and within assets at the global level (Teece, 2009).

Hence, the skills of managers and leaders are crucial for dynamic capabilities when

MNCs have diverse assets (Helfat *et al.*, 2007; Teece, 2009). The roles of managers and

leaders are to select configurations of co-specialised assets, investments and

organisational structures and to orchestrate and coordinate co-specialised assets and

nurture change and innovation processes from a dynamic capability perspective (Helfat

et al., 2007). Therefore, managerial processes are regarded as the central core of

dynamic capabilities (Ambrosini and Bowman, 2009). As far as management roles are

concerned, managers and leaders have the role of giving clear directions for future

success and managing the interrelationship between members in order to complete tasks

and achieve objectives by formulating and performing temporary tasks in cross-

functional project teams (Lawrence *et al.*, 1977).

Managerial and organisational processes in a matrix organisation are controlled by a top

manager, a two-boss manager, functional leaders and cross-functional project leaders

(Lawrence *et al.*, 1977). Functional leaders leverage members by allocating them to

temporary cross-functional project teams (*ibid.*). This managerial and organisational

process in a matrix organisation, that of leveraging and allocating members, is similar to

the concept of asset orchestration, which is regarded as part of dynamic managerial capabilities: that is, 'the capacity of managers to purposefully create, extend, or modify the resource base of an organisation' (Helfat *et al.*, 2007:24). Asset orchestration is considered to be a fundamental function of management and involves assembling and orchestrating configurations of co-specialised assets especially in dynamic settings (*ibid.*). Temporary cross-functional project leaders coordinate and integrate capabilities and knowledge from functional teams into their teams within a limited time-frame until projects finish for economic reasons (Lawrence *et al.*, 1977). A two-boss manager deals with conflicts between functional leaders and cross-functional project team leaders, whereas a top manager balances the power by giving strong direction (*ibid.*). To achieve effectiveness in a matrix organisation, interdependence between managers and leaders is necessary, coordinating networks of teams by sharing goals (Knight, 1976; Lawrence *et al.*, 1977; Ford and Randolph, 1992). In other words, if managers and leaders do not perform strategic functions, the adjustment of resources allocation is likely to fail to obtain economic returns in an organisation.

In short, leaders and managers in a matrix organisation are likely to consider not only market dynamics but also dynamic demand from customers, considering the level of

criticalities and required skills such as the particular area of technical skills and customers' native language skills. Organisational processes to formulate cross-functional project teams differ depending on the issues and areas of focus. The roles of managers and functional leaders are critical to integrate, coordinate and upgrade resources in order to obtain economic returns from global customers. In the next section, the dynamics of functional MNTs are given in detail, combined with the McGrath Input-Process-Output (IPO) model.

2.3   Dynamics of Functional Multinational Teams

Kozlowski and Ilgen (2006) state that a team is embedded in the strategic orientation of company, organisational system and structure, and environmental contingencies including changes in technology in industries and dynamic demands from global customers. An organisational process to deploy capabilities from functional teams to cross-functional project teams needs to be well coordinated by combining cognitive, motivational/affective, and behavioural resources (Kozlowski and Ilgen, 2006). In the following section, the dynamics of a functional MNT is explained in detail by referring to McGrath's IPO model.

2.3.1 Dynamic View of McGrath's IPO Model

With regard to team dynamics, small-group research has been conducted to look at inter-group relations and group processes (Levine and Moreland, 1990). In order to explore team process by examining team composition, including diversity, and the role it plays in team effectiveness, the logic of the input-process-output (IPO) model formulated by McGrath (1964) is widely used (Gladstein and Day, 1984; Salas *et al.*, 1992). In McGrath's IPO model, input refers to the team composition that is the mixture of individual characteristics and resources in a multilevel system (that is, the individual, team and organisation levels) (Kozlowski and Ilgen, 2006). Processes are regarded as activities in which members engage, combining their resources and capabilities to resolve task demands. Therefore, in the model, processes mediate between input and output. Output has three dimensions: performance evaluated by external members, satisfaction of members' needs, and the viability of members' remaining in the team through team integration (Hackman, 1987). Borrill and West (2005) have added more variables to McGrath IPO model. In the case of team input, there are group tasks, team composition, diversity and organisational context (*ibid.*). For team process, there are communication, decision-making, cohesiveness and leadership (*ibid.*). For team output,

there are effectiveness, productivity, innovation, well-being and job satisfaction (*ibid.*).

Studies have shown that team tasks influence group/team effectiveness through process

(e.g. Benson, 1997; Borrill and West, 2005; Buchanan and Huczynski, 2004). Also,

Bachmann (2006) argues that the functions of leadership are important to balance the

levels of a tightly coupled task structure and a loosely coupled cultural domain to an

appropriate degree as a process of MNTs.

Extending the traditional McGrath IPO model, various studies (Arrow *et al.*, 2000;

Kozlowski, 1999; Mathieu *et al.*, 2001) have argued that teams are considered as

dynamic, emergent and adaptive entities embedded in a multilevel system (individual,

team, organisation). For example, the skills, knowledge and experience required as

resources are different depending on the demands. Also, in the case of functional MNTs,

there are difficulties in integrating the members, since they have different cultural

backgrounds and expectations of leaders and their peers for communication and task

process (Bachmann, 2006).

Moreover, depending on the dynamics and demands of the environment, the embedded level of teams, including functional MNTs and cross-functional project teams in the organisational system, is likely to vary (Kozlowski and Ilgen, 2006). Therefore it is vital to recognise and understand the influential factors which shape, leverage and align organisational processes toward team processes (Kozlowski *et al.*, 1996, 1999). In order to analyse team dynamics, dynamic capabilities need to be considered along with the traditional McGrath IPO model. That implies that the outputs of functional MNTs are likely to be different depending on the dynamics of an organisation, involving market dynamics, strategy, and managerial and organisational processes. In the next section, diversity in a functional MNT, as a team input, is explored in greater detail.

2.3.2 Diversity in a Functional Multinational Team

In a functional MNT, members are likely to demonstrate various aspects of diversity, differing with regard to their level of knowledge and skills, their tenure in the organisation and team, their educational background and nationality, and their gender, language and lifestyle. Different dimensions of diversity exist in a MNT – both task-related and relations-oriented diversity (Jackson, 1996). These are explained below.

2.3.2.1 Task-related and Relations-oriented Diversity

As we noted above, teams have task-related and relations-oriented diversity (Jackson, 1996). Those aspects of diversity have consequences for teams taking both the short-term and the long-term perspective (Jackson, 1996). Readily detectable attributes of task-related diversity are organisational tenure, team tenure, formal credentials and level of education (*ibid.*). Underlying attributes of task-related diversity are knowledge, skills, abilities and experience (*ibid.*), whereas in relations-oriented diversity, readily detectable attributes of the diversity are gender, culture (aspects such as race, ethnicity and national origin), age, membership of formal organisations (religious, political) and physical features (*ibid.*). Underlying attributes of relations-oriented diversity are social status, attitudes, values, personality, behavioural style and social ties in a team (*ibid.*). Therefore it can be assumed that in the categories of relations-oriented diversity, there are differences in the values of individualism–collectivism which will have developed during social interaction with their group, including their family and social groups, and will categorise members as either in-group or out-group (Tajfel, 1982). The values of individualism–collectivism are multilayered, involving national cultural values and personal values of individualism–collectivism, since the values have been influenced by

social interaction (Triandis, 1988). Depending on how people identify themselves in their society by interacting with others, as in-group or out-group members, the level at which individual members cooperate with others and commit to their teams will differ (Tajfel, 1982). As a consequence, the values are likely to influence the level of team effectiveness in a functional MNT. There follows an investigation of the values of individualism and collectivism from perspectives of national cultural values and personal values.

2.3.2.2 Values of Individualism–Collectivism

Cross-cultural studies have explored how the dimension of individualism–collectivism is the most prominent dimension among all the other cultural dimensions (power distance, masculinity–femininity, uncertainty avoidance and future orientation), toward organisational effectiveness (Triandis, 1990). In cross-cultural psychology, scholars (e.g. Trandis, 1988; Kim *et al.*, 1994; Kashima, Yamaguchi *et al.*, 1995; Vandello and Cohen, 1999) argue that individualism and collectivism are the most important constructs for exploring cultural differences in social behaviours. Also, in the case of an MNT, the spectrum of individualism–collectivism is likely to be much wider than in a team which

consists of only one nationality, because of the difference in national cultural values of individualism–collectivism. From a team perspective, studies (Earley, 1994; Wagner 1995; Gibson, 1996; Earley and Gibson, 1998; Kirkman and Shapiro, 1997, 2001; Stone-Romero and Stone, 2002) have shown that even when other team-related variables are taken into consideration the values of individualism–collectivism have significant and unique influence on team performance (Gundlach *et al.*, 2006). That assumes that since 'Individualism–collectivism is an analytical dimension that captures the relative importance people accord to personal interests and to shared pursuits' (Wagner, 1995:153), it reflects people's attitude and behaviours (Kirkman and Shapiro, 2005). People who have individualistic values focus on personal interests as having greater importance than group needs, look after themselves and tend to ignore group interests when they conflict with personal desires (Wagner and Moch, 1986). On the other hand, people who have collectivistic values put group interests first, as being more important than individual needs and desires, and tend to consider the well-being of their group, even when sometimes this requires sacrificing personal interests (*ibid.*). Also, one may note differences in values of individualism–collectivism even within the same nationality (*ibid.*). It is therefore worthwhile to analyse values of individualism–

collectivism on both national and personal levels. This main study was conducted in two locations, Japan and Germany, and the differences in these national cultures of values of individualism–collectivism are explained below.

National cultural values of individualism–collectivism in Japan and Germany

Although Hofstede's study (1980) analysed the national cultural values of individualism–collectivism across nations, his dimension of individualism–collectivism was not enough to explain differences in people's behaviours when considering social interactions for in-groups and institutions. A more recent cultural study, the GLOBE (Global Leadership and Organisational Behaviour Effectiveness) project (House *et al.*, 2004) has explored further, gaining more insights into national cultural values of individualism–collectivism by using measurements of in-group collectivism and institutional collectivism with seven other dimensions (performance orientation, uncertainty avoidance, power distance, gender egalitarianism, human orientation, future orientation and assertiveness). It did this by conducting surveys from 62 countries and an 11-year study involving 170 researchers worldwide. The GLOBE project has shown significant differences in in-group collectivism and institutional collectivism between

Confucian Asia (Japan, Singapore, Hong Kong, Taiwan, China and South Korea) and

Germanic Europe (Germany, Austria, The Netherlands and Switzerland) across all nine

dimensions. Confucian Asia scores highly for in-group collectivism and institutional

collectivism, whereas Germanic Europe scores low on those measurements (House *et

al.*, 2004). Where in-group collectivism scores high, such as in Japan, people tend to

consider that duties and obligations are important factors of social behaviour, that the

distinctions between in-groups and out-groups are significant and that it is right to

emphasise social connections *(ibid.)*. Where institutional collectivism scores high, such

as in Japan, people tend to have strong interrelationships with their organisation and feel

group loyalty even if they need to sacrifice their own goals (*ibid.*). On the other hand,

where in-group collectivism scores low, such as in Germany, people tend to take the

view that personal needs and attributes are important factors of social behaviours, that

the distinctions between in-groups and out-groups are insignificant and that it is good to

stress rationality in behaviours (*ibid.*). Also, where institutional collectivism scores low,

such as in Germany, people tend to feel themselves independent from their organisation

and aim to achieve personal goals and values even at the cost of group loyalty (*ibid.*). In

short, this assumes that the Japanese are more likely than the Germans to identify

themselves as members of a team and an organisation, and to distinguish members as being either in-group or out-group. Since people are in general becoming more individualistic and are tending to detach themselves from their group as a result of globalisation and social and geographic mobility (Triandis, 1991), personal values of individualism–collectivism should be considered in addition to national cultural values of individualism–collectivism. Next, personal values of individualism–collectivism are explored in greater detail.

Personal values of individualism–collectivism

Although the dimension of individual–collectivism tends to be used as a defining feature of national cultural values in the management literature, the dimension of individualism–collectivism also applies at the personal level within the same national culture (Wagner and Moch, 1986;Triandis, 1988, 1989; Schwartz, 1992; Sinha and Tripathi, 1994; Wagner, 1995; Eby and Dobbins, 1997; Kozan and Ergin, 1999; Dolan *et al.*, 2004). According to Gundlach *et al.* (2006), the values of individualism–collectivism reflect people's self-concept. Although one's self-concept exists as multiple identities through social interaction with various people, the values of individualism–collectivism have a strong impact on self-concept (Stryker, 1980).

Many studies show that individualists are less likely to be cooperative (Mann, 1980; Cox and Blake, 1991; Wagner, 1995) or less likely to associate with teamwork than collectivists (Kirkman, 1996; Kirkman and Shapiro, 2001; Kiffin-Petersen and Cordery, 2003). Individualists' self-concept is dependent on being distinct from others as an independent person, and individualists see performance as the result of individual effort (Hofstede, 1980, 1991; Triandis, 1980, 1989, 1990). Therefore, individualists are likely to be motivated by competition, and by individual rewards and recognition, and to make efforts to achieve individual goals (Gundlach *et al.*, 2006). Because of the lack of social 'belongingness', individualists do not easily identify themselves cognitively, emotionally and behaviourally within their team compared to collectivists, who naturally identify themselves as in-group (*ibid.*). As a result, in general, collectivistic team members had a positive influence on team performance by fostering cooperation and harmony, whereas individualistic team members had a negative impact (Gundlach *et al.*, 2006). Studies have shown that strong individualism is likely to produce gamesmanship, zero-sum competition, sequestering of information and the chaotic pursuit of tangential projects having little strategic 'fit' overall even though these

characteristics may bring entrepreneurship and innovation (Maidique, 1980; Rosenbaum,

Moore *et al.*, 1980; Steele, 1983; Quinn, 1985; Reich, 1987).

On the other hand, collectivists' self-concept depends on social interaction with groups

and collectivists see performance as a result of collective effort and interaction with

others (Hofstede,1980, 1991;Triandis, 1980, 1989, 1990). Collectivists prefer to be

cooperative rather than competitive and are satisfied with group success rather than

through an acknowledgement of individual contribution (Gundlach *et al.*, 2006).

However although collectivistic values tend to have a positive effect on teamwork,

strong collectivism is likely to produce social loafing and free-rider effects that cause

low productivity, and stifle individual learning and innovation (Jones, 1984; Albanese

and Van Fleet, 1985; Earley, 1989). Also, collectivists are likely to have difficulties in

understanding and developing a relationship with customers, who would be regarded as

out-group members (Huff *et al.*, 2005).

The study by Copeland (1988) shows that organisations composed of both individualists

and collectivists will have advantages over individualist organisations when they

manage the wide ranges of both cultural perspectives effectively. McLeod and Lobel

(1992) show that diverse groups, composed of individualists and collectivists, display more cooperation and creativity than groups consisting entirely of individualists. In the case of an MNT, it is better to integrate factors from all the cultures which exist in the team (Adler, 1997; Bachmann, 2006). Chen and DiTomaso (1996) conclude that it is better to strike a balance of each cultural value since individualists are regarded as good members who explicitly state their individual goals and rights, while collectivists are regarded as good members who follow collective norms and respect social harmony in the group.

According to Gundlach *et al.* (2006), even though studies show that the values of individualism–collectivism have a distinctive impact on team performance, it is still necessary to investigate how and why this relationship occurs. Gundlach *et al.* (2006) suggest that social identity theory (e.g., Tajfel and Turner, 1979, 1986; Ashforth and Mael, 1989) is useful to investigate the relationship between personal values of individualism–collectivism and team performance. They propose a model that illustrates how team identification and team identity mediate the relationship between the personal values of individualism–collectivism and team performance. In short, members of functional MNTs are likely to show a wide spectrum of diversity; therefore, the leaders

will probably be expected to have the skills to leverage task-related diversity, to set up cross-functional project teams, and to integrate team members. In the following section, functional MNT leadership is described in detail.

2.3.3   Functional Multinational Team Leadership

Successful MNCs tend to have the leadership to coordinate their capabilities across nations to deal with complexity, valence and intensity by adjusting to changes in the environment (Mendenhall, 2008). As supported in McGrath IPO model (1964) and the social identity theory of leadership (Hogg, 2001), team leaders are regarded as part of the team process. Especially, an effective team is likely to show interaction between its members and its team leader by sharing resources and expertise, exchanging opinions, discussing issues to reach mutual agreement, showing initiative, and consulting with others (Tjosvold, 1991). Likert (1961) proposes the 'linking-pin' as a helpful concept for the overlapping group structure, and the leadership is supposed to interact with others by using leadership skills.

Also, strategic management to manage productivity and justify best practice is regarded as the role of leadership (French, 1999). Particularly in customer-oriented organisations,

the role of leaders is to adjust customer demands to corporate strategy as part of the daily business tasks, by making the organisational culture customer-oriented (Kasper, 2002). MNT leaders need to meet the challenge of balancing divergence in order to gather new ideas and foster convergence, and thus to gain agreement on decisions and actions (Adler, 1997). They need to capitalise on the diversity of team members, making full use of their strengths (Church, 1995; Jackson and Ruderman, 1995; Arredonde, 1996; Jackson, 1996; Joshi and Jackson, 2003; Schippers *et al.*, 2003). They need to have the skills to coordinate structurally tight and culturally loose couplings through intervention (Bachmann, 2006). Hence, functional MNT leaders in a matrix organisation need to integrate and coordinate team resources and capabilities by leveraging task-related and relations-oriented diversity. In a matrix organisation, the influence of functional leaders is significant in producing satisfactory team outcomes by selecting team members with care (Ford and Randolph, 1992; Webber, 2002). The leaders also keep a balance between providing guidance and giving autonomy, between taking the initiative to make decisions and letting others make them, and between tackling issues and letting others learn how to deal with them (Katzenbach, 1998).

Leadership is important in providing a pattern for team members to define their collective identity in their society (Hogg, 2001; Hogg and van Knippenberg, 2003). The collective climate affects team performance, members' satisfaction, and the viability facets of individual and team (Kozlowski and Ilgen, 2006). The climate can be shaped and fostered by strategic imperatives, leadership and social interaction (*ibid.*). Studies show that leadership and collective identification of members are positively correlated (van Knippenberg *et al*., 2004; Shamir *et al.*, 1998). Leaders' behaviours have affected self-efficacy, by which is meant the individual's ability to organise and execute actions to achieve individual goals with a belief in personal control and agency, and collective efficacy of members: that is, a group's shared ability to organise and execute actions in the belief that members can cooperate effectively to achieve the group's goals (van Knippenberg *et al.*, 2004).

Hogg (2001) has argued that leadership facilitates social categorisation and depersonalisation processes aligned with social identity which see as 'the individual's knowledge that he belongs to certain social groups together with some emotional and value significance to him of this group membership' (Tajfel, 1972:292 cited in Hogg, 2001:186). Based on general social identity theory, a social identity theory of leadership

has been developed which holds that 'leadership dynamics may be significantly affected by the social cognitive processes associated with group membership (and group behaviours), specifically the processes of self-categorization and depersonalisation now believed to be responsible for social identity processes, group behaviour, and intergroup relations'(Hogg, 2001:186). Team leaders have used their prestige with and power over the group to influence members in their attitudes, behaviours and destiny in order to attain collective goals by involving other members. In addition, leaders and human resources practitioners help individualists to identify their behaviours by creating a common perception within all the team members (Gundlach *et al.*, 2006). For example, team-oriented behaviours such as sharing information, giving appropriate feedback and meeting quality standards may increase behavioural alignment (*ibid.*). The reason is that individualists respond positively to behavioural feedback and are likely then to align their behaviour, aiming towards the desired outcomes with their motivation (Hackman, 1976, 1992; Triandis, 1989).

In the case of a functional MNT, leaders are likely to have the role of managing capabilities involving diversity among employees to align them better with organisational processes (Tjosvold, 1991). Borrill and West (2005) argue that effective

leadership is likely to extract the positive features of diversity to make the team effective by maximising its potential abilities while minimising its weaknesses. That implies that functional leaders play the role of integrator, one who sets goals and tasks and who integrates subsystems using his or her interrelationship skills (Lawrence and Lorsch, 1986; Saner and Yiu, 2000). Since currently people in most organisations become members of several teams, functional MNT leaderships are helpful in encouraging members to identify themselves with the functional team as their root and home by creating team identity (Buchanan and Huczynski, 2004). In the next section, the skills of MNT leadership are discussed by reference to a study conducted by Joshi and Lazarova (2005).

MNT leadership skills

To identify the skills of MNT leaders, Joshi and Lazarova (2005) conducted semi-structured interviews with 89 MNT leaders and members by asking them to describe their current jobs and responsibilities, challenges in their working context and the roles of the leaders. The study includes team members dispersed across various geographic locations: USA, France, Germany, India, UK, Ireland, China, Australia and Eastern Europe/Russia. Joshi and Lazarova (2005) summarise nine leadership skills: direction

and goal-setting, communication, facilitating teamwork, motivating and inspiring, managing cultural diversity, empowering, boundary-spanning, mentoring and coaching, and staffing/resource acquisition as the leadership skills of MNTs. Four leadership skills in particular – communication, direction and goal-setting, motivating and inspiring, and facilitating teamwork – are identified as important by both leaders and members in multiple locations as common leadership skills of MNTs (*ibid.*). However, some leadership skills are identified as important primarily by MNT leaders themselves (*ibid.*). From the team leaders' point of view, communication is the most important leadership skill. On the other hand, from the team members' point of view, direction- and goal-setting are right at the top of the list of leadership skills (*ibid.*). It is also true that MNT members in some locations expect different leadership skills. For example, coaching and staffing/resource acquisition are identified as important primarily by members in China and Russia/Eastern Europe. Joshi and Lazarova (2005) argue that more research is required to reveal the relationship between the cultural diversity of MNT members and effective leadership. Furthermore, they observe that studies on MNT leadership lack an empirical basis involving both leaders and members. The next

section explains functional MNT effectiveness as a team output in McGrath's IPO model.

2.3.4   Team Effectiveness of Functional Multinational Teams

Kozlowski and Ilgen (2006) argue that team effectiveness can be regarded as the result of outcomes from multilevel systems (organisation, team and individual) in line with McGrath's IPO model (1964). Effectiveness is considered as the attainment of goals, to help evaluate the degree to which a social system achieves its goals (Miller, 1991). An effective team is defined as 'one that achieves its aim in the most efficient way and is ready to take on more challenging tasks if so required' (Adair, 1986:95). Effective teams share some common characteristics although every team has a unique combination of people, tasks, processes and environment (Maznevski, 2008). These characteristics are clear task definition, skills coverage, members' roles, effective processes, trust-building, innovative processes and management of boundaries and stakeholders (*ibid.*). The four first-mentioned characteristics (clear task definition, skill coverage, members' roles and effective processes) are the basic conditions of team effectiveness (*ibid.*). Beyond these, highly effective teams tend to build trust, generate innovative processes and manage outside the team boundaries (*ibid.*). Such teams tend

to have good relationships with workers outside of the teams by recognising the details

of tasks which are likely to come from outside (*ibid.*). Moreover, members of an

effective team recognise that the team has common goals, values and norms (Lembke

and Wilson, 1998). Team effectiveness is higher when all members understand the

others' prospects and information and keep themselves continuously informed of

progress in the team (*ibid.*). In light of all this, the dimensions of team effectiveness in

existing studies will now be explored in order to evaluate the effectiveness of functional

MNTs.

Studies show that team effectiveness results from performance and behavioural

outcomes (Kirkman and Rosen, 1999; Schippers, Den Hartog *et al.*, 2003; Kou, 2004).

The performance dimension includes productivity (Hackman, 1987), innovation and

customer services (Kirkman and Rosen, 1999), cost reduction and organisational values

(Cummings, 1981). Employees in customer-oriented organisations display customer-

oriented behaviour and thus enable customers to develop an understanding of the

organisational philosophy (Dobni *et al.*, 2000). Employees learn how to develop

products and services both to satisfy customers and to increase their own economic

returns (Ueltschy *et al.*, 2007). Satisfied customers who have received high-quality

services from the employees tend to become repeat customers and are willing to pay

more for services, which affects the prices that can be set for the future (Homburg *et al.*,

2005). Team performance is regarded as the collective efforts of team members and the

result of interpersonal relationships rather than individual cognition and contributions

by reference to social identity theory (Gundlach *et al*., 2006). The attitude dimension

involves work satisfaction (Gladstein, 1984; Kirkman and Rosen, 1999), organisational

commitment (Kirkman and Rosen, 1999), team commitment (Jehn and Shan, 1997;

Kirkman and Rosen, 1999) and team unification (Ancona and Caldwell, 1997; Song *et*

al., 1997; Tjosvold, 1988).

Although most studies measure team effectiveness by using the performance dimension

rather than the behavioural dimension (Kou, 2004), members' attitudes and behaviours

are regarded as team capabilities, needed to obtain the essential knowledge to achieve

team effectiveness (Cannon-Bowers *et al.*, 1995). For example, back-up and supportive

behaviours, such as communicating the need for assistance and assisting fellow team

members, are likely to increase team effectiveness (*ibid.*). In addition, studies carried

out on a diverse team have shown that individual learning behaviours have an impact on

team effectiveness, because individual members are likely to enhance collective

learning among members by facilitating the acquisition of knowledge, skills and performance from an interdependent experience among the members (Foldy, 2004 ; Kozlowski and Ilgen, 2006). Furthermore, as discussed before, personal values of individualism–collectivism should be taken into consideration because the values are likely to have implications for social interaction based on social identity. Collective team learning is unlikely to be performed without collectivistic attitudes and behaviours such as cooperation and group/team commitment. Bearing in mind these issues, it is necessary to consider not only performance but also members' behaviours for team effectiveness.

In this section, the dynamics of functional MNTs have been explained by reference to the expanded version of McGrath's IPO model. As described, that leadership is regarded as part of team processes to leverage the diversity of members to enhance team capabilities. The next section illustrates the connection between organisational processes as part of dynamic capabilities and functional MNT leadership.

2.4 Dynamic Capabilities and Functional Multinational Team Leadership

As Helfat *et al.* (2007:30) describe it, 'managerial and organisational processes are part of the functioning of dynamic capabilities', implying that team processes in functional MNTs can be regarded as part of dynamic compatibility. There are various processes of dynamic capabilities, such as processes to identify needs and opportunities, or to deploy and upgrade distinctive resources by reflecting environmental changes. These dynamic capabilities need to be specifically developed, since they cannot be obtained directly from resources (*ibid.*). Therefore, dynamic capabilities have a strong link to organisational learning processes (Zollo and Winter, 2002). The essential processes of dynamic capabilities for MNCs are capability possession, capability deployment and capability upgrading (Luo, 2000). These components make up a cycle which starts from capability possession and moves through capability deployment to capability upgrading. The combination of these components is critical for the growth of a firm (Kogut and Zander, 1992).

These processes (capability possession, capability deployment and capability upgrading) are likely to be seen in a matrix organisation when cross-functional project teams are

designed and set up. The concepts of capability possession, capability deployment and capability upgrading, and the skills of functional MNT leaders, are described by referring to MNT leadership skills as follows.

2.4.1 Capability Possession

Capability possession refers to the possession of distinctive resources, including critical assets, knowledge or capabilities that generate economic returns and a competitive advantage (Luo, 2000). Success in global competition relies heavily on a company's human assets: therefore, managing human resources has become an important organisational capability (Luo, 2000; Lewin and Massini, 2003). As illustrated, capabilities are a combination of resources – tangible, intangible and human (Grant, 2002), while diversity of members is regarded as a distinctive resource and part ofteam capabilities. With regard to aspects of diversity in a functional MNT, there are two kinds, task-related and relations-oriented, as has already been illustrated in Section 2.3.2.

As a prerequisite to forming cross-functional project teams, functional MNT leaders should understand the current team capabilities and human resources by aiming at utilisation of resources in a matrix organisation as described in Section 2.2.3.1.

Functional MNT leaders need to implement organisational strategies with regard to configurations of co-specialised assets as part of dynamic capabilities by interrelationships with other teams (Helfat *et al.*, 2007). Hence, at the start of the process of capability possession, the leaders are assumed to have the skills of listening to team members and opening up communication and boundary-spanning, as seen in the study on MNT leadership by Joshi and Lazarova (2005).

2.4.2 Capability Deployment

Capability deployment is a process to allocate distinctive resources to fulfil demands (Luo, 2000). Resources will create stronger competitive advantages if they are employed with consideration of the external and internal environmental dynamics (Teece *et al.*, 1997; Luo, 2000). At the MNC level, by having internal relationships across organisational units, capability deployment will have its resources aligned with international networks and resources (Luo, 2000). When capabilities are not optimally deployed, economic returns are likely to be decreased and operation is unlikely to be stable (*ibid.*). In order to make their corporate strategy optimal, MNCs need to understand the demands of global customers and the customer-oriented market by recognising cross-cultural issues (*ibid.*). That implies that capability deployment should

be considered across multilevel organisational units. As described in Section 2.3.2, the role of leaders in a matrix structure is to integrate and coordinate resources so as to formulate cross-functional project teams. Based on the roles of functional MNT leaders in capability deployment, it is better if the leaders have skills in listening to members and opening up communication, facilitating teamwork, boundary-spanning and setting clear goals, as seen in the study by Joshi and Lazarova (2005).

2.4.3 Capability Upgrading

Capability upgrading is conceptualised as a process to renew capabilities in order to adjust to environmental changes and dynamic demands (Luo, 2000). The more rapid the changes faced by a company − for example, the speed of technological development and the changes of market demands from customers − the more frequently the learning of dynamic capabilities should be enhanced (Zollo and Winter, 2002). As one factor in capability upgrading, dynamic learning is considered to be essential for company success in order to build new capabilities from operational processes and create competitive advantages (Luo, 2000; Zollo and Winter, 2002). The challenge for management is to facilitate and encourage the building, sharing, transfer and integration of knowledge in teams and organisations by helping them adjust to the changing

environment in order to utilise their capabilities to the full (Easterby-Smith *et al.*, 2009).

Team identity and team identification are likely to enhance the cooperation of team members in achieving the production goals (Eckel and Grossman, 2005). Therefore, at the stage of capability upgrading, the leaders of functional MNTs should create team identity, as seen in the social identity theory of leadership (Hogg, 2001).

Various studies (Higgins and Maciariello, 2004; Bachmann, 2006) have shown that in culturally diverse teams, effective leadership ensures a good atmosphere or climate to facilitate mutual respect and acceptance and to motivate team members. That implies that leaders' skills tend to eliminate the negative sides of relations-oriented diversity. In addition, Eckel and Grossman (2005:373) state that 'the more the team members identify with one other, the more likely they are to believe they hold similar goals, values, and norms, and the more willing they will be to cooperate and work together as a team'. Other studies (Adler, 1997; Brett *et al.*, 2006) have shown that differences in national cultural values of individualism–collectivism are likely to be manageable when a team leader integrates elements from all the cultures which exist in the team. Individual interactions increase team identity and are done on either an informal or a formal basis to enhance cooperative tendencies (Campbell, 1958). Therefore, it is better

if functional MNT leaders have skills in managing cultural diversity, listening to members and opening communication, facilitating teamwork, boundary-spanning and setting clear goals, as seen in the study by Joshi and Lazarova (2005).

In short, as part of the team process involving capability possession, capability deployment and capability upgrading, functional MNT leaders should have mixed skills to make their team effective. From the results of these team processes, the level of effectiveness in functional teams can vary, enhancing both the performance and the behavioural dimensions of team effectiveness in functional MNTs, as described in Section 2.3.2.

2.5 Summary

This chapter has given the background to the basic concepts by referring to the literature on dynamic capabilities and a dynamic view of team effectiveness with consideration of McGrath's IPO model and functional MNT leadership. As globalisation is rapidly speeding up, MNCs can show that they are aware of the speed of technology and the dynamics of global customer demands by having effective dynamic capabilities to integrate, coordinate and upgrade resources and build market dynamics into their

strategies. Currently, MNCs tend to employ flexible organisational structures such as a matrix structure in order to respond to environmental changes and to the dynamic demands from customers. A matrix organisation has managerial and organisational processes to formulate different types of cross-functional project teams depending on customer issues and enquiries. These processes are coordinated by managers and functional team leaders by balancing costs and benefits. In a matrix organisation, functional MNT leadership influences the team process involving capability possession, capability deployment and capability upgrading. Functional MNTs possess both task-related and relations-oriented diversity of members as resources. These aspects of diversity should be deployed by the functional MNT leaders to orchestrate these resources to formulate cross-functional project teams. Also, in order to upgrade the skills of members and thus enhance capabilities, the leaders need to facilitate a comfortable atmosphere in the team, and encourage team integration. The functional MNT leadership skills are critical to make team and organisation effective by leveraging the diversity of members. In the next chapter, based on this literature review, a conceptual framework is given for functional MNT leadership skills for the main study, with consideration of the dynamics of a functional MNT embedded with strategic

management, the dynamics of a customer-oriented market, organisational structure and

dynamic capabilities

CHAPTER 3

RESEARCH FRAMEWORK

3.1 Introduction

The previous chapter has given a review of the literature on dynamic capabilities and team effectiveness with reference to McGrath's IPO model and functional MNT leadership. Although there are various studies of team effectiveness and dynamic capabilities, functional MNT leadership as a team process has not been explored. The study of team effectiveness by Kozlowski and Ilgen (2006) suggests that teams are dynamic entities, with the dynamics of organisation and in accordance with McGrath IPO model. In the IPO model, leadership is regarded as a team process to mediate team input and team output. From a cross-cultural psychological perspective, the cultural value of individualism–collectivism shows the most significant differences compared to other dimensions of cultural values. As discussed in Section 2.3.2.1, studies of teamwork have also shown that the personal values of individualism–collectivism have a significant and unique impact on team performance (Gundlach *et al.*, 2006). Furthermore, in the social identity theory of leadership (Hogg, 2001), team leadership is regarded as a team process to facilitate social categorisation and depersonalisation in

order to create a social identity in members who may have different personal values of individualism–collectivism. Yet, there is a lack of empirical studies that investigate the mediator roles which enable functional MNT leadership to manage diversity of team members, create team identity and thus move toward team effectiveness.

Using the above background, Section 3.2 conceptualises variables which are used in the main study: dynamic capabilities, diversity, functional MNT leadership skills and team effectiveness. Section 3.3 discusses the functional MNT leadership skills emerging from the literature. Section 3.4 develops the main research framework, designed to investigate functional MNT leadership skills to manage diversity aligned with dynamic capabilities and McGrath's IPO model. Section 3.5 gives hypotheses, using quantitative data to test the mediation effect of functional MNT leadership skills on personal values of individualism–collectivism and team effectiveness.

3.2 Conceptualisations

As Kozlowski and Ilgen (2006) propose, to enhance team effectiveness it is vital to investigate not only the organisational system but also contextual contingencies and

environmental dynamics and complexity, combined with McGrath's IPO model (1964). Also, factors that shape leverage or align processes should be considered when investigating team process. In this study we will first look at dynamic capabilities involving organisational structure and organisational processes, and then explore the IPO model in order to investigate functional MNT leadership skills to manage team process. There are four main concepts behind the research framework, as given in Figure 3.1, in Section 3.4: dynamic capabilities, diversity, functional MNT leadership skills and team effectiveness. This research will refer to the study by Luo (2000) and focus on three elements of dynamic capabilities to investigate Company X: the elements of capability possession, capability deployment and capability upgrading. For the modified IPO model, team input refers to diversity, team process refers to functional MNT leadership skills, and team output refers to team effectiveness, based on the results of the pilot study. These concepts, referred to in Chapter 2 in the review of the existing literature, are here conceptualised and are given in Table 3.1, below.

Table 3.1 Conceptual Variables in the Main Study

Concept	Conceptualisation
Dynamic capabilities	Ability to integrate, coordinate and upgrade resources in order to respond to the environmental changes and dynamic demands from global customers and other stakeholders as managerial and organisational processes
Capability possession	A process of having and recognising distinctive resources as team capabilities involving diversity of members, such as knowledge, abilities, skills and experience, to formulate cross-functional project teams
Capability deployment	A process of assigning members of functional MNTs in order to formulate cross-functional project teams by utilising team capabilities
Capability upgrading	A process of upgrading team capabilities by dynamic learning through accumulating experience, articulating knowledge and codifying knowledge
Diversity	Individual differences among people involving task-related and relations-oriented diversity
Personal values of individualism-collectivism	The way in which people identify themselves in the social world as either in-group or out-group
Individualism	Value that measures to what extent people want to be unique and 'do their own thing' and to be 'the best'
Collectivism	Value that measures to what extent people identify themselves in their groups and are willing to cooperate with their group members
Functional MNT Leadership Skills	Leadership skills that facilitate internal team integration, link to upper management, set clear goals, facilitate communication, motivate members and manage cultural diversity
Functional MNT Effectiveness	Result of performance outcomes (productivity, customer service, innovation) and behavioural outcomes (collective behaviours and learning orientation) thorough team input and process

As is clear from Table 3.1, operational variables are created by the measurements given

in Table 3.2 for quantitative analysis. The conceptual variables given in Table 3.1 are

used to codify the interview transcripts for qualitative analysis of functional MNTs. In

addition, respondents were asked about team integration by asking how members

perceived their feelings of 'belongingness' within their functional MNTs.

3.3 Discussion of Functional Multinational Team Leadership Skills

As previously argued, the leaders of functional MNTs play a role in coordinating

networks of teams by sharing goals requiring interdependence between managers

(Knight, 1976; Lawrence *et al.*, 1977; Ford and Randolph, 1992) and in maximising the

diversity of their team members (Thomas and Inkson, 2004). This study attempts to

reveal a functional MNT leadership which integrates, coordinates and upgrades team

capabilities as a team process from a dynamic capability perspective. Team capabilities

involve task-related and relations-oriented diversity (Jackson, 1996). For leveraging

diversity, for example task-related diversity (e.g., knowledge, abilities, skills and

experience), the role of functional MNT leadership is to possess, deploy and upgrade

the team's diversity as a part of its capabilities, which means formulating cross-

functional project teams as organisational processes. Also, in order for them to manage

aspects of diversity such as relations-oriented diversity (for example, differences in

personal values of individualism–collectivism), the role of functional MNT leaders is to

create team identity, to integrate team members from different nationalities by aiming for cooperation to enhance team effectiveness.

As was proposed earlier, this research will attempt to reveal functional MNT leadership skills in a matrix structure from a dynamic capability perspective. Since team process to formulate cross-functional teams is regarded as one of the organisational processes most affected by dynamic capabilities, demands from global customers and other stakeholders should be considered by leaders when formulating cross-functional project teams in the way discussed in Chapter 2. In a matrix structure, the method of formulating cross-functional project teams with managers and leaders of functional teams is regarded as organisational process, part of dynamic capabilities. Therefore, in our exploration of functional MNT leadership skills, we will examine how the leaders play their appointed roles in organisational processes while maintaining a relationship with other managers and leaders.

I will proceed from the view that the leaders of functional MNTs are of central importance if individual members' strengths and weaknesses are to be recognised, and

their personality and their career development plan related to task diversity, including knowledge, abilities, skills and experience.

Furthermore, since functional teams provide a 'home' and even 'roots' for their members, as discussed in Chapter 2, leaders of functional teams play critical roles in creating team identity and a comfortable team atmosphere, to retain functional teams and facilitate knowledge-sharing with members. That process is important to upgrade the capabilities of functional MNTs as well as the organisation, for the sake of future distinctive resources and competitive advantage. As has been discussed, McGrath's IPO model illustrates how team processes mediate team input and team output, and how leaders of functional MNTs are likely to mediate the level of diversity toward effectiveness by using their management skills. As far as diversity is concerned, differences in values of individualism–collectivism have already been emphasised in this paper, showing that leaders must learn to manage these values. As argued in Chapter 2, studies show that personal values of individualism–collectivism have significant and unique influence on team performance. Also, the social identity theory of leadership has shown that the team leader is regarded as part of the team process, yet

there is a lack of empirical studies to explore the skills of functional MNT leaders in striving for social integration. Indeed, the mediation effect of functional leadership skills on the relationship between personal values of individualism–collectivism and team effectiveness has not been explored in existing research on combining team process to formulate cross-functional project teams. Based on the above discussion of functional MNT leadership skills, a conceptual framework has been developed in the next section.

3.4 Conceptual Framework

To clarify these points, as well as the research questions given in Chapter 1, Figure 3.1, below, shows the main conceptual framework for the main study.

Dynamic capabilities (Qualitative data)

Modified IPO model
(Quantitative and qualitative data)

Team input	**Team process**	**Team output**
Diversity	Functional MNT leadership skills	Team effectiveness
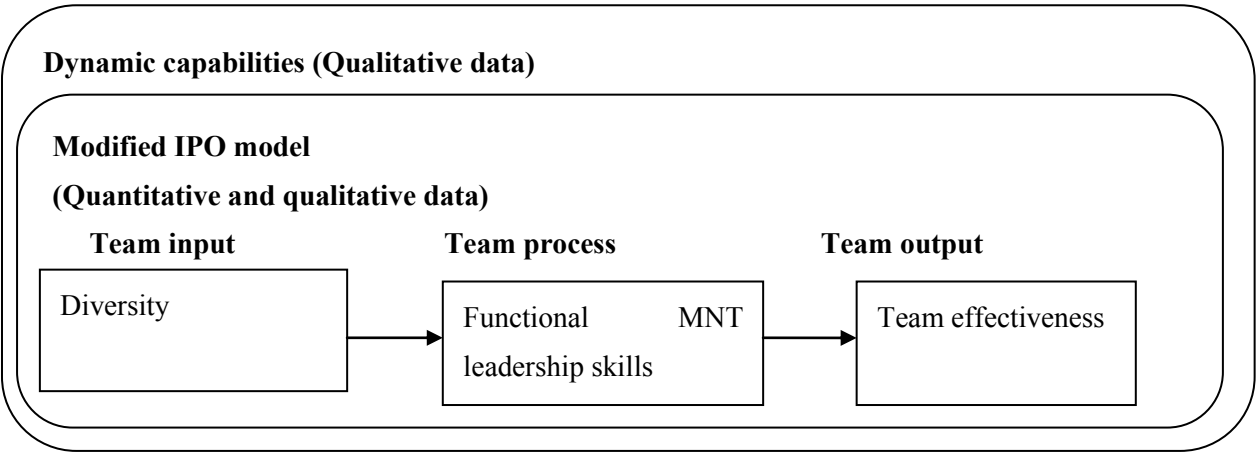
Figure 3.1 Conceptual Framework for the Main Study

As this figure shows, the conceptual framework for the main study was designed to analyse functional MNT leadership skills combined with dynamic capabilities and the modified McGrath IPO model. There are two phases of analysis: 1) of organisational processes to utilise teams and the functional MNT leadership to develop dynamic capabilities and 2) of functional MNT leadership skills to integrate diverse elements and move towards team effectiveness, based on the modified McGrath IPO model. Each of these phases is now explored in detail.

3.4.1 Functional Multinational Team Leadership and Dynamic Capabilities using Qualitative Data

In functional MNTs, there is task-related diversity such as in the knowledge, abilities, skills and experience of members of different nationalities as potential team resources. In a matrix organisation, team capabilities in functional MNTs are deployed by the leaders to formulate cross-functional project teams. Therefore, the dynamics of organisation and teams should be considered, in order to reveal the skills of functional MNT leaders. Figure 3.2 extracts the embedded team process with managerial and operational processes of dynamic capabilities from Figure 3.1. Qualitative data are used

to investigate dynamic capabilities involving strategy, market dynamics and organisational structure and managerial and operational processes.
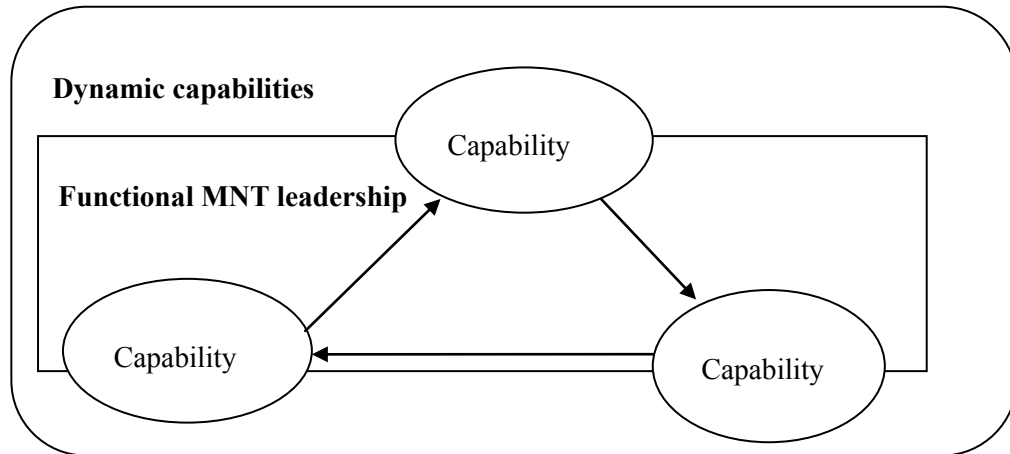
Figure 3.2 Framework of Functional Multinational Team Leadership and Dynamic Capabilities in the Main Study

Firstly, an analysis is made of organisational structure and types of team in a matrix structure and then of team processes to utilise different types of teams by using capabilities, based on the results from semi-structured interviews with reference to the literature on dynamic capabilities and the matrix structure, given in Chapter 2. Furthermore, tasks and required knowledge, ability, skill and experience will vary, depending on the type of cross-functional project teams (Yukl, 2006). Therefore, this research analyses organisational processes to formulate each cross-functional project team at micro-level. Secondly, since the literature on dynamic capabilities argues that

leaders integrate, coordinate and upgrade capabilities in order to respond to demands

from customers (Teece, 2009), the leaders of functional MNTs are investigated for how

they recognise dynamic demands from customers and task requirements from upper

management, in light of how well they know current team capabilities, as various

studies have shown (e.g. Knight, 1976; Lawrence *et al.*, 1977; Ford and Randolph,

1992). For this analysis, data from semi-structured interviews are used to investigate the

three essential elements of dynamic capabilities: capability possession, capability

deployment and capability upgrading, and to explore the roles of managers and

functional team leaders at organisational level. In addition, in order to understand

demands from global customers in different locations (Japan and Germany) there will

be an exploration of how to recognise dynamic demands from global customers in

different locations.

3.4.2 The Modified IPO Model with a Mixed Method Approach

This research is investigating the functional MNT leadership skills used to manage the

social relationships between members and the diversity of members. Figure 3.3 extracts

the modified IPO model from Figure 3.1 to analyse the mediation effect of functional

MNT leadership skills.

Team input	Team process	Team output
Diversity	Functional MNT leadership skills	Team effectiveness
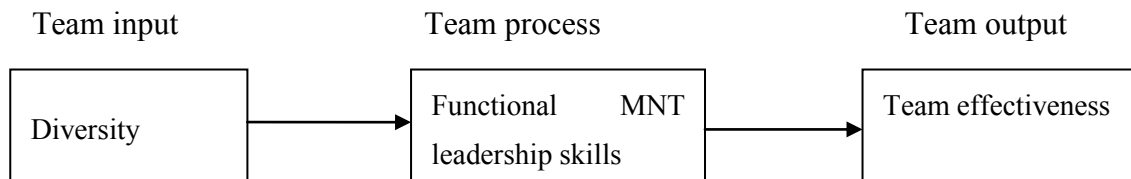
Figure 3.3 Framework of the Modified McGrath IPO Model in the Main Study

There are two approaches to investigating and analysing the modified IPO model. The

first is by testing hypotheses from questionnaire data in order to reveal the mediation

effect of team leaders on the relationship between personal values of individualism–

collectivism and team effectiveness, and the second is by exploring members'

perceptions with regard to the team's diversity, expected leadership skills, the perceived

level of team integration and the ideal measurements of team effectiveness.

By referring to McGrath's IPO model, this research has regarded diversity of team

members as team input and resources; functional MNT leadership as team processes

(which are part of dynamic capabilities); and team effectiveness as team output, based

on the results of the pilot study. The quantitative analysis focuses on functional MNT members' values of individualism–collectivism since, as has already been argued in Section 2.3.2, in cross-cultural psychology the individualist–collectivist aspect has offered the most significant differences compared to other aspects of cultural dimensions. Personal values of individualism–collectivism have shown significant and unique consequences for team effectiveness. However, there is a lack of studies to investigate how and why the relationship between individualism–collectivism and team effectiveness occurs (Gundlach *et al.*, 2006). Furthermore, as Hogg (2001) proposes, this research argues that the leaders of functional MNTs are likely to mediate the relationship between personal values of individualism–collectivism and team effectiveness by using their leadership skills. Therefore, the team analysis for investigation of the modified IPO model focuses in the first place on testing the mediation effect of functional MNT leadership skills on the relationship between individualism–collectivism and team effectiveness; and in the second place, it focuses on exploring the reality of functional MNTs by investigating members' perception of diversity, expected leadership skills, the perceived level of team integration and ideal

measurements of team effectiveness. Next, a framework to test hypotheses is given,

based on the modified IPO model.

3.4.2.1 Quantitative Analysis for Testing the Modified IPO Model

By using quantitative data to investigate the facts about functional MNTs, a further

research framework may be developed, as shown in Figure 3.4, below, to explore the

mediation effect of leadership skills on the relationship between personal values of

individualism–collectivism and team effectiveness.

Personal values   Perception of team effectiveness
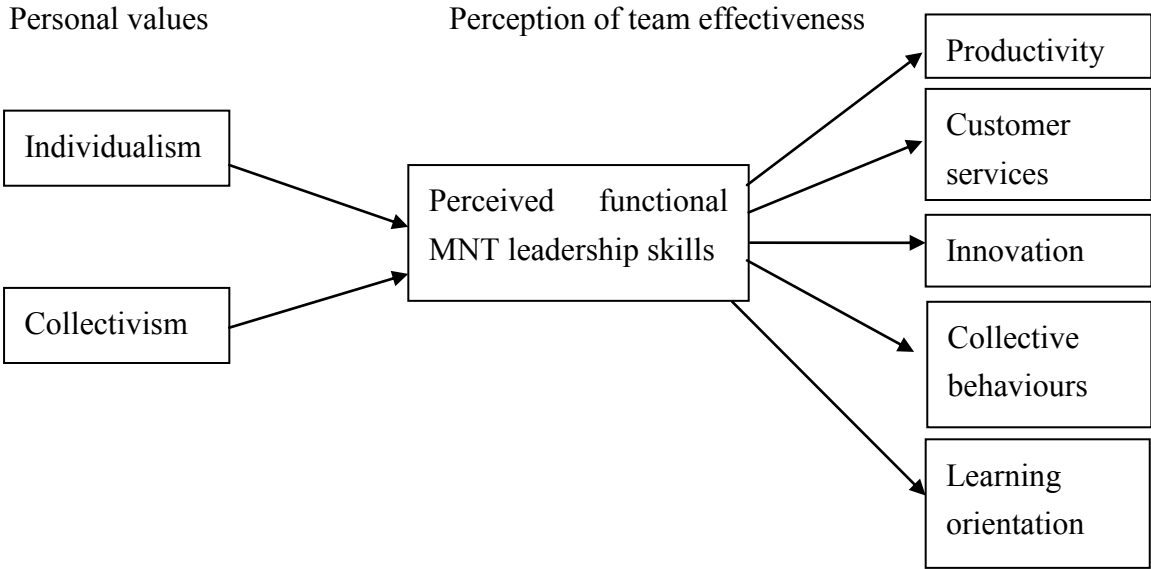
Figure 3.4 Framework of a Mediation Effect of Functional Multinational Team Leadership Skills for Hypotheses Testing in the Main Study

In order to test the mediation effect of functional MNT leadership skills on the relationships between personal values of individualism–collectivism and team effectiveness given in Figure 3.4, hypotheses have been developed as explained below.

Hypothesis testing focuses on the mediation effect of functional MNT leadership skills in order to test the modified IPO model given in Figure 3.4. As has been noted above, individualists tend to increase aspects of performance such as productivity, innovation, customer service and individual learning, whereas collectivists tend to increase collective behaviours such as cooperation and commitment to their team. Yet, both individualism and collectivism have a potential negative influence on teamwork. Copeland (1988) shows that organisations which have both individualists and collectivists will be at an advantage when they manage the wide range of individualistic and collectivistic values. Extreme individualism is likely to create a competitive environment devoid of cooperation and information-sharing (Maidique, 1980; Rosenbaum, Moore *et al.*, 1980; Steele, 1983; Quinn, 1985; Reich, 1987), whereas extreme collectivism is likely to increase social loafing and group thinking, thus decreasing productivity and innovation (Jones, 1984; Albanese and Van Fleet, 1985;

Earley, 1989). Therefore, functional MNT leaders are likely to optimise the level of team integration by creating a collective identity (Adler, 1997; Brett *et al.*, 2006). By fostering the collective identity of the team, functional MNT leaders may be able to adjust the situation towards a favourable level of collectivistic values and minimise the negative side of individualism. Hogg (2001) argues that leadership is considered as a team process to facilitate social categorisation and depersonalisation processes, aligned with social identity to make team members identify themselves as either an in-group or out-group members. Functional MNT leadership skills will probably control the level of difference in values of individualism–collectivism and thus move toward team effectiveness. However, there is a lack of empirical studies on how leadership affects individualist–collectivist values throughout the social identity of members and is thus able to encourage effectiveness. Leading on from the above discussion, the main hypothesis is developed below:

Main hypothesis: Functional MNT leadership skills have a mediating role in the relationship between personal values of individualism–collectivism and team effectiveness.

Based on the above main hypothesis, the subsidiary hypotheses along each dimension of team effectiveness may be developed as follows.

Productivity

In the drive to produce a high level of productivity, individualism is likely to make the team relatively more effective, compared to collectivism. However, as stated earlier, extreme individualism has a negative effect on team performance, by fostering traits such as gamesmanship, zero-sum competition, sequestering of information and the chaotic pursuit of tangential projects having little strategic fit overall (Maidique, 1980; Rosenbaum *et al.*, 1980; Steele, 1983; Quinn, 1985; Reich, 1987). Therefore, by using functional MNT leadership skills such as setting clear goals, motivating and inspiring members and accepting individual differences, the positive side of individualistic values is likely to be maximised and the negative side of collectivist values minimised. Therefore, it is probable that functional MNT leadership skills have a positive mediating role in the relationship between personal values of individualism–collectivism and performance. The hypotheses are developed as follows:

Hypothesis 1a: Functional MNT leadership skills have a mediating role in the relationship between individualism and productivity.

Hypothesis 1b: Functional MNT leadership skills have a mediating role in the relationship between collectivism and productivity.

Customer services

Since collectivists value in-group activities and may not understand the values of an out-group, they may have a negative impact on customer services (Huff and Kelly, 2005). Individualists, on the other hand, are likely to be open to out-group members, and therefore to understand customer demands. However, if individualists focus on personal targets (Gundlach *et al.*, 2006), it would be problematic for companies hoping to obtain economic returns by balancing cost and benefit. For example, if members of functional MNTs have individualistic values, they are likely to take the customer's side without considering the cost for the organisation. On the other hand, if members who have collectivist values are focused on their in-group, they tend to follow organisational demands rather than customer demands. By using functional leadership skills such as

informing members about the balance between customer demands and costs for the organisation, the negative side of the personal values of individualism–collectivism should be diminished by balancing both values. Hence, functional MNT leadership skills are likely to have a positive mediating role in the relationship between values of individualism–collectivism and customer services. The hypotheses are developed as follows:

Hypothesis 2a: Functional MNT leadership skills have a mediating role in the relationship between individualism and customer services.

Hypothesis 2b: Functional MNT leadership skills have a mediating role in the relationship between collectivism and customer services.

Innovation

In order to produce a high level of innovation, individualism is more likely to make the team effective compared to collectivism, as studies have shown (Maidique, 1980; Rosenbaum *et al.*, 1980; Steele, 1983; Quinn, 1985; Reich, 1987). However, these studies have also shown that extreme individualism has a negative impact on innovation.

Therefore, by using functional MNT leadership skills, the positive side of individualistic values will most probably be maximised and the negative side of collectivist values minimised. Therefore, it is likely that functional MNT leadership skills have a positive mediating role in the relationship between individualist–collectivist values and innovation. The hypotheses are developed as follows:

Hypothesis 3a: Functional MNT leadership skills have a mediating role in the relationship between individualism and innovation.

Hypothesis 3b: Functional MNT leadership skills have a mediating role in the relationship between collectivism and innovation.

Collective behaviours

In general, collective behaviours involving cooperation and team commitment are likely to exist among members who are collectivists rather than individualists. However, extreme collectivism creates a negative impact because of social loafing and group thinking, as discussed above (Jones, 1984; Albanese and Van Fleet, 1985; Earley, 1989).

Since leadership and collective identification of members are positively correlated with functional MNT leadership skills (Shamir *et al.*, 1998; van Knippenberg *et al.*, 2004), individualistic members are likely to develop more of a collective identity, and therefore the collective behaviour is likely to maintain an appropriate level. Therefore it is likely that functional MNT leadership skills have a positive mediating role in the relationship between values of individualism–collectivism and collective behaviours by creating a collective identity. The hypotheses are developed as follows:

Hypothesis 4a: Functional MNT leadership skills have a mediating role in the relationship between individualism and collective behaviours.

Hypothesis 4b: Functional MNT leadership skills have a mediating role in the relationship between collectivism and collective behaviours.

Learning orientation

In terms of learning orientation, members of diversified teams are likely to show increased individual learning (Foldy, 2004). According to existing studies, individualists

are likely to exhibit behaviours favouring individual learning, rather than collectivist learning, welcoming competition and rivalry as a result of their own individual efforts (Gundlach *et al.*, 2006; Hofstede; 1980, 1991; Triandis, 1980, 1989, 1990, 1991). Individual learning orientation is at the heart of team learning, and therefore it is vital for MNTs (Kozlowski and Ilgen, 2006). Moreover, individual development has already been mentioned as one advantage of a matrix organisation. However, there is no existing research to explore a mediator effect of functional MNT leadership skills on the relationship between individualist–collectivist values and individual learning. By communicating among members, functional MNT leaders are likely to know and understand the diversity of members as reflected in such things as team members' skills and knowledge levels which support current team capabilities. Then, by motivating and inspiring team members, they are likely to facilitate individual learning. Therefore, it is likely that functional MNT leadership skills have a positive mediating role in the relationship between individualist–collectivist values and learning orientation. These hypotheses are developed as follows:

Hypothesis 5a: Functional MNT leadership skills have a mediating role in the relationship between individualism and learning orientation.

Hypothesis 5b: Functional MNT leadership skills have a mediating role in the relationship between collectivism and learning orientation.

By testing hypotheses, a mediator effect of functional MNT leadership skills on the relationship between personal values of individualism–collectivism and effectiveness is also tested. The set of hypotheses aims to explore the relationship between variables of each concept for individualism–collectivism, functional MNT leadership skills and effectiveness (productivity, customer service, innovation, collective behaviours and learning orientation) which will be carried out through a comparison between Japanese and German local offices in a global matrix organisation.

However, in order to achieve our research aims and answer research questions, further analysis should be conducted in order to explore the roles and skills of functional MTN leaders by using enriched qualitative data. The reason is that not only personal values of

individualism–collectivism, but also other aspects of diversity, such as the level of skills and experience, might need to be considered when functional MNT leaders are deciding how to manage their teams. Therefore, after testing hypotheses, qualitative data analysis is conducted based on semi-structured interviews, as given in Section 3.4.2.2.

3.4.2.2 Qualitative Analysis for the Modified IPO Model

All respondents were asked about their perception of 1) the diversity, 2) the expected leadership skills, 3) the perceived level of team integration and 4) the ideal measurements of team effectiveness related to the concepts in the modified IPO model. With regard to diversity, common features which respondents mentioned are codified. Expected leadership skills are counted by referring to the conceptualisation given in Table 3.3. Ideal measurements of team effectiveness are counted by referring to the conceptualisation given in Section 3.2 and Table 3.2 from the operational variables of the dimensions of team effectiveness. By asking about the level of team integration, this research analyses whether team climate and atmosphere are in fact being facilitated by the leaders. All codified items with regard to diversity, expected leadership skills, ideal measurements of team effectiveness and team integration are summarised and

calculated as percentages in each functional MNT. After calculating percentages for each of the respondents' answers for each codified item, similarities and differences between functional MNTs in each location are described. Then, similarities and differences between technical expertise teams (as representing one type of functional MNT) in Japan and in Germany are investigated. Well-written or otherwise outstanding comments are extracted in order to investigate the reality of functional MNTs.

3.5 Summary

In this chapter, conceptual frameworks for the main study and hypotheses for testing the modified IPO model at the multilevel of organisational units have been given to investigate functional MNT leadership from a dynamic capability perspective as shown in Figure 3.1. For investigating functional MNT leadership, organisational processes aligned with dynamic capabilities are explored through capability possession, capability deployment and capability upgrading, based on qualitative data from semi-structured interviews as displayed in Figure 3.2. The relationship between diversity and team effectiveness with controlled leadership is likewise explored, based on the modified IPO model which may be seen in Figure 3.3. As a further level of analysis for the modified

IPO model, the mediation effect of functional MNT leadership skills on the relationship between personal values of individualism–collectivism and team effectiveness was then explored, based on the framework given in Figure 3.4 and the hypotheses given in Section 3.3.1. For the modified IPO model, members in functional MNTs were investigated with regard to members' perceptions of diversity, expected leadership skills, the level of team integration and ideal measurements of team effectiveness, all this being based on interviews.

The next chapter describes the research methodology applied in conducting this research.

Table 3.2 Operational Variables for the Main Study to Test Hypotheses

Construct	Concept	
Personal values	Individualism	The degree to which people want to be unique and 'do their own thing' and to be 'the best'
	Collectivism	The degree to which people identify themselves in their groups and are willing to cooperate with their group members without any competition
Functional MNT leadership skills	Functional MNT leadership skills	The degree to which a team leader is concerned with facilitating internal team integration, linking to upper management, setting clear goals, facilitating communication, motivating members and managing cultural diversity
Team effectiveness	Productivity	The degree to which team members achieve their goals within resource limitations
	Customer services	The degree to which team members provide their services with an appropriate level of quality to satisfy demands
	Innovation	The degree to which team members are keen to obtain new knowledge and seek out information for products and services in order to solve customer problems
	Collective behaviours	The degree to which team members have favourable collective behaviour for teamwork such as cooperation and commitment
	Learning orientation	The degree to which team members aim to gain new knowledge and skills

Table 3.3 Conceptual Variable of each Functional MNT Leadership Skills for the Main Study

Variables	Conceptualisation	MNT leadership skills in study by Joshi and Lazarova (2005)
Intra-team relational skills	Skills to integrate the team members and resolve differences of members' strengths and weaknesses	Facilitating teamwork
Extra-team relational skills	Skills to connect to networks, including customers, upper management of an organisation and other organisational units	Boundary-spanning
Setting clear goals	Skills to set team direction and goals and provide guidance for team goals	Clear goal-setting
Communication skills	Skills to listen to team members and open communication with them	Communication
Motivating members	Skills to encourage team members to make an effort and to inspire team members to solve customers' issues	Motivating and inspiring members
Managing differences in national cultures	Skills to recognise and accept differences of national cultures among team members	Managing cultural diversity

Table 3.4 Summary of Hypotheses to be Tested for the Main Study

Hypothesis 1a	Functional MNT leadership skills have a mediating role in the relationship between individualism and productivity.
Hypothesis 1b	Functional MNT leadership skills have a mediating role in the relationship between collectivism and productivity.
Hypothesis 2a	Functional MNT leadership skills have a mediating role in the relationship between individualism and customer services.
Hypothesis 2b	Functional MNT leadership skills have a mediating role in the relationship between collectivism and customer services.
Hypothesis 3a	Functional MNT leadership skills have a mediating role in the relationship between individualism and innovation.
Hypothesis 3b	Functional MNT leadership skills have a mediating role in the relationship between collectivism and innovation.
Hypothesis 4a	Functional MNT leadership skills have a mediating role in the relationship between individualism and collective behaviours.
Hypothesis 4b	Functional MNT leadership skills have a mediating role in the relationship between collectivism and collective behaviours.
Hypothesis 5a	Functional MNT leadership skills have a mediating role in the relationship between individualism and learning orientation.
Hypothesis 5b	Functional MNT leadership skills have a mediating role in the relationship between collectivism and learning orientation.

CHAPTER 4

RESEARCH METHODOLOGY

4.1 Introduction

This chapter provides an overview of the research methodology used in this research, and includes a discussion of both pilot and main studies. Research methodology is critical to how researchers recognise the world and draw up their research strategy (Bryman, 2008). Section 4.2 illustrates the research philosophy, including how the researcher considers the relationship between theory and research. It also discusses epistemological and ontological issues. Section 4.3 describes the research design: that is, mixed methods research. Section 4.4 attempts to justify the aims of the pilot study, and also describes the reasons for choosing the mixed methods approach to research. Section 4.5 explains the use of surveys as the data collection method for this research, including semi-structured interviews and self-administered questionnaires, with data collection and study samples, in both pilot and main studies. Section 4.6 describes the data analysis methods for qualitative and quantitative data. Section 4.7 describes the data analysis procedure for the pilot and main studies. Finally, Section 4.8 summarises the research methodology used in both studies. The measurement of the constructs for

the pilot study will be given in Chapter 5 once the research framework for the pilot

study has been established by reference to the literature and existing studies.

4.2 Methodological Considerations

Bryman (2008) describes how the way in which researchers choose their research

design and methods reflects their personal beliefs and feelings, and how their research

philosophy may contribute to shaping awareness for their research plans and

conceptualisation. Research methodology explains the reasons for choosing particular

methods in social research (Clough and Nubrown, 2002): therefore it is important to

explain how a researcher sees the world and selects his or her research design and

methods. With regard to research philosophy, social researchers need to answer both

epistemological and ontological issues in order to devise their research strategy

(Bryman, 2008). Epistemological issues address the question of whether the natural

sciences research model is suitable for social studies (*ibid*.). As far as the ontological

considerations are concerned, there are questions about whether social entities should be

considered as objective entities, as external facts (objectivism) or as social constructions

created by the perceptions (constructionism). These epistemological and ontological

considerations will affect the research strategy, whether a piece of research takes a quantitative, qualitative or mixed (both quantitative and qualitative) research strategy (*ibid.*).

From the viewpoint of philosophical assumptions, quantitative and qualitative methods are regarded as being incompatible, due to differences in conceptions of reality and truth (Howe, 1988). Quantitative methods are likely to be based on positivism which views knowledge as something acquired, based on rationalisation and pure observation but excluding metaphysics (in the forms of human intentions, beliefs and so forth), interests, values, purposes and psychological schemata of individuals (*ibid.*). On the other hand, qualitative methods tend to be based on interpretism, which holds that metaphysics cannot be eliminated, and that observation cannot be pure or exclude personal interests, values, purposes and psychological schemata in the acquisition of knowledge (*ibid.*). Yet, the current research environment has become more complex and dynamic, and therefore researchers are attempting to make use of both quantitative and qualitative methods to complement each other (Johnson and Onwuebuzie, 2004). In addressing the potential incompatibility of quantitative and qualitative methods, pragmatism helps to explain how quantitative and qualitative approaches may be mixed (Howe, 1988;

Johnson and Onwuebuzie, 2004). Johnson and Onwuebuzie (2004:17) state that 'Philosophically, mixed research makes use of the pragmatic method and system of philosophy. Its logic of inquiry includes the use of induction (or discovery of patterns), deduction (testing of theories and hypotheses), and abduction (uncovering and relying on the best of a set of explanations for understanding one's result)'. The pragmatic method states that 'the current meaning or instrumental or provisional truth value of an expression is to be determined by the experiences or practical consequences of belief in or use of the expression in the world' (Murphy, 1990, cited in Johnson and Onwuebuzie, 2004:16). We saw in Chapter 2 how functional MNTs are embedded with complex organisational structure and processes, and for this reason the researcher decided to apply mixed methods. The research design will be explained in the next section.

4.3 Research Design: Mixed Methods Research

Researchers who use mixed methods research collect and analyse both quantitative and qualitative data (Hurmerinta-Peltomaki *et al.*, 2006). They are able to reach a better understanding of the subject and overcome the weaknesses of quantitative and of qualitative research used alone, as described in the philosophical issues (*ibid.*). Also,

mixed methods research is practical since researchers are able to combine inductive and deductive thinking regardless of the limitations of quantitative and qualitative research methods (Creswell and Clark, 2007). This study has applied mixed-methods research in order to deepen understanding of the reality of MNTs. For the pilot study, quantitative data were used for testing hypotheses of the proposed IPO model, and qualitative data were used to confirm concepts and variables used in the IPO model by aggregating individual questionnaires from Organisation B, which is part of Company A. For the main study, first, qualitative data were used, both to investigate organisational structure and processes and also to reveal the relationship between dynamic capabilities and functional MNT leadership in Organisation Y, which is part of Company X. Hence, the data have been collected and integrated from different levels of organisational units to investigate functional MNT leadership. Second, quantitative data from self-administered questionnaires were aggregated from individual to local office level in Japan and Germany and used to test hypotheses for the modified IPO model. Third, qualitative data from semi-structured interviews with each team member were used to investigate the reality of MNTs by comparing similarities and differences between functional MNTs with regard to perception of 1) diversity, 2) team integration, 3)

leadership skills and 4) team effectiveness in functional MNTs. The next section describes the purposes of running a pilot study.

4.4 Pilot Study

Shuttleworth (2008) demonstrates that a pilot study is 'a standard scientific tool for soft research' which lets researchers conduct a tentative analysis before conducting a full study. The merits of doing a pilot study are to avoid mistakes or validity problems for a main study, to test out feasibility and methods and to 'rehearse' for a main study on a smaller scale (Shuttleworth, 2008). Furthermore, pilot studies are suitable to help to refine research questions (*ibid.*). In the case of the present research, based on the results of the pilot study the conceptual framework for the main study was simplified. Moreover, based on the experience of the pilot study, the researcher improved her skills and deducted conceptual variables from the proposed IPO model, discussed in Chapter 4, before embarking on the main study. The next section describes the type of survey, one involving semi-structured interviews and questionnaires, which was applied as the data collection method in both studies.

4.5 Survey

This research employs a survey design as part of its research strategy to collect data from a sizable population (Saunders *et al.,* 2007). Semi-structured interviews and questionnaires are used for data collection. As the most commonly used survey design, a cross-sectional design is used to collect data on more than one case at a single point of time in order to examine relationships (Bryman, 2008). This research employs a cross-sectional design for data collection, in part because of time and resource constraints. Next, the process of data collection and study sampling using a survey is described, with details of the use of questionnaires and interviews in the pilot and main studies.

4.5.1 Data collection

Fieldwork in pilot and main studies was tailored to the researcher's Japanese nationality and language skills and her privileged access to companies in Japan. In business research, there is a lack of empirical studies on multinational teams in Japan because it is assumed to be hard to obtain access to them, because of the unique Japanese business culture and language. Table 4.1, below, shows a summary of data collection in both pilot and main studies, with regard to research conducted on companies and organisations, as well as the locations and period of data collection.

Table 4.1 Summary of Data Collection in the Pilot and Main Studies

	Pilot study	Main study
Company where the research was conducted	Multinational food ingredient company (Company A)	Global software company (Company X)
Organisation where research was conducted	Research and development (Organisation B)	Global customer support (Organisation Y)
Location of data collection	Japan	Japan and Germany
Period of data collection	27 August-7 September 2007	Japan: April-July 2008 Germany: July-September 2008

As shown in Table 4.1, the pilot study was conducted in Organisation B, which is part

of Company A. The fieldwork for the pilot study was conducted in Japan over two

weeks from 27 August to 7 September 2007 at the research institute. The data were

collected by semi-structured interviews and self-administered questionnaires. Also,

secondary data were collected from existing studies and reports from market research

companies. The fieldwork of the main study was conducted in Organisation Y, which is

a part of Company X. The company provides local services for its global customers by

running regional offices all over the world, and centralises these offices in Germany.

Organisation Y was designed as a matrix structure to pool human resources world-wide.

The data were collected in two local offices of Organisation Y: one in Japan and the

other in Germany. The data were initially collected from the local office in Japan since

the office is smaller than that in Germany. Appendix 1 gives the background of

106

Company A, and Appendix 6 gives the background of Company X, with regard to company strategy, the dynamics of the industry and corporate architecture. Next, we will look at the survey sample for the pilot and main studies.

4.5.2 Study Sample

In the pilot study the research targeted multinational teams in Organisation B, which were selected based on interviews with a gatekeeper. In the main study, the research targeted functional MNTs in Organisation Y in Japan, and these were selected based on the result of interviews with human resources personnel. Those in Germany were selected on the basis of the results of interviews with functional managers. Table 4.2, below, shows the study sample and details of interviews and questionnaires in both pilot and main studies. The populations of Company A, Organisation B and Organisation Y were obtained from interviews with human resources personnel in each study. The population of Company X was obtained from the company's Annual Report in 2007. During the survey, each interviewee was asked to fill in a self-administered questionnaire after the semi-structured interview, in the case of both pilot and main studies. After the semi-structured interviews had been conducted in Japanese, the interview transcripts were translated from Japanese into English.

Table 4.2 Study Sample in the Pilot and Main Studies

	Pilot study	Main study
Study population of company where research was conducted	1,241 employees on 27 August 2007	More than 43,800 employees
Study population in organisation where research was conducted	150 researchers and several employees who deal with overseas sales	Japan: 143 employees, on 1 January 2008 Germany: 284 employees in the technical expert group (2008)
Number of teams where interview with leaders and members was conducted	6 MNTs	Japan: 6 functional MNTs Germany: 8 functional MNTs
Number of interviews conducted	26 members including human resources personnel	Japan 51 Germany 51
Number of collected questionnaires used for analysis	32	Japan 48 Germany 51

Ethical issues

From the ethical point of view, the confidentiality of companies, and interviewees' and team names are protected for both pilot and main studies. All respondents were informed about the content of this research when the researcher asked their permission for interview. Moreover, the first page of the self-administered questionnaire explains the aims of this research. Therefore respondents were given sufficient background information about the research. Interviews were recorded with the permission of the respondents, and transcribed after interviewing was complete.

<u>Translation</u>

As the translation technique for questionnaire and interview guides, the researcher chose

back-translation, an approach which has advantages given the need to avoid

discrepancies between source and target questionnaires which might arise as a result of

translating the questionnaires from source language to targeted language and then back

again (Usunire, 1998). She was helped by her bilingual friends and family. The

translation from English and Japanese for the interview guides and questionnaires was

done by the researcher, who is bilingual, but she also asked a Japanese native speaker to

double-check her translation.

The next section moves on to give details of the semi-structured interviews and self-

administered questionnaires in both pilot and main studies.

4.5.2.1 Semi-structured interviews

The semi-structured interview allows researchers to have flexibility to pick up on points

that the interviewees have made (Bryman, 2008). In the semi-structured interview, the

researcher can obtain additional data that are not easy to obtain from self-administered

questionnaires (*ibid.*). Semi-structured interviews were used in the pilot and main

studies to investigate organisations and teams in depth for managers', leaders' and members' views on team effectiveness. Table 4.3 below shows a summary of the semi-structured interviews in the pilot and main studies, giving the first person contacted, language used, level of interview, and where to locate the interview guides in this thesis.

Table 4.3 Summary of Semi-structured Interviews in the Pilot and Main Studies

	Pilot study	**Main study**
First person contacted	A gatekeeper in Organisation B	Human resources personnel in Organisation Y in Japan
Average interview duration per respondent	30 minutes	60 minutes in Japan 30 minutes in Germany
Used languages for interviews	Japanese and English	Japanese and English
Position	Managers, leaders and members	Leaders and members
Level of interview	Individual	Individual
Interview guides	Appendix 4 in English Appendix 5 in Japanese	Appendix 8 in English Appendix 9 in Japanese

Pilot study

As shown in Table 4.3, the point of departure of the pilot study was to contact the person in charge of networking outside Company A in Organisation B. He selected the interviewees and scheduled the interviews. Members of six groups which have non-Japanese members were selected for the pilot study. Additionally, those employees who had experience of working with non-Japanese members were interviewed.

As demonstrated in Table 4.3, interviews were conducted for an average of 30 minutes in Japanese and English for individuals. With the permission of interviewees, most interviews were tape-recorded. When interviews were conducted with Japanese members and non-Japanese members who spoke Japanese well, Japanese was used; whereas English was used when interviews were conducted with members who did not speak Japanese fluently.

The interview guidelines were created by referring to the proposed IPO model for the pilot study given in Chapter 5 to investigate MNTs. Depending on the person's position in the team and organisation, the interview guidelines were created in English (Appendix 4) and Japanese (Appendix 5), as laid out in Table 4.3.

<u>Main Study</u>

As shown in Table 4.3, semi-structured interviews with human resources personnel in Organisation Y's Japan office were conducted in order to learn about Company X and Organisation Y. Permission to interview each interviewee in Japan was confirmed face-to-face or via e-mail by administrative staff, whereas in Germany requests for permission to interview were sent out using the company e-mail address. Interviews

with managers in Japan were conducted to gain a general overview of the organisation and its customers as a prerequisite for the understanding of teams in the global support organisation, whereas meetings with managers in Germany were to explain to them about the content of this research and ask permission to interview their team members and leaders. In Germany, after permission was obtained from the managers, meeting requests for team members and leaders were sent out using the company's e-mail address in Germany.

The duration of interviews was different in Japan and Germany. In Japan, since the researcher was allowed to interview the employees for an hour, the interview time for team members was anything between 45 minutes and two hours, with an average duration of one hour. On the other hand, in Germany, depending on the interviewees, interview time averaged 30 minutes. Due to time limitations on interviews in Germany, some of the more predictable overlapping questions with regard to task assignment for cross-functional project teams were deleted, since the global organisation has the same procedure in different locations, according to the managers in Japan. In Japan almost all interviews were conducted in Japanese unless the interviewees did not speak Japanese, whereas in Germany all interviews were conducted in English.

The interview guidelines were created by referring to the framework developed in Chapter 3. Interview guides were created in English (Appendix 8) and Japanese (Appendix 9).

As described, after the semi-structured interviews with respondents were complete, they were asked to full in a self-administered questionnaire in both studies. The next section describes the detail of the self-administered questionnaires used in this research.

4.5.2.2 Self-administered questionnaires

Questionnaires are used in explanatory research to examine the relationship between variables and cause-and-effect relationships (Saunders *et al*., 2007). The questionnaire used in this research employs a Likert scale, which measures a set of attitudes using a multiple scale (Bryman 2008). The questionnaire used in both the pilot and main studies asked respondents how strongly they agreed and disagreed with a particular statement on a seven-point rating scale ranging from 'strongly disagree' (= 1) to 'strongly agree' (= 7), as described by Saunders *et al.* (2007). The questionnaire items were drawn up by the researcher based on existing concepts and theories, and by referring to previous studies.

113

With regard to measurement validity, it is critical to take into consideration face validity (in other words, content validity) and construct validity, since these are related to whether sets of indicators intended to measure a concept really measure that concept (Bryman, 2008). Face validity is determined by whether measurements reflect the content of the concept, whereas construct validity is evaluated according to whether a hypothesis from theories is applicable to concepts (Bryman, 2008).

Table 4.4 below summarises the questionnaire used in the pilot and main studies with regard to operational variables, interview items, content validity, language version and the whole questionnaire.

Table 4.4 Summary of Questionnaire in the Pilot and Main studies

	Pilot study	**Main study**
Operational variables	Table 5.11	Table 3.2
Measures	Table 5.11	Table 4.9
Content (face) validity	Issues listed in Table 5.11	No issues
Questionnaire	Appendix 2 in English Appendix 3 in Japanese	Appendix 7 in English

Pilot study

Operational variables and measures used to test hypotheses will be given in Table 5.11. The researcher defined operational variables by referring to existing theories and conceptual variables developed with the research framework in the pilot study.

With regard to content validity, before the questionnaire for the pilot study was used for real, 15 former Master of Business Administration (MBA) students were asked to fill in the questionnaires for the pilot study: this was to find out whether the question items were easy for respondents to understand. The response rate was 73 per cent and no respondents claimed to have had any difficulty in answering questions. Although the questionnaire items were drawn from existing literature, some of these items did not reflect what the researcher intended to investigate based on her discussions with her supervisor. In other words, the questionnaire used in the pilot study showed up problems with face validity. After this experience from the pilot study, in the main study the researcher carefully chose all items in the questionnaire from existing studies for measuring variables. Hence the main study did not have any problems of face validity. The English and Japanese versions of the questionnaires for the pilot study were

written by the researcher, and these questionnaires are given in English in Appendix 2

and in Japanese in Appendix 3.

<u>Main study</u>

Operational variables were given in Table 3.1. The researcher defined operational

variables by referring to existing theories and conceptual variables developed along

with the research framework in Chapter 2. The measures used to test the hypotheses are

given in Table 4.9.

With regard to face validity, the questionnaire items were quoted from the existing

research, and therefore the researcher could avoid problems with face validity in the

main study. In order to assess other validity, the researcher's supervisors reviewed the

questionnaire from their own experience. The final version of the questionnaire was

formulated after discussion with these experienced supervisors. For the main study, only

an English version of the questionnaire was created because employees were expected

to use English as a common business language in Company X. These questionnaires are

given in Appendix 5.

The next section describes the data analysis methods after the survey for qualitative and quantitative data in both studies. The way in which this research constructs measurements for questionnaires by using statistical techniques is also described as part of quantitative data analysis methods.

4.6 Data Analysis Methods

Since this research uses both quantitative and qualitative data, it is necessary to analyse the data while bearing in mind the characteristics of both quantitative and qualitative data analysis. From the aspect of quantitative data analysis, this research uses different approaches. Table 4.5 displays both qualitative and quantitative data analysis methods as applied in the pilot and main studies.

Table 4.5 Summary of Data Analysis Methods used in Pilot and Main Studies

	Pilot study	**Main study**
Methods for qualitative data analysis	Content analysis	Content analysis
Methods for quantitative data analysis	Factor analysis Correlation Regression	Factor analysis Correlation Regression T-test Discriminant analysis

The data analysis methods mentioned in the above table will next be described with regard to the data analysis methods of qualitative and quantitative data used in both pilot and main studies.

4.6.1 Qualitative Data Analysis

For the qualitative data, content analysis is applied to both the pilot and main studies. Since content analysis is used for analysing both qualitative and quantitative data, this data analysis method can be used for qualitative data by coding items. NVivo 8 is used for categorising and coding items from the interview transcripts in the pilot and main studies. The detail of content analysis is described below.

<u>Content analysis</u>

Content analysis is a research technique to increase researchers' understanding of particular phenomena from texts to contexts of their use in order to make valid inferences (Krippendorff, 2004). Content analysis is a flexible method of analysing documents and texts by seeking a systematic approach (Bryman, 2008). Research questions on content analysis are based on questions which are believed to be answerable (abductively inferable) by examining a body of texts (Krippendorff, 2004).

Those researchers who apply content analysis to their studies tend to use a mixture of data such as statistical knowledge, theory, experience and texts (*ibid.*). From data texts, these researchers are able to analyse significant, meaningful, informative and representational data texts. Furthermore, content analysis allows the researcher to count key categories and variables (Neuendorf, 2002). In the pilot study, significant, meaningful, informative and representational data texts were summarised and analysed. In the main study, in order to explore organisational structure and organisational processes, experiences of forming cross-functional project teams were summarised, based on semi-structured interviews with managers and leaders for representational data texts. In the main study, duplicated items which were mentioned by interviewees were counted in order to compare similarities and differences of customers in Japan and Europe and functional MNTs (see Chapter 7 and Chapter 8). The following table shows categorisations and referred tables for content analysis in each study.

Table 4.6 Categorisations and Referred Tables for Analysis in the Pilot and Main studies

	Pilot study	Main study
Categorisations	1) Diversity 2) Leadership 3) Team cognition 4) Trust 5) Commitment 6) Communication 7) Conflict 8) Learning 9) Team effectiveness	1) Organisational processes (Capability possession, capability development and capability upgrading) 2) Roles of functional MNT leaders 3) Customer demands and behaviours 4) Diversity in functional MNTs 5) The level of team integration in functional MNTs 6) Expected kills of functional MNT leaders 7) Dimensions of team effectiveness in functional MNTs
Referred table(s)	Table 5.1	Capability possession, capability development and capability upgrading from Table 3.1
		Dimensions of team effectiveness from Table 3.2
		Skills of functional MNT leaders from Table 3.3

Pilot study

Every interview transcript is split into categories with reference to Table 5.1. Diversity,

members' behaviours, leadership and effectiveness in MNTs are explored in accordance

with the following list:

1. 'Diversity in a MNT' investigates how MNT members perceive diversity in their

   team by finding common features from the semi-structured interviews.

120

2. 'Members' behaviours' involving trust, commitment, communication and conflict in MNTs are explored to ascertain how MNT members experience their member behaviours by finding common features from semi-structured interviews.

3. 'Leadership' is explored to find out what expectations MNT members have of their leaders by finding common features from semi-structured interviews.

4. 'Team effectiveness' is summarised with regard to how MNT members experience their team effectiveness by finding common features from the semi-structured interviews.

To summarise the common features, a list of conceptualisations for the pilot study was given in Table 5.1.

Main study

All interview transcripts are divided into categories of Organisation Y or functional MNTs in Organisation Y, as given in Table 4.6. The transcripts from Organisation Y and functional MNTs were used to investigate organisational structure, organisational processes and perceptions of diversity, team integration, expected functional MNT leadership skills and ideal measurements of team effectiveness.

Organisation Y

The files related to Organisation Y are divided into different categories based on location, whether Japan or Germany. These files are then coded as customer demands, dynamic capabilities, diversity in the organisation, and the roles of functional MNT leaders. The categorisation was performed for each location (Japan or Germany). The following list shows the items which were investigated in content analysis:

1. Organisational processes (capability possession, capability deployment and capability upgrading), which are referred to in Table 3.1. These elements are summarised by finding representative texts from interviews.

2. In relation to capability possession, the merits of diversity in Organisation Y from the point of view of the managers in Japan are extracted from the semi-structured interviews to ascertain how managers in Japan see diversity in terms of resources and capabilities.

3. The concept of 'Roles of leaders' is summarised to indicate how leaders perceive their tasks by finding common features from the semi-structured interviews.

4. 'Customer behaviours and demands' are counted by finding common features in each location (Japan or Germany).

Functional MNTs

The files related to MNTs are divided into either functional MNTs or cross-functional project teams in each location. These files are coded into categories of diversity in functional MNTs, team integration, expected functional MNT leadership skills and team effectiveness. The coding was performed in each MNT. Those coding items are as follows:

1. 'Diversity in a functional MNT' is categorised and counted to show how the members see diversity by finding common features from semi-structured interviews.

2. 'Team integration' is calculated as percentages which show how the members identify themselves with their teams.

3. 'Expected functional MNT leadership skills' are categorised based on Table 3.3 and counted to show how MNT members have expectations of their leaders by finding common features from semi-structured interviews.

4. 'Functional MNT effectiveness' is categorised based on Table 3.2 and counts how MNT members ideally measure team effectiveness by finding common features from semi-structured interviews.

The coding items related to diversity, leadership skills and team effectiveness in MNTs refer to the conceptualisation laid out in Chapter 3 and detailed in Table 4.6. This is illustrated by the data analysis procedures, discussed next.

4.6.2 Quantitative Data Analysis

For the pilot study, factor analysis, correlation and multiple regressions were used to analyse quantitative data. In addition to the methods which were used in the pilot study, the main study applied t-test analysis and discriminant analysis which are all used for this study. First, in order to construct measurements for both studies, factor analysis and internal reliability testing using Cronbach's alpha were performed. The procedure to construct measurements is given below.

Measurement of constructs

There are three methods to construct measurements by using data reduction; a single surrogate variable, factor scores and summated scales (Field, 2005; Hair *et al.,* 2006). As an option for creating measurements, the summated scales combine several variables that measure the same concept into a single variable in order to increase the reliability of the measurement (Hair *et al.*, 2006). The summated scales reduce measurement error,

represent multiple facts of a concept, and are easy to reproduce across studies (*ibid.*). In this research, by taking the mid-points of a single surrogate variable and factor scores, summated scales were chosen to create measurements of constructs. Next, I describe the method of creating summated scales from factor analysis, issues of validity and reliability, and the method for creating summated variables.

Factor analysis

The main purposes of factor analysis are to understand the structure of a set of variables, to construct a questionnaire in order to measure an underlying variable, and to reduce a data set to a manageable size (Field 2005). Factor analysis is used to identify the internal relationship of a summated scale which is formed by combining several variables into a single composite measure (Hair *et al.*, 2006).

In the factor rotation method, rotated factor solutions would provide improved interpretation by reducing the number of factors (Hair *et al.*, 2006). An orthogonal factor rotation such as varimax rotation is the simplest case of rotation. The varimax rotation maximises the sum of variance for required loading in the factor matrix. Hence in this research varimax rotation was employed to reduce factors in pilot and main studies.

Guadagnoli and Velicer (1988) argue that the most important elements to settle reliable factor solution are absolute sample size and absolute magnitude of factor loadings. They conclude that if a factor has four or more loadings greater than .6 then it is reliable regardless of sample size. Also, Field (2005) states that the values of the Kaiser-Meyer-Olin measure of sampling adequacy (KMO) are acceptable when it is greater than .5. For factor loading, the option of factor loading in SPSS was set as the factor loading deployed when its value is over 0.6, since Guadagnoli and Velicer (1988) are of the opinion that factor loading over 0.6 is reliable. In the case that question items did not show factor loading of over 0.6, these items would be deleted to make summated scales.

Reliability is a measure of the consistency of concepts (Byrman, 2008). Internal reliability should consider whether a multiple-item measure aggregates each question to form an overall score as said by Byrman (2008). Since this research applies multiple-item measures, Cronbach's alpha is used to test internal reliability that shows a causal relationship at the operational level (Schwab, 2005; Hair *et al.*, 2006). Hair *et al.* (2006) mention that a .60 level can be used in exploratory research. Hence this research used criteria .60 level for internal reliability.

The following Table 4.7 shows a summary of tables to construct measurements used in the pilot and main studies.

Table 4.7 Summary of Tables to Construct Measurements in the Pilot and Main Studies

	Pilot study	Main study
Factor analysis	From Table 5.12 to Table 5.21	From Table 4.10–Table 4.17
Issues of factor loading	Table 5.11	Table 4.11,Table 4.12 and Table 4.16
Cronbach's alpha	Table 5.11	Table 4.18

In the pilot study, constructs were created based on operational variables in Chapter 5. As shown in Table 4.7, the results of factor analysis with varimax rotation in each measurement are given from Table 5.12 to Table 5.21. There were issues factor loading which was below 0.6. These issues were listed on Table 5.11. Also, Table 5.11 gives Cronbach's alpha in each construct.

For the main study, as discussed in Chapter 2, the research framework has three main concepts: diversity, team leadership and team effectiveness. The tables from 4.9 to 4.16 show the results of primary component analysis of values of individualism–collectivism, leadership skills and MNT effectiveness with varimax rotation. Nine question items did

not show any value since the factor loadings of these items were less than 0.6 (in Table 4.11: Feel honoured if family receives a distinguished-service award, in Table 4.12: providing clear instruction, setting direction, communicating with upper management, responding to political changes and appreciation of diversity and delegating responsibility; in Table 4.16: making extra effort for the team). These variables were deleted before analysing internal reliability to make summated scales. Table 4.17 gives Cronbach's alpha in each construct for the main study.

Computation of summated scales

Based on the definition of conceptual variables given in Chapter 2 and factor pattern matrix, the labels of summated scales were given. After confirming validity and reliability, the scores of question items were added up for each concept. The total scores were then divided by the number of question items as described by Hair *et al*. (2006). For example, in the case of the conceptual variable of diversity, there were 10 questions. The total scores were added up from Question 1 to Question 10, and the total score was divided by 10, which is the summated scale for diversity.

Correlation and partial correlation

Correlation shows the degree to which two variables are related to each other (Saunders, Lewis et al. 2007). Partial correlation measures the strength of the relationship between a dependent variable and a single independent variable when the other independent variables might be considered to act as a control variable (Hair, Black et al. 2006). Partial correlation coefficient measures the strength of the relationship between a dependent variable and a single independent variable when the other independent variables in the model are controlled (*ibid.*). The correlation coefficient indicates the strength of the relationship between variables, ranging from -1 to +1. In both pilot and main studies, it was necessary to investigate the relationships between variables before performing hypothesis testing in order to know how the variables were correlated, as seen in Table 4.5.

Regression/Hierarchical regression analysis

Regression analysis is a statistical technique to analyse the relationship between a single dependent variable and one or several independent variables (Hair, Black et al. 2006). Multiple regression is a model which has more than two independent variables. To apply regression analysis, the data must be metric or appropriately transformed and the

129

researcher needs to decide which variable is to be dependent and which are to be independent (*ibid.*). In order to perform simple regression analysis, the minimum requirement is for over 30 samples (*ibid.*), which was met for both pilot and main studies.

For multiple regression analysis, including the hierarchical regression model, multicollinearity should be considered (Field, 2005). Multicollinearity should be tested since it creates difficulties in assessing the importance of each predictor. Multicollinearity is seen when the correlation between variables exceeds .80 (Field, 2005). However, it does not guarantee that there is no collinearity, since it may occur through the combination of two or more variables. SPSS provides collinearity diagnosis as a variance inflation factor (VIF) and a tolerance statistic. The VIF investigates whether an independent variable has a strong linear relationship with the other independent variables. If a value of VIF exceeds 10 and the tolerance statistic indicates below .1, it should be taken into consideration for multicollinearity (Myers, 1990; Field, 2005).

The accuracy of regression models needs to be tested to ascertain whether these models

are accurate representations of the real data by looking at residuals and influential cases (Field, 2005). Residuals show the differences between the values of the outcome predicted by the model, and the values of the outcome observed in the sample. Residuals would be large if a model were a poor fit with the sample data, whereas residuals would be small if a model were a good fit with the sample. Normally, standardised residuals are used to judge whether a model is a good fit or not. If the value of standardised residuals is greater than 3, the model needs to be re-examined. In SPSS, casewise diagnostics provide the observed values of the outcome, the predicted values of the outcome, the differences between these values (the residual) and this difference, standardised. In terms of influential cases that exert undue influence over the variables of the mode, Cook's distance and Mahalanobis distance are used. Cook's distance measures the overall influence of a case on a model and the values should not exceed 1. Mahalanobis distance measures the distance of cases from the means(s) of the predictor variable(s). If the values of Mahalanobis distance are greater than 15 in small samples (N=100), the model should be examined. In both pilot and main studies, there were no issues with regard to residuals from the result of SPSS outputs.

Finally, the assumptions of the regression model should be checked, to ascertain whether it is normally distributed or not (Field, 2005). SPSS provides options to check whether the residuals in the model are independent by asking for a plot graph of the standardised residuals against the standardised predicted values of the dependent variable based on the model as well as for a histogram and normal probability plot of the residuals (*ibid.*). The graph should look like a random array of dots evenly dispersed around zero (Field, 2005). In both pilot and main studies, there was normal distribution for each regression model.

Testing a mediation effect using hierarchical regression

Hierarchical regression analysis and regression analysis are a popular approach to testing mediation (Todman and Dugard 2007). In hierarchical regression analysis for testing mediation, firstly (an) independent variable(s) (IV) is set as the predictor variable(s) (a restricted model), and then the presumed mediator is added to the independent variable(s) (IVs) as the predictor variables (a full model) and a dependent variable (DV) as the outcome variable. 'Change statistics' in SPSS indicate how much these values change from the restricted model to the full model and how significant the change is. If the value of 'F Change' in SPSS shows at the significant level, it is likely

to have a mediation effect on the presumed mediator (Todman and Dugard 2007).

According to Baron and Kenny (1986), four steps are needed for establishing mediation.

Firstly, the regression unstandardised coefficient (IV-> DV) should be significant.

Secondly, the regression unstandardised coefficient (IV-> presumed mediator) should

be significant. Thirdly, two regression unstandardised coefficients (IV->DV and

presumed mediator -> DV) should be significant. Finally, the amount of mediation is

obtained by subtracting the IV-> DV regression unstandardised coefficient in the final

regression from that in the first regression and it should be significant.

For calculating the significant size of the differences, the Sobel test is often used

(Todman and Dugard 2007). The Sobel test is needed for the values of unstandardised

regression coefficient for the relationship IV -> presumed mediator as 'a', standardised

error from 'a' as 'Sa', unstandardised regression coefficient for the relationship

presumed mediator-> DV when the IV is also a predictor of the DV as 'b' and

standardised error from 'b' as 'Sb'. These values are entered into the formula of Z as

given below.

$$Z = \frac{a*b}{\sqrt{b^2 * Sa^2 + a^2 * Sb^2}}$$

The calculation using the Sobel Test Calculator for the Significance of Mediation is provided on the website (Soper 2004-2009). In terms of significant level for hypothesis testing, this research uses .10, which is considered as an acceptable level since the sample size is small in both pilot and main study (Hair *et al.*, 2006).

The above-mentioned processes were used to test the mediation effect of leadership in both pilot and main studies, as given in Table 4.5.

T-test / Hotelling's T-square

The T-test measures whether there is any statistical significance of the difference for a single dependent variable between two independent group means while Hotelling's T-square measures whether there is any statistical significance of the difference for two or more dependent variables between two independent group means (Hair, Black et al. 2006). Statistical testing is performed whether there are differences between the mean scores of each group. In the main study, the purpose of using Hotelling's T-square to

find whether there is any difference between Japan and Germany in the main study, as given in Table 4.5.

Discriminant analysis

The aim of discriminant analysis is to predict group membership from study of two or more independent values (Hair *et al.*, 2006). Discriminant analysis investigates insights into individual variables and determines the combination of those variables which represents dimensions of discrimination between groups. In terms of sample size, discriminant analysis is affected by the size of the analysis (Hair *et al.*, 2006). According to Hair *et al.* (2006), the minimum overall sample size is five observations per independent variable. Discriminant analysis is used in the main study as given in Table 4.5 to classify differences between Japan and Germany. This research for discriminant analysis uses nine independent variables; hence, the minimum required sample size for discriminant analysis should be over 45. Since the overall sample size for this research is 98, the minimum requirement for overall size was fulfilled.

The data analysis methods used in both pilot and main studies have now been expounded. In the next section, the data analysis procedures are described.

4.7 Data Analysis Procedures

This section describes data analysis procedures in the pilot study and main study respectively. As described, the pilot study focuses on detecting the significant influential values of team input, team process and team output from McGrath's IPO model.

Table 4.8 Summary of Data Analysis Procedure in the Pilot and Main Studies

Level of Analysis	Pilot study	Main study
Organisation	Testing hypotheses	Organisational processes Roles of functional MNTs
		Comparison between Japanese and German offices 1) Customer demands and behaviours 2) Testing hypotheses
Team	In-depth analysis of MNTs	Comparison between functional MTNs in Japanese and German offices
Integrated analysis of organisation and team level	MNT effectiveness	Functional MNT leadership

Pilot study

The pilot study analyses MNTs' movement toward team effectiveness for the modified IPO model given in Chapter 5. The data analysis started by testing hypotheses and making an in-depth analysis of MNCs in Organisation B, as shown in Table 4.8. Firstly,

hypotheses developed in Chapter 5 for the pilot study are tested by using regression analysis as shown in Table 4.5. Testing of hypotheses is performed by aggregating questionnaires from each respondent at organisational level. Secondly, MNTs in Organisation B were compared in order to explore similarities and differences between them. Finally, data analyses of testing hypotheses and in-depth analysis were combined to reveal the reality of MNTs. The analysis of the pilot study is given in Chapter 5. From the results of the pilot study, the conceptual variables for the main study were selected. I now move on to describe the data analysis procedure in the main study.

Main Study

The main study analyses functional MNTs at different levels of organisational units. Table 4.8 shows the data analysis procedure for the main study. Firstly, the organisational processes to utilise different types of teams and the roles of functional MNT leaders in Organisation Y are explored from a dynamic capability perspective. Secondly, a comparison between the offices in Japan and Germany is made with regard to customer demands and behaviours and the testing of hypotheses developed in Chapter 3. Thirdly, the main study investigates functional MNTs in depth by comparing functional MNTs in the Japanese and German offices. Finally, integrated analysis based

on these analyses is performed, to enable discussion of functional MNT leadership skills from a dynamic capability perspective.

4.8 Summary

In this chapter, the methodology of the research has been described, always keeping in mind the philosophical point of view. This research uses a mixed design method employing both a qualitative and a quantitative methodology. A survey research method was applied to collect data, using semi-structured interviews and self-administered questionnaires for both pilot and main studies. Also, data analysis methods, including those for qualitative and quantitative data, have been described in this chapter. Furthermore, data collection procedure, sample size, coding items and data analysis procedures for both studies have been illustrated in detail. Before I proceed to the analysis which makes up the main research, the next chapter will deal with the results of the pilot study, which was conducted to lay the groundwork of a conceptual framework for the main study.

Table 4.9 Measures used to Test Hypotheses for the Main Study

Construct	Variables	Measurements	Item sources
Personal values	Individualism	The extent to which respondents agree that they ➢ Enjoy uniqueness ➢ Are independent ➢ Have own uniqueness ➢ Enjoy competition at work ➢ Accept the nature of competition ➢ Believe in competition for good society (1='Strongly disagree' to 7='Strongly agree')	Sinelis *et al.* (1995) Sivadas *et al.* (2008)
	Collectivism	The extent to which respondents agree that they ➢ Feel the happiness of others ➢ Desire the well-being of co-workers ➢ Are proud of receiving a co-worker's prize ➢ Feel positive about cooperation ➢ Value their family ➢ Are happy to sacrifice their own interest for group ➢ Feeling honoured if family receives a distinguished-service award ➢ Are ready to sacrifice own activities for family (1='Strongly disagree' to 7 = 'Strongly agree')	Sinelis *et al.* (1995) Sivadas *et al.* (2008)

Table 4.9 Measures used to Test Hypotheses for the Main Study (Continued)

Construct	Measurements	Item sources
MTN leadership skills	The extent to which respondents agree that the leader ➢ Provides clear instructions ➢ Sets direction ➢ Delegates responsibility ➢ Provides clear guidance ➢ Provides clear goals ➢ Enables communication ➢ Avoids miscommunication ➢ Opens up communication ➢ Verifies information ➢ Listens ➢ Resolves differences ➢ Creates ownership ➢ Provides a strong vision ➢ Provides a sense of belongingness ➢ Keeps up the team's motivation ➢ Acknowledges cultural differences ➢ Is aware of different working styles ➢ Appreciates diversity ➢ Sets an example for diversity ➢ Responds to political changes ➢ Connects to markets and customers ➢ Communicates with upper management (1='Strongly disagree' to 7 = 'Strongly agree')	Joshi and Lazarova (2005)

Table 4.9 Measures used to Test Hypotheses for the Main Study (Continued)

Construct	Variables	Measurements	Item sources
Team effectiveness	Productivity	The extent to which respondents agree that the team ➤ Meets team goals ➤ Completes team tasks on time ➤ Shows quick response to problems (1='Strongly disagree' to 7 = 'Strongly agree')	Kirkman and Shapiro (2005)
	Customer services	The extent to which respondents agree that the team ➤ Offers a high-quality service ➤ Works out problems on time ➤ Provides a satisfactory service (1='Strongly disagree' to 7 = 'Strongly agree')	Kirkman and Shapiro (2005)
	Innovation	The extent to which respondents agree that the team ➤ Acquires new knowledge ➤ Seeks new information ➤ Learns skills for problems ➤ Seeks solutions to problems ➤ Seeks required knowledge (1='Strongly disagree' to 7 = 'Strongly agree')	Chen *et al.* (2006)

Table 4.9 Measures used to Test Hypotheses for the Main Study (Continued)

Construct	Variables	Measurements	Item sources
Team effectiveness	Collective behaviours	The extent to which respondents agree that they ➢ Hope for mutual success ➢ Share team goals ➢ Have common goals for teamwork ➢ Feel proud of their team ➢ Are happy to be in their own particular team ➢ Have commitment to their team ➢ Make extra effort for their team (1='Strongly disagree' to 7 = 'Strongly agree')	Chen *et al.* (2006) Van der Vegt and Emans (2000)
	Learning orientation	The extent to which respondents agree that they ➢ Are ready to develop new skills ➢ Want to tackle difficult tasks ➢ Take risks on new ideas ➢ Work on tasks using skills ➢ Value learning and skills (1='Strongly disagree' to 7 = 'Strongly agree')	Bunderson and Sutcliffe (2003)

Table 4.10 Rotated Factor Patterns of Individualism

	Factor 1	Factor 2
Being independent	.848	
Accepting individuality	.825	
Enjoying uniqueness	.680	
Accepting competition		.854
Viewing competition as positive for good society		.822
Enjoying competition at work		.677
Extraction Sums of Squared Loadings		
Eigenvalues	2.494	1.470
% of Variance	41.564	24.505
% of Cumulative	41.564	66.069
Rotation Sums of Squared Loadings		
Eigenvalues	1.984	1.981
% of Variance	33.059	33.010
% of Cumulative	33.059	66.069

Kaiser-Meyer-Olkin Measure of Sampling Adequacy. 0.695

Bartlett's Test of Sphericity 137.141 (df=15, Sig<0.001)

Table 4.11 Rotated Factor Patterns of Collectivism

	1	2
Appreciate importance of co-workers' well-being	.805	
Feel happiness of others	.706	
Have positive feelings about cooperation	.673	
Are proud of a co-worker's prize	.603	
Value family		.731
Will sacrifice own interests for group		.714
Will sacrifice own activities for family		.705
Feel honoured if family receives a distinguished-service award		
Extraction Sums of Squared Loadings		
Eigenvalues	2.537	1.408
% of Variance	31.708	31.708
% of Cumulative	31.708	49.314
Rotation Sums of Squared Loadings		
Eigenvalues	2.060	1.885
% of Variance	25.753	23.561
% of Cumulative	25.753	49.314

Kaiser-Meyer-Olkin Measure of Sampling Adequacy. 0.709

Bartlett's Test of Sphericity 114.042 (df=28, Sig<0.001)

Table 4.12 Rotated Factor Patterns of Functional Multinational Team Leadership Skills

	1	2	3
Opening communication	.763		
Enabling communication	.732		
Resolving differences	.665		
Verifying information	.651		
Avoiding miscommunication	.650		
Providing clear guidance	.636		
Listening	.632		
Providing a sense of belongingness	.602		
Keeping members' motivation	.601		
Providing clear instructions			
Creating the team's ownership		.778	
Providing a strong vision		.741	
Providing clear goals		.638	
Connecting to markets and customers		.615	
Setting direction			
Communicating with upper management			
Acknowledging cultural differences			.781
Setting an example for diversity			.701
Knowing different working styles			.694
Responding to political changes			
Appreciating diversity			
Delegating responsibility			
Extraction Sums of Squared Loadings			
Eigenvalues	10.897	1.684	1.306
% of Variance	49.531	7.655	5.937
% of Cumulative	49.531	57.187	63.124
Rotation Sums of Squared Loadings			
Eigenvalues	5.694	4.711	3.482
% of Variance	25.883	21.412	15.828
% of Cumulative	25.883	47.295	63.124

Kaiser-Meyer-Olkin Measure of Sampling Adequacy. 0.894

Bartlett's Test of Sphericity Approx. Chi-Square 1431.148 (df=231, Sig<0.001)

Table 4.13 Factor Analysis of Productivity

	Component 1
Completing team tasks on time	.896
Meeting team goals	.854
Responding quickly to problems	.749

Kaiser-Meyer-Olkin Measure of Sampling Adequacy. 0.6448

Bartlett's Test of Sphericity 88.814 (df=3, Sig<0.001)

Table 4.14 Factor Analysis of Customer Service

	Component 1
High-quality service	.915
Works out problems on time	.836
Provides satisfactory service	.812

Kaiser-Meyer-Olkin Measure of Sampling Adequacy. 0.6517

Bartlett's Test of Sphericity 107.266 (df=3, Sig<0.001)

Table 4.15 Factor Analysis of Innovation

	Component 1
Learning skills for problems	.883
Seeking solutions to problems	.846
Seeking new information	.818
Seeking required knowledge	.795
Acquiring new knowledge	.794

Kaiser-Meyer-Olkin Measure of Sampling Adequacy. 0.797

Bartlett's Test of Sphericity 262.997 (df=10, Sig<0.001)

Table 4.16 Rotated Factor Patterns of Collective Behaviours

	1	2
Feeling happy to be in own particular team	.891	
Feeling proud of the team	.853	
Having commitment to the team	.797	
Making extra effort for the team		
Having hope for mutual success		.852
Having common goals for teamwork		.800
Sharing team goals		.731
Extraction Sums of Squared Loadings		
Eigenvalues	3.916	1.148
% of Variance	55.944	16.403
% of Cumulative	55.944	72.346
Rotation Sums of Squared Loadings		
Eigenvalues	2.675	2.389
% of Variance	38.211	38.211
% of Cumulative	38.211	72.346

Kaiser-Meyer-Olkin Measure of Sampling Adequacy. 0.826

Bartlett's Test of Sphericity 318.110 (df=21, Sig <0.001)

Table 4.17 Rotated Factor Patterns of Learning Orientation

	Component 1
Wanting to tackle difficult tasks	.877
Working on tasks using skills	.822
Taking risks on new ideas	.814
Valuing learning and skills	.718
Developing new skills	.647
Extraction Sums of Squared Loadings	
Eigenvalues	3.043
% of Variance	60.866
% of Cumulative	60.866

Kaiser-Meyer-Olkin Measure of Sampling Adequacy. 0.766

Bartlett's Test of Sphericity 196.05 (df=10, Sig<0.001)

Table 4.18 Summary of Cronbach's Alpha for the Main Study

Cronbach's alpha	Japan	Germany	Total
Collectivism	0.633	0.699	0.668
Individualism	0.783	0.647	0.714
MNT leadership skills	0.946	0.882	0.938
Productivity	0.862	0.607	0.780
Customer service	0.768	0.883	0.815
Innovation	0.909	0.862	0.885
Collective behaviours	0.833	0.850	0.843
Learning orientation	0.847	0.830	0.836

CHAPTER 5

PILOT STUDY

5.1 Introduction

There are three aims to conducting this pilot study. The first is to identify and deduct influential variables in McGrath's IPO model by testing hypotheses and conducting interviews. The second is to give the researcher experience of carrying out semi-structured interviews with members of multinational teams, in Japanese and English. The final aim was to deepen the researcher's understanding of methodology and data analysis methods using quantitative and qualitative data. Section 5.2 constructs the framework of the pilot study with reference to the literature on teamwork. In the first part of this section hypotheses are developed to deduct variables from McGrath IPO model for the main study. Section 5.3 tests the hypotheses developed in Section 5.2 based on aggregated individual questionnaires in a research institute (Organisation B) which is part of a multinational food ingredients company (Company A). Section 5.4 explores similarities and differences between MNTs with regard to the members' perceptions of 1) diversity, 2) members' behaviours, 3) expected leadership skills and 4) team effectiveness, by analysing data from semi-structured interviews, using content

analysis to select representative texts. Section 5.5 integrates the findings from Section

5.3 and Section 5.4 by means of triangulation. Representative examples are extracted

from interview transcripts to reveal the reality of MNTs. Finally, Section 5.6 discusses

the limitations of the pilot study and its implications for the main study.

5.2 Research Questions and Framework for the Pilot Study

As stated in the introduction to this chapter, the aims of the pilot study were to deduct

influential variables towards MNT effectiveness and to triangulate the results obtained

from questionnaires and interviews, based on McGrath's IPO model (1964). In order to

achieve these aims, the research questions for the pilot study are as follows:

1) What are the significant influential variables in McGrath's IPO model?

2) How do members and leaders of MNT perceive 1) diversity, 2) members'

behaviours, 3) team atmosphere, 4) skills of team leaders and 5) team

effectiveness for team input, process and output?

The next subsection gives the proposed McGrath IPO model for the pilot study, involving conceptualisation and hypotheses.

5.2.1 Framework of the Proposed IPO Model

Based on McGrath's IPO model, described in Section 2.3.1, the proposed IPO model for the pilot study has been developed as given in Figure 5.1:

Team input   **Team process**   **Team output**

Team structure
Diversity

Leadership
Team cognition
Trust
Commitment
Communication
Conflict
Learning

Team effectiveness
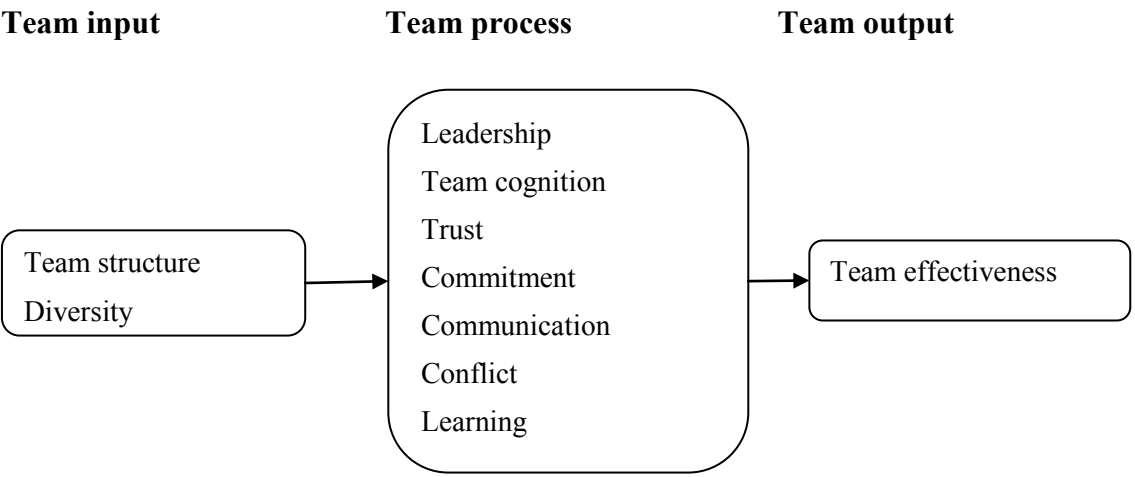
Figure 5.1 Proposed IPO Model for the Pilot Study

Here, 10 variables are chosen to test McGrath's IPO model by reference to the existing literature. Team structure and diversity were chosen as team input variables; leadership, team cognition, members' behaviour (trust, communication, commitment and conflict)

and learning were selected as team process variables; and team effectiveness was

selected as a team output variable. The next section, 5.2.1.1, conceptualises variables in

the proposed IPO model.

5.2.1.1 Conceptualisation

Table 5.1, below, gives a conceptualisation of variables in the proposed IPO model for

the pilot study.

Table 5.1 Conceptualisation of Variables for the Pilot Study

Variables	Conceptualisation
Team structure	Formal arrangement of organising interrelationships among team members in a multinational team
Diversity	Differences of nationality among team members in a multinational team in terms of culture and work ethic
Leadership	Influential power of an MNT leader to manage and coordinate his or her team
Team cognition	Consciousness of the possibility of integrating and collaborating with members in an MNT
Trust	Believing in and relying on other members, including their behaviours and abilities, in an MNT
Commitment	Feeling of making the best effort in teamwork to achieve set targets and goals in an MNT
Communication	Sharing information and ideas among team members
Conflict	Situation in which a disagreement between team members brings negative effects to an MNT
Learning	Acquiring knowledge and skills through experience and sharing knowledge in a multinational team
Team effectiveness	Achievement of an MNT's goals and targets

Each concept was defined in this study by reference to existing studies when the researcher developed the questionnaire items for the pilot study. As was discussed in Chapter 4, in order to evaluate the above variables a seven-point Likert scale was used (from 'strongly disagree' (=1) to 'strongly agree' (=7)) in a self-administered questionnaire which aimed to find out how each concept was perceived by members in MNTs. Table 5.11 gives the literature referred to and Cronbach's alpha and issues of measurements of constructs with regard to validity.

5.2.1.2 Hypotheses

There are four groups of hypotheses used to test McGrath's IPO model in this pilot study. The first was used to test the relationship between team inputs (team structure and diversity) and team processes (trust, communication, commitment and conflict). The second group was used to test team input (diversity) and team process (learning). The third group of hypotheses was to test the relationship between team processes (trust, communication, commitment, conflict, leadership and team cognition) and team output (team effectiveness). Finally, the fourth group of hypotheses was used to test for a mediation effect of MNT leadership on the relationship between team inputs (team

structure and diversity) and team effectiveness. These hypotheses, and the relationship

between variables, are given next.

First group of hypotheses: Team inputs and members' behaviours

The Hypothesis 1 group was developed by focusing on the relationship between team

input and team process extracted from the proposed IPO model given. Scholars (e.g.

Cathcart *et al.*, 1996; Adler, 1997; Bachmann, 2006) argue that organisations need to be

aware of cultural misinterpretation, miscommunication, misperception and

misevaluation arising as a result of the diversity of cultural values in MNTs. Because

members of different cultures are likely to have different perspectives, interpretations

and approaches to work, Bachmann (2006) suggests having a high degree of consensus

on solutions in an MNT. Additionally, in order to control unfavourable members'

behaviours in MNTs, team norms and structure are likely to be useful to coordinate

group activities and processes such as patterns of communication, decision-making and

problem-solving (Buchanan *et al.*, 2004). Based on the existing studies, the following

hypotheses are developed with regard to the relationship between input variables (team

structure and diversity) and members' behaviours (trust, communication, commitment

and conflict):

Hypothesis 1a: Team structure is likely to affect trust.

Hypothesis 1b: Team structure is likely to affect communication.

Hypothesis 1c: Team structure is likely to affect commitment.

Hypothesis 1d: Team structure is likely to affect conflict.

Hypothesis 1e: Diversity is likely to affect trust.

Hypothesis 1f: Diversity is likely to affect communication.

Hypothesis 1g: Diversity is likely to affect commitment.

Hypothesis 1h: Diversity is likely to affect conflict.

<u>**Second group of hypotheses: Team Inputs and Team Processes**</u>

From the perspective of cultural diversity in a cross-national group, learning from diversity is important for the effectiveness of this kind of culturally diverse group (Foldy, 2004). Foldy (2004) argues that diversity will be a source of growth and learning: therefore, culturally diverse groups possess a resource for learning and growth and the potential to perform effectively. In order to acknowledge diversity, Foldy (2004) suggests the need to develop a diversity perspective: 'the rationale that guides people's efforts to create and respond to cultural diversity in a work group; normative beliefs about the value of cultural identity at work; expectations about the kind of impact, if

155

any, cultural differences can and should have on the group and its work; and beliefs about what constitutes progress toward the ideal multicultural work group' (Ely and Thomas, 2001:234, cited in Foldy, 2004). Based on the above considerations of the link between diversity and learning, Hypothesis 2 has been developed:

Hypothesis 2: Diversity is likely to affect learning in MNTs.

<u>Third group of hypotheses: Team processes and team effectiveness</u>

As shown in Figure 5.1, leadership, team cognition, members' behaviours (trust, communication, commitment and conflict) and learning have been selected as process variables. As an output variable of teamwork, this pilot study focuses on exploring team effectiveness. As described in Chapter 2, there are various ways to measure this. In the pilot study, team effectiveness was conceptualised as the extent to which a team has achieved its goals and targets, based on Adair (1986), as already stated in Section 5.2.1.1. Next, each process variable is explained to show how it affects the effectiveness of MNTs, based on the literature.

Leadership

As already described in Chapter 2, leadership is likely to affect team effectiveness as team process. Effective leadership is likely to bring about team effectiveness by transforming the positive features of members in MNTs (Borrill and West, 2005). The team leaders should recognise environmental, membership and dynamic factors in the team and encourage the members to understand its goals and form a consensus for working together (Adair, 1986; Schein, 1998). Hence, effective leadership is likely to lead to effective teams.

Hypothesis 3a: Leadership is likely to affect team effectiveness

Team cognition

People develop their cognition, beliefs and knowledge through shared experiences in their groups (Tindale *et al*., 2003). The shared cognition has strong links with social identity and culture. For example, studies show that shared mental models may increase cooperation among members and avoid misunderstanding other members (e.g., Katz *et al*., 2004,Ng, 2004, Rajiamapianina and Carmichael, 2005, cited in Bachmann, 2006). That team cognition is then likely to increase the level of support between members

157

(Bachmann, 2006). This indicates that MNTs are likely to increase in effectiveness when members cognise themselves as team members.

Hypothesis 3b: Team cognition is likely to affect team effectiveness

Trust

Trust is vital for any human relationships, such as those of business and society throughout the world (Child, 2001). In a multinational team, trust is a fundamental condition to make the group successful and create knowledge among the group members since it creates a willingness to overcome cultural differences (Child, 2001). It also encourages the members to work together and deal with unexpected situations. In adjusting to new circumstances, trust among members discourages conflict (*ibid.*). Moreover, trust stimulates openness to exchange ideas and information among the group members (*ibid.*). Therefore trust is vital for effective teams.

Hypothesis 3c: Trust is likely to affect team effectiveness.

Communication

Communication is a complex business, and is important if organisations are to improve their performance and effectiveness in relation to morale, absenteeism and turnover, labour unrest and conflict, productivity and resistance to change (Buchanan and Huczynski, 2004). Adler (1997:70) states that 'the greater the difference between the sender's and receiver's cultures, the greater the chance for cross-cultural miscommunication'. In other words, cross-cultural miscommunication occurs when people from a different culture do not understand the sender's intention. Hence, for effective communication it is critical to understand cross-cultural issues, especially as effective communication is likely to affect team outcomes, including the effectiveness of the team as a whole.

Hypothesis 3d: Communication is likely to affect team effectiveness.

Commitment

Commitment is defined as 'a force that binds an individual to a target (social or non-social) and to a course of action of relevance to that target' (Meyer *et al*., 2006:666). Other researchers, Mowday, Steer and Porter (1979, cited in Reichers, 1986:508) define

commitment 'as (a) a belief in and acceptance of organisational goals and values; (b) a

willingness to exert effort towards organisational goal accomplishment; and (c) a strong

desire to maintain organisational membership'. Therefore, commitment is considered an

important factor in increasing organisational effectiveness (Porter *et al*, 1976). In terms

of cross-cultural management, each culture might have different values for commitment

since each has different basics of life and values (Dubinskas, 1992). Hence, in a

multinational team, for team effectiveness it is important to have team commitment.

Hypothesis 3e: Commitment is likely to affect team effectiveness

Conflict

Dubinskas (1992) investigates the relationship between culture and conflict with regard

to conflict and cross-cultural management. Since each culture has different basics of life

and values, people from different cultures may face conflict (*ibid.*). Also, conflict has

often been recognised as the result of the interaction of various cultural patterns which

differ from one another (*ibid.*). Generally, conflict is regarded as a negative

phenomenon; however, some scholars take the view that it can have positive effects. For

example, it may maintain the optimal level of activity in an organisation, expand

adaptive and innovative capabilities and give feedback on critical relationships and management issues (Miles, 1980, cited in Gallanan *et al.*, 2006). In addition, conflict improves the quality of decision-making if it is managed properly (Amason, 1996, cited in Gallanan *et al.*, 2006).

Hypothesis 3f: Conflict is likely to affect team effectiveness

Learning

Duncan and Weiss (1979) and Stata (1989) conclude that team learning affects performance and effectiveness. Also, Foldy's research (2004) shows that the positive relationship between learning and effectiveness in MNTs should be investigated. It has been said that organisational learning can improve organisational effectiveness, depending upon the way the learning process and new behaviours are developed (Huber, 1991, cited in Millian *et al.*, 2002). Hence, even at the team level, that assumes that team learning would increase the effectiveness of MNTs.

Hypothesis 3g: Learning is likely to affect team effectiveness

<u>Fourth group of hypotheses: Mediation effect of leadership</u>

As Ilgen *et al.* (2005) argue, team process would have mediational effects on the relationship between input variables and output variables. As shown in Figure 5.1, leadership is a process and team structure and diversity are variables of input for MNTs. Bachmann (2006) argues that a team leader in a multinational team needs to coordinate and stimulate the links between structure and culture. The coordination of structurally tight coupling can generate a mental model of the group's tasks for its members, and may bring the positive results of consensus, cohesion, stability and effectiveness (Bachmann, 2006). Structural coupling can be obtained by clearly defining group objectives and goals, assigning tasks to individuals, aiming to achieve group objectives and goals, giving authority and responsibilities to team members, and determining rules for interaction in tasks by the leaders. On the other hand, culturally loose coupling can be obtained by mutual respect and acceptance of differences (Bachmann, 2006). In other words, Bachmann's study (2006) implies that team leaders mediate the relationship between team input (diversity or/and team structure) and team effectiveness, as given in the following hypothesis.

Hypothesis 4a: Leadership in MNTs is likely to have a mediating role in the relationship between team structure and team effectiveness.

Hypothesis 4b: Leadership in MNTs is likely to have a mediating role in the relationship between diversity and team effectiveness.

The above hypotheses are tested at organisational level by aggregated data from individual respondents. The next section gives details of an analysis to test hypotheses based on the proposed IPO model.

5.3 Analysis of the proposed IPO model

Quantitative data from self-administered questionnaires are used in order to test the hypotheses given in Section 5.2. The data from the questionnaire answered by individuals are aggregated at the research institute level in order to be analysed. Next, the demographic data in the pilot study are described.

5.3.1 Demographic Data

Demographic data were collected from questionnaires (n=32) as given in the discussion

of sample size in Section 4.6.2. Table 5.2, below, summarises the demographic data in

the pilot study.

Table 5.2 Descriptive Statistics in the Pilot Study

	Categories	Per cent (%)
Gender	Male	75.0
	Female	25.0
Age	25-29	18.8
	30-34	9.4
	35-39	12.5
	40-44	28.1
	45-49	15.6
	50-54	12.5
	60-64	3.1
Nationality	Non-Japanese	18.8
	Japanese	81.3

(N=32)

As shown in the above table, 75% of members are male and 25% are female. The most

strongly represented age category is from 40 to 44. Among respondents, non-Japanese

members made up 18.8%.

5.3.2 Correlation

Table 5.3, below, shows the mean values and standard deviation (SD) of conceptual variables and the correlation matrix between variables. By comparing the mean values of concepts, the lowest evaluation is for effectiveness whereas the highest is for trust among team members. Also, there is no correlation between trust and team effectiveness.

Table 5.3 Correlations among Variables for the Pilot Study

	Mean	SD	1	2	3	4	5	6	7	8	9	10
1.Team structure	5.1328	0.74321	1									
2.Diversity	4.7188	1.10752	0.155	1								
3.Leadership	5.0357	0.88063	.538(**)	.437(*)	1							
4.Team cognition	5.5313	0.93488	.522(**)	0.149	.483(**)	1						
5.Trust	5.8021	0.75186	.655(**)	0.293	.565(**)	.483(**)	1					
6.Commitment	5.2135	0.71871	.544(**)	0.308	.530(**)	.638(**)	.734(**)	1				
7.Communication	5.1875	1.02980	0.300	.362(*)	.590(**)	.575(**)	.517(**)	.387(*)	1			
8.Conflict	4.6667	1.15470	.489(**)	0.129	.630(**)	.652(**)	0.330	.432(*)	.512(**)	1		
9.Learning	5.0833	0.87170	0.152	0.337	.472(**)	.590(**)	.425(*)	.526(**)	.653(**)	0.328	1	
10. Team effectiveness	4.4844	1.32278	.482(**)	0.202	.499(**)	.447(*)	0.218	.484(**)	0.097	.468(**)	0.295	1

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

(n= 32)

Table 5.3 shows there are positive correlations between team effectiveness and team structure, leadership, conflict and commitment, and that these correlations are significant at the 0.01 level, two-tailed. The relationship between leadership and team effectiveness shows the strongest positive correlation (r = .499). In addition, there are positive correlations between leadership and all other concepts at the significant level. Therefore, partial correlation is performed with leadership controlled for other variables of the proposed IPO model in order to see whether there is a mediation effect of leadership. The result is shown in Table 5.4.

Table 5.4 Partial Correlation Matrix with Functional Multinational Team Leadership Skills controlled for other Variables of the Proposed IPO Model

	1	2	3	4	5	6	7	8	9
1.Team structure	1								
2.Diversity	-.107	1							
3.Learning	-.137	.164	1						
4.Conflict	.229	-.210	.044	1					
5.Communication	-.026	.143	.526**	.224	1				
6.Commitment	.362*	.099	.368*	.149	.109	1			
7.Trust	.504**	.061	.218	-.041	.275	.621	1		
8.Team cognition	.355*	-.079	.470**	.512**	.410**	.514**	.291	1	
9.MNT effectiveness	.292	-.020	.078	.229	-.282	.299	-.089	.272	1

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

(n= 32)

As the above table indicates, after leadership has been controlled for other variables of the proposed IPO model, the relationship between team effectiveness and any other variables did not show any significance. That implies that leadership has affected these relationships. For example, as seen in Table 5.3, the bivariate correlation between team structure and team effectiveness was r (df=30) = .482, p<0.01. After leadership in MNTs was controlled for other variables of the proposed IPO model as shown in Table 5.4, the correlation dropped to r (df=29) =.292, without significant level. That implies that that team leadership is likely to mediate the relationship between team structure and effectiveness in MNTs. In order to reveal the relationships shown in correlations/partial correlations and hypotheses given in the previous section, further analyses using single/multiple regressions will be conducted as below.

5.3.3 Testing Hypotheses

In order to test developed hypotheses, regression analyses were performed. Since the sets of hypotheses for the pilot study were non-directional hypotheses, the two-tail test was applied. Before testing hypotheses, the issues of multicollinearity should be considered for multiple regression analysis. From the correlation matrix in Table 5.3,

there are no correlations which exceed .80. However, this does not guarantee that there is no collinearity since it may occur by the combinations of two or more variables. Table 5.5, below, shows the values of lowest tolerance and highest VIF in the multiple regressions.

Table 5.5 Summary of Multicollinearity Statistics for the Pilot Study

	Table	Lowest Tolerance	Highest VIF
Multiple Regression Analyses of Members' Behaviours	Table 5.6	.976	1.024
Multiple Regression Analysis of Multinational Team Effectiveness	Table 5.8	.295	3.390
Hierarchical Regression Models for the Predictor of Leadership in the Multinational Team			
The Restricted Model	Table 5.9	.976	1.024
The Full Model	Table 5.9	.582	1.719

As shown in Table 5.5, all tolerance values were greater than .10 and all VIF values were less than 10; therefore there is no multicollinearity. With regard to performing regression models, it was confirmed that in no case was it shown that standardised residuals exceeded 3, the values of Cook's distance exceeded 1 and the values of Mahalanobis exceeded 15 in output from SPSS. The histogram of all showed a bell-shaped curve and the plots of normal probability were along a straight line. All the above requirements have been met for regression models in the pilot study.

First Group of Hypotheses (H1a – H1f)

In order to reveal the first group of hypotheses, which is related to team inputs and team processes, four multiple regression analyses were performed by setting trust, commitment, communication and conflict as dependent variables and setting team structure and diversity as independent variables in each regression model. The result is given in Table 5.6.

Table 5.6 Multiple Regression Analyses for the First Group of Hypotheses

	Trust	Communication	Commitment	Conflict
Team structure	.624***	.250	.509***	.480***
Diversity	.196	.323*	.229	.055
R square	.466	.192	.347	.242
Adjusted R square	.429	.136	.302	.189
F	12.661***	3.448**	7.710***	4.622**

*p<.10,**p<.05, ***p<.01

(n=32)

From the above table, it was confirmed that team structure has affected trust, commitment and conflict at significant level (p<.01), whereas diversity has affected communication at significant level (p<.10). Based on the result of regression analyses, Hypothesis 1a: **Team structure is likely to affect trust**, Hypothesis 1c: **Team structure is likely to affect commitment**, Hypothesis 1d: **Team structure is likely to**

affect conflict and Hypothesis 1f: **Diversity is likely to affect communication** are

supported.

Second Hypothesis (H2)

A single regression of learning on the independent variable, diversity, was performed

as shown in Table 5.7.

Table 5.7 Regression Analysis of Learning Orientation

	Learning
Diversity	.337*
R square	.114
Adjusted R square	.084
F	3.842*

*p<.1,**p<.05, ***p<.01
(N=32)

The result of the regression analysis, was significant: $F(1,30) = 3.842$; $p<.10$, and

accounted for 11.4 % of the variance of diversity (R square = .114). The beta

indicates .337 at the significant level of $p<.10$. Hence it was confirmed that Hypothesis

2, **Diversity is likely to affect learning**, was supported.

Third Group of Hypotheses (H3a-H3g)

With regard to the third group of hypotheses in the framework of the pilot study, seven single regression analyses of team effectiveness were performed by setting independent variables: leadership, team cognition, trust, commitment, communication, conflict and learning. The result is shown in Table 5.8.

Table 5.8 Multiple Regression Analysis of Team Effectiveness for the Third Group of Hypotheses

	Team effectiveness
Leadership	.483**
Team cognition	.220
Conflict	.169
Communication	-.479*
Commitment	.322
Trust	-.264
Learning	.137
R square	.511
Adjusted R square	.368
F	3.579***

*p<.10,**p<.05, ***p<.01
(n=32)

This table confirms that leadership has affected team effectiveness positively (beta=.483, p<.05). Also, communication has influenced team effectiveness negatively (beta= -.479, p<.1). Therefore, Hypothesis 3a, **Leadership is likely to affect team**

effectiveness, and Hypothesis 3d, **Communication is likely to affect team effectiveness**, are supported.

Fourth Group of Hypotheses (H4a and H4b)

In order to confirm the mediation effect of team leadership, hierarchical regression analysis was performed by setting team effectiveness as an outcome variable, leadership as a predicted mediator and team structure and diversity as predictor variables. The result of hierarchical regression analysis is given in Table 5.9.

Table 5.9 Hierarchical Regression Models for the Predictor of Leadership in Multinational Teams

Variables	Team effectiveness	
	Restricted model	Full model
Team structure	.462***	.302*
Diversity	.131	.011
Leadership		.332*
R square	.249	.313
Adjusted R square	.197	.240
F	4.811**	4.257**
ΔR square from restricted models		.064
Δ F		2.613*

*p<.10,**p<.05, ***p<.01
(n=32)

As shown in Table 5.9, and as the restricted model shows, there is a significant relationship between team structure and team effectiveness (beta= .462, p<.05) and the model is significant (F=4.811, p<.05). In the full model, the relationship between team structure and team effectiveness with controlled leadership, it was dropped (beta=.302, p<.10). That confirmed the second condition of the mediation effect by indicating the relationship between the predictor variable and the presumed mediator. In the full model, the relationship between team effectiveness and leadership showed significant level (beta = .332, p<.10). Also, the model is significant (F= 4.257, p<.05). In terms of changes from the restricted model to the full mode, it was significant as shown in the change of F value ($\triangle$ F = 2.613, p<.10): therefore, it was confirmed that there was a mediator effect of leadership on the relationship between team structure and team effectiveness as given in Hypothesis 4a: **Leadership in MNTs is likely to have a mediating role in the relationship between team structure and team effectiveness**.

The size of the mediation effect was calculated by application of the Sobel approximate formula (Soper, 2004-2009) to the unstandardised coefficient and standard error values for team structure to leadership in MNTs (the column of regression 2) and leadership in MNTs to effectiveness. This yielded a value of Z= 1.633862, p=0.102288 (two-tailed),

so it was confirmed that leadership in MNTs slightly mediates the relationship between team structure and effectiveness.

In sum, it was confirmed that leadership has mostly impacted on team effectiveness (Hypothesis 3a). Leadership has a mediation effect on the relationship between team structure and team effectiveness as one of the team outputs (Hypothesis 4a). As Borrill *et al.* (2005) argued, the leadership is likely to lead to an effective team by coordinating team structure. It was confirmed that team structure has an impact on trust, commitment and conflict (Hypotheses 1a, 1c and 1d) as supported by other studies (Schott, 1996; Buchanan *et al.*, 2004). Also, it is clear that diversity affects communication and learning, from the result of testing Hypothesis 1f and Hypothesis 2, and communication has an impact on team effectiveness negatively, as shown in the literature (e.g. Cathcart *et al.*, 1996; Adler, 1997; Bachmann, 2006).

Furthermore, there is a significant correlation between leadership and other variables as shown in Table 5.3. Therefore it is worth investigating leadership skills in MNTs to learn whether team members feel the influence of their leaders towards team effectiveness. Moreover, although there was no significant relationship between

diversity and leadership, it is worthwhile to explore it, since it was confirmed that the relationships between diversity and communication and between diversity and learning were significant.

Next, in-depth analysis of MNTs is described in terms of diversity in an MNT, leadership and team atmosphere by comparing similarities and differences between these teams. After testing hypotheses using the proposed IPO model, aiming for a triangulation approach, semi-structured interviews were performed. Managers, leaders and members of MNTs in Organisation B were asked about their perception of diversity in their organisation and team, expected leadership skills, their team atmosphere, organisational and team culture, team atmosphere and members' behaviours, in order to triangulate hypothesis testing and to explore whether they noticed any cross-cultural issues and what other factors need to be considered for MNTs.

5.4 In-depth Interview Analysis of Multinational Teams in Organisation B

Interviews were conducted with six multinational teams in Organisation B for this pilot study. Table 5.10 below shows details of each team with regard to team purpose, population and sample for interview in the pilot study.

Table 5.10 Respondents and Teams in the Pilot Study

Team name	Team purpose	Population in team (number of team members)	Number of interviewees
Team 1	Research	8	3
Team 2	Research	8	3
Team 3	Research	5	4
Team 4	Research	10	3
Team 5	Overseas sales	10	5
Team 6	International patents	3	1
Total of members in teams		44	19
Total of interviewees			23 (including 4 members who had worked with non-Japanese members)

Teams 1 to 4 were in charge of research and development of food ingredients in different areas of expertise. Team 5 and Team 6 were taking responsibility for overseas sales and international patents. The similarities and differences between MNTs will now be described by comparing items of diversity, members' behaviours, leadership and team effectiveness.

5.4.1 Similarities across Multinational Teams

Between multinational teams in Organisation B, the similarities across MNTs are diversity of language and personality, team atmosphere along with organisational culture, managing cultural differences for an expected leadership skill and cooperation and sharing knowledge for ideal measurements of team effectiveness. These similarities are detailed below.

Diversity

In terms of language diversity in MNTs, respondents mentioned both advantages and disadvantages. The advantages are that when the MNC and research institute need to obtain information on local markets such as China, Korea and India, non-Japanese members may have better access to overseas markets and can search for information by using their own languages. Especially the non-Japanese members in Team 5 and Team 6 are required to speak, read and write their native language to obtain information about the local market. When Japanese members need to use English and find information written in English, non-Japanese members help them: non-Japanese members in Teams 1 to 4 were expected to use English for searching journals and writing e-mails.

On the other hand, as drawbacks of language diversity, there is potential miscommunication between Japanese and non-Japanese members. Even though the non-Japanese speak Japanese well, sometimes misunderstandings occur because of how they express their opinions. The language barrier was mentioned by all members of Team 5 who listed difficulties such as miscommunication as the result of the customarily indirect way of explaining details in Japanese. The leader of Team 5 stated that when team members use English, their mode of expression might be too direct for Japanese members. That implies a risk of miscommunication between members as described in the model. The other issue arising from the language barrier was the problem of sharing knowledge on the relationship between language diversity and communication. Since the knowledge database of the company is based on Japanese, non-Japanese members who do not write and read Japanese might not be able to contribute to knowledge-sharing in the database. That implies that language diversity may have a negative impact on knowledge-sharing and team learning. Therefore, instead of using the database, most MNTs use face-to-face communication to share knowledge and information.

With regard to another aspect of diversity in an MNT, many respondents, especially in

Team 5, mentioned personal values of team. For example, a team leader in Team 5

said:

> It is important to understand members' personal values rather than nationality.
> Once we understand that, we are able to expand tolerance level to some degree.
> If we know members' values and personality, even where we received an
> unexpected and undesirable answer we would understand the situation. If we
> push our opinions too much, it would cause trouble.

The differences in personal values and personality of MNT members have also

affected their working attitude and communication with other members. That implies

that there is an influence of personal values on behaviours.

Team atmosphere

With regard to team cognition, almost all members view their teams as having a good

atmosphere. Most of the respondents, except Team 5, mentioned that they felt the team

atmosphere had been influenced by the organisational culture in Organisation B.

Intentionally, so as to help employees integrate, Organisation B stages meetings and

social events. The respondents said that all members of Organisation B attend a

weekly morning meeting and also a quarterly meeting, while, as social events, they said there is a family event day for employees' families, to open their eyes to what the company is doing and how the employees work in the organisation. Therefore, most respondents mentioned that 'belongingness' here is seen in terms of tasks rather than teams or groups. That implies that members have developed cognition in Organisation B rather than in teams.

Expectations for MNT leaders

Most respondents expect their leaders to manage cultural differences. Some respondents stated that because of the uniqueness of Japanese culture it would take time for non-Japanese members to understand the Japanese working culture. Hence, so as to educate non-Japanese members to adjust to the Japanese working environment, team leaders were expected to communicate with non-Japanese members frequently as described with reference to the study by Joshi and Lazarova (2006) in Chapter 2 of this thesis.

Ideal measurements for team effectiveness

As common features of team effectiveness, most respondents state that when they experience cooperation and share knowledge between members they feel the team's effectiveness. For example, when junior members do not know how to use equipment for experiments in Team 1, Team 2, Team 3 and Team 4, they often ask senior members of the team for help. In addition, when a member needs to obtain overseas market information in China in Team 5 and Team 6, Chinese members help them to obtain the information using their native language.

5.4.2 Differences between Multinational Teams

Differences between MNTs were found in the diversity of required knowledge for individual tasks and different expectations for MNT leadership skills. These differences are described next.

Diversity

With regard to diversity, the level of expected knowledge and skills for non-Japanese members differs from each functional MNT to another. In general, non-Japanese

members in Team 1, Team 2, Team 3 and Team 4 were expected to have technical expertise whereas those in Team 5 were expected to have language skills in English, Chinese and Korean to search for information about local markets. Therefore, the required aspects of diversity for tasks vary depending on the types of teams.

Expectations of MNT leaders

There are different expectations of leadership. One member in Team 2 stated that team leaders should assign tasks to the members by considering the members' situation, that they should give members advice and follow up members' activity. Moreover, one respondent in Team 3 explained that an ideal team leader is the person who takes action, empowers team members, shares knowledge, gives members autonomy and validates members' action in order to achieve targets as if it were a self-managed team without a leader. In addition, the leader of Team 5 stated that it is important to build a team which learns independently and to give autonomy to members to deal with their responsibilities and own individual leadership. In sum, expected leadership skills are different between respondents and teams.

From the next section, analysed data at different levels of organisational units are integrated to understand the reality of MNTs from different perspectives and to move on to a discussion of the issues.

5.5 Integrated Analysis

From the result of testing hypotheses, it was confirmed that there was a positive relationship between diversity and communication (Hypothesis 1f) and a negative relationship between communication and team effectiveness (Hypothesis 3d). It was also confirmed that there was a positive relationship between team effectiveness and leadership at a significant level (Hypothesis 3a) and the mediation effect of leadership on the relationship between team structure and team effectiveness (Hypothesis 4a). As Table 5.8 has shown, leadership, team cognition, trust, communication, conflict and learning explain 51.1% of team effectiveness. Furthermore, team structure, diversity and leadership can explain 31.1% of team effectiveness, as shown in Table 5.9. From the above findings, clearly leadership has a significant impact on MNT effectiveness.

From the findings of qualitative comparative analysis between MNTs, the most widely

expected leadership skill was managing cultural differences in order to avoid

miscommunication between members of MNTs. Moreover, knowing members'

personality in MNTs is mentioned as a critical role for team leaders. That implies an

influence of leadership toward team effectiveness by managing cultural diversity, as

supported by work by Joshi and Lazarova (2006). That implies that it is important for

MNT leaders to manage relations-oriented diversity, including not only cultures but

also individual personal values. In addition, depending on types of teams, required

aspects of diversity are likely to be different. In the case of research MNTs, technical

competence is more important than language skills, whereas in the case of overseas

sales language skills are more important than technical competence.

Also, from the result of qualitative data analysis, the role of leaders was confirmed as

that of coordinating team processes in order to achieve both team and organisational

targets and goals. This implies that team leaders affect not only team processes but

also organisational processes in order to reflect any environmental changes by

integrating them with the capabilities of the MNT. That implies in turn a connection to

dynamic capabilities. However, in this pilot study, there were limitations to in-depth investigation of the processes of MNTs and organisational changes.

In short, by integrating quantitative and qualitative results, although the mediator effect of leadership on the relationship between diversity and team effectiveness was not confirmed from the results from the quantitative data by testing hypotheses for the proposed IPO model, there would be a difference in the meaning of diversity between what the researcher expected and what the members of MNTs perceived. Next, these limitations of the pilot study will be discussed and modifications for the main study proposed.

5.6 Limitations of the Pilot Study and Modifications for the Main Study

Several issues to do with the validity of measurements revealed the limitations of the pilot study. In the qualitative data analysis, it was found that skills, members' values of individualism–collectivism and personality as aspects of diversity were important, but also that cooperation should be considered as a measurement of the team's effectiveness. Therefore, values of individualism–collectivism should be further

developed and explored. In the pilot study, the conceptualisation of team effectiveness was defined as the degree to which a multinational team has achieved its goals. However, from the results of the interviews, team effectiveness should also include aspects of learning, cooperation and productivity. Finally, the conceptualisation of team structure was defined as the formal organisation of interrelationships among team members in an MNT. However in general, this formal arrangement of team structure is likely to be performed by MNT leaders. Therefore, the concept of leader is likely to entail coordinating team structure with top management. In sum, the variables of diversity, leadership and team effectiveness all needed to be revised for the main study.

Keeping in mind the above questions and the results of the pilot study, for testing the hypotheses the framework was simplified, to focus on personal values of individualism–collectivism and MNT leadership for team processes in functional MNTs which encourage team effectiveness. For the qualitative data analysis, the concept of dynamic capabilities was added in order to explore MNTs in depth. Also, the questionnaire and interview guidelines for the main study were revised with the researcher's supervisors, as described in Chapter 3.

5.7 Summary

As stated in the introduction to this chapter, there were four aims in conducting this pilot study. The first was to select the main concepts of independent variables of MNT effectiveness based on McGrath's IPO mode (1964), and here, two concepts – personal values of individualism–collectivism as team inputs and MNT leadership skills as team processes – were chosen for the main study. The second aim was to give the researcher experience of doing semi-structured interviews with members from multinational teams in both the Japanese and English languages. The final aim of the pilot study was to understand the methodology and practise both quantitative and qualitative data analysis by applying a mix methods research. These aims were achieved by analysing data using statistics from 31 questionnaires and content analysis from 27 interviews in both Japanese and English. Therefore, all the aims of carrying out this pilot study were achieved. The framework for the main research to test the proposed IPO model was revised by focusing on three main concepts: diversity, functional MNT leadership skills, and team effectiveness, as has been explained in Chapter 3. These concepts were revised by reflecting on the results of interviews in the pilot study. Furthermore, since the dynamics of organisation and markets should be considered in the investigation of teams, the concept of dynamic capabilities was

added for the main study. A new questionnaire and interview guidelines for the main

study were formulated based on the existing questionnaire which had been used for

empirical studies. The next chapter moves on to discuss the data analysis of the main

study.

Table 5.11 Measures used to Test Hypotheses for the Pilot Study

Concepts	Questionnaire items	Literature	Alpha	Issues
Team Effectiveness	The degree of 1. Goal achievement 2. Satisfaction with achievements (1 [Strongly disagree]---7 [Strongly agree])	Adair (1986)	.96	
Learning	The degree to which there is 3. Knowledge-sharing 4. Accumulation of experience from group 5. Passing of own knowledge to others 6. Cross-cultural learning (1 [Strongly disagree]---7 [Strongly agree])	Duncan and Weiss (1979) Foldy (2004)	.74	Q6 drop (low factor loading)
Leadership	The degree to which the leader can 7. Clarify objectives 8. Assign tasks to members 9. Determine task-related norms 10. Create a group atmosphere 11. Smooth over differences in the group 12. Communicate equally with all members 13. Evaluate group performance (1 [Strongly disagree]---7 [Strongly agree])	Bachmann (2006)	.86	
Conflict	14. Frequency of conflict The degree of 15. Exchanging opinions to dissolve conflict 16. Taking a midway solution to solve conflicts 17. Avoiding problems 18. Following the strongest opinions for solution (1 [Strongly disagree]---7 [Strongly agree])	Blake and Mouton (1964) Rahim(1983) Sorenson *et al.* (1999) Thomas and Kilmann (1974)	.88	Q14, 18 deleted (low internal reliability)

Table 5.11 Measures used to Test Hypotheses for the Pilot Study (Continued)

Concepts	Questionnaire items	Literature	Alpha	Issues
Communication	The degree to which there is 19. Formal sharing of information 20. Holding of informal meetings 21. Avoidance of miscommunication 22. Speaking slowly and clearly (1 [Strongly disagree]---7 [Strongly agree])	Adler(1997)	.65	Q22 drop (Low factor loading)
Commitment	The degree of 23. Self-commitment 24. Members' encouragement 25. Making contribution to group 26. Values of self-commitment 27. Personal values of work 28. Self-enforcement to work 29. Self-contribution to group (1 [Strongly disagree]---7[Strongly agree])	Gilbert (2005)	.79	Q29 drop (Low factor loading)
Trust	The degree of 30. Believing in members 31. Sharing of expertise 32. Openness to talk to members 33. Reliability of members' skills (1 [Strongly disagree]---7 [Strongly agree])	Child and Rodrigues (2001) Hosmer (1995)	.74	Q33 drop (Low factor loading)
Team structure	The degree of 34. Clear definition of individual roles 35. Opportunity to give individual opinions 36. Making decisions by consensus 37. Individual responsibility 38. Individual autonomy (1 [Strongly disagree]---7 [Strongly agree])	Bachmann and Huczynski (2004)	.69	Q 37 Deleted (face validity)

Table 5.11 Measures used to Test Hypotheses for the Pilot Study (Continued)

Concepts	Questionnaire items	Literature	Alpha	Issues
Diversity	The degree of 39. Creating resources by exchanging knowledge from cultural diversity 40. Enhancing of creativity 41. Differences in working ethics 42. Better options for decision-making 43. Occurrences of within-nationality conversations 44. Less accurate communication 45. Stress from cultural differences (1 [Strongly disagree]---7 [Strongly agree])	Adlar (1997, 2002) Bachmann (2006)	.75	Q41,43,44 deleted (face validity) Q45 dropped (low internal reliability)
Team cognition	The degree of 46. Sharing of goals and targets 47. Awareness of group's purpose 48. Comprehension of group objectives 49. Sense of belonging to a group 50. Having a different identity from other members 51. The relationship between organisational culture and group culture 52. Influence of the majority nationality (1 [Strongly disagree]---7 [Strongly agree])	Bachmann (2006) Tindale *et al.* (2003)	.91	Q51,52 deleted (face validity) Q50 deleted (low internal reliability)

Table 5.12 Factor Analysis of Team Structure

	Component 1
Clear definition of individual roles	.807
Opportunity to give individual opinions	.734
Making decisions by consensus	.709
Individual autonomy	.615
Eigenvalues	2.071
% of Variance	51.770
Cumulative %	51.770

Kaiser-Meyer-Olkin Measure of Sampling Adequacy .705

Bartlett's Test of Sphericity 19.052 (df=6, Sig<0.01)

Table 5.13 Factor Analysis of Diversity

	Component 1
Creating resources by exchanging knowledge from cultural diversity	.853
Enhancing creativity	.886
Better options for decision-making	.705
Eigenvalues	2.009
% of Variance	66.964
Cumulative %	66.964

Kaiser-Meyer-Olkin Measure of Sampling Adequacy .627

Bartlett's Test of Sphericity 24.766 (df=3, Sig.<0.001)

Table 5.14 Factor Analysis of Leadership

	Component 1	Component 2
Clarification of objectives	.768	
Task assignment to members	.907	
Determination of task-related norms	.858	
Creating group atmosphere		.848
Smoothing out differences in the group		.804
Equal communication with members		.828
Evaluating group performance	.618	
Eigenvalues	2.654	2.449
% of Variance	37.914	34.983
Cumulative %	37.914	72.898

Kaiser-Meyer-Olkin Measure of Sampling Adequacy .710

Bartlett's Test of Sphericity 110.803 (df=21, Sig<0.001)

Table 5.15 Factor Analysis of Team Cognition

	Component 1
Sharing goals and targets	.903
Awareness of team's purpose	.875
Comprehension of objectives	.952
A sense of belonging to a team	.824
Eigenvalues	3.168
% of Variance	79.190
Cumulative %	79.190

Kaiser-Meyer-Olkin Measure of Sampling Adequacy .812

Bartlett's Test of Sphericity 87.9599 (df=6, Sig<0.001)

Table 5.16 Factor Analysis of Trust

	Component 1
Believing in members	.813
Sharing expertise	.807
Openness to talking to members	.746
Reliability of members' skills	
Eigenvalues	2.207
% of Variance	55.163
Cumulative %	55.163

Kaiser-Meyer-Olkin Measure of Sampling Adequacy .710

Bartlett's Test of Sphericity 25.103 (df=6, Sig<0.001)

Table 5.17 Factor Analysis of Commitment

	Component 1	Component 2
Self-commitment	.924	
Members' encouragement	.741	
Making contribution to group	.828	
Values of self-commitment		.819
Personal values of work		.706
Self-enforcement to work	.870	
Self-contribution to group		
Eigenvalues	3.228	1.562
% of Variance	46.112	22.320
Cumulative %	46.112	68.432

Kaiser-Meyer-Olkin Measure of Sampling Adequacy .673

Bartlett's Test of Sphericity114.245 (df=21, Sig<0.001)

Table 5.18 Factor Analysis of Communication

	Component 1
Sharing information formally	.804
Having informal meetings	.641
Avoiding miscommunication	.811
Speaking slowly and clearly	
Eigenvalues	2.019
% of Variance	50.471
Cumulative %	50.471

Kaiser-Meyer-Olkin Measure of Sampling Adequacy .618

Bartlett's Test of Sphericity 20.639 (df=6, Sig<0.01)

Table 5.19 Factor Analysis of Conflict

	Component 1
Exchanging opinions to dissolve conflict	.906
Taking a mid-solution to dissolve conflict	.886
Avoiding problems	.895
Eigenvalues	2.407
% of Variance	80.218
Cumulative %	80.218

Kaiser-Meyer-Olkin Measure of Sampling Adequacy .741

Bartlett's Test of Sphericity 45.500 (df=3, Sig<0.001)

Table 5.20 Factor Analysis of Learning Orientation

	Component 1
Knowledge sharing	.787
Experience accumulation from group	.776
Passing own knowledge to others	.810
Cross-cultural learning	
Eigenvalues	2.166
% of Variance	54.152

Kaiser-Meyer-Olkin Measure of Sampling Adequacy .706

Bartlett's Test of Sphericity 23.815 (df=6, Sig<0.01)

Table 5.21 Factor Analysis of Team Effectiveness

	Component 1
Goal achievement	.979
Satisfaction with achievements	.979
Eigenvalues	1.917
% of Variance	95.844

Kaiser-Meyer-Olkin Measure of Sampling Adequacy .500

Bartlett's Test of Sphericity 54.183 (df=1, Sig<0.001)

Table 5.22 Summary of Hypotheses in the Pilot Study

Hypothesis 1a	Team structure is likely to affect trust.
Hypothesis 1b	Team structure is likely to affect communication.
Hypothesis 1c	Team structure is likely to affect commitment.
Hypothesis 1d	Team structure is likely to affect conflict.
Hypothesis 1e	Team structure is likely to affect trust.
Hypothesis 1f	Team structure is likely to affect communication.
Hypothesis 1g	Team structure is likely to affect commitment.
Hypothesis 1f	Team structure is likely to affect conflict
Hypothesis 2	Diversity is likely to affect learning in MNTs.
Hypothesis 3a	Leadership is likely to affect MNT effectiveness.
Hypothesis 3b	Team cognition is likely to affect MNT effectiveness
Hypothesis 3c	Trust is likely to affect MNT effectiveness
Hypothesis 3d	Communication is likely to affect MNT effectiveness
Hypothesis 3e	Commitment is likely to affect MNT effectiveness
Hypothesis 3f	Conflict is likely to affect MNT effectiveness
Hypothesis 3g	Learning is likely to affect MNT effectiveness
Hypothesis 4a	Leadership in MNTs is likely to have a moderating role in the relationship between team structure and team effectiveness.
Hypothesis 4b	Leadership in MNTs is likely to have a moderating role in the relationship between diversity and team effectiveness.

CHAPTER 6

ANALYSIS OF ORGANISATION Y

6.1 Introduction

This chapter aims to investigate both the organisational processes to utilise different types of teams in Organisation Y, and the roles of functional MNT leaders in developing dynamic capabilities in the organisation. Before we proceed to an analysis of organisational processes and the roles of functional MNT leaders, it is important to understand the organisational structure and different types of teams in Organisation Y: to analyse these, qualitative data obtained from semi-structured interviews are used in this section. Section 6.2 illustrates a study sample in the main study. Section 6.3 describes organisational structure and types of teams in Organisation Y. Section 6.4 analyses the organisational processes to use different types of teams by analysing capability possession, capability deployment and capability upgrading. Section 6.5 describes the roles of functional MNT leaders in Organisation Y based on interviews with these leaders in Japan and Germany.

In applying content analysis, an inductive approach is used, summarising the interviews, to explore how Organisation Y structures and designs its organisational processes. Representative examples are extracted from the interview transcripts to explore the structure and types of teams, organisational processes and roles of functional MNTs. Each quotation has a code so that it can be conveniently used as data for the discussion. Extracts from the interviews with managers are coded as 'M', those with team leaders as 'TL' and those with team members as 'TM'. There is also a code for each team (T1–T6 for functional MNTs in Japan and TA–TH for functional MNTs in Germany, as shown in Table 6.3). There is also a code for data (organisational structure is coded as OS, functional teams as FT, cross-functional project teams as CFT, capability possession as CP, capability deployment as CD, capability upgrading as CU, roles of functional MNT leaders as RFMNTL) in numerical order. For example, the first extract related to organisational structure from the interview with Manager 1 was given the code (M1, OS1).

6.2 Description of a Study Sample

This chapter aims to reveal organisational processes to use the capabilities of functional teams for cross-functional project teams and to investigate roles of functional MNTs. Table 6.1 shows the breakdown of the interviews used to analyse the main study:

Table 6.1 Sample of Interviews in Japan and Germany in the Main Study

Position of respondents	Number of interviewees in Japan	Number of interviewees in Germany
Human resources personnel	1	1
Managers	5	N/A*
Managers/leaders of functional MNTs	1	2
Leaders of functional MNTs	5	5
Members of functional MNTs	38	43
Total	51	51

*For the study I held meetings with managers in Germany to ask permission for interviews with leaders and members of functional MNTs, as described in Chapter 4.

As the table shows, the analysis of the main study has made use of data from interviews from various sources: human resources personnel, managers, managers/leaders of functional MNTs, and leaders and members of functional MNTs in the Japanese and German offices of Organisation Y. In this chapter, the interviews with human resources personnel and managers in Japan are used to describe the organisational structure of Organisation Y. The interviews with the managers are used to investigate organisational processes and their roles, while the interviews with the

201

leaders of functional MNTs are used to analyse organisational processes and their

roles in Organisation Y, and the interviews with members of functional MNTs are

used to investigate different types of teams and organisational processes. Table 6.2

shows the interviewed managers with their position in Japan to ascertain the

organisational structure and types of teams in Organisation Y.

Table 6.2 Interviewed Managers and their Positions in the Japanese Office

Interviewed manager	Position
Manager 1	Top manager
Manager 2	Two-boss manager
Manager 3	Functional manager
Manager 4	Cross-functional manager
Manager 5	Functional manager

As listed in Table 6.2, in Japan the positions of managers belonging to the technical

expertise group of Organisation Y are various. Their roles are explained later, in

Section 6.3, in a discussion of the organisational structure. Table 6.3 shows the

percentages of respondents, including leaders and members, in each team where

interviews and questionnaires were conducted in Japan and Germany.

Table 6.3 Sample of Teams in Japan and Germany

Japan (Total respondents n = 45)			Germany (Total respondents = 50)		
Team name	Team size (team members)	Interview respondents (percentage)	Team name	Team size (team members)	Interview respondents (percentage)
Team 1	5	100	Team A	9	66.7
Team 2	12	75	Team B	10	70
Team 3	13	100	Team C	6	66.7
Team 4	8	75	Team D	16	87.5
Team 5	9	88.9	Team E	9	77.8
Team 6	5	100	Team F	9	55.6
			Team G	16	25
			Team H	6	66.7

Although the percentage of respondents of Team G shows as small (25%) in Table 6.3, it is included in the team analysis later, in Chapter 8. The reasons were that these respondents were representative of the team as a whole and that the other team members did not have time for interviews because of their task assignments. With regard to the types of functional MNTs, Section 6.3.1.1 describes these in detail.

By using the study samples given in Tables 6.1, 6.2 and 6.3, this chapter investigates details of organisational processes to utilise different types of teams, and the roles of functional MNT leaders from a dynamic capability perspective. For analysing organisational processes, interviews in Japan are mostly used, since data obtained from interviews in Germany were not as rich as those from Japan because of time

constraints on interviews in Germany, as was explained in Chapter 4. Before going on

to analyse organisational processes and roles of functional MNT leaders, the next

section explains the organisational structure and different types of teams in

Organisation Y.

6.3 Organisational Structure and Teams in Organisation Y

Organisation Y has applied a matrix structure since 2005-6, according to the managers

and human resources personnel in the Japan office of the organisation. According to

them, the purpose of Organisation Y is to provide services for global customers in

order to optimise their business processes and support their systems for 24 hours every

day. In Figure 6.1 the structure of Organisation Y is shown, based on an interview

with Manager 1 in Japan:
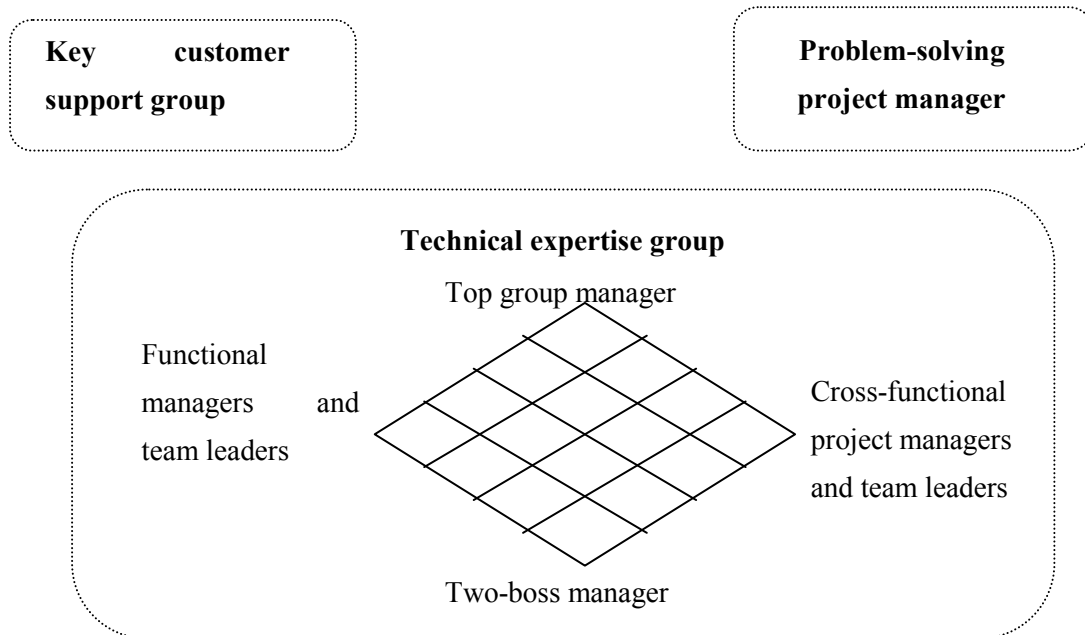
Figure 6.1 Organisational Structure of Organisation Y in All Areas

Manager 1 described the organisational structure as follows:

> In Organisation Y we have the same process in all areas. Wherever you go, you see a structure which has a key customer support group, a problem-solving project manager team and a technical expertise group.

> A key customer support group has the responsibility for taking care of customers who have paid extra maintenance and service fees to our company (Company X). The members of the key customer support group are expected to deal with these customers to sustain and build good relationships.

> A problem-solving project manager team deals with projects to solve critical issues of customers such as production system shut-downs that will affect the running of that customer's business. Whenever we have a critical situation, we select a project manager from the problem-solving project manager team and collect members from a technical expertise group to manage the situation as a cross-functional problem-solving project team.

A technical expertise group is responsible for technical knowledge and knowledge of products developed in Company X. If customers come and complain about problems, members of the technical expertise group have responsibility for solving technical issues. In the whole technical expertise group, members are responsible for understanding our company products 95%. They are supposed to be knowledgeable about our products so they can talk to customers, deal with problems and issues, and work in cross-functional project teams. Each member has different skills and different responsibilities and has to up-to-date knowledge, for example on any new parameters in the database system. (M1, OS1)

As shown in Figure 6.1, there are four types of managers in a technical expertise group: top manager, two-boss manager, functional manager and cross-functional project manager. Interviews in the main study were conducted with a top manager, a two-boss manager and functional managers in Japan, as shown in Table 6.2. The interviews with these managers revealed that they have a close interrelationship with functional team leaders, including functional MNT leaders, when they form cross-functional project teams in organisational processes. Before exploring these organisational processes, the next section explains the different types of teams in Organisation Y.

6.3.1 Types of Team

The interviews with managers in Japan showed that there are both functional and cross-functional project teams in Organisation Y. In the category of functional teams,

206

there are technical expert teams, a problem-solving project manager team and a support service tool team in each location. Based on information from the semi-structured interviews, the characteristics of each type of functional team are explained below.

6.3.1.1 Functional Teams

As shown in Table 6.4, a technical expert team, a problem-solving project manager team and a support service tool team exist in the company in Japan and in Germany. There was a backup team only in Japan when the fieldwork was conducted in 2008. Table 6.4 lists the characteristics of each functional team:

Table 6.4 Types of Functional Team in Organisation Y

Types of functional team	Team purpose	Location	Interviewed team
Problem-solving project manager team	To allocate managers of a cross-functional problem-solving project team in organisational units	Japan and Germany	Team 1 (Japan)
Technical expert team	To share the same area of technical expertise 1. members and leaders for cross-functional project teams 2. technical contact person for special customers who have paid higher maintenance fees	Japan and Germany	Teams 2–4 (Japan) Teams A–H (Germany)
Support service tool team	To test the functioning of a support service tool and localise it	Japan and Germany	Team 5 (Japan)
Backup team	To have members on hand if a cross-functional back office project team needs extra resources	Japan	Team 6 (Japan)

Problem-solving project manager team

Team 1 consists of managers of a cross-functional problem-solving project team, according to the team members. As was shown in Figure 6.1, above, a problem-solving project manager team does not belong to a technical expertise group. The leader of Team 1 stated the purpose of problem–solving project team thus:

> We take care of customers' situations which are critical and have a severe impact on the customer's business and which we cannot solve using our standard customer support. What we do is tackle an exceptional situation. It must have a visible business impact. (TL, T1, FT1)

As shown in Table 6.4, the members are functionally allocated into a problem-solving project manager's team for organisational units at the root of Organisation Y. One of the members of Team 1 mentioned how he spent his time when he was not assigned any particular tasks by his cross-functional project-solving project team, as follows:

> When I have time, I study for self-development and make a summary of what I have learnt in previous problem-solving project cases or what I can improve the next time. Also I run workshops for consultants in order to avoid escalation. (TM, T1, FT2)

The details of a cross-functional project-solving project team are given in Section 6.3.1.2, and the organisational process to formulate the team is given in Section 6.4.2.

<u>Technical expert teams</u>

Technical expert teams are one of the functional teams in a technical expertise group as was shown above in Figure 6.1. Manager 3 mentioned that 'each team has a specific expertise depending on the technical knowledge and skills in the technical expertise group. Also each team member has several tasks'. (M3, FT3) Technical expert teams have members with the functional technical expertise to deal with technical issues of global customers as stated by Manager 1. Each technical team has a different area of technical expertise, as shown in Table 6.4. Some teams have sub-groups because those teams cover several areas of functional expertise, as stated by members of Team 3 and Team C.

According to managers and leaders of functional MNTs, members' roles and responsibilities are different depending on members' future career plans. As Table 6.4 shows, members in technical expert teams are either 1) members who perform tasks in cross-functional project teams, as explained in a later section, 6.3.1.2; or 2) members who act as a technical contact person, giving advice about service solutions and business models to customers. A member of Team 2, who works in various cross-functional project teams, said:

> Most of my workload, around 80-90%, is related to onsite service project teams, which is a type of cross-functional project team. The rest of the time I head back to my functional team or/and perform tasks in a back office project team, which is another type of cross-functional project team, at my office. (TM, T2, FT4)

When these members are not assigned to any cross-functional project teams, they mentor new team members, compile documents, develop services, test products, organise workshops and self-study, according to the respondents interviewed.

Another member of Team 2, who is a technical contact person, described his tasks as follows:

> My task is to take care of important customers for Organisation Y by coordinating activities with consulting in Company X and vendors from other companies. I go to the customer side for 5 days a week. When we have team meetings, I come back to the office. (TM, T2, FT5)

Manager 3 described the main role of technical contact persons as follows:

> The role of the technical contact person is similar to that of a project manager since they handle customer issues. Therefore it would be desirable that senior members, who have experience and have belonged to Organisation Y for a long time, should become a technical contact person for a specific customer who is important to Organisation Y. (M1, FT6)

With regard to the differences between technical expert teams in the Japanese and German offices in Organisation Y, the teams in Germany have members who are

working remotely at other offices located in France, Russia, and other areas of

Germany as stated by the leader of Team F as follows:

> Our team works together with a colleague who is in France and covering the same field. There are more colleagues in the same field in Russia. They are mostly independent workers, so there is not such an intense relationship between us and our Russian colleagues. But we are working intensively with our French colleagues. (TL, TF, FT7)

In short, members in technical expert teams are required to possess and build technical

skills regardless of their tasks.

Support service tool team

A support service tool team is one type of functional team in a technical expertise

group, as was shown in Figure 6.1. The leader of Team 5 stated that the roles of the

team members in addition to those in Table 6.4 were as follows:

> Current team members are doing project management for a support service tool. We are carrying out product management and implementation of the tool. In terms of product management, we focus not on localisation but on marketing to make customers use the tool. (TL, T5, FT8)

The members of Team 5 stated that they had different tasks to test the functions of the

support service tool. Also, they have transferred knowledge of the support service tool

to other functional teams in Organisation Y and other divisions in Company X

including sales and consulting. The team members go to a customer's site to help in implementation of the service tool and give sessions on how to use the tool.

Backup team

A backup team is one of the functional teams in a technical expertise group as shown above in Figure 6.1. Members of Team 6 dealt with issues which the cross-functional back office project team could not handle through lack of resources, as shown in Table 6.4. The tasks were various and included reporting customer complaints, reporting numbers of critical issues and monitoring customer systems to/for management, according to the members of Team 6. As noted earlier, a backup team existed only in Japan, not Germany, when the fieldwork was conducted in 2008.

In the next section, the purposes and configurations of different types of cross-functional teams are described, before I proceed to further investigation of organisational processes from a dynamic capability perspective.

6.3.1.2 Cross-functional project teams

There are four types of cross-functional project team: problem-solving project teams,

onsite service project teams, remote service project team and back office project team,

all shown in Table 6.5:

Table 6.5 Types of Cross-functional Project Teams in Organisation Y

Types of cross-functional project team	Team purpose	Team configuration	Location
Problem-solving project team	To give solution to critical issues	One project manager, one technical team leader and experienced members from different technical functional teams	Japan and Germany
Onsite service project team	To provide general services at customer's site	One team leader and members from different technical functional teams Each team member deals with his or her technical area of expertise.	Japan and Germany
Remote service project team	To provide services through remote connection from Japan local office	One fixed team leader, one dispatcher, one technical leader and members Each team member deals with one customer.	Japan
Back office project team	To support other cross-functional project teams from local offices	One head (manager) • one team leader and members in Japan • three team leaders and members in Germany	One team in Japan and one in Germany

<u>Problem-solving project team</u>

According to the respondents interviewed, a problem-solving project team is formed

when customers face critical issues to solve for their business, as shown in extract TM,

T1, FT1. As can be seen from Table 6.5, team members of a cross-functional problem-solving project team consist of members from different technical expert teams, according to the respondents. An organisational process to formulate a problem-solving project team is described later, in Section 6.4.2.

Onsite service project team

According to the interviewed respondents, onsite service project teams are formulated based on customer requests, as shown in Table 6.5. Manager 1 gave an example of how to formulate an onsite service project team:

> For example, when Organisation Y receives a request from Customer A who has some problem with his database and SCM, managers and leaders of functional teams search for and assign members who have database and SCM skills to provide a satisfactory onsite service project to Customer A. (M1, CFT1)

With regard to the types of service, members of functional MNTs mentioned that these are determined based on customer information about 1) which products and components a customer is using, 2) how far the customer has proceeded with the project, 3) whether the customer is already using software products of Company X in his production system, 4) whether the customer has modified and optimised business processes, 5) whether the customer uses customer-developed programs, 6) what kind

of maintenance agreement the customer has and 7) whether the customer has critical issues on the production system. This customer information is collected by a technical contact person in the functional technical expert team or/and a member from a key customer group.

With regard to team composition of the onsite service project team, a member of Team 3 describes it thus:

> Members are collected from other teams into a technical expertise group. Team leaders are different from formal team leaders. There is a resource pool for cross-functional project team leaders. Some team members have experience as a cross-functional project team leader but they are not a functional team leader in the organisational structure. When they go onsite, they become a cross-functional team leader for a short period. (TM, T3, CFT2)

The organisational process to formulate an onsite service project team is given in Section 6.4.2.

Remote service project team

As shown in Table 6.5, a remote service project team exists only in Japan, not in Germany, according to the leaders and members of the technical expert teams in Japan. There are three fixed team members: a team leader, service owner and dispatcher,

215

according to those members who had at some time performed tasks in a remote service project team. A member of Team 2 stated that a remote service project team worked as follows:

> Team members of a remote service project team are not dealing with their team tasks as part of their daily workload. There are 10 members inside of a remote service project team, but only 2-3 team members are assigned to a remote service project team rotationally every week. Remote service sessions would continue once a week. Team members perform other tasks among their daily tasks such as being members in an onsite service project team or a back office project team. (TM, T2, CFT3).

The organisational process to assign members of technical expert teams to a remote service project team will be described later on, in Section 6.4.2.

Back office project team

As shown in Table 6.5, interviewees state that a back office project team supports other cross-functional project teams. With regard to the configuration of the back office project team, a member of Team 3 described how 'In a back office team, there are a manager, a leader and members from different functional areas of expertise.' (TM, T3, CFT4).

According to a member of Team B in Germany, there are more than 30 members of

the back office there, divided into three groups, each with a team leader. She said:

> In a back office project team in Germany, there are three groups. Group 1
> deals with very high- and high-priority customer issues. Group 2 deals with
> high- to medium-priority customer issues. Group 3 deals with extra on-
> demands from onsite project teams. All groups need to report back with
> reviews for all services provided by the cross-functional project teams. For
> each group there is a team leader, who distributes tasks to members. For
> message-solving we monitor messages. If there are cases from cross-
> functional project-solving project teams, team leader(s) in the back office will
> ask you whether it's possible for you to support these cases. Group 3 is
> engaged in backup for onsite project teams. If there are requests from onsite
> project teams, they come to group 3. (TM, TB, CFT5).

On the other hand, in Japan there are 10 members from different technical expert

teams and two members located in China, according to the members of functional

MNTs and managers.

In short, Organisation Y has a variety of team among its functional teams and cross-

functional project teams. Table 6.4 gave a summary of each type of functional team.

Table 6.5 explained each type of cross-functional project team. By using the team

capabilities of functional teams such as technical skills, Organisation Y formulates

cross-functional project teams with the managers and leaders of functional teams.

Depending on customer issues and demands and purposes, Organisation Y forms

different types of cross-functional project team. The next section explains the organisational processes, showing how Organisation Y utilises teams from a dynamic capability perspective.

6.4 Organisational Processes from a Dynamic Capability Perspective

As described, Organisation Y employs a matrix structure to formulate different types of cross-functional project team by using the capabilities of technical expert teams in order to respond to demands from customers. That implies dynamic capabilities to integrate, coordinate and upgrade capabilities by adjusting to customer demands. For analysing organisational processes from a dynamic capability perspective, capability possession, capability deployment and capability upgrading in Organisation Y are described respectively.

6.4.1 Capability Possession

As Manager 1 stated in extract M1, OS1, Organisation Y possesses the technical expertise to solve customer issues and problems by using the capabilities of functional teams in a technical expertise group. Also, Manager 1 mentioned that:

Organisation Y is a global organisation, which is good because you can count on resources and capabilities from anywhere in the world across local offices. We have global process but we need to adapt to local markets. You have to remember to act according to the different local cultures and demands. (M1, CP1)

This implies that Organisation Y possesses capabilities across locations; yet, these capabilities need to be adjusted to local markets depending on the issues and demands of customers.

Manager 1 explained how, when the Japan office of Organisation Y has hired a new employee, managers and leaders in Organisation Y create a career path with him or her, as follows:

When we hire someone, we need to train the new employee to become a team member of cross-functional project teams. We will assign him or her to a functional team and map out a development plan with him or her. It takes time to train new employees to work as team members in cross-functional project teams. (M1, CP2)

New employees thus become part of team capabilities for cross-functional project teams by belonging to a functional team.

In the case of technical expert teams in Germany, there are members who are working in different locations such as Russia and France, as described in extract TL, TF, FT7.

These members are also considered as team capabilities to formulate cross-functional project teams.

With regard to the capability possession from having members from different nationalities, managers in Japan mentioned two benefits from the diversity: ways of thinking and languages. With regard to ways of thinking, Manager 3 stated that:

> When Japanese members get together, they tend to have similar ideas. On the other hand, in a diverse environment, where different nationalities work together, people will bring different ideas from various perspectives. As a result of the diversity, Organisation Y is able to improve organisational processes by bringing in different opinions. (M3, CP3)

That implies that diversity is likely to facilitate creativity and innovation as well as improve organisational processes.

In terms of benefits from language diversity, Manager 5 stated:

> In a call centre in China, the centre is dealing with five different languages. Because of high customer demands for service in their native language, call centre members must speak proper business language in different languages. (M5, CP4)

Therefore it is probable that through the diversity of its members Organisation Y has the capabilities to deal with customers who speak different languages.

To acknowledge the team capabilities of functional teams for cross-functional project teams, Manager 2 used an Excel sheet listing each member's technical skills, his or her experience in cross-functional teams, as either a member or a team leader, and his or her career. Therefore, it seems that Organisation Y has acknowledged members' capabilities by filing information about them on an Excel sheet, and is able to refer to the sheet whenever it is notified of issues related to customer demands, in order to formulate any type of cross-functional team.

In sum, as far as capability possession is concerned, Organisation Y gains acknowledged technical expertise skills, different ways of thinking and several languages from the diversity of its members from different nationalities. The next section illustrates the organisational processes used to deploy capabilities from functional teams to different types of cross-functional project team in Organisation Y.

6.4.2 Capability Deployment

According to Manager 1 and the interview respondents, Organisation Y has a global standard procedure to deploy the capabilities of functional teams to different types of

cross-functional project teams. Each organisational process to create different types of cross-functional project team, such as a problem-solving project team, an onsite or remote service project team, or a back office project team, will now be described.

A problem-solving project team

A problem-solving project team is formulated when a customer has an emergency case, as shown in Table 6.5. A manager of a cross-functional problem-solving project team is selected from the members of Team 1 when it is formulated, as described in extract TL, T1, FT1. Figure 6.2 describes this kind of organisational process from the beginning to the end of a problem-solving project team's involvement.

Customer critical issues

↓

Meeting to judge whether Organisation Y should create a problem-solving team

↓

Formulation of a problem-solving team

- Selection of a project manager from a problem-solving project manager team
- Selection of a technical leader from technical expert teams
- Members from technical expert teams or other organisations
  - ✧ Area of expertise
  - ✧ Skill level and experience

↓

At the customer's offices

1. Making action plan with the customer
2. Solving critical issues
3. Asking help and support from a back office project team

↓

Finding solution and closing project

```
┌ ─ ─ ─ ─ ─ ─ ─ ─ ┐
│ ↓  Information flow │
└ ─ ─ ─ ─ ─ ─ ─ ─ ┘
```

Figure 6.2 Organisational Process – Problem-solving Project Team

As shown in Figure 6.2, a member of Team 1 described how the customer's critical

issues come at the starting point of a problem-solving project team:

> Firstly, if a customer project runs into problems, customer messages are
> registered with Organisation Y by consultants of our Company X and other
> partner companies. If solutions have not been provided by Organisation Y
> or/and problems are turning into more critical issues, such as the system being
> down during daytime, the customer puts in a request to have these issues
> resolved, through our top management level or the sales division in Company

X. This means that a request to formulate a cross-functional problem-solving project team has been created. Secondly, managers and members of Team 1 in Organisation Y must judge whether we are going to create this team by having a meeting. When they decide to formulate the team, we decide what the top issues are in order to resolve the critical situation. Then we go to the customer's site with members from a technical expertise group, working together as a problem-solving team. This type of team is created irregularly. We cannot guess when critical issues and requests to create this team will occur. (TM, T1, CD1)

In other words, a problem-solving team is created whenever customers experience critical issues. That implies that the required capabilities for the problem-solving team are likely to differ depending on the particular issues when this type of cross-functional project team is formulated.

As shown in Figure 6.2, there is first of all a meeting to judge whether Organisation Y should create a problem-solving project team. A member of Team 1 described such a meeting as follows:

We have a judging meeting with managers, functional team leaders of technical expert teams and members of Team 1 to decide whether we will formulate a problem-solving project team. At first we need to evaluate how issues impact on the customer's business. The team members are collected from technical expert teams based on what kinds of functions and components of our software products the customer is using, and how the customer has designed his business model by using our software products. (TM, T1, CD2)

Another member of Team 1 described the way in which members of the problem-

solving project team are selected:

> We need to select members of a problem-solving project team based on area
> of expertise, level of expertise and level of confidence. If those members are
> over-confident, it is not good. However we should not behave as if we are
> ignorant. It is hard to find solutions since the issues faced by these project
> teams are extremely difficult. We cannot find solutions merely by looking at
> existing cases and solutions. Hence members will be better off having the
> confidence to find a new solution to unknown issues in cases of high
> uncertainty. Ideally it would be better for members to have previous
> experience in problem-solving project teams. Members of the problem-
> solving project team are better off with skills balanced between intelligence,
> physical stamina and mental guts. It is difficult to maintain that balance
> because this problem-solving team can last for a long time. (TM, T1, CD3)

Since the project team deals with high-priority tasks for Organisation Y, another

member of Team 1 described how managers are allowed to use their capabilities

across locations and organisational units in Company X:

> When we have a problem-solving project, we can use any kinds of resources
> and capabilities from technical expert teams around the world across the
> locations, consultants and developers of Company X. When we ask for help
> outside of Japan, Japanese members of the project-solving team or
> consultants will act as mediators between customers and foreign escalation
> members. (TM, T1, CD4)

This suggests that the problem-solving team is likely to select the best members

regardless of locations and organisational units to find unrevealed issues and problems.

225

According to respondents, the problem-solving team is the highest priority of Organisation Y. Hence, if the project managers need to ask for resources from other divisions, such as consulting and development, and from other locations of the global support organisation and other companies in the information technology industry, they can use any resources without considering the cost. Yet, that also implies that project managers in problem-solving teams, who are members of Team 1, are required to know the best person in specific functional area of technical expertise by using their human networks. Hence acknowledge of capability possession in Organisation Y is likely to be vital to formulating a problem-solving project team.

With regard to the size and composition of a problem-solving team, a member of Team 1 stated that:

> The length of the problem-solving project and the level of difficulty depend on the issues. Our project teams are virtual teams with 20-30 members of software program developers from Germany and all over the world who work remotely or who come to Japan, as well as consultants, salespersons and members of technical expertise teams. (TM, T1, CD5)

Based on extract TM, T1, CD3, extract TM, T1, CD4 and extract TM, T1, CD5, members who have high technical competences in specific skills are gathered together

for problem-solving project teams regardless of organisational units across the world so as to find solutions for the critical issues of customers.

During the project, too, the team members ask for help from a back office project team in order to contact program developers in Germany, according to the members of the technical expert teams in Japan who had performed tasks in problem-solving teams. Therefore, while they are performing tasks in the problem-solving project team, the members of the team tend to obtain technical knowledge from members of technical expert teams across locations by asking for help through a back office project team. After finding the solution these members in the problem-solving project team go back to their functional teams, according to members of Team 1 and members of technical expert teams.

<u>Onsite/remote service project teams</u>

Figure 6.3 shows the procedure for selecting members for onsite/remote service project teams based on the result of interviews:

Customer requests

↓

Staff assignment meeting with functional team leaders/managers

Based on

```
┌ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┐
│ ↓  Information flow  │
└ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┘
```

- Areas and skills of technical expertise
- Individual development (career) plan
- Schedule (days off, holiday and other tasks)
- Experience

Onsite Service Project teams	A remote service team
1. Kicking off meetings within the project teams	1. Preparing for remote services
2. Preparing for services	2. Remote service from office

Sending report to back office for quality check

↓

Handing in report to customers

Figure 6.3 Organisational Process-Onsite/Remote Service Project Teams

As shown in Figure 6.3, when the organisation receives customer requests to provide

onsite or remote service projects, the first step is to create an onsite service project

team, as a member of Team 2 explained:

> When a customer requests services to check either the business model or the
> computer system, Organisation Y decides what kind of onsite service project
> team is to be formed. And then managers select a team leader for the onsite
> service project. (TM, T2, CD6)

This has already been explained in extract M1, CFT1 and extract TM, T3, CFT2.

Managers and leaders of functional teams assign team members to these project teams at a staffing meeting. According to Manager 1 and Manager 2, there are two members' staffing meetings. One will be a meeting with functional team leaders and managers within a technical expertise group, the other a meeting with functional managers across functional groups in Organisation Y.

With regard to weekly meetings for capability deployment from technical expertise teams to an onsite service project team, the team leader of Team 4 illustrated the procedure in Japan as below:

> Every Thursday we have a staffing meeting to assign team members to onsite service project teams. Managers, functional team leaders and persons who have requested resources from other organisational units attend this meeting. Requests include in which area, and when, we need to perform service using onsite project teams. Then managers and functional technical expert team leaders from all areas decide on which members are suitable for a specific onsite service project team. Depending on schedule and development plan, I assign team members to onsite service project teams. Onsite team leaders are assigned by managers because the role of onsite team leader is tough. (TL, T4, CD7)

These areas of requirements to select members for onsite-service project teams are listed in Figure 6.3. In the meeting, managers and leaders of functional teams refer to two Excel files to choose appropriate members for the onsite service project teams,

according to Manager 2. One Excel file is to list members' competences such as

technical skills, management skills and experience. The other file lists a schedule of

members' availability and the dates of customer requests for service. Manager 1 also

explained that the staffing meeting is an official process to deploy the capabilities of

functional teams with consideration of members' technical skills and their career

development. The leaders of Team 3 explained that when they have staff meetings

members of a remote service project team and a back office project team are also

assigned at the same time.

In terms of selecting leaders of onsite service project teams, the leader of Team 3

stated that:

> The onsite service project team leader should have more than three years'
> experience in Company X. It would be advisable to have more than five
> years' experience as a member of Organisation Y. (TL, T3, CD8)

The leader of Team 2 went on to add some important roles of onsite service project

team leaders:

> The roles of the onsite project team leaders are to understand customer needs
> and to strike a balance between customer expectations and what we can
> provide. If there is a mismatch regarding expectations, the service would not
> be successful even if highly-skilled members went onsite. But also we need to
> provide a good quality of service and hence we need to give members a

chance to accumulate experience by solving critical issues in a highly demanding environment and make services successful. (TL, T2, CD9)

From extract TL, T4, CD7 and extract TL, T3, CD8, managers and functional team leaders are likely to consider the balance between customer requests and team members' skills level and career plan in planning capability deployment. From extract TL, T3, CD8 and extract TL, T2, CD9, it is assumed that the selection of leaders for onsite service project teams is important to make these teams successful in order to avoid a mismatch between customer demands and what members provide in the onsite service project teams.

In addition a member of Team 2 mentioned that sometimes, in an onsite service project team, junior members who have not got the experience to perform tasks in the team join that team as novice members:

> A junior team member goes onsite with the service project teams as a novice to learn how to work onsite. He/she goes along two or three times as a novice member. Then the third time, he/she goes along to work as a full onsite service project team member. We do not have the time to give people lengthy training. (TM, T2, CD10)

That implies that members are expected to get used to providing onsite service projects through on-the-job training.

In talking of the way to deploy capabilities from technical expertise teams to onsite service project teams, the leader of Team C stated that the organisational process of capability deployment in the German office is likely to be different from that in the Japanese office (described in extract TL, T3, CD7), as explained below.

> We have a staffing team and members of the team put information into Excel and all functional team leaders have access to Excel. So then we screen to see whether there are any service requests into our functional areas. We forecast for the next 3 to 4 weeks. So after three weeks, if there is an upgrade service request, I check with my team members' calendars to check availability. Then I make sure of members' abilities and preferences to do various tasks on onsite service project teams. If the calendars say 'OK to go to onsite service project teams', I will inform the staffing team that we can provide onsite service project teams and they will update an Excel file and service will be scheduled. We have a weekly meeting with all functional team leaders on Wednesdays in order to be able to find resources if we receive customer requests for onsite service projects at short notice. (TL, TC, CD11)

It would therefore seem that managers and functional team leaders in the German office deploy capabilities with flexibility to respond to requests even where they come in from customers at short notice.

As Figure 6.3 shows, there are four steps to performing tasks for members of onsite service project teams. The procedure in onsite service project teams was described by members of Team 3 as follows:

Basically, when we go onsite to carry out service projects, there are a team leader and team members from the different areas which a customer has within his software system. For one type of onsite services, we have a three-week schedule to perform tasks in the onsite service project team. During the first week we have a kick-off meeting and prepare to have interviews with the customer. In the second week we go to the customer's site (onsite). In the final week members write up their final report with the outcome of service to hand in to the customer. The members of the onsite service project team tend to transfer skills. When I go onsite with members who have different skills from me, I can learn from them. On the other hand, when I go onsite with members who have not got experience and skills, I need to cover for them, even in areas where I myself do not have skills. After the site visit we need to hand in our final report to our customers. Customers see the final report as the outcome of our service from my company's side; hence we need to cover for each other. (TM, T2, CD12)

The other respondents who had experience of performing tasks in the team said that during provision of service at the customer's office the team members have meetings every day to share information. On the final day of providing service, there is a wrap-up meeting with all of the team members and customers to give preliminary results (TM, CD13).

In relation to experience in onsite service project teams, a member of Team 3 stated:

Members of an onsite service project team have different areas of expertise. In the team we separate tasks out for people with different expertise. When I made a site visit in order to support the 'going live' of the customer's system, members were assigned from different areas of expertise in a big group. But

when it came to the actual task, we needed to have more specific information and then we helped each other. This gave us a sense of 'belongingness' as a group. Of course each member has a different area of expertise. By getting support from a big group, I felt a kind of group achievement. (TM, T3, CD14)

From extract TM, T2, CD12 and extract TM, T3, CD14, it can be assumed that members of technical expert teams have accumulated experience and articulated their knowledge in the onsite service project teams.

As shown in Figure 6.3, there is a remote service project team which carries out service through a remote connection, as shown in Table 6.5. A member of Team 2 explained where customer requests come from and how his tasks are assigned:

When a remote service project team has requests from customers to provide services, we assign members who have learnt how to do remote service by a dispatcher in a remote service team. Members who are assigned tasks by the dispatcher block their schedule so as not to perform other tasks given them by other cross-functional project teams. (TM, T2, CD15)

A member of Team 6, who dispatches tasks to members for remote service projects, described how customer requests come to the project team:

Members in a key customer support group know customers' demands. They are gatekeepers for customers. Before providing remote services to customers, members in a key customer support group make contact with customers and talk to them. Regarding remote connection for services, members in a key

customer support group ask customers to set up a remote connection so that our team members can provide remote service projects. (TM, T6, CD16)

This implies that the interrelationship between the members who provide remote service projects, a dispatcher in the remote service project team, and members of the key customer support group at Organisation Y, is important to provision of remote projects.

Figure 6.3 indicates that both onsite service project teams and remote service project teams need to hand in a report to the customer as part of the service output. According to respondents, every report needs to be revised and double-checked by members of a back office project team in Japan and Germany. Next, the organisational process in a back office project team is described in greater detail.

Back Office Project Team

Figure 6.4 explains the organisational process of a back office project team to collect together members from technical expert teams:

Staffing meeting for assignment for back office project team leader and members

- Area of expertise
- Schedule

↓

Back office project team members

- Support for onsite service and escalation project teams
- Review report in the part of area of expertise
- Monitoring customer's system
- Message handling for very high-, high- and medium-priority messages

↓

Contact with experts for messages and in the case that members cannot solve issues by themselves

- Phone
- E-mail
- Forward messages
- Go to desk directly

```
┌─────────────────────┐
│ ↓   Information flow │
└─────────────────────┘
```

↓
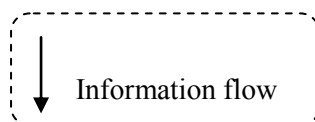
Back to functional teams after the period of assignment in the back office

Figure 6.4 Organisational Process – Back Office Project Team

As shown in Figure 6.4, initially there is a staffing meeting to deploy capabilities from

technical expert teams to a back office project team. Manager 2 explained the process

of team assignment to a back office project team from technical expertise teams as

follows:

> For back office tasks, we assign members who are available. It is a kind of
> rotation system. We prefer to prepare for onsite services three weeks in
> advance. However we need to change sometimes because of adjustments
> made with customers. Normally junior members are trained for three months

when they join the support groups. Novices have two weeks of training for the back office project team. We do not have any criteria for when members finish their basic training. I know that it is difficult for them to understand all the tasks straight away. (M2, CD17)

Also, other respondents in the Japanese and German offices said that when new members join this organisation they tend to be assigned to this team as novice members in order to learn organisational processes in Organisation Y.

A member of Team 4 described the roles of the back office project team leaders as follows:

A leader of a back office project team monitors the shared mailbox and system. By monitoring requests, the back office project team leader judges which area of expertise would fit whom, which issues have arisen and who is going to handle a specific issue. Since huge numbers of requests come to the back office project team, it is not possible for the team leader to see details of each case. The leader needs to ask if there are challenging issues for members in the team to handle. If the leader of the back office project team were an expert in the area, he or she would cover difficult issues. (TM, T4, CD18)

Other members who had ever worked as leaders of the back office project team, said that they had learnt the procedures and their tasks in the back office project team from the manager of the back office project team in Japan. They stated that the procedure of

performing tasks as the team leader was not specifically regulated. That implies that members are likely to learn what they have to do by accumulation of experience.

With regard to work carried out in the back office project team in Japan, Manager 4 said:

> We are dealing with all the Asian customers plus customers from other regions such as the USA and Latin America if they have 'top critical' problems during our times on or when they specifically ask for help with critical problems. Top critical means that the workload is passed to several countries for 24 hours. For example a member said that something might, for example, happen at midnight to a customer who has critical issues on the system. The member asks, 'Can you see what is happening here? Can you monitor the customer system to see why it is happening?' Since it would be happening at one o'clock in the morning Tokyo time, we can ask members who are located in other regions to monitor this issue and find out what the causes are. We can just pass things over to them. One of the other tasks is to support onsite project teams. All members in Organisation Y know the back office is a kind of backbone. If somebody has a critical problem like the top critical situation I mentioned, he or she would raise issues and other members would help to solve these issues from the back office. (M4, CD19)

Figure 6.4 shows all the tasks routinely carried out by members of the back office project team: 1) support other cross-functional project teams, 2) review reports from other cross-functional project teams, 3) monitor customer's systems and 4) handle messages including very high-, high- and medium-priority messages across locations.

Regarding these tasks, a member of Team 3 also mentioned complicated tasks in a back office project team:

> Generally, members of a back office project team are assigned because they do not normally carry out any onsite services. Yet, I do not think that the back office project team actually works well. Working in the back office is not easy, because members may need to face issues which have not been experienced in the past. Therefore, members in the back office project team may need to find a person who knows a specific area of technical expertise in Organisation Y across locations. (TM, T3, CD20)

A member of Team 4 stated the importance of cooperation across technical expertise teams, regardless of location, to perform tasks in the back office project team:

> In the back office project team, there are a lot of tasks which need to have cooperation from functional technical expert teams. When I could not solve a particular task by myself, I not only called and sent e-mails direct to members who might know solutions, but also went to see members personally. (TM, T4, CD21)

Because of the complicated tasks carried out by the back office project team, sometimes there are issues of task assignment by the team leader. For example, a member of Team 3 mentioned these issues:

> Sometimes the leader of a back office project team has assigned to me tasks about which I do not have any knowledge. Now, the main role of the team leader is to assign proper tasks to each team member. In unclear areas the team leader should make sure he or she draws lines which indicate which members are going to take responsibility. I want the leader to focus on team management since it affects whether the members can perform well. As a

team member, I cannot see the team as a whole. It is good for the leaders to have technical skills, but they must have soft skills as well. (TM, T3, CD22)

From extract TM, T3, CD20, extract TM, T4, CD21, and extract TM, T3, CD22, it is clear that tasks in the back office project team are complicated and members of the team may not be able to perform such tasks and reach solutions by themselves; therefore, cooperation across technical expert teams, regardless of location, is likely to be important.

So far, the organisational processes of capability deployment in different types of cross-functional project teams have been described. The next section explains the organisational process of capability upgrading after capability deployment.

6.4.3 Capability Upgrading

In extract M1, CP1, Manager 1 stated that Organisation Y relies on the technical competence of members. Extract TM, T2, CD9 and extract TM, T2, CD12 described the transference of knowledge as work was being carried out by onsite service project teams. Extract TM, T2, CD10 explained that junior members learn, as novices, how onsite services are provided by the project teams. Extract M2, CD17 explained that junior members learn how a back office project team works during on-the-job training.

Extract TM, T2, FT4 described how members tend to work better in cross-functional project teams. These extracts imply that members in technical expert teams have accumulated experience by performing tasks in cross-functional project teams. In terms of technical skills, the members have responsibility to update their skills and knowledge in their functional area of expertise, as described in extract M1, OS1. In general, members in technical expert teams are expected to develop their technical skills to deal with customers' issues.

Manager 1 describes the issues of sharing knowledge in functional teams in Organisation Y as follows:

> Sometimes we have the problem that people work solely as individuals in cross-functional project teams. They have the chance to work together to improve their knowledge in a functional team. One of the tasks in a team is that inside the team they have to collate knowledge and work together. However, it is hard to put tasks into functional teams since our software product consists of different functional techniques; therefore we are carrying out tasks in cross-functional project teams by combining technical skills from different functional teams. Whenever they come to the back office project team, they should work together ad share knowledge and talk to each other from their different areas of technical expertise. (M1, CU1).

That assumes that members are expected to learn and upgrade their skills through experience in cross-functional project teams and bring this experience back to functional teams to share knowledge in order to upgrade capabilities in their functional teams and Organisation Y.

According to Manager 1 and Manager 2, managers inform functional team leaders of organisational goals and targets and subdivide organisational goals and targets into team goals and targets. According to leaders of functional MNTs, the managers and functional team leaders develop a career plan with each team member to improve their skills by having goals and targets set annually. That implies that functional team leaders break organisational goals up into team and individual goals. As a result, upgrading capabilities in functional MNTs become future capabilities in Organisation Y.

In short, organisational processes have been affected by resource management under managers and functional team leaders in Organisation Y to formulate different types of cross-functional project teams including a problem-solving project team, an onsite service project team, a remote service project team and a back office project team. With regard to capability possession, Organisation Y has an organisational process to recognise and acknowledge members' skills when members receive performance feedback at the beginning of the year and new employees join a functional team (extract M1, CP2). In terms of capability deployment, by using the capabilities of

functional teams, different types of cross-functional project teams are formulated (for example, selection of members for each type of cross-functional project team is described in extract TM, T1, CD3 for a problem-solving project team; in extract TL, T4, CD7 for an onsite service project team; in extract TM, T2, CD15 for a remote service project team; and in extract M2, CD17 for a back office project team). At the stage of capability upgrading, individual members have accumulated experience and brought their knowledge to functional teams in order to upgrade individual technical skills. The next section explores the roles of functional MNT leaders, based on semi-structured interviews.

6.5 Roles of Functional MNT Leaders

This section, based on semi-structured interviews with leaders, summarises the roles of functional MNTs in Japan (Section 6.5.1) and Germany (Section 6.5.2) from the point of view of functional MNT leaders, and these roles are explained in relation to dynamic capabilities.

6.5.1 Roles of functional MNT leaders in Japan

Table 6.6 gives a summary of the roles of functional MNT leaders from the leaders'
perspective in Japan, based on semi-structured interviews.

Table 6.6 Roles of functional MNT leaders in Japan

Leaders of	Roles of functional MNT leaders in Japan
Team 1	• Assign members to a cross-functional problem-solving project team • Give performance feedback to members • Protect members from stakeholders • Motivate team members
Team 2	• Assign members to cross-functional project teams • Give performance feedback to members • Perform tasks in cross-functional project teams • Create resource planning for future capabilities
Team 3	• Assign members to cross-functional project teams • Give performance feedback to members • Perform tasks in cross-functional project teams
Team 4	• Assign members to cross-functional project teams • Give performance feedback to members • Perform tasks in cross-functional project teams • Consider strengths and weaknesses of each member
Team 5	• Assign tasks to team members • Give performance feedback to members • Motivate team members • Develop own technical competences
Team 6	• Assign tasks to team members • Give performance feedback to members

As Table 6.4 shows, there are different types of functional MNTs in Japan. Team 1 is
a problem-solving project manager team, while Team 2, Team 3 and Team 4 are
technical expertise teams, Team 5 is a support tool team and Team 6 is a backup team.

However, there are common roles in all functional MNTs, which are to assign tasks to members and give performance feedback to members, as shown in Table 6.6.

In relation to capability possession and upgrading, members of functional MNTs stated that three times a year they have a performance feedback session with their team leaders to discuss their career plan, their targets and their training plan. A member of Team 3 said:

> The team leader evaluates team members yearly. This is called performance feedback. At the beginning of the year we set up individual targets and goals, and mid-year, we adjust the targets judged by whether those targets are reachable. We have KPIs (Key Performance Indicators) to check how far we have achieved our individual targets and goals. These use quantitative measurements. Sometimes we also use qualitative data similar to a balance scorecard, which gives us feedback about whether team members have reached their targets in each cross-functional project team. As a matter of procedure, managers need to have a look through all members' performance feedback. (TM, T3, RFMNTL1)

With regard to task assignment to members, the leader of Team 4 said:

> When I assign members to tasks, I pay attention to members' schedules and volume of tasks. Of course one should avoid asking too much of any one team member. Although I consider members' strengths and weakness, sometimes there is no choice but to ask members to do tasks which are not easy for them. Sometimes only one person is able to do a specific task, or there may be only one person available as a resource. (TL, T4, RFMNTL2)

That implies that the leader of Team 4 considers schedules, plus the strengths and weakness of team members, when he deploys team capabilities to cross-functional project teams, as shown in Table 6.6.

The leaders of Team 2, Team 3 and Team 4, which are technical expert teams, stressed the importance of performing tasks in cross-functional project teams in order to maintain and develop workers' own technical competences. The leader of Team 2 stated:

> Also I have the role of performing tasks as a team member or leader in cross-functional project teams. I evaluate members in performance feedback. I advise members about areas where the manager is unaware of what is happening. (TL, T2, RFMNTL3)

It appears that leaders of technical expert teams are likely to keep their own technical expertise by doing multiple tasks during team management. The leader of Team 5 also stated the importance of improving her own technical competences, in order to motivate and support members.

Because members of Team 1 deal with customers' critical issues, the leader of Team 1 stated the importance of her role in protecting team members from stakeholders:

> I have to protect my team members. They get pressure from outside because they take ownership and lead critical cases. They turn to management for help. I do not want my team members to have the feeling 'I have to solve the case. If I cannot do this I've failed'. This is not right, because in some situations you have to go to a different management level when you cannot solve issues. Therefore, if the situation in cross-functional project teams becomes more serious, my team members will report the situation to me and I will inform the other management levels. I am responsible for taking their pressure away to make cross-functional problem-solving project teams manageable. If I go to the customer's site with my team members, who are managers of a cross-functional problem-solving project, I will act the bad guy in order to protect them. (TL, T1, RFMNTL4)

This role of functional MNT leaders was not stated by the leaders of any other functional MNTs. Since this leader is in charge of members of Team 1, who are dealing with critical cases of customers in Organisation Y, and is acting as a cross-functional problem-solving project team manager, members of Team 1 are likely to be criticised by stakeholders and upper management in Company X during problem-solving projects if they leave problems unsolved.

As shown in Table 6.4, Team 5 is a support service tool team to test the functions of a support service tool and localise it; therefore, the leader mentioned that it may happen that team members are given uninteresting tasks. The leader of Team 5 stated that an important role of a functional MNT leader is in motivating members:

> When I manage the team, I try to make tasks more interesting. That does not mean we have only interesting tasks available. I try to make the boring tasks more interesting for team members. (TL, T5, RFMNTL5)

Here, the team leader creates a team atmosphere to motivate members to learn new tasks.

The next section explores the roles of functional MNTs in the German office based on the results of semi-structured interviews with leaders of the technical expert teams there.

6.5.2 Roles of functional MNT leaders in Germany

Table 6.7 summarises the roles of functional MNT leaders from leaders' perspective in Germany based on semi-structured interviews with the team leaders.

Table 6.7 Roles of Functional MNT leaders in Germany

Leaders of	Roles of functional MNT leaders in Germany
Team A	• Assign tasks to members • Give performance feedback to members • Integrate team members and treat members equally
Team B	• Assign tasks to members • Give performance feedback to members • Perform tasks in cross-functional project teams • Manage and create technical expertise in the team • Know members' working status
Team C	• Assign tasks to members • Give performance feedback to members • Lead members by giving information and network • Make resource planning for future
Team D	• Assign tasks to members • Give performance feedback to members • Perform tasks in cross-functional problem-solving project teams • Give clear direction as well as give members freedom
Team F	• Assign tasks to members • Give performance feedback to members • Perform tasks in cross-functional project teams
Team G	• Assign tasks to members • Give performance feedback to members • Perform tasks in cross-functional project teams • Create a team atmosphere
Team H	• Assign tasks to members • Give performance feedback to members

Note: The interview with the leader of Team E could not be conducted since he was too busy to perform his tasks in a cross-functional project team. Therefore Table 6.7 does not have information from the leader of Team E.

As can be seen from Table 6.4, all teams are technical expert teams in Organisation Y.

All functional MNT leaders cited task assignment, performance feedback to members,

and performance of tasks in cross-functional project teams as their main roles, as

shown in Table 6.7.

The leader of Team F summarised her roles as follows:

> I am responsible for all staffing requests to find out which colleagues best fit
> this service based on knowledge, experience and expertise of certain tasks to
> delivery. I also work in cross-functional project teams. This is important
> because I can then understand what kind of problems my colleagues are likely
> to face onsite, in order not to lose the connection with the customer. (TL, TF,
> RFMNTL6)

That suggests that in this case technical competence in the leader is important when

she comes to assign her members to cross-functional project teams. This in turn

implies that the roles of the leader affect whether members are assigned to the

appropriate teams.

As one role of functional MNTs, the leader of Team D explained details of

performance feedback:

> In performance feedback, we are talking about targets and future development
> plans and agreement with training schemes but not in relation to the HR
> department. Team members take care to reach their targets and also agree to
> develop technical skills in different functions and to take training for
> delivering tasks in onsite service project teams. They have freedom to make
> their own goals. Every team member has, in fact, the target of taking care of
> their own targets. (TL, TD, RFMNTL7)

Furthermore, leaders of Team B, Team D and Team F mentioned that they do not have

any authorisation for human resources: as the leader of Team F stated:

> I have no authorisation for human resources (HR); nevertheless I do things
> together with the HR manager like performance feedback and interviews to
> take on new employees. And I give direct input because I have contacts inside
> work where it is more essential for development of members, such as task
> assignment for team members. (TL, TF, RFMNTL8)

If we look at extract TL, TD, RFMNTL6 and extract TL, TF, RFMNTL7, we see that

the roles of team leaders are likely to have an impact on capability possession and

capability upgrading of team members for technical competences. This assumes that

the roles of team functional MNT leaders are likely to affect organisational processes

of capability possession and capability upgrading of functional MNTs.

As is clear from Table 6.7, the leader of Team B gave his roles as being to manage and

create technical expertise in the team. He stated:

> The role and responsibility of technical expert team management is to keep
> knowledge, build knowledge, accumulate knowledge and hand over this
> knowledge to people who are new to us. It is a matter not only of keeping
> knowledge but also of trying to spread this knowledge to people. This is a key
> decision for us who deal with high volumes of customers and high volumes of
> different requests involving many people. This is the main job that I do. We
> try to find people's strengths in different areas and help them to develop those
> strengths in regard to our team objectives and the specific area where we are

working. And after seeing that we are really getting some progress then, we try to think how these people can prepare for their future roles. (TL, TB, RFMNTL9)

That implies capability possession and capability upgrading through team coordination.

In addition to resource planning for future capability possession, the leader of Team C said:

We need to make a forecast for the next year of what is required for services, skills and tools to able to do this. Therefore to deal with this information I need to break it down into small tasks and give team members issues which will help them with their career development and training. And then we realise current capability possession. It is important to have a good network to aggregate information for future and to make plan for developing future capabilities by choosing a member who is appropriate person to build and upgrade capabilities.(TL, TC, RFMNTL10)

His statement also suggests the relationship between future capability possession and the current skills of team members through networking.

Table 6.7 shows the leader of Team G's comments that creating team atmosphere is one of his roles. He argued that:

Team leaders have to take care of individual members, not only achieving team goals but also considering how a single person fits into tasks in cross-functional project teams. In other words, one of my roles is related to how we can achieve team goals and how a single person (member) feels comfortable with his tasks. It is important to make team members happy to stay in the team. But sometimes I need to push some of my team members who do not

want to go to join onsite service project teams. This is one of my roles.(TL, TG, RFMNTL11)

It is clear from this that one role of functional MNTs is to achieve a balance of team atmosphere and tasks, in order to achieve team goals.

Hitherto, the roles of functional MNTs have been given for both the Japanese and German locations. All functional MNT leaders in Japan and Germany mentioned their roles as being to assign tasks to members (extract TL, T4, RFMNTL2 in Japan and extract TL, TD, RFMNTL6 in Germany) and give performance feedback to members (extract TM, T3, RFMNTL1 in Japan and extract TL, TD, RFMNTL7 in Germany). The leaders of technical expert teams (Team 2, Team 3 and Team 4 in Japan and all teams in Germany) assign members to different types of cross-functional project teams (a problem-solving team, a onsite/remote service project team and a back office project team) when requests and issues come in, as shown in Table 6.6 and Table 6.7. The leader of Team 1, where managers of problem-solving project teams are allocated, assigns a team member as a manager of cross-functional problem-solving project team as shown in Table 6.6. The leader of Team 5, where members have tasks related to a support service tool, gives the team members tasks related to the functions of a support service tool since the purpose of the team is to test functions in the support service tool,

253

as shown in Table 6.4. In the case of Team 6, the leader gives tasks to the team

members when a back office project team in Japan needs some help, as described in

Table 6.4. Especially for capability deployment to problem-solving teams, managers,

functional leaders of technical expert teams and members of Team 1 are supposed to

choose the most appropriate members to deal with unsolved and critical issues of

customers across local offices in Organisation Y, as described in extract TM, T1, CD3,

extract TM, T1, CD4 and extract TM, T1, CD5. All leaders of technical expert teams

in the Japanese and German offices stated that performing tasks in cross-functional

project teams was important to keep up their technical competences (extract TL, T2,

RFMNTL3, and extract TL, TF, RFMNTL6). Also, in extract TL, TB, RFMNTL9, the

leader of Team B described how the leader keeps up the technical expertise of

members in his team. With regard to team atmosphere, the leader of Team G in

Germany explained that one of his roles was to create a comfortable team atmosphere

(extract TL, TG, RFMNTL11) and the leader of Team 5 in Japan mentioned the task

of motivating members (extract TL, T5, RFMNTL5). The leader of Team 1 mentioned

his role of protecting team members from stakeholders since the members have to deal

with the critical issues of customers (extract TL, T1, RFMNTL4). These roles of

functional MNTs are linked with each organisational process. Firstly, for capability

possession, performance feedback sessions with members are likely to be useful for acknowledging current capability possession. Also, performing tasks in cross-functional project teams is likely to increase capability possession. Secondly, task assignment to team members has affected the organisational process of capability deployment. Finally, giving performance feedback, creating a team atmosphere by motivating members, and planning for the future resources of functional MNTs have all affected the organisational process of capability upgrading.

6.6 Summary

This chapter has explored how functional MNT leaders are likely to be of great importance in integrating, coordinating and upgrading capabilities in Organisation Y, as part of its dynamic capabilities. It has found that one role of functional MNT leaders is to acknowledge the diversity of members in areas such as technical skills, nationality and personality as a source of team capabilities in the organisational process of capability possession. After acknowledging team capabilities, the role of functional MNT leaders is to understand customer issues and demands, to judge the level of criticality of customer issues and to deploy appropriate team capabilities of

functional MNTs to cross-functional project teams in the organisational process of capability deployment. In a highly critical situation where a customer has a difficult problem, functional MNT leaders formulate cross-functional problem-solving project teams by selecting members who have experience and high technical skills. In the case of normal service, to be carried out by cross-functional onsite/remote service project teams, functional MNT leaders assign their members depending on those members' areas of technical expertise and experience. For a cross-functional back office project team, functional leaders assign members to the team based on members' schedules and areas of technical expertise. Since members of functional MNTs perform their tasks in different cross-functional project teams, it is important for functional MNT leaders to facilitate team learning for future team capabilities in order to integrate members of functional MNTs into the organisational process of capability upgrading.

Next, Chapter 7 will explore the similarities and differences of customer demands and behaviours as between Japan and Europe. It will then investigate the differences in functional MNTs between the Japanese and German offices and test hypotheses which were offered in Chapter 3 for the proposed IPO model in each location.

CHAPTER 7

COMPARATIVE ANALYSIS BETWEEN OFFICES

In JAPAN AND GERMANY

7.1 Introduction

Since Organisation Y attempts to respond to dynamic demands from global customers by employing a matrix structure and designing organisational processes to create cross-functional project teams with flexibility as part of their dynamic capabilities, it is necessary to understand local customer demands and behaviours across locations. In order to reflect local customer demands, the members of Organisation Y's Japanese office provide services for mainly Japanese customers, whereas those in the German local office provide services for customers in Europe, the Middle East and Africa. Section 7.2 identifies and compares similarities and differences between customer demands and behaviours in Japan and Europe based on semi-structured interviews with functional MNT members in Japan and in Germany. Section 7.3 explores differences in perceptions of functional MNT members as between the offices in Japan and Germany in terms of personal values (individualism–collectivism), functional MNT leadership skills and team effectiveness (productivity, customer service,

innovation, collective behaviours and learning orientation) by using statistical analysis (T-test and discriminant analysis). Section 7.4 tests the hypotheses given in Chapter 3 for identifying a mediation effect of functional MNT leadership skills on the relationship between personal values of individualism–collectivism and team effectiveness by using regression analysis.

The data used in this chapter have already been given in Section 6.2 of Chapter 6. Extracts from the interview transcripts are representative examples to identify customer demands and behaviours across locations. Each quotation has a code in order for it to be used conveniently as data for the discussion and summary. Extracts from the interviews with managers are coded as 'M', those with team leaders as 'TL' and those with team members as 'TM'. There is a code for teams (T1 to T6 for functional MNTs in Japan and TA to TH for functional MNTs in Germany) as was shown in Table 6.3 and also a code for data (comparison of customer behaviours is coded as CCB, Japanese customer demands as JCD, Japanese customer behaviours as JCD, European customer demands as ECD, European customer behaviours as ECB) in numerical order. For example, the first extract related to comparison of customer

behaviours across nations from the interview with a team member of Team A in Germany was given the code TM, TA, CCB1.

7.2 Customers in Japan and Europe

Companies give weight to differences in customer demands together with consideration of national cultural issues. Since the fieldwork was conducted in Japan and Germany, there next follows a comparison of the dynamics of local customer demands and behaviours.

7.2.1 Comparison between Japanese and European customers

According to members in Japan, the Japanese office of organisation Y supports mainly Japanese customers. The members of the office provide support services in Japanese and go to customers' sites in Japan. Sometimes they go to the German office for on-the-job training. According to members in Germany, the German local office supports mainly customers from Europe, South Africa, Latin America and other areas. Members of the German local office provide support services in English and go to customers' offices around Europe, South Africa and Latin America. Sometimes

members in Germany go to other local offices in order to transfer their functional area

of expertise to colleagues in local offices of Organisation Y and are assigned as

members of cross-functional project teams as mentioned in Section 6.4.2. Table 7.1

summarises the comparison between Japanese and European customers in terms of

demands and behaviours, based on interviews.

Table 7.1 Comparison between Japanese and European Customers

	Japanese customers	**European customers**
Demands	• Precise explanation of solutions • Skills transfer for free • Accuracy of Japanese language	• Solutions to issues • High technical expertise • Services provided in the same language as customers use
Behaviours	Unique • Customer is king • Service is free Irrational complaints	Rational • Polite and rational (Northern Europe) • Open and friendly (Southern Europe) • Straight and punctual (Germany)

According to respondents in Japan and Germany, Japanese customers want to know

all the background of issues, such as the reason why issues may have recurred after

problems were supposedly solved. This might be related to their level of experience in

the use of software packages. Describing every aspect of technical issues and

problems to customers is time-consuming and sometimes impossible. Also,

Organisation Y has limitations on what it can and cannot offer, due to resource

constraints and the necessary balance between economic returns and costs.

Because of the unique behaviours of Japanese customers, Organisation Y has a special

procedure to deal with them: therefore, members outside the Japanese local office may

not be able to contact Japanese customers directly even if an issue is critical.

A member of German Team E stated:

> It is always funny dealing with Japanese customers. We cannot directly reach
> Japanese customers. There is a Japanese local office, though, where you can
> directly contact customers. There are some interesting rules for handling
> Japanese customers. These are not easy to understand for German and
> European people. Always the Japanese local office communicates between
> Japanese customers and the members of the German office. This is funny. It
> seems as if Japanese customers are different in the way they communicate.
> (TM, TE, CCB1)

That implies that even though Organisation Y has global standards or protocols to deal

with its global customers, the global support organisation needs to understand the

uniqueness of Japanese customers. Organisation Y has the flexibility to integrate and

coordinate capabilities in order to respond to customers across nations.

Furthermore, respondents mentioned differences between European and Asian

customers because of national cultures. A member of Team A, who comes from China,

compared European and Asian customers, including the Japanese, as follows:

> European customers are much easier to handle compared to Asian customers.
> It is clear to European customers that we cannot solve all problems because
> sometimes problems and issues have occurred not related to our expertise.

261

But Asian customers tend to say, 'You are here from Company X so you must solve everything'. I think it is really cultural difference since in Asia people usually get quite good service in stores, whereas in Europe nobody cares about you in stores. It is also the same for our customers, therefore Asian customers expect us to give a very high quality of services compared to European customers. (TM, TA, CCB2)

However, a member of Team B, who had been transferred from China to Germany, compared the characteristics of European customers and those of Asian customers in terms of the level of experience:

Customers in Europe are more experienced. They have used our products for many years. Normally they understand our jobs. Customers understand what the responsibilities for support are. They are less demanding than Asian customers. Chinese customers expect more from Organisation Y compared to European customers. When they have a person from Organisation Y, they think 'you have to know everything about your company's products'. That is not true. Software is expensive in China compared to other nations. A customer might think 'I spent a lot of money on products but I got less." Somehow they do not feel happy. Here in Europe, customers have accumulated experience with our products. They know more about Organisation Y in Company X. They are more considerate. (TM, TB, CCB3)

In short, there are differences in customer demands and behaviours, which are listed in Table 7.1. The next section contains further investigation of customers in Japan and Europe.

7.2.2 Japanese Customers

<u>Customer Demands in Japan</u>

Fifty-five respondents in the Japanese office mentioned that Japanese customers are

demanding and unique since people in Japan say 'the customer is king' and 'services

are provided free of charge', seeing a demand for high standards as somehow

representative of national personal values. A technical contact person in Team 2

described how Japanese customers have high expectations compared to other

customers across the nation and therefore how important it is to have global networks

beyond Organisation Y, as follows:

> Japanese customers are well known as having higher expectations and being
> more demanding than other customers across the world. Therefore we need to
> improve our service level in order to get high levels of customer satisfaction.
> In order to make them satisfied we would be better to share our knowledge
> with customers. It is impossible to do it only from our global support
> organisation. Hence it would be better to have a horizontal relationship
> between consulting and support by making flexible teams so as to make
> customers satisfied. (TM, T2, JCD1)

That implies organisational processes in order to adjust to customer demands by using

resources and capabilities across different organisational units. Therefore for MNCs, it

is important to recognise Japanese customer needs and demands in order to deploy

appropriate capabilities by using dynamic capabilities along with their strategy.

Also, respondents in the Japan office stated that the business culture of Japanese companies tends to be process-oriented and have a collective decision-making system. A member of Team 2 mentioned that Japanese companies are keen on quality control for their business routines which use Plan-Do-Check-Act (PDCA) processes, and they expect services to be provided in line with the quality standards of their company level. Japanese customers want to understand every recommendation from service reports; therefore they are conscious of unclear expressions in the Japanese language and demand complicated processes to optimise customers' information systems in the after-service reports submitted by cross-functional project teams.

The leader of Team 1 said, 'Sometimes, Japanese customers request something which does not make sense. They do not focus on final outcomes. They just focus on the current situation and sometimes forget their targets. Also the customers are bothered about why the problems have occurred rather than about the solution. We need to explain the background to why the issues occurred. ' (TL, T1, JCD2) This implies a different way of thinking from national cultural perspectives. This leader felt that Japanese customers are more process-oriented whereas European customers are more goal-oriented. One respondent added to this the organisational structures of Japan,

related to in-group collectivism and intuitional collectivism, which are likely to have a strong interrelationship with the organisation. Therefore, even though we may have asked a customer to open a remote connection, it takes time to get permission from the managers of that customer.

As a part of Japanese customer demands, customers want to be entitled to have skills transferred from Company X. Some customers want to obtain skills and knowledge and demand to have manuals which describe every function and step of their software products for free. Company X applies a business model to sell its services as products to transfer skills and manuals: hence, transferring skills and giving manuals for free are not possible. Yet, interview respondents mentioned the benefits of demands for high service quality in Japan, as it gives the company the motivation to improve quality. That implies an organisational capacity to identify and adapt to anticipated customer needs. Also, as a consequence it has a positive effect on different levels of learning, including organisational units and individuals.

Customer Behaviours in Japan

The most outstanding characteristics of Japanese customers are that they are apt to complain about the quality of support services because of mismatches between customer expectations of services and the services actually provided. Respondents in the Japanese office said, 'There might be communication gaps between our company and Japanese customers in terms of expectations and what we can offer.' According to respondents, there are mismatches between the defined global standards by top management in Organisation Y and what the customer wants. Customer demands in Japan are much higher than that which members of Organisation Y are providing as services.

A member of Team 4 recognised gaps between Japanese customers and company policy; therefore members in Japan need to act as mediators in order to satisfy their Japanese customers. She also warned that if we deliver services at the German standard, Japanese customers would complain a good deal. Another member of Team 4 stated:

> We cannot accept all customer requests because of time constraints. Hence we need to control the level of customer demands and reach agreement about where we need to put our efforts. We need to mention how far we can go,

otherwise we will face trouble later on. If we did talk with customers before services were carried out and if we knew we were not able to provide customer satisfaction, we could then offer different services. However if we have already started services, it is impossible to change customer requirements. (TM, T4, JCB1)

Several respondents in the Japanese office stated that there is a need for customer education for software packages and package solutions. A manager described the current Japanese software industry thus:

It is hard to deal with Japanese customers since they are not used to software packages and solutions packages. Most of our customers are big enterprises. Previously they ordered their requests from systems engineers and programmers and did not consider the demerits of the package. Customers want to use our software for their business convenience. They like to modify software packages as much as they can. But from our company side, we have a standard level and recommendations. There are limitations to what software packages and solutions packages can do. (M4, JCB2)

In short, respondents in the Japan office recognised that customers in Japan are much keener on quality and speed at the same time than those in European countries. Therefore, it is vital for management to control the balance between customer demands and organisational standards. Hence, several interviewees said that if the Japanese office of the global support organisation provided services at the global standard level, Japanese customers would complain about the level of service.

7.2.3 European Customers

<u>**Customer Demands in Europe**</u>

Sixty-four per cent of respondents in the German office said that because of national cultures customer demands are different between countries in Europe. According to them, it is important for the company to know how to deal with customers in each country. The differences in customer demands among European countries will now be described in detail.

According to members of functional MNTs in the German office, German customers are demanding, wanting a decent level of services compared to other nations in Europe. One reason is that German customers have had long experience of using software. German customers prefer to have German members providing service as the Germans value intellectual power highly. Therefore, when the company started assigning Chinese members to provide services three years ago, German customers immediately complained about the quality of services provided by Chinese members, according to a functional manager in Germany. The reason was that they considered the Chinese as cheap unskilled labour, and demanded high levels of expertise and skills from the company. However, after the company provided a high quality of services through its

Chinese members, customers stopped complaining. The reason was that German customers were satisfied with the services provided by these Chinese members, who are experts in their areas.

One interviewee in Team E draws a good comparison between European customers with regard to demands:

> Within Europe, German and Swiss customers have one kind of high demand. They have high skill levels themselves and they usually have high demands. English, Italian and French customers have a medium level of demand. They have a different kind of approach. When you come to German customers, they really know what they want. They want things to be efficient. However, customers from Italy and Spain have different ways of thinking: therefore, when we deliver services to Italian and Spanish customers, the way of dealing with them is not the same as what we do for German customers. (TM, TE, ECD1)

Also, there are customer demands for service in the local native language. Within Europe, there is still a preference for using the local native language, especially in small companies, and in Southern European countries such as Italy and Spain. Demand for providing customers' native languages are high in Southern Europe.

On the other hand, 36% of the respondents in the German office did not feel there were any differences among European customers in terms of demands. Several

respondents stated, 'All customers are demanding. They want to receive adequate results against their valuable investment in our services.' (TM, EDC2) In other words, all demands are the same: customers want to solve issues and obtain solutions immediately and run their computer systems without any problems. However, depending on customers, situation and issues, the ways they express their demands are different and will be affected by the reputation of the software company and the relationship between customers and company. Additionally, customers in European countries are becoming more demanding year by year, because customers have accumulated experience and knowledge of using the software products. Their questions and requests have become more complicated because of more different needs and demands for software. Since the customers have accumulated knowledge about the software products, they place high demands on the support services.

<u>Customer Behaviours in Europe</u>

In terms of customer behaviours and attitudes, 93% of respondents in the German office stated that customers are different in each country and region. They considered that they have different ways of thinking, working, organising and planning. Eighty-three per cent of respondents mentioned European customer behaviours which are

likely to be related to national culture and the way of life in each country. One

member of Team D described customer attitudes as follows:

> Customer attitudes are different depending on the way of life. It is more
> related to behaviours and emotional aspects. Some customers are strict about
> time and straightforward, others are not so punctual. It is not easy to adjust to
> different behaviours but you have to try to find a way. For European people,
> we already know those differences. (TM, TD, ECB1)

When respondents in the German office described customer attitudes in Europe, they

divided the area into two or three regions: Northern Europe, Southern Europe and

Germany. These differences are explored below.

Polite and rational in Northern Europe

Twenty per cent of respondents in the German office mentioned that Northern European

customers as a whole are generally similar to German customers. Customers in

Northern Europe are rational, polite, organised and stick to the facts compared to

Southern customers. For example, members said:

> Nordic countries, like Scandinavia, are quite similar to us Germans in things like
> working and concentration on things and disciplines. And they are very
> professional I would say. (TM, TF, ECB 2)

> Northern countries like those in Scandinavia and Middle Europe are organised and they speak good English. (TM, TF, ECB3)

> Nordic customers are very precise, just stick to the facts. They want to do their best. They look at what you have done but not yourself. (TM, TA, ECB4)

Also, normally they are good at speaking English. Hence most respondents in the German office stated that it is easy to work with Northern European customers.

Open and friendly in Southern Europe

Twenty-three per cent of respondents in Germany mentioned that natives of countries in Southern Europe are more open and friendly. A member of Team F said 'South European customers are more *laissez-faire*, more chaotic and less structured compared to Northern Europe' (TM, TF, ECB5). Another respondent said that in some European countries, such as Italy and Spain, it is not easy to communicate with customers in English. Working attitudes are also different, as the following statements show:

> Southern European customers are more relaxed and like taking their time. The timetable is not so important for them. It is often challenging for us to work with them. (TM, TF, ECB6)

> Southern Europe is more relaxed and friendlier and more aggressive in some ways, like shouting.
> (TM, TD, ECB7)

Therefore, several respondents in the German office admit it is not easy to work with customers in Southern Europe because of their openly-expressed emotions.

Straight and punctual in Germany

German customers tend to have a clear agenda for what they want to obtain from services. They are straight, punctual and stick to their targets. For example, a member of Team A said:

> German customers stick to the target. For example, one of my colleagues went to the customer's site for a workshop. It was only a one-day workshop. Everyone was keeping on asking questions. They learn very diligently. In the middle of training, one of the attendees said she wanted to use the 'ladies'. Before she went to the ladies, they had not had any break during the workshop after the lunch break. The trainer said they should have 20 minutes' break but attendees said that only five minutes was enough for a break. And everyone who attended this workshop was happy to have just a five-minute break. (TM, TA, ECB8)

German customers are organised, compared to customers in Southern Europe. They are rational and tough in their expectations since they have had long experience of using software. A member stated:

> The hardest customer in Europe is the German customer because they have known Company X for a long time. They are very demanding. They know what our company and organisation can do and what they want. Also they have known people in Organisation Y for a long time and know what we have

achieved in the past. They are always increasing their demands. (TM, TA, ECB9)

As seen from the above, customer behaviours in Europe are typical of nations which have individualistic cultures. They are rational, logical and friendly to out-group members.

In Section 7.2, a comparison of customers in Japan and Europe was explored. There are differences in behaviours and demands between local customers depending on demographic location, which suggests that it is better for Organisation Y to be concerned with these differences when local offices formulate cross-functional project teams to satisfy local customers. Especially where the customers' issues are critical, experienced members who have high technical competences are likely to be preferred, regardless of location. When issues are complex, different functional areas of expertise, a high level of experience and cross-cultural knowledge (and sometimes language skills which can be used to talk to a customer in his/her mother tongue) are required to deal with customer issues, and are taken into consideration when formulating cross-functional project teams as already described in Chapter 6. Also, as already noted, there was a special organisational process to manage Japanese customers even when

the customers might prefer to have help from members in the German office.

Therefore, the diverse aspects of members of Organisation Y are likely to be critical to

making profits at global level. In the next section, a quantitative comparison between

Japan and Germany is made.

7.3 Quantitative Comparisons between Functional Multinational Teams in the Japanese and German offices

In order to investigate whether there are significant differences in MNT members'

perceptions between the Japanese office and the German office, T-test and

discriminant analysis are performed. All variables used for quantitative analysis are

summated variables as explained in Chapter 3. As stated in Chapter 4, the number of

questionnaires collected was 48 in the Japanese office and 51 in the German office.

However, in Japan, four questionnaires were collected from managers who do not

manage functional MNTs, and therefore these questionnaires were not used for

quantitative analysis. Also one questionnaire had missing question items since the

respondent did not want to answer these items. In Germany, four questionnaires had

missing items since the respondent refused to answer specific question items. However,

the questionnaires with missing question items were used for quantitative analysis.

Next, the results of T-test and discriminant analysis are given in turn.

7.3.1 Demographic Data

Table 7.2 shows the demographic frequency of the sample from questionnaires in each

location. Demographic data were categorised as gender, age, place of birth, nationality,

length of time living in current location, academic level, field of academic study, tenure

in organisation and team, number of experience areas and number of technical skills.

Table 7.2 Demographic Data of the Main Study in Japan and Germany: Japan (n = 44) and Germany (n= 51)

		Japan (%)	Germany (%)			Japan (%)	Germany (%)			Japan (%)	Germany (%)
Gender	Male	70.5	80.4	Length of time living at current location (years)	0-4	6.8	11.8	Tenure in organisation (years)	0-4	25.0	29.4
	Female	29.5	19.6		5-9	2.3	15.7		5-9	36.4	52.9
Age (years)	25-29	6.8	23.5		10-14	6.8	2.0		10-14	38.6	17.6
	30-34	45.5	17.6		15-19	4.5	0.0	Tenure in team (years)	0-4	86.4	74.5
	35-39	29.5	27.5		20-24	6.8	17.6		5-9	9.1	25.5
	40-44	15.9	23.5		25-29	11.4	7.8		10-14	4.5	
	45-49	2.3	5.9		30-34	29.5	17.6	Number of experience areas	1	43.2	58.8
	50-54	0	2.0		35-39	20.5	19.6		2	47.7	29.4
Nationality	German	9.1	72.5		40-44	11.4	7.8		3	6.8	11.8
	Chinese	4.5	7.8	Academic field	Engineering	34.1	56.9		4	0	
	Brazilian	2.3	3.9		Social Sciences	29.5	33.3		5	2.3	
	Japanese	81.8	0		Life Sciences	4.5	2.0	Number of technical skills	1	59.1	37.3
	Korean	2.3	0		Hard Sciences	20.5	5.9		2	27.3	35.3
	Russian	0	7.8		Languages	11.4	2.0		3	11.4	17.6
	Polish	0	2.0						4	2.3	3.9
	US	0	2.0						5		3.9
	Belarussian	0	2.0						6		2.0
	French	0	2.0								

As shown in the above table, in Japan the age group between 30 and 34 was the most strongly represented in the sample population (45.5%), whereas in Germany there was an even spread of age groups between 25 and 44. In terms of nationalities, in Japan, non-Japanese members made up 18.2% and were from four different nationalities: German, Brazilian, Korean and Chinese. In Germany, on the other hand, non-German members made up 27.5%, from seven different nationalities including Chinese, Russian, Brazilian, US American, French, Polish and Belarussian.

The length of time living in the current location shows the period for which members have lived in Japan and Germany. There are some cases where Japanese and German members had not been living in Japan and Germany. Where a Japanese member was away from Japan for several years, the period was not counted as a length of time living in Japan, and it was the same for German members. For example, if a Japanese member had studied outside Japan, the length of study was not counted as part of the length of time living in Japan. That implies that the Japanese member had had the experience of knowing different cultures outside Japan, forming cross-cultural knowledge. Also, where a German member was away from Germany for several years because of a job assignment, that period was not regarded as part of his or her length of time living in

278

Germany. Except for these cases, however, the length of living current location is likely to reflect different nationalities that have lived in Japan and Germany and worked in the Japanese and German offices.

With regard to field of academic study, in Japan there was an even spread of people with a background in engineering, social sciences and hard sciences, whereas in Germany engineering made up 56.9% of the total. In Japan 38.6% of the sample population had stayed in the global support organisation for over 10 years whereas in Germany only 17.6% of the sample had done so. In terms of the number of technical skills, 59.1% of the sample in Japan indicated only one technical skill, whereas in Germany 37.3% of the sample showed as having only one skill. In Germany, there were 35.3% with two technical skills, 17.6% with three skills, and 9.8 % with more than four skills.

7.3.2 T-test

Table 7.3 displays group descriptive statistics and the results of t-test analysis for means by comparing the local office in Japan with that in Germany. As shown in Table 7.3, most variables show significant differences between the two locations, only collectivism

being the exception. The mean values of individualism and collectivism in Japan are

higher than those in Germany. All other mean values in Germany are higher than those

in Japan.

Table 7.3 Group Descriptive Statistics for the Main study

	Japan			Germany			Total			T-test			
	Mean	SD	N	Mean	SD	N	Mean	SD	N	t	df	Sig. (2-tailed)	Mean Difference
Individualism	4.9205	.86378	44	4.4575	.85625	51	4.6719	.88608	95	2.617	93	.010	.46294
Collectivism	4.9535	.64472	43	4.8880	.77844	51	4.9179	.71735	94	.439	92	.661	.06553
Functional MNT leadership skills	4.6236	1.06216	44	5.4298	.68497	49	5.0484	.96742	93	-4.296	72.104	.000	-.80627
Productivity	5.2652	1.10573	44	5.6267	.71473	50	5.4574	.93131	94	-1.854	71.903	.068	-.36152
Customer services	5.4470	.94539	44	5.6471	.86772	51	5.5544	.90521	95	-1.075	93	.285	-.20009
Innovation	5.1349	.94084	43	5.2980	.83174	51	5.2234	.88225	94	-.892	92	.375	-.16316
Collective behaviours	5.1136	.98094	44	5.4966	.95651	49	5.3154	.98186	93	-1.905	91	.060	-.38296
Learning orientation	5.8636	.75053	44	6.1040	.60507	50	5.9915	.68402	94	-1.718	92	.089	-.24036
Valid N (listwise)			43			45			88				

The most significant difference between Japan and Germany is for functional MNT leadership skills; t (72.104) =-4.296, p= 0.01. On the average, the values of leadership skills in Germany (M= 5.4298, SD= .68497) are greater than of those in Japan (M= 4.6236, SD= 1.06216). The mean differences of leadership skills between Japan and Germany are -.80627.

The second significant difference between Japan and Germany is in individualism; t (93)=2.617, p=0.01. On average, the values of individualism in Japan (M=4.9205, SD=0.86378) are greater than those in Germany (M =4.4575, SD=0.85625). The mean differences in individualism between Japan and Germany are 0.46294. That implies that, as argued in the literature (Triandis, 1991), because of globalisation members of functional MNTs in Japan have increased in individualistic values. Yet, the values of collectivism do not show significant differences between Germany and Japan, as shown in Table 7.3.

The third significant difference between Japan and Germany is in collective behaviours: t (91) = -1.905, p=0.060. On average, the values of collective behaviours in Germany (M=5.4966, SD=0.95651) are greater than those in Japan (M=5.1185,

SD=0.98094). The mean differences in collective behaviours between Japan and Germany are -.38296.

The fourth significant difference between Japan and Germany is productivity: t (71.903) = -1.854, p=0.068. On average, the values of performance in Germany (M =5.6267, SD=.71473) are greater than those in Japan (M=5.2652, SD=1.10573). The mean differences in performance between Japan and Germany are -.36152. The last significant difference between Japan and Germany is learning orientation; t (92) = -1.718, p=0.089. On average, the values of learning orientation in Germany (M=6.1040, SD=0.60507) are greater than those in Japan (M=5.8636, SD=0.75053). The mean differences in learning orientation between Japan and Germany are -.24036. Customer service and innovation do not show significant differences between Japan and Germany, based on the result of t-test.

In sum, the mean values of functional MNT leadership skills and all dimensions of team effectiveness show as higher in Germany compared to those in Japan. Only the mean value of individualism in Japan indicates higher than that in Germany.

Next, discriminant analysis is performed to see whether it is possible to classify locations (Japan or Germany) by using variables: individualism, collectivism, functional MNT leadership skills, productivity, customer services, innovation, collective behaviours and learning orientation.

7.3.3 Discriminant Analysis

Since this research was conducted in two locations, the dependent variable is a group of locations, in this case Japan and Germany. The independent variables are personal values in MNTs (individualism and collectivism), functional MNT leadership skills, performance, collective behaviours and learning orientation. The following tables show the result of discriminant analysis. Since there are seven questionnaires with missing values, 88 questionnaires were used for classification for discriminant analysis. The two groups into which the researcher wishes to classify these 88 cases are coded Japan and Germany.

Table 7.4 Classification Results

		Location	Predicted Group Membership		Total
			Japan	Germany	
Original	Count	Japan	33	10	43
		Germany	9	36	45
	%	Japan	76.7	23.3	100.0
		Germany	20.0	80.0	100.0
Cross-validated	Count	Japan	31	12	43
		Germany	11	34	45
	%	Japan	72.1	27.9	100.0
		Germany	24.4	75.6	100.0

a. Cross-validation is done only for those cases in the analysis. In cross-validation, each case is classified by the functions derived from all cases other than that case.

b. 78.4% of original grouped cases correctly classified.
c. 73.9% of cross-validated grouped cases correctly classified.

As shown in Table 7.4, for the original data the success rate in classifying Japan is 76.7% whereas the success rate in classifying Germany is 80.0%, with 78.4% of original grouped cases correctly classified and 73.9% of cross-validated grouped cases correctly classified. From the result of discriminant analysis, the classification between local office in Japan and that in Germany is likely to be done by seeing characteristics of variables. Therefore, it is likely that there are different influences from variables: therefore, hypothesis testing should be performed in each location separately. Next, before testing the hypotheses, correlation and partial correlation between conceptual variables are performed with comparison in each location in order to see relationships between variables.

7.3.4 Correlation Analysis

In order to discover relationships between variables, correlation and partial correlation in Japan and Germany are performed before testing hypotheses for mediation effect of functional MNT leadership skills respectively.

Correlation in Japan and Germany

Table 7.5 displays a correlation matrix between all variables in Japan, whereas Table 7.6 illustrates a correlation matrix between all variables in Germany. In Table 7.5, firstly, the most significant positive correlation in Japan exists between functional MNT leadership skills and collective behaviours (r= .765, p<.01). Secondly, the positive correlation between functional MNT leadership skills and productivity exists at high r value and significant level (r= .672, p<.01). On the other hand, in Table 7.6, the most positive correlation in Germany exists between functional MNT leadership skills and collectivism behaviours (r= .571, p<.01). Thirdly, the relationship between collectivism and collective behaviour shows positive correlation at high r value and significant level (r= 522, p<.01).

Table 7.5 Correlations among Variables in Japan

	1	2	3	4	5	6	7	8
1.Individualism	1							
2.Collectivism	.149	1						
3.Functional MNT leadership skills	.389[**]	.170	1					
4.Productivity	.169	.041	.672[**]	1				
5.Customer service	.374[*]	-.022	.631[**]	.734[**]	1			
6.Innovation	.259	.014	.571[**]	.682[**]	.730[**]	1		
7.Collective behaviours	.325[*]	.303[*]	.765[**]	.641[**]	.574[**]	.549[**]	1	
8.Learning orientation	.545[**]	.035	.379[*]	.364[*]	.632[**]	.318[*]	.389[**]	1

Table 7.6 Correlations among Variables in Germany

	1	2	3	4	5	6	7	8
1.Individualism	1							
2.Collectivism	.178	1						
3.Functional MNT leadership skills	.280	.352[*]	1					
4.Productivity	.207	.338[*]	.348[*]	1				
5.Customer service	.063	.399[**]	.424[**]	.546[**]	1			
6.Innovation	.089	.369[**]	.275	.555[**]	.718[**]	1		
7.Collective behaviours	.387[**]	.522[**]	.571[**]	.545[**]	.523[**]	.439[**]	1	
8.Learning orientation	.204	.212	.144	.393[**]	.202	.295[*]	.501[**]	1

**. Correlation is significant at the 0.01 level (2-tailed).*. Correlation is significant at the 0.05 level (2-tailed).

From the result of correlation analysis, based on the values in Column 3 from both Table 7.5 and Table 7.6, in Japan all variables of team effectiveness have been strongly correlated with functional MNT leadership skills, whereas in Germany some variables of team effectiveness (productivity, customer service and collective behaviour) have been correlated with functional MNT leadership skills. Therefore, it is worth investigating partial correlation before performing hierarchal regression analysis.

Partial Correlation with Functional MNT Leadership Skills controlled in Japan and Germany

As described in the previous section, there are strong influences of functional MNT leadership skills on the dimensions of team effectiveness. Therefore, partial correlations with functional MNT leadership skill controlled are performed for each location.

Table 7.7 shows the result of zero-order correlation and partial correlation between personal values (individualism and collectivism) and dimensions of team effectiveness (productivity, customer service, innovation, collective behaviours and learning orientation) with MNT leadership controlled in Japan.

Table 7.7 Correlation Coefficients between the Team Effective Dimensions and Functional Multinational Team leadership skills in Japan

Team effectiveness dimensions	Individualism		Collectivism	
	Zero-order correlation	Partial correlation	Zero-order correlation	Partial correlation
Productivity	.169	-.135	.041	-.102
Customer service	.374**	.180	-.022	-.168
Innovation	.259*	.060	.014	-.103
Collective behaviours	.325**	.047	.303**	.271*
Learning orientation	.545***	.466***	.035	-.033

*p<.10,**p<.05,***p<.01

As shown in Table 7.7, there is significant influence from functional MNT leadership skills with relationship between personal values (individualism–collectivism) and dimensions of team effectiveness, especially in the relationship between individualism and dimensions of productivity, customer service, innovation and collective behaviours in Japan. These r-values in partial correlation were significantly lower compared to those in zero-order correlation. The most significantly lower r-values can be seen in the relationship between individualism and collective behaviours. As shown in the table, the zero-order (bivariate) correlation between individualism and collective behaviours was significant; r=.325, p<.05. When functional MNT leadership skills were controlled for, the correlation was not significant: r=. 047. This suggested that the relationship between individualism and collective behaviours was mediated by functional MNT leadership

289

skills. Other relationships between variables seemed to be lower after functional MNT leadership was controlled for. Therefore it is worthwhile to investigate these relationships by using regression analysis.

Table 7.8 shows the results of zero-order correlation and partial correlation between personal values (individualism and collectivism) and dimensions of team effectiveness (productivity, customer service, innovation, collective behaviours and learning orientation) with functional MNT leadership skills controlled for in Germany.

Table 7.8 Correlation Coefficients between the Team Effective Dimensions and Functional Multinational Team Leadership Skills in Germany

Team effectiveness dimensions	Individualism		Collectivism	
	Zero-order correlation	Partial correlation	Zero-order correlation	Partial correlation
Productivity	.175	.079	.366**	.273*
Customer service	.032	-.099	.421***	.320**
Innovation	.059	-.019	.391***	.328**
Collective behaviours	.373**	.269*	.545***	.451***
Learning orientation	.180	.147	.242*	.206

*p<.10,**p<.05,***p<.01

By comparing all r –values between zero-order correlation and partial correlation with functional MNT leadership skills controlled, these values are significantly lower.

Therefore, it is worth investigating the effects of a controlled variable of functional MNT leadership skills. This suggested that relationships between personal values and dimensions of team effectiveness were mediated by leadership. Next, I will move on to test the hypotheses in order to explore the mediation effect of functional MNT leadership skills.

7.4 Testing Hypotheses for the Modified IPO model

The main hypothesis of this research is to investigate whether a set of functional MNT leadership skills mediates the relationship between personal values of individualism–collectivism and MNT effectiveness. Next, in order to test the hypotheses given in Chapter 3, regression analyses were performed. As the main hypothesis is that '**Functional MNT leadership skills have a mediating role in the relationship between values of individualism–collectivism and functional MNT effectiveness',** personal values are considered as predictor variables, a set of functional MNT leadership skills is considered as a presumed mediator and dimensions of team effectiveness are considered as outcome variables. In order to test the hypothesis, hierarchical regression analyses were performed in each location by having each

dimension of MNT effectiveness as a dependent variable, and cultural values, such as individualism and collectivism and MNT leadership skills, as independent variables. As mentioned in Chapter 3, for a mediation effect, four conditions should be met: there are significant relationships 1) between predictor variable(s) and outcome variable (restricted model), 2) between a presumed controlled variable and predictor variable(s), 3) between a presumed controlled variable and an outcome variable and 4) between predictor variable(s) and outcome variable with a presumed controlled variable (full model) and significant changes from the restricted model to the full model. Moreover, in order to calculate the significant size of mediation, a Sobel calculation was applied. The result of regression analyses in order to test hypotheses given in Chapter 2 is now described in greater detail in relation to Japan and to Germany.

7.4.1 Data Preparation for Testing Hypotheses

Before testing hypotheses, multicollinearity should be tested since it brings difficulties for the assessment of the importance of a predictor. Multicollinearity is seen when correlation between variables exceeds .80 (Field, 2005). From the correlation matrix in Table 7.5 and Table 7.6, there are no correlations which exceed .80. However, this does not guarantee that there is no collinearity since it may have occurred by the combination

292

of two or more variables. SPSS provides collinearity diagnosis as the variance inflation factor (VIF) and the tolerance statistic. The VIF investigates whether an independent variable has a strong linear relationship with the other independent variables. If a value of VIF exceeds 10 and the tolerance statistic indicates below .1, it should be taken into consideration for multicollinearity (Myers, 1990; Field, 2005). A summary of multicollinearity statistics for the regression models in this study is given in Table 7.9. In this summary table, all tolerance values were greater than .10 and all VIF values were less than 10; there is therefore no multicollinearity.

Table 7.9 Summary of Multicollinearity Statistics for the Main Study

Model	Japan (Table 7.11)		Germany (Table 7.14)	
	Multicollinearity Statistics		Multicollinearity Statistics	
	Smallest Tolerance	Largest VIF	Smallest Tolerance	Largest VIF
Hierarchical regression model of Productivity				
Restricted model	.978	1.023	.961	1.040
Full model	.963	1.039	.902	1.109
Hierarchical regression model of Customer service				
Restricted model	.978	1.023	.947	1.056
Full model	.963	1.039	.902	1.109
Hierarchical regression model of Innovation				
Restricted model	.978	1.023	.947	1.056
Full model	.963	1.039	.902	1.109
Hierarchical regression model of Collective behaviours				
Restricted model	.978	1.023	.943	1.060
Full model	.963	1.039	.899	1.113
Hierarchical regression model of Learning orientation				
Restricted model	.978	1.023	.934	1.071
Full model	.963	1.039	.891	1.122

In addition, with regard to the accuracy of regression models after performing regression analysis, it was confirmed that there was no model which showed standardised residuals exceeding 3, the values of Cook's distance exceeding 1 and the values of Mahalanobis greater than 15. Finally, for the assumptions of the regression model, the histogram of regression analyses in this pilot study looked like a bell-shaped curve and the normal probability plot could be plotted along a straight line. All the

above requirements have been met for regression analysis in this study. After data

preparation for this study I next move to regression analysis to test the hypotheses given

in Chapter 3.

7.4.2 Testing Hypotheses in Japan

As Table 7.7 has shown, there were significant zero-correlations between individualism

and the dimensions of team effectiveness: customer service, innovation, collective

behaviours and learning orientation and between collectivism and collective behaviours.

After functional MNT leadership skills were controlled for other variables, the values of

partial correlations between individualism and dimensions of team effectiveness

(customer service, innovation and collective behaviours) were significantly lower. That

implied a mediation effect of functional MNT leadership skills.

In order to confirm a mediator effect of functional MNT leadership skills in Japan,

hierarchical regressions were performed as shown in Table 7.10. The restricted models

show the result of regressions on the relationship between the predictor variables

(individualism and collectivism) and each outcome variable (every dimension of team

effectiveness: productivity, customer service, innovation, collective behaviours and

learning orientation). The full models show the result of regressions between the

predictor variables (individualism and collectivism) with the presumed mediator

(functional MNT leadership skills) and each outcome variable (productivity, customer

service, innovation, collective behaviours and learning orientation).

Table 7.10 Hierarchical Regression Models of the Predictor of Functional Team Leadership Skills in Japan

Variables	Productivity		Customer service		Innovation		Collective behaviours		Learning orientation	
	Restricted model	Full model	Restricted model	Full model	Restricted model	Full model	Restricted model	Full model	Restricted model	Full model
Individualism	.160	-.097	.378**	.168	.263*	.062	.273*	.016	.553***	.477***
Collectivism	.017	-.068	-.078	-.147	-.025	-.091	.262*	.178*	-.047	-.073
Functional MNT leadership skills		.722***		.590***		.563***		.724***		.216
R square	.027	.469	.140	.435	.068	.336	.165	.608	.301	.340
Adjusted R square	-.022	.428	.097	.392	.021	.285	.123	.578	.266	.289
F	.551	11.474***	3.261**	10.010***	1.451	6.578***	3.947**	20.206***	8.595***	6.696***
ΔR square from restricted models		.442		.295		.268		.444		.039
Δ F		32.453***		20.355***		15.761***		44.197***		2.329

 * p<.10,**p<.05,***p<.01(n=43)

Also, regression analyses on the relationships between personal values (individualism and collective) as the predicted input, and functional MNT leadership skills as the presumed mediator, were performed. The results of these regression analyses are shown in Table 7.11.

Table 7.11 Regression Analyses of Functional Multinational Team Leadership Skills in Japan

Japan	Functional MNT leadership skills (n=44)		Functional MNT leadership skills (n=43)
Individualism	.389***	Collectivism	.170
R square	.151	R square	.029
Adjusted R square	.131	Adjusted R square	.005
F	7.468***	F	1.224

* p<.10,**p<.05,***p<.01

As shown in the above table, the relationship between individualism and functional MNT leadership skills showed significance (r=.389, p<.01), whereas the relationship between collectivism and functional MNT leadership skills did not show any significance. This implies that the presumed mediator (functional MNT leadership skills) is likely to have a mediator effect only for individualism.

The column for productivity in Table 7.10 tests Hypothesis 1a and Hypothesis 1b. Although the results of the full model of the hierarchical regression showed significant changes in the F-value and R from the restricted model and significant R (F-value changed =32.453, p<.01; r changed =.442), the relationship between personal values (both individualism and collectivism) and productivity did not show any significance. Therefore, both Hypothesis 1a: **Functional MNT leadership skills have a mediating role in the relationship between individualism and productivity**, and Hypothesis 1b: **Functional MNT leadership skills have a mediating role in the relationship between collectivism and productivity**, are not supported in Japan. Yet, a direct strong relationship was confirmed between functional MNT leadership skills and productivity, as seen in F-value (F=11.474, p<.01) and R square (r=.469).

The column for customer services in Table 7.10 tests Hypothesis 2a and Hypothesis 2b. In the restricted model, the relationship between individualism and customer service showed a significant level (beta=.378, p<.05). In the full model, the relationship between functional MNT leadership skills and customer service shows significance (beta=.590, p<.01). As given in Table 7.11, there is a significant relationship between individualism and functional MNT leadership skills. Then after functional MNT

299

leadership skills are controlled for other variables, the beta values between individualism and customer service were significantly lower (beta=.168, p>.1). Also, F-value changed from the restricted model to the full model to show a significant level (F-value changed =20.355, p<.01). Hence Hypothesis 2a: '**Functional MNT leadership skills have a mediating role in the relationship between individualism and customer service**' is supported. However, there is no mediation effect of functional MNT leadership skills on the relationship between collectivism and customer services since there is no significant relationship between collectivism and customer service in the restricted model given in Table 7.10. Also, there is no significant relationship between collectivism and functional MNT leadership skills in Table 7.11. Hence Hypothesis 2b: '**Functional MNT leadership skills have a mediating role in the relationship between collectivism and customer service**' is not supported.

The column for innovation in Table 7.10 tests Hypothesis 3a and Hypothesis 3b. In this regression, all four conditions for mediator effect have been met on the relationship between individualism and innovation with the controlled variable of functional MNT leadership skills. The relationship between individualism and innovation in the restricted model showed a significant level (beta=.263, p<.1). In the full model, the

300

relationship between functional MNT leadership skills and innovation shows significance(beta=.563, p<.01). Then after functional MNT leadership skills are controlled for other variables, the beta values between individualism and innovation were significantly lower (beta=.062, p>.1). Moreover, the changes in F-values from restricted model to full model show significance (changed F-value = 15.761, p<.01). Hence Hypothesis 3a: '**Functional MNT leadership skills have a mediating role in the relationship between individualism and innovation**' is supported. However, there is no mediation effect of functional MNT leadership skills on the relationship between collectivism and innovation since there is no significant relationship between collectivism and customer service in the restricted model given in Table 7.10. Also, there is no significant relationship between collectivism and functional MNT leadership skills in Table 7.11. Hence, Hypothesis 3b: **Functional MNT leadership skills have a mediating role in the relationship between collectivism and innovation**' is not supported.

The column for collective behaviours in Table 7.10 shows the hierarchical regression analysis for testing Hypothesis 4a and Hypothesis 4b. The relationship between individualism and collective behaviours in the restricted model showed a significant

level (beta=.273, p<.1). In the full model, the relationship between functional MNT leadership skills and collective behaviours shows significance (beta=.724, p<.01). Then, after functional MNT leadership skills have been controlled, the beta values between individualism and innovation were significantly lower (beta=.016, p>.1). Moreover, the changes in F-values from restricted model to full model show significance (F= 44.197, p<.01). Hence hypothesis 4a: '**Functional MNT leadership skills have a mediating role in the relationship between individualism and collective behaviours**' is supported. However, there is no mediation effect of functional MNT leadership skills on the relationship between collectivism and innovation since there is no significant relationship between collectivism and customer service in the restricted model given in Table 7.10. Also, there is no significant relationship between collectivism and functional MNT leadership skills in Table 7.11. Hence, Hypothesis 4b: '**Functional MNT leadership skills have a mediating role in the relationship between collectivism and collective behaviours**' is not supported.

Finally, the column for learning orientation in Table 7.10 shows the results of testing Hypothesis 5a and Hypothesis 5b. Although the relationship between individualism and learning orientation showed significance, the beta value was not significantly lower.

Also, the result for the full model of the hierarchical regression did not show significant changes in the F-value and R from the restricted model. The relationship between collectivism and learning orientation did not show significance. Therefore, Hypothesis 5a: **Functional MNT leadership skills have a mediating role in the relationship between individualism and learning orientation**, and Hypothesis 5b: **Functional MNT leadership skills have a mediating role in the relationship between collectivism and learning orientation,** are not supported in Japan. However, it shows a direct strong relationship between individualism and learning orientation in both restricted (beta= .553, F=8.595, p<.01) and full models (beta= .477, F=6.696, p<.01).

The mediation effect was tested by application of the Sobel approximate formula (Soper, 2004-2009) to the unstandardised coefficient and standard error values. The result is shown in Table 7.12:

Table 7.12 Summary of Sobel Test in Japan

		Customer service	Innovation	Collective behaviours
Individualism	Z-values	2.324441	2.242536	2.538736
	P (one-tailed)	0.010051	0.012463	0.005563
	P (two-tailed)	0.020102	0.024927	0.011125

From the comparisons of Z-values given in Table 7.12, the relationship between individualism and collective behaviours has been mostly mediated by functional MNT leadership skills (Z= 2.538736, p<.05), then the relationships between individualism and customer service with functional MNT leadership skills are controlled (Z= 2.324441, p<.05) and the relationships between individualism and innovation with functional MNT leadership skills are controlled (Z=2.2425236, p<.05) respectively. In the next section, the hypotheses are tested for quantitative data collected in Germany from members of functional MNTs.

7.4.3 Testing Hypotheses in Germany

As Table 7.8 has shown, there were significant zero-correlations between individuals and collective behaviours and between collectivism dimensions of team effectiveness, productivity, customer service, innovation, collective behaviours and learning orientation. After functional MNT leadership skills were controlled, these correlations were lower, as shown in the column for partial correlation. That implied a mediation effect of functional MNT leadership skills as mentioned previously. Next, in order to test the hypotheses given in Chapter 2, regression analyses were performed.

In order to confirm a mediator effect of functional MNT leadership skills in Germany, hierarchical regressions were performed, as shown in Table 7.13. The restricted models show the result of regressions on the relationship between the predictor variables (individualism and collectivism) and each outcome variable (every dimension of team effectiveness: productivity, customer service, innovation, collective behaviours and learning orientation). The full models show the result of regressions between the predictor variables (individualism and collectivism) with the presumed mediator (functional MNT leadership skills) and each outcome variable (every dimension of team effectiveness: productivity, customer service, innovation, collective behaviours and learning orientation).

Table 7.13 Hierarchical Regression Models of the Predictor of Functional Team Leadership Skills in Germany

Variables	Productivity (n=48)		Customer service(n=49)		Innovation (n=49)		Collective behaviours (n=47)		Learning orientation (n=48)	
	Restricted model	Full model	Restricted model	Full model	Restricted model	Full model	Restricted model	Full model	Restricted model	Full model
Individualism	.107	.052	-.068	-.141	-.032	-.068	.258**	.174	.126	.118
Collectivism	.345**	.270*	.436***	.331**	.399***	.347**	.483***	.367**	.209	.197
Functional MNT leadership skills		.233		.347**		.172		.395**		.041
R square	.145	.189	.181	.282	.154	.179	.359	.490	.073	.075
Adjusted R square	.107	.134	.146	.234	.117	.124	.330	.454	.032	.012
F	3.828**	3.424**	5.096**	5.883***	4.195**	3.268**	12.330***	13.765***	1.782	1.185
∆R square from restricted models		.044		.100		.025		.131		.001
∆ F		2.381		6.286**		1.350		11.020***		.067

* p<.10,**p<.05,***p<.01

Regression analyses on the relationships between personal values (individualism and

collective) as the predicted input, and functional MNT leadership skills as the presumed

mediator, were performed. The results of these regression analyses are shown in Table

7.14:

Table 7.14 Regression Analyses of Functional Multinational Team Leadership Skills in Germany

	Functional MNT leadership skills (n=49)		Functional MNT leadership skills (n=49)
Individualism	.280*	Collectivism	.352**
R square	.078	R square	.124
Adjusted R square	.059	Adjusted R square	.105
F	3.990*		6.630**

* p<.10,**p<.05,***p<.01

As shown in the above table, the relationship between individualism and functional

MNT leadership skills shows a significant level (r=.280, p<.10), and also the

relationship between collectivism and functional MNT leadership skills indicates

significance (r=.352, p<.05). That implies that the presumed mediator (functional MNT

leadership skills) is likely to have a mediator effect on both individualism and

collectivism.

Firstly, the column for productivity in Table 7.13 for testing Hypothesis 1a and Hypothesis 1b did not show significance for the relationship between personal values (both individualism and collectivism) and productivity. Therefore, both Hypothesis 1a: **Functional MNT leadership skills have a mediating role in the relationship between individualism and productivity** and Hypothesis 1b: **Functional MNT leadership skills have a mediating role in the relationship between collectivism and productivity** are not supported in Germany.

Secondly, the column for customer services in Table 7.13 tests Hypothesis 2a and Hypothesis 2b. In the restricted model, the relationship between collectivism and customer service showed a significant level (beta=.436, p<.01). In the full model, the relationship between functional MNT leadership skills and customer service shows significance (beta=.347, p<.05). Then, after functional MNT leadership skills are controlled, the beta values between individualism and customer service were significantly lower (beta=.331, p<.05). Also, changes in F-value from the restricted model to the full model show a significant level (F-value changed =6.286, p<.05). Hence Hypothesis 2b: '**Functional MNT leadership skills have a mediating role in the relationship between collectivism and customer service**' is supported. However,

there is no significant relationship between individualism and customer service in the restricted model. Hence Hypothesis 2a: **Functional MNT leadership skills have a mediating role in the relationship between individualism and customer service** is not supported.

The column for innovation in Table 7.13 tests Hypotheses 3a and 3b. In this regression, the result of the full model of the hierarchical regression did not show significant changes in the F-value and changes of R from the restricted model. Hence both Hypothesis 3a: **Functional MNT leadership skills have a mediating role in the relationship between individualism and innovation** and Hypothesis 3b: **Functional MNT leadership skills have a mediating role in the relationship between collectivism and innovation** are not supported.

The results of the hierarchical regression analysis for testing Hypotheses 4a and 4b are shown in the column for collective behaviours in Table 7.13. In this regression, all four conditions for mediator effect have been met on the relationship between individualism and collective behaviours with the controlled variable of functional MNT leadership skills. The relationship between individualism and collective behaviours in restricted

model showed a significant level (beta =.258, p<.1). In the full model, the relationship between functional MNT leadership skills and collective behaviours shows significance (beta=.395, p<.05). Then, after functional MNT leadership skills are controlled for, the beta values between individualism and innovation were significantly lower (beta=.174, p>.1). Moreover, the changes in F-values from the restricted model to the full model show significance (F-value changed= 11.020, p<.01). Hence Hypothesis 4a: '**Functional MNT leadership skills have a mediating role in the relationship between individualism and collective behaviours'** is supported. Furthermore, the relationship between collectivism and collective behaviours in the restricted model showed a significant level (beta =.483, p<.01). Then, after functional MNT leadership skills were controlled, the beta values between collectivism and innovation were significantly lower (beta=.367, p<.05). Hence Hypothesis 4b: '**Functional MNT leadership skills have a mediating role in the relationship between collectivism and collective behaviours**' is also supported.

Finally, for testing Hypotheses 5a and 5b, the result of the full model of the hierarchical regression did not show significant changes to the F-value and R from the restricted model. The relationship between personal values (individualism and collectivism) and

learning orientation did not show significance. Therefore, both Hypothesis 5a:

Functional MNT leadership skills have a mediating role in the relationship

between individualism and learning orientation and Hypothesis 5b: **Functional**

MNT leadership skills have a mediating role in the relationship between

collectivism and learning orientation are not supported.

Next, in order to explore and compare effect size for a mediator effect of functional

MNT leadership skills, Sobel test was performed on supported Hypotheses 2b and 4a

and 4b. The mediation effect was tested by application of the Sobel approximate

formula (Soper, 2004-2009) to the unstandardised coefficient and standard error values.

The result is shown in Table 7.15:

Table 7.15 Summary of Sobel Test in Germany

		Collective behaviours
Individualism	Z-values	1.795427
	P (one-tailed)	0.036293
	P (two-tailed)	0.072586
Collectivism	Z-values	2.110656
	P (one-tailed)	0.017401
	P (two-tailed)	0.034802
		Customer service
Collectivism	Z-values	1.723290
	P (one-tailed)	0.042418
	P (Two-Tailed)	0.084836

As shown in Table 7.15, the relationship between collectivism and collective behaviours has been mostly mediated by functional MNT leadership skills (Z= 2.110656, p<.05), then the relationships between individualism and collective behaviours with leadership skills are controlled (Z= 1.795427, p<.10); and those between collectivism and customer service with leadership skills are controlled (Z=1.723290, p<.10), respectively.

7.4.4 Comparison of the Results of Testing the Hypotheses in Japan and in Germany

Until now, the results of testing the hypotheses have been given for each location. In this section, comparisons of these results are given as a summary of the hypothesis testing. Table 7.16 shows a summary of hypothesis-testing in Japan and Germany based on the results:

Table 7.16 Summary of Supported Hypotheses

Hypotheses	Japan	Sobel test (z-value)	Germany	Sobel test (z-value)
Supported in both locations	Hypothesis 4a	2.538736**	Hypothesis 4a	1.795427*
Supported in either Japan or Germany	Hypothesis 2a	2.324441**	Hypothesis 2b	1.723290*
	Hypothesis 3a	2.242536**	Hypothesis 4b	2.110656**

*p<.10,**p<.05,***p<.01

With regard to group 4 of the hypotheses to test a mediation effect of functional MNT leadership skills on the relationship between personal values and collective behaviours,

312

Hypothesis 4a is supported in both Japan and Germany, whereas Hypothesis 4b is supported only in Germany, as shown in Table 7.16. The table shows that the z-value of Hypothesis 4a in Japan (z= 2.538736, p<.05) is higher and more significant than that in Germany (z=1.795427, p<.10). That implies that functional MNT leadership skills in Japan have more significantly mediated the relationship between the personal values of individualism and collective behaviours than they have in Germany. Also it shows that the z-value of Hypothesis 4b in Germany is significant (z= 2.110656, p<.05). This suggests that only in Germany have functional MNT leadership skills affected the relationship between personal values of collectivism and collective behaviours. With regard to group 2 of the hypotheses to test a mediation effect of functional MNTs leadership skills on the relationship between personal values and customer services, Hypothesis 2a is supported in Japan, whereas Hypothesis 2b is supported in Germany, as shown in Table 7.16. The table indicates that the z-value of Hypothesis 2b in Japan shows more significance (z=2.32444, p<.05) compared to the z-value of Hypothesis 2a in Germany (z=1.723290, p<.10). That indicates that functional MNT skills in Japan and Germany have mediated the relationship between personal values and customer services. Yet, the mediation effect of functional MNT leadership skills in Japan is seen for the personal value of individualism, whereas that in Germany is seen for the

313

personal value of collectivism. Moreover, the size of that mediation effect in Japan is more significant than that in Germany. As given in Table 7.16, Hypothesis 3a, which tests a mediation effect of functional MNT leadership skills on the personal value of innovation is supported only in Japan (z=2.24253, p<.05).

In short, there are differences in mediation effects of functional leadership in Japan and Germany. Functional leadership skills in Japan have mediated only the personal value of individualism, whereas in Germany they have mediated the personal values of both individualism and collectivism. Furthermore, the size of the significance in Japan for each hypothesis is much higher than that in Germany, as shown in Table 7.16. That implies that the mediation effects of functional MNTs leadership skills in Japan are larger, especially for personal values of individualism, than those in Germany.

Up till now, the mediation effect of functional MNT leadership skills has been tested toward different aspects of team effectiveness. However, it is worthwhile to investigate the mediation effect of MNT leadership skills by investigating the team members' perception of 1) diversity, 2) expected functional MNT leadership skills, 3) team integration and 4) ideal measurements for team effectiveness.

314

7.5 Summary

This chapter has explored local offices in Japan and Germany at Organisation Y by finding similarities and differences. Firstly, there are differences in customer demands and behaviours between Asia and Europe in terms of service and the level of customers' experience of using the software products of Company X. Because of the uniqueness of the Japanese national culture and customs, there is a special procedure for handling issues and demands of Japanese customers always through Japanese members in Organisation Y. Even among European countries, customer demands and behaviours can differ, depending on areas and nations. Hence, knowing differences between customers in each location is important for Organisation Y to formulate cross-functional project teams by deploying the capabilities of functional MNTs such as cross-cultural knowledge and the language skills of the team members. Secondly, it was confirmed from the results of the t-test that there were significant differences in functional MNT leadership skills and individualism between the offices in Japan and in Germany. Thirdly, from the results of testing the hypotheses, in Japan, individualistic values were mediated by MNT leaders toward collective behaviours, customer services and innovation, whereas in Germany, functional MNT leadership skills mediated the relationships between individualism and collective behaviour, between collectivism and

315

collectivistic behaviours and between collectivism and customer service. The mediation

effect of functional MNT leadership skills in Japan was more significant than that in

Germany.

In the next chapter, functional MNTs in Japan and Germany are explored in greater

detail to know whether there are similarities and differences with regard to diversity,

expected leadership skills, ideal measurements of team effectiveness and team

integration as a part of dynamic capabilities in Organisation Y.

CHAPTER 8

COMPARATIVE ANALYSIS BETWEEN

FUNCTIONAL MULTINATIONAL TEAMS

8.1 Introduction

This chapter is dedicated to comparative analyses of functional MNTs in two locations (Japan and Germany). These analyses were performed based on qualitative data from semi-structured interviews in the Japanese and German offices. The chapter investigates similarities and differences between functional MNTs with regard to members' perceptions of 1) their diversity 2) expected MNT leadership skills 3) team integration and 4) ideal measurements of team effectiveness. In addition, it explores the implications of the relationship between leadership skills and team effectiveness in managing diversity in functional MNTs. Section 8.2 is devoted to a comparative analysis of functional MNTs in Japan. Section 8.3 gives a comparative analysis of functional MNTs in Germany by finding similarities and differences between these teams. Finally, Section 8.4 summarises and investigates differences and similarities across locations.

Representative or intriguing examples are extracted from the interviews so as to allow us to understand opinions of perceptions of diversity, expected functional MNT leadership skills, ideal measurements of team effectiveness and perceived level of team integration in a functional MNT. Each quotation has a code which enables its use as data for discussion. Extracts from the interviews with team leaders are coded as 'TL', those with team members as 'TM'. There is a code for teams (T1 to T6 for functional MNTs in Japan and TA to TH for functional MNTs in Germany) and a code for each concept (diversity in a functional MNT is coded as DFT, expected functional MNT leadership skills as ETL, ideal measurements for team effectiveness as ITE and perceived level of team integration as PTI) in numerical order for the data from Japan and alphabetical order for the data from Germany. For example, the first extract related to diversity in a functional MNT from the interview with the team member of Team 2 in Japan was given the code (TM, T2, DFT1) while the first extract related to diversity in a functional MNT from the interview with the team leader of Team A in Germany was given the code (TL, TA, DFTa).

8.2 Functional Multinational Teams in Japan

In the Japanese local office, six functional MNTs listed in Table 6.3 are investigated, including a problem-solving project manager team (Team 1), technical expert teams (Team 2, Team 3 and Team 4), a service support tool team (Team 5) and a backup team (Team 6). Table 8.1 shows a summary of semi-structured interviews with members of each functional MNT located in Japan. The respondents were asked about their perceptions of 1) diversity in their team, 2) expected MNT leadership skills 3) current team integration and 4) ideal measurements for team effectiveness. The summary is given by finding common factors, counting the number of respondents who mentioned these factors and calculating percentages.

Table 8.1 In-depth Interview Analysis of Functional Multinational Teams in Japan

Team	Diversity in the team	% of mentioned respondents	Expected leadership skills	% of mentioned respondents	Team integration (% of mentioned respondents)	Ideal measurements for team effectiveness	% of mentioned respondents
Team 1	Background Technical skills	60%	Intra-team relational skills	60%	100%	Cooperation	100%
			Extra-team relational skills				
			Seeing issues objectively	50%			
Team 2	Technical skills	44%	Communication skills	44%	66%	Cooperation	44%
			Intra-team relational skills				
	Nationalities	33%	Technical competence	33%		Productivity	44%
	Opinions	22%	Managing members' skill diversity				
			Extra-team relational skills	22%			
Team 3	Nationalities	85%	Communication skills	69 %	15%	Cooperation	54%
			Coaching skills				
	Technical skills	31%	Intra-team relational skills	62%		Productivity	22%
			Setting clear goals	38%			
	Working behaviours	23%	Technical competence	31%			
			Extra-team relational skills	23%			

Table 8.1 In-depth Interview Analysis of Functional Multinational Teams in Japan (*continued*)

Team	Diversity in the team	% of mentioned respondents	Expected leadership skills	% of mentioned respondents	Team integration (% of mentioned respondents)	Ideal measurements for team effectiveness	% of mentioned respondents
Team 4	Nationalities	55%	Intra-team relational skills	67%	44%	Cooperation	43%
	Languages		Setting clear goals	57%		Productivity	29%
	Working behaviours	22%	Communication skills	33%			
	Technical skills		Extra-team relational skills	22%			
Team 5	Languages	100%	Communication skills	71%	100%	Cooperation	56%
			Intra-team relational skills	43%		Productivity	44%
	Nationalities	71%	Setting clear goals	29%			
			Motivating members				
	National cultures	43%	Extra-team relational skills	23%			
Team 6	Technical skills	25%	Setting clear goals	75%	0%	N/A	
	National cultures						

With reference to Table 8.1, similarities and differences between functional MNTs in Japan are summarised in Table 8.2:

Table 8.2 Similarities and Differences between Functional MNTs in Japan

Perceptions of	Similarities	Differences
Diversity	Technical skills Nationalities	Working behaviours
Expected leadership skills of functional MNTs	Intra- and extra- team relational skills Communication skills Setting clear goals	Technical competences
Level of team integration	High when leadership skills of functional MNTs are perceived high by members	Different depending on types of functional MNTs and perceived level of leadership skills
Ideal measurements of team effectiveness	Cooperation Productivity	

In the next section, these similarities and differences between functional MNTs in Japan are explored in greater detail by referring to Table 8.1, Table 8.2 and the interview transcripts.

8.2.1 Similarities between Functional Multinational Teams in Japan

Diversity in a Functional MNT

As seen in Table 8.2, there were two common aspects of diversity across functional MNTs in the Japanese office: technical skills and nationalities. As Table 8.1 shows,

diversity of technical skills was mentioned by members of Team 1 (60%), Team 2 (44%), Team 3 (31%), Team 4 (22%) and Team 6 (25%). Diversity of technical skills was mentioned by all teams except Team 5 (a support service tool team). A member of Team 4 gave an illustrative example of the relationship between tenure in organisation and the level of individual members' technical skills:

> I feel diversity in terms of technical skills in my team. Most of my colleagues in my team have belonged to this organisation for a long time. They have accumulated and improved their knowledge level of functional technical skills. On the other hand, some members like me have just changed organisation or division. I had been working in development department for several years. I used more specific programming knowledge but I have not had the background for technical support. (TM, T4, DFT1)

Also some members, who had belonged to other organisational units such as Research and Development (R&D) in Team 3, have enough skills to analyse programmes with which customers might have issues. Therefore, the diversity of technical skills related to tenure in organisation was recognised by many respondents.

As seen in Table 8.2, nationality was given as an aspect of diversity in the team from four functional MNTs in Japan (Team 2 (33%), Team 3 (85%), Team 4 (55%) and Team 5 (71%)). Japanese members expected German team members to contact the central Germany office when they needed help with technical skills related to tasks in

cross-functional project teams. Therefore, the merit of diversity in nationalities in

functional MNTs is more task-related, to find solutions for technical issues.

Expected MNT leadership skills in functional MNTs

As shown in Table 8.2, there are four common items of expected leadership skills

across functional MNTs in Japan: intra-team relational skills, extra-team relational skills,

communication skills and setting clear goals.

Firstly, five out of six functional MNTs were expected for intra-team relational skills

(Team 1 (60%), Team 2 (44%), Team 3 (62%), Team 4 (67%) and Team 5 (43%)) and

five functional MNTs were expected for extra-team relational skills (Team 1 (60%),

Team 2 (22%), Team 3 (23%), Team 4 (22%) and Team 5 (23%)). These skills are

expected regardless of the type of team. For example, along with the intra-team

relational skills, a member of Team 4 stated:

> A team leader should know members' technical competences and personalities
> so as to deploy team capabilities from functional teams to cross-functional
> project teams. Also he or she needs to develop future plans for the team in
> order to assign suitable members to carry out the work. (TM, T4, ETL1)

Secondly, in relation to intra-team relational skills, a member of Team 4 added that one

task of a team leader is to overview members' status in order to understand members'

situations and conditions of health: for example, what members are having trouble or difficulty, whether or not they are exhausted, or which members have the extra ability to do other jobs. This suggests a link between the intra-team relational skills for capability possession and capability deployment. Therefore, it is likely that the functional MNT leaders' intra-team relational skills have in the end also affected the output of cross-functional project teams, therefore affecting organisational performance and effectiveness.

In considering extra-team relational skills, some members mentioned that they expected their leaders to refuse unrelated tasks from upper management. As a relevant example, one member of Team 3 said:

> What I expect from my team leader is to return unreasonable requests and pressure from upper management. I do not think that task assignment is fair. Between one team and another the team leaders should have power. For example, if our team does not have much work, the team leader should get tasks by negotiating with other team members and managers. (TM, T3, ETL2)

This statement implies that functional MNT leaders are likely to receive requests from outside teams to assign tasks to the team members. Therefore they need to judge whether these tasks are appropriate to their team members. If the tasks are not

appropriate for the team, they need to negotiate with managers and other team leaders in order to avoid tasks which are not related to members' technical areas of expertise.

As shown in Table 8.1, communication skills were mentioned by Team 2 (44%), Team 3 (69%), Team 4 (33%) and Team 5 (71%), as shown in Table 8.1. A member of Team 3 stated that the relationship between capability deployment and communication skills of member was as follows:

> By understanding members' functional technical skills with communication, the leader should assign tasks to our members. Sometimes, I doubt whether my manager and team leader understand what members can do and what we cannot do when they need to assign tasks. My leader often gave us tasks which were not my area of expertise. I hoped that my leader would have checked the content of tasks from management before assigning these tasks. Also when my leader assigns difficult tasks to team members, he or she should explain the reason why he or she has picked these members to solve these issues. (TM, T3, ETL3)

This suggests that communication skills are needed to understand current capability possession for capability deployment.

However, according to respondents in Team 3 and Team 4, because of the huge volume of leaders' workload, team leaders were unlikely to have time to communicate with members. Therefore, several respondents complained that they had been given

inappropriate tasks by their leaders, which were not related to their technical area of

expertise. In relation to this issue, a member of Team 4 explained:

> I need to do tasks assigned by my team leaders (original tasks) and other tasks
> which were not assigned by my team leader but assigned by managers and
> leaders of different functional teams (virtual tasks). Hence it is not easy to
> strike a balance between original tasks and virtual tasks. It is difficult to draw a
> line from where to where we need to take responsibility. Virtual organisation is
> difficult because I have no idea how far we need to get involved. Therefore,
> team leaders need to have relational skills within their functional teams. (TM,
> T4, ETL4)

That suggests that members of functional MNTs are confused about the propriety of

their task because of unclear delineation of task responsibilities from their leaders and

managers, because of lack of communication.

In addition, setting clear goals is expected by members of Team 3 (38%), Team 4 (57%),

Team 5 (29%) and Team 6 (75%) for both short- and long-term perspectives. Some

members of functional MNTs mentioned that although they know the organisational

targets and goals these were not made clear to them. (TM, ETL5)

Perceived level of team integration

As common issues of team integration, members from all teams in Japan mentioned that

because of the nature of tasks for functional MNTs in a matrix organisation, it is

difficult to make members feel that the team is integrated. As a representative example,

a member of Team 2 described his situation:

> I do not think that I have a strong sense of belonging to my team since I always
> stay at my customer's site. I share information with our company side and tell
> team members at the weekly meeting when I receive useful information for
> others. (TM, T2, PTI1)

This suggests that since this weekly meeting is the only opportunity to meet other

members of functional MNTs, there might be a lack of that social interaction between

members of functional MNTs which might help them to identify themselves as team

members. The reason is that individual members are assigned to different cross-

functional project teams from functional teams; therefore they stated that they felt that

there was no teamwork although they helped each other to solve issues in cross-

functional project teams (TM, PTI2).

In addition, according to members of Team 2 and Team 3, even in the same functional

team, there are several subgroups depending on functional technical expertise and

tenure in Organisation Y. In other words, although they might have a sense of

belongingness to their sub-group, it is hard to have a sense of team integration with their

functional MNT. Furthermore, the leader of Team 3 stated:

> I do not feel team emotional integration that much. Members who have belonged to the support division might be integrated together. We have a relationship of trust among members of Organisation Y. (TL, T3, PTI3)

By reflecting on this fact, members of functional MNTs might feel that they are integrated with Organisation Y.

Ideal measurements for team effectiveness

Table 8.2 showed that cooperation and productivity were mentioned by respondents as ideal measurements for team effectiveness. As shown in Table 8.1, members of Team 1 (100%), Team 2 (44%), Team 3 (54%), Team 4 (43%) and Team 5 (44%) considered cooperation as one aspect of team effectiveness. A member of Team 2 said:

> When I am assigned to the back office team, which is a type of cross-functional project team, and do not know a solution, I can ask team members who know the specific technical area in my functional team. And then I feel our team is helpful and effective. I feel my team performance and effectiveness is high. Also we have different skill levels in my team. We rely on individual skills. (TM, T2, ITE1).

This statement implies that members cooperate with each other by providing their own expertise and skills for other members where these do not have enough experience in a specific area of technical functions. This suggests that diversity of technical skills in functional MNTs is helpful to solve issues in cross-functional teams and upgrade

individual technical skills. Also, a member of Team 3 mentioned issues of team

capabilities to help other members:

> Everybody has different tasks and responsibilities. But sometimes a member cannot perform his tasks because of required skills and schedules. Then if team members help each other, it would be a link to team effectiveness. It depends on whether team members have the extra capacity to help others when members face troubles and problems. (TM, T3, ITE2)

This suggests a relationship between current capability possessions and cooperation.

As another ideal measurement for team effectiveness, productivity was also regarded as

a measurement of team effectiveness by members of Team 2 (44%), Team 3 (22%),

Team 4 (29%) and 5 (44%), as shown in Table 8.1. Although there are different types of

functional MNT, Organisation Y sets key performance indicators for individual

performance as productivity. Hence, respondents considered that team effectiveness is

likely to be the same as individual performance in Organisation Y. It is described by a

member of Team 2:

> The most efficient and effective team is a team where no team member is in the office, everybody goes customer-site and the most suitable person is assigned to a specific task. (TM, T2, ITE3)

This suggests that no members are waiting for capability deployment to carry out tasks in cross-functional project teams. As previously mentioned, the level of cooperation between members is likely to depend on extra capacities in functional MNTs. When technical expert teams have high productivity, it might be difficult to obtain help from other members.

8.2.2 Differences between Functional Multinational Teams in Japan

Diversity in functional MNTs

With regard to working behaviours, the leaders of Team 3, Team 4 and Team 5 mentioned differences in personal values. Although types of functional MNT are different, they stated that the way of thinking differs even within the same nationality.

The leader of Team 5, who is non-Japanese, said:

> Even among the same nationalities and language, there are personal differences in terms of the way of thinking. That might be because of differences in personal values to deal with issues. (TL, T5, DFT2)

This statement implies that personal values are likely to influence the way of thinking. Other members stated that depending on members, the level of involvement with customers' issues varies.

As another aspect of diversity, members of Team 1 stated that individual background in

the business field was a kind of diversity. One member from the team said:

> One of the members has dealt with problem-solving for a long time. Another member came from sales and he is good at managing. The other member had experience in technical expertise from the viewpoint of project management. I had experience in product management and pre-sales. We have different characteristics but we are all earnest and diligent. (TM, T1, DFT3)

Since the members of Team 1 are managers of cross-functional problem-solving project

teams, experience in different divisions would be helpful in dealing with customers for

solving critical issues. Therefore, experience in different divisions is likely to give

different perspectives to solving and handling customers' issues.

Expected leadership skills in MNTs

It was confirmed that the expected skills of team leaders differ depending on their teams.

Since Team 2 and Team 3 are technical expertise teams, technical competence was

expected of team leaders (33% in Team 2 and 31 % in Team 3, as shown in Table 8.1).

Members expected that their leaders would give an induction into how to solve

technical issues with customers by means of technical competence and extra-team

relational skills. One said:

The team leader considers customers' demands with respect. It would be better for us that the team leader is able to listen to customer demands such as project schedule and requests for desired functions and improvement in functions. I would hope that my team leader could discuss issues and customer demands proactively. (TM, T2, ETL6)

This statement implies that combinations of functional MNT leadership skills for technical competences are needed if the team is to respond to customer demands.

A member of Team 4 expected the team leader to give autonomy to members in order to develop skills, saying that:

A team leader should give options for members and make them judge for themselves. The leader should give members responsibility and follow them up when they make mistakes. The leader should not take extra care for members, otherwise members do not learn on their own by making mistakes. (TM, T4, ETL7)

That implies that team leaders are better giving team members opportunities to learn themselves, if necessary by making mistakes.

<u>Perceived level of team integration</u>

Respondents in Team 1 and Team 2 mentioned that because of their team leaders, they feel a sense of team integration although types of functional MNTs are different. According to members of Team 1 and Team 2, their team leaders facilitate information-

sharing in their teams, and team integration. The members of Team 1 and Team 2 go for lunch together and sometimes members of Team 2 have a drink after work on the suggestion of the leaders. A member of Team 2 stated: 'We have '*nominication*' which means communication during drinks after work because of their team leader (TM, T2, PTI4). That implies that the leaders can influence team members to identify themselves with their teams by social interaction.

In addition, in Team 2, when the members face problems during task assignment in cross-functional project teams, they can put their problems to other members of their functional team without following the formal organisational processes of Organisation Y. That assumes that members of Team 2 have developed social interaction beyond formal structure. In other words, the level of social interactions between members of Team 2 is high. Yet, members of Team 2 felt rivalry in the atmosphere, as a member of Team 2 observed:

> I feel team members have a strong rivalry. Whenever a new member joins our team, team members are worried whether the amount of work they have is going to decrease and whether the new member might take over others' tasks. Besides, having a strong rivalry would affect assignment for tasks regarding key performance indicators for individual members. In order to be selected, we need to upskill. Hence, we must take this situation seriously and get knowledge

and skills by ourselves. Because our company is a foreign affiliate company we need to increase our personal value by having competences. (TM, T3, PTI5)

That implies the value of individualism to develop individual technical competences as well as team integration. Therefore, the leader of Team 2 said, in order to facilitate not only team integration but also upgrading of capabilities, he intentionally assigned the same tasks to two or three members from Team 2 by aiming to share the same experience between members. The leader of Team 2 said:

> Inside of my team, there are subgroups based on each product. A subgroup has three or four members and I try to assign two or three members to the same task to share information. In a good sense, team members have a rivalry. Hence I am careful when I assign members to tasks to distribute them evenly. Where assignment is not even, I try to explain why I am choosing a specific member. If members do not have the chance to go onsite, their motivation would decrease. (TL, T2, PTI6)

This statement well illustrates the influence of team leaders on team integration and team learning.

However, with regard to the negative side of team integration, two members and the leader in Team 4 mentioned groupism. The leader of Team 4 said:

> We are integrated as a team but when we talk about efficiency and effectiveness it would not necessarily mean only something positive. For example, everybody wants to do a single task together in this team. Normally only one member is selected to perform and takes on the responsibility to do the task, which make it more efficient and effective. Hopefully one member does the same task continuously until the end or somebody takes over the same

task after another team member transfers his/her knowledge. Sometimes it works in a bad way, like groupism. But we are helping each other when members ask for help. In sum, team integration works in both a positive and a negative way. (TL, T4, PTI7)

This suggests that collectivism has affected effectiveness and performance in Team 4.

Yet, not only the negative side of collectivism but also the positive side was perceived

by a member of Team 4:

I feel team integration is important when I need to find my place in a functional team inside my organisation. I want to identify where I belong in my organisation and want to feel safe as a member of my functional team. (TM, T4, PTI8)

That suggests that the member of Team 4 is likely to identify himself or herself into his

or her team as a home base.

Ideal measurements for team effectiveness

With regard to the concept of productivity as team effectiveness, the meaning of

productivity is likely to be different in different types of functional MNTs. For members

of Team 1 (a problem-solving manager team), productivity is not likely to be important

compared to other types of functional MNTs since the members manage cross-

functional projects to solve customers' critical issues and their highest priority is to

solve customers' issues without considering time spent. Also, for members of Team 5 (a

support service tool team), productivity means how individual members achieve their

336

individual targets to test the functions of the support service tool in a timely manner, according to the members of Team 5. Hence, depending on the type of functional MNT, the meaning of productivity and effectiveness is likely to be different.

Two members of Team 5 and a leader from Team 3 mentioned that in order to evaluate team effectiveness it is necessary to have team targets and goals, and then management can see how far the team has reached and achieved these targets (ITE4). Yet, according to respondents, last year there were no team goals from management in the Japan office.

To conclude the analysis of functional MNTs in Japan, the members of functional MNTs recognised diversity in technical skills and nationalities, as shown in Table 8.1. Expected functional MNT leadership skills were found in intra-team relational skills (extract TM, T4, ETL1), extra-team relational skills (extract TM, T3, ETL2), and setting clear goals. Ideal measurements of team effectiveness were cooperation and productivity regardless of the types of functional MNTs. In addition, it was confirmed that a moderate level of rivalry is likely to have a positive impact on individual learning (for example, extract TM, T3, PTI5) and that strong collective behaviours among members is likely to create group thinking that bring negative impact on productivity

(for example, extract TL, T4, PTI7). This positive team atmosphere and integration

toward cooperation depended on interactions with the team leaders mentioned by

members of Team 1 and Team 2 (extract TM, T2, PTI4) although these teams are of

different types. Therefore, it is likely that team leaders balance personal values of

individualism–collectivism toward team integration. Among technical expertise teams,

technical competences are expected of team leaders, to understand customer demands

and issues (extract, TM, T2, ETL6). The analysis of functional MNTs in Japan was

given in its various aspects. The next section investigates functional MNTs in Germany.

8.3 Functional Multinational Teams in Germany

In the German local office, eight functional MNTs listed in Table 6.3 were investigated.

All teams where interviews were conducted are technical expert teams, and Table 8.3

gives a summary of each functional MNT. Common factors which were mentioned by

respondents were counted and calculated as percentages.

Table 8.3 In-depth Interview Analysis of Functional Multinational Teams in Germany

Team	Diversity in the team	% of mentioned respondents	Expected leadership skills	% of mentioned respondents	Team integration (% of mentioned respondents)	Ideal measurements for team effectiveness	% of mentioned respondents
Team A	Nationalities	100%	Intra-team relational skills	71%	57%	Customer satisfaction	43%
	Languages	71%	Managing differences of national cultures				
	National cultures	57%					
	Physical distance	42%	Communication skills	57%			
	Ways of thinking	26%	Setting clear goals	43%			
	Technical skills	14%					
Team B	National cultures	100%	Intra-team relational skills	100%	67%	Productivity	67%
			Communication skills	83%			
	Ways of thinking	50%	Managing differences of national cultures	67%		Cooperation	50%
			Motivating members	33%			
	Background	33%	Extra-team relational skills				
	Languages		Technical competence				
Team C	Nationalities	50%	Setting clear goals	75%	100%	N/A	
	National cultures		Communication skills				
			Intra-team relational skills				
	Physical distance	25%	Technical competence	25%			
	Technical skills		Managing differences of cultures				
	Personalities		Extra-team relational skills				

Table 8.3 In-depth Interview Analysis of Functional Multinational Teams in Germany (continued)

Team	Diversity in the team	% of mentioned respondents	Expected leadership skills	% of mentioned respondents	Team integration (% of mentioned respondents)	Ideal measurements for team effectiveness	% of mentioned respondents
Team D	Nationalities	71%	Intra-team relational skills	64%	100%	Productivity	50%
	Languages	50%	Managing differences of national cultures	43%		Cooperation	29%
	National cultures	36%	Communication skills				
	Communications	29%	Extra-team relations skills	36%			
	Technical skills	21%	Technical competence	29%			
	Gender	14%	Motivating members				
	Physical distance Personalities	7%	Setting clear goals				
Team E	National cultures	86%	Intra-team relational skills	71%	85%	Productivity	57%
	Nationalities	71%	Communication skills	57%		Cooperation	43%
	Languages	57%	Technical competence	43%		Customer satisfaction	43%
	Ways of thinking Technical skills	29%	Motivating members	29%			
			Setting clear goals				
			Extra-team relational skills				

Table 8.3 In-depth Interview Analysis of Functional Multinational Teams in Germany (continued)

Team	Diversity in the team	% of mentioned respondents	Expected leadership skills	% of mentioned respondents	Team integration (% of mentioned respondents)	Ideal measurements for team effectiveness	% of mentioned respondents
Team F	Physical distance	100%	Intra-team relational skills	100%,	100%	Productivity	60%
	Nationalities	80%	Communication skills	40%		Cooperation	40%
	Languages	60%	Motivating members				
	National cultures	40%	Extra-team relational skills				
Team G	Nationalities	100%	Intra-team relational skills	100%	100%	Productivity	100%
	Languages	75%	Communication skills	75%			
	Ways of thinking		Motivating the members	50%			
	Gender	50%	Extra-team relational skills				
	Personalities		Technical competence	25%			
Team H	Nationalities	66%	Intra-team relational skills	100%	67%	Productivity	75%
	National cultures	33%	Setting clear goals				
	Technical skills		Communication skills	67%		Customer satisfaction	50%
	Languages		Technical competence	33%			

Referring to Table 8.3, similarities and differences between functional MNTs in Germany are summarised in terms of diversity in a functional MNT, expected leadership skills, ideal measurements for team effectiveness and team integration as seen in Table 8.4. All functional MNTs in Germany are technical expertise teams.

Table 8.4 Similarities and Differences between functional MNTs in Germany

Perceptions of	Similarities	Differences
Diversity	Nationalities/ National cultures Languages Technical skills Distance	Gender
Expected leadership skills of functional MNTs	Intra-team relational skills Communication skills Technical competences Managing differences of national cultures	
The level of team integration	High task-related integration	Emotional integration
Ideal measurements of Team effectiveness	Productivity Cooperation	Customer satisfaction Flexibility

In the next section, similarities between functional MTNs are explored in greater detail.

8.3.1 Similarities between technical expert teams in Germany

<u>Diversity in functional MNTs</u>

Aspects of diversity, nationalities and national cultures were mentioned by respondents from all functional MNTs, as shown in Table 8.4. As was seen in Table 8.3, nationality was mentioned by members of Team A (100%), Team C (50%), Team D (71%), Team E (71%), Team F (80%), Team G (100%) and Team H (66%), whereas national cultures were mentioned by members of Team A (57%), Team B (100%), Team C (50%), Team D (36%), Team F (40%) and Team H (33%).

With regard to the diversity of nationalities, a member of Team A explained the background of Organisation Y:

> In terms of hiring employees as an aspect of company strategy, Organisation Y has changed from several years ago. The German central office has used the capabilities in the China office and they are working here. Every three months Chinese members come here in order to provide services to European customers and perform other tasks as technical specialists in other cross-functional project teams. After three months they go back to China, and then other members come over. We also have members in France. Sometimes they come here to do tasks as a member of the back-office project team (one type of cross-functional project team) but they are usually allocated to France and work there. Also there is a guy in Thailand. As fixed members of my team, we have three or four members located in the German central office. (TM, TA, DFTa)

That implies integrating and coordinating capabilities across European local offices in the German office.

In terms of national cultures, the leader of Team D explained various national cultures in the team as follows:

> From the nationality point of view, we have a lot of nationalities in this team. We have Russian, Ukrainian, French and German, etc. For me some of the national cultures are really different. If you go from the west to the east in Europe, differences are clear. What I found out is that Germans are very special. We are too direct sometimes. The Russians are direct and need to have clear orders without discussion whereas the French are polite and need to have discussion. Therefore, if you bring Russian and French members together in one team, sometimes you might have conflicts because Russians may complain that their 'French colleagues are talking all day long without any output' whereas French members may complain, 'I am working all the time, but without any discussion with my Russian colleagues'. (TL, TD, DFTb)

That suggests that leaders should be careful in their dealings with members from various nationalities since each nationality is likely to have a different working style between colleagues.

Another aspect of diversity, language, was mentioned, as shown in Table 8.3 (Team A (71%), Team B (33%), Team D (50%), Team E (57%), Team F (60%), Team G (75%) and Team H (33%)). According to the respondents, Organisation Y is able to deliver

services to customers since members speak the same languages as the customers. A

member of Team D described the advantages of the knowledge of languages:

> If you have a team member who does speak the same language as a customer
> speaks as a mother tongue, delivering services to the customer will be more
> effective. The team member understands not only customer behaviours and
> business cultures but also the details of customer issues and problems. (TM,
> TD, DFTc)

This implies that diversity of languages in functional MNTs is likely to enhance the

capabilities to deal with customers who prefer to have services in their own languages

rather than in English. However, a negative side of language diversity in functional

MNTs was acknowledged by respondents: although English is a business language in

the German office, German members prefer to speak German rather than English. A

member of Team D said:

> It is not a problem to communicate with non-German members in working time,
> because English is the official business language in Company Y. But during
> lunch and coffee breaks everybody speaks German. Whenever German
> members have a break, they prefer to speak the German language. It is not a
> problem for Germans to speak English. I reckon that people feel comfortable
> when they speak their mother tongue. But it excludes people who do not speak
> German. (TM, TD, DFTd)

This suggests that the level of intense communication differs between members who

speak German and those who do not. Hence, non-German members of the German

office are better off if they can speak German for social communication. That affects the

social interaction, therefore team integration, of functional MNTs.

Technical skills were mentioned by Team A (14%), Team C (25%), Team D (21%),

Team E (29%) and Team H (33%) as diversity in functional MNTs and was shown in

Table 8.3. Members described an advantage of diversity in technical skills as being that

one person cannot do everything on his or her own but can make up for weaknesses

with cooperation between other members of their teams. One good example is given by

a member of Team A:

> I have belonged to this organisation for a long time but I have never learnt the Java computer language. If I need to learn it, I have to learn all the stuff from scratch but I will not be able to become a Java specialist. Hence, when we have to take on new members, we can pick up those guys who have knowledge of Java and are trained in it from new graduates. They are young and might not have any working experience but they know Java intimately and have experience of it. Sometimes they are much better at solving technical problems than me, while I have experience with regard to handling customers and critical issues, knowing organisational procedures and building human network in the organisation. Therefore, when we work together, we can exchange knowledge. (TM, TA, DFTe)

That suggests the diversity of knowledge and skills have affected capability possession

and capability upgrading of technical skills in Organisation Y.

Moreover, as stated in Chapter 6, some members are working in different local offices

such as France and Russia and they visit the German office periodically to do tasks in a

back office project team. Therefore, respondents of Team A (42%), Team C (25%),

Team D (7%) and Team F (100%) mentioned physical distance as one aspect of

diversity shown in Table 8.3. It is likely to affect social interaction and team integration

between members of the German office and those in different locations.

Leadership skills in functional MNTs

There are three expected leadership skills in functional MNTs in the German office:

intra-team relational skills, communication skills and managing differences in national

cultures. This was shown in Table 8.4.

All technical expert teams in Germany expected their leaders to have intra-team

relational skills (Team A, 71%; Team B, 100%; Team C, 75%; Team D, 64%; Team E,

71%; Team F, 100%; Team G, 100%; Team H, 100%, as shown in Table 8.3). Along

with intra-team relational skills, one member of Team E said:

> It is the role of a team leader to organise his or her own team to choose the
> right person to find the way to deal with a particular task. So he or she has to
> set up mixtures of knowledge, give some rules and divide a big task into small

347

tasks that everybody can deal with. Then, the second role would be to make sure these small tasks are going to build up team knowledge. Every member can know what others are dealing with. And the third role is to protect team members from organisational problems and power relationships between managers in Organisation Y. The final role is that the team leader defines and finds the future direction of the team. He or she has to make sure everybody understands the direction of their team. And he or she has to define the beliefs of the team. (TM, TE, ETLa)

That implies that the roles of the team leader are to integrate, coordinate and upgrade team capabilities of functional MNTs, leading the team members in the right direction for the future.

Also, a member of Team A described intra-team relational skills for task assignment:

The team leader should find the best person to fit specific cross-functional project teams. For example, when I was asked to do a service in Brazil, I said to the leader 'why did you did not ask a Brazilian lady to provide this service?' Also the team leader should be able to discuss matters at the right moment in time and change your view. The reason is that sometimes you cannot have a full view and you cannot know everything and then you need a person who can say, 'It is not a good idea. Maybe we can do it another way.' The team leader should be able to convince people to do tasks. He or she should say, 'There is no other possibility. We have to do this.' (TM, TA, ETLb)

That implies a need for leadership skills to recognise capabilities and then utilise appropriate capabilities depending on customer demands and requirements. In addition, a member of Team G pointed out:

The team leader should understand what team members can and cannot do. He or she needs to know members' strengths and weaknesses. And he or she can

integrate these strengths and weaknesses into tasks according to their competences. That is necessary for an international team because colleagues from China have accumulated other experience in different cross-functional projects compared to colleagues in Germany. Also Chinese members behave differently towards customers. Therefore with regard to European business styles, we may need to educate and train Chinese colleagues a little bit in order to provide services to European customers. By visiting European customers, Chinese colleagues will accumulate experience and understand how they should behave. It is important for team leaders to give them opportunities to learn. (TM, TG, ETLc)

This statement suggests that leaders of functional MNTs give opportunities to

accumulate experience to upgrade capabilities of cross-cultural knowledge for Chinese

members.

As part of intra-team relational skills of team leaders, a member of Team D emphasised

on soft skills:

For me it is very important that a team leader has the human touch and tries to fulfil objectives of both organisation and members. That means he needs to see members as resources, in a way. The team leader needs to strike a balance between organisational resources and the human factors of team members. It is difficult for management but I think something is really needed. (TM, TD, ETLd)

That suggests that functional MNTs leaders tend to try to balance organisational targets

and members' psychological aspects.

Communication skills are also expected of functional MNT leaders by members from all teams (Team A, 57%; Team B, 83%; Team C, 75%; Team D, 43%; Team E, 57%; Team F, 40%; Team G, 75%; Team H, 67%, as shown in Table 8.3). A member of Team E described it thus:

> The leader should show that he or she wants to know what members are doing and try to share all things within their team. If a team leader comes to you and he or she asks you 'what are you doing now? How was customer?', then you would not feel you are working alone. Also, where members get involved political and critical situations, team leader should motivate the members by saying, 'Do whatever you think fit. Even if it will not work, it would not be your fault.' The team leader should support what the members are doing. It is a kind of support from management, otherwise dealing with critical issues is tough for the members. By communicating with leaders, members get motivation for their work and acquire trust towards their leaders. (TM, TE, ETLe)

That suggests that if all members feel that they are treated equally by their leader, that leader is likely to inspire trust, and be able to integrate members into his or her team.

Technical competences are expected by members of Team B (33%), Team C (25%), Team D (29%), Team E (29%), Team G (25%) and Team H (33%), as shown in Table 8.3. A relevant example was given by a member of Team E:

> In my team there are technical guys like me who need technical knowledge and skills. Managers or team leaders should know what team members are doing with their technical competences. Ideally the leader should have the same experience as other team members do. (TM, TE, ETLf)

350

In addition, managing differences of national cultures is expected by members of Team A (71%), Team B (57%), Team C (25%) and Team D (43%), as shown in Table 8.3. A member of Team A described a helpful example from the Olympic Games of 2008 in China, related to managing differences of national cultures:

> It is important that a team leader has the tolerance to accept diversity in a team. He or she needs to understand and accept cultures. For example, last week it was the opening ceremony of the Olympics in China. Of course for the Chinese it was a big event. Chinese colleagues went to the coffee corner to see the opening ceremony. And our team leader knew about that. He just accepted it since he knew that the Chinese colleagues were staying for just three months and they would otherwise have lost the chance to watch the ceremony in China. But here the Chinese members had a chance to watch TV in our office. Our team leader and manager do not care about such small things, they just want people to do their jobs well. That is why in our team the atmosphere is very good. (TM, TA, ETLg)

That statement makes it clear that the leader of Team A respected different nationalities and recognised how Chinese members felt about this major national event to manage different nationalities in his team. In the next section, the perceived level of team integration in functional MNTs is discussed.

Perceived level of team integration

Members of functional MNTs in Germany perceive team integration as highly important, as shown in Table 8.3. The leader of Team A stated the importance of weekly team meeting to facilitate team integration:

> Team integration is the most important thing. In this organisation, we are team players, we are not single players. However, we are doing tasks in different cross-functional project teams, therefore there are some communication gaps. To prevent these gaps we have weekly team meetings. This is good for reintegrating the team. Nevertheless, there will be gaps which we cannot prevent. (TL, TA, PTIa)

This suggests that the leader recognises the importance of team integration by means of a weekly meeting, since members are performing tasks in different cross-functional project teams and are not likely to meet daily.

Ideal measurements for team effectiveness

For ideal measurements of team effectiveness, productivity and cooperation were mentioned, as can be seen in Table 8.3.

Mostly productivity was mentioned by members (Team B (67%), Team D (50%), Team E (57%), Team F (60%), Team G (100%) and Team H (70%)). The reason is that Organisation Y used productivity as a key performance indicator for performance feedback on individual members, as also stated for the case of Japan in Section 8.2.1.

Cooperation was mentioned by members (Team B (50%), Team D (29%), Team E (43%) and Team F (40%)). A member of Team E explained cooperation by differentiating between individual effectiveness and team effectiveness:

I think effectiveness of the team is defined differently from individual effectiveness. Individual effectiveness is defined simply as the ability to achieve the goals for his responsibilities to be successful. On the other hand, from the team standpoint, team effectiveness is not only also to achieve its goals but also to have cooperation between members. For example, in my team each of the team members is performing his tasks in such a way as to achieve expectations and goals. Therefore, I measure team effectiveness by how much of a contribution members make. For example, in team meetings, each member has the chance to talk briefly about what he or she is doing and if he or she came across anything that would be important for the team. That is the key to team effectiveness because one person has experienced that other people may experience later on. In other words, if members are missing information, out team may have difficulty. The team meeting is a place where we get information from other members. (TM, TE, ITEa)

This statement implies a relationship between members' contributions and team effectiveness of functional MNTs by sharing of individual experiences from the cross-functional project teams. That also illustrates how members of functional MNTs accumulate experience and articulate knowledge together with other members, which is likely to upgrade team capabilities if each member brings their experience in cross-functional project teams into functional MNTs and shares their knowledge and skills in terms of their functional area of expertise. As a consequence, capabilities in Organisation Y are likely to be upgraded.

Furthermore, a member of Team B mentioned the importance of the relationship between cooperation and knowledge-sharing in promoting team effectiveness:

> Team effectiveness can be measured by how much members help others. Everybody should help each other. We have colleagues who cover different topics of technical functions. We encourage each other to help. We try to share knowledge and try to learn new things. Also we try to make documentations so as to share knowledge. Then we can have good team effectiveness. (TM, TB, ITEb)

This suggests that the meaning of cooperation is related to sharing knowledge and skills to utilise team capabilities from individual level to team level toward team effectiveness.

In the next section, differences between technical expert teams in the German office are identified.

8.3.2 Differences between technical expert teams in Germany

As shown in Table 8.4, there are also differences between functional MNTs and technical expertise teams in Germany.

<u>Diversity in a functional MNT</u>

Respondents of Team D (14%) and Team G (50%) stated gender to be a part of diversity as shown in Table 8.3. The reason was that some of the members of these teams are mothers as well as workers in the teams. Respondents who were mothers

354

mentioned their work–life balance: they work from their home for two days in a week and come to the office three days in a week because of their family commitments. Employees who have families need to take into consideration the balance between work and their family life.

Expected MNT leadership skills

As an important aspect of team leadership in functional MNTs, a member of Team D described the influence of team leadership on diversity by saying that;

> Personally, I do not think only diversity solves every problem by itself. I do think diversity is somehow advantageous if we have good leadership to take care of it. It would not be effective to use diversity as an advantage if we do not have good leaders. (TM, TD, ETLh)

That implies the mediation effect of team leadership skills on the relationship between diversity and team effectiveness, as seen in the McGrath IPO model.

Furthermore, a team member of Team D mentioned the important role of team leaders in creating team integration:

> Team leaders should create the working climate, organise team members' activities and responsibilities and provide an information path from top management to team members. I should say team success can be brought by a team leader. Eighty per cent of team performance and effectiveness have been influenced by the team leader. (TM, TD, ETLi)

This suggests that team leaders' relationship skills, including intra-team and extra-team relational skills, are important for team success and effectiveness.

<u>Perceived level of team integration</u>

Respondents from among the non-German members mentioned that they see team integration in terms of task level rather than emotional level. They stated that there were differences in the meaning of team integration related to values of national culture. In comparing the Asian to the German cultures a member of Team B said:

> Culture in Germany is different from Chinese culture because German culture strongly distinguishes between colleagues and friends. That means people can be nice colleagues for work but it does not mean they can be your good friends. I feel some concepts are different because there are big differences between Asia and Europe. (TM, TB, PTIb)

A member of Team D mentioned that German culture is more family-oriented than Asian culture. This suggests that German people tend to keep their business and private lives apart. Hence the team members from different nations, especially those who come from collectivist countries, need to take time to get to know the German working culture. Also members stated that it would be difficult fully to integrate Chinese rotation team members since they come to the German office only periodically. They do not speak

German and therefore social integration between Chinese members and German members is likely to be difficult.

Although a high level of team integration was claimed by members, it was only task-related team integration, and a majority of respondents stated that emotional integration was hard to achieve. As a well-described example, a member of Team A described about emotional integration:

> For example when we go to escalation cases we spend 3-4 weeks with the same people as a team on the customer's site and work with them until night. Then of course emotional integration is going to be much higher than if we are just sitting in the office at different tables and not talking to each other. And of course, the more we work together, the closer the emotional integration that will be created. But it is also related to the personal aspect. Team integration depends on two things: personality and amount of spending time of working together. (TM, TA, PTIc)

That implies that the level of emotional integration depends on how much members get involved in the same activities and how long they have known each other, related to social activities. In addition, a member of Team A stated that team activities with the team leader such as going for dinner are important in order to create team integration, especially when colleagues from different locations come to work in the back office. Also, a member of Team D mentioned that depending on members' purposes, the level

357

of team integration would be different. That implies that the frequency of social

activities between members and member's personalities, and whether they see

themselves as an in-group member, affect members' perceptions of team integration.

Furthermore, the leader of Team B described how team integration has been affected by

diversity, that is people's personalities:

> We have many visiting colleagues to the office in Germany from different
> locations. There are two types of colleagues. One type of colleague comes to
> our desks and introduces themselves to us. Then they go for lunch and team
> outings with us and they are likely to be accepted immediately. After one week,
> they will be treated as though they have been working for six years in the team.
> On the other hand, the other type of colleagues is shy and seldom has contact
> with us. And then they would not be recognised since they hardly talk to other
> members. (TL, TB, PTId)

As this example shows, personal values of individualism–collectivism are likely to

affect team integration. Moreover, a member of Team E mentioned the linkage of team

integration and leadership skills.

Also, a member of Team A mentioned the relationship between team integration toward

team effectiveness:

> How effectively they integrate is important for team effectiveness. In an ideal
> team, people are specialised in different areas and can handle customer issues

very quickly with cooperation. Therefore, a question is how much each member is going to get involved. (TM, TA, PTIg)

This suggests a link between the diversity of technical skills and team integration of asset orchestration in functional MNTs towards effectiveness.

Ideal measurements for team effectiveness

As shown in Table 8.3, customer satisfaction was perceived as an ideal measurement for team effectiveness by Team A (43%), Team D (43%) and Team H (50%). A member of Team D mentioned customer satisfaction for team effectiveness:

> The most important thing is the final outcome for customers. If customers are satisfied, everybody including our organisation would be satisfied. To be effective it is important for me to focus on customers because at the end of day they pay our salary. If team members are not effective, it does not make sense to have teams. If members create team effective by working together for customers with cooperation, then it would be fine. (TM, TD, ITEc)

This statement implies that Organisation Y is likely to be a customer-oriented organisation; therefore employees show deep understanding of how customers are important for their organisation.

Furthermore, as an ideal measurement for team effectiveness, members of Team A added the flexibility to deploy team capabilities:

359

We can improve our effectiveness since we can cover our lack of resources in Germany by asking Chinese colleagues to deliver services to European customers. For example if colleagues in Germany have holidays at Christmas, we German colleagues want to go home and we can ask Chinese colleagues to deliver the services. Another example is that Chinese colleagues underwent different training, and they are rather specialist whereas fixed members in the German office are generalists. When we need specialists for certain areas, we can use specific technical knowledge from Chinese colleagues. I would say that in Germany we do not have specialists. It would be better if you have a broad view and team leaders' skills and soft skills. And we can borrow resources from other local offices and bring people together in a very efficient way. This is how we can distribute tasks in a very effective way across locations. (TM, TA, ITEd)

That implies team flexibility to utilise capabilities of members from different

nationalities depending on seasons and area of expertise, either generalist or specialist.

In analysing the German office, members of functional MNTs have recognised

nationalities (extract TM, TA, DFTa), national cultures (extract TL, TD, DFTb),

languages (extract TM, TD, DFTc) and technical skills (extract TM, TA, DFTe). For

dealing with customers in Europe, the merits of having a diversity of technical skills and

languages were stated. Respondents stated that the way to deploy team capabilities by

functional MNT leaders is likely to have affected team effectiveness (extract TM, TE,

ELTa, extract TM, TA, ELTb, extract TM, TG, ELTc). Communication skills (extract

TM, TE, ETLe) of team leadership were strongly expected to assign team members

from technical expert teams to cross-functional MNTs with consideration of different aspects of diversity by adjusting customer demands and requirements. Also, managing differences of national cultures (extract TM, TA, ELTg) and intra-team relational skills (extract, TM, TD, ELTd) as team leadership skills was expected. Team integration among team members was considered, as described in extract TL, TA, PTIa. Yet, the meaning of team integration might be different between Asian and German members, as described in extract TM, TB, PTIb. Team effectiveness was measured by the level of productivity and cooperation. (extract TM, TE, ITEa and extract TM, TB, ITEb) Hence, extract TM, TD, ETLh and extract TM, TE, ETLi illustrated the importance of leadership for diversity and team integration. In addition, some teams evaluate team effectiveness by customer satisfaction since Organisation Y obtains economic returns from customers (extract TM, TD, ITEc and extract TM, TA, ITEf).

8.4 Comparison of Technical Expert Teams in Japan and in Germany

This section provides a comparative analysis to explore similarities and differences of technical expert teams across locations (Team 2, Team 3 and Team 4 in Japan and eight functional MNTs where this main study was conducted in Germany) with regard to their

perceptions of 1) diversity in their team 2) expected MNT leadership skills 3) level of

team integration and 4) ideal measurements for team effectiveness. This section focuses

on technical expert teams as representatives of functional MNT teams. Furthermore, it is

complex, to compare functional MNTs which have different tasks and skills. Table 8.5

summarises similarities and differences between technical expert teams in the Japanese

and German offices, based on Table 8.1 and Table 8.3.

Table 8.5 Similarities and Differences between technical expert teams in Japanese and German offices

Perceptions of	Similarities	Differences
Diversity	Technical skills Nationalities	Languages
Expected leadership skills of functional MNTs	Technical competence Communication skills	Managing differences of national cultures
Team integration	Importance of cooperation for sharking knowledge	The level of team integration is high in teams in the German office The meaning of team integration
Ideal measurement for team effectiveness in functional MNTs	Cooperation Productivity	Customer satisfaction

8.4.1 Similarities between technical expert teams in Japan and Germany

<u>Diversity</u>

In terms of the aspects of diversity in technical expert teams, technical skills and

nationalities are mentioned from all 11 teams regardless of location, as shown in Table

8.1 and Table 8.3. Members commented on the advantages of having varieties of technical skills when they work in cross-functional project teams for when they ask for help from members of their functional team (extract TM, TA, DFTe). From a dynamic capability perspective, the diversity of technical skills in a functional MNT is considered as an example of distinctive resources to assign members to cross-functional teams in both locations.

As another aspect of diversity, nationality is mentioned by members of 11 technical expert teams as shown in Tables 8.1 and 8.3. Although this was the case in both the Japanese and German offices, the merits of having various nationalities in technical expert teams are likely to be different. In the Japan office, a social network of non-Japanese members, especially German members, tends to be used for searching capabilities to deal with issues, whereas in the German office various nationalities were noticed (extract TM, TA, DFTa). The German office has Chinese colleagues who stay for three months to provide services for customers across European countries with flexibility to integrate and coordinate resources in Organisation Y (for example, extract TM, TA, DFTa and TM, TA, ITEd).

<u>Expected leadership skills</u>

Communication skills and intra-team relational skills were mentioned by all teams as team leadership skills needed to understand team members' technical competences and personalities in order to know the team's capabilities (extract TM, T3, ETL3). As interview transcripts have shown, these leadership skills are important for recognising current team resources and capabilities and deploying team capabilities by considering the diversity of technical skills in functional MNTs (for example, extract TM, TG, ETLc). Also, intra-team relational skills were expected to assist in task assignment to cross-functional project teams as seen in extract TM, T4, ELT1, extract TM, TE, ETLa, extract TM, TA, ETLb and extract TM, TG, ETLc.

In order to deploy the appropriate team capabilities, technical competences were expected from the leaders by eight of the teams (Team 2, Team 3, Team B, Team C, Team D, Team E, Team G and Team H). Furthermore, members of technical expert teams, regardless of location, stated that the technical competences of functional MNT leaders are likely to affect whether they understand team members (for example, TM, TE, ETLf).

Perceived level of team integration

In terms of team integration, when members perceived the high level of inter-team relational skills of their team leaders, they also perceived a high level of team integration, as shown in Table 8.1 and Table 8.3. Informal activities or events organised by team leaders, such as drinks after work (Team 2, Team A and Team D) are likely to increase the level of team integration.

Ideal measurement of team effectiveness

In exchanging and sharing knowledge, cooperation was recognised as an aspect of team effectiveness by nine teams in the Japanese and German offices (for example, extract TM, T2, ITE1, extract TM, TE, ITEa and extract TM, TB, ITEb). This suggests that cooperation is likely to affect effective orchestration of team capabilities by maximising the merits of technical skills as well as minimising the drawbacks of personal values of individualism–collectivism in technical expertise teams. As another aspect of team effectiveness, productivity was mentioned by members from nine teams (but not from members of Team A and Team C), since according to respondents in both locations Organisation Y uses productivity as a key performance indicator for individual performance feedback.

8.4.2 Differences between technical expert teams in Japan and Germany

<u>Diversity</u>

Members of technical expertise teams in the German office perceived more various aspects of diversity of members than those in Japan, in terms of languages and physical distance, as shown in Table 8.5. In terms of languages, although normally members in Germany provide services in English for European customers, sometimes these customers prefer to have services in their mother tongue as described in extract TM, TD, DFTc. However, negative sides of using different languages have been recognised in relation to social communication between German members (for example, extract TM, TD, DFTd). Furthermore, members of technical expert teams in Germany have considered physical distance as one aspect of diversity, as described in Section 8.3.1. The German office has members who are working from different locations such as France and Russia, whereas the Japanese office does not have any members who are working from a distance.

<u>Expected leadership skills</u>

As one of the functional MTN leadership skills, managing differences of national culture was expected from their team leaders by members of Team A, Team B, Team C

and Team D in the German office (for example, extract TM, TA, ELTg). As described, the drawbacks of nationalities have been recognised by members of technical expert teams in the German office, the leaders were expected to have skills in managing different national cultures with tolerance. On the other hand, in Japan, the drawback of having various nationalities was not mentioned by members of technical expertise teams. Therefore, the need for managing different national cultures has not been mentioned in the Japanese office.

Perceived level of team integration

The level of team integration as perceived by members of technical expert teams in Germany is higher than that in Japan, as can be seen in Table 8.1 and Table 8.3. In Japan, as described in extract TM, T2, PTI1, team integration was not particularly high, whereas in Germany team integration was well recognised and regarded as important for integrating the team members (extract TL, TA, PTIa). However, although the perceived level of team integration is high in Germany, the meaning of team integration might well be different between German and Asian cultures, according to members in Germany (extract TM, TB, PTIb). This suggests that the meaning of team integration is likely to be different for members in Germany and in Japan.

Ideal measurements of team effectiveness

Members of Team A, Team D and Team H mentioned customer satisfaction as an aspect of team effectiveness (for example, extract TM, TD, ITEc) though it was not mentioned by members in Japan, as shown in Table 8.1 and Table 8.3. The reason is assumed to be that members of the German office are likely to be keener on diversified customer demands, since they need to deal with customers from different countries in Europe whereas those in the Japanese office deal with mainly Japanese customers, as described in Chapter 6. Furthermore, flexibility was considered to be part of team effectiveness in Germany, as described in extract TM, TA, ITEd.

The similarities between technical expert teams in the Japanese and German offices are displayed in Table 8.5. One type of functional MNT is the same as a technical expertise team, and therefore tasks and aims of technical expert teams are similar regardless of location because of the scope of the global organisation. The differences exist because technical expert teams in Germany deal with customers from different countries in Europe and have members who come to the office temporarily, such as the Chinese members who come to the German office for three months on rotation, or French and Russian members who come to the office to join project teams. On the other hand,

368

members of technical expert teams in the Japanese office are located in the same office and deal with mainly Japanese customers. In the next section the implications of the mediation effect of functional MNT leadership will be analysed.

8.5 Implications for mediation effect of leadership

As I have described, technical skills and nationalities are mostly considered as aspects of diversity in functional MNTs, regardless of the type of functional MNT and location. Leadership is expected to manage diversity for team success (extract TM, TD, ETLh and extract TM, TD, ELTi). The negative side of diversity in nationalities and personal values was noted by respondents in both Germany and Japan. In Germany, social interaction between German and non-German members is likely to be limited mainly to work-related activities because of the language barrier, whereas in Japan personal values of individualism–collectivism affected cooperation and productivity because of the atmosphere of rivalry in Team 2 or of groupism in Team 4.

In terms of knowing members' skills and personalities as part of the diversity in functional MNTs, extract TM, T4, ETL1, extract TM, T3, ETL3, extract TM, TE, ETLa, extract TM, TA, ETLb and extract TM, TG, ETLc illustrate the main role of leaders in

369

functional MNTs. In order to learn about the differences between members, team leaders should find out members' personal values and technical skills by communicating with them. The level of team integration is likely to be facilitated by the team leaders, as seen in Team 1, Team 2, Team A and Team D.

In short, the leaders of technical expert teams were expected to have intra-team relational skills, communication skills and technical competences to understand aspects of diversity in the team such as members' technical skills and personalities. With the right combination of these skills, team leaders of technical expert teams are likely to capitalise on team capabilities for tasks in cross-functional project teams by matching customer requirements and demands. Since functional MNTs in the German office have members from China, Russia and France to deal with customers in Europe, the leaders of functional MNTs in Germany are expected to manage different national cultures in the teams. Also, as seen in the Japanese office, depending on types of functional MNTs, expected functional MNT leadership skills are likely to be different. This suggests that required and expected combinations of functional MNT leadership skills are likely to differ, depending on locations and types of functional MNTs.

8.6 Summary

In this chapter, I have carried out comparative analyses between functional MNTs in Japan and Germany and between these two locations. Intra-team relationship skills and communication skills, as MNT leadership skills, were expected of leaders in the two different locations regardless of the type of functional MTN. For technical expert teams, in addition to these skills, technical competences were expected, to know current team capabilities, deploy capabilities to cross-functional project teams and upgrade capabilities. Where the inter-team relational skills of team leaders are put to use, team members are likely to increase their level of cooperation through team integration, which was regarded as one aspect of team effectiveness by members of functional MNTs in Japan and Germany. As differences of expected functional MNT leadership skills, members of functional MNTs in Germany expected their team leaders to manage cultural differences between members, since, as I have already observed, the German office has members who come to Germany from China every three months and who work from different offices. Furthermore, the effect of leaders on the relationship between diversity of functional MNTs members and team integration has been noted by members of technical expert teams in Germany.

The next chapter summarises the multilevel analyses of MNTs, focusing on the leader's management of team capabilities. It moves to discussion of the link between managing team capabilities and dynamic capabilities in a matrix organisation with MNT leadership skills controlled.

CHAPTER 9

DISCUSSION

9.1 Introduction

The aim of this chapter is to discuss the key findings of this thesis and to integrate the

analyses of the main study. There are two parts to this thesis, a pilot study and a main

study. The pilot study was intended to detect the most influential variables of team input

and team process from McGrath's IPO model, discussed in Chapter 5, and it confirmed

that leaders did indeed mediate the relationship between team structure and team

effectiveness and that MNT leadership had an impact on the personal values of team

members for team effectiveness. The main study, based on the results of the pilot study,

was conducted to analyse leadership of functional MNTs from a perspective of dynamic

capabilities. The mediation effect of functional MNT leadership skills was tested by

applying the modified IPO model (that is, with personal values of individualism–

collectivism as team inputs, functional MNT leadership skills as team processes and

team effectiveness as team outputs). In this chapter, Section 9.2 reviews the findings of

the main study by making a link between organisational processes and the roles and

required skills of functional MNT leaders, and then discussing these impacts on team

effectiveness. Section 9.3 integrates the analyses to enrich our knowledge of functional

MNT leadership skills in a global matrix organisation.

9.2 Discussion of Findings

Based on the preliminary results and insights from the results of the pilot study, the research questions for the main study were refined as discussed in Chapter 1. When the research questions for the main study were revised, the differences in MNTs between Organisation B (where the pilot study was conducted) and Organisation Y (where the main study was conducted) were taken into consideration. Organisation B employs a divisional structure as a part of Company A (a multinational food ingredients company), whereas Organisation Y employs a matrix structure as a part of Company X (a global software company). Appendix 1 illustrates the background of Company A and Appendix 6 illustrates the background of Company X with regard to its strategic management and corporate architecture.

To answer the research questions for the main study, an analysis of organisational processes and the roles of functional MNT leaders in Organisation Y was conducted from a perspective of dynamic capabilities (Chapter 6). A comparative analysis was conducted by exploring similarities and differences in customer demands and

374

behaviours between Japanese customers and European customers, and by testing

various hypotheses in the Japanese and the German offices of Organisation Y (Chapter

7). Similarities and differences between functional MNTs were investigated in terms of

diversity, the perceived level of team integration, expected leadership skills and ideal

measurements for team effectiveness in both Japanese and German offices (Chapter 8).

In this section, organisational processes and roles of functional MNTs are integrated in

Section 9.2.1, based on the findings from Chapter 6 and Chapter 7. The mediation

effects of functional MNT leadership skills are then discussed and integrated in Section

9.2.2, based on the findings from Chapter 7 and Chapter 8.

9.2.1 Organisational Processes and Roles of Functional Multinational Team Leaders

This study has investigated the organisational processes in Organisation Y which make

it possible to utilise different types of team to promote dynamic capabilities (research

question 1), and explored the roles of functional MNT leaders in developing dynamic

capabilities (research question 2), in Chapter 6. In Chapter 7, customer demands and

behaviours in Japan and Europe were investigated to find out the requirements for

dynamic capabilities (research question 3). The main findings were that functional MNT

leaders played an important role in integrating and coordinating the diversity of team

members as well as upgrading team capabilities in organisational processes. In some respects, there are similarities between these findings and the concept of asset orchestration mentioned by Helfat *et al.* (2007) which is to assemble and orchestrate configurations of co-specialised assets as a fundamental function for dynamic managerial capabilities. However, there has hitherto been a lack of studies which explore the roles of functional MNT leaders in organisational processes although various studies have theorised dynamic capabilities (e.g. Teece *et al.*, 1997; Eisenhardt and Martin, 2000; Luo, 2000; Makdok, 2001; Helfat and Peteraf, 2003; Helfat *et al.*, 2007; Ambronisi and Bowman, 2009; Easterby-Smith *et al.*, 2009; Teece, 2009). Therefore, the findings of this study are likely to have implications for studies on dynamic capabilities. Next, the roles of functional MNTs in each organisational process – of capability possession, capability deployment and capability upgrading – are integrated, based on the findings in Chapter 6.

Capability Possession and Roles of Functional MNT Leaders

If we look at capability possession, one role of functional MNT leaders is to recognise the potential capabilities of the team from the diversity of its members, such as their different functional areas of expertise, language skills and national cultures and

personalities, described in Chapter 6. Existing studies on dynamic capabilities have not described how diversity has been acknowledged by functional MNT leaders as a source of team capabilities. As the findings in Chapter 6 indicate, capabilities such as technical expertise were important for Organisation Y to solve and to respond to global customer issues and demands. There are similarities between these findings on the importance of possessing a diversity of members and existing studies which have argued that MNCs need to possess and utilise diversity to deal with complexity in the current global competition (e.g. Konrad, 2003; Teece, 2009). In addition, this study has recognised that in Organisation Y one role of functional MNT leaders in technical expertise teams is to perform tasks in cross-functional projects as a part of team capabilities. With respect to the organisational process of capability possession, this study has added knowledge about how functional MNT leaders have acknowledged diversity as a source of team capabilities.

Capability Deployment and Roles of Functional MNT Leaders

All functional MNT leaders have recognised that one of their roles is to assign tasks to members, as shown in Tables 6.6 and 6.7. This study has found that functional MNT leaders bring about the efficient utilisation of resources through an effective relationship

between managers and functional leaders. There are similarities between the above finding and the recognised characteristics of a matrix organisation, one of which has been described as the efficient utilisation of resources (e.g. Davis and Lawrence, 1977; Kolodny, 1979; Stuckenbruck, 1983; Denis, 1986; Larson and Gobeli, 1987) and a smoothly effective relationship between managers and functional leaders for resource allocation (Knight, 1976; Lawrence *et al.*, 1977; Ford and Randolph, 1992). However, the existing studies on dynamic capabilities have not well explored the roles of functional MNT leaders, in particular how they deploy capabilities as part of organisational processes.

In the process of capability deployment, this study has found that functional MNT leaders have given consideration to the required technical areas of expertise, skills and experience of functional MNT members, as explored in Chapter 6. For example, where issues are highly critical for customers, then managers, functional team leaders and members of a functional problem-solving project manager team select the members of a cross-functional problem-solving project team, drawing on technical expert teams from right across Organisation Y and with an eye to the required level of technical skills and experience, as described in Chapter 6 (Figure 6.2). Faced with customer demands for

normal cross-functional onsite/remote service project teams, managers and functional

leaders of technical expert teams choose members from functional technical expert

teams, based on the particular technical area of expertise and skills required, and this is

shown in Figure 6.3. For a cross-functional back office project team, members are

selected depending on their area of technical expertise and schedule, regardless of

experience (Figure 6.4). As the findings in Chapter 6 make clear, the role of the

functional MNT leaders is critical for Organisation Y in its aim of efficient utilisation of

resources involving diversity across locations when necessary, and with effective

interrelationships between managers and other leaders of functional teams in the

organisational process of capability deployment (e.g. Figures 6.2, 6.3 and 6.4 in Section

6.4.2).

Furthermore, this study found that Organisation Y has developed a unique

organisational process to deal with Japanese customers as a result of the difficulties in

interpreting Japanese customer demands and behaviours. That implies that it was

previously difficult for members who were not familiar with Japanese customers to

interpret their demands and behaviours or to be able to solve their issues as shown in

Chapter 7. This finding has similarities with findings from existing studies, which have

argued that collectivistic values are not easily understood by people who are familiar with individualistic values (Watkins and Liu, 1996; Ueltschy *et al.*, 2007). The present study has also found that even in European countries there are different demands, such as for language skills and cross-cultural business manners, as demonstrated in Chapter 7. Hence, managers and leaders are expected to consider differences in the demands of customers by deploying appropriate capabilities before they come to formulate cross-functional project teams. To some degree, there are similarities between this finding and the study by Dobni *et al.* (2000) which argues that an effective customer-oriented organisation is one where employees and leaders show customer-oriented behaviours. In short, this study has added knowledge of how functional MNT leaders deploy their team capabilities to different types of cross-functional project teams, achieving this by interpreting the issues and demands of the customer with managers and other functional team leaders.

Capability Upgrading and Roles of Functional MNT Leaders

Although Zollo and Winter (2002) have argued that upgrading capabilities is important for building dynamic capabilities by accumulating experience, articulating knowledge and codifying knowledge, existing studies have not thoroughly explored how functional

MNT leaders play a role in facilitating capability upgrading as part of organisational processes. This study has examined the important role played by functional MNT leaders in linking upgrading capabilities through organisational team capabilities and individual levels of expertise. From the managers' point of view, Organisation Y has relied on individual technical skills, as described in Chapter 6, and functional team leaders are expected to subdivide organisational goals and targets into team goals and targets and members' goals and targets. As shown in Tables 6.6 and 6.7, all functional MNT leaders have recognised that one of their roles is to offer performance feedback in order to set members' annual goals and targets, to check members' achievements half-way through the year and to evaluate whether the members have achieved their goals and targets at the end of the year. With regard to capability upgrading, Manager 1 stated that there are difficulties with sharing knowledge in functional teams because of lack of team integration and identification of functional team members (Chapter 6). By reflecting the expectations of managers, this study has discovered that, as one of their roles, functional MNT leaders have to solve knowledge-sharing issues in functional MNTs. This finding has an important implication for the role of functional MNT leaders in upgrading capabilities in their teams as well as in team organisation.

Up to now, organisational processes and roles of functional MNT leaders have been

described from a dynamic capability perspective. This study has found that functional MNT leaders are expected to play important roles in developing dynamic capabilities by acknowledging current team capabilities, deploying team capabilities to respond to customer demands and upgrading capabilities for future capability possession. In the next section, details of expected leadership skills will be explored by integrating the findings from hypothesis-testing for the proposed IPO model in Chapter 7 and from in-depth interview analysis in Chapter 8.

9.2.2 Mediation Effect of Leadership Skills in Functional Multinational Teams

This study has investigated the mediation effect of functional MNT leadership skills on the relationship between diversity (especially personal values of individualism-collectivism) and team effectiveness in different locations (research question 4). It has also explored the perceptions of members in functional MNTs (research question 5). This result from hypothesis-testing has shown that functional MNT leadership skills have a mediating effect on the relationship between personal values and dimensions of team effectiveness (Chapter 7). This study has confirmed, from the results of its in-depth interview analysis of functional MNTs, that diversity is likely to increase the effectiveness of functional MNTs through functional MNT leaders, as described in

382

Chapter 8. These findings are integrated and will be discussed below.

Aspects of diversity have been explored in existing studies on the subject of diversity (e.g. Church, 1995; Jackson and Ruderman, 1995; Arredonde, 1996; Jackson, 1996; Joshi and Jackson, 2003; Schippers *et al.*, 2003). However, the question of how aspects of diversity have become advantageous for team effectiveness through the involvement of functional MNT leaders has not been properly tackled by existing studies. Through considering the role of diversity itself, this research has confirmed that members in Japan perceive technical skills and nationality as indicators of diversity, whereas those in Germany perceive nationality, national culture, technical skills, language and physical distance as indicators. In addition, the personal values of individualism–collectivism have been noted by interview respondents as an indicator of diversity. In Chapter 7, this research has investigated the impact of differences in personal values of individualism–collectivism on team effectiveness. Various scholars have advocated the examination of differences in personal values of individualism–collectivism as a meaningful way to investigate the issues of diversity and its impact on team outcomes (Tajfel, 1982; Earley, 1994; Wagner, 1995; Gibson, 1996; Earley and Gibson, 1998; Kirkman and Shapiro, 1997, 2001; Stone-Romero and Stone, 2002). However, these

studies have not explored the mediation effect of functional MNT leadership skills on the relationship between personal values of individualism–collectivism and various aspects of team effectiveness.

This study has shown that functional MNT leadership skills have a mediation effect on the relationship between personal values of individualist and collective behaviours and team integration, in both Japan and Germany. This finding is consistent with the studies by Hogg (2001) and Hogg and van Knippenberg (2003) which suggest that leadership dynamics are likely to be associated with the processes of self-categorisation and depersonalisation of members. Additionally, in the Japan office, there was a mediation effect of leadership on the relationships between individualism and innovation and between individualism and customer service. In Germany the mediation effect of functional MNT leadership skills was found in the relationships between collectivism and customer service. These findings have similarities to the studies by Adler (1997) and Brett *et al.* (2006), which argued that functional MNT leaders are likely to optimise the level of team integration by creating a collective identity. Also, the leaders of functional MNTs in the German office mediated both collectivism and individualism to balance each value, as suggested by Chen and DiTomaso (1996). This finding has

384

implications for the study by Copeland (1988), which argued that organisations which have both individualists and collectivists will be at an advantage when they come to manage a wide range of individualistic and collectivistic values. However, this research from hypothesis-testing has not detected any influence of functional MNT leadership skills in mediating personal values of individualism–collectivism to encourage productivity and an orientation towards learning as part of a whole set of measures for team effectiveness. First, personal values of either individualism or collectivism might already be at an appropriate level to enhance various dimensions of team effectiveness in functional MNTs, such as productivity and learning-orientation, without needing to be controlled by a set of functional MNT leadership skills in different locations. For example, even without the set of functional MNT leadership skills, the personal value of individualism in Japan can be seen from Table 7.10 to have an impact on learning orientation, whereas the personal values of collectivism in Germany have an influence on productivity, as shown in Table 7.13. Second, it might be that only the complete set of functional MNT leadership skills has a direct impact on certain dimensions of team effectiveness (such as productivity) depending on the location. As seen in Table 7.10, only the complete set of functional MNT leadership skills has affected productivity. Finally, it could be that neither personal values of individualism–collectivism nor the set

of functional MNT leadership skills have directly affected learning orientation, depending on the location. As shown in Table 7.13, learning orientation in Germany has not been affected by either the personal values of individualism–collectivism or the set of functional leadership skills. As hypothesis-testing in this study has been performed in only two locations (Japan and Germany), it is therefore worthwhile to investigate differences in how personal values of individualism–collectivism have been influenced by the set of functional leadership skills in fully realising each dimension of team effectiveness in other locations.

By looking at team effectiveness, this research has used both performance outcomes (productivity, innovation and customer service) and behavioural outcomes (collective behaviours and learning orientation) for hypothesis-testing, by referring to existing studies (Kirkman and Shapiro, 2005; Chen *et al.,* 2006; Van der Vegt and Emans, 2000; Bunderson and Sutcliffe, 2003). In interviews, this study found that members of both Japanese and German teams regarded productivity and cooperation as ideal measures for team effectiveness, while in addition to the measures mentioned above members in Germany considered customer satisfaction and flexibility as ideal measures for team effectiveness. These dimensions could be explored in future studies on team

effectiveness.

With regard to aspects of team effectiveness, although the results of hypothesis-testing

have not shown any mediation effect of functional MNT leadership skills on the

relationship between personal values of individualism–collectivism and productivity in

Chapter 7, the results of in-depth interview analysis of functional MNTs in Chapter 8

have indeed shown that the level of productivity is likely to depend on how functional

MNT leaders assign tasks to their members as part of capability deployment. In other

words, diversity is likely to increase team effectiveness when functional MNT leaders

acknowledge the diversity of members as a source of team capabilities and deploy

appropriate team capabilities by assigning functional team members to different types of

cross-functional project team. This also implies that the outcomes of cross-functional

project teams are likely to be affected by the deployment capability of functional team

leaders. In addition, the results of in-depth interview analysis of functional MNTs in

Chapter 8 have shown that leadership has facilitated the level of team integration and

cooperation through weekly meetings and social activities which increase

communication between members. With regard to personalities and team integration,

the interview data have also shown the influence of personality (personal values of

individualism–collectivism) on team integration. Therefore, leaders of functional MNTs were expected to be familiar with members' personalities, as described in Chapter 8. The above findings have been not been explored in existing research, and therefore have important implications for future studies on team effectiveness and dynamic capabilities.

This research has confirmed from the results of qualitative data analysis of functional MNT leadership skills, that intra-team and extra-team relational skills and communication skills are perceived as expected functional MNT leadership skills in both Japan and Germany, regardless of the type of functional MNT. The importance of managing national cultural differences was mentioned by members of technical expert teams in Germany, and the setting of clear goals by members of functional MNTs in Japan. Members of technical expert teams in both locations expected their team leaders to have the technical competences to understand tasks in different types of cross-functional project teams and acknowledge members' strengths and weaknesses in relation to technical skills. This finding has identified and added an additional functional MNT leadership skill, that of technical competence, to the list of skills proposed by Joshi and Lazarova (2005).

In this section, the findings have been discussed at organisation and team levels. The next section gives integrated analyses to reveal features of functional MNT leadership, as proposed in the research framework given in Chapter 3.

9.3 Integrated Analysis of Leadership Skills in Functional Multinational Teams

This study found that functional MNT leaders were expected to have skills of managing team capabilities from a diversity of members in organisational processes through their relationships with managers and other leaders. In some respects, this finding shows similarities with existing studies which argue that teams are dynamic, emergent and adaptive entities embedded in a multilevel (individual, team, organisation) system (Arrow *et al.*, 2000; Kozlowski, 1999; Mathieu *et al.*, 2001). Going beyond these existing studies, this study has explored and investigated the skills required of functional MNT leadership in promoting effective dynamic capabilities through possessing, deploying and upgrading team capabilities at both organisation and team levels. Based on the integrated findings, this study has found that a combination of functional MNT leadership skills, such as intra-team and extra-team relational skills, communication skills and the ability to set clear goals, is expected through

organisational processes of capability possession, capability deployment and capability upgrading.

In addition to these skills, in the case of technical expert teams, functional MNT leaders are expected to have the technical competence to understand members' technical skills as a source of team capabilities and to understand customer issues. Also, in the case of functional MNTs in Germany, the leaders are expected to have the skill of managing differences of national cultures, with the aim of helping to integrate team members in order to facilitate team cooperation and learning for capability upgrading. From the findings of this study, it has been argued that the combination of expected functional MNT leadership skills is likely to be different depending on the type of functional MNT and its location. These findings of this research have meaningful implications for studies on dynamic capabilities and functional MNT leadership skills. The combinations of functional MNT leadership skills (communication skills, intra-team and extra-team relational skills, setting clear goals, technical competences and managing differences of national cultures) will now be explained and described by integrating the findings given in Sections 9.2.1 and 9.2.2.

First, a combination of communication skills and intra-team relational skills is required for functional MNT leaders if they are both to acknowledge the diversity of members in such aspects as members' technical skills, nationality, personality and personal values of individualism–collectivism; and to be familiar with the flexibility of team members by ascertaining members' schedules through daily interaction between members as sources of team capabilities in the organisational process of capability possession. By using this set of communication skills and fostering a good intra-team relationship, functional MNT leaders are also likely to integrate team members and facilitate individual and team learning through social interaction by mediating personal values of individualism–collectivism in the organisational process of capability upgrading. Based on the findings in Chapter 6 and Chapter 8, individual learning could well be problematic and have a negative impact on cooperation as a result of the personal value of individualism. As Wagner and Moch (1986) have argued, individualists tend to ignore group interests when these conflict with personal desires. In order to solve this problem, the right set of communication skills and intra-team relational skills is required if functional MNT leaders are to create a good atmosphere, facilitate mutual respect and integrate team members to work together: this has been advocated as the role of leaders by existing research (Higgins and Maciariello, 2004; Eckel and Grossman, 2005; Bachmann, 2006).

Moreover, as seen in the results of hypothesis-testing, the set of functional MNT leadership skills has mediated the relationship between personal values and collective behaviours.

Second, extra-team relational skills are required to acknowledge the capabilities of Organisation Y across organisational units and locations and to build a good relationship with managers and other functional team leaders when functional MNT leaders assign members of functional MNTs to different types of cross-functional project team. This finding implies positive characteristics similar to those of a matrix organisation, such as lateral communication (Davis and Lawrence, 1977; Galbraith, 1971; Joyce, 1986; Larson and Gobeli, 1987; Randolph and Posner, 1992), increased information flow (Davis and Lawrence, 1977; Kolodny, 1979; Denis, 1986; Larson and Gobeli, 1987) and efficient utilisation of resources involving diversity of members (Davis and Lawrence, 1977; Kolodny, 1979; Stuckenbruck, 1983; Denis, 1986; Larson and Gobeli, 1987). These extra-team relational skills of functional MNT leaders are also important to understand customer demands and issues in order to deploy appropriate capabilities; which happens, as we have already seen, in a successful customer-oriented organisation (Dobni *et al.*, 2000). In addition to their extra-team relational skills, by setting clear

392

goals functional MNT leaders are able to avoid task ambiguity and dual authorisation, which existing studies have argued to be the negative side of a matrix organisation (e.g. Davis and Lawrence, 1977; Greiner and Schein, 1981; Katz and Allen, 1985; Denis, 1986; Posner, 1986; Larson and Gobeli, 1987).

Third, the combination of setting clear goals and possessing intra-team relational skills and communication skills is likely to facilitate team cooperation and learning by members in the organisational process of capability upgrading. The findings of this study have shown that individual learning is at the heart of team learning, as argued in the study by Foldy (2004). In addition, from the viewpoint of functional MNT leaders, the leader of Team B described, in Chapter 6, how an important role for team leaders is to keep, build, accumulate and upgrade knowledge between members. Hence, by setting clear aims for members and their teams, functional MNT leaders will be planning for future capabilities by working with members on performance feedback, with a balance being struck between organisational and team targets and members' individual targets. By setting clear targets for individual members, functional MNT leaders are likely to enhance individual learning by assigning their team members to cross-functional project teams in order to give those members a chance to accumulate experience. When the

members bring their experience back to their functional teams, functional MNT leaders are able to facilitate team integration and cooperation for articulating and codifying knowledge as part of team learning by using intra-team relational skills and setting clear targets for the team. This finding is similar to that of Zollo and Winter in their study (2002) which shows the cycle of capability upgrading through accumulating experience, articulating knowledge and codifying knowledge.

In addition to these general skills of functional MNT leaders (communication skills, intra-team and extra-team relational skills and setting of clear goals), in the case of technical expert teams the leaders' technical competences are also likely to help to understand members' technical skills and customers' issues when they acknowledge diversity of members as a source of team capabilities and formulate different types of cross-functional project team in the organisational processes of capability possession and capability deployment (see Chapter 6 and Chapter 8). In addition, when they are planning for future team capabilities in the organisational process of capability upgrading, their technical competences are likely to help them to understand any gaps between current members' technical skills and expected future resources which will turn into capability possession in technical expert teams. Also, in the case of functional

MNTs in Germany, skills of managing differences of national culture were expected in order to understand the differences between Asian and German cultures and to integrate team members from different nationalities and locations, as described in Chapter 8. This finding has affinities with the study by House *et al.* (2004), which showed that there are differences between Asian and German cultures in terms of in-group collectivism and institutional collectivism. Because of these national cultural differences, the functional MNT leadership skills of managing differences of national cultures by balancing these differences are likely to affect team integration and team learning in the organisational process of capability upgrading as well as communication skills, intra-team relational skills and setting of clear goals for members and functional teams. This finding links to existing studies which have argued a need to strike a balance of different national cultures (e.g. Copeland, 1988; McLeod and Lobel, 1992; Chen and DiTomaso, 1996; Adler, 1997; Bachmann, 2006).

To sum up, then, this research has argued that a combination of functional MNT leadership skills is vital to develop the dynamic capabilities in Organisation Y through organisational processes of capability possessions, capability deployment and capability upgrading. The right set of functional MNT leadership skills (communication skills,

intra-team and extra-team relational skills, setting of clear goals, technical competences and managing differences of national culture) is required and varies depending on types of functional MNTs and location. These findings have important implications for dynamic capabilities and functional MNT leadership skills, since existing studies have not explored the set of functional MNT leadership skills, from a perspective of dynamic capabilities and taking into consideration different factors and settings, such as types of functional MNT and locations.

9.4 Summary

This chapter has integrated and discussed the findings of this study, especially the roles and required combinations of functional MNT leadership skills to perform tasks through the organisational processes of capability possession, capability deployment and capability upgrading. This study has argued that the skills commonly expected of functional MNT leadership are those of communication, intra-team and extra-team relations, and the setting of clear goals. Additionally, depending on the type of functional MNT and the location, other skills are likely to be expected. This study has found that in the case of technical expert teams, technical competences were expected; and in the case of functional MNTs in Germany, the ability to manage national cultural

differences was expected. Furthermore, this study has explored the effect of functional MNT leadership skills on both team and organisational effectiveness. This is an important finding because the orchestration of team capabilities by functional MNT leaders is likely to prove a source of competitive advantage for Company X in its drive to respond to customer demands across locations. The next and final chapter, the Conclusion, which is based on the discussion in this chapter, describes the contributions made by this research study.

CHAPTER 10

CONCLUSION

10.1 Introduction

Functional MNT leadership to enhance team effectiveness from a dynamic capability perspective is the main topic which this research has investigated. As explained in Chapter 1, there were four objectives in conducting this research. The first objective was to understand organisational processes and functional MNT leadership from the viewpoint of dynamic capabilities. The second was to develop a research framework to investigate functional MNT leadership skills. The third was to collect primary data by doing fieldwork in Organisation Y's local offices in Japan and Germany. The fourth was to make a contribution to existing theory and business practice in the area of dynamic capabilities and teamwork and to achieve the research aims.

To fulfil these objectives, the research took the following steps. First, the literature on dynamic capabilities and the dynamics of functional MNTs was reviewed. Based on the literature review and gaps in previous research, a conceptual framework and hypotheses were developed. Then, a methodology to test the model and hypotheses was designed. Before the main study, the pilot study was conducted so as to explore the significant

influential variables and factors of the McGrath IPO model for team input, process and output. In this research, quantitative data (questionnaires) and qualitative data (semi-structured interviews) were collected in Japan for the pilot study and in Japan and Germany for the main study. The quantitative data were mainly used to test the hypotheses presented in Chapter 3. The qualitative data were analysed by content analysis to explore the dynamics of functional MNTs.

This final chapter aims to integrate the main findings of the thesis and key conclusions of the study. Section 10.2 indicates the theoretical implications and contributions. In Section 10.3, managerial implications and contributions are discussed. Then, in Section 10.4, the research limitations to this research are presented. Finally, section 10.5 describes the limitations of the research and suggests directions for future work in the field. Section 10.6 is devoted to the final conclusions of this research.

10.2 Theoretical Implications and Contributions

This section attempts to demonstrate how the results of this study make a contribution to existing theories. As Whetten (1989) does not distinguish between a theory and a model, this study regards the McGrath IPO model as a theory. The framework of this study has built on a dynamic view of team effectiveness developed by Kozlowski and Ilgen (2006) which embraces the concepts of organisational system, environmental dynamics and McGrath's IPO model (1964). This study has added the concept of dynamic capabilities and McGrath's IPO model. The present study has particularly focused on functional MNT leadership skills with regard to how leaders play a role in developing dynamic capabilities in organisational processes. From the results of this research, this study next discusses theoretical contributions to the theory of dynamic capabilities, McGrath's IPO model and the framework of team effectiveness developed by Kozlowski and Ilgen (2006).

First, I will discuss the theory of dynamic capabilities. Although studies on dynamic capabilities have argued the importance of asset orchestrations by leaders (Helfat *et al.*, 2007), organisational processes with a flexible organisational structure (Teece *et al.*, 2009), and the processes of dynamic capabilities (capability possession, capability

development and capability upgrading) (Luo, 2000), there is a lack of empirical studies to explore organisational processes. This study has contributed to the theory of dynamic capabilities by investigating each of the three organisational processes – capability possession, capability development and capability upgrading – linking each with the roles and skills of functional MNT leadership. As confirmed, this study found that functional MNT leadership had enhanced the effectiveness of organisational processes by developing dynamic capabilities in order to respond to demands from global customers. Especially at the stage of capability deployment, this research found that the most important role of functional MNT leaders in the organisational process was to formulate different types of cross-functional project team with managers at micro-level; none of this had been explored in the existing empirical studies. Therefore, this research added knowledge of what effect functional MNT leaders have had with their skills in each process of capability possession, capability deployment and capability upgrading.

Second, this study has made a contribution to McGrath's IPO model by focusing on the mediation effect of the set of functional MNT leadership skills on the relationship between diversity and team effectiveness. Studies have discussed the importance of

team leadership as team processes to utilise diversity in the teams (e.g. Church, 1995; Jackson and Ruderman, 1995; Arredonde, 1996; Jackson, 1996; Joshi and Jackson, 2003; Schippers *et al.*, 2003; Borrill and West, 2005) and to integrate members in the social identity theory of leadership (Hogg, 2001; Hogg and van Knippenberg, 2003). Yet, there was a dearth of empirical studies exploring the set of leadership skills as it affected the relationship between diversity and team effectiveness. Furthermore, Joshi and Lazarova (2005) have argued that there is a lack of empirical studies on the skills of MNT leadership in the cross-cultural environment. Based on the above theoretical backgrounds, this study has added knowledge of functional MNT leadership skills by investigating functional MNTs in depth. The findings of this study have confirmed the mediation effect of the set of functional MNT leadership skills for personal values of individualism and collective behaviours in Japan, and for the personal values of individualism–collectivism and collective behaviours in Germany. Also, it found that – regardless of location and type of functional MNTs –intra-team and extra-team relational skills, communication skills and setting of clear goals were expected of functional MNT leadership skills. Furthermore, this study found that depending on location and type of functional MNTs, other skills were expected of functional MNT leaders. In the case of functional MNTs in Germany, managing differences of national

cultures was expected. In the case of technical expert teams, technical competences were also expected of the leaders. Technical competences were not included in the study of MNT leadership skills by Joshi and Lazarova (2005): therefore, this study has added to the sum of knowledge of what kinds of functional MNT leadership skills are expected in order to maximise the diversity of members as one aspect of team capabilities.

Third, as existing studies on teamwork have argued, values of individualism–collectivism have a significant effect on team performance, and leadership has a mediating effect on the relationship between personal values of individualism–collectivism and team performance (e.g. Earley, 1994; Wagner, 1995; Gibson, 1996; Earley and Gibson, 1998; Kirkman and Shapiro, 1997, 2001; Stone-Romero and Stone, 2002): yet, there was still a need to explore how these factors worked. This study has added to knowledge of how personal values of individualism–collectivism have been mediated by the set of functional MNT leadership skills for team effectiveness in different locations. As the result of hypothesis-testing in Japan and Germany, the significant effect of functional MNT leadership skills on collective behaviours has been confirmed. In Japan, the personal value of individualism has been mediated by the skills

403

of functional MNT leadership for collective behaviours, whereas in Germany personal values of both individualism and collectivism have been mediated by the skills of functional MNT leadership for collective behaviours. Furthermore, the relationship between individualism and innovation and between individualism and customer service in Japan, and the relationship between collectivism and customer services in Germany, have all been mediated by the set of functional MNT leadership skills. From the findings of in-depth analysis of functional MNTs, it was confirmed that the leaders have affected the diversity, increasing productivity and team integration and therefore cooperation.

Fourth, this study has implications for the dynamic view of team effectiveness developed by Kozlowski and Ilgen (2006). As shown in their study, this research has confirmed that team effectiveness was likely to be obtained through team input (diversity in this research) and team process (functional MNT leadership skills in this research) with dynamic capabilities as a complex dynamic system in organisational processes. This study has reconfirmed the importance of functional MNT leadership skills as team process through a relationship with managers and other team leaders, something that has also been argued by studies on dynamic capabilities (e.g. Helfat *et*

al., 2007; Teece, 2009). Hence, this study has confirmed that diversity of members has been managed by functional MNT leaders in organisational processes to integrate, coordinate and upgrade team capabilities.

To summarise, this research has demonstrated how functional MNT leadership skills have an impact on team effectiveness, including factors of dynamic capabilities and McGrath's IPO model. Therefore, this study has made theoretical contributions to the field of team effectiveness by integrating theories of dynamic capabilities and McGrath's model with a comparative study of functional MNT leadership skills in Japan and Germany.

10.3 Managerial Implications and Contributions

This research makes contributions not only to theory but also to managerial practices. There are four points here, related to managerial practices regarding functional MNT leadership skills.

First, as this research has explored functional MNT leadership skills, it would be useful for MNC management and human resources management to reconsider the ways that

they select, educate and evaluate functional MNT leaders. In this study, respondents have acknowledged technical competences as important skills of functional MNT leaders in technical expert teams. Also, several leaders mentioned that by performing tasks in cross-functional project teams they have maintained and upgraded their technical skills. Therefore upper management could consider giving functional MNT leaders the job of performing tasks in cross-functional project teams in order to upgrade their technical competences. However, this research has shown that intra-team and extra-team relational skills and communication skills are also considered to be important for functional MNT leaders. That implies that when companies select functional MNT leaders it is better for them to consider balancing tasks for team leaders and combinations of these leadership skills. Furthermore, depending on type of functional MNT and location, the combinations of expected functional MNT leadership skills are likely to be different, as argued in Chapter 9. Therefore, this study suggests that MNCs and human resources practitioners select functional MNT leaders carefully and make training plans by considering combinations of leadership skills. It might be helpful to draw up priorities for the roles of functional MNT leaders.

Second, this research has shown how functional MNT leaders create team integration with social interaction among members to facilitate cooperation. The study has confirmed that social activities and building up teamwork were helpful in getting to know members and creating a collective identity among team members. Also, this research has shown that social activities organised by leaders of functional MNTs are likely to enhance the social integration of members. Therefore, this study suggests that functional MNT leaders facilitate team activities in order to build team integration. That is likely to increase cooperation between members, and therefore team effectiveness.

Third, this research has shown how leaders of functional MNTs have integrated and coordinated team capabilities through relationships across locations and organisational units. The study has confirmed that, depending on situations such as the level of customers' criticalities and political issues between customers, the best ways to formulate cross-functional project teams are likely to differ. That implies that organisational structure should be flexible so as to allow these leaders to communicate across organisational units and local offices. That in turn suggests that in highly dynamic markets it is a good idea for MNCs to design a flexible structure in order to

respond to customer demands by aiming to maximise interrelationships across organisational units and locations.

Finally, this study has confirmed that organisations should consider cross-cultural issues and have the flexibility to reflect demands from global customers. The research has found that Asian customers, especially Japanese customers, are more demanding than European customers but also, that even among customers in Europe there are differences in customer behaviours and demands. That has implications for MNCs who need to consider their organisational processes to integrate and coordinate capabilities in Organisation Y depending on the demands of local customers.

The results of this research show that a combination of functional MNT leadership skills has been confirmed as critical to achieve team effectiveness by developing dynamic capabilities in organisational processes. Hence, this study suggests that companies and organisations will do better to define the roles and skills of functional MNT leadership in order to respond to the dynamic demands from global customers by optimising their structure and organisational processes to reflect their organisational strategies. However, although the contributions made by this research have been alluded to above, there are

nevertheless some limitations to the research. The next section describes these limitations.

10.4 Research Limitations

There are five main limitations on this research: the usual limitations of using case studies; time constraints; cost constraints; difficulties with research methods; and the measurement of constructs. These limitations will now be explored in turn.

First, the general problems of using case studies are exacerbated because this research was conducted in two separate industries: a multinational food ingredients industry (pilot study) and a global software industry (main study). Since market dynamics differ from one industry to another, the findings of this research might not apply, or apply equally, to all industries.

Second, this research experienced limitations caused by time and cost constraints in the fieldwork in Germany. The durations of interviews in Germany were shorter than those in Japan. Therefore, there were not enough data to investigate leadership in cross-functional project teams by direct comparison of the teams in Japan and in Germany.

Perhaps the interviews in Japan were longer because most interviews were conducted in the interviewees' mother tongue, whereas the interviews in Germany were conducted in English.

Third, with regard to comparative studies across nations, it was not possible, as a result of the time and cost constraints on this research, to follow up the recommendation of one team leader in Germany to investigate teams in America. Since diversity management originally started from American business practices, perhaps MNCs use US-inspired systems to evaluate diversity at the multilayer of organisational units including company, organisation and teams. Hence, it might indeed be of great interest to investigate multinational teams in the American context, in order to see differences at regional level by comparing the European and Japanese cultures.

Fourth, in terms of method, it would be preferable to employ a longitudinal study with observation, to investigate the relationship between effectiveness and team dynamics from a dynamic capability perspective. It might especially be worthwhile to investigate how teams learn through accumulating experience, articulating knowledge and codifying knowledge for dynamic capabilities.

Finally, regarding the measurements of constructs, the measurement of functional MNT leadership skills, which is used in the study, did not include technical competences although many respondents stated that these were important leadership skills in technical expert teams. Also, in terms of team effectiveness, the ideal measurements for team effectiveness were different depending on location. Perceptions of team effectiveness were evaluated by internal members of functional MNTs, but it might be helpful if the study also included team effectiveness evaluated by external team members in the same company.

In the light of these research limitations, the following section gives recommendations for future research.

10.5 Recommendations for Future Research

Future research needs to keep in mind the limitations we have mentioned. Firstly, as this study ran into the problem of constraints on time and cost, it would be preferable to have enough time fully to investigate cross-functional project teams. As cross-cultural comparison studies for functional MNTs, it would be ideal to conduct fieldwork in several different locations which have different national cultural values.

The findings of this research have given an insight into functional MNT leadership to enhance team effectiveness from a dynamic capability perspective. Future research is encouraged to investigate each of the functional MNT leadership skills, including technical competences, and to make comparisons of leadership between functional MNT and cross-functional project teams by exploring similarities and differences.

Future studies might consider investigating the relationship between capability upgrading and functional MNT leadership skills in depth by conducting a longitudinal study. As I have stated, capability upgrading is likely to become the source of future competitive advantage for MNCs responding to customer demands. Therefore it would be interesting to find out how each functional MNT leadership skill links with the stages of team learning such as accumulating experience, articulating knowledge and codifying knowledge, and interacting with other members in functional teams and cross-functional project teams.

Additionally, the present study has evaluated team effectiveness through internal team members only; it might be an option to do a similar investigation through external

members, such as top managers, including directors and managers, and members of other functional teams and customers.

10.6 Summary

It may be safely assumed that the global business environment will become more complex in the future due to dynamic demands from global customers and rapid technological changes. Ever more demands for diversity and flexible organisational processes are likely to be urged on MNCs, compelling them to develop dynamic capabilities by integrating, coordinating and upgrading capabilities under functional managers and leaders. This research contributes to the field of team effectiveness by applying an extended version of McGrath's IPO model focused on functional MNT leadership from a dynamic capability perspective in a multinational environment. It is hoped that this study will make a contribution to the knowledge of dynamic capabilities, functional MNT leadership and a dynamic view of teamwork. Finally, although this research is based on just one case study, its general implications are clear: the importance of having a combination of functional MNT leadership skills in order to integrate, coordinate and upgrade team capabilities in multinational companies in line

with both the varying functions of the teams and the different locations in which they

operate.

APPENDIX 1

BACKGROUND OF COMPANY A FOR THE PILOT STUDY

A multinational food ingredient company (Company A), where this pilot study was conducted, was established in Japan. In order to understand the dynamics of the food ingredients industry surrounding Company A, customer demands and technology will be analysed by referring to literature on the food ingredients industry and the Annual Report of Company A. To provide the background of Company A, the MNC's strategic management is described later in this Appendix.

Food Ingredients Industry

Functional foods are defined as 'foods that may provide health benefits beyond basic nutrition' and 'food that is similar in appearance to conventional food that is intended to be consumed as part of a normal diet, but has been proposed to subserve physiological roles beyond the provision of simple nutrient requirements' (Siró *et al.*, 2008:457). Next, the food ingredients industry is analysed in greater detail in terms of customer demands and technology.

Customer demands

Global customers are increasingly demanding that food be able to contribute directly to their health (Mollet and Rowland, 2002; Siró *et al.*, 2008). Their demands for

additional quality and value have surged in the last few decades (Goldberg and Williams, 1991). Demand for functional foods is high across many nations since people are eager to enjoy better health. According to Siró *et al.* (2008), the market for functional food is globalised and expected to expand to at least US$ 22 billion (Hilliam, 2000) or even US$ 47.6 billion (Solan, 2002), (cited in Siró *et al.*, 2008). The largest market segment is America, followed by Europe and Japan (*ibid.*). Furthermore, the food industry market research company, just-food, estimates that the global functional food market is expected to reach at least US$ 90.5 billion by 2013. Next, technology for food ingredients companies is described as part of the external environment for Company A.

Technology

Companies which produce food ingredients are food companies, suppliers for food ingredients and pharmaceutical companies with researchers in basic science, nutritionists and dietitians and scientists in industry (Roberfroid, 2000). The challenge for them is to confirm the health benefits from functional foods, which requires high technical knowledge of food science, biotechnology and nutrition for making functional food ingredients (*ibid.*). That implies that companies in the food ingredients industry

need to have distinctive resources in knowledge and technology to extract health benefits from food beyond their competitors in the food industry, food ingredients companies and pharmaceutical companies. Hence, clearly, the food ingredients industry is highly competitive.

Biotechnology gives opportunities to develop new raw materials with new process technologies for functional food ingredients (Goldberg and Williams, 1991). Making functional foods requires the relevant ingredients for production, such as dietary fibre, oligosaccharides, sugar alcohols, amino acids, peptides and proteins, lactic acid bacteria, antioxidants and others (*ibid.*). Food companies are likely to obtain functional food ingredients either from suppliers or from inside their organisations. Functional food must be produced in combination with food science and medicine; therefore, innovation and technology are important to make functional food ingredients. Innovation in the food industry needs to combine technological, social and cultural innovation (Earley, 1997).

In short, because of high demands from global customers and the rapid changes in technology, the food ingredients industry is considered to be a highly dynamic market.

418

Therefore it is important to explore the strategies and strategic management in Company A in its aim to be competitive on the food ingredients market, and this will be tackled next.

<u>Strategic Management</u>

Company A has focused from its inception on producing functional food ingredients that have a positive effect on health with good nutritional value and taste, according to the company website and Annual Report. From the website it can be seen that Company A has plants overseas and sales offices in different regions and that it specialises in natural food ingredients and creating new ingredients using nanotechnology. That implies that Company A is aiming for economies of scale in the highly dynamic market, and also that it applies an international strategy that exploits the parent company's knowledge by spreading it on a global basis. Moreover, the company is enthusiastic about research, presenting its research outcomes at international exhibitions and in research journals, and it takes out patents internationally, for example in China, according to the interviewed respondents.

APPENDIX 2

THE ENGLISH COPY OF THE QUESTIONNAIRE FOR A PILOT STUDY

How effective is your group?

Currently some organisations form multinational teams or teams which include two or more different nationalities for various reasons in order to run their businesses effectively; due to business necessity (overseas/international projects/product development) ; lack of resources ;due to cost advantages obtained in relocating activities. By creating such groups, organisations may be able to make use of global human resource capabilities located inside organisations in areas such as product development, sales and distribution and marketing. However, it is difficult to manage and control the diversity of nationalities due to different national cultural values and norms. In addition, organisational culture may be influenced by organisational vision, goals, norms and the industry in which the firm operates. Inside multinational teams there are elements such as national culture, organisational culture, group culture and individual values, which are interrelated and which influence group effectiveness.

I would like to understand your opinions on the effectiveness of cross-national group work in your organisation. Through analysis of the data collected, it will be possible to show the relationship between effectiveness, communication, culture, conflict, trust and commitment etc. It would be useful to know what gaps exist between your thoughts and those of other group members, how to improve relationships among group members, and to reveal additional issues your organisation might need to address.

This questionnaire is the first step towards an in-depth understanding of the effectiveness of cross-national groups. Please be as honest and realistic as possible in your answers! Your response will be treated in confidence. It is entirely anonymous.

The results of this survey in aggregate form will be given to the company after analysis.
If you wish to speak directly about this project please contact the following:
Name : Chitose Furukawa
   The Birmingham Business School
    International Management and Organisation
e-mail:cxf426@bham.ac.uk
Address : [The UK] Birmingham Business School, University House,
       Edgbaston Park Road, Birmingham, B15 2TY, UK

- **This questionnaire is very easy and quick to complete.**
- **Please be as honest and realistic as possible in your answers.**
- **Your response will be treated in confidence. It is entirely anonymous.**

Some information about yourself;

Please circle the relevant answer

Sex	Male		Female	

Age   20-24,   25-29,   30-34,   35-39,

40-44,   45-49,   50-54,   55-59,   60-64

Previous experience in a cross-national group?   Yes / No

Previous experience in multi-cultural environment?   Yes / No

What is your nationality?   [_____]

Please choose your answer and tick the box following each question (1[Strongly disagree]---------------------7[Strongly agree])	1 Strongly disagree					7 Strongly agree	
	1	2	3	4	5	6	7
1. My group has achieved its targets and goals							
2. I am satisfied with my group achievements							
3. My group shares knowledge among the group members							
4. I have obtained skills and knowledge through my experience of group work							
5. I share my knowledge with my group members							
6. I have learnt about the existing culture differences between the group members through my experience of working in this groups							
7. My group leader clarifies the group's objectives and overall purpose							
8. My group leader assigns task roles in the group							
9. My group leader determines the norms of task-related interactions in the group							
10. My group leader creates an atmosphere of mutual respect and acceptance in the group							
11. My group leader signals his/her approachability to smooth differences in the group							
12. My group leader communicates equally with all group members							
13. My group leader evaluates group performance							

Please choose your answer and tick the box following each question (1[Strongly disagree]---------------------7[Strongly agree])	1 Strongly disagree						7 Strongly agree
	1	2	3	4	5	6	7
14. There is often conflict among my group members							
15. From my point of view, when conflict occurs in my group, group members exchange their opinion and find a solution that satisfies every member							
16. From my point of view, when conflict occurs in my group, group members share problems and take a mid-point solution which members can agree with							
17. From my point of view, when conflict occurs in my group, members avoid confronting problems							
18. From my point of view, when conflict occurs in my group, the group follows the strongest opinion in the group							
19. My group members share information in meetings							
20. My group has informal meetings after work							
21. My group members ask questions when they do not understand what other group members are saying							
22. My group members speak slowly and clearly							
23. I'm firmly committed to my group							
24. My group members encourage each other to work well together							
25. I try my best to make a contribution to work in my group							
26. Individual commitment is important for work in my group							
27. Work is as important as my family							
28. I like to feel I am making some effort in my work							
29. I work hard even when other members are not around							
30. I believe in my group members							
31. I do not hesitate to share my expertise with my group members							
32. I can speak openly to group members							
33. I can rely on group members' skills							
34. I know what is my role in the group							

Please choose your answer and the tick box following each question (1[Strongly disagree]---------------------7[Strongly agree])	1 Strongly disagree						7 Strongly agree
	1	2	3	4	5	6	7
35. I have an opportunity to give my opinion during meetings							
36. My group tries to make decisions by consensus							
37. I have responsibility for my task							
38. I have autonomy over my task							
39. I feel the diversity of culture creates more alternatives when exchanging knowledge in my group							
40. I feel cultural differences enhance creativity in my group							
41. I feel there are differences in work ethics between each nationality in my group							
42. I feel cultural differences give more options to make better decisions in my group							
43. In my opinion, there are often within-nationality conversations which some group members do not understand due to different cultural values							
44. In my opinion, there is less accurate communication due to language differences in my group							
45. I feel under stress because cultural diversity creates more tension in my group							
46. My group shares clear goals and targets							
47. I know my group's purpose							
48. I understand group objectives							
49. I have a strong sense of being a member of my group							
50. I am different from other members in my group							
51. I feel the organisational culture has an impact on my group's culture and atmosphere							
52. I feel my group has been influenced by the majority nationality in my group							

THANK YOU VERY MUCH FOR TAKING THE TIME
TO COMPLETE THIS QUESTIONNAIRE

APPENDIX3

THE JAPANESE COPY OF THE QUESTIONNAIRE FOR A PILOT STUDY

グループ効果性についてのアンケート

現在、企業に国際化の波が押し寄せるなか、企業では外国人従業員を含むグループ（国際グループ）が存在しています。そのような多国籍グループを編成する利点は、国際レベルの人材を活用できる点や海外子会社（支社）を効率よく経営管理する点と考えられています。しかしながら、このようなグループにおいて、国文化の価値観や規律の多様性を一元管理するのは困難なものと見なされています。また組織文化（企業のビジョン、企業目的、労働倫理等）が、国際グループへ影響を及ぼしているとされています。今回のアンケート調査は、国文化、組織文化、グループ文化、個人の態度がグループの効率性へいかに影響を与えているかを探るために行うものです。

本アンケートは、あなたの所属する国際グループの効果性について個人的に記入していただくものです。このアンケートによって、リーダーシップ、コミュニケーション、文化、衝突、信頼性、献身度等がグループの効率性に影響を及ぼしているかどうかの関連性を明らかにするものです。グループメンバーとの相違がどの程度あるのか、またグループメンバーとの交流関係を改善するのに役に立つと思われます。

本アンケートは国際グループに関しての理解を高めるためのものです。アンケートにできるかぎり正直にまた現実的にお答えください。このアンケートは、機密性を考慮し匿名とします。

本調査の結果につきましては、御社に調査分析が終わり次第お渡しします。ご関心のある方はご覧ください。
不明な点、また本調査内容についてお尋ねになりたい場合は以下までご連絡ください

名前：古川　千歳（**Chitose Furukawa**）
　　　The Birmingham Business School
　　　　International Management and Organisation

e-mail:cxf426@bham.ac.uk

住所：**[イギリス] Birmingham Business School, University House,**
　　　　　　Edgbaston Park Road, Birmingham, B15 2TY, UK

- このアンケートに要する時間はおおよそ10分です。
- できるだけ正直にまた現実的に質問事項にお答えください。
- 本アンケートは機密性を守るために匿名とします。

1. あなた自身についてお伺いします;

該当する箇所を丸で囲ってください。

性別　　　　　　　　　男性　　　　　　　　女性

年齢　　　　　　　　　20-24,　25-29,　30-34,　35-39,

　　　　　　　　　　　40-44,　　45-49,　50-54,　55-59,　　60-64

国際チームで以前働いたことがありますか。　　　　はい　いいえ

多国籍の環境にいたことがありますか。　　　　　　はい　いいえ

国籍　　　　　　　　　　　　　　　　　[＿＿＿＿＿＿]

2. 所属するグループに関してお伺いします

以下の質問事項に対して、右にあるボックスに該当するところに〇印をつけてください。 (1[強く否定する]--------------------7[強く肯定する])	1 強く 否定する						7 強く 肯定する
	1	2	3	4	5	6	7
1. 私のグループは、目標を達成している。							
2. 私は、グループの成果に満足している。							
3. 私のグループは、メンバー同士で様々な知識を共有している。							
4. 私は、グループの共同作業で技術と知識を学んだ。							
5. 私の知識は、グループメンバーに共有されている。							
6. 私は、グループワークの経験で国文化に違いのあることを学んでいる。							
7. 私のグループリーダは、グループの細かい目標、全体的な目的を明確にしている。							
8. 私のグループリーダは、グループメンバーに対して役割を割り当てている。							
9. 私のグループリーダは、グループ内での任務に関して基準を設けている。							
10. 私のグループリーダは、グループ内において寛容な心で互いに敬意を払う雰囲気を作っている。							
11. 私のグループリーダは、グループ内で互いの相違が目立たないように、雰囲気作りをしている。							

以下の質問事項に対して、右にあるボックスに該当するところに〇印をつけてください。 (1[強く否定する]---------------------7[強く肯定する])	1 強く 否定する					7 強く 肯定する	
	1	2	3	4	5	6	7
12. 私のグループリーダは、グループメンバー全員と平等に会話している。							
13. 私のグループリーダは、グループの業績を評価している。							
14. グループ内で、メンバー同士でしばしば衝突することが見受けられる。							
15. 私から見ると、グループ内で衝突が起こったとき、グループメンバー同士で意見を交換し、メンバーが満足する解決策を見出している。							
16. 私から見ると、グループ内で衝突が起こったとき、グループメンバーは問題を共有し、みんなが同意できる中間的な解決策を選んでいる。							
17. 私から見ると、グループ内で衝突が起こったとき、グループメンバーは問題に直面することを避けている。							
18. 私から見ると、グループ内で衝突が起こったとき、グループはグループ内の強い意見に従っている。							
19. 私のグループは、ミーティングで情報を共有している。							
20. 私のグループは、仕事が終わった後、うちとけて集まることがある。							
21. 私のグループメンバーは、他の人の発言でわからない事は質問する。							
22. 私のグループメンバーはゆっくりと明確に話をする。							
23. 私はグループに最大限の努力をしている。							
24. 私のグループメンバーは、良い仕事をするために互いに切磋琢磨しあっている。							
25. 私は、グループの仕事に貢献するためにベストを尽くしている。							
26. グループの仕事には、個人の献身さが重要である。							
27. 仕事は私の家族と同じぐらい重要である。							
28. 私はある程度仕事に対して努力をしていると感じている。							
29. 他のグループメンバーがいないときでも、私は熱心に働いている。							

以下の質問事項に対して、右にあるボックスに該当するところに〇印をつけてください。 (1[強く否定する]--------------------7[強く肯定する])	1 強く 否定する					7 強く 肯定する	
	1	2	3	4	5	6	7
30. 私は、私のグループメンバーを信じている。							
31. 私は、私の専門知識を他のグループメンバーと共有することにためらっていない。							
32. 私は、グループメンバーに対して隠し事なく話すことができる。							
33. 私は、グループメンバーの能力を頼りにしている。							
34. 私は、グループ内での私の役割を理解している。							
35. ミーティングの間に私の意見を述べる機会がある。							
36. 私のグループでは多数決で意思決定をしようとしている。							
37. 私は、自分の任務に対して責任を持っている。							
38. 私は、自分の任務に対して自主性または決定権を持っている。							
39. グループ内で意見交換をする際に、文化の違いが多くの選択肢を生み出すと感じている。							
40. グループにある多文化によって、グループ内の創造性が高まると感じている。							
41. グループ内の国籍の違いにより労働倫理が異なる気がする。							
42. 文化の違いが、グループの意思決定に対して多くの選択肢を与えていると感じる。							
43. 国による価値観の違いにより、グループ内で一部の国籍の人にしかわからない会話がしばしばあると感じる。							
44. 私のグループでは、言語の違いによりコミュニケーションがうまくいかない場合がある。							
45. グループ内で文化の違いが緊張感を生み出している気がしてストレスを感じる。							
46. 私のグループは目標を共有している。							
47. 私は、グループの目的を知っている							
48. 私は、グループの目標を理解している							
49. 私は、グループのメンバーとして強い帰属意識がある。							

以下の質問事項に対して、右にあるボックスに該当するところに〇印をつけてください。 (1[強く否定する]--------------------7[強く肯定する])	1 強く 否定する					7 強く 肯定する	
	1	2	3	4	5	6	7
50. 私は、グループ内で、他のメンバーと違っていると感じている。							
51. 組織（企業）文化が、私のグループの文化や雰囲気に影響していると感じている。							
52. 私のグループは、グループ内で大部分を占める人たちの国民性に影響されていると感じている。							

本調査にご協力いただき誠にありがとうございました。

APPENDIX4

THE ENGLISH COPY OF THE INTERVIEW PROTOCOL FOR A PILOT

STUDY

Interview Protocol for Human Resource personnel

Diversity

1. How many foreign employees are working in your organisation?
2. Do you have any cross-cultural management systems/training in your organisation?

Structure

3. How many multinational teams are in your organisation?
4. Does HRM assign a special task for cross-national groups? How? Why?
5. How do you choose tasks for cross-national groups?
6. In what way does the HRM department intervene with respect to group activities? In what circumstances? Why?

Learning/Training

7. What kind of training do you provide for foreign and host nation employees?
8. Do you have training for employees to obtain knowledge of cultural differences? How often? How long?
9. Do you have a knowledge management system in your organisation? Does it work, and how do you measure this? How do you draw together knowledge of multinational teams for the benefit of the organisation?

Leadership

10. What are the general requirements for a leader in a multinational team?
11. To what extent do you think that the leader plays a role in managing cultural differences among members?

Conflict

12. Do you have a procedure for managing conflict in your organisation?
13. Do you use a third person who is not a member to solve conflict in that group?

Commitment

14. How do you feel about employees' commitment levels?
15. Do you notice any difference between local employees' and foreign employees' commitment?
16. How do you appraise the level of commitment of employees in your organisation?

Trust

17. To what extent do you believe in your employees?
18. To what extent do you believe in your employees' skills? Do you notice any differences between foreign employees and local employees?

Group cognition

19. What do you feel about multinational teams' culture and the organisational culture?
20. Do you have a code of conduct in your organisation? Do you translate the code of conduct into different languages?

Team Effectiveness
21. Do you have any way of measuring effectiveness of multinational teams in your company?

Interview Protocol for Multinational Team Leaders

Diversity

1. What are the advantages/disadvantages of having people from different cultures working in your team?

Learning/training

2. Do you pass your knowledge and skills among your team members? If it is yes, how? If it is no, why?

3. Do you have a system to store and manage team knowledge and skills in your team?

4. Do you have a procedure to store and manage team knowledge?

Leadership

5. In your opinion, what is the ideal model of the leader in your team?

6. To what extent do you think that the leader plays a role in managing cultural differences among members?

Conflict

7. Would you define conflict in your opinion?

8. Have you experienced conflicts among your team members?

9. How did your team solve the conflict?

10. What do you think was the reason for the conflict?

11. Have you had any conflicts because of cultural differences? What were they? Have you been able to solve them?

12. How often do you have conflicts among members?

Communication

13. In your opinion how do you ensure smooth communication with your team members?

14. Do you feel communication in a multinational team is different from a team which consists of a single nationality? How is it different?

Commitment

15. How do you feel about the commitment levels of your team members to your team?

16. How do you feel about your individual commitment to your team?

Trust

17. To what extent do you believe in all your team members?

18. To what extent do you believe in all your team members' skills?

19. Do you feel any differences between foreign employees and local employees in their level of reliability?

Group cognition

20. How do you define your team culture and organisational culture?

21. What is the atmosphere in your team? Do you identify yourself within this team?

22. Do you think every member makes an effort to achieve the shared goals and targets? How?

23. Do you have any practices/norms of behaviour in your team? Do you have any document outlining these team practices/norms?

Group effectiveness

24. What are your team's goals and targets?

25. How do you feel about your team achievements?

26. How satisfied are you with your team achievements?

Interview Protocol for Multinational Team Members

Task structure

1. Have you been assigned to a specific task in your group?
2. To what extent do you have autonomy over your task?
3. How would you describe interrelationships with your group members?
4. How do you interact with your group members over your task?

Diversity

5. What do you feel are the advantages/disadvantages of having cultural diversity in your group?

Learning/training

6. When you were assigned to your work in this group, did you have a mentor to learn how the group functions?
7. How have you learnt from your mentor?
8. How much have you learnt from mentor?
9. How much have you learnt from team members?
10. What have you learnt from your team work?
11. What kind of skills and knowledge have you obtained from your team?
12. What kind of skills and knowledge do you wish to acquire from team members?
13. What kind of training did you have in your team?

Leadership

14. How do you feel about your team leader? In your opinion what are/were the roles of the leader in your team?
15. In your opinion, what is the ideal model of the leader in your team?
16. To what extent do you think that the leader plays a role in managing cultural differences among members?

Conflict

17. Have you experienced conflicts among your team members?
18. How did your team solve conflict?
19. What do you think what was the reason for the conflict?
20. Have you had any conflicts because of cultural differences? What were they? How were they solved?
21. How often do you have conflicts among members?

Communication

22. In your opinion what are the conditions for smooth communication with your team members?

23. Do you feel communication in a multinational team is different from a team which consists of a single nationality? How is it different?

Commitment

24. How do you feel about the commitment levels of your team members to your team?

25. How do you feel about your individual commitment to your team?

Trust

26. To what extent do you believe in your team members?

27. To what extent do you believe in your team members' skills?

28. Do you feel any differences between foreign employees and local employees in their level of reliability?

Group cognition

29. What do you feel about your team culture and organisational culture?

30. What is the atmosphere in your team? Do you identify yourself within this team?

31. Do you think team members make an effort to achieve the shared goals and targets? How?

Group Effectiveness

32. Do you feel you team has achieved anything ?

33. How do you feel about your team achievements?

34. How satisfied are you with your team achievements?

APPENDIX5

THE JAPANESE COPY OF THE INTERVIEW PROTOCOL FOR A PILOT STUDY

インタビュープロトコル　人事担当者

ダイバーシティ

1．何人の外国人雇用者が働いていますか。

2．クロスカルチャルトレーニングやシステムがありますか。

組織構造

3．いくつのクロスカルチャルグループ（多国籍チーム）が組織内に存在していますか。

4．どのように多国籍チームにタスクを割り振っていますか。どのように。どうして。

5．どのように多国籍チームのタスクを選びますか。

6．どのぐらい人事担当が多国籍チームの活動にかかわっていますか。どのような状態で。どうして。

ラーニング・トレーニング

7．どのようなトレーニングを、外国人従業員また現地採用従業員に提供していますか。

8．異文化知識を養うためのトレーニングを従業員に提供していますか。どの程度。どのような長さのトレーニングですか。

9．組織内に知識共有システムがありますか。どのように機能していますか。多国籍ひー無の知識をどのように組織内で活かしていますか。

リーダシップ

10．多国籍チームのリーダにはどのような必要条件がありますか。

11．多国籍チームリーダが多国籍文化をマネージするという役割はどのぐらいだと思いますか。

衝突

12．組織内で衝突を解決するための順序・手段がありますか。

13．グループ内の問題を解決するために第三者を使用していますか。

コミットメント

14．従業員のコミットメントレベルはどの程度だと感じますか。

15．コミットメントレベルで、現地従業員と外国人従業員の差を感じますか。

16．組織内で従業員のコミットメントを評価していますか。

信用

17．どのぐらい従業員を信用していますか。

１８．　　　どのぐらい従業員のスキルを信用してしますか。現地従業員と外国人従業員の差はありますか。

グループ認識

　　１９．　　　多国籍チームの文化と組織文化をどのように感じますか。

　　２０．　　　会社内に従業員規則はありますか。従業員規則を翻訳していますか。

グループ効果性

　　２１．　　　どのように組織内で多国籍チームの効果性を測定していますか。

インタビュープロトコル　多国籍チームリーダ

ダイバーシティ

　１．グループ内で多文化から来た人たちと働く利点と欠点を教えてください。

ラーニング・トレーニング

　２．メンバー間で知識共有をしていますか。しているのならば、どのようにしていますか。していないのならば、どうしていないのですか。

　３．チーム内で知識共有システムがありますか。

　４．チーム内で知識共有する順序がありますか。

リーダシップ

　５．理想のチームリーダ像とはどのようなものですか。

　６．多国籍チームリーダが多国籍文化をマネージするという役割はどのぐらいだと思いますか。

衝突

　７．衝突という意味をどのように定義しますか。

　８．メンバー間で衝突を経験したことがありますか。

　９．どのように衝突を解決しましたか。

　１０．　　衝突の原因は何だったかと思いますか。

　１１．　　異文化が問題で起こった問題はありますか。何だったのでしょうか。解決することは可能でしたか。

　１２．　　どのぐらいの頻度でメンバー間の衝突が起こりますか。

コミュニケーション

　１３．　　メンバー間のコミュニケーションをどのように円滑にしますか。

　１４．　　多国籍チームのコミュニケーションは、単一国籍で成り立っているチームと違うと感じますか。どのように違いますか。

コミットメント

　１５．　　どのぐらいチームメンバーは、チームに対してコミットメントしていると思いますか。

　１６．　　どのぐらいあなたは、チームに対してコミットメントしていると思いますか。

信用

　１７．　　どのぐらいチームメンバーを信用していますか。

　１８．　　どのぐらいチームメンバーのスキルを信用していますか。

　１９．　　外国人従業員と現地採用人に対しての信頼度は違いますか。

グループ認識

441

２０． 　　チーム内文化と組織文化をどのように定義しますか。

２１． 　　チーム内の雰囲気をどのように感じますか。帰属意識がありますか。

２２． 　　チームメンバー全員が供しているゴールとターゲットに対して努力して
いると感じますか。どのように。

２３． 　　チーム内規則がありますか。チーム規則を定めた文章がありますか。

グループ効果性

２４． 　　チームゴールやターゲットは何ですか。

２５． 　　チーム達成に関してどのように感じますか。

２６． 　　チーム達成に関してどのぐらい満足していますか。

インタビュープロトコル　多国籍チームメンバー

タスク

1．チーム内で特定したタスクを割与えられていますか。

2．どのぐらいタスクに対しての決定権がありますか。

3．メンバーとの関係はどのようになっていますか。

4．どのようにタスクに関してほかのメンバーと関与していますか。

ダイバーシティ

5．グループ内で多文化から来た人たちと働く利点と欠点を教えてください。

ラーニング・トレーニング

6．このチームに所属するときに、グループ内の機能を学ぶためにメンターはいましたか。

7．メンターから学びましたか。

8．どのぐらいメンターから学びましたか。

9．どのぐらいメンバーから学びましたか。

10．　グループワークから何を学びましたか。

11．　チームメンバーからどのような知識を学びましたか。

12．　これからどのような知識をチームメンバーから取得したいと思いますか。

13．　どのようなトレーニングがチーム内にありますか。

リーダシップ

14．　チームリーダに対してどのように感じますか。チームリーダの役割は何だと思いますか。

15．　理想のチームリーダ像とはどのようなものですか。

16．　多国籍チームリーダが多国籍文化をマネージするという役割はどのぐらいだと思いますか。

衝突

17．　メンバー間で衝突を経験したことがありますか。

18．　どのように衝突を解決しましたか。

19．　衝突の原因は何だったかと思いますか。

20．　異文化が問題で起こった問題はありますか。何だったのでしょうか。解決することは可能でしたか。

21．　どのぐらいの頻度でメンバー間の衝突が起こりますか。

コミュニケーション

22．　メンバー間のコミュニケーションをどのように円滑にしますか。

２３．　　　　多国籍チームのコミュニケーションは、単一国籍で成り立っているチームと違うと感じますか。どのように違いますか。

コミットメント

２４．　　　　どのぐらいチームメンバーは、チームに対してコミットメントしていると思いますか。

２５．　　　　どのぐらいあなたは、チームに対してコミットメントしていると思いますか。

信用

２６．　　　　どのぐらいチームメンバーを信用していますか。

２７．　　　　どのぐらいチームメンバーのスキルを信用していますか。

２８．　　　　外国人従業員と現地採用人に対しての信頼度は違いますか。

グループ認識

２９．　　　　チーム内文化と組織文化をどのように感じますか。

３０．　　　　チーム内の雰囲気をどのように感じますか。帰属意識がありますか。

３１．　　　　チームメンバー全員が供しているゴールとターゲットに対して努力していると感じますか。どのように。

グループ効果性

３２．　　　　チームゴールやターゲットは何ですか。

３３．　　　　チーム達成に関してどのように感じますか。

３４．　　　　チーム達成に関してどのぐらい満足していますか。

APPENDIX6

BACKGROUND OF COMPANY X FOR THE COMPANY X

A global software company, Company X, where the main research was conducted, was established in Germany. The company provides global software products and services in business management solutions for customers in various industries, according to its managers in Japan. The global software industry, strategic management (including diversity management) and corporate architecture are described next in order to understand the background of Company X.

Global Software Industry

Company X produces software and provides product-related services to allow customers to run their business efficiently using its software packages according to the company's Annual Report. The company is categorised into global software industry and specialised application software (Datamonitor, 2008). The market for the global software industry was anticipated to accelerate at a compound growth rate of 8.5% for the five-year period 2008-2013 (Datamonitor, 2008). The buyers of application software are from different business areas including banking and financial services, manufacturing, telecommunications and technology and logistics (Datamonitor, 2008). In the application software market, where the global software company operates, there are different business models and pricing models to earn revenues for software

companies. These pricing models for software are categorised under open-source, licensed software, leased software and product service (Keller, 2007). Each business model has a different revenue focus, strengths and weaknesses. Especially in the model of licensed software, companies obtain economic returns from licence and maintenance fees after selling software packages (Keller, 2007). Clearly, the global software industry is diverse, complex and highly dynamic in nature.

Currently the revenues of licensed software companies have shifted from licence fees to maintenance and services, since the price of software is declining (Cusmano, 2007). Company X sells licensed software so as to obtain economic returns from licence and maintenance fees, according to the company's Annual Report. Within the price of the licensed software, there are three main costs: licensing, maintenance and service fees (Cusmano, 2007). Licensing fees are paid to obtain authorisation to use a particular version of the software (*ibid.*). A maintenance agreement should be made in order to receive fixes, patches and product updates (*ibid.*). Maintenance fees are paid annually, based on a percentage of the retail price of the licensed software product (approximately from 15 to 25% depending on the software vendors) (*ibid.*). Some basic technical services may be included in the maintenance agreement (*ibid.*). For service fees for

447

training and extra technical services, customers may need to pay extra (*ibid.*). They also

need to consider extra costs such as extra maintenance fees and upgrading of the

software system (*ibid.*). In the case of the products of Company X, if customers want to

modify their system to implement their legacy system and their existing business model,

they need to develop their own programs by themselves with the standard software

package, according to the interviewed respondents. The strategic management and

diversity management of Company X will be analysed as the background of Company

X.

Strategic Management and Diversity Management

As described, Company X is in a highly dynamic industry that is facing rapid

technological changes, high customer demands and complicated business models.

Hence it is important for companies to have a strategy which focuses on innovation and

knowledge and a flexible structure as part of dynamic capabilities (Teece, 2009).

Moreover, because Company X is in a customer-oriented market, it is suggested that the

organisational culture which is likely to be emphasised there will be open, employee-

oriented, results-oriented, professional and also pragmatic, and will balance tight and

loose control systems (Deshpandé *et al.*, 1993; Jaworski *et al.*, 2000; Steinman *et al.*, 2000; Kasper, 2002). In the next section, strategic management and diversity management, including management development in Company X, are described.

Strategic management

In order to integrate capabilities and resources across subsidiaries, Company X employs a transnational strategy model and has global diversity management in order to obtain competitive advantages in the global market, as supported by various studies (Cox and Blake, 1991; Triandis and Bhawuk, 1994; Church, 1995; Fernandoez, 1995; Sonnenshein, 1997; Thomas and Inkson, 2004). Company X operates in 50 countries across nations through subsidiaries and partners in three regions: America, Europe and the Asia-Pacific region (including Japan) according to the company's Annual Report. The company provides customers with software products, related consultations, education, support, customer development and management for services. That implies that the software market has become a customer-oriented market (Jiang and Rosenbloom, 2005; Ueltschy *et al.*, 2007). The financial report of Company X shows that the mission for the company is to create leadership and innovation for global

449

economic development (Kasper, 2002; Vilares and Coelho, 2003). It also says that software revenue is a key profit area for the company since it stimulates other revenue streams, such as licence fees, maintenance contracts and additional software-related services. Maintenance contracts include support services, regular software maintenance and updates and patches for programs.

Because of the highly dynamic nature of the global software industry, leaders of software companies need to deal with elevated levels of uncertainty (Hoch *et al.*, 2000). They have to balance key management issues including leadership, people management, product management, marketing and partnering (*ibid.*). Due to high demand from customers and rapid technical evolution, companies in the industry require skilled and talented people for innovation and flexibility, to allow them to adapt to those changes and aim at sustainable competitive advantages. Skilled and talented employees are the key to the success of a global software company (Hoch *et al.*, 2000; Datamonitor, 2008). To attract skilled and talented employees, software companies need to accept different work styles and personalities as aspects of diversity by maximising their advantages and eliminating their disadvantages through understanding differences between people: this is known as diversity management (Thomas and Inkson, 2004). Therefore, a key

leadership task in professional software services is to leverage the diversity of

employees and build team-based organisations (Hoch *et al.,* 2000). Because of the

complexity of the highly dynamic global software market, strategy processes as

mechanisms to implement corporate strategies are critical for Company X as part of its

dynamic capabilities. That implies a link between strategic management and diversity

management of their resources in organisational process and routines.

Diversity management

As one aspect of diversity, Company X has employees from more than 120 nationalities:

78 nationalities are working in Germany and 30% of employees are female. According

to its annual Financial Report, the company puts an emphasis on having diversity for

innovation and attracts talented people as its assets, seeing these as necessities of

diversity in a MNC, as studies argue (e.g. Teece, 2009; Konrad, 2003). Also, the

company sees diversity as a part of its responsibility to support employees and

customers, based on the company's annual Financial Report. It emphasises the need to

manage diversity in alignment with a company strategy that encourages the needs of

employees to be met, as suggested, to coordinate cultural diversity within themselves,

between themselves, and in the environment (Adler, 1997). As can be seen in the company's Financial Report and website, Company X values diversity as a critical asset which brings knowledge of international markets, creativity and innovation, which scholars regard as capabilities (Hedlund and Rolander, 1990; Bartlett and Ghoshal, 2000). That reflects on their diversity policy and global mobility policy, and individual performance feedback. Furthermore, the company encourages international engagement by having a system of transferring and assigning tasks to employees across countries. That system may help to upgrade capabilities and resources in Company X by giving opportunities to employees to learn different business environments. That implies that the company is open to diversity, as suggested by Triandis (1980). As far as employees' career choice is concerned, the company gives its employees the freedom to drive their own careers. The aim of embracing diversity is mainly to attract and retain the most talented and creative employees in the world through understanding differences between people (Thomas and Inkson, 2004).

From interviews with managers and human resources personnel, it appears that Company X has a global diversity office located in its German central office to support different aspects of individuals: cultural diversity, generation, gender, sexual orientation

and gender identity, health or disability, and family and career. According to the company's website and documentation, the global diversity office has four targets to leverage individual potential and creativity: to develop, improve and sustain the reputation of the company as a good working environment for employees; to maintain a workplace where employees feel passionate engagement and feel that there are equal and fair opportunities based on performance; to sustain efficiency in multicultural cooperation; and to understand and meet market and customer expectations across nations. As a practice, the diversity office provides on-line materials in cross-cultural knowledge for employees to understand how to conduct business effectively with people from different nations, as was observed when the fieldwork for this thesis was conducted in Germany. During the fieldwork in Germany, Global Diversity Days were organised by the global diversity office so that employees could have an opportunity to learn about diversity through lectures from professors, and exhibitions were set up to introduce the national cultures of employees, such as sightseeing spots, local cuisine and dance. This global diversity office may produce the ability to be open to different races, ethnic groups and the values of different cultures by aiming for company effectiveness (Triandis, 1980). In order to investigate the linkage between diversity management and strategic management in Company X, management development in

the company is analysed in order to find out how it sets ideal competencies and skills

for managers.

As Jayne and Dipboye (2004) suggested, setting the communication paths and defining

clear roles and responsibilities between the senior leaders, managers and employees are

important for diversity initiatives, and investigation of the management development of

Company X is worthwhile to help investigate the management development of

Company X. Also, as described in Chapter 2, diversity needs to be orchestrated by

managers and leaders as part of dynamic capabilities. As part of management

development, Company X has a list of management competencies on its website. These

are customer focus, communication, decision-making, innovation and change

management, motivation and engagement, strategic thinking, talent management, team-

building and trust-building. That implies that the management realises the importance of

understanding, meeting and anticipating customer demand for creating sustainable

competitive advantages (Vilares and Coelho, 2003) and of learning to identify and adapt

to anticipated customer needs (Slater and Narver, 1995; Sinkula *et al.*, 1997; Brady and

Cronin, 2001). The company regards leadership as one of the requirements for managers,

for creating the future, building teams, managing performance and practising

454

management competencies. In terms of building team skills, the managers need to understand management responsibilities, the management competencies used, development questions, on-the-job training development activities and coaching/mentoring approaches. That assumes that the company is attempting to respond to rapid and flexible innovation by coordinating and redeploying internal and external competences effectively with strategic management (Teece *et al.*, 1997). It is likely that there are overlapping areas of team leadership competencies and management competencies in this company.

In terms of diversity management by managers, Company X is not likely to have any linkage since the managers in Japan and Germany had never contacted the global diversity office. Furthermore, the managerial competencies mentioned above are not clearly stated about managing diversity in the company as managerial role. That implies that Company X might not have diversity initiatives. Therefore, it is a question as to whether the company has links between strategic management and diversity management in practice across different organisational units. Also, there is no list which describes functional team leadership skills or competencies for managing and building

teams. By considering the above strategic management, the corporate architecture of the

company is described as follows.

Corporate Architecture

Since studies show that companies need to coordinate activities in their organisation

along with strategies (Hedlund and Rolander, 1990; Bartlett and Ghoshal, 2000) and

establish a structure (Grant, 2002), the corporate architecture of Company X is now

analysed to explore whether the company has designed a structure with links to the

environment and organisational structure noted by Haberberg and Rieple (2001). Based

on the interviews with the human resources business personnel in Japan, the company

structure was designed and determined by German top management and is demonstrated

in the following figure:
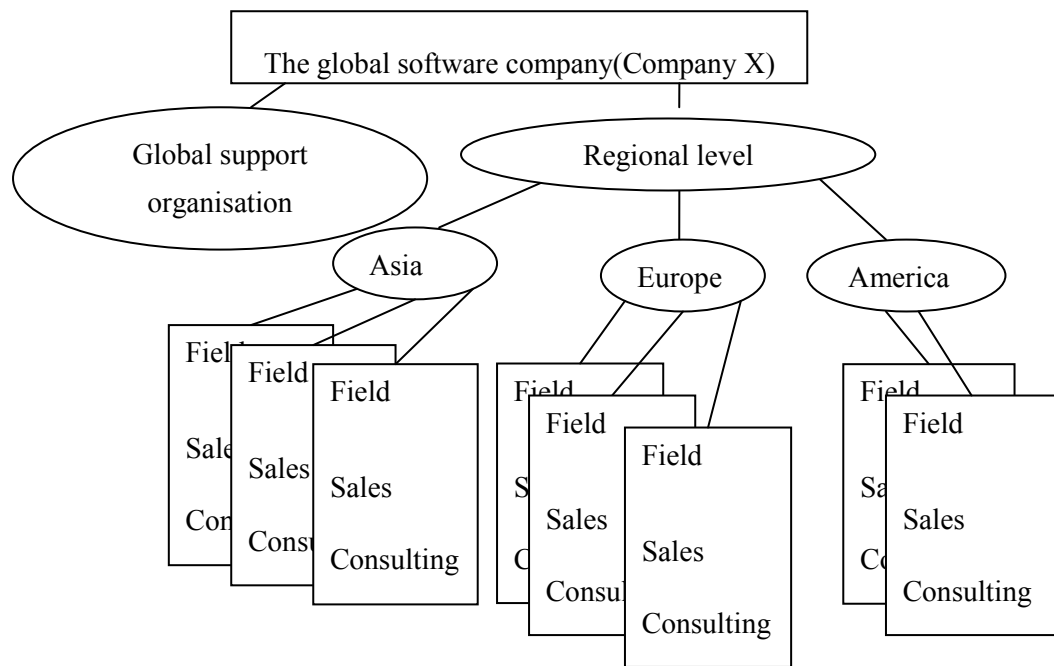
Figure A 1: Corporate Architecture of Company X

As seen in the above figure, the company is structured by using different organisational structures. For research and development (R&D) and the global support organisation (Organisation Y), the company has designed global organisations to integrate distinctive resources across subsidiaries by putting them into global knowledge pools. Sales, consulting and marketing divisions are managed by local offices and regional headquarters because local customer demands and business environment differ from one nation to another. These local divisions report to a head of regional management. For the purposes of regional management, the company has been divided into three regions:

Europe (Europe, Middle East and South Africa), the Asia-Pacific region (including

Japan), and America.

APPENDIX7

THE ENGLISH COPY OF THE QUESTIONNAIRE FOR A MAIN STUDY

Team effectiveness and leadership in a team

(for team member)

I am a PhD student from the University of Birmingham, the UK. I am doing research on team leadership and team effectiveness in a multinational team. I would like to understand your opinions on yourself, team members and team effectiveness in your team. It would be useful to know what gaps exist between your thoughts and those of other team members, how to improve relationships among team members and to reveal additional issues your organisation might need to address.

The results of this research will be used for my PhD theses and may be reported in academic and professional journals. The results of this survey in aggregate form will be given to the company after analysis. If you wish to speak directly about this project please do not hesitate to contact me.

1. There is no need to put your name anywhere in the questionnaire. The information you provide will be anonymous.

2. There are no right or wrong answers. Please respond to all of the questions. Can I have your cooperation to compete all the questions? Missing information affects the validity of questions.

Once, again, I am most appreciative that you are participating this study. Thank you very much.

Name : Chitose Furukawa

      The Birmingham Business School

      International Management and Organisation

e-mail:

      cxf426@bham.ac.uk

Address :

    [The UK] Birmingham Business School, University House,

          Edgbaston Park Road, Birmingham, B15 2TY, UK

- **This questionnaire is very easy and quick to complete.**
- **Please be as honest and realistic as possible in your answers.**
- **Your response will be treated in confidence. It is entirely anonymous.**

Section A.: Some information about yourself

Please answer by checking the appropriate box or write lines provided.

1. Sex   Male ☐   Female☐

2. Age
    20-24☐   25-29☐   30-34☐   35-39☐
    40-44☐   45-49☐   50-54☐   55-59☐   60-64☐

3. Academic level reached
    College☐ Undergraduate ☐ Master☐   PhD☐   Others[_____]

4. Area of academic subject   [_____]
5. Where are you born?   [_____]
6. What is your country of citizenship?   [_____]
7. How long have you lived in the country where you currently live? [_____]
8. How long have you worked for ? (e.g. 1 year and 6months)   [_____]
9. What are your specialty areas which you had experienced?
             Sales   ☐   Marketing   ☐   Consulting   ☐
       Administration ☐   Software development ☐   Support   ☐

       Others   [_____]

10. How long have you belonged to your team?(e.g. 1 year and 6months) [_____]

11. What are areas of expertise in ?

             [_____]   [_____]   [_____]

12. Number of members in your team   [_____]

Section B: The following questions describe how people value various events in their life. Please chose your answer and tick the box following each question. There are no right or wrong answers.

Rating scale   7-Strongly Agree

               6- Agree

               5-Slightly Agree

               4- Neither Agree nor Disagree

               3- Slightly Disagree

               2-Disagree

               1-Strongly Disagree

Please choose your answer and tick the box following each question	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
1. I enjoy being unique and different from others in many ways	☐	☐	☐	☐	☐	☐	☐
2. I often do my own thing	☐	☐	☐	☐	☐	☐	☐
3. I am unique individual	☐	☐	☐	☐	☐	☐	☐
4. I enjoy working in situation involving competition with others	☐	☐	☐	☐	☐	☐	☐
5. Competition is the law of nature	☐	☐	☐	☐	☐	☐	☐
6. Without competition it is not possible to have a good society	☐	☐	☐	☐	☐	☐	☐
7. My happiness depends on very much on the happiness of those around me	☐	☐	☐	☐	☐	☐	☐
8. The well-being of my co-workers is important to me	☐	☐	☐	☐	☐	☐	☐
9. If a co-worker gets a prize, I would feel proud	☐	☐	☐	☐	☐	☐	☐
10. I feel good when I cooperate with others	☐	☐	☐	☐	☐	☐	☐
11. I would do what would please my family, even if I detested that activity	☐	☐	☐	☐	☐	☐	☐
12. I usually sacrifice my self-interest for the benefit of my group	☐	☐	☐	☐	☐	☐	☐
13. Children should feel honored if their parents receive a distinguished award	☐	☐	☐	☐	☐	☐	☐
14. I would sacrifice an activity that I enjoy very much if my family did not approve of it	☐	☐	☐	☐	☐	☐	☐

Section C: The following questions concern how you think about your team leader. Please chose your answer and tick the box following each question. There are no right or wrong answers. Rating scale   7-Strongly Agree , 6- Agree, 5-Slightly Agree

4- Neither Agree nor Disagree

3- Slightly Disagree,2-Disagree,   1-Strongly Disagree

Please choose your answer and tick the box following each question	Strongly disagree						Strongly agree
1. My team leader provides clear instruction	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
2. My team leader sets direction and expectations	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
3. My team leader delegates responsibility across the team	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
4. My team leader provides clear guidance on how to achieve tasks	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
5. My team leader provides a clear goal and purpose for the team	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
6. My team leader enables communication between team members	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
7. My team leader makes sure the message is heard the way in which hit was intended	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
8. My team leader opens communication with team members	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
9. My team leader verifies if accurate information is being exchanged within the team	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
10. My team leader listens to team members	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
11. My team leader resolves differences between team members	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
12. My team leader creates ownership of the team's goals	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
13. My team leader provides a strong vision for the team	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
14. My team leader provides team members with a sense of belonging	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
15. My team leader keeps the team motivated	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
16. My team leader acknowledges cultural differences in the team	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
17. My team leader is sensitive to different working style	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
18. My team leader appreciates the diversity of perspectives and skills	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐

Please choose your answer and tick the box following each question	Strongly disagree						Strongly agree
19. My team leader sets an example to other team members by respecting cultural differences	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
20. My team leader is aware of political changes outside the team	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
21. My team leader stays connected to market and customer needs	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
22. My team leader identifies and maintains channels of communication with upper management	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐

Section D: The following questions concern how you think about your team. Please chose your answer and tick the box following each question. There are no right or wrong answers.

Rating scale   7-Strongly Agree

6- Agree

5-Slightly Agree

4- Neither Agree nor Disagree

3- Slightly Disagree

2-Disagree

1-Strongly Disagree

Please choose your answer and tick the box following each question	Strongly disagree						Strongly agree
1. My team meets or exceeds team goals	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
2. My team completes team tasks on time	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
3. My team responds quickly when problems come up	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
4. My team produces high quality products/service	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
5. My team works out customer problems in a timely manner	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
6. My team provides satisfactory level of customer service overall	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
7. My team members learn new ways to apply their knowledge of familiar products and techniques	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
8. My team members seek out information on products and techniques that are new to the operation	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
9. My team members identify and learn skills and technologies that may be useful in solving unfamiliar problems.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
10. My team members seek out and acquire information that may be useful in developing multiple solutions to problems	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
11. My team members seek out and acquire knowledge that may be useful in satisfying needs unforeseen by clients.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐

Section E: The following questions concern how you think about being in your team. Please chose your answer and tick the box following each question. There are no right or wrong answers.

Rating scale   7-Strongly Agree

6- Agree

5-Slightly Agree

4- Neither Agree nor Disagree

3- Slightly Disagree

2-Disagree

1-Strongly Disagree

Please choose your answer and tick the box following each question	Strongly disagree						Strongly agree
1. My team members want each other to succeed	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
2. The goals of my team members go together.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
3. When my team members work together, we usually have common goals	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
4. I feel proud to belong to this team	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
5. I am glad of belonging to this team and not to another team	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
6. I feel very committed to this team	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
7. I am willing to exert extra effort to help this team succeed	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
8. I look for opportunities to develop new skills and knowledge	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
9. I like challenging and difficult assignments that teach new things	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
10. I am willing to take risks on new ideas in order to find out what works	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
11. I like to work on things that require a lot of skill and ability	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
12. I see learning and developing skills as very important	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐

**THANK YOU VERY MUCH FOR TAKING THE TIME
TO COMPLETE THIS QUESTIONNAIRE**

Team effectiveness and leadership in a team
(for team leader)

I am a PhD student from the University of Birmingham, the UK. I am doing research on team leadership and team effectiveness in a multinational team. I would like to understand your opinions on yourself, team members and team effectiveness in your team. It would be useful to know what gaps exist between your thoughts and those of other team members, how to improve relationships among team members and to reveal additional issues your organisation might need to address.

The results of this research will be used for my PhD theses and may be reported in academic and professional journals. The results of this survey in aggregate form will be given to the company after analysis. If you wish to speak directly about this project please do not hesitate to contact me.

- There is no need to put your name anywhere in the questionnaire. The information you provide will be anonymous.

- There are no right or wrong answers. Please respond to all of the questions. Can I have your cooperation to compete all the questions? Missing information affects the validity of questions.

Once, again, I am most appreciative that you are participating this study. Thank you very much.

Name : Chitose Furukawa
   The Birmingham Business School
   International Management and Organisation
e-mail:
   cxf426@bham.ac.uk
Address :
   [The UK] Birmingham Business School, University House,
      Edgbaston Park Road, Birmingham, B15 2TY, UK

- **This questionnaire is very easy and quick to complete.**
- **Please be as honest and realistic as possible in your answers.**
- **Your response will be treated in confidence. It is entirely anonymous.**

Section A.: Some information about yourself

Please answer by checking the appropriate box or write lines provided.

1. Sex   Male ☐   Female☐

2. Age

         20-24☐   25-29☐   30-34☐   35-39☐

         40-44☐   45-49☐   50-54☐   55-59☐   60-64☐

3. Academic level reached

         College☐ Undergraduate ☐ Master☐ PhD☐ others[_____]

4. Area of academic subject   [_____]
5. Where are you born?   [_____]
6. What is your country of citizenship?   [_____]
7. How long have you lived in the country where you currently live? [_____]
8. How long have you worked for ? (e.g. 1 year and 6months) [_____]
9. What are your specialty areas which you had experienced?

         Sales   ☐   Marketing   ☐   Consulting   ☐

         Administration ☐ Software development ☐ Support   ☐

         Others [_____]

10. Have you experienced managing a team before?   Yes ☐   No☐

11. Have you experienced managing a multinational team before? Yes ☐   No☐
12. How long have you managed your team?(e.g. 1 year and 6months) [_____]

13. What are areas of expertise in ?

         [_____]   [_____]   [_____]
14. Number of members in your team   [_____]

Section B: The following questions describe how people value various events in their life. Please chose your answer and tick the box following each question. There are no right or wrong answers.

 Rating scale   7-Strongly Agree

                          6- Agree

                          5-Slightly Agree

                          4- Neither Agree nor Disagree

                          3- Slightly Disagree

                          2-Disagree

                          1-Strongly Disagree

Please choose your answer and tick the box following each question	Strongly disagree						Strongly agree
1. I enjoy being unique and different from others in many ways	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
2. I often do my own thing	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
3. I am unique individual	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
4. I enjoy working in situation involving competition with others	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
5. Competition is the law of nature	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
6. Without competition it is not possible to have a good society	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
7. My happiness depends on very much on the happiness of those around me	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
8. The well-being of my co-workers is important to me	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
9. If a co-worker gets a prize, I would feel proud	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
10. I feel good when I cooperate with others	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
11. I would do what would please my family, even if I detested that activity	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
12. I usually sacrifice my self-interest for the benefit of my group	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
13. Children should feel honored if their parents receive a distinguished award	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
14. I would sacrifice an activity that I enjoy very much if my family did not approve of it	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐

Section C: The following questions concern how you think about yourself in your team. Please chose your answer and tick the box following each question. There are no right or wrong answers.

 Rating scale   7-Strongly Agree,6- Agree, 5-Slightly Agree

                       4- Neither Agree nor Disagree

                       3- Slightly Disagree, 2-Disagree, 1-Strongly Disagree

Please choose your answer and tick the box following each question	Strongly disagree						Strongly agree
	1	2	3	4	5	6	7
1. I provide clear instruction	☐	☐	☐	☐	☐	☐	☐
2. I set direction and expectations	☐	☐	☐	☐	☐	☐	☐
3. I delegate responsibility across the team	☐	☐	☐	☐	☐	☐	☐
4. I provide clear guidance on how to achieve tasks	☐	☐	☐	☐	☐	☐	☐
5. I provide a clear goal and purpose for the team	☐	☐	☐	☐	☐	☐	☐
6. I enable communication between team members	☐	☐	☐	☐	☐	☐	☐
7. I make sure the message is heard the way in which hit was intended	☐	☐	☐	☐	☐	☐	☐
8. I open communication with team members	☐	☐	☐	☐	☐	☐	☐
9. I verify if accurate information is being exchanged within the team	☐	☐	☐	☐	☐	☐	☐
10. I listen to team members	☐	☐	☐	☐	☐	☐	☐
11. I resolve differences between team members	☐	☐	☐	☐	☐	☐	☐
12. I create ownership of the team's goals	☐	☐	☐	☐	☐	☐	☐
13. I provide a strong vision for the team	☐	☐	☐	☐	☐	☐	☐
14. I provide team members with a sense of belonging	☐	☐	☐	☐	☐	☐	☐
15. I keep the team motivated	☐	☐	☐	☐	☐	☐	☐
16. I acknowledge cultural differences in the team	☐	☐	☐	☐	☐	☐	☐
17. I am sensitive to different working styles	☐	☐	☐	☐	☐	☐	☐
18. I appreciate the diversity of perspectives and skills	☐	☐	☐	☐	☐	☐	☐

Please choose your answer and tick the box following each question	Strongly disagree						Strongly agree
19. I set an example to other team members by respecting cultural differences	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
20. I am aware of political changes outside the team	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
21. I stay connected to market and customer needs	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
22. I identify and maintain channels of communication with upper management	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐

Section D: The following questions concern how you think about your teams. Please chose your answer and tick the box following each question. There are no right or wrong answers.

Rating scale   7-Strongly Agree , 6- Agree, 5-Slightly Agree

4- Neither Agree nor Disagree

3- Slightly Disagree, 2-Disagree,1-Strongly Disagree

Please choose your answer and tick the box following each question	Strongly disagree						Strongly agree
1. My team meets or exceeds team goals	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
2. My team completes team tasks on time	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
3. My team responds quickly when problems come up	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
4. My team produces high quality products/service	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
5. My team works out customer problems in a timely manner	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
6. My team provides satisfactory level of customer service overall	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
7. My team members learn new ways to apply their knowledge of familiar products and techniques	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
8. My team members seek out information on products and techniques that are new to the operation	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
9. My team members identify and learn skills and technologies that may be useful in solving unfamiliar problems.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
10. My team members seek out and acquire information that may be useful in developing multiple solutions to problems	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
11. My team members seek out and acquire knowledge that may be useful in satisfying needs unforeseen by clients.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐

Section E: The following questions concern how you think about being in your team. Please chose your answer and tick the box following each question. There are no right or wrong answers.

Rating scale   7-Strongly Agree

6- Agree

5-Slightly Agree

4- Neither Agree nor Disagree

3- Slightly Disagree

2-Disagree

1-Strongly Disagree

Please choose your answer and tick the box following each question	Strongly disagree						Strongly agree
1. My team members want each other to succeed	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
2. The goals of my team members go together.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
3. When my team members work together, we usually have common goals	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
4. I feel proud to belong to this team	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
5. I am glad of belonging to this team and not to another team	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
6. I feel very committed to this team	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
7. I am willing to exert extra effort to help this team succeed	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
8. I look for opportunities to develop new skills and knowledge	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
9. I like challenging and difficult assignments that teach new things	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
10. I am willing to take risks on new ideas in order to find out what works	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
11. I like to work on things that require a lot of skill and ability	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐
12. I see learning and developing skills as very important	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐	6 ☐	7 ☐

**THANK YOU VERY MUCH FOR TAKING THE TIME
TO COMPLETE THIS QUESTIONNAIRE**

471

APPENDIX 8

THE ENGLISH COPY OF THE INTERVIEW PROTOCOL FOR A MAIN STUDY

Interview Protocol for Human Resource Personnel in Japan

1. Could you describe company structure and a global support organisation structure?

2. Could you explain the relationship between locations?

3. What are main roles/tasks of the organisation? What are differences between regions?

4. What are pros and cons of different nationalities in the organisation?

5. Do you have evaluation system for team leaders?

6. How often do you evaluate teams and by whom? How often do you evaluate team effectiveness/performance?

7. What kinds of expectations do you have for team leaders and members in a multinational team?

Interview Protocol for Managers in Japan

1. Could you describe your current tasks and responsibilities in this organisation?

2. Could you tell me your definition of effectiveness?

3. Do you have any evaluation system for team and team leaders in the organisation? How do you evaluate team and team leaders? Do you have any criteria to evaluate them? If it "yes", could you give me examples? How often do you evaluate?

4. Could you tell me your definition of diversity? What do you think diversity in the organisation?

5. What do you expect to team leaders? Are there differences between a mono-national team which consists of only one nationality and a diverse team which consists of more than two nationalities?

6. In your opinion what are the most challenging aspects to manage different nationalities in a team?

7. In your opinion, what do Japanese customers expect from your global support service? What do you need to do in order to satisfy Japanese customer?

Interview Protocol for Functional Multinational Team Leaders in Japan

1. Could you describe what are your current tasks and responsibilities as a leader?

2. What are tasks in your team?

3. What do you do to manage a multinational team in term of cultural differences? What are challenges of managing a multinational team?

4. How do you feel diversity in a team? What aspect diversity do you care?

5. How do you define team effectiveness?

6. How do you consider the level of emotional integration among team members?

7. How often do you evaluate team and team members? How?

8. How often do you provide feedback to team members?

9. What expectations do you have for team members? Do you tell team members about your expectation for them?

10. What do you think Japanese customers expect from your global support service? What do you need to do in order to satisfy Japanese customer?

Interview Protocol for Functional Multinational Team Members in Japan

1. Could you describe what are your current tasks and responsibilities?

2. Do you feel diversity in your team? How do you define diversity?

3. How do you define team effectiveness? How do you think your team effectiveness and why?

4. How do you consider the level of performance in your team? Could you tell me what your definition of performance and what attributes of performance?

5. How do you consider the level of emotional integration among team members?

6. How do you feel atmosphere in your team in terms of communication, commitment and learning? (attitude in team)

7. What expectations do you have for team leader?

8. Does your team leader say his expectation to you? (communication between team leader and members)

9. What do you think Japanese customers expect from your global support service? What do you need to do in order to satisfy Japanese customer?

Interview Protocol for Functional Multinational Team Members and Leaders in Germany

1. Could you describe what are your current tasks and responsibilities?

2. Do you feel diversity in your team? How do you define diversity?

3. How do you consider the level of emotional integration among team members?

4. In your opinion, what kinds of team leadership skills/competencies are needed to manage multinational teams?

5. How do you define team effectiveness?

6. How do you think European customer demands and behaviors? Are they different or the same?

APPENDIX9

THE JAPANESE COPY OF THE INTERVIEW PROTOCOL FOR A MAIN

STUDY IN JAPAN

インタビュープロトコル　人事担当者（日本）

1. 会社組織図とサポート組織に関して教えてください。
2. どのぐらいの頻度で連絡・報告をしていますか。
3. Support 部門の役割タスクは何でしょうか。他の地域と違いますか。
4. 多様性によっての利点と欠点を教えてください。
5. チームリーダに対しての、評価システムはありますか?
6. どのぐらいの頻度で、どのようにチーム効果性を計っていますか?
7. どのようなことをチームリーダとチームメンバーに期待しますか。

インタビュープロトコル　マネジャー（日本）

1. 現在のタスクと、業務について教えてください。

2. チームの効果性に関してどのように思いますか。どのようにチームの効果性を定義しますか。

3. マネジメントするのに、どのようなことを意識的に行っていますか。特に個人の価値観が異なることや個人のバックグランドを意識してマネジメントしていますか。複数のチームをマネジメントする際のチャレンジというものはありますか。

4. 多様性（Diversity）をどのように考えますか。多様性のいい点と悪い点を述べてください。

5. 各チームのチームリーダとチームメンバーに対して、どのような期待を持っていますか。そのことを直接伝えていますか。

6. 日本のお客様は何を求めていると思いますか。何をするのがいいと思いますか。

インタビュープロトコル *Functional Multinational Team Leaders*（日本）

1. 現在のタスクと、業務について教えてください。

2. 各チームのタスクについて教えてください。

3. マネジメントするのに、どのようなことを意識的に行っていますか。特に個人の価値観が異なることや個人のバックグランドを意識してマネジメントしていますか。複数のチームをマネジメントする際のチャレンジというものはありますか。

4. 多様性（Diversity）をどのように考えますか。多様性のいい点と悪い点を述べてください。

5. どのようにチームの効果性を定義しますか。

6. チームの達成感に関してどのような意見をお持ちでしょうか。

7. メンバー間の統一性に関していかがお考えでしょうか。

8. チームメンバーの評価はどのぐらいの頻度で行いますか。

9. 各チームのチームリーダとチームメンバーに対して、どのような期待を持っていますか。そのことを直接伝えていますか。

10. 日本のお客様は何を求めていると思いますか。何をするのがいいと思いますか。

インタビュープロトコル　*Functional Multinational Team Members*（日本）

1. 現在のタスクと、業務について教えてください。
2. チーム内で多様性を感じますか？どのように多様性を定義しますか？
3. チームの効果性という意味はなんでしょうか。チームの効果性についてどう思いますか。どうしてそう思いますか。
4. チームのパフォーマンスについてお聞きします。チームのパフォーマンスに関してどう思いますか。どうしてそのように思いますか。チームのパフォーマンスを図るものはなんでしょうか。
5. チームメンバーの統一性についてどう思いますか。どうしてそのように思いますか。統一性とはどういう意味だと思いますか。
6. コミュニケーション、コミットメント、チームラーニングに関してチームの雰囲気はどのように感じますか。
7. チームリーダに対して何を期待していますか。
8. リーダは、あなたに対して何を期待しているか直接話しますか。
9. 日本のお客様は何を求めていると思いますか。何をするのがいいと思いますか。

REFERENCES

Adair, J. (1986) **Effective teambuilding**. Aldershot: Gower

Adler, N. J. (1997) **International Dimensions of Organizational Behaviour**.USA: South-Western College Publishing.

Albanese, R. and Van Fleet, D.D. (1985) Rational behaviour in groups: The free-riding tendency. **Academy of management review**.10 (April), 244-55.

Amason, A. C. (1996) Distinguishing the effects of functional and dysfunctional conflict on strategic decision making: Resolving a paradox for top management teams. **Academy of Management Journal**, 39, 123–48.

Ambrosini, V. and Bowman, C. (2009) What are dynamic capabilities and are they useful construct in strategic management?, **International Journal of Management Review**, 11 (1), 29-49.

Ancona, D. C. and Caldwell, D. F. (1992) Demography and design: Predictors of new product team performance **Organization Science**, 3(3): 321-341.

Ancona, D. G. and Caldwell, D. F. (1997) Bridging the boundary: External activity and performance in organizational teams. **Administrative Science Quarterly**, 37, 637-995.

Armitage, M. A. (1993, May) Managing cultural diversity globally and domestically: A Federal model for examining programs and competencies for leader effectiveness. **The Eighth Annual Conference of the Society of Industrial and Organizational Psychology ,**San Francisco.

Arredonde, P. (1996) **Successful diversity management initiatives: A blue print for planning and implementation**.Thousand Oaks, CA: Sage.

Arrow, H., McGrath, J.E., and Berdahl, J.L. (2000) **Small groups as complex systems: Formation, coordination, development, and adaptation**. Thousand Oaks, CA: Sage.

Ashforth, B. and Mael, F. (1989) Social identity theory and the organization. **Academy of Management Review**, 14, 20-39.

Athanassopoulos, A.D. (2000) Customer Satisfaction Cues to Support Market Segmentation and Explain Switching Behaviour. **Journal of Business Research**, 47, 191-207.

Bachmann, A.S. (2006) Melting Pot or Tossed Salad? Implication for Designing Effective Multinational workgroups. **Management International Review**, 46 (6), 721-47.

Barker, J., Tjosvold, D., and Andrews, R.I. (1988) Conflict approaches of effective and ineffective project managers : A field study in a matrix organization. **Journal of**

management studies, 25 (2), 167-78.

Barney, J.B. (1991) Firm resources and sustained competitive advantage. **Journal of management**, 17, 99-120.

Barney, J.B. (1995) Looking inside for competitive advantage. **Academy of Management Executive**, 9 (4), 49-61.

Baron, R. M. and Kenny, D. A. (1986) The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. **Journal of Personality and Social Psychology**, 51, 1173-82.

Barry, D. (1991) Managing the boss-less team; lessons in distributed leadership. **Organizational Dynamics**, Summer, 31-47.

Bartlett, C.A. and Ghoshal, S. (2000) **Transnational management Text, Cases, and Readings in Cross-Border Management**. Third ed.; Boston: McGraw-Hill.

Bass, B.M. (1960) **Leadership, psychology, and organizational behaviour**. NY: Harper& Brother.

Benson, A. R. and Hsich, T. (1997) Teamwork across time and space. **the Mckinsey Quarterly**, 4, 18-27.

Blau, P. M. (1977) **Inequality and heterogeneity** New York:Free Press.

Borrill, C.S. and West, M.A. (2005) "The Psychology of Effective Teamworking" In Gold,N. (eds.), **Teamwork Multi-Disciplinary Perspectives**.NY: Palgrave Macmillan. pp.136-60.

Brady, M.K. and Cronin, J.J.Jr. (2001) Customer Orientation: Effects on Customer Service Perceptions and Outcome Behaviors. **Journal of Service Research**, 3 (3), 241-51.

Brett, J., Behfar, K., and Kern, M.C. (2006) Managing Multicultural Teams.**Harvard Business Review**, 84 (11), 84-91.

Bryman, A. and Cramer, D. (2005) **Quantitative data analysis with SPSS 12 and 13 A guide for social scientists**.East Sussex : Routledge.

Bryman, A. (2008) **Social research methods.** Oxford: Oxford University Press.

Buchanan, D. and Huczynski, A. (2004) **Organizational Behaviour: an introductory text**. 5th edn.; London: FT Prentice Hall.

Bunderson, J. S. and Sutcliffe, Kathleen M. (2003) Management Team Learning Orientation and Business Unit Performance. **Journal of Applied Psychology**, 88 (3), 552-60.

Byrne, J.A. (1993) The horizontal corporation. **Business Week**, 3351, 76-82.

Campbell, D.T. (1958) Common fate, similarity, and other indices of the status of aggregates of persons as social entities. **Behavioural Science** 3, 14-25.

Cannon-Bowers, J.A., Tannebaum, S.J.,Salas,E. and Volpe,C.E. (1995) "Defining competencies and establishing team training requirements." In Guzzo, R.A.,Salas, E. and Associates (eds.), **Team Effectiveness and decision making in organizations** -Frontiers of industrial and organizational psychology-. San Francisco: Jossey-Bass.pp333-80

Castka, P., Bamber, C.J., and Sharp, J.M. (2003) Measuring teamwork culture : The use of a modified EFQM model. **Journal of Management Development**, 22 (2), 149-70.

Cathcart, R. S., Samovar, L.A., and Henman, L.E. (1996) **Small Group Communication: Theory & Practice.** 7th ed.; Madison: Brown & Benchmark publishers.

Chen, C.C. and DiTomaso, N. (1996)"Diversity: a strategic issue." In Kossek,E.E. and Lobel, S.A. (eds.) **Managing Diversity: Human Resource Strategies for Transferring the Work Place**. Malden, MA: Blackwell.pp.137-63

Chen, G., Tjosyold, D., and Liu, C. (2006) Cooperative Goals, Leader People and Productivity Values: Their Contribution to Top Management Teams in China. **Journal of Management Studies**, 43 (5 (July)), 1177-200.

Child, J. (1984) **Organization: a guide to problems and practice**.2nd ed; London: Harper & Row.

Child, J. (2001) Trust-The Fundamental Bond in Global Collaboration. **Organizational Dynamics**, 29 (4), pp.274-88.

Child, J. and Rodrigues, S. (2001) "Social Identity and Organizational Learning." In Dierkes, M., Antal,A.B., Child,J., Nakano,I. (eds.) **Handbook of Organizational Learning & Knowledge**. Cornwall: Oxford University Press, pp.535-56.

Child, J., Faulkner, D., and Tallman, S. (2005),**Cooperative Strategy – Managing Alliances, Networks and Joint Ventures**. 2nd ed.; Oxford: Oxford University Press.

Church, A.H. (1995) Diversity in Workgroup Settings: A case study. **Leadership and Organizational Development Journal**, 16 (6), 3-9.

Clough, P. and Nutbrown, C. (2002) **A student's guide to methodology**. Great Britain: Sage.

Cohen, S.G. and Bailey, D.E. (1997) What makes teams work: Group effectiveness

research from the shop floor to the executive suite. **Journal of Management**, 23, 239–90.

Copeland, L. (1988) 'Valuing diversity: making the most of cultural differences at the workplace. **Personnel,** 65 (6), 52-60.

Cox, T. H. (1994) **Cultural diversity in organizations: Theory, research and practice** San Francisco: Benett-Koehler Publishers.

Cox, T.H. and Blake, S. (1991) 'Managing Cultural Diversity Implications for Organizational Competitiveness. **Academy of Management Executive**, 5 (3), 45-56.

Cox, T.H., Jr. (1993), **Cultural Diversity in Organizations: Theory, Research and Practice** (San Francisco: Berrett-kochler).

Cran, D.J. (1994) 'Towards Validation of the Service Orientation Construct. **The Service Industries Journal**, 14 (January), 34-44.

Creswell, J.W. and Clark, V.L.P. (2007) **Designing and conducting mixed methods research**. London: Sage.

Cummings, T.G. (1981)"Designing effective work group" In Nystorm,P.C. and Starbuck,W.H. (eds.) **Handbook of organizational design vol 2.**New York: Oxford University Press.pp.250-271

Cusmano, M.A. (2007) The changing labyrinth of software pricing. **Communications of the ACM**, July 2007/Vol.50 (7).

Datamonitor. (2008). Global software industry. Retrieved from Business Source Premier database.

Davis, S.M. and Lawrence, R.P. (1977) **Matrix.** Reading, MA: Addison-Wesely.

De Dreu, C.K.W. and Weingart, L.R. (2003) Task versus relationship conflict, team performance and team member satisfaction: A meta-analysis. **Journal of Applied Psychology**, 88 (4), 741-9.

Denis, H. (1986) Matrix structures, quality of working life, and engineering productivity. **IEEE Transactions on Engineering Management**, 33 (3), 148-56.

Deshpandé, R., Farley, J.U., and Webster, F.E. (1993) Corporate Culture, Customer Orientation, and Innovativeness in Japanese Firms: A Quadrant Analysis. **Journal of Marketing**, 57 (January), 23-37.

Devine, D.J., Clayton,L.D., Philips,J.L.,Dunford,B.B. and Melner,S.B. (1999) Teams in organizations : Prevalence, characteristics, and effectiveness. **Small Group Research**, 30, 678-711.

Dill, D. and Pearson, A.W. (1984) The effectiveness of project managers: Implications

of a political model of influence. **IEEE Transactions on Engineering Management**, 31 (3), 138-46.

Dobni, D., Ritchie, J.R.B, and Zerbe, W. (2000) Organizational Values: The Inside View of Service Productivity. **Journal of Business Research**, 47, 91-107.

Dolan, S.L., et al. (2004) Exploratory study of within-country differences in work and life values: The case of Spanish business students. **International Journal of Cross Cultural Management**, 4, 157-81.

Doz, Y., Prahalad, C.K., and Hamel, G. (1990) "Control, change, and flexibility: the dilemma of transnational collaboration." In Bartlett, C.A., Doz, Y. and G. Hedlund (eds.) **Managing the global firm**.New York Routledge.pp.117-43

Dubinskas, F.A. (1992) "Culture and conflict The Cultural Roots of Discord.", in Kolb, D.M. and Bartunek,J.M. (eds.) **Hidden Conflict in Organisations Uncovering Behind the Scenes Disputes.** the USA: SAGE Publications. pp.187-208.

Duncan, R.B. and Weiss, A. (1979) "Organizational learning: Implications for organizational design." In Straw,B. (eds.), **Research in organizational behaviour.** Greenwich: JAI Press. pp.75-124.

Earle, M.D. (1997) Innovation in the food industry. **Trends in Food Science and Technology** 8(May), 166-75.

Earley, P. C (1989) Social loafing and collectivism: A comparison of the United States and the People's Republic of China. **Administrative Science Quarterly**, 34 (4), 565-82.

Earley, P.C. (1994) Self or group? Cultural effects of training on self-efficacy and performance. **Administrative Science Quarterly**, 39, 89–117.

Earley, P.C. and Gibson, C.B. (1998) Taking stock in our progress on individualism-collectivism: 100 years of solidarity and community. **Journal of management** 24 (3), 265-304.

Easterby-Smith, M., Lyles, M.A., and Peteraf, M. A. (2009) Dynamic capabilities : Current Debates and Future Directions. **British Journal of Management**, 20, S1-S8.

Eby, L.T. and Dobbins, G.H. (1997) Collectivistic orientation in teams : An individual and group level analysis. **Journal of Organisational Behaviours**, 18 (275-95).

Eckel, C.C. and Grossman, P.J. (2005) Managing diversity by creating team identity. **Journal of Economic Behaviour & Organization**, 58, 371-92.

Einsenhardt, K.M. and Martin, J.A. (2000) Dynamic Capabilities: What Are They? **Strategic Management Journal**, Oct/Nov 2000 (21), 1105-21.

Ely, R.J. and Thomas, D.A. (2001) Cultural Diversity at Work: The Effects of Diversity Perspectives on Work Group Processes and Outcomes. **Administrative Science Quarterly***, 46, 229-73.

Fernandoez, J.P (1995) Diversity Delivers Competitive Advantage. **Executive Excellence***, May, 20.

Field, A. (2005) **Discovering Statistics Using SPSS**. 2nd ed; London: Sage Publications.

Foldy, D. G. (2004) Learning from Diversity ; A Theoretical Exploration. **Public Administration Review***, 64 (5), 529-38.

Ford, R.C. and Randolph, W.A. (1992) Cross-functional structures: A review and integration of matrix organisation and project management. **Journal of management***, 18, 267-94.

French, E. (1999) "Managing Workforce Diversity in Organisation." In Davidson,P. and Griffin,R. (eds.) **Management: Australia in a Global Context**.Australia: Joh Wiely & Sons.

Galbraith, J.R. (1971) Matrix organization designs. **Business Horizons***, 14 (1), 29-40.

Gale, B.T. (1992) **Managing Customer Value** .New York: Free Press.

Gallanan, G.A., Benzing, C.D., and Perri, D. (2006) Choice of Conflict-Handling Strategy: A Matter of Context. **Journal of Psychology***, 140 (3), 269-88.

Gibson, C.B. (1996) Do they do what they believe they can? Group efficacy beliefs and effectiveness across tasks and cultures. **the National Academy of Management Conference** .Cincinnati, OH).

Gilbert, M. (2005) "A Theoretical Framework for the Understanding of Teams." In Gold,N. (eds.) **Teamwork Multi-Disciplinary Perspectives.**New York: Palagrabe Macmollian.pp.22-32.

Gladstein, C.R. and Day, D.V. (1984) Groups in context: A model of task group effectiveness. **Administrative Science Quarterly***, 29 (499-517).

Goldberg, I. and Williams, R. (1991) **Biotechnology and Food Ingredients**.New York: Van Nostrand Reinhold.

Grant, R.M. (1996) Toward a knowledge-based theory of the firm**Strategic Management Journal,** 17, 109-22.

Grant, R.M. (2002) **Contemporary Strategy Analysis : concepts, techniques, applications**.4th ed.; Madlen; USA: Blackwell publishing.

Greiner, L.E. and Schein, V.E. (1981) The paradox of managing a project-oriented matrix: Establishing coherence with chaos. **Sloan Management Review***, 2 (2),

17-22.

Gronroos, C. (1982) A service quality model and its marketing implications. **European Journal of Marketing**, 18 (4), 35-42.

Guadagnoli, E. and Velicer, W. (1988) Relation of sample size to the stability of component patterns. **Psychological Bulletin** 103, 265-75.

Gundlach, M., Zivnuska, S., and Stoner, J. (2006) Understanding the relationship between individualism-collectivism and team performance through an integration of social identity theory and the social relations model. **Human Relations**, 59 (12), 1603-32.

Haberberg, A. and Rieple, A. (2001) **The strategic management of organizations.** London: Pearson education limited.

Hackman, J. R. (1976) The design of self-managing work groups. **Technical Report 11**, New Haven, CT: Yale University, School of Organization and Management.

Hackman, J.T. (1987) "The Design of Work Teams." In Lorsch,J.W. (eds.) **Handbook of Organizational Behaviour.** New Jersey: Prentice-Hall.pp.315-42.

Hackman, J.R. (1990) **Group that work**. San Francisco: Jossey-Bass.

Hackman, J.R. (1992) "Group influences on individuals in organizations."In Dunnette, M.D. and Hough,L.M. (eds.) **Handbook of industrial and organizational psychology**.3; Palo Alto, CA: Consulting Psychologist Press.pp.199-267

Hair, J.F., Black,W.C.,Babin, B.J.,Anderson, R. E. and Tatham, R.L. (2006) **Multivariate data analysis.** 6th ed.; New Jersey,USA: Prentice Hall).

Hedlund, G. and Rolander, D. (1990) "Action in hierarchies - new approaches to managing the MNC." In Bartlett, C.A. Doz,Y., and Hedlund,G. (eds.) **Managing the global firm**.London :Routledge.pp.15-46

Helfat, C.E. and Peteraf, M. A. (2003) The dynamic resource-based view: capability lifecycles. **Strategic Management Journal**, 24, 997-1010.

Helfat, C.E., Finkelstein,S.,Mitchell,W.,Peteraf,M.A.,Singh,H.,Teece,D.J. and Winter,S.G. (2007) **Dynamic capabilities: Understanding Strategic Change In Organizations.** Singapore: Blackwell Publishing.

Hickson, D.J. and Pugh, D.S. (2001) **Management worldwide: distinctive styles and globalisation.** 2nd ed.; the USA: Penguin.

Higgins, K.L. and Maciariello, J.A. (2004) "Leading complex collaboration in network organizations: A multidisciplinary approach." In Beyerlein, M. M., Douglas, A.J. and Beyerlein, S.B. (eds.), **Complex collaboration: Building the Capabilities for working across boundaries advanced in interdisciplinary studies of**

work teams. 10; Oxford: Elsevier Ltd.pp.203-41

Hilliam, M. (2000) Functional food—How big is the market? **The World of Food Ingredients**, 12 (50-52).

Hoch, D.J., Roeding,C.R.,Purkert,G.,Lindner,S.K. and Muller,R. (2000) **Secret of software success: Management Insights from 100 Software Firms around the world**. Boston; Massachusetts: Harvard Business School.

Hoffman, D. K. and Ingram, T.N. (1992) Service Provider Job Satisfaction and Customer Oriented Performance. **Journal of Services Marketing**, 6 (2), 68-78.

Hofmann, D.A. and Morgeson, F.P. (1999) Safety-related behaviour as a social exchange: The role of perceived organizational support and leader member exchange.**Journal of Applied Psychology**, 84, 286–96.

Hofmann, D.A., Morgeson, F.P., and Gerras, S.J. (2003) Climate as a moderator of the relationship between leader-member exchange and content specific citizenship: Safety climate as an exemplar. **Journal of Applied Psychology**, 88, 170–78.

Hofstede, G. (1980) **Culture's Consequences: International Differences in Work-related Values**. Beverly Hills, CA: Sage.

Hofstede, G. (1991), **Cultures and Organizations: Software of the mind**. London: McGraw-Hill.

Hogg, M. A. (2001) A social identity theory of leadership. **Personality and Social Psychology Review**, 5, 184-200.

Hogg, M. A. and van Knippenberg, D. (2003) "Social identity and leadership processes in groups." In Zanna,M. P. (eds.), **Advances in Experimental Social Psychology.**35 San Diego, CA: Academic Press.pp.1–52

Homburg, C., Koschate, N., and Hoyer, W.D. (2005) Do satisfied customers really pay more? A study of the relationship between customer satisfaction and willingness to pay. **Journal of Marketing**, 69 (April), 84-96.

Hong, S-C. and Goo, Y.J. (2004) A casual model of customer loyalty in professional service firm : an empirical study. **International Journal of Management**, 21 (4), 531-40.

Hosmer, L.T. (1995) Trust: The Connecting Link Between Organizational Theory and Philosophical Ethics. **Academy of Management Review**, 20 (2), 379-403.

House, R.J.,Hanges,P.J.,Javidan, M.,Dorfman, P.W. and Gupta, V. (2004) **Culture, leadership, and organizations: The GLOBE study of 62 societies**. USA: Sage.

Houston, F.S. (1986) The Marketing Concept: What It Is and What It Is Not. **Journal of Marketing**, 50 (April), 81-87.

Huber, G. (1991) Organizational Learning; The Contributing Processes and the Literatures. **Organizational Science**, 2 (1), pp.88-115.

Huff, L. and Kelly, L. (2005) Is collectivism a liability? The impact of culture on organizational trust and customer orientation : a seven-nation study. **Journal of Business Research**, 58, 96-102.

Hurmerinta-Peltomaki, L. and Nummela, N. (2006) Mixed Methods in International Business Research : A value- added perspective. **Management International Review**, 46, 439-59.

Ilgen, D.R.,Hollenbeck, J.R.,Johnson, M. and Jundt, D. (2005) Teams in organizations: From input-process-output models to IMOI models. **Annual Review of Psychology**, 56, 517–43.

Jackson, S. E. (1992) Team composition in organizational settings: Issues in managing an increasingly diverse workforce.In S.Worchel , W.Wood and J.A.Simpson (Eds.), **Group process and productivity**. Newbury Park,CA: Sage, pp 138-173.

Jackson, S. (1996) "The Consequences of Diversity in Multidisciplinary Work Teams."In West,M.A. (eds.), **Handbook of Work Group Psychology.** New York: John Wiely & Sons Ltd.pp.53-75

Jackson, S.E. and Ruderman, M.N. (1995) **Diversity in Work Teams**. Washington,D.C: American Psychological Association.

Jaworski, B., Kohli, A., and Sahay, A. (2000) Market Driven versus Driving Markets. **Journal of the Academy of Marketing Science**, 28 (1), 45-54.

Jayne, M.E. and Dipboye, R.L. (2004) Leveraging Diversity To Improve Business Performance : Research Findings And Recommendations For Organizations. **Human Resource Management** 43 (4), 409-24.

Jehn, K.A., Chadwidck, C., and Thacher, S. (1997) To agree or not to agree: diversity, conflict, and group outcomes. **International Journal of Conflict Management**, 8, 287-306.

Jehn, K.A. and Shan, P.P. (1997) Interpersonal relationships and task performance: An examination of mediating processes in friendship and acquaintance groups. **Journal of Personality and Social Psychology,** 72 (4), 775-90

Jerkovsky, W. (1983) Functional management in matrix organizations. **IEEE Transactions on Engineering Management,** 30 (2), 89-97.

Jessup, H.R. (1990) New roles in team leadership. **Training and Development Journal**, 44, 79-83.

Jiang, P. and Rosenbloom, B. (2005) Customer intention to return online : price

perception, attribute -level performance, and satisfaction unfolding over time. **European Journal of Marketing**, 39 (1/2), 150-74.

Jones, G. (1984) Task visibility, free riding, and shirking: Explaining the effect of structure and technology on employee behaviour. **Academy of management review**, 9 (October), 684-95.

Johnson, R. B. and Onwuegbuzie,A. J. (2004) Mixed Methods Research: A Research Paradigm Whose Time Has Come. **Educational Researcher**, 33(7),14-26.

Joshi, A. and Jackson, S.E. (2003) "Managing workforce diversity to enhance cooperation in organizations." In West, M.A.,Tjosvold E. and Smith,K.G. (eds.), **International Handbook of Organizational Teamwork and Cooperative Working.** Great Britain: John Wiely & Sons.pp.277-96.

Joshi, A. and Lazarova, M. (2005) "Do "Global" Teams Need "Global" Leaders? Identifying Leadership Competences in Multinational Teams." In Glinow D. L. Shapiro, M.A., Cheng,J.L.C. (eds.), **Managing Multinational Teams: Global Perspectives**. Advances in international management 18: Elsevier Jai.pp.281-302.

Joyce, W.F. (1986) Matrix organization; Social experiment. **Academy of Management Journal**, 29 (3), 536-61.

Kashima, Y., Yamaguchi, S., Kim, U.and Choi, S.(1995) Culture, gender, and self: A perspective from individualism–collectivism research. **Journal of Personality and Social Psychology**, 69, 925-37.

Kasper, H. (2002) Culture and leadership in market-oriented service organizations. **European Journal of Marketing** 36 (9/10), 1047-57.

Kaz, R. (1982) The effects of group longevity on project communication and performance. **Administrative Science Quarterly**, 27(1), 81-104.

Katz, R. and Allen, T.J. (1985) Project performance and the locus of influence in the R&D matrix. **Academy of Management Journal**, 28 (1), 67-87.

Katz,N.,Lazer,D.,Arrow,H. and Contractor,N. (2004) Network Theory and Small Groups.**Small Group Research**, 35 (3), 307-32.

Katzenbach, J.R. and Smith, D.K. (1993) The discipline of teams. **Harvard Business Review**, (March-April 1993),111-20

Katzenbach, J.R. and Smith, D.K. (1998) **The wisdom of teams: Creating the high-performance organization**.Cambridge, UK: McGraw-Hill.

Keller, R.T. (2001) Cross-functional project groups in research and new product development; Diversity, communication, job stress, and outcomes. **Academy of**

management journal, 44 (3), 547-55.

Keller, E. (2007) The cost of doing business : How software application pricing models are likely to change.**Manufacturing Business Technology** 42-43.

Kelley, S.W. (1992) Developing Customer Orientation among Service Employees. **Journal of the Academy of Marketing Science,** 20 (1), 27-36.

Kerzner, H. (1984) **Project management a systems approach to planning, scheduling and controlling.**New York: Van Nostrand Reinhold.

Kiffin-Petersen, S.A. and Cordery, J.L. (2003) Trust, individualism and job characteristics as predictors of employee preference for teamwork. **International Journal of Human Resource Management**, 14 (1), 93-116.

Kim, U., Triandis, H. C., Kagitcibasi, C., Choi, S.-C. and Yoon, G. (1994), **Individualism and collectivism: Theory, method, and applications**.Newbury Park, CA: Sage.

Kingdon, D.R. (1973) **Matrix organization**. London: Tavistock.

Kirkman, B.L. and Shaprio, D.L. (1994) The impact of cultural values on employee resistance to teams: towards a model of globalized self-managing work team effectiveness. **Academy of Management Review**, 22 (3), 730-45.

Kirkman, B.L. (1996) The impact of national culture on employee resistance to teams: A comparative analysis of globalized self-managing work team effectiveness. **Academy of Management Review**, 22, 730-57.

Kirkman, B.L. and Shapro, D.L. (1997) The impact of cultural values on employee resistance to teams: Toward a model of globalized self-managing work effectiveness. **Academy of Management Review,** 22, 730-57.

Kirkman, B.L. and Rosen, B. (1999) Beyond self-management: Antecedents and consequences of team empowerment. **Academy of Management Journal**, 42 (1), 58-74.

Kirkman, B.L. and Shapiro, D.L. (2001) The impact of cultural values on job satisfaction and organizational commitment in self-managing work teams: The mediating role of employee resistance. **Academy of Management Journal**, 44 (3), 557-69.

Kirkman, B.L. and Shapiro, D.L (2005) "The impact of cultural value diversity on multicultural team performance." In Shapiro, D.L. ,Glinow, M.A. and Cheng, J.L.C. (eds.), **Managing multinational teams : global perspectives**. Advances in international management 18; Amsterdam: Elsevier.pp.33-67

Knight, K. (1976) Matrix organization: A review. **The Journal of Management**

Studies*, (May), 111-30.

Kogut, B. and Zander, U. (1992) Knowledge of the firm, combinative capabilities, and the replication of technology. **Organization Science***, 3, 383-97.

Kolodny, H.F. (1979) Evolution to a matrix organization.**Academy of management review***, 4 (4), 543-53.

Konard, A.M. (2003) Defining the Domain of Workplace Diversity Scholarship. **Group and Organization Management***, 28 (1), 4-17

Korsgaard, M.A., Brodt, S.E., and Sapienza, H.J. (2003) "Trust, identity and attachment promoting individuals' cooperation in groups." <u>In</u> Tjosvold,D., West, M.A.and Smith, K.G. (eds.), **International Handbook of Organizational Teamwork and Cooperative Working**. England John Wiley & Sons Ltd.pp.113-30

Kou, C.C. (2004) Research on Impacts on Team Leadership on Team Effectiveness. **The Journal of American Academy of Business***, September 2004, 266-77.

Kozan, M.K. and Ergin, C. (1999) The influence of intra-cultural value differences on conflict management practices. **The International Journal of Conflict Management***, 10, 249-67.

Kozlowski, S.W.J.,Gully, S.M.,McHugh, P.P.,Salas, E. and Cannon-Bowers, J.A. (1996) "A dynamic theory of leadership and team effectiveness: Developmental and task contingent leader roles." in Ferris,G.R. (eds.), **Research in personnel and human resource management.** 14; Greenwich, CT:: JAI Press.pp.253–305

Kozlowski, S.W.J.,Gully, S.M.,Salas, E.,Cannon-Bowers, J.A. (1996) "Team leadership and development: Theory principles, and guidelines for training leaders and teams." in Johnson ,D., Beyerlein, M. and Beyerlein, S. (eds.), **Advances in interdisciplinary studies of work teams: Team leadership**. 3; Greenwich, CT: JAI Press.pp.251–89.

Kozlowski, S.W.J. (1999) A typology of emergence: Theoretical mechanisms undergirding bottom-up phenomena in organizations. **the 14th Annual Conference of the Society for Industrial and Organizational Psychology.**Atlanta, GA.

Kozlowski, S.W.J.,Gully, S.M.,Nason, E.R. and Smith, E.M. (1999) "Developing adaptive teams: A theory of compilation and performance across levels and time." <u>In</u> Ilgen,D.R. and Pulakos,E.D. (eds.) **The changing nature of work performance: Implications for staffing, personnel actions, and development.** San Francisco: Jossey-Bass.pp.240–92.

Kozlowski, S.W.J. and Bell, B.S. (2003) "Work groups and teams in organizations." <u>In</u>

Borman, W.C. , Ilgen , D.R. and Klimoski, R.J. (eds.), **Handbook of psychology**. Industrial and organizational psychology; London: Wiley.pp.333–75

Kozlowski, S.W.J. and Ilgen, D.R. (2006) Enhancing the Effectiveness of Work groups and Teams. **Psychological Science in the public interest**, 7 (3), 77-124.

Krippendorff, K. (2004) **Content analysis : an introduction to its methodology**. 2nd ed.; Thousand Oaks, CA. ; London: Sage.

Larry, F. (1976) **The European Multinationals**.New York Harper & Low.

Larson, E.W. and Gobeli, D.H. (1987) Matrix management: contradictions and insights. **California Management Review**, 29 (4), 126-38.

Larson, J.R. and Chirsitensen, C. (1993) Groups as problem-solving units: Toward a new meaning of social cognition.**British Journal of Socail Psychology**, 32, 5-30.

Lasserre, P. (2007) **Global Strategic Management**.New York Palagrave Macmillan.

Lawler, E.I., Morhman, S., and Ledford, G.G.J. (1992) **Employee involvement and total quality management**.San Francisco, CA: Jossey-Bass.

Lawler, E.E., Mohrman, S.A., and Ledford, G.E. (1992) **Employee involvement and total quality management: Practices and results in Fortune 1000 companies.**San Francisco: Jossey-Bass.

Lawler, E.E., Mohrman, S.A., and Ledford, G.E. (1995) **Creating high performance organizations: Practices and results of employee involvement and total quality management in Fortune 1000 companies**. San Francisco: Jossey-Bass.

Lawrence, P. R., Kolodny, H.F., and Davis, S.M. (1977) The human side of the matrix. **Organizational Dynamics**, Summer, 43-61.

Lawrence, B.S. and Lorsch, J.W. (1986) **Organization and Environment: Managing Differentiation and Integration**. USA: Harvard Business School.

Lembke, S. and Wilson, M.G. (1998) Putting the 'team' into teamwork: Alternative theoretical contributions for contemporary management practice. **Human Relations**, 51, 927-44.

Levine, J. M. and R. L. Moreland (1990). Progress in small group research. **Annual Reviews of Psychology** ,41: 585-634.

Lewin, A.Y. and Massini, S. (2003)"Knowledge Creation and Organizational Capabilities of Innovating and Imitating Firms."', In Tsoukas,H. and Mylonopoulos,N. (eds.) **Organizations as Knowledge Systems** . Houndmills, UK: Palgrave Macmillan. pp. 209-236

Lewis, J.P. (1993) **How to build and manage a wining project team**. New York: American Management Association.

Lewis,K.,Belliveau,M.,Herndon,B. and Keller,J. (2007) Group cognition, membership change, and performance: Investigating the benefits and detriments of collective knowledge. **Organizational Behaviour and Human Decision Processes**, 103, 159-78.

Likert, R. (1961) **New Pattern of Management** .New York: McGraw-Hill.

Lorange, P. and Probst, G. (1990) "Effective strategic planning processes in the multinational corporation." In Bartlett,C.A., Doz,Y. and Hedlund,G. **Managing the Global Firm.** London, Routledge.pp. 55-71

Luo, Y. (2000) Dynamic Capabilities In International Expansion. **Journal of World Business**, 35 (4), 355-78.

Maidique, M. (1980) Entrepreneurs, champions, and technological innovation. **Sloan Managment Review**, 21 (2), 59-76.

Makdok, R. (2001) Toward a synthesis of the resource-based and dynamic-capability views of rent creation. **Strategic Management Journal**, 22, 387-401.

Mann, L. (1980) "Cross-cultural studies of small groups." In Triadis,H.C. and Brislin, R.W. (eds.) **Handbook of cross-cultural psychology**. 5; Boston,MA: Allyn and Bacon.pp.155-210

Manz, G.G. and Sims, H. P., Jr. (1993) **Business without bosses: How self-managing teams are building high-performance companies**. New York: Wiley.

Marks, M.A., Mathieu, J.E., and Zaccaro, S.J. (2001) A temporally based framework and taxonomy of team processes. **Academy of Management Review**, 26, 356–76.

Mathieu, J.E., Marks, M.A., and Zaccaro, S.J. (2001) "Multi-team systems." In Anderson, N.,Ones, D., Sinangil, H.K. and Viswesvaran, C. (eds.) **Organizational psychology.**2; London: Sage.pp. 289–313

Maznevski, A.M. (2008) "Leading global teams." In Mendenhall, M.E., Osland, J.S.,Bird, A.,Oddu, G.R.,Maznevski, A.M. (eds.) **Global leadership : Research, practice and development**. Routledge Global Human Resource Management Series; Oxon : Routledge. pp.94-113

Maznevski, A. M. and Chudoba K. M. (2000). Bridging Space Over Time:Global Virtual Team Dynamics and Effectiveness. **Organization Science** 11(5): 473-492.

McDermott, L., Waite, B., and Brawley, N. (1999) Executive teamwork. **Executive Excellence** 16 (5), 15-19.

McGrath, J.E. (1964) **Social psychology: A brief introduction**. NewYork: Holt, Rinehart, & Winston.

McGrath, J.E., Berdahl, J.L., and Arrow, H. (1995) "Traits, expectations, culture, and clout: The dynamics of diversity inwork groups." in Jackson,S.E. and Rederman,M.N. (eds.) **Diversity in Work Teams**. Washington,D.C.: American Psychological Association. pp. 17-45.

Mclead, P.L. and Lobel, S.A. (1992),The Effects of Ethnic Diversity on Idea Generation in Small Groups. **Academy of Management Best Paper Proceeding** (Las Vegas, NV,), 227-31.

Mendenhall, M.E. (2008) "Leadership and the birth of global leadership." in Mendenhall, M.E., Osland, J.S.,Bird, A.,Oddu, G.R.,Maznevski, A.M. (eds.), **Global leadership : Research, practice and development.** Routledge Global Human Resource Management Series Oxon Routledge. pp.1-17.

Meredith, J.R. and Mantel.S.J.Jr. (1989) **Project management**. 2nd ed..; New York: John Wiley.

Meyer, J.P., Becker, T.E., and Van Dick, R. (2006) Social identities and commitments at work : toward an integrative model. **Journal of Organizational Behaviour**, (27), pp.665-83.

Miles, R. H. (1980) **Macro organisational behaviour**. Glenview, IL: Scott, Foresman.

Miller, D.C. (1991) **Handbook of Research Design and Social Measurement**.California: Sage.

Millian, J., Taylor, S., and Czaplewski, A.J (2002) Cross cultural performance feedback in multinational enterprises; Opportunity for organizational learning.**Human Resource Planning**, 25 (3), 29-43.

Mohrman, S.A., Cohen, S.G., and MohrmanA.M., Jr. (1995) **Designing team-based organisations: New forms for knowledge work.** San Francisco: Jossey-Bass.

Mollet, B. and Rowland, I. (2002) Functional foods: at the frontier between food and pharma. **Current Opinion in Biotechnology**, 13 (5), 483-85.

Moreland, R.L. (1999) "Transactive memory: learning who knows what in work groups and organizations." In Thompson, L.L., Levine, J.M. and Messick, D.M. (eds.), **Shared cognition in organizations: The management of knowledge**.Mahwah,NJ: Erlbaum.pp. 3-31.

Morgan, G. (2001) "The multinational firm : Organizing Across Institutional and National Divides." In Morgan, G. , Kiristensen, P.H. and Whitley,R. (eds.) **The multinational firm - Organizing Across Institutional and National Divides**. New York: Oxford University Press.

Mowday, R. T., Steers, R. M., and Porter, L. W. (1979) The measurement of organizational commitment. **Journal of Vocational Behaviour,** (14), 224-47.

Murphy, J. P. (1990) **Pragmatism: From Peirce to Davidson**, Boulder,CO: Westivew.

Myers, R. (1990) **Classical and modern regression with applications.** 2nd ed.; Boston,MA: Duxbury.

Narver, J. C. and Slater, S.F. (1990) The Effect of a Market Orientation on Business Profitability. **Journal of Marketing**, 54 (October), 20-35.

Neuendorf, K.A. (2002) **The content analysis guidebook**. California: Sage.

Newcomb, T.M. (1961) **The acquaintance process**. New York Holt, Rinehant and Winston.

Ng, D. (2004) The Social Dynamics of Diverse and Closed Networks. **Human Systems Management**, 23 (2), 111-22.

Osternman, P. (2000) Work reorganisation in an era of restructuring : Trends in diffusion and effects on employee welfare. **Industrial & Labour Relations Review**, 53 (2), 179-96.

Parasuraman, A. (1987) Customer Oriented Corporate Cultures Are Crucial to Services Marketing Success. **Journal of Services Marketing**, 1 (1), 39-46.

Pfeffer, J. (1983) Organizational demography In L.L.Cummings & B. W. Staw (Eds.), **Research in organizational behavior** Greenwich, CT: JAI Press,p229-357.

Pisano, G.P. (1994) Knowledge, integration, and the locus of learning: an empirical analysis of process development. **Strategic Management Journal**, Winter Special Issue 15, 85-100.

Porter, L. W., Steers,R.M.,Mowday,R.T.,Boulian,P.V. (1974). Organizational commitment, job satisfaction and turnover among psychiatric technicians. **Journal of Applied Psychology** 59(5): pp.603-660.

Posner, B.Z. (1986) What is all the fighting about? Conflicts in project management. **IEEE Transactions on Engineering Management**, 33 (4), 207-11.

Quinn, J.B. (1985) Managing innovations: Controlled chaos. **Harvard Business Review**, 63 (May-June), 73-84.

Rahim, M. A. (1983) A measure of styles of handling interpersonal conflict.**Academy of Management Journal**, 26, 368–76.

Randolph, W.A. and Posner, B.Z. (1992) **Getting the job done: Managing project teams and task forces for success**. Englewood Cliffs,NJ: Prentice-Hall.

Reich, R.B. (1987) Entrepreneurship reconsidered: The team as hero. **Harvard Business Review**, 65 (May-June), 77-83.

Reichers, A.E. (1986) Conflict and Organizational commitment. **Journal of Applied Psychology**, 71 (3), 508-514.

Rijiamampianina, R. and Carmichael, T. (2005) A Pragmatic and Holistic Approach to Managing Diversity. **Problems and Perspectives in Management**, 1, 109-117.

Roberfroid, M.B. (2000) Concepts and strategy of functional food science: the European perspective. **American Journal of Clinical Nutrition**, 71 (6 June), S 1660-1664.

Rosenbaum, M.E., et al. (1980) Group productivity and process : Pure and mixed reward structures and task interdependence. **Journal of Personality and Social Psychology**, 39 (4), 626-42.

Salas, E., Dickinson, T.L., Converse, S.A. and Tannenbaum, S.I. (1992) "Toward an understanding of team performance and training." In Swezey, R.W. and Salas, E. (ed.), **Teams: Their training and performance** .Norwood, NJ: Ablex.pp.3-29

Salas,E.,Rosen,M.A.,Burke, C.S.,Goodwin, G.F. (2008) "The Wisdom of Collectives in Organizations: An Update of the Teamwork Competencies." in Salas, E., Goodwin, G.F. and Burke ,C.S. (eds.), **Team effectiveness in complex organizations : Cross-Disciplinary Perspectives and Approaches** .SIOP Organizational Frontiers Series; NY : Routledge. pp. 39-79.

Saner, R. and Yiu, L. (2000) Challenges of the 21st Century for Leadership Qualifications: Reflections and Responses. **Asian Journal of Public Administration** 22(June) (1), 75-89.

Saunders, M., Lewis, P., and Thornhill, A. (2007) **Research methods for business studies**. Harlow : Financial Times Prentice Hall.

Schein, E.D. (1988) **Organizational psychology**. 3rd ed..; USA: Prentice- Hall International Editions.

Schein, E.H. (1992)**Organizational Culture and Leadership.** 2nd ed.; San Francisco: John Wiley & Sons.

Schippers, M. C.,Den Hartog, D. N.,Koopman, P. L. and Wienk, J. A. (2003) Diversity and team outcomes: the moderating effects of outcome interdependence and group longevity and the mediating effect of reflexivity. **Journal of Organisational Behaviour**, 24 (6), 779-802.

Schwab, D.P. (2005) **Research methods for organizational studies**. 2nd ed.; Mahwah,New Jersey: Lawrence Erlbaum Associates.

Schwartz, S.H. (1992) Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. **Advances in Experimental Social Psychology**, 25, 1-65.

Shamir, B., Zakay, E., Breinin, E.and Popper, M. (1998) Correlates of charismatic leader behaviour in military units: Subordinates' attitudes, unit characteristics, and superiors' appraisals of leader performance. **Academy of Management Journal**, 41, 387–409.

Shapiro, B.P. (1988) What the Hell Is 'Market Oriented?'. **Harvard Business Review**, 66 (November-December), 119-25.

Shock, J.H. (1992)**Working in teams: A practical manual for improving work groups**.New York: Amacom.

Shuttleworth, M. (2009) 'Pilot Study' http://www.experiment-resources.com/pilot-study.html accessed 29, October.

Sinha, D. and Tripathi, R.C. (1994) "Individualism in a collectivist culture: A case of coexistence of opposites." In Kim,U.,Triandis,H.C.,Kagitcibasi,C.K.,Choi,S.C. andYoon, G. (eds.) **Individualism and collectivism: Theory, methods, and applications**. Thousand Oaks,CA: Sage.pp.123–36.

Sinkula, J.M., Baker, W.E., and Noordewier, T. (1997) A Framework for Market-Based Organizational Learning: Linking Values, Knowledge and Behaviour. **Journal of the Academy of Marketing Science**, 25 (Fall), 305-18.

Siró, I.,Kápolna, E.,Kápolna, B. and Lugasi, A. (2008) Functional food. Product development, marketing and consumer acceptance--A review. **Appetite**, 51 (3), 456-67.

Sivadas, E., Bruvold, N.T., and Nelson, M.R. (2008) A reduced version of the horizontal and vertical individualism and collectivism scale: A four-country assessment. **Journal of Business Research**, 61 (3), 201-10.

Skrabe, Q.R. (2002) The myth of teams. **Industrial Management**, 44 (5), 25-9.

Slater, S. and Narver, J.C. (1995) Market Orientation and the Learning Organization. **Journal of Marketing**, 59 (July), 162-67.

Smith, H.R. (1978) A socio-biological look at matrix. **Academy of management review**, 3 (4), 922-26.

Solan, E. (2002) The top 10 functional food trends. The next generation. **Food Technology**, 56, 32-57.

501

Song, X.M., Montoya-Weiss, M.M., and Sohmidt, J.B. (1997) Antecedents and consequences of cross-functional cooperation: A comparison of R&O, manufacturing, and marketing perspective. **Journal of Predation Innovation Management***, 14, 35-47.

Sonnenschein, W. (1997) **The Practical Executive and Workforce Diversity**. Illinoi USA: NIC Business Book.

Soper, D.S. (2009), 'Statistic Calculators: A-priori Sample Size Calculator for Multiple Regression', <http://www.danielsoper.com/statcalc/calc01.aspx>, accessed 17th December 2009.

Soper, D.S. (2009), 'Sobel Test Calculator for the Significance of Mediation', <http://www.danielsoper.com/statcalc/calc31.aspx>, accessed 14.Nov 2009.

Soper, D.S. (2009), 'Statistic Knowledge Base : A-priori Sample Size for Multiple Regression', <http://www.danielsoper.com/statkb/topic01.aspx>, accessed 17 December 2009.

Stahl, G. K., Maznevski, M. L., Voigt, A., and Josen, K. (2010). Unraveling the effects of cultural diversity in teams : A meta-analysis of research on multicultural work group. **Journal of International Business Studies**, 41: 690-709.

Stata, R. (1989) Organizational learning; The key to management innovation. **Sloan Management Review***, 30 (3), 63-74.

Steele, L. (1983) Managers' misconeptions about technology. **Harvard Business Review***, (November-December), 47-54.

Steinman, C., Deshpandé, R., and Farley, J.U. (2000) Beyond Market Orientation: When Customers and Suppliers Disagree. **Journal of the Academy of Marketing Science***, 28 (1), 109-19.

Stryker, S. (1980) **Symbolic interactionism: A social structural version**. Menlo Park, CA: Benjamin/Cummings.

Stuckenbruck, L.C. (ed.), (1983) **The implementation of project management: The professional's handbook.** Reading,MA: Addison-Wesly.

Tajfel, H. (1972), 'Social categorization. English manuscript of 'La catégorisation sociale', in S. Moscovici (ed.), **Introduction à la Psychologie Sociale** (Paris: Larousse), 272–302.

Tajfel, H. 1982. Social psychology of intergroup relations. **Annual Reviews of Psychology**, 33: 1-39.

Tajfel, H. and Turner, J. (1979) "An integrative theory of intergroup conflict." In Austin,W.G. and Worchel,S. (eds.), **The social psychology of intergroup**

relations. 2nd ed.; Chicago, IL: Nelson-Hall Publishers.pp.33-47

Tajfel, H. and Turner, J.C. (1986)"The social identity theory of intergroup behaviour." In Worchel,S. and Austin,W.G. (eds.) **Psychology of inter-group relations**. Chicago, IL: Nelson-Hall.pp.7–24.

Tata, J. and Prasad, S. (2004) Team self-management, organisational strucure, and judgements of team effectiveness. **Journal of Managerial Issues**, 16 (2), 248-65.

Teece, D., Pisano, G., and Shuen, A. (1997) Dynamic capabilities and strategic management. **Strategic Management Journal**, 18 (7), 509-33.

Teece, D. (2009) **Dynamic capabilities and strategic management**. New York: Oxford University Press.

Thomas, D.C. (1999) Cultural Diversity and Work Group Effectiveness: An Experimental Study. **Journal of Cross-Cultural Psychology**, 30 (2), 242-63.

Thomas, D.C. and Inkson, K. (2004) **Cultural intelligence: People skills for global business**. San Francisco, CA: Berrett-Koehler.

Tindale,R.S.,Meisenhelder,H.M.,Dylema-Engblade, A.A.and Hogg,M.A. (2003) "Shared Cognition in Small Groups." In Hogg,M.A. and Tindale,R.S. (eds.) **Blackwell Handbook of Social Psychology; Group Processes**. Cornwall: Blackwell Publishing.

Tjosvold, D. (1988) Cooperative and Competitive interdependence: Collaboration between departments to service customers. **Group and Organization Studies**, 13 (3), 274-89.

Tjosvold, D. (1991) **Team organization: An Enduring Competitive Advantage**,Chichester,England: Wiley.

Todman, J. and Dugard, P. (2007) **Approaching Multivariate Analysis: And introduction for psychology**.New York: Psychology Press.

Triandis, H.C. (1980) **Values, Attitudes and Interpersonal Behaviour**. Lincoln, NE: University of Nebraska Press.

Triandis, H.C (1988) "Collectivism and individualism: A reconceptualization of a basic concept in cross-cultural psychology." In Verma,G.and Bagley,C. (eds.) **Cross-cultural studies of personality, attitudes, and cognition.** London:Palgrave Macmillan.pp.60–95

Triandis, H.C. (1989) The self and social behaviour in differing cultural contexts. **Psychological Review**, 96, 506-20.

Triandis, H.C. (1990) "Cross-cultural studies of individualism and collectivism." In

Berman,J.J. (eds.) **Nebraska Symposium on Motivation: Cross-cultural Perspective. Current Theory and Research in Motivation**. Lincoln, NE: University of Nebraska Press. pp.41-133.

Triandis, H.C. (1991) "Cross-cultural differences in assertive/competition vs group loyalty/cooperation." In Hinde,R.A. and Groebel,J (eds.), **Cooperation and Prosocial Behaviour** . UK: Cambridge University Press.pp. 78-88

Triandis, H. C. and Bhawuk, D. P. (1994) Bridging the gap between theory and practice: A comparative study of current diversity programs. **Final report, working paper no. 2. Champaign** ,University of Illinois Center for Human Resource Management.

Ueltschy,L.C., Laroche,M.,Eggert,A. and Bindl,U. (2007) Service quality and satisfaction : an international comparison of professional service perceptions. **Journal of Service Marketing** 21 (6), 410-23.

Usunier, J. (1998). **International and cross-cultural management research**. London;SAGE.

Van der Vegt, G., Emans, B., and Van De Vliert, E. (2000) Team Members' Affective Responses to Patterns of Intragroup Interdependence and Job Complexity. **Journal of Management**, 26 (4), 633-55.

van Knippenberg,D.,van Knippenberg,B.,De Cremerc,D. and Hogg,M.A. (2004) Leadership, self, and identity: A review and research agenda.**The Leadership Quarterly**, 15, 825-56.

Vandello, J. A. and Cohen, D. (1999) Patterns of individualism and collectivism across the United States. **Journal of Personality and Social Psychology**, 77, 279-92.

Vilares, M.J. and Coelho, P.S. (2003) The employee - customer satisfaction chain in the ECSI model. **European Journal of Marketing**, 37 (11/12), 1703-22.

Wagner, J. and Moch, M.K. (1986) Individualism-collectivism: Concept and measure. **Group & Organization Studies**, 11 (3), 280-304.

Wagner, J.A. (1995) Studies of individualism-collectivism: Effects on cooperation in groups. **Academy of Management Journal**, 38, 152-72.

Wall, W.C., Jr. (1984) Integrated management in matrix organization. **IEEE Transactions on Engineering Management**, 31 (1), 30-36.

Watkins, H.S. and Liu, R. (1996) "Collectivism, individualism and in-group membership: implications for consumer complaining behaviours in multicultural contexts." In Manrai,L.A. and Manrai,A.K. (eds.) **Global perspectives in cross-cultural and cross-national consumer research**. NY: International Business

Press. pp.69-96.

Watson, W.E., Kumar, K., and Michaelsen, L.K. (1993) Cultural diversity's impact on interaction process and performance: comparing homogenous and diverse task groups. **Academy of Management Journal***, 36, 590-602.

Watson, W. E., Johnson, L., and Zourides, G.D. (2002) The influence of ethic diversity on leadership, group process , and performance : an examination of learning teams. **International Journal of Intercultural Relations***, 26, 1-16

Webber, S.S. (2002) Leadership and trust facilitating cross-functional team success. **The Journal of Management Development***, 21 (3/4), 201-14.

Webster, F.E. Jr. (1988) Rediscovering the Marketing Concept. **Business Horizons***, 31 (May-June), 29-39.

Weick, K. E. (1969). **The social psychology of organizing**. Reading,MA: Addison-Wesley.

West, M.A. and Markiewicz, L. (2004) **Building Team-based Working : A practical guide to organizational transformation**. Cornwall: BPS Blackwell.

Whetten, D.A.(1989) What Constitutes a Theoretical Contribution?. **Academy of Management Review** 14(4), 490-495.

Whitely, R. (2001) "How and Why the International Firms different? The Consequences of Cross-Border Managerial for Firm Characteristics and Behaviours." In Morgan, G. Kiristensen, P.H. and Whitely, R. (eds.), **The multinational firm - Organizing Across Institutional and National Divides**. New York: Oxford University Press.pp.27-68.

Wilemon, D.L. and Thamhain, H.J. (1983) Team building in project management. **Project Management Quarterly***, 14 (3), 73-81.

Williams, K. Y. & O'Reilly III, C. A. 1998. Demography and diversity in organizations: A review of 40 years of research In B.W.Staw and L.L.Cummings (Eds.), **Research in organizational behaviour***, Vol. 20: Greenwich, CT: JAI Press.pp.77-140.

Yukl, G. (2006) **Leadership in Organizations**. 6th ed.; New Jersey: Pearson education international.

Zollo, M. and Winter, S.G. (2002) Deliberate Learning and the Evolution of Dynamic Capabilities. **Organisation Science***, 13 (3), 339-51.