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Accelerating Global Product Innovation through Cross-cultural Collaboration: Organizational Mechanisms that Influence Knowledge-sharing within the MNC

Karina Jensen

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THÈSE

présentée par :

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PhD Dissertation, ESCP Europe in the field of International Management

**Accelerating Global Product Innovation
through Cross-cultural Collaboration:
Organizational Mechanisms that Influence
Knowledge-sharing within the MNC**

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I dedicate this thesis to my parents
Ernst and Gunn Jensen
whose support and encouragement
have always been greatly appreciated.

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Karina JENSEN

L'innovation globale et la collaboration interculturelle:

**Les mécanismes organisationnels qui déterminent le
partage du savoir dans les entreprises multinationales.**

Résumé

La mondialisation, l'introduction d'un produit sur le marché, l'adaptation au consommateur représentent des défis permanents pour réussir l'innovation sur le marché à travers les cultures. Un environnement commercial interculturel et interconnecté a créé une demande croissante pour le partage des connaissances dans les entreprises multinationales (EMN). L'incapacité des membres d'une équipe dispersés géographiquement à partager et communiquer efficacement les idées et solutions peut entraîner un manque d'innovation des produits, un retard dans leur introduction, et réduire les ventes et opportunités de marchés. Cela nécessite de la part des dirigeants d'optimiser les connaissances interculturelles de l'équipe afin d'améliorer le design et la livraison de solutions innovantes pour les clients à l'échelle mondiale. Par conséquent cette thèse cherche à examiner et identifier les mécanismes organisationnels qui favorisent la collaboration interculturelle et le partage de connaissances au sein d'équipes dispersées géographiquement, dans l'élaboration d'un processus d'innovation (du front end of innovation).

Cette thèse se base sur l'approche par les ressources et par les connaissances de la firme, où les pratiques cognitives et sociales intégrées jouent un rôle important pour l'innovation. A travers une recherche qualitative j'examinerai les mécanismes organisationnels qui influencent les interactions entre le responsable de projet et l'équipe interculturelle durant les lancements globaux de produit, de la conception du produit jusqu'à sa mise sur le marché. Dans la mesure où il y a peu de recherche empirique sur la collaboration interculturelle et l'innovation globale, c'est une opportunité considérable de contribuer à la recherche en management de l'innovation, et d'aider des organisations à développer leurs capacités de partage de connaissances, véritable avantage concurrentiel dans la conception et l'introduction de nouveaux produits sur les marchés internationaux.

L'objectif de cette thèse est d'étudier et démontrer comment les EMN peuvent faciliter le processus de collaboration interculturelle afin de concevoir et de mettre en œuvre efficacement des stratégies d'innovation pour de nouveaux produits. Cette recherche vise à développer un cadre et un modèle théorique pour la collaboration des équipes interculturelles en répondant à la question suivante : Comment les EMN optimisent la collaboration des équipes interculturelles afin d'améliorer le planning et la mise en œuvre de stratégie globale d'innovation ? Ceci répond aux besoins des organisations de partager les connaissances du marché local entre les équipes interculturelles afin d'accélérer la réactivité aux opportunités du marché à l'international.

Mots-clés : la collaboration interculturelle – management de l'innovation global – mécanismes organisationnels – équipes dispersés géographiquement – front end of innovation – le partage de connaissances – lancements globaux de produit – conception du produit – mise sur le marché – le planning et la mise en œuvre de stratégie globale d'innovation

Karina JENSEN
**Accelerating global product innovation through
cross-cultural collaboration:**

Organizational mechanisms that influence knowledge-sharing within the MNC

Résumé en anglais

Globalization, time to market, and customer responsiveness present continuous challenges for achieving market innovation across cultures. A cross-cultural and networked business environment has created increased demand for knowledge-sharing within the multinational corporation (MNC). The inability of geographically distributed team members to effectively share and communicate ideas and solutions can result in a lack of product innovation, delayed product introductions, and reduced sales and market opportunities. This requires managers to leverage cross-cultural team knowledge in order to improve the design and delivery of innovative customer solutions worldwide. This dissertation thus intends to examine and identify organizational mechanisms that facilitate cross-cultural collaboration and knowledge-sharing for geographically distributed teams responsible for the front end of innovation.

The resource-based and knowledge-based views of the firm inform this dissertation where integrated cognitive and social practices serve an important role for innovation. Through qualitative research, I will examine organizational mechanisms that influence interactions between the project leader and the geographically distributed team during global product launches, from product concept to market introduction. Since there is a lack of empirical research conducted with organizations on cross-cultural collaboration and global innovation, there is a significant opportunity to advance research within innovation management while assisting organizations in the development of knowledge-sharing capabilities that serve as competitive advantage in conceiving and introducing new products to international markets.

The purpose of this dissertation research is to investigate and demonstrate how MNCs can facilitate the cross-cultural collaboration process in order to effectively conceive and execute innovation strategies for new products. The research intends to develop a framework and model for cross-cultural team collaboration in exploring and responding to the following research question: How can MNCs optimize cross-cultural team collaboration in order to strengthen the planning and execution of global innovation strategies? This research responds to organizational needs for sharing knowledge amongst cross-cultural teams in order to accelerate responsiveness to international market opportunities.

Key words: cross-cultural collaboration – global innovation management – organizational mechanisms – geographically distributed teams – front end of innovation – knowledge-sharing – global product launch management – strategic planning - product conception – go-to-market

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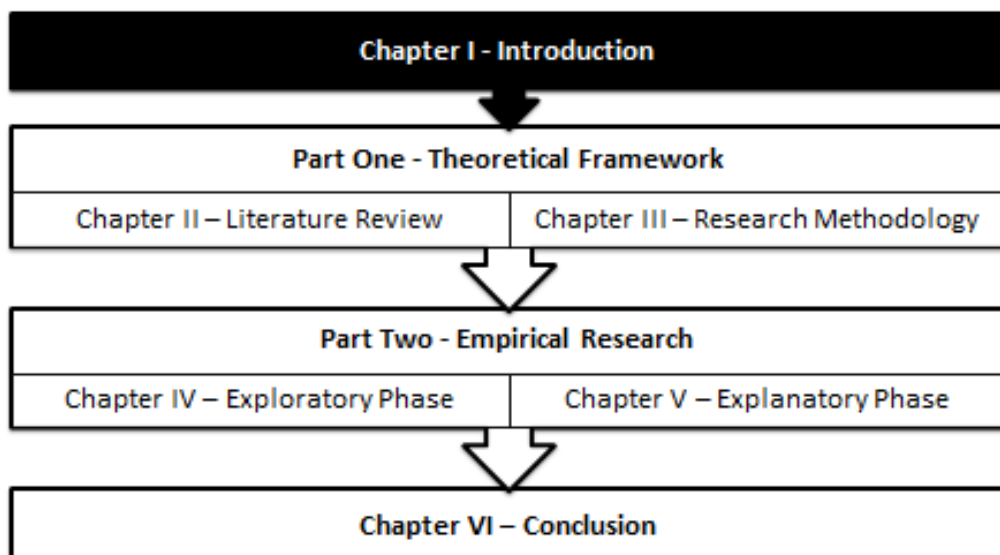
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Introduction

Dissertation Overview



I. Introduction

*“The real voyage of discovery consists not in seeking new landscapes
but in having new eyes.” – Marcel Proust*

A. Statement of Research Problem, Background, and Context

The changing global business landscape is demanding a rapid time to market with a customer-centric focus and continuous innovation on a global scale. According to the 2008 IBM Global CEO study, innovation and collaboration command top attention from CEOs. They are looking for new business designs that facilitate faster and more extensive collaboration on a worldwide scale. The evolving economy and marketplace demand an organization that can quickly innovate and adapt to global change. The benefit of an organization's global mindset derives from the ability to build cognitive bridges across local market needs and the company's own global experience and capabilities (Govindarajan and Gupta 2001). The crucial task for corporate management is thus to recognize the external technical embeddedness of subsidiaries and to coordinate the integration of diverse learning outcomes (Andersson 2003). Local learning networks are more likely to enable innovations while international intra-organizational learning networks show knowledge as an important resource by encouraging diffusion (Tregaskis 2003). There is a need to integrate global and local knowledge across the organization.

Although companies realize the need to create and share knowledge across cultures and functions, they have faced challenges in facilitating exchange between multicultural team members working at global headquarters and local subsidiaries. Knowledge transfer requires the development of strong and trustworthy relations, especially within organizational boundaries, including cognitive, structural, and relational capital (Wijk, Janesen, and Lyles 2008). The resource-based view of the firm is thus important due to the 'perceived value of knowledge' where the quality of the relationship between the recipient and the source are key in successful cross-border knowledge transfer (Perez-Nordtvedt, Kedia, Datta, and Rasheed 2008). Therefore, global mindset, relationship-building, and knowledge-sharing become critical factors for collaborating and innovating across functions and cultures.

The demand for global knowledge-sharing requires new approaches to managing cross-cultural team interaction. Geographically distributed teams need to seek cross-cultural knowledge in order to share, create, and implement innovative customer solutions that

respond to global and local market needs. This synergistic approach assumes cultural contingency – where the best way depends on the cultures of the people involved (Adler 1997). In pioneering the use of cultural dimensions, Hofstede (1997) succeeded in expanding awareness and understanding of cultural differences in country business values while Trompenaars (1997) showed the impact of cultural differences on doing business. However, these theories view national culture as difference rather than a resource. The management of cultural differences does not fully support the dynamic and changing needs of the MNC. Holden (2002) has argued that cross-cultural management can effectively serve as an organizational resource by facilitating interactive translation and knowledge-sharing through participative competence.

Organizations should therefore leverage cultural diversity rather than manage cultural differences. Denial of cultural diversity has been shown to have a negative effect on innovation performance and project performance (Bouncken, Ratzman, and Winkler 2008). However, the benefit of cultural diversity upon team efficiency has been widely debated where creativity could be compromised with conflict and lack of communication. Earley and Mosakowski (2000) have argued that hybrid or shared cultures can mediate such differences for improved team performance. Furthermore, Fink and Mayrhofer (2001) note that ‘organisational efforts to create customer value through the transformation of resources into customer benefits are embedded into the culture of the organisation’. Organizational culture is thus an influential factor in the ability of cross-cultural teams to optimize cultural knowledge in creating and implementing new product or service ideas.

Global products, new technologies, and distributed teams have created a network-centric innovation focus. Since the implementation of new product development (NPD) programs has experienced various levels of success, many studies have focused on identifying associated problems and efficiencies (Shepherd and Ahmed 2000). There seem to be disparities between the project management system and the need for a global and process-focused view. Wong (2002) highlights a research gap in emphasizing the need for research that extends and integrates extant knowledge and methodologies in new product development (NPD) and international marketing for advancing theory and practices within global new product management. Kleinschmidt, de Brentani and Salomo (2007) have evolved this research through a model of international NPD program performance that shows the need for a global innovation culture (risk taking and openness to global markets and customers) and global knowledge integration (capturing and integrating knowledge across borders).

Furthermore, social capital creation is important for building strong relationships among persons who have knowledge of the organization's dispersed activities related to global new product innovation (McDonough, Athanassiou, and Barczak 2006). Greater social interaction and network ties show higher creativity for NPD project teams (Chen, Chang, and Hung 2008). Networks and social capital play an important role in developing cross-cultural team collaboration through trust-building, team creativity, and knowledge-sharing during the global innovation process. Social networks, mobility, and shared experiences among people working in different regions overcome the tensions accompanying globalizing local knowledge (Ichijo 2006). Psychosocial factors such as trust, commitment, and communication play an important role in the functioning of virtual teams (Henttonen and Blomqvist 2005). Social capital and knowledge-sharing capabilities are thus emerging as potential considerations for developing and facilitating cross-cultural team collaboration and innovation within the MNC.

Research Problem

Organizations require cross-cultural team knowledge in order to facilitate the development and execution of innovative customer solutions for international markets. The inability of cross-cultural and geographically distributed teams to effectively collaborate and share relevant local market knowledge within the global MNC network can affect innovation management performance and international market results.

Purpose of the Study

The purpose of this qualitative research study is to investigate and demonstrate how multinational enterprises (MNCs) can facilitate the cross-cultural collaboration process in order to strengthen front-end innovation capabilities. The research will focus on organizational mechanisms that enhance cross-cultural team interaction processes with the objective of creating and sharing knowledge that contributes to successful product introductions worldwide. This responds to organizational needs for sharing local market knowledge amongst geographically distributed teams located within the global MNC network, HQ and international subsidiaries, in order to accelerate responsiveness to international market opportunities.

The unit of analysis is the global product launch project from concept to launch, in order to allow for examination of the planning and execution phases. The research views organizational culture as a common set of group norms and values established by the cross-

cultural team members, wherein national culture relates to the norms and values of individual team members involved on a global product introduction project. In reference to Holden's theory of cross-cultural management competencies (2002), cross-cultural knowledge will be viewed as a resource in the management of intra- and inter-organizational interactions. The dissertation paper will build upon exploratory and explanatory research and utilize a qualitative approach based upon field research with global and regional team leaders working for MNCs with headquarters in the US, Europe, and Asia. This research intends to advance understanding of organizational mechanisms that facilitate cross-cultural collaboration and the sharing of cross-cultural knowledge to strengthen product performance and international market results.

The first research phase involves an exploratory study comprised of a questionnaire and semi-structured interviews with 45 executives and senior managers responsible for cross-cultural teams and global product introductions in 35 MNCs based in Europe, Asia, and the US (please see Appendix A for a list of participants). The organizations were selected for their focus and leading role in innovation through mission statements, business objectives, brand recognition and industry rankings. The purpose of the pilot study is to refine the survey instrument while evaluating and identifying managerial and organizational practices and challenges in cross-cultural team collaboration. It is exploratory in nature and involves a questionnaire and semi-structured interviews conducted by one researcher.

The second research phase involves an explanatory study (please see Appendices B, C, and D for a list of participants) requiring a second round of interviews with senior managers responsible for the global product launch project and cross-cultural teams. In addition, there will be a third round of interviews with regional team managers responsible for local execution in the Asian region in order to fully examine and validate the research question from the perspectives of HQ and subsidiaries. In this way, I intend to identify organizational mechanisms that facilitate cross-cultural collaboration for global project leaders and geographically distributed teams that are responsible for introducing new products to international markets.

B. Significance of Study

The proposed research intends to develop a framework and model for understanding the organizational mechanisms that influence cross-cultural collaboration practices when bringing new products to international markets. With a lack of empirical research concerning cross-cultural collaboration practices during the front end innovation process, there is a

significant opportunity to address the role of collaboration in strengthening product innovation and market performance for MNCs. The study responds to current organizational challenges in facilitating global and local teamwork that enhances the creation and introduction of new products worldwide. While advancing research in an emerging field, the study intends to advance organizational understanding of cross-cultural collaboration practices that respond to the changing innovation needs of the global marketplace.

Literature has paid great attention to the conditions for teamwork and collaboration for research and new product development (NPD). However, there has been little attention to the role of collaboration and knowledge-sharing in conceptualizing and introducing new products to international markets. Kleinschmidt, de Brentani, and Salomo (2007) have advanced the field of innovation management by identifying key organizational resources for effective deployment of new product development (NPD) process capabilities. Although the authors emphasize the importance of global knowledge integration and launch preparation capabilities, they have not explored how this process is achieved in orchestrating firm resources to enhance the front end innovation process. I would like to contribute to theory by extending the resource and knowledge-based views through a new explanatory framework and conceptual model that demonstrate how organizational mechanisms influence knowledge-sharing and collaboration for senior managers leading global projects and cross-cultural teams. Foss et al. (2010) have identified the role of organizational mechanisms and micro-foundations (theorizing in terms of actions and interactions of individuals through explicit cognitive and behavioral assumptions) as two specific areas lacking in the knowledge sharing literature. This dissertation research intends to show how MNCs may orchestrate and configure cross-cultural team knowledge as a resource for conceiving and introducing new products and services.

On a methodological level, this dissertation aims to provide a qualitative study to address the gaps of previous quantitative and empirical studies. Previous studies with large samples or use of quantitative data have been limited to very few constructs and general observations (Foss et al. 2010, Kleinschmidt, de Brentani and Salomo 2007). These studies relied on questionnaires without the insights possible from detailed interviews concerning direct, clinical interactions of actors. At present, there has not been a clinical study in academic research that has examined the interactions between the global manager and cross-cultural teams responsible for the global product launch. Thus, I intend to use a qualitative methodology to fill this research gap in examining multiple constructs for a specific context –

the worldwide product introduction project. The research involves three phases addressing an exploratory stage and two explanatory stages in order to fully evaluate and validate the research question.

On an empirical level, the dissertation examines a topic that is receiving increased attention from MNCs due to the focus on global collaboration within innovation management. According to the EIU 2006 global CEO study, the top factors for increasing future growth rates (until 2020) are quality of management, new product development, and improved collaboration and communication inside and outside the organization. As demonstrated in the literature review and interviews with senior managers, organizations are still seeking solutions for accelerating product innovation through cross-cultural collaboration. The ability of global and local project teams to effectively share and communicate ideas and solutions may influence project performance linked to product innovation, timely product introductions, and international sales and market opportunities. Since there is a lack of empirical research conducted with organizations on cross-cultural collaboration for the front end of innovation, there is a significant opportunity to advance research within innovation management while assisting organizations in the development of cross-cultural collaboration capabilities that strengthen innovation performance and international market results.

C. Research Question

The research intends to develop a framework and model for cross-cultural team collaboration by evaluating the organizational mechanisms that facilitate interactions between the global project leader and the team. In addressing this purpose, the following research question is applied:

1. How can MNCs optimize cross-cultural team collaboration in order to strengthen innovation management capabilities?

D. Assumptions

This study will primarily rely upon field research with participating experts and practitioners who are actively engaged in the disciplines of global product management, marketing, and innovation. The researcher primarily sought participants who were engaged in managing global product introductions and cross-cultural teams in order to receive current and relevant feedback to this study. This researcher assumes that developing cross-cultural collaboration competencies for facilitating front end innovation practices will remain an integral objective in achieving international business success. Finally, this researcher assumes

the interviews and questionnaires will accurately present and interpret the research questions and subsequent findings.

E. Limitations

The context of the study is applied to MNCs that are focused on global innovation through the introduction of new products and services. The first phase is an investigative process, wherein the researcher is primarily concerned with identifying organizational factors that influence cross-cultural collaboration during the global launch project, from concept to market. The second phase is an explanatory approach in order to test hypotheses developed from the first research phase. The communication framework, process, and tools will be determined by selected managers and executives responsible for leading global product launch and innovation initiatives in their organizations. This study remains limited to determining the organizational mechanisms for facilitating cross-cultural collaboration and innovation within the organization. The study also remains limited to the real-time interviews and survey data gathered from participating senior managers and leaders from MNCs in selected industries.

F. Definitions

Advanced Economies – also known as Mature Markets – post-industrial countries characterized by high per-capita income, highly competitive industries, and well-developed infrastructure (Cavusgil et al. 2008).

Bounded Rationality – Managers ‘scarcity of mind’ when responsible for making decisions and engaging in purposive action in the firm always face information problems (Verbeke 2009, Verbeke and Yuan 2005).

Bounded Reliability – The ‘scarcity of effort to make good on open-ended promises’ where agents do not always carry through on expressed intentions to try to achieve a particular outcome or performance level (Verbeke 2009).

Communities of Practice – Communities of practice are formed by people who engage in a process of collective learning in a shared domain of human endeavor (Wenger 2004).

Cross-cultural - The terms *cross-cultural*, *global*, *intercultural*, and *international* will appear interchangeably to describe variables relevant to many cultures around the world.

Cross-cultural management - The behavior of people in organizations around the world and shows people how to work with clients and employees from various cultures (Adler 1997).

Cross-cultural management competency – Serves as an organizational resource by facilitating interactive translation and knowledge-sharing through participative competence.

Cross-cultural management is thus conceived in terms of collaborative learning, the transfer and sharing of knowledge and experience (Holden 2002).

Cultural Synergy – Adler (1997) describes cultural synergy as a process in which managers shape organizational strategies, policies, structures, and practices based upon the cultural patterns of individual organization members and clients.

Culture - Reflects the learned and shared knowledge, beliefs, and rules of social groups that influence behavior (Hofstede & Hofstede, 2004).

Emerging Markets – subset of former developing economies that have achieved substantial industrialization, and rapid economic growth while differentiated by a degree of economic development and per capita income (Cavusgil et al. 2008).

Front-end Innovation – the period when an opportunity is first considered to the time that an idea is considered ready for development (Kim and Wilemon, 2002). The Fuzzy Front End (FFE) ends when an organization approves and begins formal development of the concept.

Front-end Innovation Process – the key elements of product strategy formulation and communication, opportunity identification and assessment, idea generation, product definition, project planning, and executive reviews (Kurana and Rosenthal 1998).

Global Ecosystem – A global ecosystem demands unique personalized experiences and worldwide access to resources in order to sustain the value chain (Prahalad & Krishnan 2008).

Globalization – A growing economic interdependence among countries as reflected in increasing cross-border flows of three types of entities: goods and services, capital, and know-how (Govindarajan & Gupta 2001).

Global Integration – the coordination of the firm's value chain activities across countries to achieve worldwide efficiency, synergy, and cross-fertilization in taking maximum advantage of similarities between countries (Cavusgil et al. 2008).

Global Product Launch – the new product introduction process that involves product conception, product development, launch execution and finally market introduction.

Incremental Innovation - upgrades or improvements to existing products, additions to existing platforms, and repositioning of existing products introduced in markets.

Innovation – the embodiment, combination, or synthesis of knowledge in original, relevant, valued new products, processes, or services (Luecke and Katz 2003).

Knowledge Creation – The conversion of tacit knowledge into explicit knowledge through an ongoing social process of validating truth (Nonaka 1994).

Knowledge flow management – The environment, people, tools, and technology that enable knowledge flow where an organization can manage knowledge through an environment with tools and technology that people find safe, efficient, and that motivates them to share their knowledge (Leistner 2010).

Knowledge-sharing – The provision or receipt of task information, know-how, and feedback on a product or procedure (Hansen 1999, Foss et al. 2010) and a crucial antecedent to knowledge creation (Cohen and Levinthal 1990, Tsai 2001).

Knowledge transfer – The extent to which an MNC's headquarters and its subsidiaries transmit knowledge to each other (Lee et al. 2008).

Local Responsiveness - meeting the specific needs of buyers in individual countries (Cavusgil et al. 2008).

Network Communities - form of technology- mediated environment that foster a sense of community among users (Mynatt, Adler, Ito, O'Day 1997).

Network-centric Innovation – Externally focused approach to innovation that relies on harnessing the resources and capabilities of external networks and communities to amplify or enhance innovation reach, innovation speed, and quality of innovation outcomes (Nambisan & Sawhney 2008).

Organizational Culture – common set of group norms and values established by the MNC.

Radical Innovation - breakthrough products that are new to the company and/or new to markets and customers.

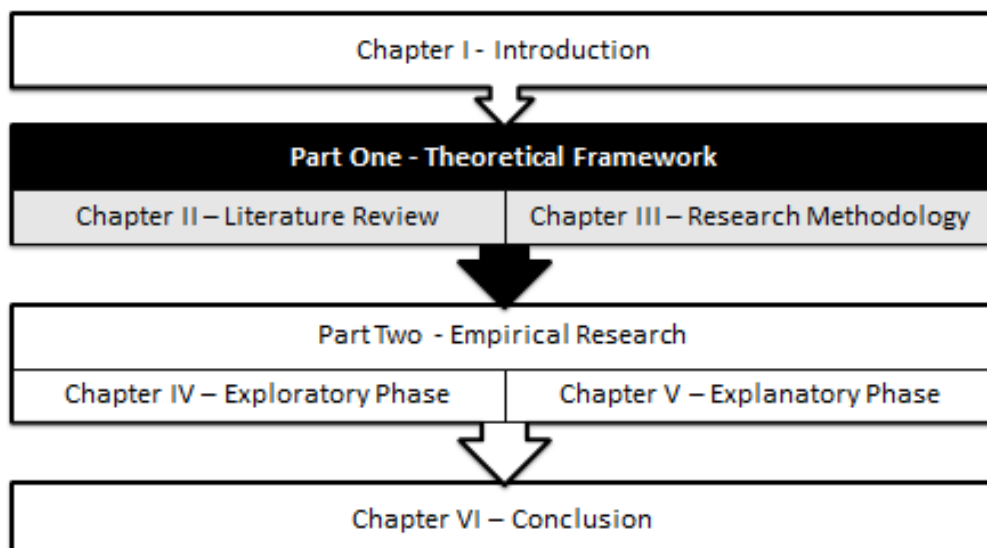
Recombination Capability – capability to recombine firm knowledge with newly accessed resources to produce goods and services that meets stakeholder needs internationally (Verbeke 2009).

Routines – distinct ability of firm to further combine organizational resources in unique ways valued by firm's stakeholders as exemplified by stable patterns of decisions and actions that coordinate productive use of resources and generate value internationally (Verbeke 2009).

Part One

Theoretical Framework

Dissertation Overview



II. Literature Review of the Management of Global Innovation, Knowledge, and Culture within the MNC

A. Conceiving and Executing International Innovation Strategies

1. A dynamic and changing global marketplace

The evolving economy and marketplace demand an organization that can quickly innovate and adapt to global change. In order to respond and adapt to this dynamic environment, the multinational corporation (MNC) needs to consider three interdependent elements in managing rents, evaluating an effective structure, and the necessity to continuously innovate (Lemaire 1992, 2003). In order to achieve global integration and optimization, the 2008 IBM study of 1130 senior leaders in 40 countries showed that a majority of CEOs plan to change the organization's capabilities, knowledge, and assets. The focus of management attention will be on the areas of business where personal chemistry or creative insight matter more than rules and processes, making the productivity of knowledge workers the major challenge of the next 15 years (EIU 2006). The worldwide movement of customization, innovation, and competitiveness is driving the focus on knowledge and relationships. A firm's competitiveness is dependent upon its ability to develop a dynamic capability or difficult to imitate combination of resources which includes coordination of inter-organizational relationships (Teece, Pisano, and Shuen 1997, Eisenhardt and Martin 2000). As international markets demand the design and delivery of localized products and services, MNCs are facing increased pressure to optimize knowledge and innovate across the organization.

It is thus important to understand the very essence of innovation and the central focus of this dissertation through the following definition: *'Innovation is the embodiment, combination, or synthesis of knowledge in original, relevant, valued new products, processes, or services'* (Luecke and Katz 2003). Since creativity is often mentioned interchangeably with innovation, it is necessary to clarify the differences between these two concepts for the purpose of this dissertation. Amabile et al. (1996) define innovation as *'the successful implementation of creative ideas within an organization where creativity and teams is a starting point for innovation; the first is necessary but not a sufficient condition for the second'*. Thus, creativity leads to innovation which in turn results in new products, processes, or services.

The opportunity to access and share knowledge within the firm relies upon the internal and external environments. The benefit of an organization’s global mindset derives from the ability to build cognitive bridges across local market needs and the company’s own global experience and capabilities (Govindarajan and Gupta 2001). A cross-cultural and networked business environment has created a growing need for knowledge-sharing between headquarters and subsidiaries. The crucial task for corporate management is thus to recognize the external technical embeddedness of subsidiaries and to coordinate the integration of diverse learning outcomes (Andersson 2003). Local learning networks are more likely to enable innovations while international intra-organizational learning networks show knowledge as an important resource by encouraging diffusion (Tregaskis 2003). The ability to respond to local market opportunities and to adapt products and services to local market needs requires an effective knowledge-sharing process for cross-cultural and geographically distributed teams.

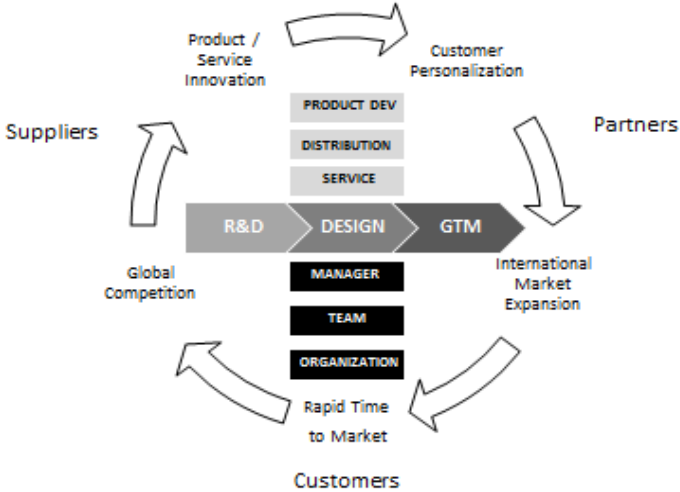


Figure 1. Challenges in conceiving and bringing new products to market.

The rapid commercialization of products and the impact of global competition have created difficulty in sustaining product innovation. The capacity to act on consumer insights and reconfigure resources dynamically requires a flexible and responsive network. There is pressure on the MNC to rapidly respond to new market opportunities through the conception and execution of innovative product and service solutions while collaborating with customers, partners, and suppliers (see Figure 1). This demands a transformation process with

transparent, flexible, and consistent systems to support change and innovation while maintaining cost competitiveness (Prahalad & Krishnan 2008). It requires organizations to leverage global and local team knowledge in order to improve the development and execution of new products worldwide. Companies need to invest in relationship management capabilities in order to avoid cross-cultural challenges and issues that will block global network-centric innovation (Nambisan & Sawhney 2008). In order to foster innovation from invention to product development to commercialization, organizations need to consider cross-cultural needs for improving communication and personal networks, building a shared culture of innovation, and targeting subsidiary activities (Gundling 2003). It is thus important to consider the reconfiguration and orchestration of organizational resources that strengthen collaboration and innovation management capabilities for conceiving and introducing new products.

a. Global and Local Market Strategies

The development and execution of global strategies is often complex and demanding for the multinational corporation. In order to effectively understand the key dimensions of international strategic management, it is important to evaluate the different demands of global and local business objectives. Levitt (1983) advocated that all organizations should focus on a global strategy in order to gain competitive advantage. In order to gain a comprehensive view, Ghoshal's (1989) organizing framework integrates several management theories in terms of sources of evaluating strategic objectives with sources of competitive advantage. Thus, the strategic task of managing globally is to use all three sources of competitive advantage to optimize efficiency, risk and learning while also managing the interactions between different goals and means worldwide (Ibid). This framework incorporates several key notions in management by addressing the strategic objectives of achieving efficiency in current operations, managing risk, and innovation, learning and adaptation. In addition, the sources of competitive advantage explore national differences, scale economies, and scope economies that could serve as advantages for the MNC. The strategic objective of innovation, learning, and adaptation explores the advantage of learning from national diversity in organizational and managerial processes while capturing scale economies through cost reduction and innovation which leads to scope economies of shared learning across the organization. This framework serves as a basic foundation for past and present models and theories concerning global strategies.

In referencing Ghoshal's (1989) organizing framework, there are several basic frameworks that should be noted in shaping current innovation strategies in international management. With a focus on the efficiency perspective, the Integration-Responsiveness framework (figure 2) proposed by Prahalad (1975) and developed and applied by Doz, Bartlett and Prahalad (1981), is based upon the need for global integration of firm resources and the need for local responsiveness to markets around the world. Global integration is thus defined as the coordination of the firm's value chain activities across countries to achieve worldwide efficiency, synergy, and cross-fertilization in taking maximum advantage of similarities between countries (Cavusgil et al. 2008). In referring to innovation strategies, global integration also represents new business designs that facilitate faster and more extensive collaboration on a worldwide scale and rapid reconfiguration for new opportunities (IBM CEO Study 2008). Local responsiveness, on the other hand, is defined as meeting the specific needs of buyers in individual countries (Cavusgil et al. 2008). In understanding the underlying pressures that drive global integration and local responsiveness, managers can better understand the advantages and disadvantages of strategic decisions.

The Integration Responsiveness framework has been instrumental in defining four distinct strategies for internationalization that impact new product introductions. In responding to pressures for local responsiveness, there are two specific strategies: the home replication strategy and the multidomestic strategy. The home replication strategy or international strategy is where the firm views international business as separate from the domestic business where products are designed with domestic customers in mind and international business is viewed as an extension of the product life cycle. The multidomestic or multilocal strategy delegates more autonomy to the country manager where differences between national markets are recognized in allowing variance between product and management practices by country (Bartlett and Ghoshal 2000, Cavusgil et al. 2008). Responding to pressures for more global integration, there is the global strategy approach where headquarters seeks substantial control over its country operations in order to achieve maximum efficiency, learning, and integration worldwide (Ibid). While increasing opportunities for cross-regional learning and higher quality products, the global strategy benefits from converging needs of customers and a global marketplace. On the other hand, it is also more challenging to coordinate activities and maintain consistent communication between headquarters and subsidiaries. Another approach for balancing global and local needs is the transnational strategy where the firm strives to be more responsive to local needs while

retaining central control of operations to ensure efficiency and learning (Cavusgil et al. 2008). Thus, managers can focus on balancing global and local needs by optimizing local responsiveness and flexibility while facilitating global learning and knowledge transfer.

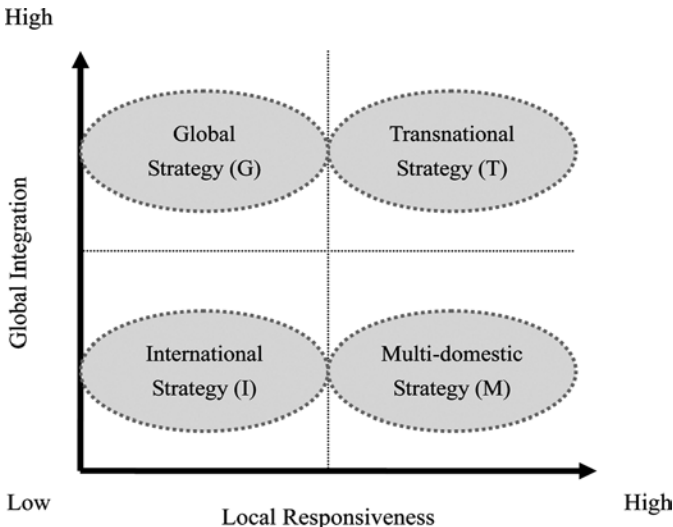


Figure 2. Integration Responsiveness Framework, Source: Fan, Nyland, Zhu, (2008)

The identification of global and local interests helps define the internationalization of MNC activities. Lemaire (2003) highlights the distinctions between the forces of globalization and local adaptation through the elements of competition where globalization is driven by worldwide competition with other multinational actors that are driven by cost efficiency and market reach. On the other hand, local market competition and customer needs will drive local adaptation (Lemaire 2003). However, there is also a mix of activities that respond to both global and local needs when moving between multi-domestic and multi-local to transnational activities. Thus, there is the global focus and multinational structure responding to globalization pressures, followed by a mix of transnational activities and then the domestic structure which responds to local adaptation. The advantages of a global focus versus a local focus have been noted in the literature in terms of the design and production of products for global and local customers. A global focus allows economies of scale and scope with cost efficiencies for more universal products that are produced and sold to a more homogenous market where customers have similar preferences. On the other hand, a local focus allows adaptation due to differences in preferences, tastes, technology use, and purchasing power which may unlock opportunities that cannot be tapped with global or standard products.

Rather than focus entirely on a global or local strategy, organizations can achieve integration and responsiveness through a transnational approach. This brings more attention to the contingency view of globalization where global strategy, organization, and management bring important linkages to globalization drivers (Yip 1994). In understanding organizational and managerial barriers to global strategy, Yip (1994) has argued for more research methodologies that can capture the details of implementation. There appears to be a greater need for theoretical and empirical research concerning the relationship between organization, strategy, and management. Milliot (2005) has noted the necessity of interactive alignment of internationalization strategies and organizational profiles. Inspired by the works of Porter and Perlmutter, Milliot developed a model that emphasizes the impact of external environment on strategic and organizational choices made by managers where alignment needs to occur between the internationalization strategies (international, multinational, transnational, and global) and the organizational profiles in focusing on ethnocentric, polycentric, geocentric, or holicentric approaches in view of strategic intention or appropriation. The manager's role and influence in developing and implementing strategy is therefore an essential element in understanding organizational challenges in integrating and responding to international market demands.

Further advances have been made to strategies for globalization in a changing economy. Ghemawat (2007) proposed the three main strategies of adaptation, aggregation, and arbitrage which are selected according to the company's worldwide operations. An adaptation strategy seeks to increase revenue and market share through local market relevance; whereas an aggregation strategy is more focused on standardization and integration across borders, and the arbitrage strategy is primarily used for functional organizations in exploiting differences between national or regional markets. Ghemawat (2007) has named this model the AAA triangle (see figure 3) and emphasizes the adaptability of the model according to strategy and organizational type where adaptation is mostly linked to a country-centered organization; aggregation is linked to cross-border groupings such as business units or product divisions; and arbitrage is mostly adapted by vertical or functional organizations that need to balance supply and demand within and across organizational boundaries.



Figure 3. The AAA Triangle Model. Source: Ghemawat 2008

There are models that explore the manager's influence upon the strategic decision process for internationalization activities. The Uppsala model builds upon assumptions that managers display bounded rationality and avoid uncertainty or risk (Johanson & Vahlne 1977). Internationalization is thus perceived as an incremental process, starting with markets that are closest geographically and culturally and gradually extending away from the firm's country of origin (Holm et al. 2009). Due to the reliance on traditional models such as Uppsala, there are a number of gaps in the knowledge about internationalization, especially in the areas of the opportunity-seeking process with local markets and the internationalization of multiple products within the confines of the growing MNC which requires a new agenda for internationalization process research (Holm et al. 2009). Since the Uppsala model and current literature do not address the challenges faced in today's dynamic global marketplace, it is important to consider the role of MNCs as multi-product, multi-business, and multi-experience organizations that add more layers of complexity to internationalization. Where the Uppsala model views the firm as a reactive actor, Holm et al. (2009) argue for the view of the MNC as an opportunity-seeking actor that not only reacts, but also deliberately and non-deliberately acts upon and creates business opportunities. Thus, one needs to consider how the firm's strategy and performed activities influence the type of opportunities found and exploited and how the firm's context and organizational structure may have an impact on what type of market opportunities are available to the firm.

It is important to consider how firms exploit and explore market opportunities when developing strategies during international expansion. Market discovery is the result of both exploration and exploitation activities, however in order to exploit market discovery firms must learn the process of navigating and managing daily activities in connection with search,

planning, routine, and improvisation where effective learning leads to changes in pace, orientation, and extension in the international expansion of the firm (Johanson et al. 2003). The firm has the opportunity to learn through interaction and communication with internal and external groups. When measuring the impact of speed-to-market and market performance, exploitation increases product objective quality and exploration enhances product innovativeness to the firm (Molina-Castillo et al. 2011). Moreover, both exploitation and exploration can serve as important success factors when launching new products (Ibid). When pursuing *exploitation*, the focus is often on incremental innovation by exploiting core competencies, defending existing market positions, and maintaining current processes while *exploration* places emphasis on radical innovation by developing new knowledge, entering new markets, and finding new approaches. Levinthal and March (1993) define exploration as “the pursuit of knowledge, of things that might come to be known” and exploitation as “the use and development of things already known”. The introduction of new products includes established products that offer improved or new features as well as completely new product concepts to the firm’s customers and markets.

b. New Strategies for Driving Innovation

The evolving dynamic marketplace that drives innovation today is experiencing major shifts through the strategic dimensions of context, content, and process. The context for strategy-making is heavily influenced by globalization where knowledge and innovation move easily and quickly across borders, the emergence of multiple business models, customization of solutions with value co-creation, and collaboration among internal and external stakeholders (Davenport et al. 2006). Then there is content or the product of strategy process with consideration of functional, business, corporate, and network levels (Ibid). Finally strategy process is being challenged due to the forces of the innovation economy where deficiencies have been found on the traditional approaches of rationality and analysis, process linearity, comprehensive or universal strategy process, and homogenization of organizational culture (Ibid). An increased focus is being placed on knowledge-sharing and learning in order to succeed in international markets. The New Economy is based upon communication with emphasis on value-added products and services, co-creation of value with employees and customers, and transparency inside and outside the organization (Senge and Carstedt 2001). Strategic context, content, and process are being re-defined for enhancing communication and collaboration within the innovation economy worldwide.

Traditional strategic management models are being challenged in areas concerning customers, organizational relationships, competition, and managerial mindsets. Davenport et al. (2006) note four specific challenges: 1) The shift from visible assets and invisible customers to invisible assets and visible customers that bring closer interactions between organizations and customers; 2) The transition from vertical and horizontal organizations to networks of intrafirm, extrafirm, and interfirm relationships; 3) The decreasing focus on competition through analytical deconstruction and the increasing focus on holistic value construction through collaboration with customers, partners, and suppliers; 4) the shift from a descriptive and reactive mindset to an innovative, proactive managerial mindset. The rapid and evolving marketplace is driven by multiple markets and customers that demand personalized product and service solutions. In examining innovation, this dissertation mostly addresses product innovation (improvement of established offers) and disruptive innovation (radical or new innovation) or a combination.

c. Mature and Emerging Markets in the Innovation Economy

As innovation is becoming the driving force in the global economy, the different dynamics between mature and emerging markets need to be considered when introducing new products. Advanced economies, post-industrial countries, held leading positions during the globalization movement in achieving high income levels, developing competitive industries, and well-developed commercial infrastructures which placed them among the wealthiest nations in the world including most of the countries in the European Union, Australia, Canada, Japan, and the United States (Cavusgil et al. 2008). While developing economies have been less fortunate with limited industrialization and stagnant economies, the emerging markets are achieving substantial industrialization, modernization, and rapid economic growth including countries in the regions of Asia, Latin America, and Eastern Europe (Ibid). Most notably, the BRICS countries (Brazil, Russia, India, China, and South Africa) have gained leading positions in the world economy which is creating a dramatic shift and power structure between the mature and emerging markets.

In using world real GDP as an indicator, real GDP in advanced economies is expected to expand 2.5% while GDP in emerging and developing economies is expected to expand by 6.5% according to the IMF 2011 report. Per Figure 4, future forecasted world GDP in 2020 show China with the largest percentage of GDP while China and India would account for a quarter of world GDP, overtaking both the US and EU while mature markets vary in growth rates and other emerging markets grow at a steady pace. Foreign direct investment (FDI) is

another key factor since MNCs largely mediate trade and investment flows and FDI patterns provide another indicator of economic wealth and opportunity. The OECD 2012 report shows that OECD country FDI outflows have declined by 6% while FDI inflows have increased by 26% largely due to higher investments in Germany, Switzerland, the UK, and the US as well as the BRIC countries. It is thus important to understand the distinctions between the mature and emerging markets and the impact upon innovation strategies for MNCs.

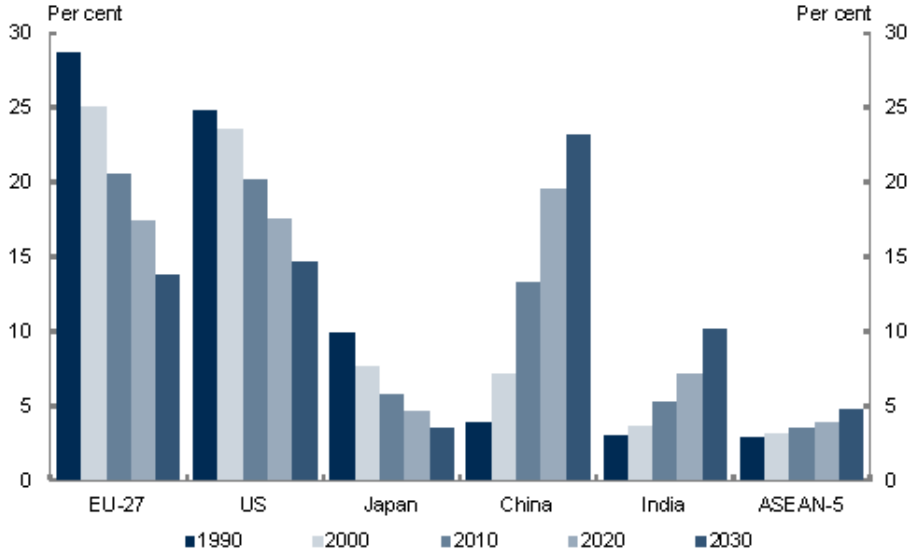


Figure 4. Current and future regional GDP growth forecasts.

Sources: Australian Government Report (2010), World Bank, IMF World Economic Outlook, OECD, UN Population Database and Treasure, The Conference Board Total Economy Database (2007).

Advanced economies have reached a mature state of development where they have evolved from manufacturing to service-based economies. They have dominated international business with half of world GDP, world trade in products, and 75% of world trade in services (Cavusgil et al. 2008). Based mostly in North America, Europe, and Japan, the advanced economies host the world’s largest MNCs and are characterized by high purchasing power with low trade restrictions and a sophisticated infrastructure. However, the downturn in the economy from 2008-2011 brought attention to greater debt levels, high unemployment and declining GDP growth rates. On the other hand, international growth is still promising due to strong corporate balance sheets for MNCs in advanced economies and strong market demand in emerging and developing economies (IMF 2011). In consideration of new product introductions, advanced economies provide a sophisticated infrastructure, high purchasing power and more homogenous markets due to a long history of globalization, especially in

North America and Europe. On the other hand, new product introductions face much higher competition due to well-developed industries and multiple competitors, as well as higher operational costs. The development and commercialization of new products benefit from research, design, and market opportunities while challenged by increased competition and customer demands in meeting cost, quality, and design preferences.

Emerging markets are experiencing steady and increased growth in regions such as Asia, Eastern Europe, the Middle East, Africa, and Latin America. They are becoming attractive investment opportunities for MNCs due to a growing middle class with rapidly improving living standards, high economic aspirations, increasing purchasing power, and improving infrastructure (Cavusgil et al. 2008). Due to privatization and the promotion of new start-ups and privately-owned businesses, both SMEs and MNEs are expanding into domestic and international markets.

While the majority of FDI inflows were in North America in 2011, the other significant FDI destinations were the BRIC countries China, Brazil, Russia, and India (OECD Report 2012). Though these markets were often viewed as production sites due to low cost labor, they are increasingly offering opportunities in research and development as well as marketing and sales of new products. While mature markets were often the top tier destinations for international product introductions, emerging markets are receiving increased attention and importance due to their rapid growth. Emerging markets offer market opportunities and a growing purchasing power with customers open to new concepts. On the other hand, there are market challenges due to greater heterogeneity and cultural differences that require more focus on building strong relationships. New product introductions require more understanding and attention to the particular needs of local markets and customers.

d. The Growing Role of Innovation in China

China's role in the global value chain is evolving as it moves from a focus on production to product innovation. While China offers foreign MNCs potential production, marketing and sales opportunities, it is also developing its own talent pool of high potential companies and managers for domestic and international markets). China has benefited from foreign direct investment, joint-ventures, government support, a large domestic market, and a broad talent pool. There is a strong focus on innovation due to the government's emphasis on indigenous innovation outlined in its five year plan, strengths in commercializing innovation, and the creation of innovation hubs throughout the country (Orr and Roth 2012). On the other hand, there are weaknesses in having specific knowledge and skills for the practice of

innovation such as a lack of advanced techniques for understanding customer needs, risk-taking, and internal collaboration required for developing new ideas.

Organizations that are introducing new products and services to China and other emerging markets are experiencing several challenges. Although foreign MNCs bring the necessary knowledge and practices, there are the issues of high turnover of Chinese employees and intellectual property protection (Orr and Roth 2012). Firms may have benefited from low cost labor and sales, yet there are the challenges of inadequate infrastructure, regional language differences, autonomous local governments and disparate income levels between urban and rural areas (Cavusgil et al. 2008). MNCs that are targeting the Chinese market need to consider cultural, economic, political and social differences. Another challenge to the global marketplace is China's quest for high-tech dominance. In order to reach this objective, the Chinese government is acting as both buyer and seller in certain key industries by retaining ownership of customers and suppliers (Hout and Ghemawat 2010). The challenge for MNCs is the choice of parting with their latest technologies and comply with strict regulations or refuse and miss out on the world's fastest growing market. Thus, MNCs are now forced to consider how they can minimize competitive and security risks to their technologies and which innovations the MNC must develop in China to gain advantage in the global market. (Hout and Ghemawat 2010). In making an investment decision in the Chinese market, there are implications to both local and global market strategies.

In order for MNCs to succeed in the Chinese market, they need to consider how to create a culture of risk-taking and learning, retain local talent, gain a deeper understanding of Chinese customers, and create ways to promote collaboration for innovation (Orr and Roth 2012). Investment in collaboration and local teams can promote innovation beyond global HQ and promote improved understanding of the local market. In referring to the example of Apple's introduction of the iPhone 3G in 2009, the US home market and then the European market were the first to receive these new products while Asia and emerging markets did not receive the product until 6 months to one year later, offering a standard solution without localized applications or services (Rein 2009). In addition, Apple did not consider local needs for applications, subscription models, and service providers (Ibid). For the following launch of the next generation iPhone in 2010, with the growing market demand in China, Apple ensured a simultaneous worldwide product launch as well as some service modifications in order to ensure delivery of local iPhones within a similar time-frame for China as well as their

leading emerging markets. In order to succeed in international markets, MNCs need to consider improved understanding of customers and local market needs for key emerging markets such as China.

2. Achieving competitive advantage in international markets

The ability of the firm to identify, capture, and manage market opportunities relies upon effective coordination of resources worldwide. According to the EIU 2006 CEO study, the top future sources of competitive advantage will rely upon responsiveness to changes in the marketplace, a clear strategy, quality of management, and quality of relationships with customers, suppliers, and outside parties. In order to satisfy the customer experience, Prahalad and Krishnan (2008) contend that a global ecosystem needs to be built on two pillars for sustaining value creation: unique, personalized customer experiences and worldwide access to resources. MNCs need to coordinate resources across developed and emerging markets in order to optimize design, production, and service elements of the global value chain. In order to sustain innovation, Nambisan and Sawhney (2008) argue for the need for companies to shift from firm-centric innovation to network-centric innovation. The achievement of network-centric innovation requires shared goals and objectives, a shared world view, social knowledge creation, and an architecture of participation (Ibid). This demands a focus on innovation and value creation through collaboration and process transformation.

The reconfiguration and recombination of knowledge resources are serving an increasingly important role in the MNCs ability to achieve competitive advantage in international markets. Recent research has shown that understanding how HQ and overseas subsidiaries co-create knowledge is a critical issue (Cui, Griffith, and Cavusgil 2005, Regner and Zander 2011). As markets become more dynamic, there is the need to quickly identify and respond to particular needs or demands. Resource and knowledge combination are critical to creating value and responding to customer demand while achieving a competitive advantage through continuous innovation as well as effective exploitation of innovation (Verbeke 2009). Since the MNC's key strengths consist in knowledge routines and recombination capabilities, it is important to consider the firm's location-bound and non-location bound firm-specific advantages (FSAs) (Ibid). There needs to be a balance of exploration and exploitation activities with insights to particular knowledge routines and recombination capabilities. Regner and Zander (2011) argue that we still do not have a complete picture of micro-level mechanisms of knowledge and strategy creation or the interactions and synergies between MNC sub-units and subgroups. Research on dynamic

capabilities has mostly focused on the nature of capabilities at the firm level instead of the process (Eisenhardt and Martin 2000; Helfat et al. 2007; Teece et al. 2007; Winter 2003). This calls attention to the need for more empirical research concerning the actual process of how organizations achieve and optimize knowledge-sharing and collaboration within the MNC network.

More specifically, for this dissertation paper the focus will be on the MNC's routines and recombination capabilities leading to processes and products that integrate existing knowledge from HQ and newly accessed knowledge from subsidiaries in local markets. In developing FSAs, tacit knowledge is a key source of competitive advantage since it is difficult to imitate (Kogut and Zander 1992, Teece 1998). New ways of collaborating build on social relationships within firms where cumulative knowledge cannot be easily acquired (Kogut and Zander 1992). Thus, how competences and knowledge assets are configured and deployed can impact competitive outcomes and market success (Teece 1998). It is therefore critical to examine how MNCs are optimizing access to and reconfiguration of collective knowledge held within the team.

The Need for Local Market Responsiveness

In accessing local market information for conceiving and introducing new products internationally, it is necessary to consider how organizational routines assist or hinder knowledge recombination capabilities. The FSA transfer of knowledge can be affected by the administrative structure of the MNC as demonstrated by the archetypes centralized exporter (standardized products manufactured at home), the international projector (knowledge-based FSAs developed in home country transferred to local subsidiaries, international coordinator (MNCs FSAs linked through global operations and logistics), multcentred MNC (entrepreneurial subsidiaries that are key to knowledge-based FSA development) (Verbeke 2009). The international transferability of an FSA depends upon the extent of its development activities in the home market as well as the necessity for location-bound knowledge in order to adapt to host countries, including the specific roles of HQ and subsidiaries (Rugman and Verbeke 2001). Integration of resources and national responsiveness drive the particular manner in which reconfiguration of resources takes place. Since administrative architectures have evolved with the dynamic changes in the global marketplace, it is necessary to further evaluate the roles of HQ in the home market and subsidiaries in local markets.

3. The interdependence of headquarters and subsidiaries

The views and roles of headquarters and subsidiaries can influence the development and execution of the global product launch. The simplifying strategies of homogenization (similar treatment) and centralization (one dominant and one subordinate) often cause tensions between headquarters and subsidiaries due to issues of bounded rationality and bounded reliability (Bartlett and Ghoshal 1986). Bounded rationality may be linked to the access and availability of required local market information for making new product planning decisions whereas bounded reliability refers to the subsidiary manager's alignment of self-interest and initiative in sharing and contributing knowledge linked to local product marketing and sales opportunities as influenced by centralized or decentralized decision-making. In addition to cultural distance, bounded rationality could be further complicated by the different views of managers in HQ and subsidiaries concerning opportunities for value creation where home country managers tend to focus on critical market analysis and subsidiary managers tend to have a more positive view on the potential of the local market and subsidiary ability (Verbeke 2009). Thus, the view and understanding of the roles held by HQ and subsidiaries becomes integral to collaboration within the global team.

When exploring the particular roles of HQ and subsidiaries, it is necessary to understand the factors that influence their interactions. In considering the strategic importance of the local market with the resource base of the subsidiary, Bartlett and Ghoshal (1986) proposed a model to differentiate subsidiary roles in using the Black Hole (weak resource unit, strategically important market), the Implementer (weaker specialized resources, less strategic market), the Strategic Leader (competent local subsidiary, strategically important market), and the Contributor (competent local subsidiary, less strategic market). The model refers to the importance of strategic direction from HQ while allocating roles and responsibilities to subsidiaries in the MNC network, influencing entrepreneurial and innovation potential through more autonomy to strategic leader subsidiaries.

The relationship between HQ and subsidiaries plays an instrumental role in the success of new product innovation opportunities. MNCs face increasing challenges in managing the complexity of interactions between HQ and subsidiaries due to multiple embeddedness across heterogeneous contexts at two levels: At the MNC level, networks must be organized to effectively exploit differences and similarities of multiple host locations whereas at the subsidiary level, they must balance embeddedness within internal and external environments (Meyer et al. 2011). Organizational systems and processes are needed to

facilitate interaction for teams that are working in multiple locations. Research has shown the importance of decentralization, subsidiary management credibility, communication, and a global perspective in determining entrepreneurial initiatives at the subsidiary level (Birkinshaw 1997, 1998), (Verbeke et al. 2007). There is the interdependent role of team members based in HQ and subsidiaries

There is also the consideration of how interactions can influence the relationship between HQ and subsidiaries. The participative role of subsidiaries has been further explored by Kim and Mauborgne (1993, 1998) through due process and decision-making in MNCs. The centralized decision-making process by managers in HQ tends to de-motivate managers in subsidiaries thus contributing to bounded reliability problems. Kim and Mauborgne proposed a procedural justice model where decision-making respects certain communication principles. Although this model applies a process focus with consideration of subsidiary participation, it only addresses the process of the subsidiary response to top-down decision-making directives from HQ to subsidiaries rather than examining the bottom-up perspective from subsidiaries and the exchange required with HQ.

There has been increased focus in the literature regarding the role of subsidiary initiatives in the global MNC network. This brings attention to the optimization of internal subsidiary initiative (selected location for strategic initiative) and external subsidiary initiative (identifying opportunities in local business environment) (Verbeke 2009). For the purpose of this dissertation paper, internal subsidiary initiatives apply to the selected target markets for the global product launch while external subsidiary initiatives apply to the proposal for new or enhanced products for future product introductions locally and internationally. Since a lack of understanding can arise between HQ and subsidiaries in positioning their interests, the challenge for MNCs is to create an environment empowering subsidiaries to pursue innovation initiatives while maintaining an appropriate level of initiative review for managing bounded reliability (Verbeke 2009, Rugman and Verbeke 2003). This also impacts HQ management ability to manage bounded rationality where corporate resources and funding are allocated to subsidiaries' potential to contribute to internal and external launch objectives.

There is also the interplay of strategic roles and responsibilities for subsidiaries during the innovation process. The value of HQ attention is often contingent upon subsidiary strategic configuration (Ambos and Birkinshaw 2010). Whether the subsidiary has responsibility in strategy or execution can influence interactions. The role of top managements' attention and international assignment experience has been addressed in the

literature where subsidiaries that have a high level of strategic choice and value adding activity perform better due to the interactions of subsidiaries' autonomy, inter-unit power and initiatives with headquarters' attention (Bouquet, Morrison, and Birkinshaw 2009, Ambos and Birkinshaw 2010). It is thus important to consider the level of engagement of subsidiaries and local markets in conceiving and introducing new products to international markets.

4. Implications for international product innovation

The discussion on strategic conception and execution of global innovation initiatives emphasizes the importance of effective organization and implementation through MNC's routines and recombination capabilities. The overall challenge is to achieve time-to-market through effective management of the innovation portfolio and the launching of major discontinuities (Zairi and Al-Mashiri 2005). The new product introduction requires a timely and valuable innovation that integrates local market knowledge from local teams and subsidiaries within the MNC network. Communities are social containers for incremental innovation, whereas networks are the place for boundary-spanning learning and radical innovation (Dal Fiore 2007). Within the MNC network it is important to consider the role of the subsidiary in adding value to global innovation capabilities when bringing new products to market. Subsidiaries need to be sufficiently embedded within the local environment to generate knowledge access and inflows while also sufficiently embedded in the MNC's internal network for knowledge to be transferred and used through the MNC (Meyer, Mudambi, and Narula 2010). Headquarters can influence this relationship through control mechanisms for subsidiary local embeddedness such as knowledge development as performance criteria (Andersson et al. 2005). The interdependence between local market knowledge and knowledge diffusion places increased importance on the project leader and cross-cultural team in facilitating knowledge-sharing during the global product innovation process.

5. The need for organizational change in structures and systems

Global products, new technologies, and distributed teams have created a greater need for co-creation and collaboration. The continuous need to innovate and adapt to global markets has driven companies to explore innovation practices that can integrate with other functions in the organization. Innovativeness is perceived as the best structural fit to an ever-changing environment (Gephardt 2005). Strategies of changing or establishing innovation systems need to consider mechanisms of interchange including the art of communication,

cooperation, and managing interplay structures (Pohlmann et al. 2005). Moreover, innovation systems should be regarded as the development of social systems which are successful in the achievement of their strategy (Ibid). It thus becomes important for MNCs to evaluate and integrate the appropriate organizational process. The organization's innovation process is both the backbone where innovative efforts are formed and the context around which ideas are mobilized from thought to action (Desouza et al. 2009). The project leader, the cross-cultural and cross-functional team, as well as a strong launch process become important elements for new product introductions.

The role of social capital is increasingly critical in facilitating organizational collaboration and innovation. Networks and social capital can enable the transfer of tacit knowledge in highly ambiguous situations such as a radical and global new product development effort (McDonough et al. 2007). In understanding how to manage the knowledge flow in the network, collaboration can be managed for both divergent and convergent needs. Networks become more open and loose to facilitate the knowledge search process and more closed and dense to facilitate creativity and product design and development (McDonough et al. 2007). Social capital creation helps build strong relationships among persons who have knowledge or serve a role in the organization's new product innovation process worldwide.

Since the implementation of NPD programs has experienced various levels of success, many studies have focused on identifying associated problems and efficiencies (Shepherd and Ahmed 2000). Wong (2002) highlights a research gap in emphasizing the need for research that extends and integrates extant knowledge and methodologies in NPD and international marketing for advancing theory and practices within global new product management. Since product innovation allows firms to adapt to changing market needs, an experiential strategy of multiple design iterations, extensive testing, frequent project milestones, a powerful project leader, and a multifunctional team accelerates product development (Eisenhardt and Tabrizi 1995). Kleinschmidt, de Brentani and Salomo (2007) have evolved this research through a model of global NPD program performance that shows the need for a global innovation culture (risk taking and openness to global markets and customers) and global knowledge integration (capturing and integrating knowledge across borders). Although the authors emphasize the importance of an innovation culture, knowledge integration and launch preparation capabilities, they have not explored how this process is achieved in orchestrating firm resources to enhance global product launch performance.

B. Product Innovation Management for International Markets

1. The innovation value chain and emerging market needs

Leading multinationals have focused on the value chain in moving new concepts from R&D to production, marketing, sales, and customer service and support. This effort enables companies to respond more quickly to customers through optimized design, quality, cost, and delivery worldwide. Moving from a global standardized approach to a transnational focus, organizations have experienced mixed success in combining a global strategy with a local touch. The creation and application of new business models require internally consistent choices in the areas of customer definition, identification of customer value and design of the value creation process. In re-designing end-to-end value chain architectures, companies need to think about the interfaces across these activities in order to optimize value to customers and scalability across borders (Govindarajan and Gupta 2001). The specific interactions and communication activities that assist firms in accelerating international market responsiveness serve as key connectors in the global value chain.

	IDEA GENERATION			CONVERSION		DIFFUSION
	IN-HOUSE	CROSS-POLLINATION	EXTERNAL	SELECTION	DEVELOPMENT	SPREAD
	Creation within a unit	Collaboration across units	Collaboration with parties outside the firm	Screening and initial funding	Movement from idea to first result	Dissemination across the organization
KEY QUESTIONS	Do people in our unit create good ideas on their own?	Do we create good ideas by working across the company?	Do we source enough good ideas from outside the firm?	Are we good at screening and funding new ideas?	Are we good at turning ideas into viable products, businesses, and best practices?	Are we good at diffusing developed ideas across the company?
KEY PERFORMANCE INDICATORS	Number of high-quality ideas generated within a unit.	Number of high-quality ideas generated across units.	Number of high-quality ideas generated from outside the firm.	Percentage of all ideas generated that end up being selected and funded.	Percentage of funded ideas that lead to revenues; number of months to first sale.	Percentage of penetration in desired markets, channels, customer groups; number of months to full diffusion.

Source: The Innovation Value Chain. By Morten Hansen and Julian Birkinshaw. Harvard Business Review, July 2007.

Figure 5. The Innovation Value Chain. Source: Hansen and Birkinshaw 2007

The linear process of identifying, developing, and delivering products also needs to consider the interaction flows that produce and convert ideas into products. In order to develop a more complete end-to-end framework for product innovation, Hansen and Birkinshaw (2007) developed a value chain view with a three-phase process that includes idea generation, idea development, and the diffusion of developed concepts (as shown in figure 5).

The process of transforming ideas into commercial outputs is viewed as an integrated flow from generating ideas to converting ideas (selection and development) to diffusing products and practices within the organization. However, this model does not address interaction flows that occur between actors for each phase. In order to improve capability development for product innovation, it is important to explore interactions during the conversion and diffusion of firm resources in reconfiguring and orchestrating knowledge in the development of capabilities for new products.

2. The Front End of Innovation

In conceiving and introducing new products, the MNC needs to balance exploration in evaluating and identifying new opportunities while managing the implementation process and then ensuring exploitation of the selected concept for commercialization. The literature has shown the key to success for new products is the **front end innovation process** where significant benefits can be achieved through performance improvement. Kurana and Rosenthal (1998) specifically identified key elements for the front end innovation process including product strategy formulation and communication, opportunity identification and assessment, idea generation, product definition, project planning, and executive reviews. As presented in figure 6, this in depth study showed that front-end activities need to take a holistic approach that links business strategy, product strategy, and product-specific decisions through a process that integrates elements of product strategy, concept development, business justification, resource planning, team roles, and decision mechanisms. Strategic planning and go-to-market execution are the key phases in the global product launch project that encompass these elements in conceiving and implementing new products to international markets.

The front-end innovation process involves critical strategic planning and communication processes that determine the success of new product introductions. Planning provides a blueprint for action that organizes project team interaction through a common language and understanding that reduces time-consuming coordination problems (Eisenhardt and Tabrizi 1995). The effectiveness of integration in strategic and operative level front-end activities is dependent on the level of concreteness of the defined business strategies, the amount of business-minded decision making, and the balance between control and creativity (Poskela 2007). This exploration stage combines conception and strategy-making of new products which requires effective management of front-end activities amongst cross-cultural and cross-functional teams. It has been found that internal task motivation of group members is important in front-end initiatives aiming at strategic renewal due to the challenging

execution and transformation of ideas into product concepts that require highly motivated front-end group members to create successful end results (Poskela and Martinsuo 2009). In addition, organizational mechanisms are needed to remove obstacles and to motivate group members (Ibid). The management of organizational mechanisms that influence the collaboration and communication needs of teams is therefore an important consideration.

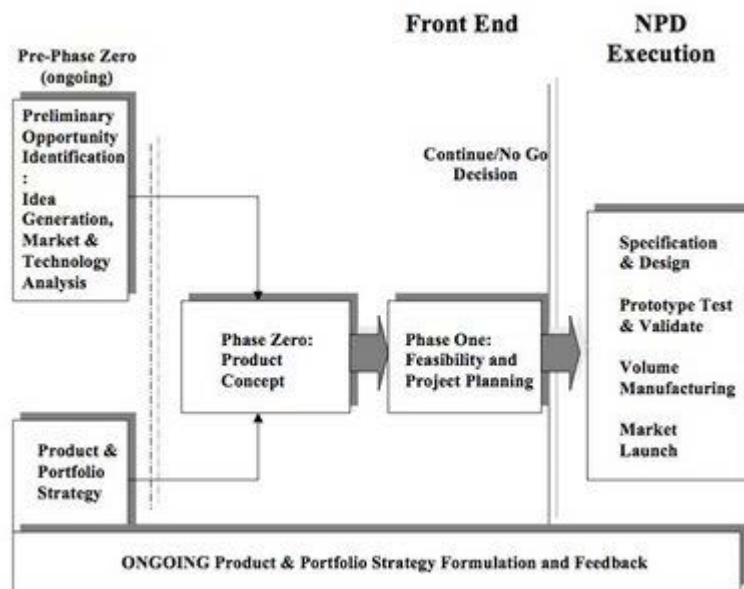


Figure 6. The Front End Innovation process, Source: Khurana and Rosenthal 1998

The **front-end of innovation is the focus of this dissertation** due to its critical impact upon global product launch performance. The literature has also referred to front end activities as the *Fuzzy Front End* (fuzziness, ambiguity, and uncertainty) where it is viewed as a set of interdependent activities that can be integrated with a structured process (e.g. Kim and Wilemon, 2002, Poskela 2007, Poskela and Martinsuo 2009). The Fuzzy Front End is the period when an opportunity is first considered to the time that an idea is considered ready for development (Kim and Wilemon 2002). Koen et al. (2001) have presented a model of the front-end phase process consisting of five elements including opportunity identification, opportunity analysis, idea genesis, idea selection, and concept and technology development. In order to use a clear definition for the Front End of Innovation, this dissertation paper will use the definition by Kurana and Rosenthal (1998) where the front end innovation process includes product strategy formulation and communication, opportunity identification and assessment, idea generation, product definition, project planning, and executive reviews.

In defining front-end innovation, it is also important to make a distinction from reverse innovation which has recently received attention in the literature. *Reverse innovation*

is defined as ‘developing ideas in an emerging market and coaxing them to flow uphill to Western markets’ (Govindarajan 2012). While the premise is a local to global focus, it is important to emphasize that reverse innovation places a stronger focus on new product development in designated emerging markets. It is an engineering-driven focus that directs new products and knowledge transfer to mature markets. On the other hand, this dissertation is focused on *front-end innovation* involving ideation, strategic planning, concept validation, market, and customer engagement. It is a market and customer-driven focus that involves a cross-cultural and geographically distributed team in mature and emerging markets where collaboration takes place in the front-end innovation process. The introduction of the new product concept is targeted for introduction to both emerging and mature markets. Due to the collaborative focus within the global MNC network, collaboration and knowledge-sharing occur from planning to execution.

The front-end of innovation and NPD project processes are interdependent and essential to managing the conception and execution of new product and service concepts. The structure and key requirements of the new product concept is decided in the front-end phase which affects new product development activities (Poskela and Martinsuo 2009) since the front-end innovation process should produce a defined product concept, clear development requirements, and a business plan aligned with corporate strategy (Kim and Wilemon 2002). Front-end process activities may be regarded as the most challenging phase of the innovation process yet the most rewarding in providing opportunities to improve the overall innovation capability of the company (Reid and de Brentani 2004, Kim and Wilemon 2002, Poskela and Martinsuo 2007). Front-end management has a strategic orientation where both strategic and operative levels need to be considered for product conceptualization and implementation (Zhang and Doll 2001). This supports market exploration and exploitation activities where exploration activities at the strategic level focus on strategy formulation, execution is focused on strategy implementation and upper management control, and exploitation is focused on leveraging strategy as well as strategic renewal and learning (Poskela 2007, Poskela and Martinsuo 2009).

The front-end of innovation is more closely associated with radical innovation yet it also incorporates incremental innovation as well as an integration of both radical and incremental innovation activities. *Radical innovation* or breakthrough products are new to the company and/or new to the market. Hill and Rothaermel (2003) define radical innovations as based on the development and implementation of new products, processes, and technologies.

Radical innovation requires a higher proneness to uncertainty due to the need for organizational change and consideration of new technologies and markets (Hill and Rothaermel 2003, Moosmayer and Koehn 2011). *Incremental innovation* is considered to be upgrades or improvements to existing products, additions to existing platforms, and repositioning of existing products introduced in markets. Incremental innovations usually do not address new markets and do not create market or technology related discontinuities (Garcia and Calantone 2002) where the main purpose is to keep existing products competitive through adaptations or small improvements of existing products and services (Sorescu and Spanjol 2008). Both radical and incremental innovation may be found within an organization's product portfolio.

It is important to note that a new product often requires an integrated approach with a front-end process followed by a rigorous project management process for NPD and GTM. There are new product introductions that may require both radical and incremental innovation depending on the strategic vision, the market demands, and related technologies which require new discoveries. While front-end innovation is essential to global product launches, there is limited research on the strategy-making process and the cognitive and social interaction needs required for conceiving and bringing new products to market.

3. Global project management and the product launch process

The implementation of the product innovation strategy is the most critical element for international market success. The real innovation challenge lies in execution since there is often a conflict between ongoing operations and innovation (Govindarajan and Trimble 2010). This requires the application of project management practices in order to facilitate the identification and implementation of the new product concept. The identification of a viable means of ensuring that knowledge is produced and diffused across project boundaries and throughout the organizational hierarchy is a very important issue for project-based businesses (Ajmal and Koskinen 2008). Special attention needs to be placed on the type of project management system selected and applied to initiatives managed across borders and cultures. Viewing projects as the 'true traction points for strategic execution', Levitt et al. (2008) have identified six imperatives that leaders should address and align: Ideation (identity, purpose, and long-range intention), Vision (translation to goals and metrics), Nature (framework for aligning organizational strategy, culture, and structure), Engagement (process for managing strategic initiatives), Synthesis (methods for monitoring and aligning project), and Transition

(integrating into company operations). The organizational framework lays the foundation for effective strategic planning and execution worldwide.

The project management process for global product innovation requires special considerations for idea generation, conversion, and diffusion of new concepts. The literature has produced several stage models, where Desouza et al. (2009) have presented a general overview including generation and mobilization, advocacy and screening, experimentation, commercialization, and diffusion and implementation. Zairi and Al-Mashiri (2005) have developed a more extensive model to include strategic integration with market and consumer needs as well as internal capabilities. This is where the idea phase captures market and consumer needs with effective process understanding and capability combined with a project focus and discipline with effective teamwork and tools to ensure successful results. Furthermore, project management needs to reflect a culture of continuous innovation with a series of elements including clear objectives and effective communication, team selection and role specification, project leadership, discipline and methods, tools and techniques, progress review and reporting mechanisms, measurement, post-launch evaluation and recommended learning (Zairi and Al-Mashiri 2005). With the foregoing in mind, it is now necessary to examine the application of project management concepts to the global product launch process.

a. From concept to market

The global product launch process is a comprehensive cycle that moves from product conception to product development and launch execution and finally market introduction. The development and employment of dynamic capabilities related to global product launch allows firms strategic positions in the marketplace that are difficult for competitors to overcome (Calantone and Griffith 2007). When creating and introducing a new product concept to the global marketplace, there are key steps that are followed by the global product launch team which include the product planning phase, with local market validation, followed by the project management process, and then the local market preparation for marketing and sales activities, and finally the worldwide product introduction. The global product and marketing management team at headquarters works closely with local marketing and sales teams at the subsidiary level. Thus the product concept and marketing planning stages may require collaboration from the local marketing and sales teams during the planning and execution stages in order to ensure product and marketing programs that are effectively adapted to local markets.

b. Product launch phases and considerations

The global product launch demands a multi-faceted, multi-functional, and multi-cultural approach to planning and execution. Organizations are increasingly focused on accelerating time to market through reduced product development cycles and increased process efficiency. The antecedents to international new product timeliness have been studied by Veronica Wong (2002) who has identified external and internal environment factors. Externally, an organization faces competitive intensity, customer/market homogeneity, and technological change that determine global launch program efficiency. However, internal factors such as marketing and technical resources assigned to local markets and NPD process proficiency along with product competitive advantage are equally important factors (Ibid). With innovation influencing market pull, Charue-Duboc (2008) highlights the importance of new product introductions for the competitive positioning of a firm. This requires an integration of both R&D and product development activities in order to ensure time to market (Charue-Duboc and Midler 2002). The few global launch models that exist are often adapted from new product development or project management models. As noted by Wong (2002) little empirical research exists which addresses the role of external, internal, organizational, and environmental variables in international product development and launch timeliness. Although the launch of new products remains a core business priority for multinational companies, there are few project and team process models to guide global launch managers.

Although the Stage Gate model helps improve project management, it still does not address the special cognitive needs of a global product introduction such as socialization, networking, communication, and learning. This has led to the modification and improvement of idea-to-launch methods by various companies as they've developed the next-generation Stage gate system. These systems include a lean, adaptive, flexible, and scalable process with a discovery process at the front-end and post-launch reviews and performance metrics after the product introduction (Cooper 2009). While the new generation Stage gate system offers an improved process, it still does not address the knowledge-sharing needs of a global product introduction. Many of these problems seem to be attributed to the implementation phase which requires a lack of process vision, concepts and techniques that vary in applicability, need for organizational culture change, and complex changes requiring improved process interface (Anthony et al. 1992). There seem to be disparities between the project management system and the need for a global and process-focused view.

c. Internationalization and localization needs

Since the global product launch involves consideration of diverse markets, cultures, and languages, a certain amount of adaptation and customization to local customer preferences is required. Bruce et al. (2007) compare this approach to a design perspective which mandates a tailoring of product and marketing mix to encourage early acceptance within the intended global market. To guide firms in customizing features, they propose four design categories of channel parameters—country mores, language and colloquialisms, and technology infrastructure— which have a strong propensity to dictate customized design requirements for a worldwide launch. Planning and execution activities need to consider local market adaptation needs during the global product launch process. This is further supported by the TLCC framework which identifies the need to address specific dimensions of internationalization in order to ensure appropriate product adaptation for technical, linguistic, cultural, and cognitive levels (Sturm 2002). In addressing the go-to-market activities, there are similar considerations for language, images, and messages that may need localization. It is important to note that internationalization (or globalization) is the design or development of a product, application or document that enables localization for customers that vary in culture, region, or language. Localization is therefore the adaptation of a product, application, or document to meet the language or cultural needs of a specific target market (www.w3.org). Internationalization and localization are the most important stages in preparing products and marketing materials for the new product introduction to key local markets worldwide.

d. Team roles and responsibilities

The organization offers a multinational matrix structure driven by product and geographic responsibilities and roles. Serving as the **core project team**, the marketing group is usually responsible for driving the product launch process worldwide. This requires a global framework and methodology, international project management and communication tools, and cross-functional and cross-cultural team management. In addition to the core project team, each product introduction requires the formation of a **global launch team on two levels**: 1) **Cross-functional**: the operational team in headquarters responsible for product design, management, and marketing on a global level, and 2) **Regional and local**: the planning and implementation teams responsible for marketing and sales at the regional and local levels. Finally, the **executive team** provides the authority and influence for decision-making and approval of key planning and execution phases for the worldwide product

introduction process. These three groups play an integral role in the success of the global product launch initiative.

e. Internal and external stakeholders

When organizing for a global product launch, the involvement of internal and external stakeholders is critical for effective implementation. It is not sufficient to only involve cooperation and integration of NPD with the core and cross-functional teams. Successful new product launch in overseas markets also calls for parallel alignment of goals and objectives in the new product process, resources and behavior through use of integrating mechanisms (Wong 2002). Thus, it is necessary to consider the internal and external stakeholders for the global product launch project. Depending on the organization's matrix structure and the project objectives, the internal stakeholders usually represent the executives and group managers of the product, marketing and sales departments as their support and allocation of resources are needed to effectively develop and launch the new products into key markets. Moreover, the internal stakeholders also include the local marketing and sales managers who are responsible for execution of strategic initiatives. The external stakeholders mainly involve local customers and partners who can validate and support the new product offer. The involvement and support of key stakeholders in local markets are important in the early phases of the project in order to ensure sufficient goal alignment and resource allocation within the MNC.

4. New product development in an international context

Facing competition, customer satisfaction, and time to market pressures in a global marketplace, organizations have looked to NPD frameworks as a solution to achieving improved cooperation, coordination, and communication. The approach requires an intuitive and flexible process while also providing enough structure for sense-making and responsiveness (Eisenhardt and Tabrizi 1995). However, increased control and discipline combined with planning tools often serve as key drivers for the product groups. It has been proposed that the only sustainable source of advantage is a superior NPD framework (Anthony et al. 1992). Cooper and Kleinschmidt (1995) identified nine elements that drive NPD performance: high quality new product process, a clear and well-communicated strategy, adequate resources, senior management commitment, an entrepreneurial climate, senior management accountability, strategic focus and synergy. The majority of NPD frameworks share some key characteristics: Use of a structured development process, a team of senior executives, use of realization teams (core teams), and stage gate reviews (Shepherd and

Ahmed 2000). The development of team processes and promotion of self-managed cross-functional teams is increasingly viewed as the logical means to generating more creative and efficient solutions (Donellon 1993). Maintaining a responsive process with sufficient structure for team interaction and collaboration is deemed a better solution.

The pressure of time to market is a key driver which is defined as the elapsed time between the start of product definition and product availability (Vesey 1990). This is determined by the efficiency of the information process, the levels of uncertainty in development, and the amount of information needed to combine all elements (Murmman 1994). It is also closely linked to the ability of ensuring a timely product introduction worldwide. There needs to be an effective balance between product development time and the ability to have the product ready for the market (Shepherd and Ahmed 2000). This creates additional pressure to coordinate effective processes between the product development and product marketing teams within the organization. In order to stay competitive, firms apply the basic attributes of an NPD framework, yet continue to show evolutionary improvements in several areas in order to retain their lead (Griffin 1997). The focus becomes a timely market introduction with sufficient development and preparation of new product concepts.

The continuous need to innovate and adapt to global markets has driven companies to explore NPD practices that can integrate with other functions in the organization. As discussed in the previous section on product launch phases and considerations, the most popular and commonly used process is the stage gate system introduced by Robert Cooper. Stage gate systems essentially apply process management methodologies to the innovation process (Cooper 1990). Stage gate systems use a predetermined set of stages marked by gates that serve as checkpoints with a list of criteria that need to be met in order to open the gate for the next stage (Ibid). A typical stage gate system provides an overview or road map with key benchmarks or milestones to be achieved. By efficiently managing the product development process, the system also provides more time to manage marketing activities that are required for the product introduction. The stage gate model's use as a project planning process has led to modification and improvement of idea-to-launch methods by various organizations in developing the next-generation Stage gate system model including the stages of scoping, business case, development, testing, and launch (Cooper 1990, 2009). While this model addresses the project planning process, it still does not effectively address the front-end innovation process with cognitive and social interaction needs required for conceiving and introducing new products.

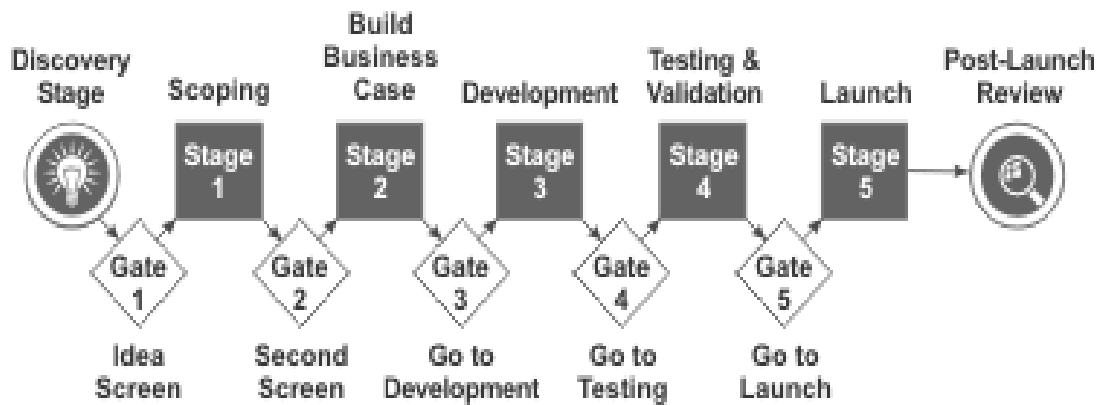


Figure 7. Cooper's Stage Gate Model (source: Zanthus.com, Cooper 1994, 2009)

When introducing new products, MNCs are continuously faced with the challenge of balancing global and local market needs. In managing the tension between global integration and local responsiveness (Bartlett and Ghoshal 2002), global integration needs continuous feedback from local markets and is essential for global integration to be effective (Gilbert 2007). While it is essential to sustain a global image and offering, it is also necessary to consider adaptation of solutions and practices when needed in key markets. Successful globalization of local knowledge is people-based and relies on outside in learning among geographically dispersed teams: a strong strategic commitment to international expansion, mental rehearsal focused on global overview perspectives, intellectual confrontation across geographic areas, and globally orchestrated experimenting and debriefing (Gilbert 2007). There is also the tension of integrating local needs with global business objectives. Toyota developed a new strategy for solving the issue of global to local adaptability by learning about local needs and requirements and then adapting to them through global coordination (Ichijo and Kohlbacher 2006). MNCs will increasingly need to identify and manage the issues of maintaining a standard offering while adapting when necessary to local customer needs.

5. Go-to-market needs for international products and services

While NPD has received great attention in the literature, there is limited research available concerning the role of go-to-market or launch preparation activities. Wong (2002) highlights a research gap in emphasizing the need for research that extends and integrates extant knowledge and methodologies in NPD and international marketing for advancing theory and practices within global new product management. Lenfle and Midler (2003) further emphasize the need for research concerning organizational learning and

conceptualization processes in order to strengthen the opportunities for new product development within the organization. In responding to the dynamic and evolving marketplace, organizations are increasingly evaluating their readiness or ability to go to market and sell products when the global launch occurs. Learning is being viewed as a strategic lever for preparing the product, marketing, and sales teams to deliver on business objectives.

The ability of teams to execute on project objectives is often determined by the knowledge, skills, and resources needed for launch success. There is the consideration of readiness skills for key stakeholders where customers have a knowledgeable sales and marketing force, the marketing and sales teams have the skills to support their business and learning objectives, and the organization ensures knowledgeable and competent teams that can achieve business objectives (Grosse 2008). In addition to capable teams, there is also the need for marketing and sales materials that enable local teams through localized and adapted customer communication. When planning and communication have been established, learning can facilitate the sharing of knowledge and information held by the cross-cultural and cross-functional team members around the world. On one hand, it is important for HQ teams to educate their local counterparts on the product and marketing objectives. On the other hand, subsidiary managers need to educate the HQ managers or project leaders about their local market and customer needs. The importance of education in preparing marketing and sales teams highlights the need for stronger knowledge integration and learning processes from concept to launch.

6. Integrating NPD and GTM in the global product launch process

When managing the new product introduction process, it is necessary to take a holistic approach where NPD and GTM are integral components of the innovation value chain. In product development, there are two theories – compression strategy where a predictable series of steps can be compressed (Gupta and Wilemon 1990). Planning in the front end innovation process can help accelerate time to market through a clear vision and efficient team interaction. The other view is experiential strategy where product development is an uncertain path requiring intuition and flexibility yet enough structure for sense making (Eisenhardt 1995). The elements of structure and motivation are important in these situations since uncertainty can create paralyzing anxiety about the future (Weick 1993). Eisenhardt and Tabrizi (1995) showed that using an experiential strategy with frequent project milestones, a powerful project leader, and a multifunctional team accelerates product development. It thus becomes important to understand the integration and influence of the Front End Innovation

process with NPD and GTM activities when introducing new products to international markets.

The relationship between product development and product marketing is highly interdependent and needs to be managed effectively across the organization during the global product launch. In order to manage the divergent processes of Front End Innovation with convergent cognitive capabilities, an assumption can be made that an experiential strategy is necessary for integrating the initial concept phase of Front End strategy and the planning and execution phases of the NPD and GTM strategies. In order for the organization to succeed in delivering global and local innovation solutions, it needs to consider the effective management of the NPD and GTM processes from concept to launch. The Front End Innovation process naturally demands a flexible strategy in order to accelerate creative thinking and organizational exchange for optimizing global and local solutions. However, it also requires a compression strategy as it makes the transition to the NPD and GTM phases where a series of steps or milestones are driven by a dedicated global launch champion and cross-functional as well as cross-regional teams. Further exploration is needed to understand the dynamics between the key functions of planning for Front End Innovation and execution for NPD and GTM.

C. Knowledge-sharing Capabilities within MNCs

1. The role of knowledge in MNCs

The concept of knowledge management has evolved as a critical element in the success of an organization's business objectives. In order to explore knowledge-sharing, it is essential to understand the distinctions between knowledge transfer, knowledge creation, and knowledge-sharing. Knowledge transfer is defined by Lee et al. (2008) in terms of 'the extent to which an MNC's headquarters and its subsidiaries transmit knowledge to each other'. In the organizational context, it is the frequency and means by which management in headquarters and subsidiaries transfer knowledge. Upon closer examination, knowledge-sharing is 'the provision or receipt of task information, know how, and feedback on a product or procedure (Hansen 1999, Foss et al. 2010). It is often a crucial antecedent to knowledge creation (Cohen and Levinthal 1990, Tsai 2001). In order to strengthen the creative tension between tacit and explicit knowledge, Nonaka (1994) proposed the theory of organizational knowledge creation where knowledge held by individuals, organizations, and society can be expanded through an interactive amplification or joint creation of knowledge. This

dissertation is focused on knowledge-sharing since it addresses the transformation of individual and team knowledge into organizational knowledge which is the central theme of this paper. Moreover, knowledge-sharing is a continuous form of interaction in organizations that is essential to team and project processes.

In understanding the future of knowledge-sharing in organizations, it is helpful to examine the key drivers of early knowledge management. There has traditionally been a strong link between knowledge and strategy, content, and organizational culture. Early knowledge management did not realize the objectives of gaining competitive advantage through effective knowledge management where a general approach ignored context and placed a heavier emphasis on technology and content. Some of these failures were attributed to a lack of understanding what knowledge was most important to the organization's strategy, what should be codified and shared, and with whom it should be shared (Prusak and Weiss 2007). In using content, many early knowledge initiatives focused on documentation and codified knowledge by individuals that lacked context. This approach failed to recognize team or group knowledge as well as the complex and dynamic relationships between sources (Prusak and Weiss 2007). When examining organizational culture, past challenges involved how to encourage knowledge-sharing behavior and motivate employees through the appropriate systems and processes. This brought increased attention to socialization, trust, and relationship-building as represented by social and relational capital where a culture recognizes knowledge and does not treat knowledge as power (Prusak and Weiss 2007). The ability to recognize knowledge as a competitive advantage by structuring content and encouraging social interactions has gained increased interest.

Organizations play a critical role in mobilizing tacit knowledge and nurturing dynamic knowledge creation processes. When the knowledge-creating process is viewed as the conversion from tacit knowledge into explicit knowledge, the process becomes an ongoing social process through the synthesis of different views held by people (Nonaka 1994, Nonaka and Takeuchi 1995, Nonaka and Toyama 2007). The global product innovation process provides a strong case for the ability to balance tacit and explicit knowledge conversion. Knowledge emerges through the subjectivity of context-embedded actors, and is objectified through the social process of knowledge validation (Nonaka and Toyama 2007). Thus, the dynamic interaction of objectivity and subjectivity provides the opportunity for the creation and validation of new ideas and concepts that respond to emerging market opportunities.

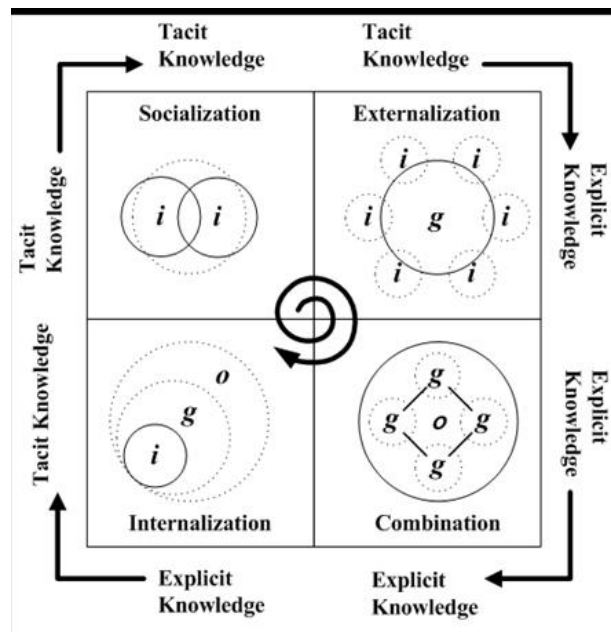


Figure 8. The SECI Process Model (Source: Nonaka and Konno 1998)

In order to show how the organization operates as an entity for knowledge creation, Nonaka, Sasaki, and Senoo (2004) introduced the basic components of the model of a knowledge-creating firm where knowledge is created through dynamic interactions with the environment. The SECI model (Socialization, Externalization, Combination, and Internalization) which includes the process of dialogues, and practice, the knowledge vision and driving objectives (for direction and energy), ba, an existential place for the SECI process, knowledge assets as inputs and outputs, and the environment as an ecosystem of knowledge and multi-layered ba. Nonaka and Toyama (2009) used the creation of new products as an example of the SECI process where product development starts with ‘socialization’ and tacit knowledge of customers is accumulated and shared and then articulated into a product concept through ‘externalization’; the product concept is then systemized and made into a product through ‘combination’ where explicit knowledge is collected, combined, and selected to form more complex and systematic sets of explicit knowledge; the knowledge created in the form of a new product is converted into tacit knowledge by customers who use it through internalization which in turn sets off a new spiral of knowledge creation (Nonaka and Takeuchi 1995). Since innovation is viewed as coming from the customer and the market, one needs to look at the discovery process in order to share the experience with the market and to discover trends and practices which always come from physical experiences (Konno 2011). The interactions that occur between HQ and subsidiaries

during this process are instrumental to the local market experience with customers and the outcome for new products in international markets.

a. Communities of Practice

As knowledge becomes more valuable to global business success, communities of practice provide strategic ways to manage these assets within and outside the organization. Jean Lave and Etienne Wenger first proposed the idea of communities of practice through their research on situated learning where learners participate in frameworks that have a social structure. Sharing a common concern or passion, communities of practice allow members to deepen their knowledge, expertise, practices, and approaches (Wenger 2002). Communities of practice share three crucial characteristics: a shared domain of interest, an active community, and a shared practice for practitioners. The strategic intent includes service and support, best practices, knowledge-stewarding, and innovation. In competing for market share, talent, and competitive advantage, communities of practice provide a way for the enterprise to create a whole system around core knowledge requirements. Domains of knowledge become focal points for connecting people in different units who may be working on related projects. This highlights the importance of developing a knowledge strategy to support a global business strategy. In detailing operational terms, the process starts with strategic goals and required core competencies, business processes, and key activities. Success in global markets depends on the ability of communities to share and manage knowledge across the world.

Global communities of practice require more time in uniting multiple agendas, defining the domain and developing personal relationships and trust among members. This requires a design that allows for variations in culture, language, organization, technology, time, and work without sacrificing trust and connection between global community members (Wenger McDermott Snyder 2002). According to Wenger, there are four key activities to consider for global community development: Achieve stakeholder alignment, create a structure for global connections and local variations, build rhythm to maintain community visibility, and develop private space systematically. In order to ensure a global reach with local connections, a community needs a fractal structure that provides the ability for global and local coordinators to create links between local groups and connect them to the global community.

By uniting distributed global teams around key topics, forming strong relationships, and creating forums to foster sharing and understanding, communities of practice provide the connective structure needed to build adaptive global organizations (Wenger McDermott

Snyder 2002). Moreover, routines are often shaped and determined at an intermediate level, the level of communities, due to the permanent interaction between the individual and organizational levels (Cohendet and Llerena 2003). While communities of practice support the cumulative process of practices and discoveries in the firm, there has been criticism concerning the relevance to global project teams. Cohen (2007) contends that communities of practice have provided disappointing results due to the tension between managing a social network of common interest and a mandated team with specific work goals. Seely Brown (2001) argues the design of organizational architecture and connection with local communities is crucial in harnessing innovation throughout large organizations. The ability to link work, learning, and innovation through communities of practice relies upon the alignment of individual communities of practice to the overarching organizational architecture.

b. The role of knowledge flow

Knowledge flow has emerged as an important consideration in aligning knowledge with the work flow of an organization. The concept of knowledge flow management addresses the environment, people, tools, and technology that enable knowledge flow where an organization can manage knowledge through an environment with tools and technologies that people find safe, attractive, efficient, and that motivates them to share their knowledge (Leistner 2010). In order to better understand knowledge flow, there are three key elements that characterize and shape the management of knowledge flow: solution, experience, and social creation (Nissen and Snider 2003). When knowledge is viewed as a solution, there is often real-time transfer of knowledge among practitioners seeking solutions through the means of a technology platform which is shared across the organization and geographies; knowledge as experience is often recorded and stored and is time and project dependent as it makes use of the experience resulting from a specific situation – knowledge as experience also requires organizational processes and technology in order to record, store, and disseminate knowledge (Zack 1999, Nissen and Snider 2003). Knowledge as solution and experience is converted from tacit to explicit knowledge or codified for knowledge transfer.

However, the final element of knowledge flow, socially created knowledge, is the result of interpersonal relationships or the social interactions around a business problem where social processes lead to knowledge creation and sharing (Nissen and Snider 2003). They involve informal, unstructured communications and processes of sense-making (Weick 1979) where discussion and conflict and negotiation may be a central part of the learning process (Nissen and Snider 2003). In understanding the elements of managing knowledge

flow, the issue then becomes how to ensure alignment between the type of knowledge and work flow within the firm.

Knowledge flow is directly linked to the ability of organizations to share knowledge which includes the dimensions of time, space, and organizations. A reference built upon Nonaka's (1994) work that helps guide and explain the characteristics of dynamic knowledge is a multidimensional framework developed by Nissen (2006) which is based upon diverse dynamic knowledge perspectives and integrates them through four dimensions in a life cycle: explicitness, reach, life cycle, and flow time. The first dimension, explicitness, addresses the type of knowledge where explicit class is represented by technology and a tacit class that does not contain technology (Nissen et al. 2000). The second dimension addresses the level of social aggregation associated with various types of knowledge such as expressive patterns for visualization (Nonaka and Takeuchi 1995); the third dimension addresses activities associated with knowledge such as knowledge creation and conversion; and the fourth dimension involves flow time which explicitly addresses the dynamic nature of knowledge and its integration with the other dimensions (Desouza, Nissen, and Sorensen 2008). The ability to share knowledge captures elements from each phase where knowledge is available through live or virtual interactions, followed by the ability to communicate the knowledge through various media and then the ability to create and convert knowledge and its final integration or dissemination within the organization.

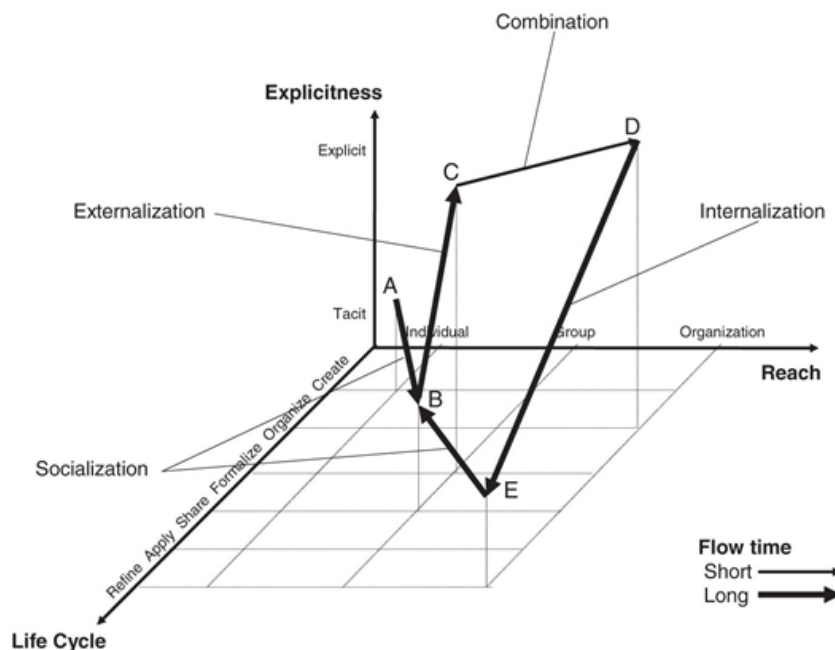


Figure 3 Multidimensional knowledge-flow visualization (adapted from Nissen, 2006b)

Figure 9. Multidimensional knowledge-flow visualization, Source: Nissen 2007

In understanding how to manage and influence knowledge flow, the concept of knowledge governance is emerging as a critical yet under-researched topic that has not been fully developed. Knowledge governance is the selection of organizational structures and mechanisms that can influence the processes of using, sharing, integrating, and creating knowledge in preferred directions (Michailova and Foss 2009). Since this dissertation is focused on knowledge-sharing, a more specific definition is used in the governance of knowledge-sharing where ‘the choice, combination, and deployment of formal and informal organizational mechanisms to influence individual knowledge-sharing behavior in organizations so that organizational knowledge-based goals can be achieved’ (Foss et al. 2010). This concept allows for an examination of mechanisms and structures that link knowledge-sharing and organizational performance through mechanisms and structures at the organizational or macro level that influence behaviors of knowledge-sharing at the micro or individual level. Foss et al. (2010) argue that current research on knowledge-sharing lacks a normative element even though it is a highly practice-influenced research area and can thus not offer managers an adequate model or process for embedding knowledge-sharing initiatives in existing organizational structures and cultures. It is therefore necessary to examine how governance mechanisms influence the knowledge-sharing behavior of teams working in a dynamic, global and cross-cultural context.

2. Knowledge exploration and exploitation

As the MNC is continuously faced with the need to balance knowledge exploration and exploitation capabilities, there is the issue of conflicting objectives for HQ and subsidiaries. The parent country where HQ is based strives to exploit opportunities for existing products while subsidiaries have the interest to explore new opportunities within local markets. Regner and Zander (2011) argue that scholarly discussions of MNC knowledge creation places an excessive focus on activities and capabilities of the parent country as well as the foreign subsidiaries instead of developing a more balanced and integrated theory on how MNCs can combine parent and subsidiary competencies with external knowledge in order to create knowledge to support sustainable competitive advantage. They believe it is a question of interplay between an exploitation-heavy centripetal MNC social-identity frame, which is related to extant core knowledge, and host-country and subsidiary social-identity frames that occasionally play an exploratory role (Ibid). The nature of interactions that occur in a cumulative process of practices and discoveries, as viewed in communities of practice and groups, can contribute to shaping the balance between exploitation and exploration

mechanisms of the firm (Cohendet and Llerena 2003). There is the issue of maintaining and increasing success for the current product line in existing and emerging markets while also providing the opportunity for subsidiaries to explore and identify new opportunities for value creation.

3. Organizational factors that influence the knowledge-sharing process

Organizational readiness and operational readiness assure the enterprise is prepared to respond and deliver on new product innovation challenges. This requires the appropriate environment, culture, mindset, communication system, and structure. Foss et al. (2011) argue that firm organization needs to be examined where internal practices should be considered for the support of innovation. There is limited literature available on how organizational practices influence interaction with local customers and markets even though they play a crucial role by hindering or facilitating interaction with customers (Ibid). Project processes and technology infrastructure allow for operational efficiency and implementation success. Efficient organizational and management capabilities enable the enterprise to operate effectively and deliver value within a global network. However, organizational dimensions drive characteristics and behaviors for managers and teams. Andriopolous (2001) identified five major organizational dimensions that enhance or inhibit creativity in a work environment including organizational climate, organizational culture, organizational structure and systems, leadership style, and resources and skills. In order to better understand the influences upon collaboration and knowledge-sharing capabilities, this section will examine the organizational elements of strategy, structure, culture and climate, leadership, and communication.

The MNC is a highly complex organization that faces the challenge of rapid configuration and orchestration of knowledge resources when developing and delivering new products. The organizational factors and influences upon knowledge integration capabilities are dependent upon the particular structure needed for international market demands. Firms provide the physical, social, and resource allocation structure for knowledge to be shaped into competences (Teece 1998). The relationship between organizational factors and new product project success has been explored with various findings including the role of resources involving people (strong project champion and multi-disciplinary team), development (market research), testing, and launch (Kandemir, Calantone, and Garcia 2006, Eisenhardt and Tabrizi 1995). In order to foster innovation from concept to product development to commercialization, organizations also need to consider cross-cultural needs for improving communication and networks, building a shared culture of innovation, and targeting

subsidiary activities (Gundling 2003). It is about organizational change and transformation that creates a global mindset and achieves enhanced transparency and visibility worldwide.

In developing an international perspective of the innovation process, it is useful to examine the mindset of the organization. Kleinschmidt, de Brentani and Salomo (2007) presented a model of global NPD program performance that shows the need for a global innovation culture (risk taking and openness to global markets and customers) and global knowledge integration (capturing and integrating knowledge across borders). A global innovation culture and a strong global knowledge integration capability can thus be considered as factors in facilitating new product introductions worldwide. In order to access and integrate local market knowledge, there is also a focus on new organizational practices through intensive vertical and lateral communication, rewarding employees for sharing and acquiring knowledge, and high levels of delegation of decision rights (Foss et al. 2011). It is therefore necessary to consider the organizational factors as well as the practices that influence the effective orchestration of knowledge resources across countries.

In viewing the MNC as a global network, collaboration and innovation become integral to building relationships and social capital within the firm. Innovation through inter-organizational collaborations involves different types of knowledge that should be managed within and between organizational units and functions (Sammorra and Biggiero 2008). In socializing the view of the innovation process, organizations need to recognize networks of social relationships as a critical resource for the combination and exchange of knowledge required to promote innovation and create intellectual capital (Nahapiet and Ghoshal 1998). Furthermore, social capital creation is important for building strong relationships among persons who have knowledge of the organization's dispersed activities related to global new product innovation (Athanassiou, Barczak, and McDonough 2006). Greater social interaction and network ties show higher creativity for NPD project teams (Chen, Chang, and Hung 2008). Networks and social capital play an important role in developing cross-cultural team collaboration through trust-building, team creativity, and knowledge-sharing during the global innovation process. Social capital and knowledge-sharing capabilities are thus emerging as potential solutions for optimizing cross-cultural team collaboration and innovation across the organization.

4. Organizational Leadership

The ability of an organization to change and adapt is determined by the mindset and competencies of the leadership and management teams. André Laurent contributed research

on the cross-cultural implications of organizational behavior and leadership where he contended (1986) that a truly international conception of human resource management would require willingness from headquarters to not only acknowledge cross-cultural differences but also to take active steps in order to make these topics discussable and usable. The recognition and promotion of cultural diversity and its value for global innovation needs to be driven by management teams in headquarters as well as subsidiaries in order to create a global innovation culture. Top management's commitment to international expansion is made visible by its frequent physical presence in local outposts, and its interest in, and knowledge of, the local challenges and of the people facing them (Gilbert 2007). Strong learning leadership is required to help local managers and heads of central units interactively construct the knowledge that will help them progress successfully in the global corporate context (Ibid). In analyzing the MNC and knowledge, Cantwell (2011) emphasizes the importance of considering mechanisms used by the manager and the group as well as their interactions. The manager also needs a reward system that reinforces the appropriate incentives for the team. It is therefore important to ensure that team leadership and top management actively support and drive cross-cultural collaboration and knowledge-sharing for meeting global innovation objectives.

5. Strategy-making process for international markets

In planning and organizing product innovation strategies, MNCs often need to consider the roles of headquarters and subsidiaries in terms of the divergent and convergent communication needs of the global product innovation process. The simplifying strategies of homogenization (similar treatment) and centralization (one dominant and one subordinate) often cause tensions between headquarters and subsidiaries due to issues of bounded rationality and bounded reliability (Bartlett and Ghoshal 1986). Bounded rationality refers to the problems of access to information that is of sufficient quality and quantity to guide decision-making and managerial action as well as the manager's limited capability to process complex information bundles (Verbeke 2009). Thus, bounded rationality may be linked to the access and availability of required local market information for making new product planning decisions.

Bounded reliability, on the other hand, involves the problems of an individual's desires and effort to achieve a particular outcome or performance level which may lead to an imperfect effort towards pre-specified goal achievement and incomplete fulfillment of promises (Verbeke 2009). In evaluating the global product launch project, bounded reliability

may affect the subsidiary manager's alignment of self-interest and initiative in sharing and contributing knowledge linked to local product marketing and sales opportunities. This is further complicated by the understanding of how and why absorptive capacity ensures innovation performance which is the 'ability to identify, assimilate, and exploit knowledge from the environment' (Cohen and Levinthal 1990). Thus, there is a continuous tension between HQ's ability to access local market information and the subsidiaries interest and ability to contribute local market knowledge.

These tensions are further challenged by the differences in strategy creation between HQ and subsidiaries. Strategy-making cannot be organized, formalized, or detached from operational issues (Mintzberg 1994). It is an ongoing and emergent process that demands integration of various external impacts and internal decisions. Strategy-making in the periphery is inductive in using exploratory strategy activities whereas strategy-making in the center is more deductive with an industry and exploitation focus through planning, analysis, formal intelligence, and the use of standard routines (Regner 2003). This may impact strategy-making between headquarters and subsidiaries which need to consider the process on multinationals' ability to conceive and execute effective worldwide strategies (Kim and Mauborgne 1993). When introducing new products and services to international markets, there is an interdependent process between HQ and subsidiaries for planning and execution activities. In bringing new products to market, the MNC's use of subsidiary marketing knowledge is found to directly affect the development of capabilities for other subsidiaries as well as the overall performance of the MNC (Holm and Sharma 2006). The organization's ability to recombine and reconfigure local market knowledge from subsidiaries influences its international sales capabilities.

The strategy context serves an influential role in shaping the development of knowledge and capabilities for innovation. The view and description of strategy contexts involves 'activity configurations' with specific actors, cognitive frames, socio-cultural features, artifacts and practices that create complementarities and strategy creation through their combination (Regner 2008). This can be applied to the context of strategy for introducing products to international markets where the project leader and the core team apply global and local perspectives that are integrated through organizational routines. Social embeddedness and relations become essential in the development of strategy and capabilities through shared understanding and interactions in strategy-making (Regner and Zander 2011). There is the element of engagement that needs to be considered in conceiving and introducing

new products. In considering the social meaning, strategy-as-practice has focused on the importance of socially-shared understanding and shared views of practices within the organization and their impact upon strategy-making (Johnson et al. 2003, Whittington 2006, Jarzabkowski 2004). Shared understanding appears to be particularly important when new knowledge, capabilities and strategies are formed via complex social and knowledge-based relationships in sub-groups within the MNC (Regner and Zander 2011). Shared understanding in strategy-making for global product innovation thus becomes an important focus due to the complexity of introducing new products to diverse markets, cultures, and customers.

6. Organizational structures and systems

The framework and support that determine the structure and systems of an organization largely determines the process of work within groups. Thus, the ability to recognize and adapt to new market opportunities is influenced by the flexibility or rigidity of an organization. Csikszentmihalyi and Sawyer (1995) propose the challenge for organizations is to create cultures that direct internal creativity (such as technology, structures, staff and individuals) towards external creativity (such as customers, competitors, suppliers, and governments) which results in increased market share and customer satisfaction. When a multinational organization is operating in multiple international markets, the complexities of structure need to be simplified in order to allow for creativity and innovation. Kanter (1996) notes that innovation is ‘most likely to grow in organisations that have integrative structures and cultures emphasizing diversity, multiple structural linkages, both inside and outside the organization, intersecting territories, collective pride and faith in people’s talents, collaboration, and teamwork’. Csikszentmihalyi (1988) proposed a holistic view for organizations where creativity emerges from the experiences and interactions of individuals and their teams in transmitting structured information and action, as well as the wider field or social system of community of managers, leaders, and customers – it is a dynamic framework of creativity where the interaction of all three systems are necessary for creativity. It is thus important to focus on the structures and systems that influence interactions within the MNC.

a) Knowledge-sharing structures and systems

The concept of knowledge integration has evolved as a critical component in organizational learning and strategy. In developing a global system for managing and structuring knowledge, an effective knowledge management system includes knowledge acquisition, storage, analysis and data mining, sharing and dissemination, application, and

validation (Marquardt 1998). There are both static and dynamic elements in managing tacit as well as explicit knowledge. When treating knowledge-sharing between cultures, there is the consideration of sticky knowledge (Szulanski 1996) which is more complex, tacit and systemic. In managing the gap between people and technology, the failure of knowledge projects is mostly attributed to lack of knowledge control or ownership, insufficient space to connect and learn, limiting discussions, and an over-emphasis on technology (Cohen 1998). There appears to be a lack of structure as well as opportunity for communication and exchange. Ichijo explains that effective management of knowledge depends upon an enabling context that requires five elements: 1) instilling a knowledge vision, 2) managing conversations, 3) mobilizing knowledge activities, 4) creating the right context, and 5) globalizing local knowledge (Ichijo 2004, von Krogh et al. 2000). Thus, there is the need to integrate knowledge through improved communication and exchange between global and local team members.

Knowledge requires the development of strong and trustworthy relations, especially within organizational boundaries. Efforts to share knowledge and increase innovation in organizations are likely to fail unless they are built on a firm foundation of social capital, the relationships of trust and mutual understanding that make knowledge collaboration possible (Cohen 2007). Social capital creation is enabled by the following elements: Space and time to meet and work closely together, trust-building, equity of opportunity and reward, and the analysis of existing social networks (Ibid). There is an emphasis on relationships and trust-building in order to foster communication and sharing. Cognitive capital seems to be a critical element alongside structural and relational capital – it also contributes to the capacity to absorb knowledge, one of the most important organizational characteristics (van Wijk, Janesen, and Lyles 2008). The ability to develop trust and strong relationships combined with the capacity to absorb knowledge through social and cognitive capital are important considerations for effective knowledge-sharing.

b) Framework for global headquarters and local subsidiaries

There are external and internal conditions of the organization that impact the relationship between headquarters and local subsidiaries. HQ management may seek a situation that would allow congruence between its goals and those of the subsidiary (Eisenhardt 1989). On the other hand, the means to achieve this goal may differ between HQ and subsidiaries where HQ may not have full knowledge about local conditions that affect achievement of the goal and may have the perspective that subsidiaries lack expertise or

knowledge for strategic implementation (Tasoluk et al. 2006). The lack of trust between HQ and subsidiaries in each other's competencies and capabilities appears to be a powerful causal condition in the emergence of means congruence (Ibid). An empirical study by Wang et al. (2004) concerning MNCs and their subsidiaries in China found two groups of factors for the MNC parent and subsidiary: Knowledge contributed by the parent to the subsidiary is affected by 1) the parent's capacity to transfer knowledge and parent's willingness to transfer knowledge. On the other hand, knowledge acquired by the subsidiary from its parent is determined by two factors: 1) the subsidiary's capacity to acquire knowledge and 2) the subsidiary's intent to acquire knowledge. In reviewing these two studies, one can conclude there is the issue of competence trust where HQ management may have the perception that subsidiary managers lack strategic competencies in executing the product launch whereas subsidiary managers may have the perception that HQ lacks the required local market knowledge to ensure a successful local product launch.

There are frameworks that address the trust and communication issues between headquarters and subsidiaries. Gupta and Govindarajan (2000) have argued that a complete mapping of the knowledge transfer process requires attention to all of the following five major elements: i) value of the knowledge possessed by the source unit, ii) motivational disposition of the source unit regarding the sharing of its knowledge, iii) the existence quality, and cost of transmission channels, (iv) motivational disposition of the target unit regarding acceptance of incoming knowledge, and (v) the target unit's absorptive capacity for the incoming knowledge. The value, motivational disposition, and absorptive capacity become key considerations for ensuring communication of knowledge. There is also the consideration of goal alignment. Successful new product introductions in international markets require parallel alignment of goals and objectives in the new product process, resources, and behavior through the use of integrating mechanisms to generate a high level of coordination across headquarters and subsidiaries in different countries (Wong 2002). This brings into question the process of coordination and its impact upon trust between HQ and subsidiaries where competence trust may be lacking between HQ and subsidiaries and can thus influence collaboration capabilities.

c) Role of subsidiaries in innovation process

The role of local managers in subsidiaries determines the commitment and capability to introduce new products to target markets. Due to the interdependent nature of conceiving and introducing new products, HQ and subsidiaries hold critical and complimentary

knowledge that need to be integrated for successful execution. Developing international networks inside the company has also been viewed as a mechanism for fostering subsidiary initiatives (Birkinshaw and Hood 2001). The ability of the subsidiary manager to initiate and communicate new market knowledge contributes valuable information for strategic planning activities. Lee et al. (2008) argue that the value of a foreign subsidiary comes partly from its interactions with customers and competitors of its host country market and with its headquarters. Moreover, the subsidiary plays a critical role in effective execution of the launch in addressing the local product and marketing mix. Research has shown the importance of decentralization, subsidiary management credibility, communication, and a global perspective in determining entrepreneurial initiatives at the subsidiary level (Birkinshaw 1997, 1998), (Verbeke et al (2007)). The ability to respond to local market opportunities and to adapt products and services to local market needs requires an effective knowledge-sharing process for globally distributed teams.

The nature of a subsidiary's embeddedness can also impact its performance and role at the corporate level. Andersson et al. (2001) argue the closer a subsidiary' external business relationships with suppliers and customers, the easier it will be to assimilate new knowledge from outside, the more the subsidiary can innovate and increase its performance in the local market. The relationship embeddedness of both a subsidiary's external and corporate networks contributes positively to the business performance of subsidiaries that receive innovations from within the corporate network (Hallin et al. 2011, Almeida and Phene 2004). This can be explained by relationship embeddedness in the external network providing a better understanding by actors concerned of what is required in the local market as well as a positive business performance for the internal or corporate network where local needs may be more easily integrated into the innovation development process when the relationship with the MNC/HQ counterpart for innovation development is based upon mutual adaptation, long-term orientation, interdependence and trust (Ibid). The subsidiary brings value in its relationship-oriented functions such as the co-production of market knowledge with headquarters and other subsidiaries (Cui, Griffith, and Cavusgil 2005). There is also the challenge of multiple embeddedness for MNCs launching products into multiple locations simultaneously. Subsidiaries need to balance internal embeddedness within the MNC network with their external embeddedness in the host market (Meyer et al. 2011). Thus, the view and relationship of HQ towards the subsidiary is influenced by the role of the subsidiary and its ability to create value within the host market.

7. Organizational culture

The organizational environment serves as a key factor for inspiring and sustaining innovation amongst teams. Information flows may depend on organizational culture and climate where enabling factors in the organization can influence and highlight the importance of information (Angle 1989). In examining the organizational culture and climate for innovation, we view organizational culture as deeply held assumptions, meanings, and beliefs (Martin 2002) whereas climate is the manifestation of practices and patterns of behavior (rooted in assumptions, meaning, and beliefs) (Amabile 1996). There are a few models that examine organizational culture and its impact upon employees. Schein (1992) argues that organizational culture is a pattern of basic assumptions that have been evolved, discovered, or developed by a given group as it learns to cope with problems of external adaptation and internal integration. Furthermore, his model examines culture through three elements, artefacts, values, and basic assumptions. The artefacts are the visible organizational structure and processes, values are the social principles, goals and standards held within the culture as intrinsic worth, and underlying assumptions are beliefs and habits of perception, thought and feeling that are assumed (Schein 1984). Thus, organizational culture consists of deeply held assumptions, meanings, and beliefs that are developed and integrated by groups as practices within the organization.

In order to understand organizational culture, it is also important to consider the global and local contexts that influence the development of common values and beliefs within the firm. Davenport et al. (2006) emphasize that diversity and sharing, not conformity and protection, are acknowledged for creativity and innovation and cross-border collaboration for organizational cultures. In the 2008 IBM study of 1130 senior leaders in 40 countries, CEOs emphasized the importance of having a common corporate culture while sustaining the diversity of local cultures for innovation. There is the need for balance in ensuring a unifying global culture for employees while ensuring the local culture retains its ties to local markets and customers. Furthermore, Fink and Mayrhofer (2001) note that ‘organisational efforts to create customer value through the transformation of resources into customer benefits are embedded into the culture of the organisation’. Therefore, it is important to consider the role of organizational culture and its impact on collaboration and global team performance in developing new products and services.

a) Global innovation culture

An organizational culture with a strategic intention to cultivate innovation within its global network requires specific elements. Organizational culture can be viewed as a valuable strategic resource as it can provide a supportive structure and strategic motivation for global product innovation and launch which demands further research and understanding (Calantone and Griffith 2007). In addressing organizational culture, Kanter (1988) states that innovation is most likely to occur in organizations that have integrative structures, emphasize diversity, have multiple structural linkages and intersecting territories, have collective pride and faith in people's talents, and emphasize collaboration and teamwork. It is important to understand how to create yet also nurture an innovation culture in the long-term. A sustainable innovation culture incorporates innovation, education, and training on a continuous basis, co-location and secondments, innovation networking, and reward and recognition for innovation (Zairi and Al-Mashiri 2005). Thus, managers need to understand the key elements of a global innovation culture as well as the practices that will sustain innovation.

However, there is also the need to address collaboration and knowledge-sharing within the organization. A culture oriented towards innovation and knowledge management is a relevant factor for efficient contribution to the improvement of a company's technological results (Donate and Guadamillas 2010). In order to meet the demands of a changing global marketplace, companies need to consider organizational factors that nurture and sustain innovation. Kleinschmidt, de Brentani and Salomo (2007) developed a model of global NPD program performance that shows the need for a global innovation culture (risk taking and openness to global markets and customers) and global knowledge integration (capturing and integrating knowledge across borders). This model provides a better understanding of the organizational factors that influence product innovation and knowledge, however it does not address the climate and the processes that influence the achievement of a global innovation culture and knowledge integration. Sarros et al (2008) have shown that organizational culture is an important determinant for the climate of innovation as measured by the adequacy of resources, the encouragement and support of change and creativity and its impact upon strong and visionary leadership. It is therefore necessary to examine the relationship between organizational culture and climate.

b) Organizational climate for innovation

Organizational climate serves as an integral element of organizational culture when nurturing creativity and innovation within the firm. The definition of organizational climate

can be viewed as a multi-dimensional phenomenon descriptive of the nature of an individual's experiences within an organization (DeCotis and Koys 1980). This includes 'the experience of history, internal and external struggles, the types of people it attracts, work and management processes and physical layout, the modes of communication, and the way authority is exercised within the organization' (Katz and Kahn 1978). A more recent definition of climate provides a short yet concise explanation: 'the recurring patterns of behavior, attitudes, and feelings that characterize life in an organization' (Isaksen et al. 2000). In reviewing these definitions, it becomes clear that organizational climate is closely tied to the experience and interactions of people within the organization on individual and group levels.

The expectations, vehicles, and knowledge source of communications can influence how innovation is conceived and applied. DeCotis and Koys (1980) surveyed and integrated past literature to create eight key dimensions of organizational climate including autonomy, trust, cohesiveness, support, recognition, fairness, and innovation. In developing a method to assess the organizational climate for creativity, Amabile et al. (1996) and Tesluk et al. (1997) have developed instruments to assess perceptions of work environment dimensions deemed important in empirical research and theory on creativity in organizations including goal and means emphasis, encouragement, autonomy or freedom, resources, pressures, and support. Amabile (1997) argues that intrinsic motivation is often developed from social conditions and encouragement in the form of expertise, creativity, and motivation. This can often be determined by a climate that offers challenging work, fosters innovation and the generation of new ideas, and the development of diverse work groups with support and resources.

In examining the impact on individuals, teams, and organizations, climate appears to have a strong influence on organizational performance. Ekvall et al. (2000) further identified nine dimensions for enhancing creativity in the organization, including challenge and involvement (degree of involvement in daily operations, long term goals, and visions), freedom (the independence in behaviors exerted by people in the organization), trust/openness (emotional safety), idea time (amount of time used for elaborating new ideas), conflict (presence of personal and emotional tensions), idea support (how new ideas are treated), debate (differing views, ideas, experiences, knowledge), and risk-taking (tolerance of uncertainty and ambiguity in workplace). Climate affects organizational and psychological processes such as communication, problem-solving, decision-making, conflict handling, learning and motivation which impacts efficiency and productivity as well as the ability to innovate (Ekvall et al. 2000). These dimensions pertain to the individual level, however it is

also important to consider the team level. In studying team effectiveness and innovation at work, West et al (1990) identified four determining factors: participative safety, support for innovation, team vision, and task orientation. In reviewing these organizational factors for nurturing a climate of innovation, it is clear that organizational and communication processes influence the ability for people to initiate and collaborate on projects through the development, validation, and implementation of new ideas.

When the project leader facilitates the global product launch project, the climate for teams that are globally distributed and multicultural needs to consider the expertise or knowledge, creativity and motivation at the managerial level. Foss et al. (2011) examined the organizational practices that impact individual incentives to absorb knowledge from outside the firm and share this knowledge inside the firm which led to the identification of three key practices: Intensive vertical and lateral communication, rewarding employees for sharing and acquiring knowledge, and high levels of decision rights. Whether the manager is transforming outside knowledge from customers or inside knowledge gained from own expertise and that of others, practices that assist the manager in developing innovation and creativity are critical to organizational performance.

In order to examine the links between theory and practice for enhancing creativity, Amabile and Khaire (2008) gathered nearly 100 thought leaders to discuss an emerging agenda for business leaders in managing creativity and innovation. The key ideas that transformed into new guidelines included abilities to encourage ideas within the organization (ask inspiring questions and allow ideas to emerge from the workforce), enable collaboration (avoid lone inventor myths and use various methods for teams to conceptualize together), enhance diversity (get people with different backgrounds to work together while gaining diverse experiences), identify and support stages of creativity (avoid process management and provide sufficient time and resources for exploration), accept and manage failure (create psychological safety and recognize usefulness of failure), and motivate with intellectual challenges (protect the front-end from commercial pressure and facilitate creative projects) (Ibid). Emerging organizational practices are clearly focusing on increased collaboration, creativity, risk-taking, and diversity of knowledge.

D. Knowledge-sharing and Cross-cultural Team Collaboration

1. Leveraging cultural diversity in global organizations

The management of cultural diversity defines an organization's approach to cross-cultural management. Organizations have often approached this challenge by responding to three different approaches: parochial, ethnocentric, and synergistic (Adler 1997). The most common responses – parochial and ethnocentric – either do not recognize cultural diversity and its impact on the organization or recognize cultural diversity only as a source of conflict or problems. This brings into question how national culture affects the development of organizational culture where there are two approaches in applying a universal organizational culture or recognizing the diversity of national cultures (Pesqueux 2004). Synergistic is the least common response where organizations view culture as leading to both advantages and disadvantages through integration of diverse ideas. While organizations are showing more convergence in structure and technology, they still show divergence in the cultural behavior of people within organizations (Adler 1997). Cultural differences need to be recognized and used as an advantage rather than a liability. Thus global organizational development must match strategy, structure, and systems with the people skills of engagement, enablement, and execution (Gundling 2003). The ability to leverage cultural diversity thus requires the consideration of a number of different elements.

The demand for organizational knowledge-sharing requires new approaches to managing cross-cultural team interaction. Rather than manage cultural differences, international project teams will need to integrate cultural differences and similarities in order to share, create, and implement innovative customer solutions that respond to global and local market needs. Cultural diversity thus becomes a key resource in designing and developing global learning organizations (Adler 1997). Organizations will need to leverage cultural diversity rather than manage cultural differences. Denial of cultural diversity has been shown to have a negative effect on innovation performance and project performance (Bouncken, Ratzman, and Winkler 2008). While research has suggested cultural diversity's effect on teams is mediated by specific team processes and moderated by contextual variables, Maznevski et al. (2010) propose that cultural diversity affects teams through process losses and gains associated with increased divergence and decreased convergence. Their study results show that cultural diversity may lead to process losses through task conflict and decreased social integration, however cultural diversity also leads to process gains through increased creativity and satisfaction. The ability to increase innovation performance in

challenging times depends on how effectively business leaders can develop a global mindset and harness diverse perspectives to drive innovation (Ernst & Young 2008). MNCs are increasingly faced with the need to leverage cultural diversity in facilitating and accelerating innovation within the organization.

2. The role of culture

The notion of culture in business is a complex and elusive topic when seeking a precise definition for people and organizations. In seeking a definition for people and national culture, it is important to understand the influence of national cultures on organizational behavior when focusing on global strategy-making and management (Adler 1997). Although there have been numerous definitions of culture, the definitions of Kroeber and Kluckhohn (1952) and Hofstede (1980) are the most cited for research. After cataloging over a hundred definitions of culture, anthropologists Kroeber and Kluckhohn presented a comprehensive and widely accepted definition of culture:

Culture consists of patterns, explicit and implicit, of and for behavior acquired and transmitted by symbols, constituting the distinctive achievement of human groups, including their embodiment in artifacts; the essential core of culture consists of traditional (i.e. historically derived and selected) ideas and especially their attached values; culture systems may, on the one hand, be considered as products of action, on the other, as conditioning elements of future action.

In Kroeber and Kluckhohn's definition, culture is shared by members of a social group; culture shapes behavior and structures one's perception of the world (Adler 1997). On the other hand, Hofstede's definition emphasizes culture as difference, as follows:

Culture is the collective programming of the mind which distinguishes the members of one human group from another...the interactive aggregate of common characteristics that influences a human group's response to the environment.

There is an interesting and important distinction about culture that is important to emphasize for this research: Edward Hall (1987) and Edgar Schein (1992) were concerned with visible and invisible culture. Hoecklin (1995) has argued that *'the essence of culture is not what is visible on the surface. It is the shared ways groups of people understand and interpret the world. These differing interpretations that cultures give to their environment are critical influences on interactions between people working and managing across cultures.'*

For the purpose of this dissertation research, the role of national culture is examined in terms of how it shapes behavior and structures one's interpretation of the world when interacting

with people in a cross-cultural team context. There is also the element of language since it can influence interactions amongst a cross-cultural and geographically distributed team. The work of Piekkari (2011) and Usunier (1998) emphasizes the role of language in business where foreign languages still express culturally specific patterns or behaviors despite the use of English as the international business language. Finally, there is the cultural orientation involving the interaction of values, attitudes, and behaviors of individuals and groups. Individuals may express culture and its normative qualities through the values that they hold about life and the world around them which in turn affect their attitudes about the form of behavior considered more effective in any given situation (Adler 1997). Values, attitudes, behaviors, and language are important considerations when facilitating interactions for cross-cultural collaboration.

3. The role of cross-cultural collaboration

Due to the rapid growth and popularity of eco systems and business networks inside and outside the organization, MNCs are paying increased attention to the role of collaboration. Solving complex problems through collaborative teamwork is viewed as the largest change factor and the leading type of interaction inside and outside the organization at present and in the future (EIU Study 2006). Moreover, the top organizational changes until 2020 are expected to be closer involvement with customers in product/service development processes (82%) and incentives for employees to collaborate more effectively across functions within the organization (79%) (Ibid). As organizations invest in collaboration efforts, there will be more demand for specific knowledge and skills in effectively collaborating across borders and cultures.

Since collaboration is a primary focus for organizations, there needs to be more attention on the skills and competencies of internal teams. Drawing insights from a worldwide study (with over 100 managers in 20 firms that use collaboration in innovation efforts), MacCormack and Forbath (2008) found that leading firms make strategic investments in collaboration based upon the following key areas:

- *People* – Consideration for recruitment, training, evaluation, and reward systems for ‘soft’ skills training for managers to improve motivation and collaboration abilities.
- *Processes* – Learning-driven approaches for collaboration in order to identify roles and responsibilities for team members worldwide.
- *Platforms* – An infrastructure or set of tools and standards that allow the sharing of data and teams can work together seamlessly.

- *Program* – Building a firm’s collaborative capabilities through a dedicated program rather than standalone activities.

Organizations that intend to build a strong foundation for high performance collaboration need to consider several factors. Evans and Wolf (2005) found that organizations seeking effective collaboration often rely upon two infrastructure components: a shared pool of knowledge and universally available tools. In addition to the infrastructure, organizations need to consider leaders as connectors, a common work discipline, widespread communication, semantic knowledge, and intrinsic motivation. In studying successful MNCs, the authors summarize key elements for creating the MNC network worldwide:

- *Pervasive collaborative technology* – simple, open technology with adaptability.
- *Visible work* – there should be an open and shared view of work.
- *Communities of trust* – Collaboration is facilitated by increased trust in the organization.
- *Modular thinking* – Focusing on recombining value through options.
- *Teamwork* – Encourage and reward group initiatives.

4. Cross-cultural management concepts and research drivers

With the growth of global business, the demand for cross-cultural competencies has increased throughout the organization. The international business literature has recognized that global integration as relevant to MNC activity is about increasing interfaces between people, nations, and cultures that continue to retain local distinctiveness (Meyer et al. 2011). The need for effective cross-cultural management of people and resources around the world is thus essential to the performance and success of the MNC. Cross-cultural management explains the behavior of people in organizations around the world and shows people how to work with clients and employees from various cultures (Adler 1997). The concept of culture as a social construct has evolved into three streams of research for international cross-cultural management (ICCM): 1) ICCM studies with a focus on cross-national comparison, 2) ICCM studies with an intercultural interaction focus and 3) ICCM studies from a multiple cultures perspective (Boyacigiller et al. 2002). Although this dissertation is focused on intercultural interaction research, it is important to understand the distinction and relevance of all three streams of cross-cultural research. A review will therefore be presented concerning the context, drivers, research methods and contributions to theory.

The context of cross-national comparative research is dominant in the literature concerning culture with noted authors such as Geert Hofstede, Fons Trompenaars, André Laurent, and Philippe d'Iribarne. The implications for the conceptualization of culture in cross-national comparative research involves an interest in the relationship between management and economic development and comparative systems management as well as an interest in the link between cultural values and managerial attitudes and behaviors (Boyacigiller 2002). Dimensions-based conceptualizations of culture were first developed by Hall (1959) and Kluckhohn and Strodtbeck (1961). While Hall offered the building blocks to cultural research that included polychronic and monochronic time as well as high context and low context culture (1976) that served to define distinct dimensions in culture and valuable frameworks that are still used at present. The concept of high context culture shows an emphasis on relationships, indirect communication, implicit behavior whereas low context infers a focus on task and time with direct communication and explicit behavior. Kluckhohn and Strodtbeck provided six dimensions of culture that served as an initial framework for many researchers including Hofstede and Trompenaars. These six dimensions included the nature of people (good or bad), nature (live in harmony or not), relationships (individual vs. group), activity mode (being or doing), space (private or public), and temporal situation (past, present, or future).

Geert Hofstede's work provided a landmark study since he corroborated and integrated the results of other studies through an extensive literature review and then performed a 60 country study of Oriental and Occidental cultures within IBM (which included an extensive database of attitude surveys for 116,000 IBM employees). Hofstede's contribution to the field brought great value since a set of universal dimensions was created with measures of culture that could be used for further research (Boyacigiller 2002). Hofstede and his seminal work in 'Culture's Consequences' continues to offer a strong foundation and influential framework for studying culture. The study results focused on significant differences in the behavior and attitudes of employees and managers from different countries. Hofstede's work is primarily focused on the management of cultural differences and does not address cross-cultural interactions.

The four basic dimensions (which later became five dimensions) include power distance, individualism and collectivism, uncertainty avoidance, masculinity and femininity, and time orientation (Hofstede 1997). Power distance refers to the extent to which less powerful members of institutions or organizations accept that power is distributed unequally,

where large power distance refers to hierarchical structures and small power distance refers to flat structures; Individualism refers to how people are supposed to look after themselves and their immediate families only while Collectivism refers to how people belong to in-groups or collectives which are supposed to look after them in exchange for loyalty; Uncertainty Avoidance examines strong and weak factors in regard to the extent to which people feel threatened by ambiguous situations and have created beliefs and institutions that try to avoid these situations; Masculinity vs. Femininity refers to the societal values where masculinity represents the dominant values in society such as power, money, and things and Femininity refers to the dominant values of caring for others and quality of life; and finally Time Orientation which refers to short-term (immediate and action-oriented) and long-term (future and planning-oriented). These cultural dimensions have influenced numerous studies in the field of cross-cultural management as well as knowledge management and innovation for national and cultural comparison of differences.

Hofstede's colleague and former collaborator Fons Trompenaars then developed seven dimensions with his co-founder Charles Hampden-Turner (1998) which further extends the implications for managerial behaviors and attitudes. These dimensions include: Universalism vs. particularism (rules vs. relationships), individualism vs. collectivism, specific vs. diffuse, achievement vs. ascription, sequential vs. synchronic, internal vs. external control, and neutral vs. emotional. The authors have further attempted to link the dimensions to innovation practices (2010) by examining them through the lens of conceptualizing and marketing products globally and locally.

The dimension of universalism versus particularism is linked to the global/standardization and local/adaptation dilemma. Self-interest and personal fulfillment is linked to individual and team focus for the innovation project; neutral versus affective (emotions inhibited versus emotions expressed) refers to team members' attitudes towards the innovation process; specificity versus diffusion refers to the innovation journey from specifics to diffuse, system-changing wholes for arriving at a solution. Trompenaars and Hampden-Turner (2010) note that the most effective work environments include the combination of specific and diffuse sources of knowledge. Then there is the sixth dimension of achievement versus ascription which is defined as inner-directed or control and direction from within whereas outer-directed where control and direction come from without. The seventh and final dimension is sequential versus synchronous time which the authors link to time to market as a sequential and traditional approach or 'push' strategy compared to the synchronous approach

or 'pull strategy' where resources are mobilized as needed. The seven integrations for innovation teams represent a capacity the authors call transcultural competence (Trompenaars and Hampden-Turner 2010). While Trompenaars' work has helped further understanding of cultural differences in values and practices, it has not explored the nature or effects of cross-cultural interactions.

Additional authors have made valuable contributions to the literature concerning beliefs and value systems. Based upon implicit beliefs about effective action in organizations, André Laurent's work includes the (1986) exploration of the effects on organizational behavior concerning cultural differences such as authority, political systems, hierarchical relationship systems, and role-formalizing systems. Shalom Schwartz (1992) developed a framework that includes seven cultural value dimensions of egalitarianism, harmony, embeddedness, hierarchy, mastery, affective autonomy and intellectual autonomy. The purpose of this work was to explore the question of cross-cultural or cross-national differences in value priorities by identifying some of the causes and effects. Schwartz and colleagues followed a similar research approach to Hofstede in studying whole cultural groups as unit of analysis where the sample was drawn from teachers and students in 20 countries across all continents. This work has proved influential as it has been evaluated and applied to several studies within business and creativity.

Although Hofstede's framework has dominated the research field, a more recent landmark study concerning the conceptualization of culture has been developed by Robert House (2004) and colleagues through the GLOBE study (Global Leadership and Organizational Behavior Effectiveness) where the study is more focused on culture's influence on leadership and related organizational effectiveness (Boyacigiller et al. 2002). Using both etic and emic approaches, GLOBE presents nine uni-dimensional culture scales including avoidance of uncertainty, power distance, collectivism 1 (societal emphasis of collectivism), collectivism 2 (family collectivism), assertiveness, gender egalitarian, future orientation, performance orientation, and human orientation. The study has effectively extended Hofstede's work by presenting multiple measures of culture based on shared values of organizational or society members and current organizational and societal practices produced by a network of 170 social scientists and management scholars from 62 cultures around the world (Boyacigiller 2002).

Although Hofstede and GLOBE frameworks have inspired and contributed to further research in the field, they have also received criticism for generating general outcomes that

lack in depth understanding. Kirkman et al. (2006) note that Hofstede-inspired research is fragmented, redundant, and overly reliant on certain levels of analysis which demands more specific research to address current gaps. On the other hand, Javidan et al. (2006) find that GLOBE does not fully explore the dynamics of cultural contact in order to discover how different cultural dimensions interact. Since methods employed in cross-national comparative research are primarily large-scale quantitative studies, there is a challenge in understanding particular cultures in context due to the lack of in-depth qualitative research.

In the quest for a deeper understanding of cultural behaviors and practices, there are the remaining models of multiple cultures and intercultural interactions that examine context more closely. Multiple cultures is a relatively new research field that encompasses organization studies and the concept of organizational culture with a primary research focus on identity work and the interplay of different cultural identities which also involves mixed methods of research (Boyacigiller 2002). The growth and rapid change of the global economy has brought increased interest and attention to the interaction of national cultures. Intercultural interaction research is an emerging framework for conceptualizing interaction between persons in multinational organizational settings which have been shaped by 1) work on organizational culture, 2) an interest in interpretive frameworks, 3) the application of anthropological theory and methodology to organizational analysis and 4) communication studies. The approach is closely aligned to this dissertation research.

The cultural synergy model of interaction deals with international diversity and intercultural management (Adler 1983) where it is important to understand under which conditions universal (patterns common to all cultures) and pluralistic (culturally specific patterns) approaches can be used. Finally, it is important to understand how to use cultural synergy with universal patterns of management and organization which are effective for all cultures and based on both cultural similarities and differences. Based on the understanding of cross-cultural interactions, the underlying assumption of synergistic research is the possibility for multinational and multicultural organizations to use a manager-created balance between specific and general approaches (Ibid). Methodology is often based on social or cultural anthropology in making cultural interpretations primarily through qualitative data analysis using ethnography or data collected through personal interviews with qualitative analysis of data. The primary research method used for this dissertation is based upon intercultural interaction research using the cultural synergy model based upon qualitative research through personal interviews and qualitative analysis of data.

5. Challenges and opportunities in sharing knowledge across distance

Geographic and cultural distance demand special considerations for collaborating and sharing knowledge during international projects. The literature shows the complexity of establishing shared understanding, trust, and effective organizational practices across distributed contexts which is governed by the use of information technology and the difficulties in engaging through such mediated work (Olson and Olson 2000; Sorensen 2005). There is the consideration of both social and technological factors in facilitating interactions that promote understanding and learning. The effects of cultural distance process on team learning includes four main factors: team creativity, task complexity, knowledge ambiguity, and team conflict. Exploratory learning and exploitative learning are affected by these four factors in different ways within NPD (Murray and Zhou 2007). Thus, it is necessary to further investigate processes that enhance knowledge-sharing yet reduce ambiguity and conflict.

In reviewing the research concerning team processes and knowledge coordination amongst geographically distributed team members, the transactive memory system (TMS) has emerged as a group information processing technique for knowledge coordination in teams. TMS primarily addresses the way that groups process and structure information and the shared division of cognitive labor regarding group members' encoding, storing, and retrieving of information (Wegner 1987). As a process, TMS allows group members to understand who possesses what specialized knowledge (specialization), to trust the reliability of that knowledge (credibility), and to organize differentiated knowledge effectively (coordination), in this way enhancing the group's capabilities through effective use of each other's resources and knowledge (Zhang et al. 2007). TMS thus focuses on team members' distributed knowledge and expertise and on how this distributed knowledge is combined (Kozlowski and Ilgen 2006). Zhang et al. (2007) found that task interdependence, cooperative goal interdependence, and support for innovation are positively related to work teams' TMS which, in turn, is related to performance. TMS helps structure knowledge flow and exchange while relying on particular tools for storing and retrieving information.

When conducting cross-border transfer of organizational knowledge, there is always the need to consider different cultural contexts. Bhagat et al. (2002) suggest that effectiveness of cross-border knowledge transfer is directly related to the type of knowledge involved in the transfer process where the transfer of knowledge is moderated by 1) the nature of transacting cultural patterns and 2) the cognitive styles of the individuals involved in such transactions. In moderating the effectiveness of this transfer, they propose a theoretical framework for

understanding cultural patterns in using the dimensions of individual-collectivism and verticalness-horizontalness. When examining the individualist culture compared to collectivist cultures it is shown that individualist cultures are explicit and independent whereas the collectivist cultures are tacit and systemic. In comparing verticalness and horizontalness, verticalness is defined as standing out and differing in status whereas horizontalness is defined as having the same status and not wanting to stand out (Bhagat et al. 2002). The authors contribute to understanding and awareness of the role of dimensions and cultural patterns in cross-border knowledge transfer. However, the role of cognition also needs to be addressed in understanding the interactions that take place between people working in different geographic locations.

E. Understanding the cross-cultural knowledge-sharing process

1. Developing a collaborative space

The organizational environment provides a knowledge-sharing space that integrates functions, cultures, and geographies. When considering innovation systems as social systems, there is a process of ‘social making’ of innovations that can define a socially accepted space determined by cultural interactions including: affective frames of identity and difference, cognitive frames of knowledge, and normative sets of values, norms, and beliefs (Pohlmann et al. 2005). Developing a space that integrates and motivates members to share knowledge is a complex endeavor due to the multiple determinants for cross-cultural interactions. Regner and Zander (2011) suggest that an agglomeration of diverse social identity frames, nested inside a corporate centripetal frame create an arena in which exploitable new knowledge can be created. Thus, the MNC has the potential to create a social space that promotes the process of cultural interactions. It can also be viewed as knowledge absorption where an interpersonal process of developing and managing relationships lead to knowledge absorption (Kayes et al. 2005). Knowledge absorption is the capacity to gather and process knowledge external to the organization (Cohen and Levinthal 1990) where prior related knowledge such as research and development, insights from operations, and ability to gather information on marketing efforts are directly related to the ability to learn from experience. The ability to leverage social space in order to gather and exchange knowledge gathered from international markets and customers is increasingly important to organizational success.

The ability to gather and process knowledge gained from internal and external perspectives has an impact upon the interactions between cross-cultural teams in HQ and

subsidiaries. Kayes et al. (2005) identified seven cross-cultural knowledge absorption capabilities that include valuing different cultures, building relationships, listening and observing, coping with ambiguity, managing others, translating complex ideas, and taking action. Presented as an experiential learning-based model (Figure 10), the model integrates research on cross-cultural competencies, experiential learning and knowledge absorption where it is suggested that managers require four sets of competencies: Generating new internal knowledge, gathering new internal knowledge, organizing extant internal knowledge and applying extant external knowledge. In extending and integrating research in the key domains of information processing, knowledge absorption, and experiential learning, the model provides an improved understanding of the competencies and activities required to effectively manage knowledge flow.

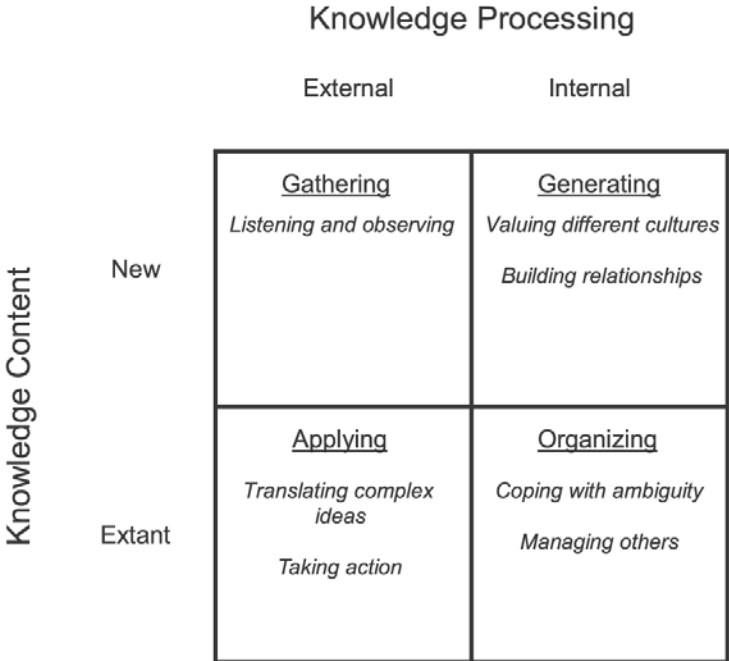


Figure 10. Cross-cultural knowledge absorption competencies. Source: Kayes et al. 2005

There is also the necessity to improve understanding of the manager’s ability to recognize and coordinate cognitive dispositions with social interactions. Ringberg and Reihlen (2008) argue that the decoding of information into meaningful knowledge is mediated by people’s private and cultural models, which are created from the unique combination of their cognitive disposition and socio-cultural interaction. Since knowledge transfer is always tentative, one should consider a socio-cognitive model that captures and explicates socio-cognitive processes involved in sense-making during the knowledge transfer. This model includes knowledge transfer outcomes of high social interaction, reflective thinking,

categorical thinking, and low social interaction which are influenced by negotiated knowledge, collective knowledge, unique knowledge, and stereotypical knowledge. In examining the role of cognitive factors and environmental feedback mechanisms, managerial implications emphasize the need of the manager to be trained to identify and coordinate people's cognitive dispositions and required level of social interaction with the type of knowledge transfer that is required for an efficient operation under a given environmental condition (Ringberg and Reihlen 2008). This work along with previous research emphasizes the increasing importance of effectively managing and facilitating effective social interactions that engage all members of the team.

2. Convergent and divergent team processes

Since shared cognition plays a central role in geographically distributed teams, it is important to understand the factors of convergence and divergence in the lifecycle of a project team. Geographically distributed teams can be effective in bringing together divergent viewpoints in producing new organizational capabilities which requires the recognition and validation of their existence (Baba et al. 2004). Although divergence can be a strength, it is also necessary to consider the process of cognitive convergence which is facilitated by separate yet parallel learning experiences in a common context, the surfacing of hidden knowledge at remote sites, shifts in agent self-interest that motivate collaboration and trigger the negotiation of task interdependence (Ibid). Divergent perspectives foster creativity and a more comprehensive search for and assessment of options, although the team must be able to integrate perspectives and arrive at a single solution (Govindarajan and Gupta 2001). Thus, it can be of benefit to encourage both divergent and convergent processes in exploring creation and recombination of knowledge resources which lead to new innovation opportunities.

3. Link between knowledge-sharing and team learning

The role of the learning process for geographically distributed teams requires a focus on strengthening cross-cultural awareness, knowledge, and skills for team members. André Laurent (1986) argues that international human resource management requires the building of beliefs in all parties involved that more creative and effective ways of managing people could be developed through cross-cultural learning. As discussed in the previous sections on knowledge-sharing and culture, there are several considerations needed for facilitating cross-cultural interactions that lead to a positive learning outcome. Cultural differences in developing and applying knowledge affects organizational learning due to the Western

emphasis on quantitative or explicit knowledge and the Eastern emphasis on qualitative or tacit knowledge (Cohen 1998). Thus, knowledge-sharing also needs to consider a balance of tacit and explicit knowledge that supports innovation objectives. Several learning theories confirm the value of interactions where Kolb (1983) argues that adults learn more effectively when learning is embedded in meaningful experiences. The cross-cultural team process brings together diverse perspectives and through collaborative dialogue allows for knowledge exchange and evolution of the decision process. This can be related to the learning cycle of generating knowledge effectively.

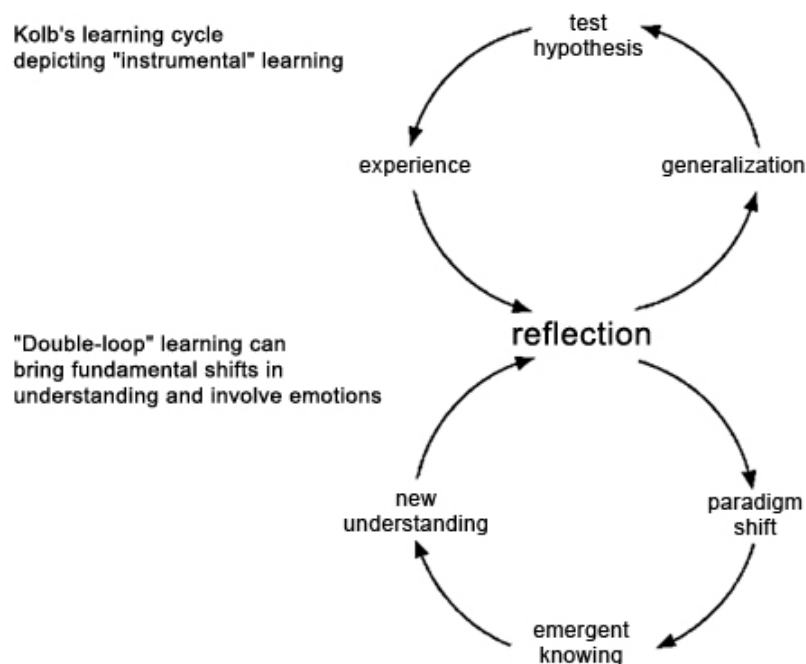


Figure 11: Single loop learning and double loop learning.

Source: Teaching resources, design for critical thinking, University of Texas (www.utexas.edu) 2012

The tacit knowledge held by individuals also becomes more explicit in the sharing process and is thus more accessible to everyone (Argyris and Schön 1978). In seeking actionable knowledge, Argyris and Schön devised two forms of learning through the concepts of single-loop and double-loop learning (see figure 11). Single-loop learning is the most common style of learning and refers to traditional problem-solving or improving the system as it exists; where double-loop learning involves questioning the underlying assumptions behind techniques, goals, and values (Argyris and Schön 1978). In below figure Kolb's learning cycle is depicted as single loop learning whereas Argyris and Schön have also

introduced the double loop that demand more reflection and dialogue from team members. During a project, teams would typically follow the established project process through single-loop learning without questioning the options or fully leveraging the knowledge of other team members. A double-loop learning process is more integrative and inclusive in that team members can fully explore the project process from goals to strategies in order to determine the best approaches for achieving successful results.

In order to promote individual and team learning, there is the consideration of an organization's influence in creating the appropriate environment for learning. Senge (2000) made the link from individual and team learning to organizational learning through a systems thinking perspective. The five elements that created a more holistic view of organizational learning include systems thinking as moving from a linear to a circular view in identifying challenges and solutions. Within the systems thinking framework there is personal mastery for the individual's personal vision and reality of what can be accomplished; mental models where reflection and inquiry of attitude and perceptions influence thought and interaction; shared vision where collective discipline create shared purpose; and team learning where discipline of group interaction happens through dialogue and discussion (Senge 2000). The circular view of organizational learning supports current demands for increased collaboration and innovation amongst teams. As noted by Peter Senge, "great teams are learning organizations where groups of people who, over time enhance their capacity to create what they truly desire to create" (Senge 2000). Senge emphasized the value for people to experience different beliefs and assumptions in order to shift minds and further the development of their skills and capabilities. This learning theory provides a strong foundation for understanding cross-cultural collaboration and successful team work.

When examining cross-cultural team learning and knowledge-sharing, it is important to consider the influences of both the organizational and team contexts. Geographically distributed teams in MNCs are also affected by cultural distance during the new product introduction process. Cultural distance can affect team creativity, task complexity, knowledge ambiguity, and team conflicts which in turn can affect exploratory and exploitative learning for new product development (Murray and Zhou 2007). Moreover, team learning is often dependent on the organizational context and strategic direction in which the team operates. A corporate emphasis on global integration can lower team learning, but an emphasis on responsiveness and knowledge management norms and procedures can increase team learning (Bruhn and Gibson 2006). Organizational contexts that emphasize responsiveness and

knowledge management can thus increase team learning which can positively influence task performance and the quality of interpersonal relations (Ibid). The global and dynamic business environment creates pressures in managing demands for integration and responsiveness that impact team learning in terms of the organizational resources available for project planning and execution.

4. Facilitating team collaboration and cross-cultural interactions

Cross-cultural interaction takes place among social systems of different cultures, by that constituting a common cross-cultural space. Action and interaction can take place only in the social sphere (Fink, Meyer, and Kölling 2007). Effective team processes need to be developed through a psychologically safe communication climate that supports the innovation process (Gibson and Gibbs 2006). Psychosocial factors such as trust, commitment, and communication play an important role in the functioning of virtual teams (Henttonen and Blomqvist 2005). Furthermore, social capital creation is important for building strong relationships among persons who have knowledge of the organization's dispersed activities related to product innovation (Athanasidou, Barczak, and McDonough 2006). The ability of cross-cultural teams to create trust, communicate, and develop strong relations can help facilitate cultural knowledge that drives the creation and implementation of new ideas.

In order to fully understand cross-cultural management interaction, it is necessary to examine how critical incidents emerge and their importance in cross-cultural interactions. Fink et al. (2007) suggest that cultural standards can provide more insights than cultural dimensions and personality traits. The cultural standard method addresses differences in the modes of perceiving, sensing, thinking, judging, and acting within and across different cultures (Fink and Meierewert 2001; Thomas 2003). Cultural standards were developed to generate more cultural-specific and actionable knowledge since cultural dimensions do not address the actual problems during management encounters. Fink et al. (2007) argue that a deeper understanding of the social system which is characterized by actions is needed since cultural dimensions in the cultural system and measures of personality traits in the personality system are only a proxy for cross-cultural differences between the systems. Cross-cultural interaction takes place among social systems of different cultures and thus constitutes a common cross-cultural space.

Then it is necessary to explore the central role of the social system in identifying determinants for behavior in cross-cultural interactions. Based on Parsons and Shils (1962) model of action concerning the culture system, the social system, and the personal system,

Fink et al. (2007) show how cultural dimensions, cultural standards, and personality traits are related and thus determine behavior in cross-cultural interactions. Critical incidents occur when choosing actions and re-actions in regard to particular cultural values and cultural standards and ignoring the other party's values and cultural standards (Ibid). The authors contribute to the literature on cross-cultural interaction by demonstrating the relations between cultural dimensions and their influence on critical incidents. This provides more awareness and knowledge in understanding and effectively managing cross-cultural behavior and cross-cultural performance.

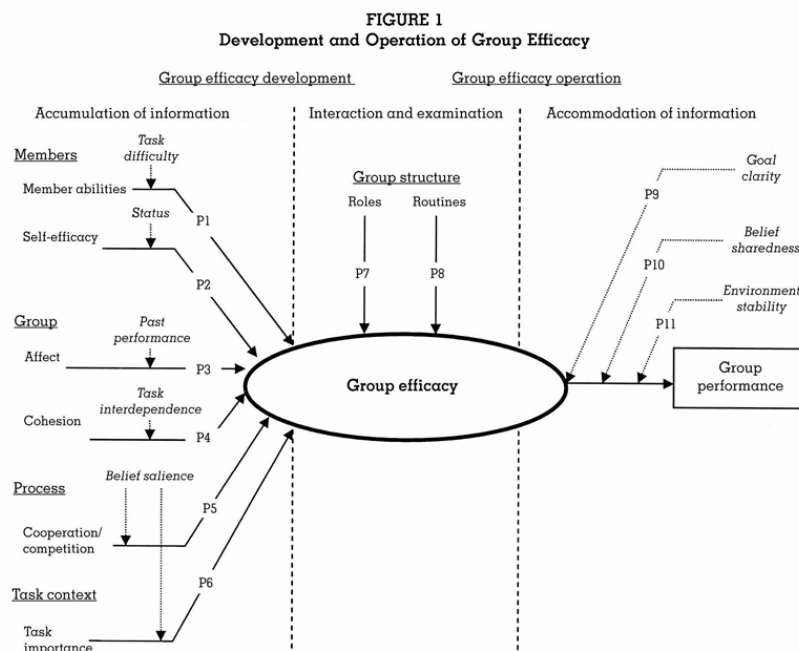


Fig. 12. Development and Operation of Group Efficacy.

Source: Earley and Gibson, 2007

The ability to develop and operate group efficacy requires specific conditions and activities. Earley and Gibson (2007) argue that group efficacy can be conceptualized as a 'cognitive product' developed through collective cognition where the processes represent (Gibson 2001) accumulation (assembly of information), interaction (exchange of information), examination (negotiation of meaning), and accommodation (use of information in performance). In proposing a new framework, Earley and Gibson (2007) suggest several factors that influence accumulation of information (as presented in figure 12) – members (member abilities and self-efficacy), group (affect and cohesion), process (cooperation and competition), task context (task importance); the activities of interaction and examination are

driven by roles (specificities) and routines (explicit nature); and group performance is then influenced by goal clarity, belief sharedness, and environment stability. This research extends existing empirical work on group efficacy and provides new insights to team motivation and innovation and managing knowledge within the MNC network. However, it does not completely address the role of culture and cross-cultural interactions in group collaboration.

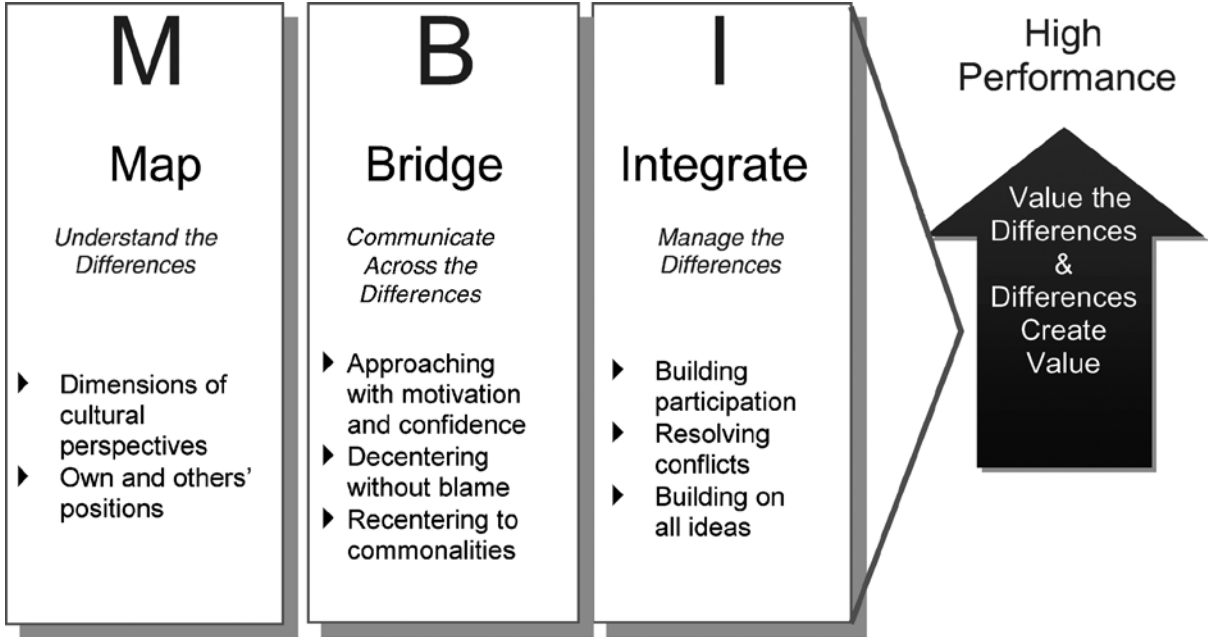


Figure 13. MBI Processes in Global Teams. Source: DiStefano and Maznevski 2003

Another approach for facilitating collaboration and enhancing cross-cultural team performance involves the concept of interactive learning and development through efficient team management. Maznevski and DiStefano (2000) have created a model of global team processes that incorporate mapping, bridging, and integration skills (see figure 13) which is based upon the ability to understand, communicate, and manage cultural differences. This model takes into account cultural dimensions and values and the influence of interactions. Mapping is understanding the team’s compositional differences and the implications for bringing the team different knowledge perspectives and approaches to relationship management; bridging is communicating across differences, and integrating is bringing different perspectives and preferences together, resolving differences among them, and building on them to generate innovative, high quality approaches (Maznevski and DiStefano 2008). It is also important to understand the benefits of such processes for team members such as the development of geographic, cultural, and functional knowledge through mapping; open and effective communications through bridging; and learning new knowledge through

integration. Maznevski and DiStefano's model effectively address the cultural factors involved in cross-cultural team management and collaboration, while influences on cross-cultural interactions are not addressed.

In order to fully understand intercultural collaboration, there must be the consideration of cultural differences and barriers to trust and interaction. Bird and Osland (2005) propose a cultural sense-making approach with considerations for value dimensions and communication styles. When engaging in collaborative projects, there is the issue of cultural conflict and the type of sense-making behavior that will help navigate the situation. Based on the sense they make of the situation, they construct a response (Weick 1995) that is rooted in a cognitive structure known as "schema" and elicits a behavioral response known as "script" (Gioia and Poole 1984). In order to effectively manage interactions and potential conflicts, managers need to consider the sense-making process. Bird and Osland (2005) thus propose a cultural sense-making model as an extension of the sense-making process (Weick 1995) that represents a universal practice. They contend that increases in business and cultural complexity present managers with a wider variety of signals and cues with greater uncertainty for interpretation and attribution as well as ambiguity in selecting appropriate scripts. Thus, effective sense-making for an intercultural collaborative context is more challenging and requires different levels of knowledge. In order to facilitate the complexity of this process Bird and Osland (2005) present an iterative cycle of sequential events: 1) framing the situation, 2) making attributions, and 3) selecting a script. The authors make a valuable contribution to advancing the understanding of cross-cultural collaboration. However, the application to the global innovation process and relevant project and team interactions require further research.

a) Trust-building

The ability to establish trust in order to interact and collaborate effectively is essential in team collaboration, especially when working with various cultures since the meaning of trust can differ. Trust is generally regarded as 'the confident expectation that, in a situation relevant to the trustor, another party (the trustee) will act in the trustor's best interest, and the willingness to rely on and be vulnerable to the trustee' (Whitener and Stahl 2004). There is a universal need for trust when working with people of different backgrounds and cultures in order to achieve collaboration and successful project results. The creation of trust depends on the individual's propensity to trust and the perception of the other party's trustworthiness, which can be defined as competence, benevolence, and integrity (Mayer et al. 1995).

Moreover, the facilitation of tacit knowledge is enabled by personal relationships that are developed based on trust and reciprocity (McDonough et al. 2005). The ability to develop trust thus depends on the perceptions of each party involved in collaborative work. Research has shown that trust is an important condition within any work team due to the dependence on knowledge-sharing which is influenced by the degree of trust that exists between people (Chowdhury 2005, Politis 2003). It is therefore important to consider the key factors that drive the creation and sustainability of trust for cross-cultural and geographically distributed teams.

Cultures vary in their propensity to trust as well as the perception of trustworthiness. In reference to the section concerning cross-cultural management and cultural dimension models, there are a few cultural dimension models that directly refer to the role of trust. In Kluckhohn and Strodtbeck's (1961) model, there is a dimension related to the view of trust where a culture tends to view partners as untrustworthy until they have earned the trust or a culture tends to view partners as trustworthy until they have proved otherwise. Hall's (1976) High Context/Low Context model refers indirectly to trust in showing that high context prefer agreements that are based on relationships where trust is developed over time whereas low context cultures view the immediate contract as a sign of trust and thus focus more on the task than the relationship. There is also the impact of differences in communication styles. The creation of a framework of intensive interaction between key parties seems to be a pre-condition for establishing cross-cultural trust, which is decisive for the successful process of changing attitudes (Fink and Holden 2005). Then the question turns to how a manager can best develop interactions that assure more trust-building amongst team members.

Understanding, identifying, and respecting cultural differences provide an initial foundation for cross-cultural collaboration. Ting-Toomey (1999) identified specific actions that can improve perceptions of trustworthiness:

1. Understanding cultural preferences – what trust and being trustworthy means in other culture.
2. Learning the expectations of trust-based behavior in that culture.
3. Matching those expectations in a consistent, dependable way.

There is also the added complication of cross-functional and geographically distributed teams which demands further adjustment for collaborative work. There are different disciplinary perspectives, different regional or national cultures, and the lack of face-to-face interaction when working across distance which can impact trust (Hinds et al. 2004).

In this sense, initial perceptions of trustworthiness are particularly important in cross-functional, geographically distributed teams (Ibid). Thus, leaders and members of virtual teams cannot always follow the same procedures for trust in traditional teamwork. Due to situational factors and socio-psychological dynamics an attitude of separation and inter-group perspectives prevail among distributed sites which require project managers to actively work on relationship management for increased trust-building (Newell et al. 2007). The factors of physical, psychological, geographic, and cultural distances create more complexity for building trust. Relational communication and psychosocial factors such as trust, commitment, and communication play an important role for virtual teams while communications technology supports relationship building in tasks related to information sharing and storing (Henttonen and Blomquist 2005). The development of trust for geographically distributed teams should emphasize relational communication and relationship building with the aid of communication technologies for specific tasks.

The cultivation of trust is essential to facilitating collaboration and ensuring successful team results. The absence of trust is likely to prevent team members from open expression where the team's diversity could turn into a liability. Gupta and Govindarajan (2001) emphasize that cultivating a culture of trust involves scheduling face-to-face meetings, rotating and diffusing team leadership, linking rewards to team performance, and building social capital through international rotations and events. The opportunity to create successful collaborations for leveraging team diversity is thus dependent upon the development of social capital.

b) Motivation

Motivation serves an important role in understanding the level of interest and engagement of team members. Amabile (1998) proposed a model of six management practices that can influence intrinsic motivation: providing challenges, greater freedom, adequate resources, support, encouragement, and attention to team design. However, these behaviors need to be embedded in the structures and systems of an organization to be effective (Ibid). While Amabile addresses intrinsic motivation for increasing the motivation and participation of teams, the factors identified provide general prescriptives and do not directly consider cross-cultural teams where interactions need special considerations. Cohendet and Llerena (2003) argue that the local context in which routines emerge and learning takes place have important consequences for understanding specific consequences of routines (cognitive, co-ordination and motivational), especially in terms of the incentives and

structure of the firm. Further investigation is needed in regard to motivation and the dynamics between global and centralized routines at HQ and the integration of local and decentralized routines at the subsidiary level.

There is the consideration of cognitive and motivational processes for facilitating cross-cultural collaboration. Foss and Lindenberg (2011) argue for a stronger focus on the interplay between cognitive and motivational processes in developing the concept of joint production motivation as the foundation for motivational micro-foundations of organizational performance. When people see themselves as part of a joint endeavor with roles and responsibilities it becomes easier to generate shared representations of actions and tasks, cognitively coordinate cooperation, and choose their own behaviors in terms of joint goals (Ibid). The goal-framing theory and joint-production framework contribute to literature on motivation and collaboration, however, they are still lacking specific business and cross-cultural contexts that could further explain mechanisms and interactions required for achieving team collaboration.

c) Team creativity and idea generation

Team creativity serves an important role in the ideation phase of new products and services. Mihaly Csikszentmihalyi (1990) describes successful team performance as diffuse flow process where skills and the challenges faced become a great wave of team excitement. He shows that creativity is an interaction between a person's thought and socio-cultural context which means that almost all creativity involves social interactions (Csikszentmihalyi 1990). Networking and social capital can serve as drivers for team creativity. Social capital is distinguished by the three dimensions of structural capital in social interaction and network ties, relational capital in mutual trust, and cognitive capital in shared goals (Tsai and Ghoshal 1998, Inkpen and Tsang 2005). According to research findings of Chen et al. (2008), there is higher creativity for NPD project teams that have greater social interaction and network ties. The authors argue that taking a social capital perspective can contribute to more understanding in how teams interact internally and externally in stimulating creativity.

The development and sustainability of idea generation and creative thinking requires a climate for creativity within the team and organization. Leaders set the tone for creativity and consequently develop an environment that determines to which degree organizational members generate creative work (Puccio et al. 2011). Creativity and innovation enable change within the organization through leadership that empowers team members to share and co-create knowledge. Puccio et al. (2011) emphasize the importance of creative leadership in

responding to the dynamic and evolving business environment. They note that leadership style influences the climate for creativity in ‘the ways leaders influence those with whom they work in formal or informal interactions.’ The authors have developed five tenets in developing leadership and a climate for creativity:

- Creativity is a process that leads to change; you don’t get deliberate change without it.
- Leaders help the individuals and organizations they influence grow by deliberately facilitating productive change.
- Because leaders bring about change, creativity is a core leadership competence.
- An individual’s ability to think creatively and to facilitate creative thinking in others can be enhanced.
- As individuals develop their creative thinking and master those factors that promote creativity, they enhance their leadership effectiveness.

Creativity as a managerial competency is increasingly drawing attention from organizations as they seek to strengthen innovation efforts. The growing interest in design thinking is strengthening this momentum as companies realize that creativity may bring a different perspective than the traditional analytical approach to problem-solving. IDEO, a leading global design management firm founded in California in 1991, developed the concept of design thinking through a three phase process that includes inspiration, ideation, and implementation activities. Design thinking is viewed as a ‘human-centered’ discipline that involves the application of traditional designer skills for identifying problems and inventing solutions with experts from other disciplines, their clients, and the users (Brown 2008). Its method of design thinking follows a process of observation, brainstorming, rapid prototyping, refining, and implementation activities. These activities are often regarded as idea generation or ideation and they are applied to diverse teams for encouraging creative collaboration. According to CEO Tim Brown, design thinking requires specific characteristics such as empathy, integrative thinking, optimism, experimentalism, and collaboration (Brown 2008). IDEO has introduced ideation thinking to global and culturally diverse teams in developing a common space for creativity.

d) Conflict management

Conflict in cross-cultural collaboration is not easy to predict and navigate when working on international projects. Sources of conflict can be difficult to identify due to unconscious beliefs, attitudes, and norms where trigger events may bring people out of routines and force them to make sense of intercultural events they do not understand (Osland

and Bird 2000). This may give rise to a sense-making behavior and require new mental models or scripts to follow. There is also the added complication of working across geographic and cultural distances that require a focus on sharing. Hinds and Mortensen (2005) found that shared identity moderated effect of distribution on interpersonal conflict and shared context moderated effect of distribution on task conflict where spontaneous communication played a key role in the relationship between distribution and conflict. Spontaneous communication is more closely linked to a stronger shared identity and more shared context in this study (Ibid). Spontaneous and frequent communication can thus facilitate conflict identification and management.

Team conflict is detrimental to the facilitation and success of business objectives and organizational initiatives. Geographically distributed teams may experience conflict as a result of two factors: 1) the distance that separates team members and 2) their reliance on technology to communicate and work with one another (Hinds and Bailey 2003). Teams can use measures to mitigate many of the negative effects of distance and technology mediation in meeting face-to-face, learning more about each other's work environments, creating similar contexts, and learning about as well as adapting to various technologies (Ibid). There are also opportunities to identify the type of conflict and resolution involved by particular behaviors. Jehn and Mannix (2001) found that higher group performance was associated with particular patterns of conflict including low yet increasing levels of process conflict, low levels of relationship conflict, and moderate levels of task conflict. In identifying process, relationship and task conflicts, the authors found that teams with this particular profile had similar pre-established value systems, high levels of trust and respect, and open discussions around conflict (Jehn and Mannix 2001). In order to effectively manage conflict, teams need to consider the types of conflict involved and the influence of distance and communication technologies.

In order to avoid greater conflicts that can challenge or block the work process, it is necessary to consider conflict handling strategies. When teams succeed in resolving conflict, there is still an opportunity to build trust and strengthen relationships. Collaborative conflict handling can bring many benefits such as efficiency in resolving issues, increased interpersonal and coordination benefits (Lovelace et al. 2001). One way to understand how conflict is resolved within teams is the Thomas (1992) two-dimensional taxonomy of conflict-handling intentions. When both parties attempt to maximize their interests (assertiveness) as well as the other party's interests (cooperativeness), the Thomas taxonomy shows that both

parties have a collaborative intent. However, if there is no collaborative intent, there may be four alternative approaches that lead to frustration with the outcome: avoidance, competition, compromise, or accommodation. The ability to manage conflict relies upon increased satisfaction of both parties' interests which is further enhanced by increased communication and relationship-building.

5. Cross-cultural team communication and distance issues

An important component of cross-cultural management involves communication between cultures. Adler (1997) notes that in approaching cross-cultural situations, effective businesspeople assume difference rather than similarity. Sources of cross-cultural misinterpretation include subconscious cultural "blindness", a lack of cultural self-awareness, projected similarity, and parochialism. Communication issues become more challenging when there is geographic and cultural distance when working with globally distributed teams. As previously noted in the literature, virtual teams need to meet early in the project cycle where they have an opportunity for face-to-face interactions. Maznevski and Chudoba (2000) propose that effective global virtual team outcomes are a function of appropriate interaction incidents and the structuring of communication incidents configured by aspects of the team's structural and process elements. There is also the consideration of the sequence of incidents that are necessary to generate a deep rhythm of regular face-to-face incidents with the interspersions of less intensive, shorter incidents using various media (Ibid). The structure and flow of communication needs to be carefully organized in order to ensure sufficient access, receipt, contribution and ability to share knowledge with team members around the world.

The opportunity to effectively coordinate and facilitate work amongst geographically distributed teams requires a greater understanding of communication structures during the work project. Hinds and McGrath (2006) show that geographically distributed teams require more structure than co-located teams with an informal hierarchical structure for smoother coordination that requires attention to the relationships between social, work, communication structures and coordination ease. The authors argue that loosely coupled distributed teams are better able to coordinate their work through an informal hierarchical organization of work. In addition, alignment between communication and work structure is more strongly associated with coordination ease. Finally, social ties were associated with more coordination ease for both co-located and distributed teams (Hinds and McGrath 2006). Geographically distributed teams can benefit from an informal hierarchical work structure as well as more attention to the links between the communication network and informal work network.

6. Team Leadership

The rapidly changing business environment demands particular leadership skills in order to navigate a cross-cultural and networked marketplace. There is first the consideration of selection criteria for effective team leaders since they must manage organizational, linguistic, cultural, and physical distances which require credibility and expertise in process management (Gupta and Govindarajan 2001). Empirical research has provided several characteristics important for ensuring effective global leadership (Black, Morrison and Gregersen 1999, Tung and Miller 1990). Maznevski and DiStefano (2000) identified and summarized the characteristics that are particular to leaders with international responsibilities; In addition to having strong business and functional knowledge, global leaders need strong skills in three areas: 1) learning and adapting, 2) managing relationships, and 3) managing ambiguity. This involves the ability to learn and adapt thinking to new contexts and changes while managing relationships across cultures, functions, and distance and simultaneously conceptualizing potential solution for ambiguous elements in strategy and organization. Team leaders thus need to strengthen cognitive and social skills that often require experience.

In facing the need to develop their interpersonal and cognitive skills, global leaders may require a different form of preparation than classroom training. Maznevski and DiStefano (2000) propose that team leaders can effectively learn and develop leadership skills from well-managed global teams since they provide a rich context for developing and refining the knowledge and skills of global leadership. Participation in an effectively managed and high-performing team can thus prepare current members for future leadership roles and thus strengthen cross-cultural team process capabilities throughout the organization. This is due to the conditions where skills are best learned when 1) they are continually practiced and refined in a relevant context; 2) feedback is available concerning the impact of the behavior; and 3) there are opportunities to observe others modeling the behaviors, and there is strong social cohesion for taking behavioral risks (Maznevski and DiStefano 2000, Bandura 1977). There is an opportunity to develop global leadership potential through the intensive interactions during the team processes of learning, managing, relationships, and managing uncertainty through mapping, bridging, and integrating activities. This new direction provides a valuable contribution to the literature on global team leadership and teams as well as international human resource management. (The team process is discussed in further detail in the cross-cultural team collaboration section). In view of the qualities that are expected from cross-cultural team leaders, it is of interest to examine practices that enhance team leadership.

In view of the complex challenges facing team leaders in project and team management, there is an increased need to review the specific issues and solutions that can facilitate team leadership in conceiving and bringing new products to international markets. Barczak et al. (2006) have identified four key challenges facing global team leaders as well as the skills and attributes that are needed to ensure a successful outcome for teams. The research involved 300 global team leaders and team members in 230 companies and uncovered four key challenges: 1) team members who speak different languages, 2) team members who come from different cultural backgrounds, 3) team members who live and work in multiple countries, and 4) team members who come from different companies. When addressing solutions for native languages, the authors note that team leaders must pay attention to the following solutions:

Different native languages

In order to facilitate communication, the project leader needs to:

- Send critical documents and materials to team members.
- Allow time to digest and respond too shared information.
- Develop and distribute written records of all meetings.
- Work to create common terminology and educate team members that the meaning of the team's shared language (often English) is often understood differently by non-native English speakers.

Different cultural backgrounds

The team leader needs to be aware of specific cultural dimensions that influence the project process:

- Differences in time perceptions may lead to different treatments of deadlines.
- The level of respect for hierarchy can influence the nature of open, informal and two-way communication.
- The level of acceptance for high levels of risk can mean different levels of initiative taken.
- Trust can be difficult to build if a leader's trust beliefs are different than team members (task versus relationship focus).
- The leader's belief in long-term or short-term planning can impact the project and team process.

Living and working in different countries

In order to foster trust, it is important for team leaders to set an early team meeting in order to meet multiple objectives:

- Set project goals.
- Develop project plans jointly to assure each team member's commitment.
- Define roles and responsibilities.
- Build relationships.

Members from different companies

Team leaders need to consider the development of social capital to develop the team's internal network through the following ways:

- Provide time for team members to get to know one another.
- Identify members' mutual interests and needs.
- Encourage team members to work together and interact socially.
- Facilitate continuous interaction among team members.

The work of Barczak et al. (2006) effectively integrated past empirical research with current management practices to provide a concise overview of key managerial skills needed to manage global teams during innovation projects. However, it is also limited to describing and understanding cultural dimensions and communication styles. Recognizing the type of cultural dimension affected and identifying the type of communication style to be applied can enhance managerial performance. In order to fully prepare for the management of interactions and collaboration, new learning models have emerged to develop the cross-cultural competencies of leaders around the world

7. New models and skills for management training

As the world economy is dynamic and continuously evolving, organizations and managers are also looking to learning solutions that will prepare and help them navigate an increasingly unpredictable and international business environment. There is also more movement by managers where they may be expected to travel to multiple geographic destinations for visits, short-term or long-term assignments, and often in a multicultural context in working with global and local teams. Past training methods have tended to focus on learning concerning cultural dimensions, values, or communication styles linked to specific countries through cultural profiles or country-based business practices. The biggest weakness of training involving country briefings, cultural assimilators, and self-assessments is the

embedded assumption that all individuals need similar exposure and training that do not always take into account individual differences in cultural experience and knowledge (Earley and Ang 2003). With multi-location and multi-cultural business contexts, the traditional models of mono-cultural or context-specific learning may not provide sufficient training for managers who need to interact and respond within a rapidly moving and geographically changing environment that requires high intensity interactions such as found in cross-cultural collaboration for international innovation projects. It is therefore of interest to examine models that have emerged concerning cross-cultural leadership competencies and skills.

a) Cultural intelligence and global mindset

The development of cultural intelligence has become an important topic in international business and management. Since global managers need to adapt their knowledge and skills to evolving team projects, past learning models based on cultural differences and mono-country learning do not provide sufficient guidance. Cultural intelligence applies to learning by doing with knowledge of the culture, mindfulness of cross-cultural situations, and behavioral development in cross-cultural situations (Inkson and Thomas 2004). Cultural Intelligence or the Cross-cultural Quotient (CQ) incorporates the capability to interact effectively across cultures. It involves learning from social interactions where experiences are transferred into knowledge and skills. CQ captures the capability for adaptation across culture and it reflects a person's capability to gather, interpret, and act upon radically different cues to function effectively across cultural settings or in multicultural situations (Earley and Ang 2003). There are three basic elements that represent cultural intelligence including metacognition and cognition (thinking, learning, and strategizing); motivation (efficacy and confidence, persistence, value congruence and affect for the new culture); and behavior (social mimicry, and behavioral repertoire) (Earley and Peterson 2003).

The aspects of cultural intelligence that are of particular interest to leadership and multinational teams involve metacognition and motivation. When applied to teams, members are required to acknowledge weak overlapping knowledge and focus on their commonalities in order to create a synergistic culture (Earley and Peterson 2003, Adler 1997). Although team differences are important strengths, it is better to leverage such knowledge when the team has found common ground. Metacognitive skills such as learning and cultural sense-making make it possible to establish common goals, roles, and rules or practices. Moreover, metacognitive or cognitive skills are especially valuable for team and project leaders since the competencies include planning, monitoring, and evaluating. Planning refers to the capability to generate

cognitive structures and strategies (higher level thinking strategies) (Earley and Peterson 2003) that allow managers to use conditional knowledge in adjusting their cognition to different cultures. There is also the metacognitive competency of monitoring which reflects a capacity to reason inductively and deliberate and formulate hypotheses concerning actions while monitoring internal and external cues (Ibid). Finally, there is the ability to recognize and reflect on one's own awareness and ability for learning about other cultures. The cultural intelligence or CQ model is thus more applicable to current challenges in international management.

A model that is based upon competencies specific to being an effective leader and manager in a cross-cultural environment is the global mindset. Gupta and Govindarajan (2001) were the early thought leaders for this concept and defined a global mindset as 'one that combines an openness to and awareness of diversity across cultures and markets with a propensity and ability to synthesize across this diversity.' They felt global mindset competencies could be measured in three distinct ways: Open to diversity across cultures and market, knowledgeable about diversity across cultures and markets, and able to integrate diversity across cultures and markets. By enabling the ability to build cognitive bridges across and between needs and company's own global experience and capabilities, Gupta and Govindarajan (2001) emphasized the great benefit of a global mindset is to enable companies to combine speed with accurate response. This could also be translated into a greater capacity to identify needs on global and local levels, effective coordination across functions and cultures, and faster roll-out of new product concepts. The ability to cultivate a global mindset relied on four factors:

- Curiosity about the world and commitment to learning
 - Organization's support and enforcement.
- Explicit and self-conscious articulation of current mindset
 - Indirect comparative mapping
 - Introduce self in meeting discussion, presentations, etc.
- Exposure to diversity and novelty
 - Facilitate knowledge building for individuals.
 - Build diversity within teams and groups.
 - Employ various approaches and mechanisms
 - Formal education (seminars, university courses)
 - Participation in cross-border teams, projects.

- Utilization of diverse locations for team and project meetings
- Immersion experiences in foreign cultures
- Expatriate assignments
- Geographic/cultural diversity among management ranks
- Location of business unit headquarters.
- Disciplined attempt to develop integrated perspective from diverse strands of knowledge about cultures and markets.
 - Defining and cultivating set of core values throughout corporation.
 - Job rotation across geos, business divisions, and functions.
 - Cultivation of interpersonal and social ties across locations.

The global mindset competencies provide value for MNCs who are operating in multi-cultural environments since they focus on the link between individual and organizational performance. Javidan et al. (2010) pursued research and further developed the global mindset model based on interviews with more than 200 senior executives in the US, Europe, and Asia as well as a survey of more than 5,000 managers. The research resulted in the development of three specific components that are defined by three specific attributes. They are presented as follows:

Intellectual capital – capacity to understand how business works on a global level through the following attributes:

- Global business savvy – strong grasp of how industry operates, customers behave, competitors target needs, and strategic risks by geography.
- Cognitive complexity – the ability to piece together multiple scenarios with moving parts.
- Cosmopolitan outlook – an active interest in culture, history, geography, political and economic systems of the world.

Psychological capital – receptiveness to new ideas and experiences is critical with the following attributes:

- Passion for diversity – a penchant for exploring other parts of the world, experiencing other cultures, and trying new ways or approaches.
- Thirst for adventure – ability to thrive in unpredictable and complex environments.
- Self-assurance – a sense of humor and self-confidence with energy and a willingness to take risks in new contexts.

Social capital – to build trusting relationships with people of different backgrounds.

- Intercultural empathy – ability to engage and connect emotionally with people from around the world.
- Interpersonal impact – ability to bring together divergent views, develop consensus, and maintain credibility while building networks and making connections.
- Diplomacy – listening to what is said and what is not said, ease in conversations with people from different backgrounds.

The global mindset capacities and attributes allow managers and professionals to assess and identify their strengths and weaknesses in designing a learning plan to improve their competencies. Since managers bring different ways of thinking understanding, acting, and communicating, they are often not well versed in dealing with intense diversity (Javidan et al. 2010). The global mindset model can thus assist managers and teams to evaluate and strengthen their skills in cross-cultural interaction and adaptation.

b) Cultural synergy and participative competence

Cross-cultural management as a direct link to knowledge management holds great relevance in establishing culture as an organizational resource that supports business and operational objectives. Holden's knowledge-based concept of cross-cultural management is based upon a networking behavior for facilitating the transfer of organizational knowledge and experience (Holden 2002). The author and researcher has argued that cross-cultural management can effectively serve as an organizational resource by facilitating interactive translation and knowledge-sharing through participative competence. In this way, cross-cultural collaboration provides a competitive advantage in facilitating knowledge that responds to local market opportunities. By facilitating networking, knowledge-sharing, and learning across countries, cross-cultural management can enable the successful implementation of projects worldwide. The emerging business environment of global ecosystems and network-centric innovation has created increased demand for cross-cultural knowledge in working with virtual teams. The development of social networking and Web 2.0 technologies has created a unique opportunity for cross-cultural management to serve as a vehicle for common dialogue or interactive translation. This creates a new cross-cultural domain and a set of competencies that responds to the emerging demands of the global workplace.

8. Collaboration for geographically distributed teams

Although difficult to achieve, cross-cultural collaboration serves an important role in nurturing and sustaining knowledge-sharing throughout the organization. Inter-team and intra-team cooperation have been found to serve as significant determinants of knowledge generation by subsidiaries (Mudambi and Navarra 2007). There is also the consideration of teams managed by leaders or self-managing work teams (SMWTs) which is a special category of teams that performs many of their own tasks, such as goal setting, monitoring quality, and “allocating rewards” (Gibson et al. 2001). The dissertation research and the unity of analysis (the global launch project) requires the consideration of a project leader (director or senior manager) as well as geographically distributed team members that perform some of their own tasks including goal setting for the global launch objectives, identification of local market needs, and organization of local resources. Thus, it can be concluded the nature of the global launch project requires a team leader that sets the global vision and objectives with performance measures that offers the framework and guideline where geographically distributed team members can set goals, identify, and contribute essential knowledge and resources necessary for ensuring a successful local market introduction and thus contributing to an effective worldwide product introduction.

Competitive advantage is based upon the ability to identify and assemble local talent from diverse locations, develop productive global teams, and effectively use technology tools to facilitate knowledge creation and transfer. The emergence of virtual teams working across functions and borders places special demands on utilizing the appropriate tools and technologies for group communication. There is also the challenge of adapting to a teamwork mode that requires more autonomy and initiative such as aspects of self-managing work teams. Gibson et al. (2001) note that management needs to consider different cultural orientations and attitudes such as power and status differences in the organization, the extent to which the employee values work over non-work activities, the amount of responsibility accepted by the employee, and the extent to which the employee believes that he or she has an influence over actions. A geographically distributed team thus represents various attitudes and abilities in effectively adapting and responding to the needs of a global launch project.

Several researchers and authors have investigated and proposed solutions for overcoming differences in cultural values for global teamwork. Earley and Mosakowski (2000) argued that transnational teams do not begin with shared meaning systems and that successful heterogeneous teams create hybrid team cultures over time. They define hybrid

team culture as an emergent and simplified set of rules, norms, expectations, and roles that team members share and “enact”. Moreover, the authors identify hybrid team culture as a facilitator of group interaction where performance of heterogeneous teams improves over time (Earley and Mosakowski 2000). They further suggest that a unified team culture may depend upon several conditions such as the establishment of rules for interpersonal and task-related interactions, creation of high team performance expectations, effective communication, and conflict management styles, and the development of a common identity (Ibid). There are group procedures and processes that can influence and develop these conditions. Gupta and Govindarajan (2001) propose a framework for high-performing business teams that includes an effective team charter, effective team composition, and effective team process. In order to develop new knowledge for continuous improvement and innovation, training programs need to help managers adapt to diverse cultures, tasks, and technologies. This includes the growing integration and involvement of team members from mature and emerging markets. Moreover, emerging markets and rapidly expanding economies such as China and India require increased cultural understanding and attention to local practices.

In order to coordinate communication with teams in mature as well as emerging markets, managers are faced with the challenge of creating an open space for interacting with team members on a virtual basis. Earley and Mosakowski (2000) showed that organizations intending to implement teams for the purpose of innovation with characteristics of national diversity, geographical dispersion, electronic dependence, or structural dependence, need to ensure psychologically safe communication. Gibson and Gibbs (2006) argue that characteristics of geographic dispersion, electronic dependence, structural dynamism, and national diversity hinder innovation through unique mechanisms that can be overcome by creating a psychologically safe communication climate that can increase innovation.

The psychologically safe communication climate involves the group and is characterized by support, openness, trust, mutual respect, and risk taking which facilitates innovation since it involves speaking up, raising differences for discussion, engaging in spontaneous and informal communication, providing unsolicited information, and bridging differences by suspending judgment, remaining open to other ideas and perspectives, and engaging in active listening. This work draws upon team psychological safety which is a shared belief that a team is safe for interpersonal risk-taking (Edmondson 1999). Gibson and Gibbs note the concept of psychologically safe communication climate is focused on communication behavior and team members’ interactions as represented by messages and

message-related events. Thus, the literature has established the critical role of a supportive and open environment that encourages initiative, openness, and engagement.

The work of geographically distributed teams requires a high level of coordination and understanding of information use. It is important to make the work structure transparent to team members and encourage team members to communicate directly with those with whom they share interdependence (Hinds). When interacting and sharing information, increased national diversity shows benefits for exploration and use of information which can stimulate more depth and diversity of information (Hinds et al. 2005). Additional work on subgroup phenomena suggest that the amount of diversity may not be the challenge to social integration as much as the extent to which key attributes of members are correlated (Lau and Murnighan 1998). Cramton and Hinds (2005) extend this work in suggesting that ethnocentrism and reduced team effectiveness are the most likely outcomes when fault lines are activated and subgroups become salient. Bouncken et al. (2008) support these findings in their study on cultural diversity and its influence on the performance of innovation teams where positive attitudes towards cultural diversity increase project and innovation performance. The acceptance of virtual work is facilitated when managerial support promotes cultural integration and diffused knowledge about the strategic objectives of virtual work and when globalized work practices are promoted and sustained (Mattarelli and Tagliaventi 2010). Cultural sensitivity and attitudes towards cultural diversity become important factors for facilitating project and innovation performance.

With more awareness of the faultlines and issues concerning cross-cultural differences, there is also the necessity to identify and articulate solutions. Cramton and Hinds (2005) propose a solution through ethnorelativist learning in learning about another group with the aim of understanding its perspective, including the other group's perspective on one's proper group. This results in cross-national learning about differences in the culture and local situation of team members that impact the team's work and relationships which can ultimately enable teams to leverage distance and differences (Cramton and Hinds 2005). Additional factors for managers to consider involve inclusive leadership and the type of communication technologies that can convey contextual information. In order to optimize cultural diversity, managers should consider the environment, the structure of information, cross-national learning and the tools that allow exploration and use of information.

Another solution for promoting collaboration amongst geographically distributed team members is the use of face-to-face meetings. Oshri et al. (2008) argue that face-to-face

meetings still pose challenges to globally distributed teams in creating and sustaining social ties between remote counterparts. Although project meetings are designed to address project management and technical issues, create interpersonal ties and improve collaborative work, meetings at a distance still require more consideration in order for effective communication to take place. In order to create and sustain social ties Oshri et al. (2008) suggest a set of activities that improve and renew social ties between remote team members before and after face-to-face meetings. The social tie activities are organized into three stages for organizing and developing social ties: Introduction, Build-up, and Renewal.

Most of the solutions studied and offered in practice involve technical and operational mechanisms for resolving time zone and cultural differences such as languages, local practices, and norms. Less attention has been paid to human and social aspects involved in collaboration and geographically distributed teams (Doherty and King 2005). While face-to-face meetings assist in social interaction and addressing project issues, there are several communication stages that need to be considered throughout the team process. Oshri et al. (2008) argue that managers should consider the full life cycle of social ties when they plan and execute collaborative work between remote sites. In mapping individual, team, and organizational communication to introduction, build-up, and renewal phases, they recommend specific activities and tools for renewing or strengthening interpersonal relationships within the team. This work contributes to the knowledge of team work flow process; however it does not address the interdependence of the project process with the life cycle of teams and social ties.

9. Cross-cultural Team Performance

As MNCs become more dependent on cross-cultural teams to conceive and deliver projects on a global scale, the performance factor becomes a critical element in measuring successful business results. The environment and tools thus need to be considered for ensuring effective team performance and successful business results. Intel's report and survey of 1260 employees noted that lack of shared work practices and structure, and workplace mobility as well as cultural differences posed challenges to performance (71% of Intel employees surveyed work on teams with people from different cultures). According to the report from Intel Corporation (Pickering and Wynn 2004), teams that effectively collaborate avoid or significantly reduce the following cost factors:

- *Time to market* – Cost of not meeting market window and loss of competitive advantage.

- *Time to information*: project delays due to lack of information or incorrect information.
- *Cost of duplicate projects*: Unintended duplication of effort.
- *Cost of poor coordination*: Increased risk of severe product flaws and recalls.
- *Travel and relocation*: Remote coordination instead of face-to-face meetings and co-location.
- *Opportunity cost of intellectual capital*: Teamwork hours can produce exponentially more value than individual worker hours.

On the other hand, it is important to consider the managerial process and organizational mechanisms for the performance of international product introductions. Ghauri et al. (2005) present a model for introducing and managing a performance management system for international NPD projects. Showing that NPD output performance is a direct driver of business success, the model identifies three core processes of product development, evaluation strategy, and planning. In addition, there are enabling processes (deployment of human and financial resources, effective use of systems and tools, cross-functional integration, and top management leadership and commitment) that serve as input and support the NPD process performance. The final outcome from the core and enabling processes is performance at the project level for improved market competitiveness. Ghauri et al. (2005) emphasize that process performance is a key driver of output performance. The authors suggest the following firm measures for evaluating NPD project performance:

- Number of new products launched annually.
- Number of projects completed in specified time period.
- Sales before and after project.
- Profit before and after project.
- Percentage of sales from products introduced in the last three to five years.
- Percentage of profits from products introduced in the last three to five years.
- Ratio of successful/unsuccessful projects.
- Profitability relative to competition – in all markets.

The model and research emphasize the importance of a clear business strategy for ensuring effective performance management and system implementation of international NPD projects. Moreover, the authors recommend dissemination and implementation across the organization with continuous refinement through project planning, reviewing, and reporting. Although the

study is focused on NPD within the new product life cycle, it is clear that project performance and evaluation is an important factor for ensuring a successful outcome. This brings attention to the need for identifying project performance factors for front end innovation during the global launch project.

G. Summary of Literature Review

In summarizing the literature review, there are several concepts identified for the research streams concerning the management of global innovation, knowledge, and culture within the MNC. In meeting the challenges of a dynamic global marketplace, the MNC is facing increasing pressure to innovate and respond to consumer needs in international markets. The benefit of an organization's global mindset derives from the ability to build cognitive bridges across local market needs and the company's own global experience and capabilities (Govindarajan and Gupta 2001). In order to respond to new market opportunities, organizations need to consider transparent, flexible and consistent systems to support innovation and change while maintaining cost competitiveness (Prahalad and Krishnan 2008). However, organizations also need to manage global integration of resources as well as local responsiveness to international markets. This brings more attention to the understanding of how global strategy, organization, and management bring important linkages as well as barriers to global strategy in terms of its implementation (Yip 1994). Traditional strategic management models are being challenged in areas concerning customers, organizational relationships, competition and managerial mindsets (Davenport et al. 2006). The strategy-making process is being challenged due to the particular forces of the innovation economy in terms of context, content, and process.

The forces of the innovation economy have created important considerations for MNCs when developing innovation strategies for mature and emerging markets. In highlighting the growing innovation role of the Chinese market, MNCs must consider how to minimize risks while selecting the innovations to develop in China in order to gain advantage in the global market (Hout and Ghemawat 2010). Thus, organizations need to consider improved understanding of customers and local market needs for China as well as key emerging markets. In order to sustain innovation worldwide, Nambisan and Sawhney (2008) argue for the need for companies to shift from firm-centric innovation to network-centric innovation which requires shared goals and objectives, a shared world view, social knowledge creation, and an architecture of participation. Regner and Zander (2011) argue that we still do not have a complete picture of micro-level mechanisms of knowledge and strategy creation of

the interactions and synergies between MNC sub-units and subgroups. This calls attention to the need for more empirical research concerning the actual process of how organizations achieve and optimize knowledge-sharing and collaboration within the MNC network.

The roles of managers based in HQ in the home market and managers based in subsidiaries in local markets serve an important consideration for collaboration and knowledge-sharing. At the MNC level, networks must be organized to effectively exploit differences and similarities of multiple host locations whereas at the subsidiary level, they must balance embeddedness within internal and external environments (Meyer et al. 2011). There is also the participative role of subsidiaries that needs to be considered as explored by Kim and Mauborgne (1993, 1998) through due process and decision-making in MNCs. Since a lack of understanding can arise between HQ and subsidiaries in positioning their interests, the challenge for MNCs is to create an environment empowering subsidiaries to pursue innovation initiatives while maintaining an appropriate level of initiative review for managing bounded reliability (Verbeke 2009, Rugman and Verbeke 2003). It is thus important to consider the level of engagement of subsidiaries and local markets in conceiving and introducing new products.

Within the MNC network, it is important to consider the roles of the cross-cultural and geographically distributed team in adding value to global innovation objectives. Communities are social containers for incremental innovation, whereas networks are the place for boundary-spanning learning and radical innovation (Dal Fiore 2007). The organization's innovation process is both the backbone where innovative efforts are formed and the context around which ideas are mobilized from thought to action (Desouza et al. 2009). The literature showed the key to new success for new products is the front end innovation process where key elements include product strategy formulation and communication, opportunity identification and assessment, idea generation, product definition, project planning, and executive reviews (Kurana and Rosenthal 1998). The front-end innovation process involves critical strategic planning and communication processes that determine the success of new product introductions.

In order to achieve market success for new product introductions, there is the consideration of effective planning and execution of new product introductions. The real innovation lies in execution since there is often a conflict between ongoing operations and innovation (Govindarajan and Trimble 2010). The project management process for global product innovation requires special considerations for idea generation, conversion, and

diffusion of new concepts. The literature has produced several stage models, where Desouza et al. (2009) have present a general overview including generation and mobilization, advocacy and screening, experimentation, commercialization, and diffusion, and implementation. The stage gate model's use as a project planning process has led to modification and improvement of idea-to-launch methods by various organizations in developing the next-generation Stage gate system model including the stages of scoping, business case, development, testing, and launch (Cooper 1990, 2009). While this model addresses the project planning process, it does not effectively address the cognitive and social interaction needs required for conceiving and introducing new products.

The literature then examined the role of knowledge as a critical element for facilitating the global innovation process. Knowledge-sharing is defined as 'the provision or receipt of task information, know-how and feedback on a product or procedure (Hansen 1999, Foss et al. 2010) which is often a crucial antecedent to knowledge creation (Cohen and Levinthal 1990, Tsai 2001, Nonaka 1994). There is also the concept of knowledge flow in aligning knowledge with the workflow of an organization where three elements characterize and shape the management of knowledge flow: solution, experience, and social creation (Nissen and Snider 2003). In order to effectively manage and influence knowledge flow, there is the concept of knowledge governance where the selection of organizational structures and mechanisms can influence the processes of using, sharing, integrating, and creating knowledge (Michailova and Foss 2009). In view of this literature, organizational factors serve a strong influence and role for innovativeness. Five major organizational dimensions were identified in enhancing or inhibiting creativity in a work environment including organizational culture, climate, structure and systems, leadership style, and resources and skills (Andriopoulos 2001).

When examining organizational factors that influence the knowledge-sharing process, several findings within the literature were discussed. In addressing the strategy-making process for international markets, there are differences in exploratory and exploitative approaches between HQ and subsidiaries in local markets. In order to integrate global and local perspectives, social embeddedness and relations become essential in the development of strategy and capabilities through shared understanding and interactions in strategy-making (Regner and Zander 2011). This requires effective management of knowledge with an enabling context that requires a knowledge vision, managing conversations, mobilizing knowledge activities, the right context, and globalizing local knowledge (Ichijo 2004, von

Krogh et al. 2000). Efforts to share knowledge and increase innovation in organizations are likely to fail unless they are built on a firm foundation of social capital, the relationships of trust and mutual understanding that make knowledge collaboration possible (Cohen 2007).

In examining the key organizational factors, there is the consideration of organizational structures and systems that influence interactions within the MNC network. Czikszenmihalyi (1988, 1995) proposed a holistic view for organizations where creativity emerges from structured information and actions as well as the social system of managers, leaders, and customers where their interactions develop a dynamic framework of creativity. There is also the role of culture as a strategic resource as it can provide a supportive structure and strategic motivation for global product innovation and launch which demands further research and understanding (Calantone and Griffith 2007). Organizational culture is also an important determinant for the climate of innovation as measured by the adequacy of resources, encouragement and support of change and creativity and its impact upon strong and visionary leadership (Sarros et al. 2008). These elements serve an influential role in developing an environment that is open to cross-cultural collaboration for the front end of innovation.

The role of culture and its relationship to knowledge-sharing and innovation practices is finally examined through a review of the literature concerning cross-cultural management. The importance of understanding this interaction is best described by Meyer et al. (2011) when noting that international business literature has recognized that global integration as relevant to MNC activity is about increasing interfaces between people, nations, and cultures that continue to retain local distinctiveness. Moreover, Adler (1997) emphasizes the role of cultural diversity as a key resource in designing and developing global learning organizations. In examining the historical literature on cultural dimensions, there is a strong emphasis on managing cultural differences rather than optimizing differences and similarities. Hofstede and GLOBE frameworks have been criticized for being overly reliant on certain levels of analysis and not exploring the dynamics of cultural contact (Kirkman et al. 2006 and Javidan et al. 2006). This leads to the dissertation research focus on intercultural interaction and cultural synergy (Boyacigiller 2002, Adler 1983) where it is important to understand under which conditions universal (patterns common to all cultures) and pluralistic (culturally specific patterns) approaches can be used.

In order to understand the cross-cultural knowledge-sharing process, the literature review focused on considerations for interactions among cross-cultural and geographically

distributed team members. When considering innovation systems as social systems, there is a process of 'social making' of innovations that can define a socially accepted space determined by cultural interactions including: affective frames of identity and difference, cognitive frames of knowledge and normative sets of values, norms, and beliefs (Pohlmann et al. 2005). In examining convergent and divergent team processes, geographically distributed teams can be effective in bringing together divergent viewpoints in producing new organizational capabilities which requires the recognition and validation of their existence (Baba et al. 2004). Then there is the link between knowledge-sharing and cross-cultural team learning. A corporate emphasis on global integration can lower team learning, but an emphasis on responsiveness and knowledge management norms and procedures can increase team learning (Bruhn and Gibson 2006).

When examining the conditions for cross-cultural learning, the literature shows specific considerations for cross-cultural as well as geographically distributed teams. Effective team processes need to be developed through a psychologically safe communication climate that supports the innovation process (Gibson and Gibbs 2006). Psychosocial factors such as trust, commitment, and communication play an important role in the functioning of virtual teams (Henttonen and Blomqvist 2005). However, the ability to develop and operate group efficacy requires specific conditions and activities. Earley and Gibson (2007) argue that group efficacy can be conceptualized as a 'cognitive product' developed through collective cognition where the processes represent (Gibson 2001) accumulation, interaction, examination, and accommodation. There is also the concept of interactive learning and development where Maznevski and DiStefano (2000) created a model of global team processes based upon the ability to understand, communicate, and manage cultural differences. These models are helpful in understanding cross-cultural interactions while they do not address influences and particular motivations linked to cross-cultural teams collaborating on the front end innovation process.

The literature review continues with an examination of cross-cultural management and leadership practices. Maznevski and DiStefano (2000) propose that team leaders can effectively learn and develop leadership skills from well-managed global team since they provide a rich context for developing and refining the knowledge and skills of global leadership. New models and skills have emerged for cross-cultural leadership training in order to respond to the changing needs of international management. New concepts addressing cross-cultural interaction needs have emerged such as cultural intelligence through

knowledge, mindfulness, and behavioral development in cross-cultural situations (Inkson and Thomas 2004). The global mindset model addresses leadership competencies in openness, knowledge, and integration of diverse cultures and markets as measured in intellectual, psychological, and social capital (Gupta and Govindarajan 2001, Javidan et al. 2010). And then there is Holden's (2002) knowledge-based concept of participative competence through the facilitation of interactive translation and knowledge-sharing activities.

The literature review concludes with an examination of the environment needed to nurture and sustain knowledge-sharing throughout the organization. Inter-team and intra-team collaboration have been found to serve as significant determinants of knowledge generation by subsidiaries (Mudambi and Navarra 2007). There is also the consideration of communication between geographically distributed teams where Earley and Mosakowski (2000) showed that organizations need psychologically safe communication for innovation and Gibson and Gibbs (2006) argue that unique mechanisms can create a psychologically safe communication climate that increases innovation. Positive attitudes towards cultural diversity (Bouncken et al. 2008) can increase project and innovation performance and cross-national learning can enable teams to leverage distance and differences (Cramton and Hinds 2005). The work contributes to the literature concerning geographically distributed teams and work flow process, however, it does not address team roles within the innovation process. In order to understand how to facilitate cross-cultural collaboration for the front-end of innovation, further research is required concerning the influence of organizational mechanisms on interactions between the global project leader and the cross-cultural team during the global product launch project.

III. Research Methodology

A. Methodological Framework and Key Theories Applied

1. Research Design

In taking the approach of objectivist ontology and positivist epistemology (Cunliffe 2010), I assume there are discoverable relations between organizational factors and process outcome. The ethnographic method is used in collecting and validating data through semi-structured questionnaires and interviews. Moreover, as a process theorist, I am interested in exploring how social phenomena emerge through individual and collective actions (Pettigrew 1997, p. 338) as studied through the interactions of global project leaders collaborating with cross-cultural teams. The research pursues exploratory and explanatory phases in order to in order to fully evaluate and validate the research question. The inquiry is structured to provide a deeper level of analysis from managers who share the same professional roles and responsibilities in leading global product introductions in collaboration with cross-cultural and geographically distributed teams. They have been selected from leading MNCs who are recognized for innovation from a variety of industries and countries in order to avoid bias.

The researcher has selected a qualitative study to address the gaps of previous quantitative and empirical studies. With a lack of research on the topic, previous studies have addressed innovation and knowledge-sharing with large samples or use of quantitative data have been limited to very few constructs and general observations (Foss et al. 2010, Kleinschmidt, de Brentani and Salomo 2007). These studies relied on survey questionnaires without the insights possible from detailed interviews concerning clinical interactions and experiences of actors. At present, there has not been a clinical study in academic research that has examined the interactions between the global project leader and cross-cultural teams concerning the global product launch and the front-end innovation process. Thus, I intend to use a qualitative methodology to fill this research gap in examining multiple constructs for a specific context – cross-cultural team collaboration from concept to execution of the global product launch project.

Research Question

The research intends to develop a framework and model for cross-cultural team collaboration by evaluating the organizational mechanisms that facilitate team interaction. In addressing this purpose, the following research questions emerge:

1. How can MNCs facilitate cross-cultural team collaboration in order to strengthen innovation management capabilities?

The research will further seek to answer supporting questions in developing a new framework and model for optimizing cross-cultural team innovation;

- a. How does the organization develop an environment that is conducive to cross-cultural team collaboration?
- b. How are knowledge-sharing practices influencing cross-cultural team interactions during the product launch program (from NPD to GTM)?
- c. How can communication tools and technologies facilitate cross-cultural team interactions during the product launch program (from NPD to GTM)?

2. Methodology

The proposed study is focused on qualitative research primarily using interview studies in employing an inductive research approach (Eisenhardt 1989). In addition to interviews with thought leaders and subject matter experts, a literature review has been conducted on theories and practices within innovation management, knowledge management, and cross-cultural management. Applying resource-based (Barney 1991, Peteraf 1993) and knowledge-based views (Grant 1996), the theoretical framework that guides this study involves resource-based theory (RBT) where the capabilities by which managers integrate, build, and reconfigure the firm's internal and external competencies and resources are a source of competitive advantage (Eisenhardt and Martin 2000, Teece, Pisano, and Shuen 1997). Amin and Cohendet (2004) have argued that a competence or resource-based perspective of the firm opens the scope for exploring how firms learn and adapt in complex and changing business environments. Furthermore, the knowledge-based view emphasizes that knowledge is one of the most critical resources in helping firms gain a competitive advantage in international markets (Grant 1996). Knowledge-based theory further argues that organizational knowledge creation is a result of the differences in human subjectivity that lead to new knowledge where the process allows individuals to interact with each other to transcend their own boundaries which create change in themselves, others, the organization, and the environment (Nonaka and Toyama 2007). Moreover, the theory of the knowledge-creating firm explains the differences among firms as a result of goals and strategy (Ibid).

The purpose of this qualitative study is to investigate and demonstrate how MNCs can facilitate the collaboration process in order to strengthen innovation management capabilities.

The research examines organizational resources that influence interactions between the project leader and cross-cultural teams concerning project collaboration routines during the front end innovation process of the global launch project. The primary actor is the global project leader and manager based in HQ who is responsible for leading the global launch project and cross-cultural team members located at subsidiaries in local markets. The unit of analysis is the global product launch project comprising strategic planning and execution activities, including idea generation, strategic planning, new product development (NPD) and go-to-market (GTM) activities. The research views organizational culture as a common set of group norms and values established by the MNC, wherein national culture relates to the norms and values of individual team members involved on a global product introduction project. In reference to Holden’s theory of cross-cultural management competencies (2002), cross-cultural knowledge is viewed as a resource in the management of intra- and inter-organizational interactions. Through an exploratory study, we will examine organizational factors that influence cross-cultural team interactions from concept to market.

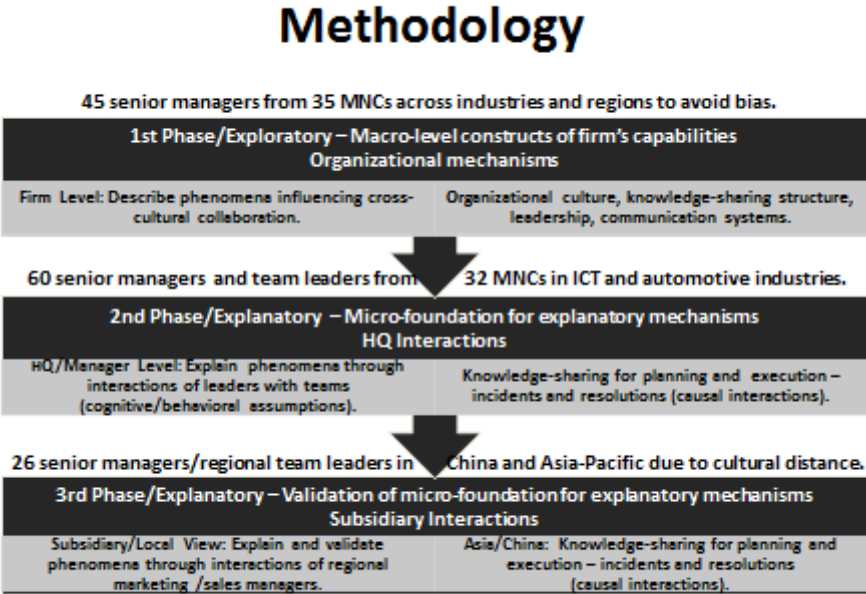


Figure 14: Overview of methodology and three research phases.

Research Methods

The research design is based on qualitative research with a mixed methods approach. The exploratory and explanatory phases require different methods. In the exploratory phase, inductive inquiry is used for the literature review and interviews with senior managers

responsible for global product management, marketing, and innovation projects as well as interacting with cross-cultural teams within MNCs. In applying synergistic research (Adler 1983), this researcher intends to evaluate how organizational mechanisms influence interaction between the global project leader/senior manager and the cross-cultural team where universal and culturally specific patterns are created from positive uses of cultural similarities and differences. This type of research also involves identification of particular MNC structures and processes that are effective for cross-cultural collaboration between organizational members.

The discoveries from the exploratory phase were evaluated for development of hypotheses to be tested during the explanatory phase, concerning the relevant organizational mechanisms and process outcomes for facilitating cross-cultural collaboration. Explanation by mechanisms can provide a key explanatory rationale for processual research design in clarifying causal ambiguity and how the process works through activation of mechanisms that interdependently generate outcome (Pajunen 2006). Furthermore, knowledge governance mechanisms (Foss et al. 2010) allow for an examination of mechanisms and structures at the organizational or macro level that influence behaviors of knowledge-sharing at the micro or individual level. In pursuing both exploratory and explanatory phases, the identification of organizational mechanisms and explanation of causal mechanisms or interactions during the project process are applied to the dissertation research.

The first research phase resulted in interviews with 45 executives and senior managers responsible for cross-cultural teams and global product management, marketing, and innovation in 35 MNCs based in the US, Europe, and Asia-Pacific (please see Appendix A for a list of participants). It was exploratory in nature and involved semi-structured interviews conducted by one researcher. A diverse sample of industries and geographies was sought in order to avoid bias and to identify universal processes for the unit of analysis. The interviews included a questionnaire and were conducted via phone and through company visits between August 2009 and March 2011. This research helped refine the survey instrument while evaluating and identifying organizational mechanisms that influence the global product launch process, from the planning and product conceptualization phase to the execution and market introduction phase.

During the explanatory research phase (June 2011 to January 2012), evaluation and validation of hypotheses involved a second round of interviews in two groups: 1) Project leaders responsible for planning and project management of global product launches based in

headquarters and 2) local team managers responsible for launch management and go-to-market activities in subsidiaries located in China and Asia (an overview of this methodology is presented below). The second phase research results involve interviews with 60 senior managers based in headquarters and 26 regional managers based in Asian subsidiaries. A comparison of subsidiary responses with the results from the senior manager interviews improves understanding of headquarters and subsidiaries views in order to fully examine and validate the research question.

It is useful to examine the global launch process through an extreme context which involves competitive industries and markets. Senior managers and project leaders working for automotive and information communication technologies industries were selected since these sectors face growing competition, increased localization needs, reduced time to market, and a radical and technology-driven innovation focus. Consequently, it is necessary to identify a region with high growth potential yet intense competition and greater cultural distance. Since the discoveries from the exploratory research found the Asian region matched these criteria, managers working for subsidiaries located in Asia (Japan, China, Singapore, and India) were selected and interviewed during and after a three week research trip. The unit of analysis is based upon cross-sectional studies using a retrospective in discussing the most recent global product launch process in evaluating interactions between the senior manager and project leader based in headquarters and cross-cultural team members located in subsidiaries worldwide during the key launch phases of planning and product conceptualization as well as execution and go-to-market preparation. The field research includes interviews, questionnaires, on-site visits, observations, and collection of corporate and press documents. The criteria for the field research are based upon the following:

- **Organization** – MNCs with international operations, globally distributed teams, and a focus on global product introductions for consumer and business markets (see exhibit A for a list of participants from the pilot study).
- **Culture and Geography**– MNCs with headquarters based in North America, Europe, and Asia.
- **Project/Unit of Analysis** – Focus on global product introduction project and team leader/manager responsible for developing and delivering concept and execution elements for global product introductions.

- **Industries** – The field research will focus on MNCs across industries, with an emphasis on firms that have been recognized for product and service innovation through rankings:
 - *Exploratory phase*: The pilot study involves executives and senior managers with responsibilities in global product management, marketing, and innovation.
 - *Explanatory phase*: The final study involves two groups: senior managers directly responsible for global product launch projects and cross-cultural teams; and regional managers directly responsible for local product launch execution within the information communication technologies and automotive industries.

3. Data Collection

Data collection has taken place from August 2009-January 2012 through two research phases as noted in the timeline. The instruments for the field research include a questionnaire, interviews, and observation. Internal validity of the proposed model was sought through theory triangulation using extensive literature reviews in innovation, knowledge management, cross-cultural management, and globally distributed teams. Pattern matching is based upon the literature review and the experience of managers in the pilot study. Reliability will be sought through the questionnaire protocol, collection of interview data, and the use of company names. Data collection is outlined as follows:

- **Timeline**: First research phase/pilot study (8/2009-3/2011); Second research phase (6/2011-1/2012); Third phase – consolidation (Oct 2011-Feb 2012).
- **Instruments**: Questionnaire and interviews with senior managers will be recorded using a protocol with a common set of closed and open-ended questions.
- **Format**: A questionnaire is used for the semi-structured one hour interviews where measurement is primarily based upon semi-structured/open and closed questions.
- **Sources**: Interviews with executives and senior managers responsible for global product launches and cross-cultural teams. Access through professional networks.
- **Questions**: Based on the literature review, interviews and transcript reviews with senior managers, as well as experts in the field.

Confidentiality

The interviews were conducted with senior managers and executives responsible for global product or service launch projects and cross-cultural teams. They were conducted via telephone interviews and face-to-face interviews at the company sites. Prior to or at the start of the interview, participants were informed of the research purpose and its role in the PhD dissertation. The participants were then told the information they would provide would be confidential and there would be no direct reference to their names within the dissertation. In addition, they were informed the content from each interview would be integrated and evaluated for specific patterns and practices that would emerge from the ensemble of the interviews. The participants were also informed that a reference would only be made to the name of the companies in which the participants worked at the time of the interviews.

4. Data Analysis

The analytical process for this study supports the analysis framework for the Ladder of Analytical Abstraction (Miles and Huberman 1994) where three levels of the model show the processes of summarizing and packaging the data, repackaging and aggregating the data, and developing propositions or hypotheses to contrast an explanatory framework. The analysis included content analysis, noting patterns, clustering, and making contrasts and comparisons (Miles and Huberman 1994, Yin 1994). A summary of the data was created and organized according to the nature of the responses to structured and open questions. Comments and descriptions were gathered and then grouped by clusters and themes in order to effectively identify patterns and interpret findings. Then the data was grouped under key concepts and labels in order to allow for a coding process. These findings were then contrasted and compared in order to identify relevant themes. Memoing – ‘the theorizing write-up of ideas about codes and their relationships as they strike the analyst while coding’ (Glaser 1978: 83) - was applied to all data from field research questionnaires, on site and phone interviews, and observations from company visits. In order to construct the discoveries and findings, I relied on my professional and industry knowledge of the topic, the literature review, and the insights gained from the interviews with executives and senior managers.

B. Field Research – Methodology for Exploratory Phase

1. Research context and methods

The exploratory study resulted in interviews with 45 executives and senior managers responsible global product management, marketing, and innovation and the management of or

interaction with cross-cultural teams in 35 MNCs based in the US, Europe, and Asia-Pacific (please see Appendix A for a list of participants). The organizations were selected for their focus on innovation through mission statements, business objectives, and industry rankings. A diverse sample of industries and geographies was sought in order to avoid bias and to identify universal processes for the unit of analysis. In order to gain access to senior managers responsible for global product management and innovation, I relied on my personal network of professional contacts, referrals by participants, and direct contact initiated through professional networks, conferences, and associations. Pattern matching is based upon the literature review and the experience of managers in the pilot study. Reliability is sought through the collection of interview data, the role and responsibilities of participants, and the use of company names. The exploratory study is thus intended for the evaluation and identification of organizational mechanisms that influence the global product launch process from the conceptualization and NPD stage to the implementation and GTM stage when the product is introduced to the local markets.

Development of Research Framework

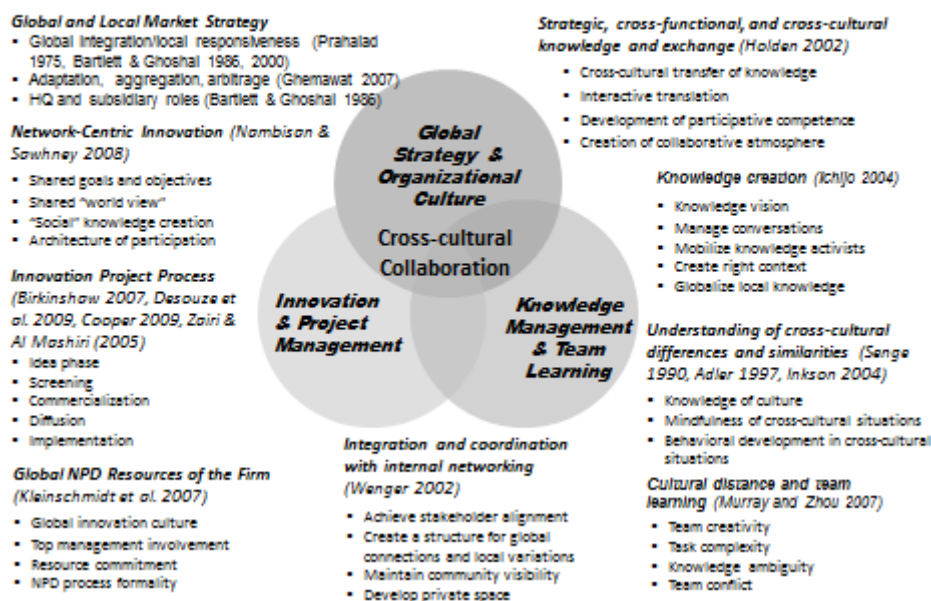


Fig 15. Development of research framework from literature review

The first research phase and exploratory stage is to identify organizational mechanisms by evaluating the macro-level constructs of the firm's capabilities. In focusing on firm-level research, the researcher can evaluate and describe phenomena influencing cross-cultural collaboration. The development of the research framework (as presented in figure 15)

was created from the literature review concerning the international dimensions of organizational management, innovation, knowledge management, and cross-cultural management. The framework guided the construction of the questionnaire with the purpose of understanding and identifying organizational mechanisms that influence interactions between senior managers and the cross-cultural team during the global product launch process, from concept to market. The final research framework presented in below figure assisted in the creation of the research framework as well as sub-themes for the questionnaire which focused on organizational culture and innovation systems, global team processes and challenges, knowledge-sharing structures and processes, global strategy and structure for HQ and subsidiaries, and communication tools and technologies used within the project process.

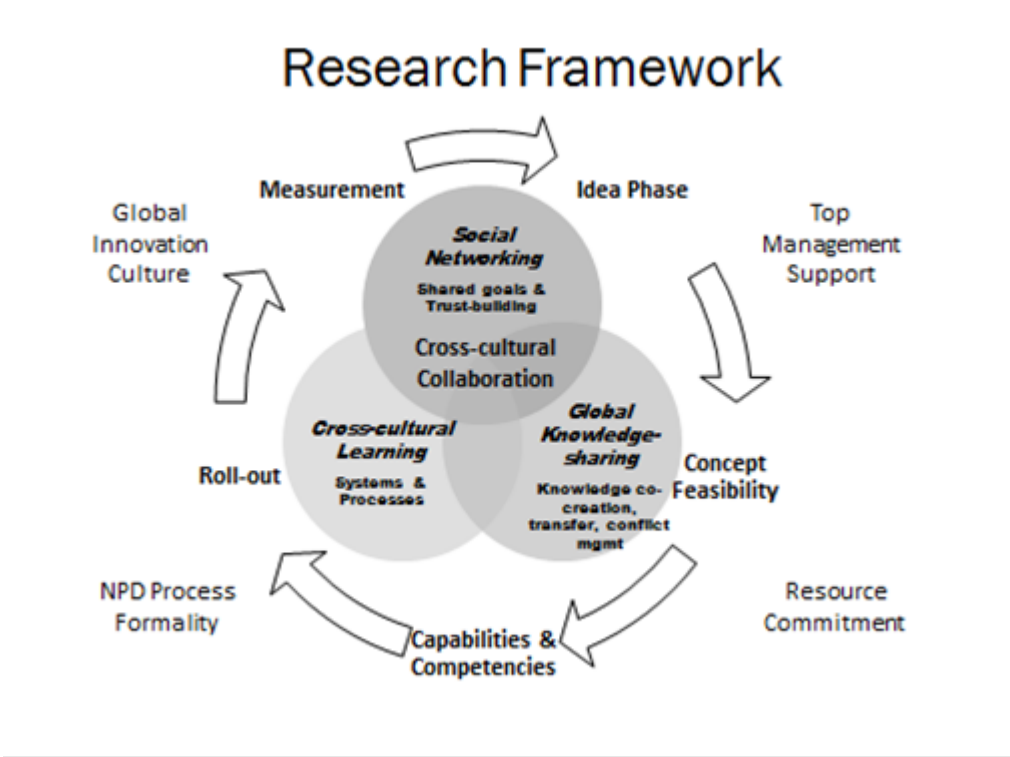


Figure 16.a. Research Framework for Exploratory Phase

Several sources were drawn from the literature review to construct the questions within the questionnaire. A primary reference for the questions concerning the elements of a global innovation culture and the organizational environment is Kleinschmidt, Brentani, and Salomo’s work (2007) concerning global innovation culture. The elements of their model were tested and then refined in order to develop a new vision of a global innovation culture from the perspectives of participants in the exploratory study. In developing questions concerning organizational systems and processes for the global product launch, the key references include Eisenhardt (1995), Desouza et al. (2009), Birkinshaw and Hansen (2007),

Cooper (1990, 2009), and Zairi and Al-Mashiri (2005). The questions concerning team and communication processes and tools were influenced by the works of Murray and Zhou (2007), Holden (2002) Hinds (2005), Earley and Gibson (2007) among others. Questions concerning knowledge-sharing structures and processes were primarily based upon the works of Ichijo (2004), Nambisan and Sawhney (2008), Holden (2002), and Wenger (2002). Finally, the questions constructed to test the role and communication flow between HQ and subsidiaries were based upon the works of Prahalad (1975), Bartlett and Ghoshal (1986, 2000), and Ghemawat (2007). The comprehensive literature review of the sub-themes helped shape the final research framework (as shown in below figure) and the questions for the questionnaire.

In order to better understand current organizational challenges and practices, the senior manager and project leader responsible for either or both NPD and GTM in the global product launch project as well as the management of cross-cultural teams was selected as the principal actor and participant for the exploratory study. The participants in the exploratory study were based in HQ and subsidiaries with global and regional responsibilities. A majority of the participants were based in HQ and carried global responsibilities in interfacing between HQ and subsidiaries. The participants were selected for their current role and responsibilities in conceiving and or bringing new products to international markets. In order to obtain formal data and current perspectives that were not available from the literature review, the questionnaire sought the perceptions of the senior managers on the practices and challenges of conceiving and bringing new products to market concerning organizational systems and processes as well as cross-cultural team management processes. In pursuing the manager's perspective, the intended outcome is to identify organizational mechanisms that can facilitate cross-cultural collaboration for the project and team process. Due to its exploratory nature, the first research phase relied on the primary research question and a set of supporting questions to guide the investigation process as presented in the research design section.

2. Data collection

In order to effectively prepare for the field research, the questionnaire was reviewed and tested with a few academic professors and business executives to refine the content and ensure a cohesive and precise format for collecting data (the final questionnaire can be viewed in Exhibit A). The interviews were conducted with a questionnaire to ensure a consistent process and were conducted via phone and through company visits between August 2009 and

March 2011. The questionnaire was sent in advance of the interview so that interviewees could review the content and prepare for the questions which was beneficial to those who did not have English as their native language. All of the interviews were conducted in English. When participants needed to clarify the question, the question would be repeated and simplified in English with the exception of interviews conducted in French-speaking countries which were then re-phrased in French to ensure understanding. Since all of the participants held positions with global responsibilities, they used English as a business language within their organizations.

Interviews were conducted at the company site and via phone depending on the preference and availability of the participant, especially due to geographic distance as participants were based at headquarters and subsidiaries of MNEs located in Europe (Denmark, Finland, France, Germany, Italy, Netherlands, Switzerland), Asia (China, India, Japan, South Korea, Taiwan), and North America (US). The researcher travelled to California to make company visits and pursue on site interviews with most of the executives and managers based in HQ at the US MNCs participating in the exploratory study. Since the researcher is based in Paris, France there was an opportunity to make a few interviews on site with the managers based in European HQ or subsidiaries of MNCs; the remaining interviews were made via telephone or Skype calls with participating executives and managers working for MNCs in the US, Europe, and all of the participants based in HQ of Asian MNCs. The duration of the interview was between 45-90 minutes and followed the outline of a semi-structured questionnaire with open and closed questions pertaining to the key themes of the research topic. The interviews were transcribed verbatim during the actual interviews where the researcher typed the conversations during the interview and recorded the content on her laptop computer. A review of the transcript was made by the researcher after each interview in order to ensure correct understanding of the interview.

C. Field Research – Methodology for Explanatory Phase

1. Research context and methods

The exploratory study helped refine the survey instrument while evaluating and identifying organizational mechanisms that influence the global product launch process, from the planning and product conceptualization phase to the execution and market introduction phase. During the second research phase (June 2011 to January 2012), the explanatory approach involved a second round of interviews in two groups: 1) senior managers

responsible for planning and project management of global product launches based in headquarters and 2) regional team managers responsible for execution and go-to-market activities in subsidiaries located in Asia. The research results include interviews with 60 senior managers based in headquarters and 28 regional managers based in Asian subsidiaries. A comparison of subsidiary responses with the results from the senior manager interviews improves understanding of perspectives and views from both headquarters and subsidiaries in order to fully examine and validate the research question as well as confirm the hypotheses. Since the exploratory phase identified organizational mechanisms that influence the global product launch process from the conceptualization and NPD stage to the implementation and GTM stage, the explanatory phase is intended to identify and explain causal mechanisms or interactions during the project process.

For the explanatory research phase, the research sample involved the same organizations from the exploratory phase in order to maintain consistency. However, there was a conscious decision focus on the organizations that represent technology-driven industries such as information and communication technologies and automotive industries. The focus on technology-driven firms allowed examination of the global launch process through an extreme context which involves both radical and incremental innovation in dynamic and competitive industries and markets. Senior managers and project leaders working for automotive and information communication technologies industries were selected since these sectors face growing competition, increased localization needs, reduced time to market, and a radical and technology-driven innovation focus. Firms in these industries are also catering to the emerging mobility needs of customers who are continuously seeking ease of use and transparency for home and business.

Consequently, it was also necessary to identify a region with high growth potential yet intense competition and greater cultural distance. Since the discoveries from the exploratory research found the Asian region matched these criteria, managers working for subsidiaries located in Asia (Japan, China, Singapore, and India) were selected and interviewed during and after a three week research trip. The unit of analysis is based upon cross-sectional studies using a retrospective in discussing the most recent global product launch process in evaluating interactions between the senior manager and project leader based in headquarters and cross-cultural team members located in subsidiaries worldwide during the key launch phases of planning and product conceptualization as well as execution and go-to-market preparation.

In order to meet the above research criteria, the explanatory phase involved the selection and invitation of several managers whom did not participate in the first phase due to three reasons: 1) some of the managers from the first phase did not qualify since the research profile required managers with direct responsibility for planning and project management of global products and launches as well as management or facilitation of a cross-cultural team, 2) several of the managers that participated in the first phase had left the organization or had taken a new role that did not correspond with the research profile and 3) the managers represented service firms that did not meet the criteria for global product launch projects (such as the firms TCS and Mindtree).

Thus, organizations from the first phase that either did not have the managerial and organizational profile required for the explanatory research phase (i.e. did not offer products with a technology component such as consumer goods) were removed from the second research phase including Nike (US), Danone, Lego, L'Oréal, Nestlé (Europe), Acer, Mindtree, and TCS (Asia). Moreover, a few study participants from MNCs that met the research criteria were added in order to replace the MNCs that were removed from the explanatory phase. Senior managers from MNCs that were added to the explanatory phase include Apple (US), Alcatel-Lucent, Ericsson, Essilor, and Renault (Europe), HTC and Infosys (Asia). In order to gain access to senior managers for the second phase, I relied on my own network of professional contacts, referrals by study participants from the exploratory phase, and direct contact initiated through professional networks, conferences, and associations. Reliability is sought through the collection of interview data, the role and responsibilities of participants, and the use of company names.

Research Framework

The exploratory study uncovered the firm-level constructs and organizational mechanisms that influence cross-cultural collaboration. This allowed the researcher to modify the research framework and specify the phenomena that would be studied for the explanatory phase. As shown in the figure, the research framework for the explanatory phase seeks to examine the micro-foundation for explanatory mechanisms at the HQ/manager level. Thus, the intent is to explain phenomena through the project leader's interactions with cross-cultural teams during the front-end innovation process of the global product launch project. Specifically, this researcher will focus on knowledge-sharing practices for the project collaboration process involving planning and execution phases, examining critical incidents and resolutions. By identifying causal interactions, it is possible to examine the influence of

organizational mechanisms upon team leadership and team dynamics in creating and sustaining an effective knowledge-sharing process for the front-end of innovation. Since the senior managers responsible for the global product launch primarily serve as the knowledge facilitator and liaison between HQ and subsidiaries, they are capable of providing global and local perspectives due to the nature of their work and experience.

Research Framework – Explanatory Phase

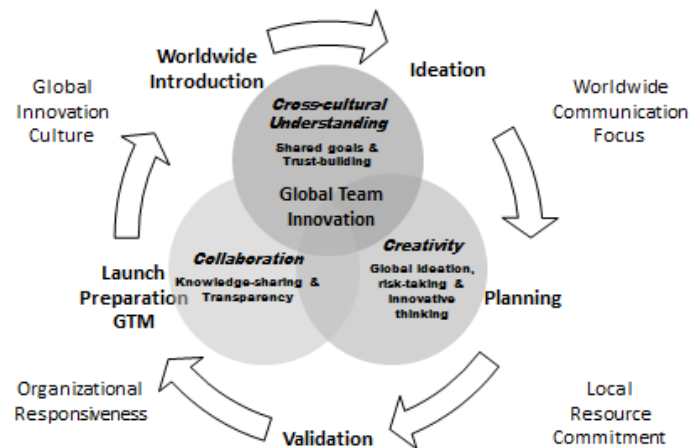


Figure 16.b. Research framework for explanatory phase

In order to examine these phenomena, the exploratory phase developed a set of hypotheses to be tested for the explanatory phase:

Hypotheses

- H1: A product innovation strategy that is focused on decentralization and local market adaptation is positively associated with increased cross-cultural team collaboration.
- H2: The cultivation of a global innovation culture with an emphasis on cultural empathy, knowledge-sharing, and creativity is positively associated with increased cross-cultural team collaboration.
- H3: A project leader with the skills to facilitate cultural empathy, communication, and creativity is positively associated with increased cross-cultural team collaboration.
- H4a: A knowledge-sharing structure that increases communication at the subsidiary level is positively associated with increased cross-cultural team collaboration.
- H4b: A knowledge-sharing structure that facilitates communication throughout the front end innovation process, from conceptualization to planning to market introduction, contributes positively to cross-cultural team collaboration.

- H4c: Cultural understanding in the communication of ideas and the management of conflict during the front-end innovation process are positively associated with the project leader’s ability to increase cross-cultural team collaboration.
- H5: Formal and informal communication vehicles that incorporate face-to-face team interactions are more positively related to cross-cultural collaboration during the front end innovation process than formal and informal communication vehicles that incorporate virtual and electronic team interactions.
- H6a: Knowledge-sharing during the planning phase of the global launch project is positively associated with the project leader’s ability to increase cross-cultural team collaboration.
- H6b: Trust-building and team engagement during the planning phase are positively associated with the project leader’s ability to increase cross-cultural team collaboration.
- H7: Project performance as measured by improved time to market, product localization, customer demand, and local sales results is positively associated with increased knowledge-sharing and collaboration for cross-cultural teams involved in the front-end innovation process.

A model was then developed for evaluating organizational mechanisms in order to understand their influence and impact upon team leadership and project performance for conceiving and delivering new products. Table 1 shows the organizational resources and routines that influence cross-cultural collaboration and launch performance. A model was developed from the literature review and the exploratory study in order to assess the global product innovation process in terms of three elements: organizational resources that influence cross-cultural collaboration, global product launch process and collaboration capabilities, and global product launch performance.

Organizational Resources	Organizational routines during product innovation phases	Global Launch Performance
Innovation Strategy Global innovation culture Leadership Knowledge-sharing structure Communication tools	Front-end Innovation Process Product planning Ideation Validation Market Execution	Project performance

Table 1. Organizational resources and routines for theory-building

Table 1 shows the key resources and routines that will be examined in order to show how mechanisms produce specific outcomes linked to leadership and project performance as

measured by team engagement, product localization, and local sales results. The exploratory phase identified the organizational resources of global innovation culture, strategy, leadership, knowledge-sharing structure, and communication tools as higher-level orchestrating behaviors of mechanisms whereas the project collaboration involving planning and execution activities serve as routines. In the explanatory phase, we will make explicit the relevant component parts or processes that show how their orchestrated functioning activates mechanisms linked to the outcome of project performance.

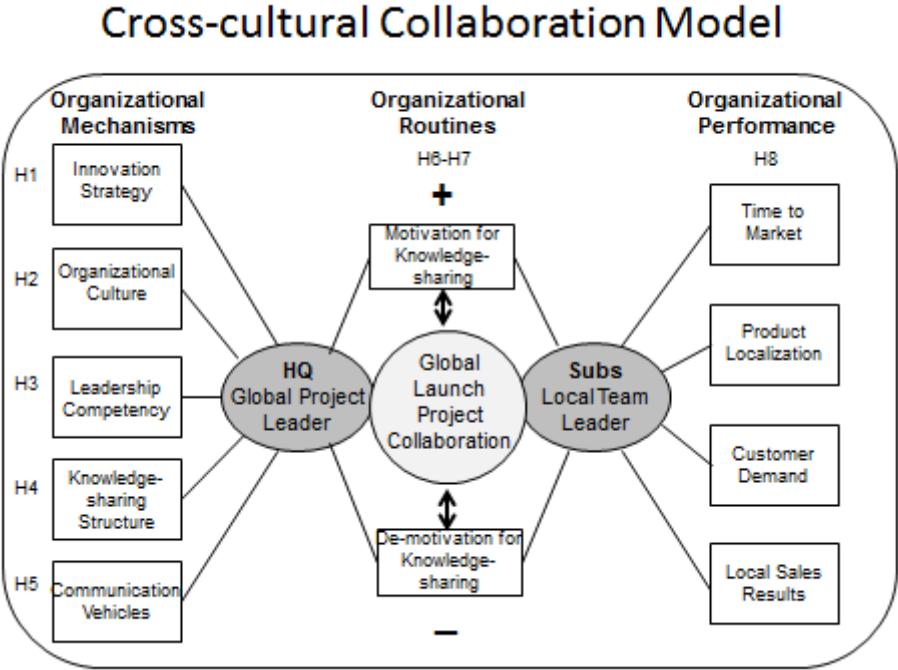


Figure 17. Organizational resources and routines that influence cross-cultural collaboration

2. Data collection

In order to effectively prepare for the field research, the questionnaire for the explanatory phase was reviewed and tested with a few academic professors and business executives to refine the content and ensure a cohesive and precise format for collecting data. The interviews were conducted with a questionnaire to ensure a consistent process and were conducted via phone and through company visits between June 2011 and January 2012. Study participants were briefed on the research purpose and questions prior to the interview; however the questionnaire was not presented until the interview when the actual questions were posed. The questionnaire and interviews with senior managers and team members were recorded using a protocol with a common set of closed and open-ended questions. The

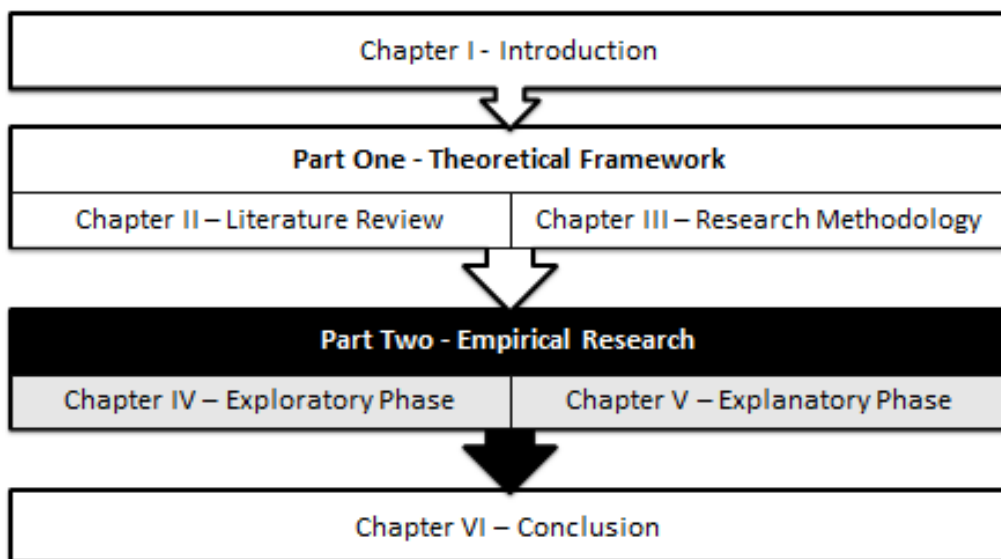
questionnaire contains a semi-structured format including open and closed questions. Questions are based upon the literature review and field interviews. All of the interviews were conducted in English. When participants needed to clarify the question, the question would be repeated and simplified in English with the exception of interviews conducted in French-speaking countries which were then re-phrased in French to ensure understanding. Since all of the participants held positions with global responsibilities, they used English as a business language within their organizations.

Interviews were conducted at the company site and via phone depending on the preference and availability of the participant, especially due to geographic distance as participants were based at headquarters and subsidiaries of MNEs located in Europe (Finland, France, Germany, Italy, Netherlands, Sweden), Asia (China, India, Japan, South Korea, Taiwan), and North America (US). The researcher travelled to Asia to make company visits and pursue on site interviews with several of the subsidiary managers of European and US MNCs based in Japan, China, and Singapore as well as HQ of the Asian MNCs in Japan and China. Since the researcher is based in Paris, France there was an opportunity to make several interviews on site with the managers based in European HQ or subsidiaries of MNCs in France and the Netherlands; the remaining interviews were made via telephone or Skype calls with participating executives and managers working for MNCs in the US, Europe, and Asia. The duration of the interview was between 30-75 minutes depending on the senior manager's availability and followed the outline of a semi-structured questionnaire with open and closed questions pertaining to the key themes of the research topic. The interviews were transcribed verbatim during the actual interviews where the researcher typed the conversations during the interview and recorded the content on her laptop computer. A review of the transcript was made by the researcher after each interview in order to ensure correct understanding of the conversation.

Part Two

Empirical Research

Dissertation Overview



IV. Research Results – Exploratory Phase

A. Presentation of exploratory research results

The purpose of the recently completed exploratory study with 45 participants from 35 MNCs is to identify practices and challenges in achieving cross-cultural collaboration during the global product launch process, from concept to market. In the following sections, hypotheses are developed to identify the organizational mechanisms that influence collaboration between the senior manager/project leader and the cross-cultural team members responsible for the global product launch. I will first examine the role of organizational systems and resources available to senior managers and their teams in facilitating front end innovation from concept to execution. Next, I will focus on the particular challenges and considerations for the senior manager and project leaders in managing interactions with geographically distributed teams. I will then take a closer look at organizational resources that enhance collaboration and knowledge-sharing. Finally, I will present the business objectives and performance measures that impact the global product launch project. This section will then conclude with a summary of key findings and development of hypotheses to be tested in the explanatory phase. In order to provide a closer look at these practices, I will discuss the views of global project leaders, the challenges in managing organizational resources, cross-cultural teams and organizational practices for collaborating, communicating, and innovating during the global product launch process.

1. Presentation and comparison of key findings

a. Global and local innovation strategies

The primary direction taken by the MNCs in which study participants worked is primarily linked to global integration or aggregation where standardization of products is the main objective and local responsiveness or adaptation where local market presence and relevance is the main objective. There appeared to be three distinct strategies applied for the introduction of new products: 1) a global strategy where the new concept is conceived at HQ as a universal solution with minimal adaptation made for local markets or 2) a transnational strategy where the product is developed as a basic concept with consideration for local adaptations where needed or 3) a local strategy where new concepts are created at the local level and then shared at the global level. In reviewing the responses, potential issues were

identified for cross-cultural collaboration between teams in HQ and subsidiaries due to strategies that were more global and focused on standardization rather than localization.

Planning and strategy is often developed and formalized at HQ where localization is applied to key markets at a later stage. Planning tends to be centralized at HQ with high-level decisions and directions for business strategy, the product portfolio, and new product development is determined by the global team that is based in the home location of the MNC. Several managers noted the challenge of operating in an engineering-oriented culture where planning and decision-making is centralized at HQ. The market pressures for developing and delivering localized solutions is driving some of the MNCs to transition from the more centralized structure with an engineering-driven culture to one that has a more decentralized structure with a market-driven culture. Thus, the considerations for collaboration would be applied to the degree of centralization for planning activities and the prioritization placed upon a global solution from HQ or a local solution adapted to the needs of subsidiaries and local markets. There is a strategic focus and tension that needs to be explored for the explanatory phase in order to fully understand the influence of strategic choice upon planning and implementation of new product introductions. Thus, the first hypothesis is formalized as follows:

H1: A product innovation strategy that is focused on decentralization and local market adaptation is positively associated with increased cross-cultural team collaboration.

b. Managing the global product launch

In order to meet the time pressures of customer demand and market competition, senior managers responsible for the new product introduction process need to ensure effective organization through the project management process. In posing a closed question to determine the type of project process used within the organization, the most frequent practice applied the standardized stages (34%), followed by stage gates/gatekeepers (28%), and some using networks (20%) as well as specific technologies (17%) to manage the various phases (and 1% using other practices). When study participants were asked to describe the new product management and team process, the participants showed several similarities in practices. The product launch project is cross-functional and cross-cultural as it involves team members from the regions and countries of target markets as well as the functional teams that are responsible for designing, developing, producing, marketing, and delivering the new product concept.

Global Product Launch Process

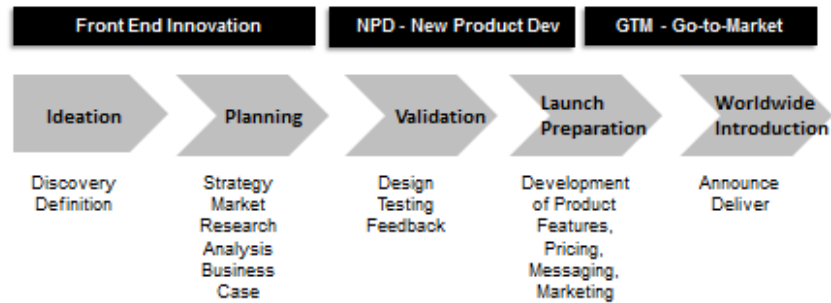


Figure 18. Key steps in global product launch process

A majority of participants use year to year product plans with a phase review or stage gate process for project management. The main steps involved in the launch process include discovery, definition, planning, design, development, testing, and launch (please see overview presented in above figure 18). The global concept is often conceived at the HQ location with later localization and adaptation for local markets. Study participants noted the average range of product launch management involved five phases to nine phases to complete key milestones or activities prior to the official product introduction. One of the participants noted the use of a very concise and simple project process with three phases of insights, collection and ideation; design, and delivery.

The study participants also noted the importance of functional activities such as planning (market research on customers, competitor's strategies, regulations, etc.), product development, marketing and sales, and customer support and service. The involvement of functional teams is critical during the project process where R&D may have some involvement during the ideation and conception phase, engineering takes the lead for product design and development, and marketing takes the lead for go-to-market activities. However, there appears to be a struggle or tension between the engineering and product design groups and the marketing and sales groups in many organizations. If the product launch is primarily product and engineering-driven, there appears to be more emphasis on the company voice and objectives whereas if the product launch is primarily customer and market-driven, there

appears to be more emphasis on the local market voice. Thus there is a continuous tension between an engineering or market-driven approach.

c. Developing a global innovation culture

In fostering cross-cultural collaboration and innovation, the study participants emphasized the importance of organizational culture. When considering the critical elements for developing a global innovation culture within the organization, the participants were presented with the elements found in the Kleinschmidt et al. (2007) model to fully explore and validate activities that are critical to the complete launch cycle from NPD to GTM. Since this model had only been tested for NPD process capabilities, it was necessary to extend and explore additional elements that could apply to the process as it moves from concept to market. In responding to the questionnaire, a majority of participants selected knowledge-sharing, worldwide team contribution, local responsiveness, formal/informal communication, and local resource commitment. In order to compare and expand upon the key elements that were selected by the respondents, an additional question focused on the organization’s innovation culture.

Global Innovation Culture

Research Codes	Analytical Codes	Emergent Themes
Value cultural differences Appreciation for cultural diversity Local responsibility Cross-cultural sensitivity Leverage global and local talent	Globally diverse talent Cultural sensitivity	Cultural Empathy
Global and collaborative framework Communications transparency Easy information sharing Adaptation and integration	Knowledge-sharing Transparency	Collaboration
Foster entrepreneurial thinking Innovation as core value Focus on development of new ideas Adaptability and agility	Global ideation Innovative thinking	Creativity

Table 2. Global Innovation Culture and emergent themes

In order to explore the values that are important in nurturing innovation inside the organization, participants were asked to describe how their organizations reflected a global innovation culture. Their statements were then evaluated for common key words that were grouped into three categories. The first category features *Global teamwork and cultural diversity*. Participants emphasized the importance of recruiting global talent and developing culturally diverse teams. This requires an awareness and openness to other cultures through international education, projects, exchanges, and collaboration worldwide. Moreover, an

appreciation for cultural diversity was mentioned several times with an emphasis on culturally diverse management team and talent pool. There were also frequent references to local relevance and responsibility by leveraging local talent and input. Some of the participants comments demonstrate the importance of global teamwork and cultural diversity:

“We value cultural differences, we’re a culturally diverse company using culture to an advantage”. – Product Marketing Director

“We have a common language, communication focus, interaction across regions, and ensure cross-cultural sensitivity through education, transfer, and travel programs”. – Product Marketing Director

“We view diversity in teams as a cross-cultural investment that requires awareness, education, and openness to other cultures through cultural theme events and team-building activities”. –Global Product Manager

“The company encourages international rotational assignments and cross pollinates individuals across the globe – our products are becoming more and more locally relevant across the globe”. –Global Product Design Manager

“Our internal structure leverages talent across the globe (US, Europe, India, and China) to create efficient teams that deliver on specific targets and initiatives. Our executives and management are adept in rallying round folks from our different centers around the world and deliver superior results. We frequently move people across geographies to create understanding, appreciation, and awareness of the different cultures our teams have to deal with”. – Vice President of Marketing

The second category focused on *idea generation and creative thinking*. Many participants mentioned the continuous development of new ideas along with free-form thinking as essential to an innovation focus. There is the need to empower teams to think differently and to take new initiatives. There were several mentions concerning the importance of fostering entrepreneurial thinking and focusing on the development of new ideas. There also needs to be openness to innovation in order to develop innovative thinking. However, several participants noted the importance of moving quickly on these ideas by being agile, adaptable, and flexible to market needs and responses. The following statements were made by participants concerning idea generation and creative thinking:

“We are actively rewarding and promoting innovative thinking. We are working very hard to ensure that we innovate in all aspects of our business and not only on the product side”. – Chief Technology Officer .

“We’re encouraged to think differently, to find the competitive advantages across practices”. – Global Product Management Director

“Innovation is the core value of the company and is the very basis of our differentiation; we took another big leap when we created a global and collaborative framework”. – New Product Operations Head

“One of our company values is innovation and entrepreneurial spirit. We host global customer councils that ask the customers directly what they want to see in the next products, and also brainstorm about if they like our proposed ideas. Then we take action to integrate these suggestions into the next product launch.” – Global Product Manager

The final set recognized *transparency and knowledge-sharing* as important elements. There were several references to the importance of global and local collaboration through knowledge-sharing between product and marketing teams based in headquarters and subsidiaries. This requires transparency and an open environment that facilitate access to information and resources globally. It requires a flat structure that allows for a collaborative team focus and interaction across regions. There is also the need for easy adaptation and integration in order to share best practices and ensure learning between various cultures and regions. The following statements were made by study participants concerning transparency and knowledge-sharing:

“There’s easy information sharing, full project transparency, local responsibility, and collaboration in virtual, distributed teams”. – Global Product Manager

“The global team helps contribute success to business results. When they see something works, there’s a willingness to share best practices and learn from each other. Regions can collaborate and help each other foster innovation”. – Senior Global Product Marketing Manager

“We will still challenge ourselves to be better through daily cross-cultural meetings and teleconferences from the upper level to the lower level”. – General Manager, Product Strategy and Research

“Our company values emphasize a collaborative teamwork focus”. – Global Product Manager

The above three categories demonstrate that organizations with strong innovation cultures leverage the local market knowledge of their global teams through a focus on cultural understanding, idea generation, and collaboration. In developing the three themes for a global

innovation culture, the three categories are summarized with a single word descriptive in linking themes to the three categories identified as follows: 1) Cultural Empathy – globally diverse talent and cultural sensitivity; 2) Collaborative – transparency and knowledge-sharing; and 3) Creative – global ideation and innovative thinking. The interviews with participants and the evaluation of common patterns show that MNCs are increasingly paying attention to the roles of cultural diversity, collaboration, and creativity when developing and implementing new concepts for international markets. These findings lead to the development of a second hypothesis:

H2: The cultivation of a global innovation culture with an emphasis on cultural empathy, knowledge-sharing, and creativity is positively associated with increased cross-cultural team collaboration.

All of the participants noted their organization's focus on recruiting global talent and promoting culturally diverse teams. However, practices for developing cultural understanding and awareness varied from dedicated programs to a lack of resources. The creativity and innovation practices in organizations ranged from a company-wide framework supported by collaborative technologies to focused activities within teams linked to specific business objectives. The emphasis on collaboration and knowledge-sharing was highly dependent on the transparency and openness between team members located in HQ and subsidiaries. Some participants found their organizations had succeeded in developing global knowledge-sharing practices with continuous interactions between global HQ and local subsidiaries, while a majority felt there were barriers to facilitating communication for geographically distributed teams. The use of frequent communication practices and tools with easy access to information and resources were noted as critical factors to obtaining local market information.

d. Managing cross-cultural team collaboration

The global product launch typically requires engagement of local teams from product conception to market introduction. Each innovation initiative requires a team, an organizational model, and a plan that is revised through a rigorous learning process (Govindarajan and Trimble 2010). As shown in the previous sections, creating and introducing a new product concept to the global marketplace requires the global product launch team to follow key steps which include the product planning phase, with idea generation and local product validation, followed by the project management process, local market preparation for marketing and sales activities, and finally the worldwide product introduction. The global product and marketing management team at headquarters works closely with local marketing

and sales teams at the subsidiary level. Thus the planning and execution phases often require input from the local marketing and sales teams in order to ensure product and marketing programs that are adapted to local market needs.

The management of a globally distributed team is not an easy task as it requires the full engagement and commitment of team members that are dispersed across countries and time zones. This places particular importance on the role of the senior manager and project leader as knowledge facilitator, team collaborator, and project guide. It is a multidisciplinary role that demands effective strategic planning, project management and leadership of cross-functional and cross-cultural teams. When senior managers were asked about the success factors for global teamwork, the responses focused on several elements that were evaluated for common patterns and then coded to create a list of the top qualities and skills for team and project leaders (please see below table 3). General skills that were identified included aspects of product planning, project coordination and team management. However, the factors that were consistently mentioned emphasized the team management skills required to achieve successful results from product concept to market introduction worldwide. Communication and cross-cultural understanding led the way, followed by team engagement, efficient project management and the development of a shared vision.

Global Team Leadership Success Factors

1. Understand cultural and market differences.
2. Practice frequent and open communication on global and local levels.
3. Engage global teams through effective communication and collaboration technologies and tools.
4. Establish clear goals and objectives through effective project planning.
5. Develop a shared vision that ensures a common understanding.
6. Focus on relationships through socialization and personal interaction.
7. Ensure openness and flexibility in adjusting to cultural differences.
8. Establish trust across cultures and regions.
9. Develop cultural empathy through respect and understanding.
10. Create a common language.

Table 3. Global team leadership skills from first phase research.

The skills identified for successful teamwork and collaboration support the literature review on team leadership, cross-cultural teamwork, and globally distributed teams. Goal clarity and shared vision have been shown in previous empirical work as effective for group efficacy and teamwork (Earley and Gibson 2007). The ability to understand and bridge cultural differences has been addressed by several researchers (Maznevski and DiStefano 2008, Hinds 2005). The important role of trust has gained increased attention in the literature

(McDonough et al. 2005, Ting-Toomey 1999, Gupta and Govindarajan 2001). Leadership skills for managing cross-cultural teams have emphasized the ability to manage relationships (Maznevski and DiStefano 2000) as well as the importance of creating a common language and identity (Barczak et al. 2006). Developing cultural understanding has been a focus for researchers focusing on global mindset and cultural intelligence as well as cultural dimensions (Javidan et al. 2010, Inkson and Thomas 2004, Gupta and Govindarajan 2001, Trompenaars 2010). What is noteworthy from the top team leadership skills listed by participants is the focus on cultural empathy and the ability to adjust to culturally diverse teams while understanding local market differences. Cultural understanding, communication, and collaboration skills are critical elements in managing the product innovation process through cross-cultural teams. The team engagement factor has received limited attention in the literature. Finally, the study participants did not mention motivation, learning, knowledge-sharing, conflict management or team creativity which needs further investigation. Given the focus on cultural understanding and collaboration for the product innovation process, a project leader needs to develop specific competencies that support the development of cultural empathy, collaboration, and creativity.

H3: A project leader with the skills to facilitate cultural empathy, communication, and creativity is positively associated with increased cross-cultural team collaboration.

e. Facilitating communication flow between HQ and subsidiaries

In order to further understand knowledge-sharing practices within the organization, study participants were asked how globally distributed teams are facilitating knowledge-sharing where managers were presented with five specific choices drawn from the literature review. A larger number (27%) selected the knowledge creation and concept development process which involves HQ and international offices. The remaining responses were evenly distributed (17-20%) where managers acknowledged that the global process at times involves international exchange with offices worldwide, it facilitates coordination of global NPD information, and it requires input from worldwide locations at each stage of idea, concept development, feasibility, testing, and launch). Since this question did not clarify how and why knowledge-sharing practices took place within the organization and the team, managers were encouraged to share more details concerning knowledge-sharing practices in the organization. The responses ranged from a structured knowledge-sharing driven by the project management process to a loose, un-defined structure and a lack of any structure. Study participants emphasized the need to develop a more structured knowledge-sharing process with a focus on

local market perspectives. There were also references to integrating knowledge-sharing into the core of the organizational culture. The following statements were shared by some of the senior managers:

“There’s not that much true global sharing in our organization. We deliberately develop globally but we try to keep key initiatives in a workgroup yet distribute initiatives on a global scale.” – Chief Technology Officer

“We have an internally developed process that represents gates which compartmentalize actions in a timeline by group. Internet web-based document repositories and internal technologies and activities such as instant messaging, email, video conference, and site visits have been useful.” – Senior Product Marketing Manager

“There’s a big focus on documentation for best practices and methodologies, we need to centralize this and create work flows where we work closely with other product management units. We use communities of excellence where they contribute and participate in knowledge-sharing, and establish a measurement of success to adopt information for global exchange.” – Program Management Director

“Information is shared through two annual company meetings such as live forums where we present and exchange best practices and plans. Then we have informal networking through directors and discussions with global team members... There’s limited use of technologies since the company relies heavily on informal networking and informal knowledge-sharing (over the water cooler).” – International Marketing Manager

“Knowledge-sharing is an iterative process with constant change and adaptation where we have numerous meetings, interactive conversations. However, this process needs more participation from the regions and subsidiaries.” – Product Marketing Director

“Knowledge-sharing and conflict management is not done well or systematically.” – Product Management Director

“Knowledge-sharing needs to be mandated, formal and tools-driven. There needs to be effective infrastructure for remote collaboration, workflows for managing the global interaction process and tools for harvesting of knowledge artifacts.” -- Vice President, Product Management

“Technologies are mere enablers for the knowledge-sharing process but the key differentiator would be to ingrain this knowledge-sharing culture as a core DNA of the organization.” – Head of Product Operations and Delivery

The global product and marketing managers based in headquarters often take the lead in communicating with team members based in key local markets that have been targeted for the product introduction. However, the ability to access and capture market and product knowledge from local team members varies greatly among respondents. Those that indicated most satisfaction with knowledge-sharing cited the use of regular organizational events and discussion forums where team members meet and exchange ideas and practices. Several noted the importance of continuous communication and exchange through various web technologies and tools for discussion meetings, idea generation, and knowledge management. The literature also shows that improving formal and informal channels of communication between headquarters and subsidiaries creates international networks inside the company that have been viewed as a mechanism for fostering subsidiary initiatives (Birkinshaw and Hood 2001). On the other hand, participants that cited dissatisfaction with local knowledge-sharing cited the lack of systems, processes, and tools inside the organization.

f. Local communication and dialogue facilitation

Although the study results showed that involvement of local subsidiaries often occurs during the product planning and go-to-market phases, organizational communication flow appears to move primarily from global headquarters to subsidiaries. When asked about the organizational communication flow for global teams during the concept and launch phases, participants felt that most communication was either initiated at global headquarters with feedback from local subsidiaries (52%) or directed from global headquarters to the local subsidiaries (41%). There was less communication at the local level with 7% of respondents noting that communication was conducted between local subsidiaries while 0% of the respondents felt that most of the communication was directed from local subsidiaries to global headquarters. Most of the respondents emphasized the importance of involving local team members at the planning/product concept and execution/go-to-market phases. These findings demonstrate the need to further explore communication flow from subsidiaries to headquarters in order to identify opportunities to improve collaboration between global and local teams.

Communication Flow between HQ and subsidiaries

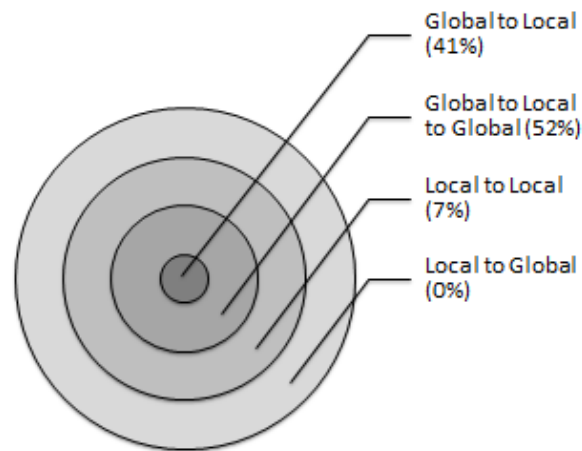


Figure 19. Communication flow between HQ and subsidiaries.

In questioning managers about communication and dialogue facilitation at the local level, it became apparent that knowledge exchange between the global HQ and local subsidiaries is critical at every phase. However, it is not always easy to achieve local market involvement and increased exchange between HQ and subsidiaries. Several of the study participants emphasized the importance of involving local teams and noted success in achieving participation during the global product launch process. There is great awareness by the senior managers and team leaders on the engagement process and the key phases where local involvement is needed. Emphasis on regular communication, a structured project process, and opportunities for local market input contribute to a well-planned and executed launch project. Dialogue is facilitated through key milestones during the project process. The key stages that demand most interaction are the product concept planning and market implementation stages where the latter tends to seek more involvement from subsidiaries due to local market knowledge and localization requirements.

H4a: A knowledge-sharing structure that increases communication at the subsidiary level is positively associated with increased local team collaboration.

The study participants noted the use of several vehicles to facilitate communication throughout the global launch project:

“At the local level, there is customer interaction early in the concept phase with local subsidiaries and local customers – there is also involvement at the later stage during execution.” – Program Management Director

“In the planning phase, when we investigate and propose a solution and product, we need formal buy-in. As the project evolves, there’s more local participation, there’s a global effort during pre-launch and product development, then we launch and require more input during the post-launch phase.” – Product Marketing Director

“Communication usually starts early in the NPD cycle when key markets are identified and the concept is tested with users. Subsequently different countries may get involved for feedback as the product moves from idea to concept to beta testing to final evaluation and ultimately a global launch.” – Global Product Manager

“Local involvement is mostly at the marketing stage when we consider concept development and go-to-market needs.” – Product Management Director

In order to investigate the actual level of participation by local teams located in subsidiaries, the managers were questioned about when ideas were received by teams in local subsidiaries. Study participants found the accessibility and participation of local team members varied depending on the communication structure and process attached to the launch project. The company culture and strategy concerning product innovation initiatives also serve a strong influence. Managers were dependent upon the nature of the launch strategy, the communication focus of the organizational culture, and the knowledge-sharing structure and communication tools that were available and applicable to the team. The team leader’s role and ability to influence the strategy, structure, and communication for team collaboration is essential to an effective project process. Moreover, the ability to involve local teams in the launch project process is essential to delivering effective local solutions to target markets.

H4b: A knowledge-sharing structure that facilitates communication throughout the front end innovation process, from conceptualization to planning to market introduction, is positively associated with cross-cultural team collaboration.

Some of the challenges facing managers when facilitating communication and knowledge-sharing throughout the front end innovation process were described by participants:

“Local team involvement rarely happens except in later stages when product is ready for GTM and launch. And sometimes not even then is dialogue initiated until just

immediately prior to public launch This is an area we are actively trying to change.” – Chief Technology Officer

“We struggle with feedback from subsidiaries since they don’t seem to need or want to embrace process.” – Program Management Director

“We always seek feedback when we need to be in touch with market, however, received feedback doesn’t mean that it is applied.” – Product Management Director

“Yes, we seek local input for product planning and go-to-market phases, but it is not part of the organizational process. The manger needs to drive and initiate to invite input from local teams.” – Senior Program Manager

“Local input doesn’t exist in our current process.” – Product Marketing Director

“The company’s strategy prioritizes major stories at both a global and local level. Based on the short list of priorities, certain localities are engaged more so than others. The level shifts across the company matrix based on a pre-assigned sequencing of priorities over time.” – Senior Product Design Manager

“We hold weekly calls across our Mature and Emerging Market geographies. The local level has access to a global directory database, so anyone can take initiative and directly email HQ to submit an idea or alert management to take action.” – Global Product Manager

“Almost always the feedback is taken into consideration and in many cases we give subsidiaries the freedom to tailor the GTM (market implementation) programs to suit their needs.” – Global Product Manager

“This is very sporadic – sometimes, ideas come from a phone call or e-mail or face-to-face meeting, but the majority of ideas are from pre-arranged meetings.” – Product Management Director

g. Optimizing organizational processes and tools

In evaluating organizational processes and tools that support a collaborative and innovative environment, learning and communication resources were examined for their role in team collaboration. In presenting the participants with four specific categories, it was found that organizational resources varied in use between live and virtual learning tools (30%), global team methodology (28%), cross-cultural training (20%), and a knowledge-sharing vehicle (19%), while 3% did not use any of these resources (see figure 20). The use of cross-cultural learning and a knowledge-sharing vehicle was quite low and often was not actively used even if available. It is also interesting to note that nearly half of the survey participants (48%) have a global teamwork process methodology although it is tied to the project

management system and does not always address communication practices such as socialization, networking, and knowledge-sharing. As noted in the literature, social networks, mobility, and shared experiences among people working in different regions overcome the tensions accompanying globalizing local knowledge (Ichijo 2006). The project management methodology is often driving the team process through project milestones where a majority is using formal stages from idea to launch or a stage gate system. Thus, team communication processes focus heavily on tasks and timelines that are linked to the expected project management results.

Organizational Learning Systems & Tools

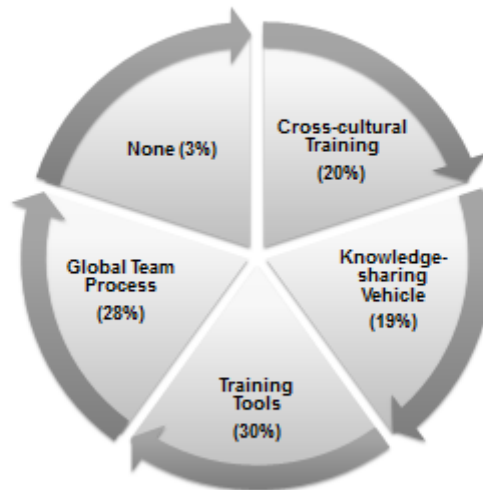


Figure 20. Learning systems and tools used by teams during launch project

In reflecting upon learning tools that can facilitate team collaboration, the study participants spoke about the balance between people and technology. There are many technologies available within the MNC for developing a knowledge-sharing structure and communication tools. In addition to the project process and related systems, there are e-learning and social media technologies for educating cross-functional teams. The knowledge-sharing vehicles available within the company either offer a formal platform or a various tools such as web portals, web conferences, and Wikis. However, the human factor or social process amongst teams appears to be of the greatest concern for team leaders. They feel there needs to be more time and focus for collaboration and knowledge-sharing:

“We need to spend more time on information-sharing. We currently have internal forums and discussions; however this is not a recognized practice where people spontaneously

share online. It's usually communicated via the launch lead and broadcasted to others.” – Senior Program Manager

“Collaboration is always a challenge, there's a need for more communication with a global view; social networking is mostly unstructured as a white space and difficult to measure.” – Vice President of Product Marketing

“We need to stress interactive conversation and collaboration in our company.” – Program Management Director

“There's a lack of communication and learning tools – teams need to ‘loosen up’; we need to take time to communicate and listen to other team members, otherwise we fall into the assumption game. Thus we need to develop trust through listening and understanding.” – Senior Program Manager

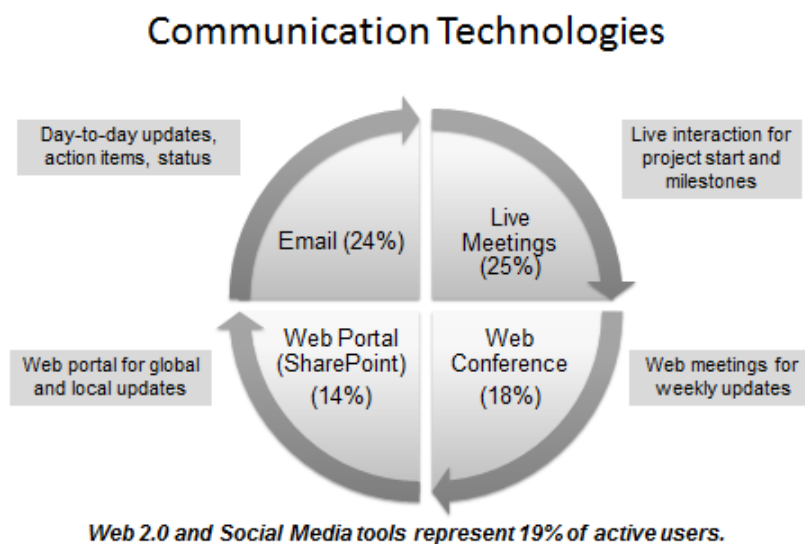


Figure 21. Team communication technologies used during the product launch process.

Since team leaders require effective communication for facilitating team collaboration, it is necessary to investigate the type of communication tools and technologies available to the team. Managers were questioned about the type of tools and technologies they considered most effective for global team communication. When working on global product introductions, participants noted that live interaction is still the most important element in building strong relationships. Live meetings (25%) and email (24%) are relied upon for most effective communication, while technologies such as web conferencing, and web portals are

mainly used to effectively manage communication for globally distributed teams within these multinational organizations. However, 16% of participants noted that social media and web technologies are being used for global team communication, including online communities and a combination of social media (such as wikis, texting, and twitter) and video conferencing (figure 21). Although live meetings and email are the most popular forms of communication, there appears to be increased use of social media and web technologies for team communication.

Due to recent publications and presentations on social media and web technologies, there appears to be a growing assertion that technologies can facilitate communication throughout the organization. In order to examine the actual use of web technologies and social media within globally distributed teams, managers were questioned about the availability of social network platforms and the type of social networks utilized by teams (figure 22). The exploratory phase research results show that 40% of participating companies have a social media platform or social network. However, the use of such a network in global product launch projects was not frequent since 17% of participants used a virtual network compared to 44% of participants who used formal organizational networks such as live meetings and events, with 39% who used informal networks such as coffee breaks and lunch meetings within the organization. There appears to be a great deal of exploration and experimentation in order to find the best solution for project communication and the most effective technologies that suit the interest and usability needs of team members around the world. On the other hand, there is still skepticism on the most effective use of social networking practices and their role in the team and project process:

“Networks allow us to share needed information including documents. Networks do not replace facilitating the team collaboration and proper stakeholder management and communication.” – Senior Program Manager

“Informal networking is very important in our country and our company such as coffee and smoking breaks, lunch, etc.” – Product Management Director

“The social network consists of formal relations. There’s a sales kick-off meeting for social interaction, followed by informal meetings. We focus on face-to-face interaction with no technology network used for socializing.” – General Manager, Planning and Strategy

“We use informal networks like mentoring sessions (face-to-face or virtual), communities of practice, knowledge sharing sessions as well as formal networks like

governance meetings and team meetings. We have been using virtual networks powered by collaborative platforms.” – Head, Product Operations and Delivery

“The ability to collaborate virtually is still really in its infancy. We have video conferencing with multiple cameras and monitors, email, WebEx live desktop meetings, instant messenger, but there is still no really good system for interacting that can replicate being there in person. One of the main issues is the user: the willingness to use the technologies, being skilled enough to use them seamlessly, and being disciplined enough.” – Global Program Manager

The Virtual Difference

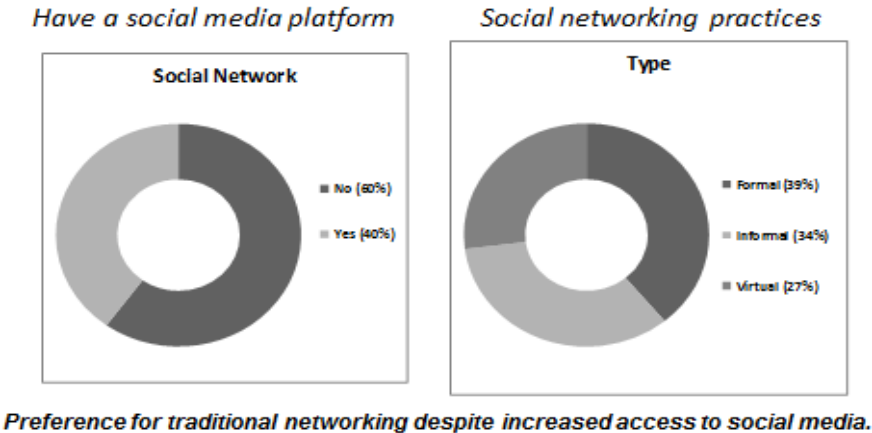


Figure 22. Use of social media for team communication.

Regional Differences

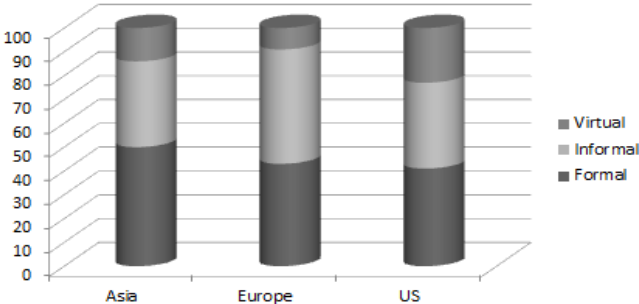


Figure 23. Regional differences in networking practices (HQ home country).

These findings demonstrate the need to evaluate access to and use of communication processes that provide increased interaction during the global product launch project. There is more interest in increasing opportunities for live interaction through events, meetings and exchanges at HQ or subsidiary sites. This has been influenced by the need for face-to-face interaction in building trust and relations between team members of different cultures. Web technologies and social media have been promoted as emerging solutions to effective communication in a networked business environment. Although managers have a wide selection of social media and technologies for team collaboration, the preference is still placed upon more traditional networking activities such as formal business meetings or informal social meetings, per figure 23. The challenge for integrating social media and technologies is the ability to enhance interactions between team members. There is the promise of video and web conferencing technologies that can simulate image and dialogue in real time. Moreover, managers and teams are still experimenting to arrive at an effective balance of live and virtual team interactions.

H5: Formal and informal communication vehicles that incorporate face-to-face team interactions are more positively related to cross-cultural collaboration during the front end innovation process than formal and informal communication vehicles that incorporate virtual and electronic team interactions.

h. The team innovation process

In order to provide a deeper investigation to the relationship between the new product introduction process and team collaboration, the next question examined the four team processes that occur during the management of the product launch project with cross-cultural teams: shared goals and trust-building, team creativity and brainstorming, conflict management, and the knowledge-sharing process. When managers were questioned about which project phase the four team processes occur, a majority placed shared goals and trust-building (71%) and team creativity and brainstorming (70%) in the pre-launch or planning stage. Conflict management (54% throughout/from pre-launch to post-launch and 25% during project process/between pre-launch and post-launch) and knowledge-sharing activities (68%) were mostly used throughout the project process, from planning to execution. The reasons for these preferences will be explored for placing shared goals and trust-building as well as team creativity and brainstorming in the pre-launch or planning stage whereas conflict management and knowledge-sharing were prevalent throughout the project process. An overview of the team process flow during the launch project phases is shown in figure 24.

Launch Project and Team Process

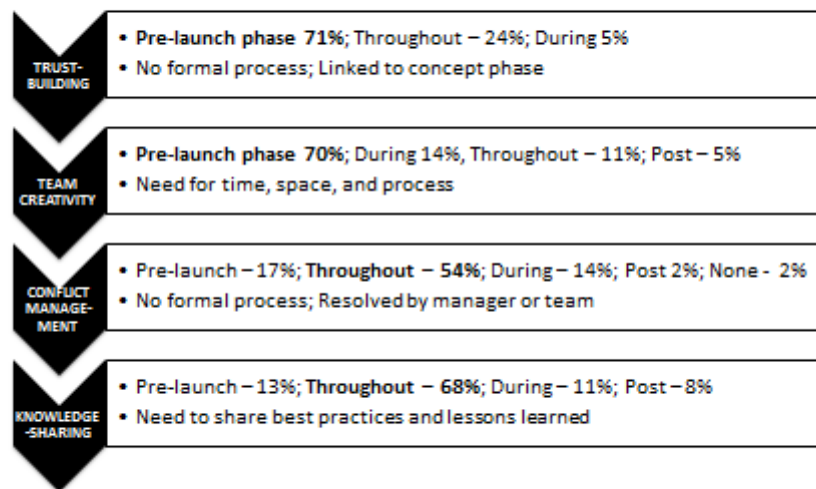


Fig 24. Team process during launch project phases

The *pre-launch or planning phase* requires the development of shared goals and trust-building where effective planning and development of the launch vision and roadmap is essential. The development of *shared goals* requires alignment with multiple stakeholders including the executive and functional teams in HQ and the product, marketing, and sales teams in subsidiaries. It is linked to the business planning process in order to understand the scope of the project and the shared goals. Some of the participants mentioned the opportunity to share the planning template with local teams in order to create more understanding and encourage more interaction and contribution concerning regional and country market needs. Trust-building serves a critical role in creating awareness and understanding amongst team members from different cultures. More structure is needed in order to understand the full communication flow and to encourage relationship-building within teams. Several of the participating managers mentioned the challenge of trust-building due to the lack of travel and team events for face-to-face interactions. The downturn in the economy from 2008 to 2011 increased cost-cutting measures which offered few opportunities for senior managers and team members to interact in a live setting due to budget restrictions as MNCs have reduced business travel in order to reduce costs in an effort to ensure continued profitability. Due to a heavier reliance on web, video and teleconference, it has been difficult to strengthen relations without the face-to-face interactions and interpersonal exchanges needed for trust-building.

The second activity that serves an important role in the pre-launch or planning phase is team creativity and brainstorming. The opportunity for teams to share and generate new ideas is often limited by time to market pressures and the dominant role of the management team in this process. There were mixed responses concerning the ideation stage. Several managers emphasized this activity was reserved for the top management team in HQ to meet and brainstorm new concepts. If more team members are involved, there would be a dedicated event with an outside facilitator. Some of the MNCs would initiate ideation in the pre-launch phase and then encourage free-form thinking throughout the process using real and virtual interactions. Yet others would provide a template or proposal for local teams to add comments as a structured form of knowledge-sharing.

There are also cultural implications for the ideation or brainstorming process due to a difference in participation levels that can be attributed to hierarchy and communication process where reflection time may be needed instead of direct idea generation. As noted by one participant “sharing new ideas depends on the culture, some cultures are more ‘passive’ due to the focus on collectivism and hierarchy; there are also some subsidiaries that have a feeling of being ‘secondary’ to HQ”. The involvement of local team members also seems to be lacking due to the focus on HQ management teams for this process. There is also the consideration of different cultural approaches to developing new ideas as noted by another study participant, “there are different approaches and ways of thinking that can impact the brainstorming session”. A lack of time and resources also impact the creativity process as noted by one manager, “Innovation and idea sharing is more difficult since we lack a common board or vehicle for discussion”. Overall, it appears that most of the participants do not have a formal ideation process and that it is an activity that occurs as an informal discussion more than a dedicated process.

The two remaining activities of *conflict management and knowledge-sharing* were viewed as serving an important role throughout the project process from pre-launch to post-launch phases. Conflict management tends to happen early in the project process since team members are still getting acquainted and adapting to different behaviors and work styles. However, conflict can occur throughout the project process due to timing issues for planning and execution. The challenge is always to keep conflict productive where differences are appreciated and explored and not used as barriers to communication. Conflict also varies by culture, especially between West and East, since in the West there is more acceptance and openness to conflict as part of the creative process where in the East conflict is not viewed as

productive and is generally avoided. Most of the participants noted that conflict resolution is usually facilitated within the team or by the project leader or senior manager if it needs to escalate to senior management. In Asia, conflict resolution tends to be managed by the project leader since hierarchy serves an important role whereas team resolution tends to serve a more important role in the West. What appears to be shared across cultures is the need for a safe space that promotes indirect and direct communication for team members worldwide. In view of the findings from the previous sections, the pre-launch or planning process appears to be the most critical phase for building shared goals, trust, and team creativity as well as managing conflicts.

As noted in the above evaluation, the team interaction processes have an impact on the global product launch project phases. Respondents found that trust-building, shared goals and team creativity are a priority during the pre-launch or planning phase while knowledge-sharing and conflict management need to be managed throughout the product launch process. It is important to establish trust and encourage contribution of ideas early in the project. Trust and open communication amongst team members help facilitate conflict management and knowledge-sharing which are managed throughout the planning and execution phases. Trust-building was viewed as the top challenge in global team collaboration where a lack of effective team communication and knowledge-sharing processes could affect trust amongst geographically distributed team members.

H6a: Knowledge-sharing during the planning phase of the global launch project is positively associated with the project leader's ability to increase cross-cultural team collaboration.

The *knowledge-sharing* activity appears to serve the most crucial role since it is needed from pre-launch throughout the launch process and then after the product has been introduced into the market. Several of the participants noted that knowledge-sharing and cross-pollination of ideas are encouraged at every phase. There are several operating mechanisms that make this possible throughout the planning and execution phases such as meetings, one-on-one discussions, scenario planning, document-sharing, post-launch review of best practices and lessons learned. Other participants' organizations are more formal and structure knowledge-sharing for each project checkpoint or milestone. At some organizations it is a more structured, linear and project-driven process while at others it is more organic and iterative in order to ensure an evaluation of global and local needs. Several of the participants noted the importance of knowledge-sharing post-launch after the product has been introduced

to the market when it is important to conduct a session on lessons learned to review issues that could be resolved and improved in preparation for the next product launch. Knowledge-sharing appears to serve a critical role in building understanding and trust during the front end innovation process. In providing specific comments concerning the type of vehicles used within the organization, study participants noted several practices that can facilitate knowledge-sharing:

“We have launch circles and live meetings on a regular basis where we invite our top markets to review new products and discuss them, look at product features, present launch plans and issues.” – Product Manager

“Knowledge-sharing takes place at approval check points; it is linked to the project process. During launch, we use SharePoint and Wikis to post plans; post-launch involves informal sharing of lessons learned. However, we need more engagement during this process since the engagement of the team can be challenging.” – Director of Product Marketing

“We are learning a lot at various phases of a project, even during launch from initial or reference customers, or post launch from various types of customers. Sharing those inputs is often very critical, not only for future NPD, but for existing products as enhancements or improvements.” – Senior Product Planning Manager

“I need the input from customers around the world to get my ideas on what to create next. I then need to go back and bounce ideas and do some brainstorming (with teams), same with launch and post launch. It is a never-ending cycle of feedback. My environment is completely global and cyclical.” – Global Product Manager

i. Building trust and collaboration for geographically distributed teams

The exploratory study showed that senior managers leading cross-cultural teams are challenged by trust and team engagement during the product launch process. When asked to select the most challenging elements in managing global teams (top three by priority), a majority of participants selected 1) trust-building and sharing practices, 2) team participation, and 3) interactive dialogue. Trust was viewed as the most important yet most difficult to establish among cross-cultural teams. This has been shown in the literature where psychosocial factors such as trust, commitment, and communication play an important role in the functioning of virtual teams (Henttonen and Blomqvist 2005). When asked to rate current organizational performance for team process elements (from 1 to 10 where 10 represents

excellence), the lowest scores were attributed to trust-building (6.06), team creativity (6.43), sharing practices (6.55), and interactive dialogue (6.6). Participants noted the challenges of motivating and managing team members across cultures and geographies. There were few opportunities to pursue dedicated creativity and brainstorming sessions since there was often a lack of time and space. With online communication, managers often need to ensure that everyone is aligned and engaged which requires more discipline from remote workers. Due to less verbal interaction and more online communication, team leaders felt there was a greater need for individual initiative, clearer objectives and procedures, increased communication, as well as practices and tools available for group collaboration.

H6b: Trust-building and team engagement during the planning phase are positively associated with the project leader's ability to increase cross-cultural team collaboration.

Some of the comments of the study participants highlight the challenges of building trust and encouraging more team engagement when managing across cultural and geographic distances:

“There’s always the challenge with virtual communications since you need face-to-face time in order to build relationships.” – Program Management Director

“The global team process is more challenging in many ways since there is less verbal interaction and a lot more online communication such as email, wikis, forums which are being used for ongoing discussions. There is also a lack of goal-sharing and trust-building due to company size, politics, and competing priorities.” – Vice President, Product Marketing

“Trust is a big issue that we try to address but it still remains a big challenge. It’s important to encourage relations across the organization. We are currently too product-driven versus a team process focus. Goals are not collaborative or shared and the structure is very hierarchical.” – Senior Program Manager

“Organizational culture plays an important role since trust and collaboration are part of our organizational values.” – Senior Product Marketing Manager

“We need to develop trust across cultures since many countries feel that we are too US-centric. In EMEA (Europe Middle East Africa), it is important to show focus and show how we listen to the regions and their needs.” – Senior Product Marketing Manager

“Our main issues have to do with trust, especially between Germans and Italians; Germans don’t trust Italians.” – Product Management Director

“We need to communicate our differences in an effort to bridge the cultural gap. The success of communication is of critical importance.” – Senior Product Planning Manager

The study participants noted the challenges of understanding and integrating diverse cultural values and practices for the global team process. A majority of the participants (88%) listed culture as a predictive element during the team processes of trust-building, team creativity, conflict management, and knowledge-sharing. Those that did not list national culture as a predictive element maintained that a strong organizational culture had succeeded in uniting and integrating global teams. A majority of participants felt that team processes focused on communication and relationship-building could effectively strengthen trust and a shared understanding of goals. However, knowledge-sharing approaches vary between cultures, especially between western and eastern ways of generating ideas and managing conflict. There were several examples shared where North American and European approaches would focus on more direct communication and spontaneous exchange of ideas and information. On the other hand, the Asian approaches to knowledge-sharing require more time and more indirect communication due to respective roles and type of information to be shared. The face-saving notion in Asian cultures, especially in China, Japan and South Korea, avoids communicating information that is too negative or confrontational. There are differences in conflict management methods between North America, Europe, and Asia where team leaders working in US MNCs prefer direct discussion, team leaders from European MNCs prefer a combination of direct and indirect resolutions, and team leaders from Asian MNCs used methods that avoided conflict in order to support the face-saving beliefs of the Asian cultures.

H6c: Cultural understanding in the communication of ideas and the management of conflict during the planning phase is positively associated with the project leader's ability to increase cross-cultural team collaboration.

j. Measuring global product launch performance

The exploratory study also shows the importance of facilitating cross-cultural collaboration in order to meet business objectives. In responding to global market demands, participants were asked to indicate which category the organization was most innovative where it was found that products received the most focus while process received the least focus. Participants responded to several categories with products leading the way (29%), followed by customer (23%), teamwork (17%), business model (16%), and process (15%). When asked about global team performance measures, a majority of participants noted that market performance (external) indicators included global and local sales results, customer use

and satisfaction, as well as product quality and performance. On the other hand, organizational performance or internal indicators focused on budget and cost management, time to market, and product localization. The literature has shown that firms succeeding in global markets typically demonstrate timely responses and flexible product innovation, coupled with effective management of internal and external competences (Teece, Pisano, and Shuen 1997; Zou and Cavusgil 2002). There is constant pressure to design and deliver effective and timely solutions.

In meeting performance measures, most of the study participants noted organizational pressures in the areas of time to market, competing project priorities and responsibilities, achieving cost and revenue objectives, product differentiation, and sales results. Both external and internal performance objectives are often measured by formal instruments such as the KPI (key performance indicator) and the OKR (objectives and key results) in order to ensure individual and team accountability. The pressures of market competition, budgets, and sales objectives have made it more challenging for project leaders to have the time and space needed for idea generation and knowledge-sharing with their geographically distributed teams in order to explore and identify market solutions. The need for increased communication between HQ and subsidiaries highlight the importance of team collaboration and knowledge-sharing in order to respond to local market needs. These performance measures highlight the importance of responsiveness to global and local market demands for globally distributed teams responsible for product innovation.

H7: Performance measures for knowledge-sharing that lead to improved time to market, product localization, customer demand, and local sales results are positively associated with increased cross-cultural team collaboration.

Some of the comments that highlight the pressures of meeting business objectives while collaborating during the front end innovation process follow:

“There’s always a focus on the end results, not on organizational performance, since there is the usual time pressure combined with unknowns as well as cultural difficulties in meeting targets.” – Global Product Manager

“In my experience, the team performance is measured by quality of final output, timely delivery against deadlines, and ability to apply learning to future projects (standardization of best practices).” – Senior Global Program Manager

“We focus more on business results than team process evaluation.” – Product Management Director

“We always have to consider how to educate and scale the organization. Most of the growth is occurring in international markets and we need to consider localization and availability of resources.” – Vice President, Product Marketing

“The primary objective is to meet the delivery date to market. The hard part is that compression happens as the product moves through the process and groups run late.” – Global Product Manager

“There is external pressure in the PLC (product life cycle) where the latest features are needed in the market and we try to ensure a quality product and customer satisfaction.” – Global Product Manager

In summary, the findings have uncovered key practices and challenges experienced within MNCs in managing and facilitating cross-cultural collaboration during the global product launch project. In the next section, the implications of this model will be discussed in terms of research needs for the explanatory phase. In reviewing the theoretical framework of the proposed model, I present the theoretical model for facilitating cross-cultural team collaboration during the front end innovation process while identifying organizational mechanisms and routines that influence knowledge-sharing.

2. Organizational mechanisms for cross-cultural collaboration

The exploratory study uncovered key practices and challenges for project leaders in managing and facilitating cross-cultural team collaboration during the global product launch cycle. In meeting local customer expectations, the project leader and launch team are facing pressures in achieving time to market, cost and revenue objectives, product differentiation, and international sales results. In response to meeting global market demands, organizations show a growing focus on developing a strong innovation culture by facilitating idea generation, communication, and collaboration for geographically distributed teams in order to ensure local market responsiveness. However, collaboration processes still pose a challenge for team leaders, especially in developing trust, engagement, and interactive dialogue. In driving product and service innovation, there are cultural differences to consider for managing idea generation, conflict, and knowledge-sharing. Organizational communication and learning resources provide limited access to cross-cultural training, team process, and knowledge-sharing vehicles although a majority listed culture as a predictive element.

Geographically distributed teams require more communication over distance which places a heavy reliance on technologies such as email, web conferences, web portals, video

conferences and social media tools. Organizations are starting to implement dedicated knowledge platforms and collaborative technologies as well as increasing formal and informal exchange and communication across geographies. Those that indicated most satisfaction with knowledge-sharing cited the role of organizational culture and team values focused on idea creation, learning and sharing across cultures. Organizational tools and processes placed an emphasis on live and online communication and interaction where team members could easily connect, meet, and exchange ideas and practices. Although social media is increasingly available, there is a slow adoption rate in using these technologies and tools. A preference is placed upon face-to-face and voice communication through a combination of formal and informal networking practices.

a. Organizational resources and mechanisms

As demonstrated by the field research, an organization with a global innovation culture appears to facilitate cross-cultural team collaboration through common values and practices. Organizations with strong innovation cultures leverage cultural diversity with a focus on transparency, communication, collaboration, and idea generation. In developing an organizational culture that fosters innovation, participants emphasized the role of knowledge-sharing, worldwide team contribution, and communication while ensuring local responsiveness and local resource commitment. This outcome differed from the Kleinschmidt, de Brentani, and Salomo study (2007) where top management involvement and NPD process formality (along with resource commitment) were considered most important (the study participants were solely responsible for NPD programs in American and European MNCs). This exploratory study further extends the Kleinschmidt, de Brentani, and Salomo model by identifying particular characteristics of an organization's global innovation culture. In addition, the exploratory study introduces cultural understanding as a key element in building an organizational environment for innovation which has not been addressed in the literature on organizational culture nor organizational innovation. The elements of cultural understanding, collaboration, and creativity require complimentary processes for developing a climate of innovation. A global mindset and cross-cultural awareness enable communication and exchange within culturally diverse teams. Idea generation and creative thinking are facilitated through worldwide-team contribution while collaboration and transparency are strengthened by knowledge-sharing and local responsiveness. These organizational values succeed in creating a global innovation culture that makes cultural diversity an advantage.

The strategic focus of the product launch project is a critical element in developing collaboration capabilities. As shown by the exploratory study, the product innovation strategy can influence the degree of knowledge-sharing that occurs depending on the emphasis on centralization or decentralization. There is also the consideration of functional authority and control between the engineering and product functions in comparison with the marketing and sales functions. When exploring communication flow between HQ and subsidiaries, it also became evident that a knowledge-sharing structure for encouraging more subsidiary initiative is needed for increasing the communication flow from subsidiaries. The exploratory research showed that a majority of the communication is initiated and controlled by HQ which provides a more top-down dialogue. Finally there is the senior manager responsible for the launch project and leadership competencies to consider for facilitating cultural understanding, communication, and collaboration for the geographically distributed team.

In order to foster and sustain cross-cultural collaboration during the global product launch project, organizations still need to examine knowledge-sharing and learning resources that improve accessibility and engagement for global teams. Although organizations are striving towards a global, innovative, and collaborative culture, the systems and tools currently available do not necessarily ensure an interactive dialogue around the world. As demonstrated by the exploratory study, organizational communication flow for teams focus on global headquarters rather than local subsidiaries which could serve as a challenge for collaborative exchange between global and local team members. The responses concerning organizational learning resources further underscored a lack of engagement with 19% using a knowledge-sharing vehicle during the innovation process. The question is thus centered on how organizations can encourage more contributions from local team members working in country subsidiaries. With a focus on collaboration and visibility, why are there still challenges to engaging local team members? How can the organization ensure a more dynamic exchange between global and local team members? The exploratory study has thus shed light upon current organizational practices and raised questions concerning challenges in conceiving and delivering new products worldwide.

Teams need to effectively share cultural knowledge for developing innovative product solutions that respond to local market needs. This demands organizational communication processes that facilitate the sharing of cultural knowledge and thus contribute to innovative market solutions and successful project initiatives across countries. The exploratory study has uncovered several issues and research gaps that need to be further explored and examined.

The explanatory research phase needs to evaluate organizational communication processes and tools that enhance cross-cultural interaction and dialogue on global and local levels. It also needs to examine cultural differences for knowledge-sharing between team members of different countries. In addition, organizational learning and knowledge-sharing processes need to be further explored in terms of adoption and effectiveness in improving cross-cultural collaboration. In this study, participants did not find that social media tools could improve or benefit cross-cultural collaboration, showing a preference for live interaction. Social media and web communication technologies are increasingly available within organizations yet have not been actively used by globally distributed teams working on product launch projects. Since social media practices tied to organizational innovation have not yet received much attention from researchers, it provides an opportunity to explore and examine new solutions and technologies that can enhance interactions for globally distributed teams.

b. Routines and capabilities

In view of the limited literature currently available, there needs to be a greater research focus on the front end innovation process where conception and planning of new product concepts are determined. In this exploratory study, the front-end innovation activities (planning, ideation, and validation phases) have been identified as the routines for influencing project collaboration and global launch performance. The exploratory study uncovered the interdependent role of these phases and the importance of open communication and knowledge-sharing for engaging team members. The explanatory research phase needs to examine the processes that strengthen the conception as well as the execution of the global product launch project. As the literature review and exploratory study have shown, there is a research gap and organizational need for integrating and advancing theory and practices for the conception as well as the execution of new product innovations. The literature has sufficiently explored NPD process capabilities yet has not extended the same rigor to front-end innovation process capabilities in order to improve understanding of the relationship between conception and market execution of new products.

There is much to learn about capability development and the use of knowledge resources in exploring the link between front-end innovation, NPD and GTM execution. The competitive and changing global marketplace demands an agile process that can develop dynamic capabilities through collaboration and knowledge-sharing. This exploratory study has identified organizational factors and knowledge-sharing processes that need to be considered for achieving effective collaboration between team leaders and geographically

distributed teams during the global product launch. The exploratory study uncovered the role of the front-end innovation process in team engagement where the routines need to be further evaluated during the explanatory research phase. In order to fully develop the theoretical framework and proposed model, the explanatory study will need to focus on how local market knowledge is gathered and shared through interactions that occur during the planning and execution phases of the global product launch. This will improve understanding of the mechanisms that influence collaboration and knowledge-sharing in achieving the global product launch objectives.

c. Global Launch Performance

Although global product launches involve consideration of diverse markets, cultures, and languages, there is a lack of research concerning the collaboration process required for enhancing success of new products in local markets. Given the impact of effective product launch execution on global innovation and market success, the configuration and orchestration of local market knowledge can be viewed as an organizational resource and competitive advantage. The orchestration and reconfiguration of knowledge shared between cross-cultural team members in the context of the global product launch can therefore create and shape new customer solutions and market opportunities that serve as a competitive advantage for MNCs in international markets. In meeting local customer expectations, the global product launch team is facing pressures in reducing time to market, achieving cost and revenue objectives, product differentiation, and international sales results. There is also the consideration of performance measures and the evaluation of team processes such as knowledge-sharing. As a response to meeting global market demands, organizations show a growing focus on developing a strong innovation culture by facilitating cultural understanding, creativity, and collaboration for globally distributed teams in order to ensure local market responsiveness. In this dissertation, I propose that collaboration through knowledge-sharing is influenced by organizational mechanisms and routines which in turn impact project performance. It is therefore necessary to examine these constructs more closely during the explanatory research phase in order to test the hypotheses and evaluate findings.

3. Development of hypotheses for the explanatory phase

The findings from the exploratory study are valuable in constructing hypotheses for evaluating organizational mechanisms in order to understand their influence and impact upon team leadership and project performance for conceiving and delivering new products. Seven hypotheses were developed from the exploratory research phase with the objective of

identifying organizational mechanisms that influence the knowledge-sharing process. The findings showed that knowledge-sharing serves a critical role in cross-cultural collaboration during the front end innovation process. In order to investigate the knowledge governance mechanisms at the firm level and their impact on knowledge-sharing behaviors of project leaders at the individual level, the hypotheses were constructed to identify the specific organizational and causal mechanisms that influence collaboration and knowledge-sharing during the front end innovation process. The hypotheses are presented below:

- *H1: A product innovation strategy that is focused on decentralization and local market adaptation is positively associated with increased cross-cultural team collaboration.*
- *H2: The cultivation of a global innovation culture with an emphasis on cultural empathy, knowledge-sharing, and creativity is positively associated with increased cross-cultural team collaboration.*
- *H3: A project leader with the skills to facilitate cultural empathy, communication, and creativity is positively associated with increased cross-cultural team collaboration.*
- *H4a: A knowledge-sharing structure that increases communication at the subsidiary level is positively associated with increased local team collaboration.*
- *H4b: A knowledge-sharing structure that facilitates communication throughout the front end innovation process, from conceptualization to planning to market introduction, contributes positively to cross-cultural team collaboration.*
- *H4c: Cultural understanding in the communication of ideas and the management of conflict during the planning phase is positively associated with the project leader's ability to increase cross-cultural team collaboration.*
- *H5: Formal and informal communication vehicles that incorporate face-to-face team interactions are more positively related to cross-cultural collaboration during the front end innovation process than formal and informal communication vehicles that incorporate virtual and electronic team interactions.*
- *H6b: Knowledge-sharing during the planning phase of the global launch project is positively associated with the project leader's ability to increase cross-cultural team collaboration.*
- *H6a: Trust-building and team engagement during the planning phase are positively associated with the project leader's ability to increase cross-cultural team collaboration.*

- *H7: Performance measures for knowledge-sharing that lead to improved time to market, product localization, customer demand, and local sales results are positively associated with increased cross-cultural team collaboration.*

The exploratory phase identified the organizational resources of innovation strategy, global innovation culture, leadership competency, knowledge-sharing structure, communication vehicles as higher-level orchestrating behaviors of mechanisms whereas project collaboration involving planning and execution activities serve as routines. In the explanatory phase, I will make explicit the relevant component parts or processes of organizational mechanisms that show how their orchestrated functioning activates causal mechanisms linked to the project process and the outcome of project performance.

With the aid of the findings from the exploratory phase, the above hypotheses were developed and applied to the development of a more extensive cross-cultural collaboration model that presents a detailed view of the influence of organizational mechanisms upon the project routines and processes for global launch collaboration as well as their impact upon project and market performance. The hypotheses within this model guide the research and evaluation of organizational mechanisms and causal mechanisms during the explanatory research phase. The final model is presented below in figure 25 and incorporates the seven hypotheses that are presented in this section. The hypotheses will be tested and evaluated with the findings from the explanatory phase in the next section.

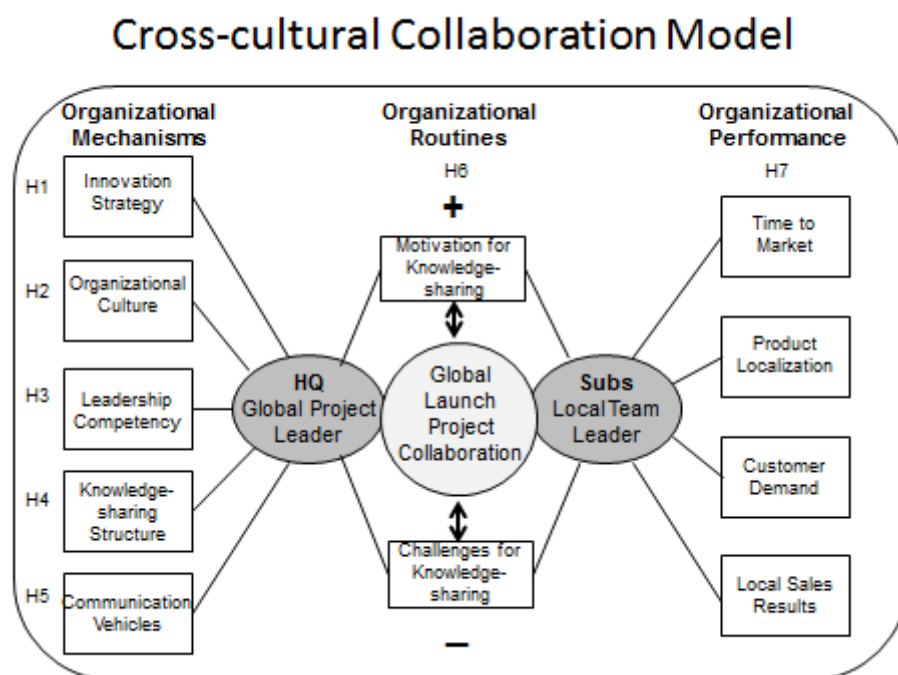


Figure 25. Theoretical model for cross-cultural collaboration

V. Research Results – Explanatory Phase

A. Explanatory research results - global project leaders in HQ

The purpose of the explanatory study with 60 participants from 32 MNCs is to identify specific interactions between the project leader and the geographically distributed team for the key project phases of planning and execution during the global product launch project. The intention is to validate the findings concerning organizational mechanisms from the exploratory phase and to further investigate and identify causal mechanisms. The explanatory study is conducted at the managerial or individual level where the senior manager and project leader is based in HQ while facilitating communication and collaboration with geographically distributed teams primarily based in the world regions of North America (US), Europe, and Asia. This will allow the explanation of phenomena identified in the exploratory phase concerning organizational mechanisms that influence cross-cultural collaboration. Moreover, it will allow the identification of causal interactions concerning critical incidents and resolutions by the senior manager and project leader and challenges in achieving cross-cultural collaboration during the global product launch process, from concept to market.

1. Presentation and comparison of key findings

In the following sections, the hypotheses will be tested in evaluating causal interactions (incidents and resolutions) that influence collaboration between the senior manager/project leader and the cross-cultural team members responsible for the global product launch. I will first re-examine the role of organizational systems and resources available to senior managers and their teams in facilitating product innovation from concept to execution. Next, I will focus on the critical incidents, the challenges and resolutions for the senior manager and project leaders in managing interactions with globally distributed teams. I will then investigate and describe the routines and capabilities that enhance collaboration and knowledge-sharing. Finally, I will identify specific performance measures that influence the global product launch project. This section will then conclude with a summary of key findings and the development of the model for organizational mechanisms that facilitate knowledge-sharing and collaboration. In order to provide an in depth view of these practices, I will discuss the views of global team leaders and their experience in facilitating cross-cultural collaboration for global product launch projects as well as the views and experience of regional team leaders in Asia who are responsible for facilitating communication with the project leader and senior manager based in HQ.

a. Conceiving global product innovation strategies

The dynamic and innovation-driven business environment has placed increased expectations and demands upon MNCs for conceiving and delivering new products. In order to meet changing customer and market needs, firms are faced with new decisions concerning strategic direction. In order to examine the product innovation strategy used by managers and their organizations, study participants were questioned about the type of product innovation that is most representative of their global launch responsibilities. They were offered the choices of radical innovation (new product concepts and initiatives) or incremental innovation (upgrades or improvements to existing products and concepts) or both radical and incremental innovation. A majority (56%) indicated that both radical and incremental innovation represented their current product offering while 35% noted a sole focus on incremental innovation and 9% with a sole focus on radical innovation. The large response to using both radical and incremental innovations is representative of the growing need to incorporate radical or new features within an existing product offering. Several managers noted the need to introduce new technologies or components in order to keep an existing product line updated with the latest features for customers. Although many managers had led launches for breakthrough or radical products, they indicated the need to continuously introduce radically new technologies or features that would sustain growth of the new product.

In order to maintain international market growth and satisfy local customer demand, MNCs need to consider a balanced product portfolio of radical and incremental product innovations. On one hand, study participants noted the need to sustain growth of existing product lines through upgrades of new technologies and features. On the other hand, there is also the need to introduce radical new product concepts that create new categories or market opportunities. Thus, there is a continuous demand for the organization to balance both radical and incremental innovation for internal ideation and creation of new ideas that can be applied to existing and future concepts. There is also the element of risk where top management tends to favor the focus on existing products that currently bring revenue and sales results rather than the investment and exploration of new concepts that do not currently have revenue potential. The strategic focus needs to be aligned with the ability to ensure continuous innovation for existing products for consistent sales results while developing and introducing radical product innovations that can capture increased revenue and sales in the future.

In order to meet the growing demand for continuous innovation, MNCs are developing innovation strategies that need to consider both global and local market

considerations. The study participants were questioned about whether front-end innovation activities were mostly centralized or decentralized in order to determine the current strategic direction. As noted in the literature review, front-end innovation activities consist of idea generation, product design and development, marketing and sales. A majority of the study participants (70%) indicated that front-end innovation activities were centralized whereas the remaining respondents (30%) indicated they were decentralized. There is a strong focus on control and central decision-making at the HQ level where product strategy, design, and marketing decision processes are centralized. As noted by a study participant “We have our brain in HQ with a regional footprint and presence on a tactical level in the areas of production and sales.” Strategic planning is initiated and organized at HQ with tactical implementation and adaptation made at the subsidiary level. The tendency to focus on a global and centralized approach appears to be due to the ability of senior managers and project leaders to move quickly and gain consensus through a centralization of the planning process. Overall, the focus is on a global strategy determined at the HQ level and local execution made at the subsidiary level.

Although most of the study participants’ firms focused on a global and centralized innovation model, there was a clear movement towards a decentralized model due to market pressures. There appears to be a strong interest in focusing on local market needs due to the need to be more customer-centric. As noted by one of the managers “We were more centralized in the past, however, we’re trying to move towards more decentralization since we have realized that products don’t always reflect the local view.” The explanatory study showed that research and development, product development, and sales tend to show more decentralization according to the managers interviewed. However, there appears to be a growing interest by managers and their organizations to decentralize most of the front-end innovation activities. Due to the importance of customer focus, firms are realizing the value of moving to a more decentralized model in order to focus on local market responsiveness.

b. Sustaining an innovative organizational culture and climate

In examining the strategic direction for product innovation, it is necessary to determine how firms are responding through internal resources and capabilities. As discovered in the first phase research, a global innovation culture serves an important and influential role in developing the appropriate environment for innovation. Thus the study participants were questioned about the qualities that were representative of the organization’s innovation process. They were presented with a list of four specific elements that were

determined from the literature review and the exploratory study: Chaotic and disruptive, organic and collaborative, structured and disciplined, customer and relationship-focused. The largest number of responses represented an organic and collaborative process (31%) and a structured and disciplined process (29%), followed by a customer and relationship focus (25%) and chaotic and disruptive with the least number of responses (15%). Study participants noted the importance of balancing a chaotic and disruptive process with the necessity to manage an efficient and disciplined process.

The research uncovered the tension facing managers and organizations in balancing a creative and chaotic process with a structured and disciplined approach. According to a senior manager “We are chaotic and disruptive in terms of breakthrough technology, organic and collaborative when we finally lock in on idea and product.” There appeared to be a great interest among the senior managers to encourage and sustain more creativity and chaotic processes for generating new ideas within the organization. On the other hand, there is also the necessity to mitigate risk and ensure effective market execution of innovation projects due to business performance objectives. As noted by a senior manager “We usually see a chaotic process where it is important to allow failure to happen. To be innovative, you need to take risks. However, big companies try to minimize and mitigate risks.” Thus there is a balancing act with the ability to encourage creative chaos, ensure disciplined approaches with collaborative teams, while focusing on customer needs. As emphasized by one manager, “Innovation and how it works is more structured and disciplined, however the organization is going through significant changes and it’s moving towards an organic and collaborative approach.” In meeting changing market demands, there is an increasing need to become more collaborative in creating, developing, and delivering new solutions to international customers.

The exploratory study revealed the elements of organizational culture that are critical in developing an environment that is conducive to global innovation – **cultural empathy, creativity, and collaboration**. As noted in the literature review, organizational climate serves as an integral element of organizational culture when nurturing creativity and innovation within the firm. In order to further explore the elements of organizational climate that are critical to the innovation process, study participants were questioned about the strengths and weaknesses in the organization’s current innovation process. The participants’ statements were evaluated and coded by hand into key words that were then grouped into analytical codes. These codes allowed the researcher to develop emergent themes for organizational

strengths and weaknesses concerning the current innovation process. They were then compared to the themes created from a global innovation culture in the exploratory phase.

Organizational Climate - Strengths

Research Codes	Analytical Codes	Organizational Climate Emergent Themes	Organizational Culture Emergent Themes
Customer and market-driven Customer engagement and relationships Market and customer adaptability Adaptive and agile Flexible, lean and fast	Customer and market-driven Adaptability and agility	Market Responsiveness	Cultural Empathy
Entrepreneurial initiative and risk-taking Idea generation and creativity Open to innovation Focus on disruptive skills	Entrepreneurial risk-taking Idea generation	Entrepreneurial Initiative	Creativity
Collaboration and transparency Global team and talent Openness and intelligence Multicultural team process	Multicultural team collaboration Openness and transparency	Global Team Transparency	Collaboration
Process orientation Quick execution Effective project process Structured and disciplined	Structured and disciplined Project and execution focus	Execution Efficiency	

Table 4. Strengths of innovation process within MNCs

In order to explore the innovation processes that increase innovation inside the organization, study participants were asked to describe the strengths and weaknesses of their organizations. As viewed in the summary of above figure, there is a general focus on **market responsiveness, global team transparency, entrepreneurial initiative, and execution efficiency**. Market responsiveness is expressed in terms of a customer-driven focus with adaptability and agility for changing market needs. There is increased pressure to understand and listen to customer needs in regional and local markets around the world. A customer orientation demands more time and attention to cultivating relationships and building loyalty. Due to the fast-paced and changing nature of international markets, study participants noted the increased need for market responsiveness, being flexible, quick, and adaptable to challenges and solutions for international customers. On the other hand, weaknesses of some organizations point to a lack of market responsiveness and customer focus. The inability to respond to customer and market demands can be hampered by the organization's administrative layers and slow decision-making processes. A lack of customer-orientation and

attention to local market requirements can result in the inability of the MNC to respond and provide the appropriate market solutions.

Organizational Climate - Weaknesses

Research Codes	Analytical Codes	Organizational Climate Emergent Themes	Organizational Culture Emergent Themes
Need more flexibility Lack customer focus Need more responsiveness Too product/tech-driven	Lack of responsiveness Lack of customer focus	Market Responsiveness	Cultural Empathy
Lack of risk-taking Lack entrepreneurial initiative Weak in idea generation and creativity Need more focus on chaos/disruption	Lack of risk-taking Need focus on creative disruption	Entrepreneurial Initiative	Creativity
Global and collaborative framework Communications transparency Easy information sharing Adaptation and integration	Lack of participation and visibility Lack of cross-cultural team collaboration	Global Team Transparency	Collaboration
Too structured and disciplined Lack of focus/disciplined process Lack of decision-making on ideas Lack of effective execution	Too much structure Efficient structure and process	Execution Efficiency	

Table 5. Weaknesses of innovation process within MNCs

Some of the comments from study participants reflect these strengths and weaknesses:

“There’s a focus on customer research and orientation. We’re really looking at how to support the everyday life style of customers.” – Director of Product Marketing

“It’s really difficult to keep up with the speed of new products... Technology is evolving so much faster than the auto lifecycle that when we launch the car it’s difficult to make it relevant at the time of launch.” – Product Management Director

“As we listen to customer needs, we need a better way to innovate for a new solution since it’s only about how to improve existing solutions for customers, incremental solutions.” – Global Product Manager

“Our company is too tech-driven which makes it difficult to really understand customer needs... We need to deliver products to help customers and we need to help the company to launch more services.” – Program Manager

“We have a customer focus where we listen to customer challenges and what kind of features and solutions they are looking for. There’s a customer and field focus to collaborate and get their input and feedback.” – Vice President, Product Marketing

“We are customer and market driven. We can make things work to be close to the customer or market and to really take an outside in approach to defining the development process of new initiatives.” – Product Management Director

“We understand where the market has potential and what it takes to lead. In certain places, we make the market since the customer doesn’t always know where to go.” – Product Management Director

“We have good relationships with our customers, we’re successful in engaging them from concept to design to validation. There’s a process around design validation and user/customer experience validation.” – Global Product Planning Manager

Global team transparency is the second element identified and coded as a theme for an innovation climate. The element of global team transparency within innovation climate is closely linked to the element of collaboration as a value for a global innovation culture. When questioned about strengths of the innovation process within their organizations, study participants often referred to collaboration and transparency where there is an openness and ability to share and network across functions and cultures. This process involves participative decision-making and a consensus-driven communication style. There were also frequent mentions of the importance in managing and facilitating work within cross-cultural teams who are distributed around the world. This demands effective cross-cultural management processes with an appreciation for culturally diverse talent. Thus, the ability for multicultural teams to share knowledge should involve a less structured and open space that emphasizes collaboration and visibility.

On the other hand, study participants noted that collaboration could also serve as a weakness in decreasing the innovation process. There may be too much collaboration for certain project activities where group members take a long time to arrive at a decision. If collaboration is needed at every step of the launch process, it could slow the go-to-market activities. However, the greatest weakness still appears to be the inability to achieve effective cross-cultural collaboration where study participants noted the need to be more open-minded and collaborative within the organization. A lack of participation and visibility could decrease collaboration. Thus, organizations need to manage effective collaboration that is appropriate for the specific activity concerned during the innovation process. The following statements

made by participants express the role of global team transparency within an innovation climate:

“Our strengths include a loose structure without a strict process and being open to adaptation in the regions.” – Global Product Marketing Director

“There is an openness and intelligence applied within our company to support innovation, especially involving a consensus style.” - Global Marketing Director

“We have very multicultural and geographically distributed teams that have the freedom to do things. They are well recognized in the organization and deliver key innovations with the means and the resources.” – Global Program Director

“Collaboration is good, but sometimes it slows the group down. We need to make decisions quickly and sometimes we’re stifled. Differences in opinion can delay decisions.” – Program Management Director

“We are trying to increase collaboration, but there’s no visibility. It’s not always easy between subsidiaries and HQ. There’s limited opportunity to participate due to differences in time and language. Most documents and meetings are in the (home country) language and most decisions are made at HQ.” – Global Program Manager

The third element and theme identified for the organization’s innovation climate is entrepreneurial initiative. In analyzing and coding key words, entrepreneurial initiative is closely linked to the organizational culture theme of creativity. When describing their organization’s strengths in innovation, several study participants mentioned the first sub-theme of idea generation and creativity. There appeared to be a demand for increased idea generation from all over the world. This leads to the second sub-theme of entrepreneurial risk-taking where study participants referred to the ability to take risks, the ability to quickly embrace innovative ideas, and the willingness to invest in new initiatives. There was also mention of a focus on disruptive skills as well as intrapreneurial skills. The focus is increasingly placed on entrepreneurial initiative that can result in the generation of new ideas.

However, study participants noted that entrepreneurial initiative could also serve as a weakness in their organizations. Several complained of the lack of risk-taking, a sub-theme, which they felt was mostly due to a conservative organizational culture with administrative layers that could challenge innovation opportunities. The second sub-theme identified is the need for a focus on creative disruption. Several participants noted there was too much focus on incremental improvements instead of placing the focus on chaotic disruption for new ideas. They expressed the need for more idea generation and creativity in order to evolve the

innovation process. Thus, the need for increased initiative and idea generation is reinforced in evaluating weaknesses for the innovation process. Some of the statements made by study participants follow concerning their reflections:

“We take advantage of different initiatives in our organization but there’s the complexity of layers. We could improve the process for layers since there are more considerations and people involved. It takes longer to make decisions and we could be stopped by other issues in layers, so changes are needed.” – Global Product Planning Manager

“We keep it (innovation) in HQ for control of process. Since it doesn’t happen at the subsidiary level, we miss out on creative ideas and opportunities to incubate.” – Global Product Manager

“What limits product innovation is having to work within a framework instead of creating something brand new. If our company wants to create a new car, we can’t create all new processes, first we start with the ideal and what we want to do, and then we see what capabilities exist, and then determine based on capabilities and what we want – what matches existing capabilities also limits product innovation capabilities.” – Global Product Manager

“As a culture and mindset, we focus on disruptive innovation and intrapreneurial skills.” – Program Manager

“We are still open for new innovations, in many cases in being the first to apply new innovations.” – Global Product Manager

“We have lots of ideas and the benefit of an international market presence, we need to leverage international markets. For example, in Asia there is more openness to risk, more ideas, and more opportunities.” – New Product Management Director

The last element and theme identified in the organizational innovation process is execution efficiency. Several study participants emphasized the sub-theme of a structured and disciplined process as beneficial for product innovation. A structured process orientation that ensures timely execution appears to be an advantage and benefit. Moreover, the second sub-theme of project and execution focus speaks to the nature of the product launch process which is primarily project-driven. Efficiency and prioritization of resources serve an important role for large scale projects such as new product introductions.

On the other hand, the lack of or too much of a structured approach can serve as a weakness according to several study participants. The lack of focus and a disciplined process can lead to a lack of effective execution and decision-making. There appears to be an increasing emphasis on the ability to select and execute on an idea. Not only should the

process be structured but it should also ensure time to market. A solid framework is needed to move the product from the concept stage to the implementation stage. Finally, a weakness could be too much structure where there is a rigid and complex process. Standardized and structured processes slow GTM activities and the ability to select and execute on new ideas. There is also the administrative burden of a heavy focus on maintaining existing products without considering the development of new products. Some of the insights gained from statements by the study participants follow:

“Our weakness is making strong decisions and executing on those decisions. There is an organizational sense of what we want to achieve; here are ideas, the approaches... then there is inertia and indecision on which direction to take. Thus, we’re not as responsive, the speed is not there.” – Global Product Marketing Director

“We are very efficient for large-scale projects that require resources from regions. When we have heavily structured processes and guidelines, we don’t have the resource issues to get there.” – Senior Product Manager

“The structured, disciplined approach works well but it limits out of the box thinking.” – Vice President, Product Marketing

“We need to be structured and disciplined due to the product design and manufacturing process. We have to stick with the timelines and we need to ensure that every year we have a new product/solution.” – Product Marketing Director

“We have quick execution on decisions though decisions can take a long time – it’s a fluid process with quick execution.” – Senior Manager, Global Products

The explanatory study has helped identify the key themes that define an innovation climate within the organization and their relationship with a global innovation culture. There is emphasis on market responsiveness and its link to cultural empathy where organizations need to be more customer and market-driven while demonstrating adaptability and agility to local market needs. A growing focus on entrepreneurial initiative is linked to creativity and the ability to generate ideas while taking entrepreneurial risks and initiatives. And then there is the focus on global team transparency linked to collaboration where openness and transparency are key to successful cross-cultural team collaboration. There is an appreciation for culturally diverse talent and knowledge where interaction and sharing is encouraged. However, collaboration requires execution efficiency in order to ensure a successful project process for timely market response. This requires a structured and disciplined approach with an effective project process. Market responsiveness, global team transparency, entrepreneurial

initiative, and execution efficiency determine both strengths and weaknesses in the organization depending on the presence or absence of these elements.

c. The global team leadership style

In order to further explore the global team leadership skills identified in the exploratory phase, study participants were asked about what kind of leadership style they felt is necessary for effectively managing and facilitating cross-cultural team collaboration during the global product innovation process (from concept to go-to-market). The intent of the researcher is to pursue a more in depth investigation into the particular leadership traits that are identified with the ability to facilitate cross-cultural collaboration. The responses of study participants were then reviewed for common patterns and key words concerning leadership styles that were then grouped and coded for research codes as well as analytical codes to allow for emergent themes that were then identified as four distinct profiles that represent particular behaviors and practices. As shown in below figure, the four leadership styles identified in this study include the following: **Directive leadership, inclusive leadership, communicative leadership, and empowering leadership**. The leadership styles, particular practices, and managerial examples are presented below.

Leadership and Cross-cultural Collaboration

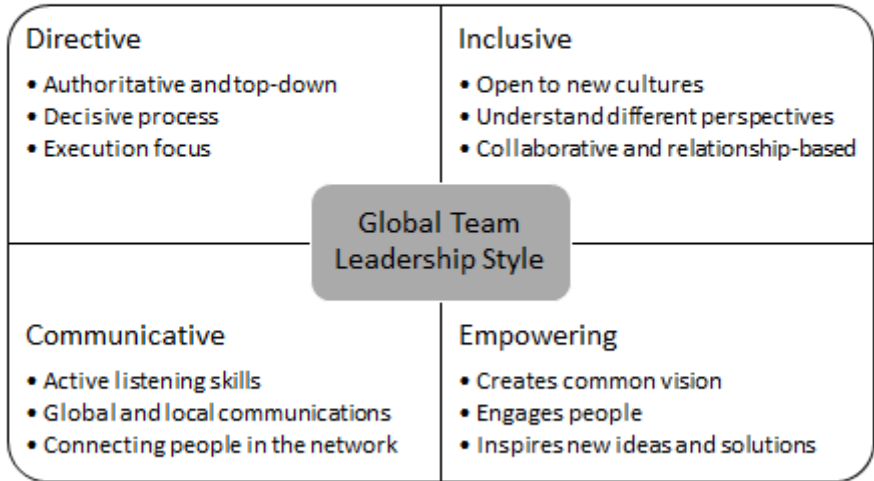


Fig 26. Team leadership styles in facilitating cross-cultural collaboration.

The **directive leadership** style is focused on providing authority and direction for the team during the global launch project. The vision and strategy tends to be set at HQ or in a

centralized manner with execution as the main role served by local team members and partners. This style is associated with strong leadership from concept to execution combined with a firm and structured project management process. There were two distinct approaches described by the senior managers and project leaders for directive leadership. On one hand, there is the style that is strictly top-down where strategy and process is determined by the senior management team and then team members are expected to execute on the announced launch objective and strategy. As expressed by a senior product manager: “We set out directions up front and early, providing the vision for the entire team which is most important. Secondly, we set realistic timelines for everyone to come onboard. Thirdly, we provide communications on a regular basis depending on how the regular team requires this, keeping everyone in check and lockstep.” There is a strong focus on the global objective and strategy combined with a systematic and structured project process and follow-up. A central decision is made for the product features, price, and specifications. There is not much involvement in the launch phases since the project is driven by a central decision and plan where the focus for the local team members is to provide support and collaboration for successful execution.

On the other hand, there is the directive leadership that allows for more involvement in the launch phases yet retains firm leadership in making final project decisions. While the first launch project phase involves ideation and contribution from local team members, the second phase requires more directive leadership to screen ideas, evaluate feasibility, and determine the most effective solution for the new product introduction. There is also the need for directive leadership as the project moves into the execution phase in order to ensure effective management of project objectives and to ensure successful project results. As noted by a senior manager responsible for the worldwide product business: “You need to be decisive, to have the ability to review different kinds of information and knowledge, manage conflicts and needs, and then determine the best solution.” While the project leader needs to ensure collaboration and consensus, it is also necessary to make a decision that represents the needs and priorities of the global launch project. As noted by a senior manager, “we need to reach a certain level of consensus that often needs to prioritize some items over others. The development team cannot do everything, but from local representatives, we might need the item to maximize their business, which might not mean maximizing the business as a whole. This type of localization versus standardization conflict often needs to be managed by higher management which requires a sort of top down decision.” Thus there is the directive leadership that is more controlled and authoritative in managing the product innovation

process from concept to execution while there is also the directive leadership that views decisiveness and direction as a necessity for specific phases of the global product launch cycle.

In exploring the team leadership style necessary for facilitating cross-cultural collaboration, there were several study participants that emphasized that directive leadership could also prevent or challenge team collaboration due to the tendency for a command and control style of management. If there's a focus on leadership directives rather than team participation, there may be less interest and motivation to contribute to the launch project process. A dominant style with a fixed mindset can challenge team engagement and motivation in supporting launch objectives. As noted by a study participant: "You need to be a good team player and don't play the 'alpha type' role where you will fight the process and kill ideas." Another senior manager emphasized, "You can't be autocratic, you will lose people. Don't tell them what you're doing only... include people, and involve them based on their contributions." In addition to a strong directive focus, there is also the challenge of using the cultural self-reference criterion for the manager leading the launch project where one's own set of cultural values and perspectives are applied. Several study participants warned against a tendency to use the national approach from one's own culture or the home country of MNC headquarters. "Management should not impose their national cultural style," emphasized a director responsible for global new product development programs. Since the directive leadership style can lead to both positive and negative effects upon cross-cultural team collaboration, the project leader needs to consider the specific launch phase that directive leadership should be applied.

The second style identified is **inclusive leadership** where collaboration and relationship-building are priorities. Collaboration was noted as especially critical for the early phases of the project as noted by one of the study participants: "Collaboration happens during the concept creation phase where we typically need a variety of ideas, voices from various perspectives in all geos. In order to encourage this, I am concerned that top down approach somehow restricts openness." Openness to new cultures with a global mindset and cross-cultural understanding are key skills for cultivating inclusive leadership. Several study participants emphasized the importance of cultural empathy and the ability to understand people from different cultures who bring diverse perspectives. As expressed by a senior manager: "It's important to consider differences in cross-cultural teams where there's a need to be sensitive to who people are and how they communicate. It's very productive to have

collaborative team management where you try to capture everyone's feedback since it's important to understand hidden agendas or more importantly hidden gems where you need to dig deeper." These cultural differences and diverse views also lead to conflict where the manager needs to understand how to facilitate and mediate issues that occur between team members. Thus, there is a need to set expectations and ensure understanding within the team in order to effectively facilitate cross-cultural collaboration.

In order to achieve inclusive leadership, many study participants emphasized the importance of a collaborative approach that invites participation from team members. There is also the balance between collaboration and direction where the project leader needs to ensure the team can contribute yet also provide the needed authority necessary for execution. "Someone needs to lead, everyone needs to feel involved and part of the process," emphasizes one of the study participants. The focus on inclusion and contribution to the global launch project demands respect and openness to other cultures. "You need to show respect and imagine their perspective and world view. Show that you understand them and you can relate to them," advised a director of international products in reference to working with local team members. It is especially important when working across both geographic and cultural distances that a project leader applies contextual sensitivity in order to ensure understanding amongst cross-cultural team members. This is clearly noted by a senior manager: "What is rich in cross-cultural communications is that you look at the global perspective and you get views from different cultures which provide interesting perspectives. The key is contextual sensitivity and managing teams through communications (written and verbal)." There is opportunity to capture unique insights when there is openness and sensitivity to the value of cross-cultural team knowledge for the global launch project.

The element of trust is facilitated by the ability to achieve collaboration through relationship-building. This requires adaptation to various cultures in order to increase communication and interaction. There are many differences in communication, practices, and time zones where a project leader needs to be flexible and adapt to diverse values and perspectives. "What makes leadership complicated is not only time zone differences, cultural differences, and how you deal with teams that don't perform... you need to ensure teams grow together... you need to develop trust-based relationships," emphasized a senior manager. A senior product manager also noted that a collaborative style gives team members the opportunity to show and demonstrate their own leadership: "Since the launch is very structured, one needs to give more space for members to initiate and provide leadership for

new ideas.” By focusing on openness and respect for culturally diverse team members, there is an opportunity to build trust during the project collaboration process. In referring to team frictions, a senior product manager explained: “You need to have a basic understanding of how colleagues work around the world and accept cultural differences. We may be viewed by others that Americans are ‘pushy Cowboys’ but we need to break that stereotype.” Trust, respect, collaboration, and facilitation of cultural differences become the key elements of inclusive leadership.

Although relationship-building and face-to-face interaction are important to building trust and collaboration, there is the challenge of organizing live meetings that bring all of the team members together in one location. Several study participants noted the use of teleconference, video conference, email, and various web tools in order to ensure sufficient communication. However, the use of virtual communication is not always effective for building relationships. As explained by one of the senior managers: “If you’re thinking of a car for China, you need to spend time in the market, however in times of savings and a poor economy, there are few trips and thus it’s difficult to manage. There’s more focus on virtual communications and internet which can help, any means of communications and having a presence virtually and live.” Several study participants noted the necessity to use face-to-face meetings combined with various electronic communication tools. A senior product manager noted that “Face-to-face meetings are a key element, especially when you’re new in this position and starting a project; it’s important to meet and show, it’s about you going to them and its key that members understand how they’re part of a global approach and that they feel they’re part of a global team.” Thus, it is important that everyone has the opportunity to bring their ideas and their voices to the project whether in person for live meetings or virtually through electronic communications.

The third approach is the **communicative leadership** style where consistent communication on global and local levels is necessary. The communicative leader emphasizes active listening skills and attention to language use. It is essential to listen to team members and allow sufficient exchange and communication during the launch project. Taking time to listen to diverse perspectives and local points of view can help the project leader improve understanding of particular needs or requirements for local markets. As noted by a senior manager, “you need to be a good listener; you’re not a local expert so you need to listen to the locals.” There is also a need to have regular communication that involves both face-to-face meetings as well as electronic communications in order to sustain a dialogue between the

project leader and the team. In order to ensure that everyone is informed and engaged, there are often several modes of communication available such as web sites, portals, or social media network sites. This demands the ability to foster productive conversations where every team member is involved and shares their perspective. The setting of expectations and sharing of context need to be communicated clearly and precisely. Due to the interaction of team members from diverse cultures, there is a greater need to listen and ensure understanding through an awareness of local languages and the preferred modes of communication.

The project leader often serves as the central contact for launch project information and team communication. This places more importance on the manager's influencing skills for increasing interaction and collaboration amongst cross-cultural team members. Aside from setting a common vision and expectations, the project leader needs to ensure relationship and trust-building amongst all members. In a sense, the manager serves as a connector for information, resources, and people in developing the internal MNC network. As noted by a senior manager regarding the ability to facilitate cross-cultural collaboration, "it's being connected between all of them, behaving like a network, where the manager is seen as a node in the network who's heavily involved in all communications and can connect people." There is a focus on continuous communication and exchange in order to enhance knowledge-sharing amongst geographically distributed team members.

The final leadership style identified for effectively managing and facilitating cross-cultural team collaboration is **empowering leadership** where the project leader creates a common vision, engages the team, and inspires new ideas and solutions. The empowering leader provides inspiration through the development and support of the team vision and common goal. In achieving agreement upon the project objectives, influencing and engagement skills are essential for motivating team members to reach the desired results. This places the project leader in a coaching role in order to drive results yet ensure sufficient resources for the team. Thus, the project leader needs to create the appropriate environment where team members feel safe and open to sharing knowledge through initiative and communication. "You need to create the circumstances and ensure that people are being rewarded and moving towards the same target," emphasizes one of the study participants. There is the necessity to develop the vision and an open space where team members are free to create and exchange knowledge that supports the project objectives for the new product introduction.

In order to strengthen the team process, the empowering leadership style provides the opportunity for team members to initiate and take ownership of the project process in order to increase motivation. Engagement of team members is especially important in the early launch phases where local market knowledge and new ideas can contribute to project success. As noted by a senior manager: “The early phase needs the right brain and more creative approach to influence and inspire where you need to engage and influence the team in addition to getting support and approval from top management.” When collaborating with team members of diverse cultures, it becomes critical to recognize their contribution and level of involvement in preparation for the new product introduction in local markets. Given the differences in communication styles and English language ability, additional time, respect, and patience are required for achieving understanding and collaboration. As emphasized by a study participant, “the team leader should be the one who gains visibility for the team from upper levels, needs to ensure that important work is visible and that members feel recognition, to see the innovation moving through the pipeline and understand their value and contribution to innovation, to understand their part in the big picture.” Empowerment leadership requires the project leader to create inspiration and motivation by recognizing the value of team members and rewarding them with stimulating and interesting work assignments.

In reviewing the kind of team leadership style necessary for effectively managing and facilitating cross-cultural collaboration, the study participants emphasized qualities found within the four styles of directive leadership, inclusive leadership, communicative leadership, and empowering leadership. There are qualities found within each of these styles that strengthen the capabilities of the global launch project leader to achieve cross-cultural team collaboration. There is the necessity to ensure some authority and direction for effective project execution while offering an open and collaborative approach to working with team members from diverse cultures. Then there is the importance of effective interpersonal communication skills through active listening with attention to cultural differences in sharing knowledge and information. This leads to the role of empowering leadership with the ability to create a common vision that transcends cultures and functions while inspiring the creation of new ideas and solutions.

2. Knowledge-sharing during project collaboration phases

The previous sections shed light on the organizational mechanisms that influence the role of local team members in subsidiaries during the global product launch project. The research results showed that subsidiary members are mostly involved in the tactical details of

launch preparation and go-to-market implementation. Some organizations ensured earlier involvement at the validation phase to ensure local product adaptation while only a few organizations allowed participation between HQ and subsidiaries for ideation and planning. The ideation and planning functions were viewed as roles for HQ management in evaluating and organizing global market needs and opportunities. On the other hand, the findings in the section concerning strategic direction showed an increasing focus on decentralization and local market responsiveness. In addition, the section on organizational culture and climate showed a strong focus on customer and market-orientation for HQ managers and their organizations. In order to increase team engagement, the team leadership style demands a combination of authoritative, communicative, collaborative, and empowering skills. In view of the increased attention placed on local market knowledge, it appears the collaboration and support of the local team members and managers are of increasing importance to the success of the product launch project. It is therefore necessary to investigate the interactions between the senior manager responsible for the global launch project based in HQ and the subsidiary team members responsible for local market execution.

a. The role of trust for cross-cultural teams

In order to explore the key elements of trust-building for the cross-cultural team involved in the global launch project, team leaders were asked how trust could be improved within the team. The responses from the study participants were evaluated for common patterns and then organized into specific research codes and then further screened and selected into analytical codes that produced four emergent themes. There were four specific themes identified in improving trust with cross-cultural teams during the global product launch project – **social interaction, frequent and open communication, act and deliver on promises, and project contribution**. These themes are explored and detailed in the following paragraphs concerning specific values and practices that are important to consider in building trust. The findings and the links between literature and the field research are then reviewed and discussed.

The study participants placed clear emphasis on the importance of **social interaction** in building trust amongst cross-cultural teams. There is the need to provide more time for social interaction and connection within the team. This includes meeting with people in person through visits to HQ, special team-building events, and project presentations. The local team members need to be updated on recent news and practices where a senior manager mentioned the need to ‘share and show new product innovations and have discussions’. The

ability to build relationships appears to involve a combination of team-building sessions such as social mixers and outings, frequent interactions through business meetings and internal communication practices. There is a clear focus on socializing and relationship-building in order to ensure to strengthen team-building.

Trust-building for cross-cultural teams

Research Codes	Analytical Codes	Emergent Themes
Team and relationship-building Socialize and build relationships Allow more time for social interactions Encourage HQ visits and interactions	Relationship-building Team-building Social interaction	Social interaction
Drive transparency and communication Ensure informal ways to communicate Listen and make people feel heard	Transparency Frequent communication Live meetings	Open communication
Promise to offer answers and deliver Follow up on your word Justify decisions and show how done Show action on promises	Follow through on word Deliver on promises Act on what say Justify decisions	Act and deliver on promises
Ensure meaningful work and tasks Give space and opportunity to contribute Provide target and allow to work on own	Meaningful work Project collaboration Opportunity to contribute	Project contribution

Table 6. Trust-building for cross-cultural teams and emergent themes

The second element of team trust involves **frequent and open communication**. There is a focus on driving transparency through open and honest dialogue. Frequent communication is ensured through a combination of live (person to person) and electronic communications such as meetings, web conferences, and emails. In order to ensure sufficient attention and commitment to regular communication, an effective agenda with strong incentives are recommended. Moreover, it is important to listen and ensure that all of the globally distributed team members are heard. Some of the study participants suggested this could be accomplished through dedicated meetings or innovation collaboration sessions with the global project leader and the cross-cultural team members around the world.

The third element of team trust involves the ability to **act and deliver on promises**. In conducting new product introductions, there is the role of integrity where senior managers and global project leaders emphasize the importance of following through on their promises and statements to the geographically distributed team members in subsidiaries. They emphasize the necessity to carefully manage a commitment for new product innovations by providing regular communication and delivering on their promises. This is especially important where the project leaders need to respond and provide answers to proposals, requests or questions

from local team members. In addition, this could involve the justification of decisions where the local team's proposal or request is not met due to business and organizational objectives. Thus, it is the ability of project leaders to provide a consistency of experience to teams in acting on their promise, showing action, and delivering on their commitments. When there is consistency between words and actions, there is increased credibility which leads to a faster establishment of trust. As noted by one study participant, "People trust you if you follow up on your word – it gains respect and commitment." Therefore, active communication and feedback between the project leader and the geographically distributed team during the global launch project process can contribute to increased trust.

The final element of team trust involves **project contribution**. Global project leaders need to ensure that team members have meaningful work and well-defined tasks during the product launch project. The collaboration with a geographically distributed team provides local team members with the opportunity to enhance their recognition and contribution to strategic initiatives for the MNC. It is the leader's role to provide teams with meaningful work while guiding the process and facilitating any challenges or conflicts. Several study participants also noted the importance of autonomy and more focus on space and freedom to contribute (rather than imposing strict or tight processes). Project collaboration through idea generation and the key launch phases provide an opportunity for increased trust in recognizing the value and knowledge that local team members bring to product innovation objectives.

The field research results show that trust between the project leader and the cross-cultural team is primarily based on the ability to facilitate social interaction, frequent and open communication, acting and delivering on promises, and the role of team members in project contribution. These findings support the literature review in that the creation of trust is both enabled by personal relationships (McDonough et al. 2005) and the individual's perception of trust through competence, benevolence, and integrity (Mayer et al. 2005) as well as an intensive interaction between key parties (Fink and Holden 2005). The explanatory study has defined and linked four specific elements of trust that are particular to cross-cultural collaboration on product innovation projects which are related to integrity, benevolence, personal relationships and intensive interaction. Furthermore, there is the factor of understanding specific cultural elements that are important for perceptions of trustworthiness such as understanding cultural preferences, learning and matching expectations of other cultures in a consistent way (Ting-Toomey 1999). The explanatory study shows the global

preferences for facilitating cross-cultural collaboration which also needs to be compared to the study conducted with local and regional team leaders in the Asia region.

b. Cross-cultural knowledge-sharing practices

In order to determine if national culture serves an important role in knowledge-sharing, study participants were asked whether national culture affects knowledge-sharing behaviors. There were two parts to this question, a closed question and an open question. The closed question was designed to determine the percentage of participants that felt culture does affect (by responding yes) or does not affect (by responding no) knowledge-sharing behaviors. The interview results showed that 82% of the study participants felt that national culture affects knowledge-sharing behaviors while 12% of study participants did not feel that it affects knowledge-sharing behaviors. A majority of the senior managers involved in the explanatory research phase indicated that national culture serves an influential role in how knowledge is shared within the geographically distributed team. In order to explore this question further, study participants were then asked to explain how national culture does or does not affect knowledge-sharing behaviors. The responses are summarized and detailed in the following sections.

In reviewing the comments from the interview participants, there were several common perspectives as well as differing interpretations concerning the experience of the senior managers and team leaders in facilitating collaboration for geographically distributed and cross-cultural teams. Their observations and experiences focus on four distinct areas of knowledge-sharing: **structure**, **power**, **openness**, and **initiative**. In examining **structure**, there were differences in how knowledge is organized and presented during the project process where some cultures are considered more structured and methodical while other cultures are viewed as more intuitive and communicate their experience with a particular topic. Americans and Germans were often mentioned as being very methodical and process-driven during project work. On the other hand, Asians in general tend to have more work structure yet communication structure is more organic and indirect. There is the notion of how knowledge is structured for communication where there is a more direct way to communicate as experienced in North America and Europe compared to a more indirect way to communicate as experienced in Asia. In addition, there is the consideration of the organizational structure in how local market knowledge is shared globally within the organization. Some of the local country team members tend to keep the knowledge at the local level and do not share at the global level. Thus project and meeting processes need to

consider the global objectives and agenda while allowing more communication and exchange concerning the specific work tasks as well as local market knowledge.

The perception and value of knowledge as **power** is closely linked to the ability to share knowledge within teams. Team members that work within cultures and local markets that display a strong hierarchical structure have difficulty sharing knowledge since it is viewed as power and ownership of expertise for the individual that holds the knowledge. There is the sense of enhanced job status and job security if knowledge is held only by the individual. There is also the view that leaders should hold the most valuable knowledge for the project. Study participants noted that they often experienced this behavior from team members of Asian cultures where there was less encouragement of knowledge-sharing due to the view of knowledge as power in the organizational hierarchy. On the other hand, Europeans and Americans tend to view knowledge as empowerment when shared with others. There is more focus on knowledge-sharing amongst team members since knowledge tends to be considered worthless unless it is shared. Team collaboration and sharing is encouraged in order to generate new ideas and information that lead to improved solutions. Thus, there is the interplay of perceptions where knowledge can be viewed as power for the individual or knowledge can be viewed as empowerment of the team.

Structure and power influence the degree of **openness** to knowledge-sharing which is a key element in facilitating cross-cultural collaboration. The hierarchy can dictate the amount of information and the type of knowledge shared amongst team members. When there is more authority and hierarchy attached to knowledge-sharing, there is a tendency to share less and to provide only specific knowledge linked to the project task without expanding on the context and related information. For example, several study participants referred to the differences between Western (European and North American) and Eastern (Asian) approaches to knowledge-sharing. Europeans and Americans tend to practice an open and group-oriented approach to brainstorming and sharing knowledge where everyone is expected to contribute spontaneously and directly within an immediate time period. This places team members from many Asian countries at a disadvantage due to time needed to reflect on ideas as well as formulate these ideas in the English language. Due to the different communication and language styles, Asians need more time to share and provide knowledge for the team project. Several team leaders noted that Asian team members need time to read and reflect about the process in writing since they are uncomfortable in speaking before they fully understand the objective and the process. There is also the role of 'losing face' in Asian cultures where one

cannot directly say no and cannot be completely open and direct concerning an idea or topic since one does not want to embarrass another member or cause conflict. As noted in the exploratory study, there is a tendency of conflict avoidance for many Asian cultures (including Japan, South Korea, and China) where the idea generation process may inhibit Asian members from providing ideas that could challenge other ideas due to fear of conflict.

There is also the issue of transparency in ensuring that knowledge is shared between team members at all locations around the world. The American approach tends to focus on immediate sharing of team knowledge to ensure visibility and exchange whereas the Asian approach tends to be more conservative with knowledge-sharing which may be done indirectly and require more time. The European approaches tend to find a middle ground depending on the cultures involved where there is both knowledge-sharing that is direct and open as well as more indirect and less open depending on the type of knowledge involved. This is often linked to role and responsibility where knowledge-sharing in Asia and to some extent in Europe is linked to the role of the leader and team members. In addition, the degree of transparency and openness to knowledge-sharing is influenced by the way knowledge is created, stored, and diffused by the project leader and the team in the organization. One needs to consider how knowledge is documented and stored via data repositories for access by team members as well as how knowledge is directly shared through interactions through virtual and live meetings and events.

The final element identified in the cross-cultural knowledge-sharing process involves individual **initiative** in contributing to team knowledge. The ability to initiate and contribute ideas as well as knowledge is dependent upon adaptability and security in job roles and the work environment for team members. Several study participants mentioned the concern for job security in terms of sharing knowledge and initiating new ideas. There is some fear concerning the ability of the initiative to succeed or fail and the resultant impact upon their job role and responsibility. In addition, there is the risk that a new initiative may take away resources that are dedicated to existing projects. Thus local team members may show some resistance due to the overall stability for job roles and responsibilities. Moreover, there is also the entrepreneurial behavior of initiating new ideas that needs to be supported and promoted for team members to feel comfortable in following such actions. In many Asian cultures, especially in Japan, there is not the tradition of taking new initiatives due to group consensus and managerial hierarchy. On the other hand, in the US there is a stronger culture of taking initiative since it is a behavior that is encouraged in society as well as the work environment.

Thus, there needs to be a consideration for a work environment that promotes and supports a safe environment for embracing innovation and new initiatives.

c. Cultural implications

When responding to the role of national culture in affecting knowledge-sharing behaviors, study participants made specific references to cultures that they felt were more representative of specific knowledge-sharing behaviors pertaining to structure, power, openness, and initiative. Some of these cultures will be examined in more detail for each region including the US (North America), Germany, France, and UK (Europe), Japan, China, and India (Asia).

When working on global launch projects, the experience of non-American team leaders collaborating with American team members was noted as a focus on communication with positive reinforcement as well as open and direct communication without fear of speaking in a group setting. In addition, Americans were perceived as using a more pragmatic approach for the project process with a short-term view and attention to bottom line (sales) results. There were references to a more process-driven and task-oriented approach with a problem-solving focus. There is a lack of proactive thinking about what will happen and what needs to be done in the long-term future. As noted in the previous section, the American knowledge-sharing approach tends to rely on more group empowerment with an openness and transparency for sharing by encouraging initiative through continuous communication and positive reinforcement. However, the tendency to focus on a more structured and process-driven approach appears to hamper and challenge communication with team members from other countries.

In examining European knowledge-sharing approaches, study participants mentioned the German, French and British approaches to demonstrate different approaches within Europe when collaborating on the global launch project process. The German approach is described as methodical and process-driven with a tendency to provide concise and specific information on what is needed due to different levels of knowledge within the organizational hierarchy. Non-German team leaders mentioned the strengths of a direct, professional and structured approach to knowledge-sharing. On the other hand, the challenges were described as the lack of knowledge-sharing unless there is a direct link to a specific task. There needs to be more questioning and elaboration on topics in order to encourage German team members to share more knowledge and spend more time on communication. There is a cultural communication style in being more conservative and reserved in expressing their knowledge

and thoughts while there may be an element of fear of job security in sharing too much knowledge.

On the other hand, the French approach to knowledge-sharing was described by some of the study participants as more proactive in considering long-term opportunities and creating innovative solutions. There is more time spent on the discussion and decision process with challenges to decisions and less fear of conflict management. However, this behavior may also challenge team collaboration as there is more criticism of decisions made by team members. Conversely, the British approach to knowledge-sharing was referred to as more careful and courteous in communicating and sharing ideas with more avoidance of conflict. Similar to the US approach, the UK approach tends to focus on positive reinforcement before addressing negative or weak points. There may be less challenge to different ideas and avoidance of conflict with more focus on a conciliatory process in order to reach business objectives. The German, French, and British approaches also tend to involve more hierarchy concerning the decision process as well as the role of power and knowledge-sharing between the team leader and the geographically distributed team which could challenge openness and transparency for project collaboration. Organizational and team structures appear to apply a more methodical and process-driven approach. On the other hand there appears to be varying degrees of openness and initiative to communicating and discussing new ideas. Thus, the European approaches to knowledge-sharing vary for the elements of openness and initiative while remaining more consistent in the areas of structure and power.

The Asian knowledge-sharing practices are mentioned by many of the non-Asian study participants as the most challenging to understand and manage during the global launch project. When senior managers and team leaders were asked to elaborate on their experiences in working within Asia, there was an emphasis on describing the cultures of Japan, China, and India. Thus, the following descriptions are summarized to shed insights on knowledge-sharing practices within three leading economies in Asia. The Japanese knowledge-sharing approach was described by study participants as being more insular in that there is a preference for sharing knowledge at the local level (within Japan) and there is not as much interest to contribute to the global effort which reduces communication at the global level. There is more focus on the needs for the Japanese market rather than contributing to the global picture. However, when there is opportunity to collaborate on a group project, the Japanese approach of knowledge-sharing is very organic where they easily integrate information and knowledge. There is a focus on consensus-building and collaboration in planning for the long-term, and

although a lengthy process, tends to result in effective execution of global launch projects. And there are formal structures with respect for the power structure in terms of roles and responsibilities. As mentioned in the previous section concerning conflict management in Asia, there is an avoidance of conflict in order to preserve harmony and build consensus.

In a similar way, Chinese organizations rely on a formal hierarchical structure with more reliance on the decisions of the management team. Like Japan, there is much politeness and respect in communication with others while retaining authority and decision-making powers for the senior managers. Due to the face-saving practice, there is indirect communication that does not communicate negative information or a direct 'no'. Since negative news is avoided, there is difficulty in communicating any difficulties or delays in the project launch process which means that there tends to be agreement without insight on potential issues and time delays for the delivery date. Due to a structured and formal communication approach, there is emphasis on top-down communication where action usually cannot be taken without management's approval. However, there is an openness and ambition to work hard on new ideas and to produce the best solution possible for the launch project.

When study participants expressed their thoughts about working with Indian team members, they noted the need for more structure with directions and details. The Indian approach tends to be more focused on execution and systematic processes with a more short-term view. There is more comfort in structure and guidelines for ensuring execution efficiency. However, much like Japan and China, there is less direct communication about negative information which means there is an attitude to act even without sufficient knowledge in order to maintain confidence. However, a few study participants also noted that the communication style is more direct in comparison with China and Japan.

In view of the three countries examined, there are some specific knowledge-sharing practices that can be noted for the Asia region. In terms of structure, there is more organizational hierarchy and dependence on decisions made by the management team where most of the power resides with the senior manager or team leader. However, much like the US and Europe, there is a focus on execution efficiency and systematic processes for ensuring successful project launch results. Thus, idea generation and planning activities appear to vary in engagement of team members depending on roles and responsibilities. However, there is respect and full support for decisions in order to drive collaboration for effective execution when decisions are made by management. In regard to openness, the Asian countries

examined show more reservation for sharing knowledge until they have more understanding or a solution for solving the problem. There appears to be less encouragement of knowledge-sharing due to the view of knowledge as power for managers. Moreover, Asian cultures appear to have more difficulty to initiate new ideas and act on innovation opportunities due to the hierarchical nature of the knowledge-sharing process. Thus, there are strengths in the knowledge-sharing structure for achieving effective execution, while there are challenges to openness and initiative by team members due to the role of management power in the organizational hierarchy.

d. Creating opportunities for cross-cultural knowledge-sharing

When exploring the role of national culture in creating positive knowledge-sharing behaviors, there were several examples and suggestions on how to develop opportunities for cross-cultural knowledge-sharing. Study participants noted the importance of positive attitude and openness to other cultures. There needs to be special consideration for the different ways of knowledge-sharing between Eastern (Asian) and Western (American and European) practices. As noted by one participant “Asians are more thoughtful before they speak, and it doesn’t mean they don’t have opinions or a point of view, they think more over a problem before verbalizing. Whereas US culture (Americans) speaks before they think and this will evolve into open thinking and discussion. There are some elements that are needed to balance where think through problem and then work on solution.” Although internal competition or distrust can occur between various team members, it is more likely that collaboration and cross-cultural understanding is sought in order to achieve success for the organization worldwide.

There were several references to the need to create an atmosphere of trust and the appropriate environment where people can share what they know and do in order to create the opportunity for more innovation. Some felt there should be a dedicated office for organizing knowledge-sharing with a time plan, ground rules and structured sharing process. This would involve a dedicated process group to visualize and summarize team communications. In addition to creating a dedicated knowledge-sharing space, there is also the consideration of a process that integrates Western and Eastern practices. As noted by one of the participants, “Asians need the time to read and reflect about the process in writing since they’re uncomfortable in speaking. They need to find a balance, in meeting face-to-face to talk and gain trust, but they need writing for full understanding. Thus the elements of structure, power, openness and initiative should consider the aspects of Western and Eastern practices that support knowledge-sharing.

e. The role of organizational culture and knowledge-sharing

It is also of interest to examine the responses from study participants that did not feel national culture affects knowledge-sharing behaviors within the organization. There was a strong emphasis on the role of organizational culture in integrating cultural differences and creating a universal set of values for the cross-cultural team. In organizations with a strong culture, sharing happens with ease across teams. One of the study participants noted “our organizational culture promotes direct communication and if you have valid points you should make it heard within the company... Overall, the corporate culture helps with global collaboration to ensure robust feedback from all over the world.” Yet another study participant noted the universal interest and need to share throughout the organization: “Any team worldwide, Europe or US, or local offices are ready to share knowledge. HQ also understands the need to share knowledge with local team members.” If team members worldwide support open communication and collaboration there is the opportunity for members with different cultural practices to embrace the organizational values. Moreover, there is also the role of incentives, time, structure, and process available for ensuring sufficient knowledge-sharing for the geographically distributed team. In addressing the importance of team collaboration during the project launch process, a senior manager noted “it’s important to have the time to understand concept and context and understand why one can or can’t be successful in other countries.” The organizational environment therefore needs to consider sufficient time, structure, and process with the appropriate incentives.

f. Knowledge flow during the global launch project

Since the previous sections have shown the importance of a local market and customer focus, it becomes necessary to examine the role and participation of launch team members located in subsidiaries. The researcher thus questioned the study participants about the team communication flow between HQ and subsidiaries during the planning and execution phases of the product launch. This question was posed during the exploratory phase and it was deemed of value to pose the question again to validate and identify the communication process between HQ and subsidiaries. The intent is to check on initiatives made by the managers in HQ in comparison with the team members at the subsidiary for communication and interaction during the launch process. The HQ managers were presented with four choices – HQ to subsidiary (communication initiated by HQ), subsidiary to subsidiary (communication between subsidiaries on local and regional levels), subsidiary to HQ

(communication initiated by subsidiary), and HQ to subsidiary to HQ (initiated by HQ with feedback from subsidiaries).

The study results from the participating managers responsible for product launches show different communication flows between HQ and subsidiaries at each of the key phases (per figure 27). The research showed that most of the communication flow during the planning phase is either initiated at HQ with feedback from subsidiaries (56%) or initiated and directed by HQ to subsidiaries (40%). A small number of study participants (4%) reported that most of the communication flow is initiated by the subsidiaries. The execution stage showed more participation at the subsidiary level with 58% of communication flow initiated by HQ with feedback from subsidiaries. The initiative taken by HQ and subsidiaries seemed to be more balanced with 21% of communication initiated by HQ only and 19% of communication initiated by the subsidiaries only – there was a tiny percentage (2%) that indicated communication between subsidiaries only. The planning phase appears to involve more directive communication from HQ whereas the execution phase involves more exchange between HQ and subsidiaries in launching the new product to local markets.

Communication Flow

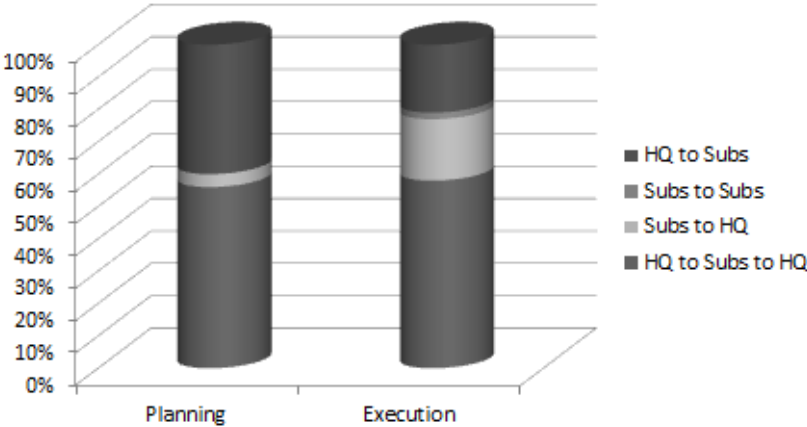


Figure 27. Communication flow - HQ and subsidiaries

In order to further understand the actual engagement level of subsidiaries during the product launch cycle, the HQ managers were asked to specify which phases local subsidiaries were most involved. There were four selections available as the key product launch phases identified in the exploratory study – Ideation, concept validation, product planning, and go-to-

market (implementation). As noted in figure 28, the research results showed that a majority (51%) of subsidiaries are involved in the execution or go-to-market phase. Some firms involved the subsidiaries in the validation phase (20%), the product planning phase (16%), and the ideation phase (13%). There is much less involvement of subsidiaries in the ideation, validation, and planning phases while full participation and involvement are expected for local market execution.

Subsidiary Involvement

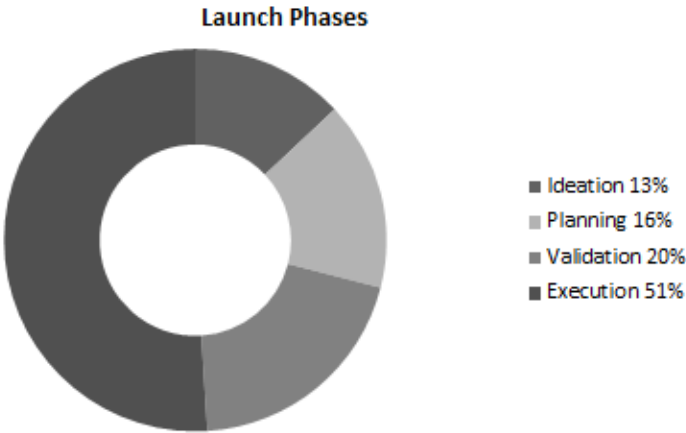


Figure 28. Involvement of subsidiaries in launch phases

In explaining the heavy emphasis on execution for subsidiaries, the study participants referred to the focus on subsidiary implementation roles due to the critical need for marketing and sales preparation involving promotional material and sales training. Others mentioned the effort to involve subsidiaries in the validation effort, once ideation and planning had been completed by management at HQ. As noted by one study participant, “There is not much involvement in ideation and this needs to be improved. Validation is very important and there is some involvement, however, the concept is presented and imposed from HQ.” There is an emphasis on product conception and design at the HQ level with validation from subsidiaries concerning local adaptability. Thus, subsidiaries are expected to validate concepts where they are not necessarily involved in the ideation and planning activities. Yet others mentioned the need to involve subsidiaries in every phase, from ideation to go-to-market. As noted by a senior manager “We are participating in all stages with regions today, although we did not in past. In certain phases, we find that we should have more emphasis with local markets to get sufficient input and knowledge.” The subsidiary role is primarily focused on implementation

although there appears to be an increasing focus on more involvement in ideation, validation and planning.

3. Interactions during the front-end innovation process

In order to explore specific interactions between the HQ manager and the subsidiary teams, the study participants were asked to identify and describe the following during the two critical project phases of planning and execution: 1) critical information needed from local team members, 2) challenges or critical incidents in knowledge-sharing and contribution from local team members, and 3) how local team members would be more motivated to increase knowledge-sharing and contribution. The findings are summarized in the below table and will be discussed in detail in the following sections.

	Critical Information	Critical Incidents/ Challenges	Motivation/Resolution
Planning	<i>Local market trends Market data, size and potential Market requirements Local competition Customer knowledge Customer validation Customer expectations Local product features Product pricing Marketing capabilities Localization needs Budget allocation Resource allocation Revenue forecast</i>	<p><i>There's a lack of trust in local team's knowledge and capabilities, thus HQ retains control. When issues happen, then local team is at fault.</i></p> <p><i>People don't always tell the truth and may say something that's not true about customers or markets. They may be concerned about sales targets, job security or need to ensure a good sales bonus.</i></p> <p><i>There are language and communication problems since some team members don't speak English well. Important meetings are only held for 20 minutes since people don't want to talk too much and uncomfortable with the language. This means that we miss details needed which can't be replaced with an email or phone conversation.</i></p> <p><i>HQ often takes information but doesn't feed it back to</i></p>	<p><i>Integrate and create partnership between HQ manager and subsidiary managers with parallel responsibilities. More communication and collaboration.</i></p> <p><i>Extended outposts in field are very important. Need liaisons and facilitators to bridge communication gaps of time and input in order to prioritize needs and accelerate execution using information from EMEA, Asia, and US.</i></p> <p><i>Local teams are always looking for closed loop feedback, where HQ</i></p>

		<p><i>local teams to show what happened to input. Sometimes local team proposal does get incorporated but it's represented as corporate proposal and the local team does not receive recognition.</i></p> <p><i>Local teams don't have a holistic view or transparency to the planning situation which makes it difficult for them to have an accurate idea of what they're going to sell and how they can contribute knowledge. HQ has difficulty communicating more information since it's in the planning stage and sensitive to sharing new product concept details due to early leaks.</i></p> <p><i>HQ pushed out directives for execution of product launch using tele-presence and virtual communications. The subsidiary team members were not involved in planning or were not consulted concerning the new product concept. A lot of frustration was created since the local teams are already overwhelmed and don't have the resources. They feel they cannot participate or respond to initiatives. So our system collapsed, the local sales teams did their own thing, created a variation or felt it was not possible to execute and ignored the offer. Problem in past is lack of inclusion and reliance on tele-presence/technologies which did not allow relationship-building which leads to more trust and interaction.</i></p>	<p><i>acknowledges input and shows what is done with it; how incorporate and produce in product.</i></p> <p><i>The biggest motivation is to feel confident that their time is well spent. If they make the effort to give us feedback and share their knowledge with others, that we would actually incorporate that feedback into our plans, and that other regions would adopt some of the best practices that they share.</i></p> <p><i>The HQ management team had to travel to regions and hold formal planning sessions to identify local market and subsidiary needs to include in HQ initiatives and align with local market priorities and execute accordingly. We have pursued this live approach due to breakdown in past.</i></p>
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Execution	<i>Local sales support Product/tech issues Local product features Customer feedback Positioning Messaging Localization of marketing material Customer support Partner support Execution capabilities</i>	<i>Local subsidiaries are challenged with competing priorities and making revenue. If they can't provide value for new product opportunities, they will avoid new initiatives since they won't generate revenue.</i> <i>There's little opportunity to share learning. We usually have best practices and lessons learned after launch, teams want to provide input but the company has already moved on and re-focused the team on other priorities. This makes it difficult to get their attention for future improvements.</i>	<i>Need to ensure specific and relevant information. Need to show how understand local problem and perspective and then show guidance in how to make information visible and available in the future.</i> <i>It's necessary for teams to bring closure and to review issues, need to make time for best practices and lessons learned.</i>
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Table 7. Critical knowledge, incidents, and resolutions

a. Interactions during the planning phase

In order to understand the nature and role of interactions during the global product launch project, it is necessary to identify the type of information that is critical for effective planning and execution of a new product concept to international markets. Study participants were therefore asked to identify the most critical information that is needed from local team members for the planning and execution phases. In reviewing information sought by global project leaders for the planning phase, there is a strong focus on local market, customer, and product knowledge. There is a need to understand local market potential by examining trends, size, growth, and competition factors. Then there is the necessity to understand the customer profile, preferences, needs, and expectations in developing a suitable product offering. In order to evaluate a feasible business plan, the global project leader also needs to determine product feature localization, pricing, and resource needs for marketing and sales activities. Finally, there is the need to assess financial resource allocation dependent upon budget needs in relation to forecasted revenue for the local market.

The planning phase requires alignment between the project leader in HQ and the team members in local markets in order to ensure the product strategy meets local market expectations. As noted by one participant “We need to check if decisions made at HQ make sense with local market expectations. There could be business and technological constraints; we need to see how the new product will fit with business habits and its compatibility with consumer expectations and specificities.” Specific and updated market information is critical to effective planning and execution of the global product launch project. Knowledge about the customer and the market potential provides improved insights to the strategic approach and planning needs. A senior manager explained that “We need to have product development phase 0 ready and show this is a marketing opportunity and the market is profitable based upon these facts and assumptions.” There is the growing need to build a business case in order to demonstrate market potential and to obtain sufficient budget allocation. As noted by another senior manager, “We need to get the business case and target customers/users in challenging our own market analysis from HQ, it’s bottom up vs. top down business planning.” Thus, market insight combined with a sound business case can improve alignment between the project leader in HQ and the geographically distributed team in local subsidiaries.

The planning phase also demands consideration of the content and the process of knowledge-sharing. In-depth investigation of customer requirements may be needed for product localization. A director of product management noted that “very specific market needs are not a given such as features needed locally, for example markets that have specific needs due to climate or fuel criteria. Thus you need to know the requirements from a technical view as well as local regulations due to test requirements.” It is often necessary to understand the customers’ user preferences and their relationship to the products used. This demands access to markets and customers through local team members involved in the global launch project. As one senior manager emphasized, it is necessary to have “access to the local market, know how customers use particular concept, what are their wants, needs, and what they envision in terms of the kinds of options desirable. How can the product be used to improve life and productivity?” This kind of information can usually be obtained through the interactions between the project leader in HQ and the launch team members based in local markets. Such interactions demand frequent and consistent communication through knowledge-sharing. As explained by a product marketing director, “The most important information is resolved through active participation. We need more collaboratively structured

planning, it's mostly top down now... most important, it needs to be an open, collaborative, and trusted process.

b. Interactions during the execution phase

When study participants were asked about critical information needed from local team members during the go-to-market or execution phase, they focused primarily on knowledge concerning marketing and sales execution capabilities. When seeking local market insights, marketing related information is sought for positioning, messaging, and localization of marketing content. There is also sales information that is especially important for ensuring local sales support and training as well as partner support. Finally, there is the knowledge concerning the customer for gathering feedback, references, and ensuring support concerning the new product. There is also the need to check on final localization needs for products and marketing content should additional changes be required prior to the worldwide launch execution date.

Marketing leads the way for the execution phase since it determines the positioning and messaging for the new product introduction. A clear and unique value needs to be developed with the customer in mind. As noted by one senior manager, “the most critical information is about messaging. If you consider the value proposition, the value pillars, mix of messaging, media mix, and timing (the actual launch date).” Then there is the sales content and training that is needed to ensure the sales team has sufficient knowledge as well as the readiness to sell into international markets. As noted by a senior manager, “There needs to be capability on execution, where you have resources lined up, trained, informed, and ready. A lot of education is needed in having marketing ready for customer support and partner support.” There is the element of customer intimacy, having the ability to understand local market needs and the drivers that determine customer preferences. As emphasized by a director, “There’s customer feedback for feature needs and requirements, as well as marketing material needed.” Messaging and the value proposition are determinants of effective customer communication for marketing and sales activities designed for the product launch.

The go-to-market and execution phase ensures launch preparation from market awareness to order placement to fulfillment. One of the study participants noted the logistics necessary to support the launch cycle, “We should have pre-orders, beta testing, customer feedback, partner input, approval of messaging, and ensure order process works... and then work with sales team to ensure they have the necessary information and can inform customers.” There is the constant concern for sufficient communication and information

concerning customer engagement. If a company succeeds in capturing positive, local customer references prior to the product launch, there is an opportunity to develop more persuasive marketing and sales tools. As emphasized by a vice president of product marketing, “We need to improve the customer reference plan which shows (product) adoption and falls between product development, marketing, and sales... we’re good at recruitment (of customers), but need to foster a relationship that yields a visible reference.” There is increased attention to effective recruitment and management of customer references and information that assist the sales teams.

In comparing the planning and execution phases, there are distinct differences in the type of knowledge sought and shared by the project leader and the geographically distributed team. The planning phase requires local market, customer, and product knowledge directly related to the creation and validation of the product concept. Critical localization requirements need to be determined during this phase such as customer preferences, product features, pricing, marketing and sales resources. On the other hand, the execution phase requires more specific knowledge concerning marketing and sales content and material. This phase also requires final product localization requirements and customer engagement for concept validation. The planning phase determines the key criteria for the success of the global product launch project while the execution phase ensures the development and delivery of the product, marketing, and sales content needed for the worldwide introduction.

c. Information gathering process

There was further examination of the way the information was gathered for the critical planning and execution phases. The strategic planning phase appeared to concern most of the study participants as they emphasized the importance of information-gathering for this initial stage of the global product launch project. There were two primary approaches – formal and informal. The formal approach involves structured and regular meetings as well as survey tools to ensure knowledge-sharing concerning the strategy and market needs. This involves planning meetings and even dedicated planning teams that are usually conducted on site through face-to-face meetings. Another formal method includes yearly surveys or forms that are sent to local teams in order to gather information. The product management team or a dedicated planning team gathers information from the local sales teams while investigating local market opportunities. As noted by one of the study participants, “We have a product kick-off meeting where we present the concept and have a list of features for them (local team members), we ask them to return with feedback or we may have individual or regional

meetings with them to capture needs.” There were a few study participants that noted that project leaders need to travel to the regions in order to meet customers and hold planning sessions where corporate management and local teams can review the plan and prioritize resources as well as budget allocation. Many of the study participants emphasized their intention to increase involvement of local team members in planning sessions.

There are informal communication methods used in gathering information from the local team members. Project leaders and teams may rely on virtual communication methods such as conference or video conference calls, emails, or informal meetings conducted online or on site. Several study participants noted the use of video conference and teleconference for virtual meetings. There is also the opportunity for project leaders to work with local teams in conducting customer visits and arranging informal meetings with local sales teams in order to better understand market needs. Several study participants noted an openness to social media and experimentation in using various communication vehicles for enhancing communication within the cross-cultural and geographically distributed team. A vice president of product marketing highlighted the opportunities generated by working more closely with local team members, “There are great marketing minds throughout the world where we need to leverage local team knowledge. If we look at how the local team tackles the challenge then we can receive new results.” The ability to listen to local markets and optimize collaboration within the team can generate new solutions and opportunities for the global product launch project.

d. Knowledge-sharing Challenges

In order to gain an in-depth understanding of the particular knowledge-sharing challenges for leading global teams, the senior managers and project leaders were questioned about the greatest challenges in facilitating knowledge-sharing and contribution from local team members. Their comments were examined for similarities and differences through research coding and then grouped into particular categories for analysis. The findings have been organized and presented into four main areas that experience challenges – **open communication and team transparency, organizational knowledge-sharing practices, project planning process, and strategic understanding of local teams**. The previous section concerning critical information indicated the planning phase demonstrates particular emphasis on access to and sharing of local market knowledge. The following knowledge-sharing challenges are therefore focused on the planning phase.

When leading and managing a global launch project, the senior manager is faced with the objective of creating a strategic plan that effectively differentiates and positions the new

concept to key geographic markets around the world. The ability to understand the value and relevance of the new concept to specific local markets relies on the local market knowledge held within the organization. Moreover, the local team members often possess the necessary market and customer knowledge that is required for identifying and validating localized solutions. However, there is often a challenge of **open communication and transparency** between team members in HQ and subsidiaries. Many of the study participants noted that communication across geographic distances is increasingly dependent upon technology tools and social media in order to reduce travel expenditures and manage efficient budgets. The pressure to reduce travel and rely increasingly on virtual and electronic communications is mostly due to the economic crisis experienced from 2008 to 2011. The lack of face-to-face communication and interaction has made it more challenging to build trust and foster quality relationships since there is less time and opportunity for travel and onsite visits and exchanges amongst geographically distributed team members. Managers are therefore confronted with the challenges of building trust and developing relationships across geographic and cultural distances while trying to ensure a balance of face-to-face interaction and virtual communication on a limited budget.

When examining the communication process within the cross-cultural and geographically distributed launch team, the views of the project leaders emphasized the challenges of language, communication styles, and organizational communication systems. Since English is used as the international business language for all of the managers and organizations involved in this study, there is the consideration of how well team members master the English language. The ease or difficulty in understanding the team's dialogue with each other depends upon the level of English used, the type of accents and their influence upon pronunciation of the English language, and the interpretations formed between the sender and receiver. As noted by a senior manager; "Sometimes important meetings are only held for 20 minutes since people don't want to talk too much and they're not comfortable talking; we miss details and we can't replace this with phone calls or emails." While it is important to have everyone speak and express their thoughts and ideas, actual engagement and communication by team members could be challenged by discomfort in their level of English and the ability to express their ideas. Other members may be more comfortable and at ease with English as well as to taking initiative and contributing ideas which results in some members dominating the conversation over others. Therefore, there is a need for a

communication structure and process that enables contribution and engagement by all of the team members worldwide.

When addressing market exploration and exploitation activities for global product launch projects, many of the project leaders interviewed recognized that more transparency and involvement in planning activities are needed for local team members. However, there are several issues that make it difficult to achieve effective **knowledge-sharing practices** between the project leader in HQ and the local team members in subsidiaries. There is a lack of systematic processes to share knowledge where an open and simplified communication structure is needed. There needs to be more recognition and dedicated time for knowledge-sharing with team members in other countries and regions. As expressed by one of the study participants “it should not be a forum where you ask the sales guy what’s missing; the innovation process needs to share knowledge about the market where team members can ask, discuss, and share knowledge.” Since a dedicated communication vehicle often does not exist for knowledge-sharing, much of the critical market knowledge remains within the minds of the team members and is not given the opportunity to be shared with the team. Therefore, the manager is challenged by the lack of a knowledge-sharing structure, effective communication tools, and a dedicated time and space to share with team members.

There are challenges in knowledge-sharing for local markets, especially prevalent in emerging markets, where communication and information are not fully understood during project collaboration. The lack of a communication structure where local team members are not always able to present information in a manner that is understood and appreciated by the project leader and senior management team in HQ is a challenge. In addition, there is difficulty in understanding the language and communication style of team members when using English in communicating specific needs and requirements. This is further complicated by the lack of travel and physical presence of team members in HQ and subsidiaries combined with the issues of using various online media and communication technology tools that may lack the efficiency, clarity, and trust-building elements of face-to-face communication. This creates a greater need to develop relationships within the MNC network in order to achieve global launch project objectives. As noted by a senior product planning manager: “Generally, we find that subsidiaries are eager to learn what’s happening from HQ, especially about new products and designs. They’re eager to tell you what they think.” Although there is interest and openness to share, the elements of geographic and cultural distance create less interaction

and communication between team members which contributes to a lack of trust and knowledge-sharing.

In their role as knowledge facilitators, project leaders acknowledged the need for HQ to focus on local market needs and opportunities. There are challenges with the current **planning process** for conceiving and introducing new products to international markets. As one product management director noted, “senior management in HQ is more interested in the numbers and not in the process and what the customer wants (in local markets).” Due to time constraints, there is also more emphasis on execution versus sufficient time for planning and research in understanding local market opportunities. The senior management team in HQ may want to act quickly and decisively when they have developed and confirmed the global market strategy while local teams may need more time to evaluate and determine the best execution approach for local markets. Several project leaders also noted a lack of confidence by team members based in HQ towards local team members based in subsidiaries.

On one hand, there is limited openness and sharing of information during the planning process due to organizational confidentiality of new concepts which results in the project leader sharing few details with the local team members. This creates difficulty in gathering real-time data and up-to-date information on customers from the local managers since they do not have sufficient information from HQ in order to contribute relevant and concise data. On the other hand, the lack of feedback or concise and correct data leads to mistrust from the project leader and the team members in HQ since they cannot rely on this information for effective planning of the new product introduction. There is also the continuous challenge of time and resource constraints where the project leaders noted the issue of capturing all of the feedback from local team members, having the time to incorporate the ideas and recommendations into the planning phase and then returning to the local team members to receive their final feedback and confirmation on the new concept. As expressed by a product marketing director: “We sometimes have to say ‘this plan incorporates your feedback’ due to time limitations. And then feedback from the field is sometimes such that we didn’t fully understand their feedback and our new plan does not always adequately address some of their feedback and concerns.” There are time and resource constraints that can challenge management abilities and organizational responsiveness.

Local team members carry critical knowledge concerning local customers and markets and they have perspectives and recommendations which requires responsiveness and efficient feedback and consideration of local market needs. When project leaders do not recognize or

validate the contributions and ideas of local team members, there is increased tension and mistrust within the team. As expressed by a senior product manager: “Local teams know their customers and regions, so they often have strong opinions of what’s needed and what’s necessary; we need to give feedback and meet their needs since regional teams can get frustrated in that the request may get ignored.” A few of the study participants admitted that they simply did not have enough time to incorporate all of the changes and provide sufficient confirmation of team members’ ideas. The project leader and launch team thus needs to ensure timely exchange and delivery of information between HQ and subsidiaries worldwide. There is a lack of a structured system that can capture the feedback and ensure information flows from local team members which requires increased communication and interaction.

In addressing the type of knowledge-sharing structure and communication tools that improve exchange between the project leader and the team members, the study participants emphasized the lack of a global view and **strategic understanding from local team members**. There is often a lack of alignment between the project leader and the team members in terms of priorities and expectations. Project leaders and senior managers mentioned the tendency of a short-term view for local team members where most of the energy and effort is placed on execution. Local team members are challenged with competing priorities of marketing and selling several products and services while also ensuring they make revenue goals. Thus new products and services that are going to be introduced to local markets are evaluated for the customer value and the revenue potential they will bring to local markets. If there is not a significant value or interest for the customer and market, new concepts may be avoided or ignored since there is the perception they will not generate revenue.

In regard to market exploitation, the perspective that subsidiaries tend to have a short-term view is closely linked to organizational objectives and performance measures. Since local teams are evaluated upon sales results within local markets, there is greater pressure to focus on products that can generate the most revenue. There is also the challenge for local teams to effectively understand the new concept and how they can contribute to its creation and development due to limited information from the project leader and functional teams based in HQ. As expressed by a senior product manager: “Subsidiaries are myopic in that they don’t have a long-term view so information is not always available or arrives too late. There is a process for sharing but the content is not always finalized until closer to launch date.” Senior managers explained that limited information is shared with their local team members

during the concept stage due to the sensitive and competitive nature of the market and the fear that information leaks will occur prior to the product introduction. Thus, more guidance and interaction is needed from the project leader in order for the teams to fully understand the concept and to contribute to its development and adaptation to local markets.

Concerning market exploration, senior managers addressed the importance of structured knowledge-sharing and formal communication tools in presenting new initiatives and opportunities identified in local markets. They feel that local team members propose initiatives without justification where there is a lack of an effective proposal that presents a strong business case and substantiates the market opportunity through specific and relevant information that assists the strategy-making and decision-making processes. If the local team member cannot demonstrate the local or regional problem and perspective and show how the idea or concept will provide a solution, the senior management team in HQ will have challenges in evaluating the information and linking the opportunity to local, regional, or global market opportunities. A senior product manager provided an example of an incident that demonstrates this difficulty: “Last year, a Japanese counterpart needed a feature but delivered the request in an insulting and angry way due to language and tone. She could not communicate the importance of the proposal, so other people became involved in order to support her and communicate the needs more clearly.” The communication within the team is further challenged by language and the lack of a conflict management process where there is often not a method or way of managing different perspectives and needs during the planning phase. Unresolved conflicts can contribute to misalignment between the regions and a loss of productivity in new product development and go-to-market activities.

The conflict between the views of the senior management team based in HQ and the perspectives of local team members based in subsidiaries can negatively impact the effective conception and introduction of a new concept to international markets. The global launch manager or project leader often serves as the knowledge facilitator between senior management and functional teams in HQ responsible for product design and development and marketing and the local teams in key international markets who are responsible for product management, marketing, and sales. When addressing the tension between geographically distributed team members in HQ and subsidiaries, project leaders noted the challenge of emphasizing centralized planning at HQ. This creates a lack of local market understanding and connection where there is not enough consideration of local adoption or cultural exposure to the different ways of using the proposed concept. There is also a misalignment of

incentives where team members in HQ are focused on the long-term, strategic, and global objectives of planning a new concept and the team members in local markets are pressured to focus on the short-term, tactical, and local objectives of executing and selling a new concept. There is a lack of mutual knowledge-sharing incentives that contribute to the common objective of conceiving and implementing new concepts for international markets. With reduced international travel and exchange, there is also the lack of a physical presence by local team members at HQ and a lack of physical presence by the project leader and senior manager at local market sites.

In addressing improvements for team communication, the study participants emphasized the importance of effective organizational communication systems. Information from local team members does not always move through the appropriate communication channels nor reach the intended recipients. There needs to be a greater emphasis on organizational knowledge-sharing concerning local market needs. Knowledge-sharing within the organization can be limited by imposed silos where knowledge is viewed as power and held by certain groups within the organization. There are also cultural differences in approaches to knowledge-sharing and decision-making as noted by a senior product manager: “The American approach is based on team feedback and debating pros and cons. The Chinese way in decision-making is for the top leader to hear the feedback and then the team gets in line to execute on the decision made by the leader.” There may be communication challenges in the planning phase where there needs to be an increased awareness and ability to share knowledge through protocols and processes. The lack of trust between launch team members located in various countries and regions is often a result of the lack of interactions and networking capabilities. The organization needs to allow for more recognition and validation of local team member’s talent and knowledge in order to ensure increased engagement. Thus, the question turns to how organizational resources can support the manager in increasing networking and knowledge-sharing capabilities amongst cross-cultural and geographically distributed launch team members.

e. Motivation for knowledge-sharing

In order to explore potential incentives and reasons for addressing the challenges in leading geographically distributed teams and facilitating knowledge-sharing practices during the global launch project, the senior managers and project leaders were questioned about how they feel local team members in subsidiaries would be motivated to increase knowledge-sharing and contribution during the planning and execution phases. Their comments were

examined for similarities and differences through research coding and then grouped into particular categories for analysis. The findings have been organized and presented into six main themes that influence motivation – **recognition, responsiveness, empowerment, engagement, organizational systems, and incentives**. In order to remain consistent with the evaluation and discussion of knowledge-sharing challenges, the following motivations for knowledge-sharing and contribution are focused on the planning phase.

When addressing motivation, project leaders and senior managers felt that **recognition** served as a strong factor in determining the level of motivation for their teams. The recognition of local team members' knowledge and expertise in the global launch project as well as the value their participation brings to the success of the project are key drivers. As noted by a senior manager: "If they make the effort to give us feedback and share their knowledge with others, (they're motivated) that we actually incorporate their feedback into our plans, and that other regions would adopt some of the best practices they share." It is important that the project leader acknowledges team member's contributions and shows how it has been applied to product design and development. Conversely, if their ideas or feedback are not applicable or not feasible for the particular project, there needs to be clear communication and explanation for this decision. This requires honest conversations and responsiveness to inquiries posed by local teams. The team members aspire to be a part of the global team where they are recognized for their contributions through increased visibility and collaboration.

The problem stems from the opposite behavior where there is a lack of recognition for team members' contribution, a lack of feedback concerning the idea or suggestion, and a lack of validation concerning the results of the contribution. As explained by a senior manager concerning several incidents where subsidiaries were not recognized for their ideas or contributions: "From an HQ perspective, we need to show that we received the knowledge and recognize its value. Sometimes subsidiaries make a proposal and we don't acknowledge or follow up with them. We need to be more responsive and address why or why not the proposal was effective or interesting. Sometimes the local team proposal does get incorporated but its presented as a corporate proposal and the local team does not receive recognition." Thus, it is critical that project leaders recognize team initiatives and proposals by addressing the value to the project. It is important to validate the roles and contributions of team members by recognizing their value and contribution to the global launch project.

The **responsiveness** of the project leader and senior management teams in HQ is closely linked to the recognition of team members' role and value in subsidiaries. If there is a lack of communication and response to important requests for exploiting or exploring market opportunities, local team members will feel ignored and not valued by the organization leading to reduced motivation to contribute to new product introductions. In providing an example of a situation where local teams were ignored, a senior product manager explained "Sometimes they ask for something and then we don't respond for 8 months to a year and we might not always deliver what was requested due to time and budget." Several of the study participants acknowledged that they need to communicate more quickly and clearly on the ideas received and respond on what could actually be delivered. Another senior manager emphasized that "if the locals see more results in the local products that are delivered to them, they will feel we have listened to them." The ability to listen to local team members was a recurring theme with many of the senior managers emphasizing how listening and implementation strengthen credibility and trust for the team which results in increased motivation.

The local team members seek a process where they can ensure increased customer demand and sales results. As noted by a senior manager, "You need to ensure they have a sound proposition to sell to customers, that they are happy and content with the solution and that they can sell well and enjoy more profits." In order to increase responsiveness, there needs to be a clear communication structure with the opportunity to recognize and listen to market needs and then respond with clear actions and deliverables. Several study participants emphasized the need for transparency in decision-making processes with the ability to listen and show actions from exchanges and interactions between the project leader and the team. A positive experience in knowledge-sharing recognizes and responds to team contributions through implementation of their ideas and suggestions. Validation of their value occurs through the delivery of the final concept that meets local market needs and expectations. On the other hand, a negative experience and loss of credibility can occur when team members' are encouraged to contribute and there is no response, action or delivery of a concept that incorporates their ideas or suggestions. Thus, credibility and trust are closely linked to the ability to listen and respond to geographically distributed team members.

The **empowerment** of team members through meaningful work is another motivation factor during the global launch project. The opportunity to work in a role where a team member can contribute value through idea generation and concept development throughout

the project process creates a sense of engagement and contribution. As explained by one of the study participants: “You need to ensure local teams have meaningful work, they understand the project, the vision, and they’re excited about the work... You need to engage and involve them in the process to ensure they’re embedded in the team, an important part of the team, and they’re providing meaningful work.” The active role of the team member in the project increases engagement and knowledge-sharing. On the other hand, if the team member is only assigned an administrative or execution task, there is not as much meaning attached and thus less motivation to contribute to the project. If the work is only attached to gathering and communicating information based upon directives from the global project leader and top management in HQ, there is less motivation for the local team members. However, many study participants noted that motivation increases when there is empowerment of local teams can through activities that directly involve them in creating new concepts, taking new initiatives, and making decisions regarding the local businesses.

The opportunity to participate in the concept development and creation process is a powerful motivator for cross-cultural and geographically distributed teams working on the launch project. A senior manager and product management director noted that “the cool part is ideation and defining the product, you get them (the team) motivated when they feel their input is taken seriously and it’s helping define the product correctly.” The team members like to see their voices reflected in the product design and specifications as this leads to an improved customer solution and increased sales opportunities in international markets. As explained by a senior product planning manager, “they’re eager to share information as the product is created since they see that it will bring value for them. They need to ensure it’s a product they can sell so they have a vested interest and motivation to sell as they see an opportunity for the market.” In order to develop and sustain team engagement, it appears to be important to keep the members connected to the project and show that their contribution is leading to a valuable concept. Study participants noted that the organizational environment and leadership influence the ability to encourage co-creation and collaboration. A senior product manager emphasizes that “you create an environment where people get a sense of importance where they want to do something good for the market and realize the importance of a particular initiative,” while adding that guidance is needed from the project leader such as “you need to show the benefits and values. Give examples of success to motivate them, ensure they’re part of the communication so they don’t feel isolated.” Co-creation and concept development appear to be powerful drivers for team engagement and collaboration which are

influenced by the project leader and the organizational environment during the project process.

In order to ensure increased **engagement** for the global launch project, the senior managers need to ensure active participation in the early project phases of planning and ideation. A majority of study participants emphasized and re-emphasized the importance of ensuring that team members are part of the project process and product success. Leadership styles such as command and control and a directive approach were mostly viewed as demotivating to team members. A more participative leadership style was viewed as beneficial to team engagement where team members are involved in the planning process. It appeared that involvement in the planning phase influenced motivation for later involvement in the execution phase. As noted by a senior manager: “Before you go to the execution phase, they need to be part of the planning phase; being part of it (the project) and being pulled in on execution only is not good for the project success.” There is also the element of organizational structure and the degree of emphasis on global objectives with centralized decision-making in HQ in comparison with local objectives and de-centralized decision-making in subsidiaries.

In reducing this tension, it becomes critical for the project leader to ensure effective communication and reasoning concerning the context and the decision-making process and how it affects team members and local markets. A global management director expressed that “HQ have to give more authority to local team members. When it’s a new product development process, there are many decision factors such as price and design specifications. It is important to involve local teams in these decision processes and accept suggestions from local team members.” Ensuring participation and engagement requires persuasive and inclusive communication skills from the project leader where there is clarification and guidance in understanding the context and the value for project collaboration. As noted by a senior product manager: “They’re more motivated to know the context, why they’re doing this, what’s in it for me? If they understood the logic, they would be more open to change. It may also help to provide ideas or solutions on how to change or solve challenges.” Thus, it becomes important for the project leader and senior manager to effectively communicate when and how decisions are made and the implications for team engagement.

The **organizational environment** and structure for communications serves an influential role in facilitating knowledge-sharing between the project leader and the geographically distributed team members. Some of the study participants noted that more focus should be placed on the functions and roles within subsidiary sites such as marketing

and research resources linked to specific market opportunities within the regions. Senior managers also noted how their organizations had set up R&D centers in key markets to ensure local resources for more integration in the product strategy and product development lifecycle. As some of the key growth markets such as China and India enjoy increased investment and attention to local resources, they gain confidence and increased recognition within the MNC network. However, it is important to ensure transparency and knowledge-sharing for all of the markets in which a company is operating worldwide. Several of the study participants noted their companies had identified liaisons or facilitators to bridge the communication gaps of time and distance while prioritizing needs and accelerating execution from key regions such as EMEA, Asia, and North America. The senior managers and project leaders noted their roles as knowledge-facilitators in managing the global launch project from concept to execution.

The development of a formal knowledge-sharing structure relies upon top management support, transparency, and team engagement. According to the interviews with the study participants, there appears to be a lack of dedicated time, process, and tools for sustaining knowledge-sharing. As noted by a director and team leader: “You need to mobilize people for knowledge-sharing, you also need top-down directive to show the importance to the company and business objectives. You need to ensure high visibility and transparency, and higher powers that encourage and support movement. Also, people are motivated by returns, in how this brings value to their work.” In addition to a structured process, study participants noted the necessity to meet and communicate more frequently in order to increase interaction and collaboration. There appears to be a need for continuous exchange and openness to sharing knowledge through various processes and tools within the organization. In view of cultural differences in sharing knowledge, there should be consideration of rewards and behavior for knowledge-sharing that motivate cross-cultural collaboration.

Travel and mobility between different locations involving HQ and subsidiaries appear to have the most influence on a positive knowledge-sharing behavior and increased cross-cultural collaboration. Most of the study participants referred to the ability to travel amongst team members in order to have the opportunity for meeting and working at the same location. They noted the critical role of face-to-face interaction in building trust and strengthening relationships among geographically distributed team members working on the global launch project. There should be an organizational environment with dedicated events that allow worldwide team members to meet and interact at a common location in order to increase

understanding of cultural perspectives as well as global and local market demands. As expressed by a senior manager: “We try to create an environment where we bring together all of the subsidiary managers where the intent is to share best practices... they rethink what they have done and share experiences with others. This helps impact execution since (the local teams) in subsidiaries don’t have visibility into planning, it’s a very HQ centric activity.” There needs to be more time and resources dedicated to travel and time spent in key locations in order to understand the culture and working environment which enhances the interactions and relationships amongst team members. The challenges to making more travel possible involve executive management approval, the organization’s innovation strategy, and the economic situation with reduced travel budgets imposed by most of the MNCs in which study participants work.

In order to sustain collaboration amongst team members, there is the critical role of **incentives** for encouraging and enhancing knowledge-sharing behaviors. There should be considerations for the type of elements that should be incorporated in performance reviews such as the type of knowledge-sharing practices or the quality of information team members contribute. Some study participants noted the use of 360 degree evaluations in order to receive feedback from peers and colleagues concerning knowledge-sharing and collaboration competencies. There also should be more recognition and rewards for sharing knowledge according to senior managers interviewed in the study. This could range from a simple thank you card to an award for their contributions. A senior manager explained the different approaches used for rewarding teams in various regions: “Asia likes recognition such as a ‘bravo’ award for team focus, and EMEA and Latin America teams are about getting the sales bonus.” While rewards may vary across regions, it is always important to foster strong team collaboration and show how diverse team ideas are recognized and provide value in the short-term and long-term.

Performance reviews as well as remuneration based upon knowledge-sharing practices were often cited as a way to facilitate team practices. Specific knowledge-sharing practices can be incorporated into performance reviews in order to evaluate contributions by team members. A product management director with responsibilities for the market in China emphasized three elements that have been valuable in motivating local team members to share knowledge: “You need to think about the three C’s – culture, career, compensation. If there is a culture of trust, the team members like to stay in the organization, there also needs to be security and continuity with the boss since they want to advance in their career, and then the

third factor is compensation, you need to consider salary as an important factor.” Moreover, a common vision and goal significantly help facilitate interaction and collaboration on strategic projects involving new product introductions. As noted by a director of product management: “It’s about incentives, but also having a shared company-wide goal. We often see top-level strategic goals but not a delivered effort to break them down into local needs and efforts... Each employee needs to be aware of how to contribute to the overall goal.” It appears that a common goal and incentives with a supportive organizational environment and consistent leadership contribute to effective knowledge-sharing practices.

4. Organizational resources for knowledge-sharing

In order to determine the kind of knowledge-sharing structure and communication tools that are most effective for facilitating cross-cultural collaboration, study participants were questioned about organizational knowledge-sharing practices through two related questions: 1) the manner in which local knowledge is currently shared and diffused in the organization and 2) the organizational resources (systems and tools) that could help facilitate knowledge-sharing and contribution from team members worldwide. The responses were summarized and integrated in order to identify common patterns of practices and needs from project leaders responsible for the global product launch and geographically distributed, cross-cultural teams. Particular patterns were identified by the frequency and number of key words mentioned by study participants in describing knowledge-sharing practices. The results and findings are presented and described in the following sections.

a. Sharing and diffusing local market knowledge

In reviewing and summarizing the findings from the explanatory phase research, it is clear that local knowledge is mostly shared and diffused within the team through informal communication processes and tools. There were few examples of formal knowledge-sharing structures and frameworks. It appeared to be a more informal process for most study participants’ organizations where it was the responsibility of the project leader to determine which launch phases were important for local team member participation and contribution. There appeared to be mostly informal systems of knowledge-sharing available where study participants mentioned the availability of several electronic communication tools for gathering information during the ideation and planning phases (such as email, web portals, web conferences, teleconference, and video conference). Whether meetings occurred before, during, or after the global launch, the scheduling of meetings and use of particular

communication tools were more consistent when linked to the project process. Thus, meetings were often scheduled on a weekly basis for team updates and on a quarterly basis for regional meetings. When there was sufficient budget and support available, there would be travel to the geographic regions in order to ensure more face-to-face interaction and knowledge exchange.

A few of the study participants' noted the availability of more structured standards and practices for knowledge-sharing in their organizations. These were tools and practices applied to the consolidation of information such as web portals, reports, and local consolidation meetings. Some mentioned the use of an internal knowledge database where information is centralized and can be used by all of the regions when seeking global and local market information. While a knowledge database can offer a central access point for team members, there is also the challenge of ensuring use of such a knowledge base among members. As noted by a study participant: "Subsidiaries don't always turn to the HQ knowledge management base and instead contact other subsidiaries to check their experience in the launch and what they're working on." Another senior manager working on facilitating knowledge management in his organization emphasized the importance of trust, having an open environment, and easy to use technologies. "The challenge is lack of trust, we have an open environment but we're requested to create closed groups which goes against the philosophy of opening knowledge and having more transparency," the manager noted while also emphasizing that "the first barrier is using technology and social media which requires a different mindset in how to work. So we need to offer support and comfort in learning and using tools." While there are formal tools available for use within teams and organizations, there appears to be a lack of a formal process and the ability to promote increased interactions in a live setting.

b. Facilitating knowledge-sharing and contribution

In order to seek potential solutions for providing more effective knowledge-sharing processes and tools, study participants were asked about the organizational resources (in the form of communication systems and tools) that could help facilitate knowledge-sharing and contribution from team members. When integrating and reviewing all of the responses from the study participants, there were several common needs and practices identified and codified through a review of key words. The organizational resource needs that received the largest number of responses focused on increased **travel** and **face-to-face interaction, local engagement, a common space for cross-cultural team collaboration, technology**

platforms for ideation and knowledge-sharing, and a supportive organizational environment with time for knowledge-sharing and cross-cultural learning. These key topics as well as related needs for organizational systems and tools will be presented and discussed in this section.

Despite the increase in availability of web technologies and social media for organizational communication within their organizations, study participants emphasized their demand for more **travel** and **face-to-face interaction** with their geographically distributed and cross-cultural teams. As expressed by a senior product manager, “we have too many tools already, we’re missing the human touch and the time to listen and talk and think about our exchange.” Based upon the large number of responses on this topic, it appears that study participants currently lack opportunities for travel and face-to-face interaction at both HQ and subsidiary locations. Several study participants emphasized the benefit of co-location for a global team, even for a short term, where team members can socialize, exchange ideas, and share knowledge. Centralization of cross-cultural teamwork was mentioned several times where the project team could fly into the HQ location or a subsidiary location and spend time together during the early phases of the launch project. The increase of communication technologies and virtual teamwork due to corporate budget cuts on travel expenditures has had a negative impact on team collaboration and communication. As expressed by a senior product manager, “it’s really about the lack of cultural sensitivity and time. I would rather be present in the country with the local team, talking to customers, listening to team members instead of having an online session.” Many of the study participants noted that an increase in the travel budget and organizational support for cross-cultural team collaboration would greatly benefit the global launch project.

The level of **local engagement** is an important consideration for ensuring increased collaboration and knowledge-sharing between the project leader and the team members. There were several study participants that mentioned the need for more involvement and exchange between team members located in HQ and subsidiary locations around the world. This could be accomplished through the organization of visits, exchanges, and rotations in order to increase cultural exposure and awareness for team members as well as the project leader. Some participants mentioned the importance of having a reward system where there is more recognition of team members’ contributions and there is an opportunity to celebrate the team’s achievements. Others mentioned that more opportunities should be offered local team members and managers for travel to other locations in order to increase team interaction. Yet

others mentioned the promise of cross-fertilization meetings where different team members are invited from various countries to conduct an exchange and spend time in each other's countries. As explained by a director of global products, "this allows exchange and cross-fertilization to better understand team members' in the regions, a better appreciation of work environments and the local challenges, and improved relations amongst the team." The project leader as well as the team members can strengthen their interactions and cultural awareness through increased travel and visits to team members in local markets.

The growing need for interaction and dialogue between the project leader and team members brings attention to the **collaborative space** dedicated to the innovation process. Several of the study participants referred to their interest in a collaborative workspace where team members can interact and work seamlessly together. An open space and forum that allows for generation of ideas and sharing of knowledge through features available on site and online. Others mentioned a common space and tool that would enable dialogue concerning product features and requirements of new concepts considered for the global product launch project. A technology platform and collaboration tool that can be used for encouraging idea generation and exchange appeared to be of interest to several participants. Moreover, they emphasized the need to use web communication technologies for effectively structuring and facilitating communications when working at a distance. The tools of particular interest were email, voice and video conferencing tools, wikis, as well as specific reporting tools for the launch project. Video conference was mentioned by the majority of participants due to its ability to simulate meetings in real time through visual media.

Although there is a great interest for increasing live interaction, the study participants' also noted the value of **communication technologies** for facilitating collaboration at a distance. A few noted the lack of a comprehensive and well-structured launch management process that is understood and supported by everyone. As explained by a vice president of product marketing, "the systems and tools are there, though we may be missing the complete process. Our process is less defined, we're not always aware of the process or what's needed. We need a well-structured process that everyone understands and knows how to contribute." In addition to a global platform for collaboration, there is also the need for more clarification of the product innovation and launch process at the local level. Idea generation tools and more travel exchanges were mentioned in the previous sections as one way to increase initiative and contribution from local team members. However, a few of the senior managers interviewed mentioned the need for a more structured process in assisting the local team members to

effectively communicate their needs. A business case model for local teams could help facilitate communication with the project leader and functional teams based in HQ. The use of a technology platform that could serve as a unifying space for managing and collaborating on the global launch project may provide an opportunity for increasing knowledge-sharing.

In order to achieve successful cross-cultural collaboration for the global launch project, study participants emphasized the necessity of a supportive organization with top management approval. Some felt there should be an increased commitment to the knowledge-sharing process while others felt there should be better systems for knowledge-sharing. As expressed by one of the study participants, “it’s more a question of capability and that we don’t have the tools or know how to do it. The question is do they want to do it or not?” There is a need to develop a structured and centralized knowledge-sharing system that can incorporate the product launch project process phases for guiding the team. In order to use such a system, there is also the dependency upon the team members to apply an open mindset and entrepreneurial initiative. As emphasized by one of the study participants “I would like to have more clarity and governance, clear decision-making, and enablement of initiatives.” Thus, a strong knowledge-sharing structure with clear processes and effective tools may enhance collaboration.

The organization needs to provide an environment and culture that is open to culturally diverse perspectives and to receiving feedback from everyone. “It is more about the company culture, how corporate looks at the geographies and see them as an integral part of the development cycle. Tools cannot be successful from the company culture perspective if it’s not in the minds of the people...if the culture is inclusive and subsidiaries are part of this process,” expressed a director of product management. Other participants supported this statement in noting the importance of the global mindset of the project leader and the team members. A senior product manager noted that “I wish for every team member to have a good mindset and think about the fact that we’re a product company and that we need to consider global opportunities of products and incorporate those needs.” Such a mindset often requires cross-cultural learning and education and some of the study participants mentioned resources for workshops where team members from HQ and subsidiaries could meet for enhanced collaboration. Another senior product manager even suggested that “anyone who drives meetings should get education and certification on running multicultural collaboration in teams; there’s certification for project management but not cross-cultural management or

dealing with other cultures.” Organizational support for cross-cultural learning and knowledge-sharing can enhance and strengthen global launch collaboration.

5. Performance evaluations

In order to examine current performance measures and their influence upon collaboration and knowledge-sharing practices for global teams, the study participants were asked if current performance measures include evaluations for team collaboration and knowledge-sharing. A majority of the participants (67%) noted that evaluations for team collaboration and knowledge-sharing did not exist within the team or organization while 33% noted there were individual, team, and organizational evaluations concerning these practices. Some noted there are individual evaluations for collaboration such as peer and managerial reviews. However, there were few specifically focused on knowledge-sharing practices.

For those who noted active enforcement of collaboration and knowledge-sharing within their organizations, there appeared to be more focus on individual evaluations. As noted by a manager responsible for a global product line: “There are individual evaluations within and outside of the project. This is an important value at our organization.” Another manager noted there is a strict adherence to this behavior, explaining that “There are key characteristics for measuring internal clients where we ask them about a person’s collaboration approach... There are consequences for people who don’t collaborate.” Yet another manager explained that evaluations occurred within the team: “It’s based on cross-team evaluations, so you provide feedback on the team members’ performance, their strengths and where they need to develop.”

When study participants were asked about the primary metrics for measuring success of the global product launch project, the responses were mostly focused on traditional performance measures such as time to market, revenue and sales, quality of product, and customer base. A manager responsible for global product planning explained that “we are basically judged by profit, not process so much.” A majority of the managers and project leaders expressed the interest and need to move towards measures that focus on team performance. As expressed by a senior manager responsible for global product planning: “We have two evaluation systems that include competencies and objectives. Objectives play a more important role for promotion and appraisals. However, management believes competencies such as team motivation, influencing and inspiring, how you communicate your ideas, will be more relevant in the future – it defines who you are as a leader.” A product manager emphasized a growing need for collaboration and knowledge-sharing evaluations within the organization,

noting that “we see this of growing interest, it’s important to the organizational culture. We also want to promote more community –building with internal recognition.”

6. Results of explanatory phase and validation of hypotheses

With the completion of the explanatory research phase involving global project leaders, a review of the findings is presented and compared with the hypotheses. The intent of the explanatory study is to validate the findings from the exploratory phase concerning organizational mechanisms and to further explore and determine causal mechanisms. The explanatory study was thus conducted at the individual or managerial level in order to examine interactions between the project leader based in HQ and the geographically distributed team involved in the global launch project. The intent is to identify causal interactions concerning critical incidents and potential resolutions in examining the perceived challenges and motivations for facilitating knowledge-sharing during the planning and execution phases of the front-end innovation process.

In order to respond to customer and market demands, a majority of study participants noted that it is necessary to balance both radical and incremental innovation for ensuring market exploration as well as exploitation. While a majority of the study participants indicated their organizations’ front end activities are centralized, the findings concerning strategic direction also indicated an increasing focus on decentralization and local market responsiveness. In view of the increased attention placed on local market knowledge, it appears the collaboration and support of the local team members and managers are of increasing importance to the success of the product launch project. Although the first hypothesis (H1) is not fully supported in that a majority of organizations still have centralized front-end innovation activities, the interest and movement towards decentralization need to be further explored with the findings from the study with local managers concerning challenges and motivations for knowledge-sharing.

The three elements of a global innovation culture identified in the exploratory study – cultural empathy, creativity, and collaboration – were re-examined through a comparison with the organizational climate or the global innovation climate described by the study participants. Since climate is an integral element to culture, the researcher felt there could be important links or relationships tied to organizational culture. The emergent themes of organizational climate are market responsiveness, entrepreneurial risk-taking, global team transparency, and execution efficiency. The theme of market responsiveness showed a strong focus on customer and market-orientation for HQ managers and their organizations which further supports the

first hypothesis concerning strategic focus. It also shows a strong link to the organizational culture theme of cultural empathy due to the need for local market understanding and adaptability. Global team transparency and efficient execution show a strong link to collaboration where study participants expressed the need for collaboration and knowledge-sharing with a structured and disciplined process. In view of these findings, the second hypothesis (H2) receives strong support for organizational culture with new links identified for organizational climate.

In order to further explore the global team leadership skills identified in the exploratory phase, the study participants were asked about specific team leadership style necessary for effectively managing and facilitating cross-cultural team collaboration during the global product innovation process (from concept to market). The four leadership styles identified in this study were directive leadership, inclusive leadership, communicative leadership, and empowering leadership. While the directive leadership style provides authority and direction, the inclusive leadership style emphasizes collaboration and openness to cultures; the communicative leadership style is focused on interpersonal communication and relationship-building, and the empowering leadership style creates unity, engagement, and creative inspiration. The identified leadership styles strongly support the third hypothesis (H3).

In order to seek potential solutions for providing more effective knowledge-sharing processes and tools, study participants were asked about the organizational resources (in the form of communication systems and tools) that could help facilitate knowledge-sharing and contribution from team members. The organizational resource needs that received the largest number of responses focused on increased travel and face-to-face interaction, local engagement, a common space for cross-cultural team collaboration, technology platforms for ideation and knowledge-sharing, and a supportive organizational environment with time for knowledge-sharing and cross-cultural learning. The study showed a strong interest in creating the space, time, and resources dedicated to innovation. The element of local engagement with more involvement and exchange for local team members strongly supports hypothesis H4a while the collaborative space, technology platform and supportive organizational environment support a comprehensive knowledge-sharing structure for hypothesis H4b. The emphasis on travel and face-to-face interaction supports hypothesis H5.

Then I examined the role of culture in knowledge-sharing by asking the study participants how culture may influence knowledge-sharing. Their observations and

experiences focused on four distinct areas of knowledge-sharing: structure, power, openness, and initiative. Structure relates to differences in how knowledge is organized and presented and initiative relates to taking responsibility for communicating new knowledge or ideas which supports hypothesis H4c as well as openness which relates to the degree of knowledge-sharing conducted due to fear of conflict and the internal hierarchy.

In order to explore the key elements of trust-building for the cross-cultural team involved in the global launch project, team leaders were asked how trust could be improved within the team. There were four specific themes identified in improving trust with cross-cultural teams during the global product launch project – social interaction, frequent and open communication, act and deliver on promises, and project contribution. These themes indicated the type of actions and skills that help the project leader build trust with cross-cultural and geographically distributed teams. Social interaction, frequent and open communication, as well as project contribution support hypothesis H6b while this needs further examination for the interactions that take place during the project collaboration phases. Project contribution is a new finding which refers to the opportunity to contribute to meaningful work and project collaboration through ideation, validation, or planning.

When exploring the role of local team members in subsidiaries during the front end innovation process, the research results showed that subsidiary members are mostly involved in the tactical details of launch preparation and go-to-market implementation. Some organizations ensured earlier involvement at the validation phase to ensure local product adaptation while only a few organizations allowed participation between HQ and subsidiaries for ideation and planning. The ideation and planning functions were viewed as roles for HQ management in evaluating and organizing global market needs and opportunities. In reviewing information sought by global project leaders for the planning phase, there is a strong focus on local market, customer, and product knowledge in order to understand market potential and customer preferences. The nature of this information indicates that the planning phase demonstrates particular emphasis on access to and sharing of local market knowledge. Access to local markets and customer knowledge is often made possible through interactions with local team members. This finding builds support for hypothesis H7 on project performance however further investigation is needed.

In seeking an in-depth understanding of the particular knowledge-sharing challenges for leading global teams, the senior managers and project leaders were questioned about the greatest challenges in facilitating knowledge-sharing and contribution from local team

members. The findings were organized and presented into four main areas that experience challenges – open communication and team transparency, organizational knowledge-sharing practices, project planning process, and strategic understanding of local teams. Open communication and team transparency refer to the challenges of building trust and relationships across geographic and cultural distances using virtual communication where more face-to-face interaction is needed. This finding further supports hypothesis H5. The lack of effective knowledge-sharing and planning processes supports the need for more knowledge-sharing during the planning phase in hypothesis H6a. In addition, there is the finding that global project leaders and management teams in HQ may feel that local teams' lack strategic understanding.

In order to explore potential incentives and reasons for addressing the challenges in leading cross-cultural and geographically distributed teams while facilitating knowledge-sharing practices, the global project leaders were questioned about how they feel local team members in subsidiaries would be motivated to increase knowledge-sharing and contribution during the planning and execution phases. The findings were organized and presented into six main themes that influence motivation – recognition, responsiveness, empowerment, engagement, organizational systems, and incentives. The global project leaders perceived these themes could increase the motivation of local team members in sharing knowledge during the launch project. Findings indicate that increased recognition, responsiveness, empowerment, and engagement motivate local team members to increase knowledge-sharing and contribute to the front-end innovation process. Engagement especially refers to early involvement in the planning phase which further supports hypothesis H6a. However, organizational systems and incentives such as dedicated time, process, tools, and performance measures appeared to be lacking for a majority of the participants' organizations. While global project leaders indicated that the motivational factors have an impact on project performance, the current findings are not sufficient for supporting hypothesis H7. In order to fully examine challenges, motivations, and project performance on the local level, an examination of the results from the local study participants in China and Asia is required.

B. Presentation of Explanatory Research Results – Local Managers/Asia

As noted in the research methodologies section, there were a few changes to participating MNCs from the exploratory research phase and there was a conscious decision to focus on the organizations that represent technology-driven industries such as information and communication technologies and automotive industries. The focus on technology-driven firms allowed examination of the global launch process through an extreme context which involves both radical and incremental innovation in dynamic and competitive industries and markets. Senior managers and project leaders working for automotive and information communication technologies industries were selected since these sectors face growing competition, increased localization needs, reduced time to market, and customer demands for both radical and incremental innovation with a technology-driven focus.

Consequently, it was also necessary to identify a region with high growth potential yet intense competition and greater cultural distance. Since the discoveries from the exploratory research found the Asian region matched these criteria, managers working for subsidiaries located in Asia (Japan, China, Singapore, and India) were selected and interviewed between June 2011 and January 2012: Several of the managers were interviewed on site in Japan, China, and Singapore during a three week research trip which took place between June and July 2011; the remaining managers based in China, Singapore, and India, were interviewed via phone. Responsible for the management of products, marketing, and sales as well as local teams in China and the Asia region, these managers were identified as the most appropriate contacts for sharing their experience and perspectives concerning cross-cultural collaboration and knowledge-sharing needs in local markets.

1. Presentation and comparison of key findings

The previous section presented findings concerning the organizational and causal mechanisms that influence cross-cultural collaboration during the global product launch project. However, these findings were presented from the perspectives of the senior managers responsible for the launch initiative as well as management and facilitation of cross-cultural and geographically distributed teams. While these managers were identified as the most appropriate sources, primarily due to their role as knowledge facilitators between team members in HQ and local team members in subsidiaries, it is also necessary to compare their perspectives with the perspectives of local team managers and team members in order to fully validate the research question. Aside from interviews with 60 senior managers based in

headquarters, the researcher also conducted interviews with 26 regional and local managers based in the Asian subsidiaries of European and US MNCs. A comparison of responses from local study participants in Asia with the responses from global project leaders based in HQ improves understanding of perspectives and views from both headquarters and subsidiaries in order to fully examine and validate the research question as well as confirm the hypotheses.

a. Global and local product innovation strategies

The dynamic and fast growing markets of Asia have placed additional expectations and demands upon MNCs to respond and deliver products that respond to customer needs. In order to compare the perceptions of the regional and local managers in Asia with the perspectives of the global project leaders, the same questions were posed concerning the type of product innovation and the strategic direction of the local subsidiaries. Similar to the global study, the local study participants noted that a majority (83%) of new products being introduced include both radical and incremental innovation. Local managers based in China had differing views on the emphasis placed on radical or incremental innovation, while most agreed that both are integral to sustaining market growth and generating market opportunities.

In a dynamic market such as China, local managers are finding that both radical and incremental innovation need to be considered. A senior manager explains that “in reality, we would like to have more radical innovation, but it’s very difficult. So typically we work on both since we can’t have a major focus on radical, due to the risk.” Another manager based in China emphasized incremental innovation: “In Asian cultures, we see more innovations around incremental, not necessarily radical. The US market has more new ideas or radical innovations than the rest of the regions. We have different PLCs (product life cycles) for products in China.” A local manager working for the Chinese subsidiary of a leading automotive company addressed the challenges of managing radical with incremental innovation: “Our models are more incremental, the technology components are more radical. It’s the specifications and equipment level components – there’s a trend towards communications to connect the smart phone to the car, using navigations systems to ask for specific locations, etc.” However, some of the local managers work for organizations that are placing increased pressure on radical innovation to create new market opportunities. A senior product manager working for the Chinese subsidiary of a European MNC noted that “we now look at disruptive innovation. We need to look at new concepts. We’re shifting to radical more than incremental.”

In meeting the innovation needs of local customers and markets in China as well as throughout Asia, local managers were asked about the centralization or decentralization of front-end innovation activities. The participants indicated less centralization than the global study, however, they still indicated that centralization is still stronger than decentralization with 52% indicating that product design and marketing are still centralized. Decentralization was noted by 38% of the participants, especially for marketing and sales activities (whereas 10% noted that both centralization and decentralization occurs). Some of the local study participants indicated their organizations were moving towards decentralization while others noted a strong focus on centralization for front end innovation activities.

b. The innovation culture and climate

In exploring the link between the global innovation culture and the climate within the organization, local study participants were asked similar questions to the global study participants in order to compare their responses. They were first asked to select the qualities they found to be most representative of the organization. Then they were also asked to identify organizational strengths and weaknesses of the innovation process. These results are presented and compared with the responses from the global study participants in order to identify potential patterns or relationships. In describing the organization's innovation process, the participating managers responsible for local and regional management in Asia emphasized several qualities. A structured and disciplined approach showed the highest selection (34%), followed by organic and collaborative as well as customer and relationship focus (both 27%); chaotic and disruptive received the least selections. Compared with the global study, organic and collaborative received the most selections (31%), followed by a structured and disciplined approach (29%), customer and relationship focus (25%), and the least number of selections for chaotic and disruptive. The responses show that the top three qualities are evenly distributed whereas a chaotic and disruptive approach represents a smaller focus in the innovation process.

The study with the global project leaders showed a strong link between an innovation culture with the values of cultural empathy, creativity and collaboration and an innovation climate with the values of market responsiveness, entrepreneurial initiative, global team transparency, and execution efficiency. In order to explore this question with the local study participants, they were asked to describe what they perceived as the strengths and weaknesses of their organization's innovation process. The responses are summarized in below figure. Using the same method as the global study, the responses from the local study participants

were evaluated and coded by hand into research codes that were then grouped into analytical codes and then compared with the emergent themes from the global study. Since the responses from the local study participants showed similar analytical codes, the same emergent themes were applied.

Organizational Innovation Climate – Strengths and Weaknesses

Research Codes	Analytical Codes Strengths (+)	Analytical Codes Weaknesses (-)	Organizational Climate Emergent Themes
More customer focus Lack of local market support No comms with local market Improve customer relationship focus		Lack of customer focus Lack local market communications	Market Responsiveness
No focus on creativity Challenge to be creative Not included in conception Push back for new concepts More freedom for innovation Entrepreneurial initiative Risk-taking	Entrepreneurial initiative and risk-taking	Lack local inclusion Lack creativity focus	Entrepreneurial Initiative
Collaboration and visibility Common goal Knowledge-sharing and networking Consensus-building	Collaboration Knowledge-sharing		Global Team Transparency
Structured and disciplined Robust process Well-defined process Pressure to execute Too much structure Focus on implementation	Structured and well-defined Robust process	Too structured Implementation focus	Execution Efficiency

Table 8. Strengths and weaknesses of innovation climate, local views

In examining the perceived strengths and weaknesses of their organizations' innovation climates, the local managers in Asia showed both similarities and differences in comparison with the results from the global project leaders. While the participants provided both strengths and weaknesses for their organization's innovation process, the research codes showed a stronger emphasis in certain areas depending on the subject. There was a clear weakness perceived for market responsiveness where a majority of the participants felt there was not a sufficient focus on local customers and markets as well as a lack of communication with the local teams. The climate theme of entrepreneurial initiative was supported by the local study participants, however they did not feel this value had a local reach in that there was a lack of

involvement and opportunity to focus on creativity and innovation. Global team transparency in the form of collaboration and knowledge-sharing was viewed as a strength, however it appeared to be primarily linked to the project process and execution. While local study participants noted the benefits of a structured and robust innovation process, several managers also noted the weakness of being too structured and having a strong implementation focus. Overall, the findings from the local study participants support the findings from the global study participants in supporting a global innovation climate through market responsiveness, entrepreneurial initiative, global team transparency, and execution efficiency. However, the local managers in Asia showed a stronger emphasis on the need for local market responsiveness and participation in the innovation process through initiative and creativity.

c. The cross-cultural team leadership style

In order to compare the global team leadership styles identified with the global launch project leaders in the explanatory phase, local team leaders and managers were asked about what kind of leadership style they felt is necessary for effectively managing and facilitating cross-cultural team collaboration during the global product innovation process (from concept to go-to-market). The responses of study participants were then reviewed for common patterns and key words concerning leadership styles that were then grouped and coded for research codes as well as analytical codes for comparison with the emergent themes and the four leadership styles identified with the study involving global project leaders: **Directive leadership, inclusive leadership, communicative leadership, and empowering leadership**. When reviewing the research and analytical codes for local managers based in Asia, similar codes and leadership styles were identified with the global launch managers. Thus, the leadership styles of directive, inclusive, communicative, and empowering were the same as those identified with the local team managers in Asia. However, the local managers placed special emphasis on skills identified with the directive and inclusive leadership styles. The findings and detailed insights from the local managers' perspectives are presented in figure 29.

The **directive leadership** style was described as providing authority and direction for the team during the global launch project. This style is associated with strong leadership from concept to execution combined with a firm and structured project management process. There were two distinct approaches described by the senior managers and project leaders for directive leadership. On one hand, there is the style that is strictly top-down where strategy and process is determined by the senior management team and then team members are expected to execute on the announced launch objective and strategy. On the other hand, there

is the directive leadership that allows for more involvement in the launch phases yet retains firm leadership in making final project decisions. The local team managers in Asia emphasized the importance of using the latter approach where there is a direct and strong leadership style while providing guidance and involvement for local team members. In many Asian countries, especially in China, a leader needs a firm approach in setting clear project objectives and expectations. In comparison with Europe and the US, it is important to show hierarchy and power status as a leader early in the project phase. A senior manager in China noted that “you need to set up the right expectations and reinforce discipline. In China, you have to be stronger in terms of setting up discipline, and then they (local team members) will learn fast. The start of building a team is the most critical moment.” When the leader has established credibility and authority, it becomes easier to facilitate trust and relationship-building with local team members.

Leadership and Cross-cultural Collaboration

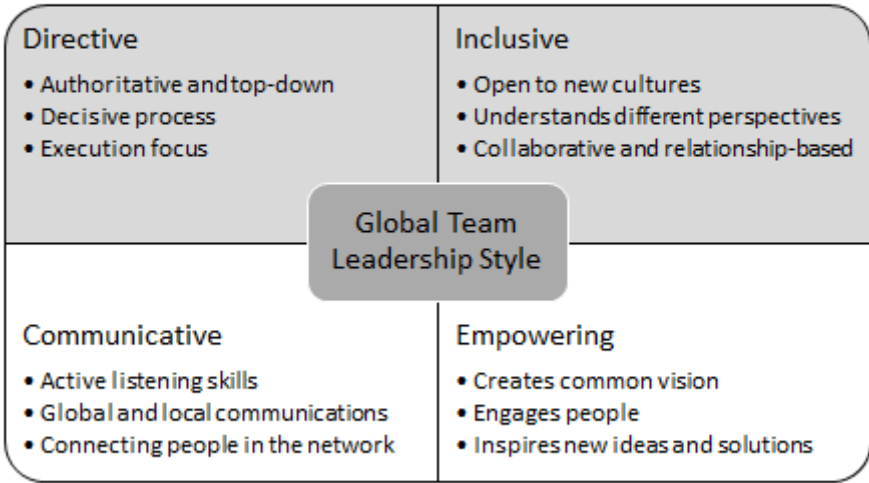


Figure 29. Team leadership styles in facilitating cross-cultural collaboration in Asia.

The second style identified is **inclusive leadership** where collaboration and relationship-building are priorities. The study participants and local team managers in Asia emphasized the importance of understanding and embracing cultural differences. Leaders with a cross-cultural mindset and awareness of cultural differences were viewed as being more effective. As noted by a senior manager in China, “I prefer to work with people who have an interest in China as a market and appreciate our culture. I’m more motivated to take on work

when there's a true interest." There is a greater importance placed upon relationships within the Asia region which requires the ability to develop collaboration and understanding when interacting with team members. Practices involving trust-building and creating a common goal were viewed as essential in bringing team members together for project work. This requires a leadership style that is inclusive with a balance of a consultative and participatory approach in collaborating with team members. Local team members prefer to contribute ideas and be involved in strategy-making while leaving the final decision to the project leader.

The third approach is the **communicative leadership** style where consistent communication on global and local levels is necessary. The communicative leader emphasizes active listening skills and attention to language use. This is especially true when interacting with teams in Asia due to the focus on relationship-building and the limited use of English as a business language. This requires awareness of the local language as well as consistent content and clarification when communicating with team members. In addition to providing sufficient communication, there is also the need to use strong influencing skills when networking and building relationships. "Personal contact is very important, people need time together, for dinner or working meetings together to establish relationships in order to facilitate long distance communications," explains a director based in India. The ability to interact frequently and connect with local team members promotes goodwill and creates more credibility. A regional director based in China notes that you should "bridge the communication gap, help teams understand why they're doing this, then bridge the capabilities gap and how to approach opportunities. You need to create a common language and ensure that requirements from the local level are not ignored." An open and transparent communication style where knowledge is shared with local team members appears to be the preferred approach.

The final leadership style identified for effectively managing and facilitating cross-cultural team collaboration is **empowering leadership** where the project leader creates a common vision, engages the team, and inspires new ideas and solutions. Local study participants in Asia emphasized the growing need for encouraging initiative and exploration of new opportunities. Most of the Asian cultures studied, including India, China, Japan, and Singapore, do not tend to take initiative unless there is a directive or a request involved. Although it is not a common business practice, it is receiving more attention due to the innovation needs of the global marketplace. As expressed by a senior Chinese manager: "We need a different mindset, the company is managed with too much of a systematic approach..."

We need to allow risk and failure. Everybody avoids risk, they want to play it safe. We need to allow some part of organizational resources devoted to this area.” In promoting innovation, there is the leadership ability to motivate and encourage local team members to innovate and take more initiative. A regional executive based in Singapore emphasizes that “early on you need to be very inclusive and towards the end focus on ownership and execution.” Local team members need the opportunity and support to take initiative and create new ideas.

In reviewing the kind of team leadership style preferred by the local management team in Asia, the study participants emphasized the same qualities found within the study with global project leaders, specifically the four styles of directive leadership, inclusive leadership, communicative leadership, and empowering leadership. However, the competencies related to directive and inclusive leadership appeared to best support the needs for authoritative and firm leadership while ensuring relationship-building and collaboration on new product introductions. Moreover, interpersonal communication skills through active listening with attention to cultural practices for the Asian countries discussed is critical to building credibility with the local teams. Finally, the empowering leadership style appears to receive more interest with local team members as local and global markets become more competitive and require new ideas and customer solutions.

2. Knowledge-sharing during project collaboration phases

The organizational mechanisms of product innovation strategies, culture and climate, and team leadership styles have been examined and compared with the results from the global study. There is support as well as some variation with the local study. There is clearly a local focus on strategy with a stronger emphasis on entrepreneurial initiative, creativity, and collaboration in evaluating organizational culture and climate. The findings also show a preference for authoritative and collaborative leadership. In view of the research results, it is necessary to improve understanding of considerations for knowledge-sharing and collaboration practices during planning and execution of the product launch project in Asia.

a. The role of trust for local teams

In order to explore the key elements of trust-building for local team members involved in the global launch project, the Asian region team leaders were asked how trust could be improved for the local team. The intent is to compare the emergent themes from the global project leaders with the local team leaders. The emergent themes identified in improving trust with cross-cultural teams during the global product launch project were social interaction, frequent and open communication, act and deliver on promises, and project contribution. In order to

make a comparison, the responses from the local study participants were evaluated and coded for similar key words and then specific themes were identified. While two of the emergent themes were identical to those of the study involving global project leaders, there were also some distinct differences. The themes are explored and detailed in the following paragraphs concerning specific values and practices that are important to consider in building trust for countries in Asia, with a special emphasis on building trust in China.

Trust-building in Asia

Research Codes	Analytical Codes	Asia Themes	Global Themes
Know how to do business in Asia Understand cultural context/power structures in Asia and China Mindset and behavior to interact with cross-cultural teams	Cross-cultural understanding Knowledge of cultures Cultural mindset and behavior	Cross-cultural mindset	Social interaction
Sufficient and open communication Understand other perspectives Social events and interactions Events and socialization	Open communication Socialization and interaction Understand other perspectives	Open communication	Open communication
Establish credibility and authority Keep commitment, deliver as promised Become familiar with context Ensure more transparency with HQ	Credibility and authority Keep commitment Deliver on promises	Act and deliver on promises	Act and deliver on promises
			Project Contribution

Table 9. Trust-building for local team members in Asia

The local study participants placed clear emphasis on the importance of a **cross-cultural mindset** in building trust amongst local teams which is an element that is missing from the themes that emerged from the global project leaders. The local team members in Asia emphasized the importance of a cross-cultural mindset and behavior that is focused on cross-cultural understanding and knowledge of other cultures. The ability to build trust is based upon the knowledge and understanding of a culture, especially when doing business in China. As expressed by a senior Chinese manager: “The actions for the team leader are to know the culture and have enough knowledge about China and the way of doing business in the Chinese market. Understand Chinese culture and build trust for the Chinese team.” There is also the need to understand the cultural context and the power structures that are particular to many Asian countries. As noted by a senior executive responsible for the Asia-Pacific region: “The biggest challenge is the cultural context and power structures – the strong power distance. It’s hard to be successful if the cultural context and personality is not understood by

team members. You need to select people that have certain mindsets or behaviors that allow them to interact well with a cross-cultural team.” Thus, the ability to show understanding for the culture helps create the mindset and behavior that builds trust when interacting with local teams in Asia.

While the theme of social interaction was not identified in the local study, the two themes of **open communication** and **act and deliver on promises** are shared between the study participants, the global project leaders as well as the Asia regional team leaders. Open communication benefits from a global mindset as well as interaction through business and social events. The ability to act and deliver on promises has significant impact on the trust and confidence placed in the project and team leader during the launch project. “If you’ve made the commitment and cannot make it such as a new product that you’re trying to roll into the market and you don’t deliver as promised, then you break down trust for the team and customers. They will be very reluctant to collaborate in the future,” explained a senior product manager based in Singapore. In order to establish credibility and authority, you need to understand the perspective of the other person and be honest about expectations. “It is more of a knowledge issue,” notes a senior product manager, “there are always boundaries since we don’t know what’s happening in HQ, subsidiaries don’t know, HQ doesn’t know what’s happening in subsidiaries, regions don’t know what’s happening in other regions... When you become more familiar with the context, you become more familiar. So we need more data and information to develop familiarity.” Open communication can influence trust-building by providing sufficient knowledge for local team members to understand the context of the global launch project.

b. Knowledge-sharing behaviors in Asia and China

In order to better understand knowledge-sharing behaviors in Asia and China, the local managers were asked whether national culture affects knowledge-sharing behaviors and how they affect these behaviors. As in the study involving global project leaders, a majority (87%) responded yes, that national culture does affect knowledge-sharing behaviors. They provided many responses concerning the way that knowledge-sharing is affected between cultures. Finally, the respondents were asked about knowledge-sharing practices particular to Chinese culture where they provided their perspectives on particular practices and behaviors. These insights are shared in the following section.

In reflecting upon knowledge-sharing practices between cultures, the local study participants often used comparisons between Eastern and Western practices. Several of the

local managers noted that Asian cultures are generally not as open to knowledge-sharing as Western cultures. Asian practices tend to focus on team collaboration with an execution focus whereas Western cultures tend to take more individual control and initiative. In the East, there is more subtlety and indirectness in communication whereas in the West, there is a more assertive and direct approach to communication. Project management and communication is also viewed as a different approach between Eastern and Western practices; a defined plan with processes for execution including the project timeline and key milestones is the standard approach in the West whereas some Asian cultures, notably Chinese, work directly and quickly on an immediate plan without taking into account relevant relationships and requirements. As expressed by a director based in China: “When comparing West and East, it is more about a quick temper versus a slow temper where there’s a need to find a matching point, to find a common ground where ideas could be clearly communicated, discussed and understood to move forward.” There are several considerations for understanding knowledge-sharing and communication practices in the East.

When contrasting Western and Eastern practices, study participants made several references to the US and German/European cultures in comparison with China. The top-down and more authoritative leadership style in China can often contrast with the more open and direct leadership style in the US, as explained by a regional director in China: “In the US, it’s very flat and can be open and candid on all levels, which is not always appreciated in China. The challenge is when we have local people with good ideas but they’re not willing to articulate them... The local team needs to ensure change and adaptation.” The project leader thus needs to consider ways that local team members can engage in the project while integrating project and cultural practices in project collaboration.

There is also the consideration of work and communication styles when managing the project process. A German director based in China explains that “Germans are more factual, focused on the goal, and communicate directly. The Chinese way is to communicate around the topic, they don’t speak directly of the problem; they need to react in a different way and provide hints to solve the problem. The German way may be seen as disrespectful, how does one then connect two different ways of working?” These differences can also be influenced through different education and learning practices. A senior manager explained that “in China it’s about producing and in Germany it’s about understanding. In China, you memorize information whereas in Germany you want to understand the context.” The advantage is that you can learn quickly and remember essential information in China, however it does not

motivate entrepreneurial and creative behaviors. Communication styles in Asia tend to be more indirect where less knowledge is shared. A few senior managers noted that Indians tend to speak less and you need to know who to ask for what; you need to ask more direct questions to increase engagement of local teams.

The ability to adapt and integrate these cultural differences is mostly determined by the cross-cultural and interpersonal skills of the project leader. A senior manager emphasized that “it’s critical to have the right management team in place to ease knowledge-sharing. Even within our company, we see that it comes from the management team and management style. It can become a negative environment with the wrong leadership style.” It appears that the appropriate leadership style can positively influence local Chinese managers to learn quickly and perform well. What may be needed is often a broader selection of approaches and the cultural understanding of how different approaches can create a winning solution. Due to cultural practices and education, Chinese professionals tend to wait for the manager to tell them rather than take the initiative themselves. Encouragement is needed to promote more knowledge-sharing and expression. As explained by a senior Chinese manager: “The ability to change depends on the role of the manager and leader who can facilitate information and knowledge-sharing.” Chinese teams are open to learning and adapting new practices where the local team needs to increasingly adapt to global practices and standards. “In China, the view is that patience is more required for long-term investment and return, you need an imaginative style, patience, and to understand and familiarize yourself with the environment,” emphasizes a senior manager. Chinese and Asian managers are open and capable of change and learning with the appropriate support and leadership for achieving effective innovation practices.

The local study participants provided many insights and advice in how a global project leader can successfully facilitate collaboration and knowledge-sharing with Chinese team members. Several participants noted the reason for not sharing knowledge is often linked to job security since there is a feeling that one loses their power by giving away or sharing special knowledge and expertise. There is also the traditional view that the manager should initiate and make key decisions which prevents team members from volunteering knowledge. A director based in China explained that “in China, your boss should know best so it’s not feasible that a team member knows more than the boss on a topic (and will not show their knowledge in order to save face).” Moreover, there is not the sense of job ownership, individual roles and responsibilities, that are characteristic of western project management

practices. This can further limit the sharing of knowledge and initiation of new ideas. Another consideration is conflict avoidance, found in many Asian cultures, where there is difficulty saying 'no' or to directly address or evaluate an idea that might embarrass or be considered confrontational, called 'saving face', which could pose a challenge in generating different ideas. Finally, there needs to be an awareness of the relationship emphasis in Chinese business culture where internal teams may be competing rather than cooperating with each other since each project leader has a devoted team. In view of these cultural differences in knowledge-sharing, there are several communication challenges that need to be considered and resolved for the project leader when managing ideation and planning activities.

Despite the cultural views and communication practices that may challenge knowledge-sharing amongst Chinese team members, the local managers responsible for China and the Asia region were confident in the ability of local team members to adapt and change to more open and innovative approaches for conceiving and introducing new products. A majority felt the leadership style of the management team and the organizational culture could greatly influence the ability of the local team members to effectively collaborate and share knowledge with team members worldwide. The traditional views of competition, knowledge as power, and saving face can be changed through a focus on the common goal and the focus on team and organizational success. A senior Chinese manager responsible for China and the Asia region of a US MNC noted that "saving face has little influence inside our organizational culture. The Chinese dislike confrontation, yet they cannot always rely on the consensus-building approach. So it becomes important to have a good face, doing good for the company and the product." The ability to share knowledge often requires more encouragement and guidance from the manager through direct communication. There needs to be sufficient time, space, and tools for creating a collaborative dialogue with local team members. A senior American product manager based in China adds that "Group conversations are difficult, however one-on-one or a few people makes it easier for sharing. Visual tools such as whiteboards are helpful. You also need to ensure that it's ok to fail and to have new ideas." Many of the local study participants felt that respect, patience, and communication can help the project leader facilitate cultural communication differences.

The participating senior managers with experience working in China and the Asia region emphasized that increased communication and knowledge-sharing can increase team productivity as well as development of the business strategy. It's important to develop a better understanding of the project and ensure sufficient team-building for project collaboration. A

senior Chinese manager travelling between US HQ and the Chinese subsidiary recommended several activities to promote interaction: “Share stories and provide valuable comments and advice for the team. You can also duplicate the experience and approaches that others find very successful... the team also needs to get to know each other as much as possible to work successfully together and to avoid conflict.” Another senior Chinese manager noted that “Since Chinese tend not to share more and language is a barrier, small talk is more useful. We are not as aggressive or direct in communication in comparison with the Indians.” The local Chinese managers based in China expressed positive perspectives concerning the potential of knowledge-sharing and innovation practices of Chinese team members. A Chinese senior management team noted that “Chinese can take more risk and take initiative. Chinese can be more creative than Westerners, but we’re known more for duplication than innovation; execution is great in China.” If allowed more time, opportunity, and guidance, the Chinese team members have the ability and motivation to achieve successful results.

The views of the local teams provided valuable insights to particular cultural values and behaviors that can influence knowledge-sharing in Asia and especially in China. In examining Chinese knowledge-sharing practices and cultural differences, it became clear that power, conflict avoidance, ownership, and communication styles can serve as challenges for the project leader and the geographically distributed team. As discussed in the section on cross-cultural knowledge-sharing practices with global project leaders, Asian knowledge-sharing practices in general offer strengths in the knowledge-sharing structure for achieving effective execution, however there are challenges to the degree of openness and initiative taken by team members due to the role of management power in the organizational hierarchy. The local study has shown that traditional views of competition, knowledge as power, and saving face can be changed through a focus on the common goal for achieving team and organizational success.

c. The role of local teams in the knowledge-sharing process

In order to examine the views of local team members in Asia concerning knowledge-sharing practices between the geographically distributed team in HQ and subsidiaries, several questions were posed to the local study participants concerning their participation and motivation in knowledge-sharing practices during the global product launch project from planning to execution. By posing the same questions to both groups of study participants, the intention of the researcher is to compare the perspectives of the global project leaders with the local team leaders in Asia. In the following section, the responses from the local team leaders

in Asia will be compared with the previous findings based upon responses from global project leaders. The first step is to examine the involvement of local teams in the launch cycle phases, followed by an in depth evaluation of critical information, challenges, and motivations for increasing knowledge-sharing and contributions from local team members. This section is then concluded by an examination of organizational resources that would facilitate knowledge-sharing and contributions from local team members in Asia.

In order to explore and specify in which global launch cycle phases the local team members were most involved, local team managers were asked in which of the global launch cycle phases local subsidiaries were most involved. The study results showed that a majority of the local managers (48%) felt they were most involved in the last phase concerning launch preparation and go-to-market execution. The local team members felt they were somewhat involved in the concept validation phase (26%) and they felt they were less involved in the phases of product planning (15%) and ideation (11%). These responses are closely aligned to the responses by the global project leaders as shown in below figure. There is a heavy emphasis on involvement in the execution phase for local team members whereas there appears to be limited involvement in the early phases of ideation, validation, and planning of the new concept for local markets.

Participation in Global Launch Cycle Phases	Views of Local Managers/ Asia subsidiaries	Views of Global Managers/HQ
Ideation	11%	13%
Concept Validation	26%	20%
Product Planning	15%	16%
Go-to-Market	48%	51%

Table 10. Local participation in global launch cycle phases

In reflecting upon the limited involvement in the early phases of ideation, validation, and planning of the new concept, a senior regional manager based in China expressed that “Western companies feel they know what the customer wants, so now it’s time for us to sell.” A senior American product manager based in China tried to explain the absence of local participation through the top down approach of his organization: “It’s top down early in the program where HQ comes up with the plan and then they approach the local team for implementation.” A German senior manager based in China explained that “in terms of communication, our company does not just say what we should do but also how we should do it. There are templates that HQ would like applied, but there are events that can be localized

and tailored to the Chinese market.” Although a majority of study participants felt there was limited involvement by local team members, there were some local managers that emphasized active involvement at every phase, stating that “we need to ensure that we haven’t missed any requirements before we move onto initiatives. More information is better than less information.” Local teams are most involved at the go-to-market phase when there is a need for local market execution.

3. Interactions during the front-end innovation process

In order to explore specific interactions between the local team members in Asia and the global project management team in HQ, the local study participants were asked to identify and describe the following during the two critical project phases of planning and execution: 1) Critical information needed from local team members, 2) challenges or critical incidents in knowledge-sharing and contribution from local team members to the project leadership team in HQ, and 3) how local team members would be more motivated to increase knowledge-sharing and contribution. The findings and responses from local study participants are summarized in the below table and will be discussed and compared with the findings from the global project leaders based in HQ in the following section.

	Critical Information	Critical Incidents/ Challenges	Motivation/Resolution
Planning	Local market trends Market data, size and potential Market requirements Local competition Customer knowledge Customer validation Customer expectations Product pricing Localization needs Budget allocation Revenue forecast	<i>Sometimes people in HQ act like they know more than people in the field. We tell them what the market needs, then they tell us ‘no, no, we think this is what customer wants’. Thus, we may end up with something that’s not tailored to the end market and it creates problems for the local market, thus we need to create an internal balance.</i> <i>HQ should get people involved in the planning phase, from the very start, and not when it’s a finished design and then say ‘by the way, it’s developed and now</i>	<i>People from HQ and top management need to understand the importance of contributions from the local team and markets to the company. The product development team needs to listen to the local team when developing products.</i> <i>It would help to have people from HQ to spend time in the field, and field people to spend time in HQ to encourage more friendships and collaborative relations</i>

		<p><i>it's your job to sell it'. We need field people to get involved as soon as possible.</i></p> <p><i>We need to make HQ more aware of user behavior in China. After we explain and demonstrate the importance of the market, HQ is convinced. HQ may not understand local needs or initiatives that deviate from global model.</i></p> <p><i>Top down planning comes from HQ regarding new product ideas. There's not much excitement in field sales in Japan. The company doesn't allow involvement in planning stage, it's very top down. The Japan subsidiary is more involved in global marketing planning rather than product planning.</i></p> <p><i>HQ is sometimes afraid that technology will be copied in China and blocks some knowledge-sharing. If we don't bring the technology to China, we're not competitive. Chinese customers want the latest technologies, people are better informed and will not buy old technology. HQ depends on the local team for local information, administration, etc. So we need to build up a good relationship in order to capture local market information.</i></p> <p><i>In India, there are barriers to</i></p>	<p><i>where team is integrated with local and global people, involving personal interchange and then having physical presence of people will encourage information flow and idea exchange.</i></p> <p><i>Motivation is to develop something that becomes a global feature and to contribute to the global market beyond the local market. If the company provides the opportunity to share and to achieve more and collaborate with the local team, then we're more motivated.</i></p> <p><i>Teams need to be more closely linked to corporate side. We need more cross-functional communication and dot line reporting relations. We need to send more local teams to HQ or send HT team to local subsidiaries.</i></p> <p><i>We're trying to motivate through more transparency, organizing team meetings where share more information to reduce prejudices regarding info-sharing. We could also reward them (subsidiary</i></p>
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		<p>knowledge-sharing. The way to convey particular market needs does not work since the context is not shared. For example, product needs are different but this is not understood as important since there's a lack of this need in other markets.</p> <p>For a recent launch project, everything was delayed due to a big challenge where the launch concept was changed.</p>	<p>managers) through a visit to HQ where they can network and meet their colleagues.</p> <p>Provide more ownership and closeness to market. An understanding of the language, perception, and context makes it easier.</p> <p>Creativity was high since we had the opportunity to be creative and free (and brave) to tackle new approaches and ideas. We stayed away from traditional approaches to find new solutions.</p>
Execution	<p>Local market requirements</p> <p>Local sales support/tools</p> <p>Marketing material</p> <p>Communication concept</p> <p>Customer references</p> <p>Customer needs</p> <p>Competitive data</p> <p>Product training</p>	<p>When it comes to planning and GTM, market requirements are not always considered. You frequently have input from local markets in a global meeting, then you roll out product and input hasn't been integrated. As a result, enthusiasm to respond to requests about local requirements is decreasing. In China, we don't feel our voices are heard, so we're not eager to contribute.</p> <p>HQ needs to understand the importance and relevance of key marketing and sales tools for local markets. The general manager needs time to gather support and understanding for the local launch (support from local marketing and sales teams). Timing is the biggest challenge. The product platform may be ready,</p>	<p>HQ is now trying to include APAC (Asia-Pacific) region in the simultaneous global launch. Currently Japan, Korea, and Taiwan have a more local focus, however HQ is trying to integrate them into a global program.</p> <p>The most motivated moment is the day of announcement is to see success from launch generated from press and marketing activities. It's the ability to share success. We're motivated when customer references are used in global campaigns – there's more recognition.</p>

		<i>however documentation is not always translated in time for the press announcement.</i>	
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Table 11. Local team interactions and critical incidents

a. Interactions during planning and execution phases

The explanatory phase study involving senior managers responsible for the global product launch identified specific critical information that is sought during interactions that occur between the global project leader in HQ and the local team members in subsidiaries. In order to review and validate this information, the local team managers in the Asia subsidiaries were asked to identify the most critical information that HQ needs from the local teams during the planning and execution phases. In reviewing the information that local managers perceived as most critical from their local markets, they emphasized the importance of local market and customer knowledge. In comparison, the global project leaders noted the importance of local market and customer knowledge yet also focused on customer validation, resource allocation, and local product knowledge such as features or localization needs. In the planning phase, local study participants perceived a stronger focus on providing customer, market, and competitive information while also addressing needs for content localization, budget allocation, and revenue forecasts. When it is time for the launch preparation and go-to-market phase, local study participants perceived a stronger need for customer profile and user behavior information, customer references, competitive market data, local market requirements for both product and marketing content, marketing material and sales support including training. In comparison, the global project leaders showed similar concerns with the exception of execution capabilities, product localization, positioning, and customer and partner support.

The planning phase relies upon knowledge of local market requirements to determine the level of standardization or adaptation required for a new concept. Knowledge concerning customer preferences, local user practices, and local market trends are essential during this phase. It is important for the local managers to provide insights to the local customers and markets, however there is also the need to consider participation for the ideation, validation, and planning phases. A regional director of global products in Asia cautions that “knowing the target market and how to promote (concept) is important, but if the product has been developed without input from the start, it may not work for the market since it may not fill the

need, then the GTM strategy does not matter.” The planning phase requires engagement by the local team in order to ensure that a concept is feasible and adaptable to the local market. In addition, the execution phase requires consideration of local consumer preferences and marketing practices, as noted by a local product marketing manager based in China, “the problem is that we’re not properly informed about the communication concept (from HQ), detailed planning is difficult to obtain. We feel that we need to do something for the Chinese culture, it’s better to let us determine since the central function can’t provide us with valuable advice.” While the planning phase may require early engagement and contribution from local team members, the outcome is a more effective execution in delivering solutions that are adapted to local market needs.

b. Information gathering process

Since the interviews with the global project leaders produced a detailed and insightful account of the information gathering process during the planning phase, the researcher determined that it could be of interest to investigate the perspectives and activities of the local team managers and members during the planning phase. Thus, the local study participants were asked about how the information was gathered. Their responses indicated there were both informal and formal methods as identified in the study with global project leaders. The informal methods consisted of phone and web meetings with contact between HQ and the local subsidiaries on a regular basis; the formal methods included specific planning templates and country visits to meet with the local team and customers. Interface contacts can occur from the project leadership team in HQ to the regional lead contacts in Asia who then interface with their local counterparts; there is often direct local contact with large markets such as Japan, India, and China.

The local study participants emphasized their own involvement in gathering local market and customer information. They communicated that active involvement is necessary since they have contact with local customers and have knowledge of the local market. As explained by a Chinese team manager based in China, “the local team gathers information; we have a lot of opportunities for customer visits. We need to collect customer information to organize feedback to HQ.” The manager also added that “today, in our case, it is initialized by HQ and gathered selectively from local people which is not the best case.” Some of the study participants felt that increased communication with HQ and more active involvement of the local subsidiaries is necessary. A Chinese regional director noted that “locally, information is gathered from customers directly, via phone or visits. Supposedly a process is in place, but the

product team (in HQ) can bypass this stage. Some groups have more communications than others.” It appears that local teams have the most access and knowledge of the local customers and markets, however the process in gathering and communication this knowledge varies among the organizations of the local study participants.

c. **Knowledge-sharing challenges**

In order to understand the particular knowledge-sharing challenges from the local team perspective, the local team managers for China and the Asia region were questioned about the greatest challenges to knowledge-sharing and contribution from local team members based in subsidiaries to the management team in HQ. Their comments and responses were evaluated for similarities differences in practices and then common patterns were identified and organized by research coding to ensure particular categories for analysis and presentation. The findings have been organized into five main areas that experience challenges: **Communication and knowledge-sharing practices, project process for product innovation, local market understanding by HQ senior management team, local involvement in planning process, and availability of resources.** In order to maintain consistency with the findings from the study with global project leaders, the focus will be on the planning phase and its impact upon the execution phase when presenting the findings from the local market study in Asia. A comparison of views and challenges perceived by the global project leaders in HQ will then be compared with the views and challenges perceived by local team managers in Asian subsidiaries.

When addressing the challenges of **communication and knowledge-sharing practices** between geographically distributed team members based in HQ and local subsidiaries in Asia, there was an emphasis on the lack of communication, the context for knowledge-sharing, the lack of opportunity for risk-taking and knowledge-sharing, the lack of a clear structure and process, and the need for more team interaction at the same location. The improvement of communication through a specific vehicle and more exchange between team members in HQ and subsidiaries appeared to be of most importance. The context for knowledge-sharing in conveying particular market needs should include more awareness and understanding for local market needs and requirements. In encouraging more knowledge-sharing between the team members, the project leader needs to consider how to allow time and space as well as encourage behaviors for risk-taking and knowledge-sharing. The lack of clear roles and an effective communication process appears to have a negative impact on the team members’ ability to build trust and relationships where knowledge can be shared and

captured. There is also the recognition that local teams need to make more effort to contact HQ to suggest ideas and raise issues that can impact concept creation and market opportunities. Several local study participants noted the need to co-locate teams and encourage more visits and exchange with local team members. The lack of a knowledge-sharing structure and effective communication processes are similar to the challenges faced by global project leaders when communicating with local teams.

In addressing the communication challenges, a senior manager based in China noted that “communication is most important, we need to ensure everyone’s on the same page; we need a driver for product launch - clear goal, good plan, and good skill to communicate with team members. Interactive communications with team members to get feedback for planning.” Another senior product manager mentioned the influence of culture: “First is culture of not expecting to share more than receive. There is the issue of trust in that most foreigners feel that Chinese will steal ideas so they don’t want to share with the locals.” A senior manager based in China emphasized that “it’s about trust between the HQ team and the regional unit, we need to build up trust, regional organizations and capabilities. For the local team, it’s about sharing know-how since they don’t provide or share much.” A director responsible for the Chinese market adds that “local teams are motivated to contribute but demotivated by HQ actions. The type of response or lack of response from HQ demotivates people.” Another senior manager in China emphasized that “team members don’t have much communication with HQ. It’s important to consider if there’s a clear bridge and responsibility to enable HQ and local teams.”

The **project process for product innovation** appears to pose a challenge for local team members due to a lack of alignment with the business objectives and organizational innovation needs. Many of the local study participants mentioned the difficulties in understanding their roles and the working methods necessary for achieving the launch objectives. There is often a large product offering from HQ that local teams are expected to market and sell in their countries. Due to the time and effort required to gain product knowledge and to sell to customers, local teams will often select those concepts that appear to have the most localized solutions and the strongest appeal to local customers. On one hand, the continuous pressure to sell and reach revenue targets for existing products or market exploitation needs, makes it challenging to have time for market exploration in identifying future market opportunities. On the other hand, local teams also understand that they need to effectively communicate and sell their ideas in order to persuade the senior management team

in HQ to provide support and funding for new initiatives. There is also the consideration for timely introductions in order to align local market availability with other regions around the world.

When explaining the importance of involving local team members in the project process, a director based in China emphasized that “it’s most important that HQ should get people involved in the planning phase, from the very start, not when it’s a finished design and then say ‘by the way it’s developed and now it’s your job to sell it’. We need field (local) people to get involved as early as possible.” A director responsible for sales operations in China adds that “another challenge is market timing for product launch in HQ market and other markets. Local competitors can copy faster than internationalization process.” An executive responsible for the Asia-Pacific region notes the challenge consists of “an understanding of the timeline and requirements during the project process. Some cultures understand what’s needed, however there are long-term and short-term focus differences. There’s a disconnect between participants on the needs and roles, and we can’t be productive; we need agreement and understanding on requirements.” A senior manager based in Japan and working with the Asian region notes that one of the challenges includes “top down planning which comes from HQ for new product ideas. There’s not much excitement in field sales in Japan... our company doesn’t allow involvement in the planning stage, it’s very top down.” The same manager adds that “the biggest challenge is streamlining appropriate processes and tools.”

Another challenge identified with local study participants in Asia involved the lack of **local market understanding** by senior managers based in HQ. Several local study participants perceived a lack of trust in local team members and the lack of recognition in their contributions to global and local innovation initiatives. They felt that HQ teams tended to have a superiority attitude where their global product knowledge was more important than local market knowledge. This causes tension between the senior management team in HQ and the local teams in country subsidiaries in Asia. A majority of the local study participants referred to the lack of awareness concerning local markets and customers which often resulted in the creation and proposal of standard solutions. The senior management team often did not consider or take the time to understand local requests and needs that deviate from the global concept model. Local study participants felt there should be more training, immersion, and local market involvement of senior managers based in HQ.

The perceived lack of attention of the HQ senior management teams to local market needs also impacts the planning phase of new products. Local study participants found that an emphasis on top-down planning from HQ does not allow for sufficient involvement of local teams in the product innovation process. With centralized planning and control at HQ, the process is further challenged by lengthy decision-making and communications in order to achieve project results. The local managers interviewed emphasized that local team members are motivated to contribute, however the negative responses or lack of responses can often create disinterest and de-motivation for local team members. As noted by a senior manager, “local market voices are not heard by HQ”. In addition, local team members do not always feel connected with the global MNC network in order to keep informed of activities by their peers in other markets around the world. Thus, local study participants emphasized the need to involve local team members in planning as well as to increase opportunities for them to share their knowledge.

When addressing the conflict or incidents created with the lack of local market understanding, a director responsible for the Chinese market notes that “sometimes I see that people in HQ act like they know more than people in the field. We tell them what the market needs, then they tell us ‘no, no, we think this is what the customer wants’. Thus, we may end up with something that’s not tailored to the end market and that creates problems for the local market.” A sales operations director based in China notes that “when it comes to planning and go-to-market, market requirements are not always considered. Other observation is that you frequently have input from markets in global meetings, then you roll out product and input hasn’t been integrated. As a result, enthusiasm to respond to requests about local requirements is decreasing.” A senior manager based in China emphasized that “we need to make the HQ team more aware of user behavior in China... HQ may not understand local needs or initiatives that deviate from the global model; through more communication and data we can demonstrate the need to HQ.”

The final area identified as a challenge for local study participants in knowledge-sharing and contribution from local team members involves **timing** and the **availability of sufficient resources**. There is more time and space needed for generating ideas that respond to new market opportunities. Local teams are often pressured to deliver short-term sales results which make it difficult to focus on the development of future market opportunities. In addition, the local team needs sufficient time and resources to train and prepare the local sales team for the new product introduction. Overall, the study participants noted the importance of

receiving budget allocation and sufficient financial support for introducing and marketing new concepts. There is also the consideration of essential resources such as staffing and support for marketing, sales, and customer activities.

In addressing the lack of time and space for idea generation with local teams, a senior manager based in China noted that “the ideation phase is currently random, we need to create practices and more openness needed. For risk-taking, there’s a need to create room and space to encourage this behavior and build-up the culture for taking initiative and sharing views.” The same manager adds that “with new ideas, it takes a lot of effort to sell and persuade, it’s a very big process. You need to approve resources and funding, etc.” A senior product manager for the Asian region emphasizes that “the challenge is the effort and time for the process in making number, doing homework...In the long-term, we know that knowledge-sharing and communications are healthy for the company but we have short-term goals and the challenge of meeting every day demands.” In expressing the challenges for support of local marketing and sales, a senior manager based in Japan and interfacing with the Asian region noted that “US HQ needs to understand the importance and relevance of key marketing and sales tools for local markets. Timing is the biggest challenge. The product platform may be ready; however documentation is not always translated in time for the press announcement. We’re now trying to include APAC in a simultaneous global launch.” In addressing the need for more budget and resources, a senior manager explains: “In China, we have strong competitors, marketing is more important and we need to convince HQ to provide more budget.”

In reviewing and comparing the views and experiences of the local team managers, there are both similarities and differences identified with the views expressed by the global project leaders. A summary of challenges perceived by local team managers as well as global project leaders is provided in the above figure. Both groups of study participants felt that current communication and knowledge-sharing practices could be more structured and organized while allowing for more time, space, and transparency for enhancing cross-cultural team collaboration. In particular, both groups referred to the tensions caused by the need to pursue market exploration while also sustaining market exploitation for existing products. Both study groups also referred to the need for more understanding and involvement of HQ senior management in recognizing and rewarding local market opportunities. There is also the ongoing tension between team members in HQ and local subsidiaries concerning the level of involvement in the launch project process.

Perceived challenges <i>Local team managers/Asia</i>	Perceived challenges <i>Global project leaders/HQ</i>
Ineffective communication and knowledge-sharing Inefficient project process for product innovation Lack of local involvement in planning process Lack of local market understanding by HQ team Insufficient availability of resources	Ineffective knowledge-sharing practices Lack of open communication and transparency Inefficient planning process Lack of strategic understanding by local teams
Views of local team managers/Asia	Views of global project leaders/HQ
“We need interactive communications with team members” “We need to get involved in the planning phase” “People in HQ act like they know more” “Local market voices are not heard by HQ” “Timing is the biggest challenge”	“Local teams need to share more knowledge” “We need to give more feedback to local market” “We should focus on local market needs” “Local team members have a short-term view” “Local team members propose initiatives without justification”

Table 12. Perceived challenges by local team managers and global project leaders

Views of local study participants that differed from those of the global project leaders were focused on the lack of local involvement in the planning process and insufficient sales resources. The local team managers felt that global project leaders and management teams based in HQ do not have sufficient understanding nor make sufficient efforts to understand the local market and customer needs. There was a general feeling from the local study participants that the management team in HQ is too focused on the global product strategy without considering the local market requirements. In comparison with the study involving global project leaders, there is a general feeling that local teams do not have a global view of product strategy or an understanding of the planning needs for new products and concepts. In addition, they felt that local team members could not effectively initiate, communicate or propose the business case for persuading the global project leader or senior management team in HQ to consider a new idea or initiative proposed by local team members.

The main point of conflict that exists between the global project leader based in HQ and the local team members is therefore the perception and understanding of global and local team roles in conceiving and bringing new products to market. The project collaboration

process primarily involves centralized planning at HQ with decentralized execution driven by the global project leader and local team members in key markets. The global project leader in HQ is driving centralized planning, ideation, and validation processes without or with limited participation by local team members. The lack of knowledge-sharing during the conception and planning process prevents or limits local team members from contributing their knowledge about local customer and market requirements. This strategy results in new concepts and products that are poorly adapted to local market and customer needs. Yet, the local team is expected to serve an active role in the execution of the product launch in their local market. The local team members serve the role of ‘implementer’ in focusing on go-to-market activities. They usually do not have the opportunity to contribute to the creation of a new product solution during the planning phase which could result in a solution that meets local customer needs. Instead, the local team is expected to sell a global or standard solution that does not meet local customer needs. This contributes to reduced interest and motivation to marketing and selling the new product as well as reduced motivation to contribute to the creation and implementation of new concepts for future product introductions.

d. Motivation for knowledge-sharing and contribution

In order to further explore the opportunities for gaining interest and engagement from local team members, the local study participants in Asia were asked how they feel local teams would be more motivated to increase knowledge-sharing and contribution during the global planning and execution phases. The intent of the researcher is to compare their responses with those of the study participants involving global project leaders based in HQ in order to compare and validate the motivations of local teams in China and Asia. The comments of the local study participants were examined for similarities and differences through research coding and then grouped into particular theme categories for analysis. The findings have been organized and presented into five main themes that influence motivation – **recognition, empowerment, interaction, open communication, and organizational support**. In order to remain consistent with the evaluation and discussion of motivation for the study participants involving global project leaders, the motivations for local knowledge-sharing and contribution in China and Asia are only focused on the planning phase.

When interviewing the local team managers, the role of **recognition** for their role and contribution in the organization was identified as a key motivator. Most of the participants mentioned an aspect of recognition that was viewed as a key motivator and driver for product innovation projects. The ability of the HQ team to recognize the local team member’s

knowledge, talent, and expertise in conceiving and bringing new product innovations to market is a powerful intrinsic motivator. Local study participants noted that global project leaders should give more attention and listen to local teams in order to provide effective feedback and reinforce their recognition of the valuable role of local team members. The simple act of showing appreciation for the local team member's contributions as well as rewards for their contributions and achievements appear to increase motivation for local team members.

In expressing the importance of recognition, a senior manager responsible for a local team in China noted that "We need recognition from HQ and the global team to move forward. If we have innovative and new ideas, we can get recognition from the global team to take us seriously and to try and implement the idea." Emphasizing the importance of encouraging creativity, a regional director based in China noted that "you need to recognize and show appreciation for their (local team's) contribution through response and feedback." Another senior product manager responsible for the Chinese market commented that "reward and contribution would motivate more innovation practices. It's important to enjoy recognition and the value that team members bring to the project." A senior product manager based in China addressed the importance of incentives: "People that share information and work with global teams should be recognized as high performers and compensated accordingly. It should be noticed in the company and through performance evaluations." A regional executive responsible for the Asia-Pacific region emphasized the need for the HQ management teams to focus on local markets: "The motivation of local teams is not as important as central teams to give local markets more attention. You need to ensure they're (local teams) recognized and they matter."

The opportunity to be recognized for one's contribution requires **empowerment** of local team members in pursuing new initiatives. Having a sense of ownership in the product innovation process is established in the early phases of planning, ideation, and validation of new concepts. Local study participants noted the importance of encouraging ideation, generating ideas and sharing knowledge with team members. They expressed a need for greater freedom and collaboration to take new initiatives. Developing a risk-taking culture where there is an acceptance of failure would encourage more team members to initiate ideas. A majority of the local study participants noted the importance of having a greater impact on the organization with new ideas and products. Moreover, the opportunity to develop an idea that brings both local and global opportunities was noted as a strong motivator due to

increased responsibilities on a global level. The opportunity to apply local ideas to global opportunities reinforces the value of local market knowledge as an organizational resource. Local team members simply would like to see the impact and results of their contributions and how they can add value to the team project on a global level.

In speaking to the importance of empowerment of team members for project collaboration, a local team manager based in Japan gave an example of creative opportunities that enable the team: “Last summer, we decided to add more critical features (for the local product) which involved rapid change. There was not much time for execution. Creativity was high. We were very creative and free to tackle new approaches and ideas.” A senior product manager based in China emphasized the importance of making a global impact through the ability “to develop something that becomes a global feature, to contribute to the global market beyond the local market. If we provide the opportunity to share and to achieve more and collaborate with the global team, then we’re more motivated. The reward is the recognition of the work and having a greater impact with new ideas and products on a global level.” A senior manager working for the Chinese subsidiary of a US MNC noted the challenge in developing a sense of ownership for Chinese team members and the need to instill more responsibility: “We need to instill a sense of importance in helping our company succeed in China, in terms of their role and its value to our success... we need to show the tangible results of their actions, how they influence the situation; it’s important to show they contribute and make an impact.” A senior Chinese manager working for the Chinese subsidiary of a European MNC emphasized that “We need more empowerment. We need to share and let local teams feel responsibility. Accountability is welcomed.”

The ability to share ideas and knowledge through **open communication** is also a powerful motivator according to local study participants. Several local team managers expressed that they wanted to see increased transparency and the availability of knowledge at both global and local levels. Some recognized that improved communication is needed from the local teams where sharing of market requirements and precise customer needs may prompt more feedback from the global project leader and senior management team in HQ. A majority of local study participants expressed their interest in creating a knowledge-sharing culture through more incentives and rewards for knowledge-sharing practices. They also noted the necessity to be more responsive and ensure timely as well as accurate feedback. The opportunity to create open communication and transparency where local markets understand

the global strategy and future implications would strengthen their knowledge and ability to execute.

In explaining the necessity for more communication, a senior manager responsible for the Asia-Pacific region noted the importance of leadership: “It’s important as a regional leader to find what countries are doing well and allow them to share with others and communicate.” A senior Chinese manager working for the Chinese subsidiary of a US MNC noted that local teams are more motivated by “idea sharing and knowledge-sharing. The China office is pressured to build the company culture that’s open, transparent, flat, and encourages sharing.” There is also the importance of ensuring effective communication from the local team members as noted by a senior Chinese director based in China: “The local team needs to understand that good communications means better support from HQ, then we may have the right product planning and features from HQ based on the feedback and quality of market requirements from the local team.” A Chinese team manager working for the Chinese subsidiary of a US MNC is currently acting as knowledge facilitator for the local team noting that “without this role, there are challenges in unclear responsibilities and communication as well as language issues.”

The development of open communication and transparency require increased **interaction** and development of strong relationships between the global project leader and the local team members. A majority of local study participants emphasized the need to increase visits and exchanges between team members based in HQ and those based in local subsidiaries. There was a strong feeling that visits by the global project leader as well as product development, design, and marketing teams based in HQ should occur on a more frequent basis. Local study participants felt that more visits and time spent in local markets could contribute to an improved understanding of the local culture, market and customer requirements. It would also provide the opportunity to increase attention to local needs and requirements in designing products with a more polycentric view. There was a general feeling that more live meetings and face-to-face interactions could strengthen collaborative relations between the global project leader and management teams based in HQ and local team members based in subsidiaries. Increased interactions and physical presence could encourage information flow and idea exchange according to local managers interviewed.

On the other hand, several study participants expressed the need for local teams to visit and spend time at the HQ location in order to improve understanding of the global innovation strategy, encourage continued exchange and strengthen relationships with the

global project leader and management teams. There were suggestions to organize global meetings for all of the local team members that could be held at the HQ location in order to promote greater interaction amongst all team members involved in the global product innovation process. Aside from organizing visits and live events, local study participants felt that increased cross-functional communication with improved technology tools could also improve interactions across geographic distances. Overall, the local study participants appear to emphasize greater interaction and collaboration through increased visits and face-to-face interactions between global and local team members. This would increase the opportunities to leverage the knowledge and talent within the global MNC network.

In explaining the importance of personal interaction in strengthening team relations, a Chinese director working for the local subsidiary of a US MNC notes that “it would help to have people from HQ to spend time in the field and for field people to spend time in HQ to encourage more friendships and collaborative relations.” A senior manager also working for the Chinese subsidiary of a US MNC emphasized that “in short, we are running an organization with team members located in local offices and team members from the local country. So physical appearance (face-to-face communication with local team) and the communication language are very important advantages.” A local senior manager working for the Chinese subsidiary of a European MNC also commented on the use of technologies: “We need to look at the means to communicate back to HQ – web portals, sharing, the need for more IT solutions. This could be creative hives of people through informal networks to ensure more information.” The product marketing director for China and Asia, working for the same organization emphasized the role of live interaction suggesting that “we can invite them to come to the Shanghai HQ for a week long communication meeting, a global product roadmap review meeting. A global meeting involving regional team members. They have a better idea of the product portfolio and a sense of new technologies and opportunities.”

The ability to take more initiative for creating and marketing new concepts requires more **organizational support** and resources to ensure local market success. Several of the local study participants referred to the need for a sufficient budget to develop and execute on creative ideas. There should be more freedom and flexibility to determine the budget and financial support needed to support new initiative according to local managers. There appears to be a general feeling that more investment and support in local market opportunities will generate more revenue for the organization. In addition to financial support, local study participants noted that more support was required for ensuring sales readiness. They felt that

HQ management teams need to consider more resources for training sales teams on new products as well as providing them with effective marketing content and sales tools. According to study participants, there should be more resource commitment and support for local market opportunities.

In expressing the need for additional resources to ensure effective local execution, a local manager based in Japan noted that “we need more resources to help the sales team to increase business opportunities... we would be more motivated if we have a budget for our own local plans to have the ability to execute. The local team has many creative ideas but we need to fight against budget limitations. If HQ gave us more freedom and flexibility for the budget, we would be more motivated.” Another senior manager based in Japan and responsible for Japanese and Asian product marketing activities indicated disappointment with the lack of support from his organization: “There is currently no resource commitment. The organization is not supportive.” A senior director responsible for product strategy in China noted that more resources may be the outcome of more communication: “If collaboration provides investment and support for more revenue, then there’s more motivation from local teams. The message to the sales teams is that if they have direct objectives with vague feedback, they will be punished by not having the initiative on the company list.” There are both financial and training resources to consider when communicating and building the business case for new market opportunities.

Perceived motivations <i>Local team managers/Asian subsidiaries</i>	Perceived motivations <i>Global project leaders/HQ</i>
Recognition	Recognition
Empowerment	Empowerment
Open communication	Responsiveness
Interaction	Engagement
Organizational support	Organizational systems
	Incentives

Table 13. Perceived motivations by local team managers and global project leaders

The review and analysis of local managers’ views concerning motivations to increase knowledge-sharing and contribution during the global planning and execution phases have resulted in the five key themes of recognition, empowerment, open communication,

interaction, and organizational support. Recognition showed the importance of attention to local team members' knowledge and appreciation for the value of their contributions. When addressing empowerment, there was a clear interest to initiate and create new ideas with the ownership and responsibility for achieving local and global market success. In order to achieve more collaboration and dialogue, there is the importance of open communication with an emphasis on transparency and knowledge-sharing. This demands increased interaction with visits and face-to-face meetings at the HQ location and at subsidiaries in local markets. Finally, local study participants expressed that organizational support is needed to fund and provide sufficient resources for local market initiatives.

The themes identified by local study participants were then compared with the themes identified by global project leaders as shown in above figure. Recognition and empowerment are aligned with both groups in their importance for increased knowledge-sharing. Global project leaders emphasized responsiveness while local team managers in Asia emphasized open communication which address similar motivations. Global project leaders refer to responsiveness and more transparency and feedback concerning initiatives and requests, whereas local team managers refer to transparency and knowledge-sharing. For team collaboration, global project leaders identified engagement as team members who are actively involved in the innovation process, whereas local team managers identified the related theme of interaction with frequent visits and opportunities for face-to-face interaction. Finally, the two groups appeared to differ slightly on the topic of organizational resources and support where the global project leaders identified organizational environment and structure and mobility as important areas for improving the knowledge-sharing process. While the local study participants identified the role of organizational support and funding for local product, marketing, and sales initiatives, they also expressed the need for more travel and interactions between the global team members when addressing open communication.

e. Local team roles in the knowledge-sharing structure

In order to better understand the motivations and challenges that can influence knowledge-sharing and contribution for local team members during the innovation process within the global launch project, a comparison was made between the motivations, challenges, and critical incidents indicated by the local study participants as well as the global study participants. In evaluating patterns and key words, the researcher identified research codes and then screened them for analytical codes for the final identification of key themes and roles. This evaluation resulted in four distinct project collaboration roles that are based upon

the descriptions of global project leaders and local team managers concerning challenges and motivations for local team members. The four roles identified include: **Implementer**, **Contributor**, **Collaborator** and **Intrapreneur**. These roles were then mapped to the organizational innovation strategy in order to evaluate the emphasis on global standardization (global market exploration and exploitation) versus local responsiveness (local market exploration and exploitation). This evaluation resulted in a knowledge-sharing structure which identified particular roles served by local team members in relation to the front end innovation process. In addition to providing detailed descriptions in the below section, a brief summary of each role is provided in the below figure.

Local Team Roles in Knowledge-sharing Structure

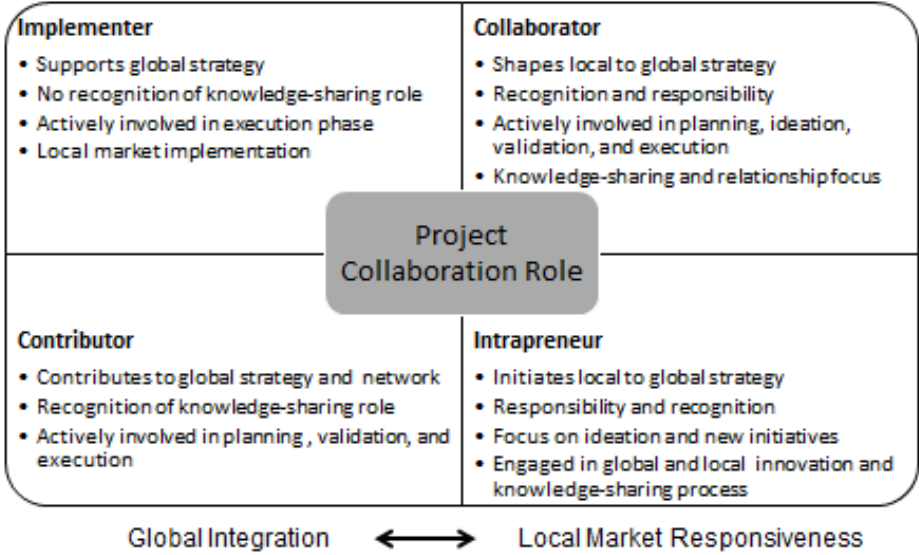


Figure 30. The four knowledge-sharing roles for project collaboration

In evaluating challenges for knowledge-sharing and collaboration, the role of the **implementer** emerged from an emphasis on execution and support of global strategy during the project collaboration process. In describing the launch project process, many local team members referred to the daily pressures of executing and selling new products into local markets. There is not sufficient time to focus on future market opportunities and share knowledge since there are continuously new global business objectives to support. Several of the local study participants also emphasized the focus on top-down planning for global strategies where the global project leader and management in HQ determine the conception

and direction for new concepts. Local team members are expected to support global strategy and do not have the opportunity to share their knowledge. This leads to the feeling that management in HQ does not have an interest nor an understanding of local market opportunities as well as local customer knowledge. Thus the implementer role consists of an active role in the execution phase without involvement in the planning, ideation, and validation phases.

Supporting and contributing to the global strategy, the role of the **contributor** is primarily based upon the ability of the team member to provide feedback and suggestions for global product concepts. The knowledge-sharing role of the local team member is recognized by the global project leader and the HQ team since local market validation and planning is needed in order to ensure successful execution. Thus, the local team member provides knowledge on local adaptation needs for introducing the new concept. The need for recognition in order to contribute and provide feedback on global concepts was expressed by several local study participants as well as global project leaders concerning the local team role. This includes the ability to actively participate with the global project team and to ensure open communication and knowledge-sharing within the MNC network.

The role of the **collaborator** is to shape local to global strategy by sharing local market knowledge and understanding how to integrate global and local market opportunities. This role is expressed by several local study participants as well as global project leader participants concerning the need to create interaction between the global project leader and management in HQ and the local team members. The global project leader and the management team in HQ recognize and respond to the knowledge-sharing practices of local team members. There is an interest by the collaborator to create relationships and increase knowledge-sharing within the MNC network. This involves travel, visits and exchanges by local team members in order to increase interactions and to be fully integrated in the global network. The collaborator role promotes transparency and open communication concerning local market practices. This means active participation in the planning, ideation, validation, and execution phases of new product innovations. The collaborator role also has an awareness of the necessity to structure and present communication that is easily understood by global team members in order to ensure effective knowledge-sharing.

Finally there is the role of the **intrapreneur** who initiates and proposes new ideas and concepts that contribute to local market strategies as well as global business objectives. The local manager has full recognition and support from the management team in HQ to pursue

new initiatives. This role appeals to local managers that are ready to take on ownership of a new project and feel empowered by the recognition and rewards available from the global MNC network. The focus tends to be on active participation in the ideation phase with variable participation in the planning, validation, and execution phases depending on the responsibilities of the local manager. Local managers that take on an intrapreneurial role appear to be very engaged in the local and global innovation process in order to create an impact within the organization. There were several local study participants that noted a strong interest and ambition in taking on more responsibilities and contributing to new ideas and products that make a local as well as a global impact. This requires an organizational culture and leadership that promote initiative, risk-taking, creativity, and collaboration throughout the MNC network.

f. Organizational resources for knowledge-sharing

In order to determine the kind of knowledge-sharing structure and communication tools that are most effective for facilitating collaboration for team members located in Asia, local study participants were questioned about the organizational resources (systems and tools) that could help facilitate knowledge-sharing and contribution from local team members. The responses are summarized and integrated in order to identify common patterns of practices and needs from team managers responsible for local planning and execution of new product introductions in China and Asia. Particular patterns and themes were identified by the frequency and number of key words mentioned by study participants in describing knowledge-sharing practices. These responses are then compared with the responses from the global project leaders in the explanatory study as shown in the below figure. When addressing organizational resources that could facilitate knowledge-sharing and contribution, the local study participants emphasized the need for a **collaborative space, increased interaction and communication, a technology platform and tools for knowledge-sharing, an innovation structure and process, and organizational resources dedicated to innovation and knowledge-sharing**. These findings are presented and discussed in the following section.

When responding to organizational resources that could facilitate knowledge-sharing and contribution from local team members in Asia, the local study participants emphasized the need for a **collaborative space** dedicated to the innovation process. There were several references to nurturing an open and collaborative environment within their organizations. In addition, there were several references to a physical space where team members could benefit from face-to-face communication and live interactions. Local study participants note the

opportunity to create a global forum for more interactions among team members as well as a physical space or work room for product innovation. As noted by a local program manager working for the Chinese subsidiary of a European MNC, “We need to create a forum to gather people and to have more interaction. Innovation shouldn’t have any border limits...it shouldn’t be centralized in some way.” There appeared to be a need to increase both cross-functional and cross-cultural communication and collaboration.

Organizational resources <i>Local team managers/Asian subsidiaries</i>	Organizational resources <i>Global project leaders/HQ</i>
Collaborative space for innovation Increased interaction and communication Technology platform/tools for knowledge-sharing Innovation structure and process Organizational resources dedicated to innovation and knowledge-sharing	Common space for team collaboration Travel and face-to-face interaction Local engagement Technology platforms for ideation and knowledge-sharing Supportive organizational environment Time for knowledge-sharing and cross-cultural learning

Table 14. Organizational resources for facilitating knowledge-sharing

The opportunity to increase collaboration requires increased team **interaction and communication** according to local study participants. Several of the local study participants indicated the need for improved exchange and communication between team members based in HQ and local subsidiaries and markets. Many participants emphasized their interest in increased travel between the HQ location and the local subsidiary location. There appeared to be a general consensus that visits by local team members to HQ, as well as local visits by the global project leader and management teams in HQ, could improve the ability to share local cultural knowledge as well as improve local market understanding. A manager working for the Chinese subsidiary of a European MNC suggested more interactions: “We need a higher exchange with people working in local subsidiaries and HQ. There needs to be more flow from subsidiaries to HQ, we already have a big flow from HQ to China. We need to go to HQ to share the culture and to create an understanding of local market needs and practices.” All of the local participants emphasized the importance of having on site meetings with face-to-face communication in order to strengthen relationships. A senior manager working for the

Chinese subsidiary of a US MNC emphasized that “if you facilitate face-to-face meetings, then electronic tools can be effective. But you need to make sure there’s more relationship focus. Face-to-face time is most important for collaborative work.” There is a clear need for visits and on site meetings for increased interaction and communication between geographically distributed team members.

Although face-to-face communication is viewed as the most critical factor in facilitating knowledge-sharing and collaboration, many of the local study participants also emphasized the importance of having an effective **technology platform with communication tools**. Before or after in person meetings, there is awareness that communication needs to be sustained through specific communication technologies. Several tools were suggested such as video conferencing, Google documents, wikis, and web portals. A regional manager working for the Singapore office of a US MNC felt the organization had progressed well in ensuring sufficient technologies, noting that “we do a good job of knowledge-sharing and leveraging SharePoint (web portal) where we can communicate about programs and global best practices, there’s a platform for sharing our own webcasts, and we have an awards program.” In addition, several of the local study participants suggested that a comprehensive knowledge-sharing platform should be considered for knowledge-sharing as well as storage such as a market intelligence database focused on capturing local market knowledge. As senior manager working for the Chinese subsidiary of a US MNC expressed a need for “having a market intelligence database and managers responsible for knowledge... There’s an initiative where we need to improve capturing local market knowledge in what we have done with client work.” Thus, there is a strong interest in identifying and applying communication technologies that are dedicated to and support knowledge-sharing practices.

In addition to face-to-face communication and technology tools, there appears to be the need for an effective organizational **innovation structure and process**. A majority of the local study participants noted the lack of a process and resources for conceiving and delivering new concepts on global and local levels. A senior product manager working for the Chinese subsidiary of a European MNC expressed that “there is no process, we need to try and explore and we need direction... moving from creation to execution is chaotic at the moment.” There were several demands for facilitating knowledge-sharing through a simplified structure and easier processes. A formal internal process and structure for innovation showed strong interest among study participants. A senior product manager working for the Chinese subsidiary of a European MNC explained that “the process topic is

complex and difficult with different interests. We are also in a fast-growing market, the company is experiencing great growth and a need for more structure and more processes. We need to efficiently manage growth.” There were also mentions of elements that should be considered within this process such as knowledge experts for managing, sharing, and communicating knowledge within teams and the organization as well as individual learning through knowledge-sharing activities.

The opportunity to increase collaboration and creativity requires **resources dedicated to innovation and knowledge-sharing** according to local study participants. There needs to be more focus on idea generation and the freedom to create and transfer knowledge. As noted by a senior manager responsible for the Asia region: “Innovative and entrepreneurial people need to be nurtured. If the company can be set up to develop ideas with the rigor of a large company and the agility of a small company while preserving rewards, then we could create the ideal environment.” Several study participants noted the challenge of not having an adequate budget or the financial resources to execute on local market initiatives. In addition, several participants noted the lack of time and dedication for exchange and collaboration that can result in new ideas and opportunities. A local product manager working for the Chinese subsidiary of a European MNC emphasized that “top management needs to show more attention and care with dedicated resources and a budget. When you give freedom and budget and time, then people thrive.” There needs to be more openness and freedom as well as the appropriate resources for creating and sharing knowledge.

In reviewing organizational resources that could help facilitate knowledge-sharing and contribution from local team members, a final comparison was made between the views of the local managers in Asia and those of the global project leaders based in HQ in order to confirm agreement with specific resources. The key themes identified in both groups are shown in the figure. Both groups expressed a need for a **collaborative space** where global and local team members can meet to share their ideas and knowledge concerning local market opportunities. In addressing knowledge-sharing practices, both groups emphasized increased **face-to-face interaction and communication** with an interest for more travel and visits between the HQ location and local subsidiaries in Asia in order to improve cultural understanding and local market knowledge. In addition, the global project leaders acknowledge a need to improve local engagement through increased involvement of local team members in the global innovation planning process linked to new product introductions. In addition to an emphasis on live collaboration and interaction, both groups agreed upon the need for a dedicated

technology platform for ideation and knowledge-sharing as well as complementary technology tools that can facilitate team and organizational practices. The local study participants emphasized the need for a dedicated innovation structure to guide the process from concept to execution within their organizations. Finally, both groups agreed upon the need for **dedicated organizational resources to innovation, learning and knowledge-sharing**. There were many references to enabling innovation through more time, space, and freedom for the global team members to create new ideas and concepts that respond to international market opportunities.

C. Results of explanatory phase with local study participants

In order to validate the findings from the study with global project leaders, a second round of interviews were pursued with the regional and local managers based in subsidiaries located in Asia - China, Singapore, India, and Japan. The intent of the explanatory study with local managers is to validate the findings from the explanatory phase with global project leaders. A comparison of results from both studies should further help identify and confirm organizational mechanisms as well as causal mechanisms that influence knowledge-sharing for local team members. The explanatory study is conducted at the individual or managerial level in order to examine interactions between the local team managers based in subsidiaries in Asia and the global project leader based in HQ. The intent is to identify interactions concerning critical incidents and potential resolutions in examining the perceived challenges and motivations of local team managers in facilitating knowledge-sharing during the planning phase of the front-end innovation process.

In supporting the study with global project leaders, the local managers indicated the necessity for balancing both radical and incremental innovation for ensuring market exploration as well as exploitation – an even greater majority (83%) noted that new product introductions represent an integration of radical and incremental innovation. In meeting innovation needs of local customers and markets in China as well as throughout Asia, local managers indicated that centralization is somewhat stronger than decentralization where product and design tends to be centralized and marketing and sales tend to be decentralized. The first hypothesis (H1) is partially supported since local study participants indicated a movement towards decentralization for front end innovation activities in order to respond to local market needs.

H1: A product innovation strategy that is focused on decentralization and local market adaptation is positively associated with increased cross-cultural team collaboration.

In exploring the innovation climate from the local perspective, participants were asked similar questions to the global study participants in order to compare responses. The findings from the local study participants are comparable to the findings from the global study participants in supporting a global innovation climate through market responsiveness, entrepreneurial initiative, global team transparency, and execution efficiency. However, the local managers in Asia showed a stronger emphasis on the need for local market responsiveness and participation in the innovation process through initiative and creativity. The findings from the drivers of innovation climate in turn support the need for a global innovation culture with the values of cultural empathy, creativity, and collaboration as stated in the second hypothesis (H2).

H2: The cultivation of a global innovation culture with an emphasis on cultural empathy, knowledge-sharing, and creativity is positively associated with increased cross-cultural team collaboration.

In reviewing the kind of team leadership style preferred by the local management team in Asia, the study participants emphasized the same qualities found within the study with global project leaders, specifically the four styles of directive leadership, inclusive leadership, communicative leadership, and empowering leadership. In view of Asian management practices, the competencies related to directive and inclusive leadership received special emphasis for authoritative and firm leadership while ensuring relationship-building and collaboration for the front-end innovation process. The identified leadership styles strongly support the third hypothesis (H3).

H3: A project leader with the skills to facilitate cultural empathy, communication, and creativity is positively associated with increased cross-cultural team collaboration.

In order to determine the kind of knowledge-sharing structure and communication tools that are most effective for facilitating collaboration for team members located in Asia, local study participants were questioned about the organizational resources (systems and tools) that could help facilitate knowledge-sharing and contribution from local team members. When addressing organizational resources, the local study participants emphasized the need for a collaborative space, increased interaction and communication, a technology platform and tools for knowledge-sharing, an innovation structure and process, and organizational resources dedicated to innovation and knowledge-sharing.

In reviewing organizational resources that could facilitate knowledge-sharing from local team members, a final comparison was made between the views of the local managers in Asia and those of the global project leaders based in HQ in order to confirm agreement with specific resources. Both groups expressed the need for a collaborative space where global and local team members can meet to share their ideas and knowledge concerning local market opportunities. In addressing knowledge-sharing practices, both groups emphasized increased face-to-face interaction and communication with an interest for more travel and visits between the HQ location and local subsidiaries in Asia in order to improve cultural understanding and local market knowledge. These views strongly support hypothesis H5. In addition, the global project leaders acknowledge a need to improve local engagement through increased involvement of local team members in the global innovation planning process linked to new product introductions. The views of both groups show that a knowledge-sharing structure with increased communication for local team members strongly supports hypothesis H4a.

H4a: A knowledge-sharing structure that increases communication at the subsidiary level is positively associated with increased cross-cultural team collaboration.

H5: Formal and informal communication vehicles that incorporate face-to-face team interactions are more positively related to cross-cultural collaboration during the front end innovation process than formal and informal communication vehicles that incorporate virtual and electronic team interactions.

In addition to an emphasis on live collaboration and interaction, both groups agreed upon the need for a dedicated technology platform for ideation and knowledge-sharing as well as complementary technology tools that can facilitate team and organizational practices. The local study participants emphasized the need for a dedicated structure to guide the innovation and collaboration process from concept to execution. Finally, both groups agreed upon the need for dedicated organizational resources to innovation, learning and knowledge-sharing. There were many references to enabling innovation through more time, space, and freedom for global team members to create new ideas and concepts that respond to international market opportunities. These views show strong support for hypothesis H4b in emphasizing a knowledge-sharing structure that facilitates communication throughout the front end innovation process.

H4b: A knowledge-sharing structure that facilitates communication throughout the front end innovation process, from conceptualization to planning to market introduction, contributes positively to cross-cultural team collaboration.

The views of the local teams provided valuable insights to particular cultural values and behaviors that can influence knowledge-sharing in Asia and especially in China. In examining Chinese knowledge-sharing practices and cultural differences, it became clear that **power, conflict avoidance, ownership, and communication styles** can serve as challenges for the project leader and the geographically distributed team. These cultural practices support the cultural knowledge-sharing factors identified in the global study – **structure, power, openness, and initiative**. As discussed in the section on cross-cultural knowledge-sharing practices with global project leaders, Asian knowledge-sharing practices in general offer strengths in the knowledge-sharing structure for achieving effective execution, however there are challenges to the degree of openness and initiative taken by team members due to the role of management power in the organizational hierarchy. Project leaders and team members need to consider differences in communication as well as conflict management which supports hypothesis H4c. However, the findings indicate that cultural differences in the knowledge-sharing structure, management power, and initiative should also be considered. The local study showed that traditional views of competition, knowledge as power, and saving face can be changed through specific leadership practices such as cultural empathy, collaboration, empowerment, and a common goal for achieving team and organizational success.

H4c: Cultural understanding in the communication of ideas and the management of conflict during the front-end innovation process is positively associated with the project leader's ability to increase cross-cultural team collaboration.

The need for engagement of local team members in the front-end innovation process is further emphasized by the lack of participation and project collaboration for conceiving and introducing new products. As indicated by the global and local study participants, the study results showed that a majority of local teams are only involved in the execution phase, some were involved in the validation phase (which comprises global concepts from HQ where adaptation is sought as well as local concepts proposed), and a minority is involved in the ideation and planning phases for new concepts intended for international markets.

When examining critical knowledge required for the planning and execution phases of the global launch project, the planning phase is identified as the critical point of interaction between global project leaders and management teams in HQ and the local teams based in subsidiaries. Local market, customer, and product knowledge is sought by the global project leader where customer validation, resource allocation, and local product feature needs are critical for planning, in addition to customer, competitive, and market knowledge noted by

local team members. The planning phase relies upon knowledge of local market requirements to determine the level of standardization or adaptation required for a new concept. Knowledge concerning customer preferences, local user practices, and local market trends are essential during this phase where the local manager can provide insights to customers and markets.

In order to understand the particular knowledge-sharing challenges from the local perspective, the team managers for China and the Asia region were questioned about the greatest challenges to knowledge-sharing and contribution from local team members based in subsidiaries to the management team in HQ. The findings focused on the planning phase and included five main areas that experience challenges: **Communication and knowledge-sharing practices, project process for product innovation, local market understanding by HQ senior management team, local involvement in planning process, and availability of resources.** Views of local study participants that differed from those of the global project leaders were focused on the **lack of local involvement in the planning process, lack of involvement in the planning process and insufficient marketing and sales resources.**

The lack of a knowledge-sharing structure and effective communication processes and the link to an efficient project process for front end innovation are similar to the challenges found in the study with global project leaders. However, the lack of local market understanding by senior managers based in HQ is perceived by local study participants as a challenge to front end innovation since a lack of cultural and market awareness results in the creation and proposal of customer solutions that do not meet local market requirements. Furthermore, the lack of local involvement in the planning phase does not provide the local team members with an opportunity to share their knowledge and contribute to the creation and validation of concepts that respond to local market opportunities. This finding supports hypothesis H6a and partially supports hypothesis H7.

H7: Project performance as measured by improved time to market, product localization, customer demand, and local sales results is positively associated with increased knowledge-sharing and collaboration for cross-cultural teams involved in the front-end innovation process.

The main point of conflict that exists between the global project leader based in HQ and the local team members is the perception and understanding of global and local team knowledge in conceiving and bringing new products to market. The project collaboration process primarily involves centralized planning at HQ driven by the global project leader and decentralized execution driven by local team members in key markets. The global project

leader in HQ is driving centralized planning, ideation, and validation processes without or with limited participation by local team members. The lack of knowledge-sharing during the conception and planning process prevents or limits local team members from contributing their cultural and functional knowledge about local customer and market requirements. This strategy results in new concepts and products that are poorly adapted to local market and customer needs.

The local team members usually do not have the opportunity to contribute to the creation of a new product solution during the planning phase which could result in a solution that meets local customer needs. Instead, the local team is expected to sell a global solution with limited or no adaptation that does not meet local customer needs. The global strategy and top-down approach to product innovation contributes to reduced interest and motivation to marketing and selling the new product as well as reduced motivation to contribute to the creation and implementation of new concepts for future product introductions. In view of the tension between global strategy and local market execution, the need for a local strategy and bottom-up approach focused on decentralization and local market adaptation in hypothesis H1 needs to be further evaluated concerning motivation of local teams.

In order to further explore the opportunities for gaining interest and engagement from local team members, the local study participants in Asia were asked how they feel local teams would be more motivated to increase knowledge-sharing and contribution during the global planning and execution phases. The intent of the researcher is to compare their responses with those of the study participants involving global project leaders based in HQ in order to compare and validate the motivations of local teams in China and Asia. The findings focused on the front-end innovation process and identified five main themes that influence motivation – **recognition, empowerment, interaction, open communication, and organizational support.**

In comparing the themes identified by global project leaders, recognition and empowerment are aligned with both groups in their importance for increased knowledge-sharing. The findings show that recognition and empowerment are the most critical factors for facilitating knowledge-sharing during the front end innovation process. Both studies emphasized the importance of recognizing the local team member's knowledge, talent, and expertise for contributing to front end innovation. In addition, empowerment provides the sense of ownership the innovation process that needs to be established in the early phases of planning, ideation, and validation. These findings strongly support hypothesis H6a concerning

the need to share knowledge during the planning phase. Global project leaders emphasized responsiveness while local team managers in Asia emphasized open communication which addresses similar motivations. Global project leaders refer to responsiveness and more transparency and feedback concerning initiatives and requests, whereas local team managers refer to transparency and more knowledge-sharing from global project leaders and management teams in HQ.

For team collaboration, global project leaders identified engagement as team members who are actively involved in the innovation process, whereas local team managers identified the related theme of interaction with frequent visits and opportunities for face-to-face interaction during the front-end innovation process. Finally, the two groups appeared to differ slightly on the topic of organizational resources and support where the global project leaders identified organizational environment and structure and mobility as important areas for improving the knowledge-sharing process. While the local study participants identified the role of organizational support and funding for local product, marketing, and sales initiatives, they also expressed the need for more travel and interactions between geographically distributed team members in order to effectively facilitate open communication.

In order to explore the key elements of trust-building for local team members involved in the global launch project, the local team managers were asked how trust could be improved for the local team. The local study participants placed clear emphasis on the importance of a **cross-cultural mindset** in building trust amongst local teams which is an element that is missing from the themes that emerged from the global project leaders. A cross-cultural mindset is viewed as the ability to gain knowledge and understanding of the cultural context and practices for building trust. While the global study theme of social interaction was not identified in the local study, the two themes of **open communication** and **act and deliver on promises** are shared between the global and local study participants. Open communication is the ability to drive transparency and conduct open and honest dialogue with local team members. It is important to provide sufficient knowledge for local team members to understand the context of the global launch project and how they can contribute to the front end innovation process. Moreover, the ability to act and deliver on promises appears to be the most critical element to building trust for local team members since it is linked to project collaboration during the front-end innovation process. It is the ability of the project leader to recognize, respond, and deliver on requests and initiatives in order to facilitate collaboration with local team members. These findings strongly support hypothesis H6b.

H6b: Trust-building and team engagement during the planning phase are positively associated with the project leader's ability to increase cross-cultural team collaboration.

In order to better understand the motivations and challenges that can influence knowledge-sharing and contribution for local team members during the innovation process, a comparison was made between the motivations, challenges, and critical incidents indicated by the local study participants as well as the global study participants. This evaluation resulted in four distinct project collaboration roles that are based upon the descriptions of global project leaders and local team managers concerning challenges and motivations for local team members. The four roles identified include: **Implementer**, **Contributor**, **Collaborator** and **Intrapreneur**. These roles were then mapped to the organizational innovation strategy in order to evaluate the emphasis on global standardization (global market exploration and exploitation) versus local responsiveness (local market exploration and exploitation). This evaluation resulted in a knowledge-sharing structure which identifies particular roles served by local team members in relation to the front end innovation process. The Implementer role is identified with an emphasis on execution and support of a global strategy due to top-down planning where there is no involvement in the front-end innovation process. This role appears to create challenges for knowledge-sharing and collaboration where there is a lack of motivation for local team members. Supporting a global to local strategy, the contributor is expected to provide more feedback and suggestions for adapting global concepts to local markets. While there is no opportunity for ideation and initiative, there is more motivation linked to active participation in knowledge-sharing.

The roles of collaborator and intrapreneur are focused on a local to global strategy where there appear to be higher motivations for knowledge-sharing and collaboration. The collaborator drives local to global strategy by sharing local market knowledge and understanding how to integrate global and local market opportunities. The intrapreneur initiates and proposes new ideas and concepts that contribute to local market strategies as well as global business objectives. In view of this evaluation and identification of local team roles in the front-end innovation process, hypotheses H1 and H7 are partially supported in focusing on a local strategy and facilitating increased cross-cultural collaboration. In order to find stronger support for these hypotheses, it is necessary to test them through explanation by organizational and causal mechanisms.

H7: Project performance as measured by improved time to market, product localization, customer demand, and local sales results is positively associated with increased knowledge-sharing and collaboration for cross-cultural teams involved in the front-end innovation process.

D. The cross-cultural collaboration framework and causal mechanisms

The results from the explanatory phase with global and local study participants provided an in depth view of organizational mechanisms and their influence upon the ability of the global project leader to facilitate cross-cultural collaboration with geographically distributed teams for the front end innovation process. The findings allowed further evaluation and testing of the hypotheses developed from the exploratory phase. These findings led to the identification of the components of causal mechanisms that influence knowledge-sharing and collaboration between the global project leader and the cross-cultural team responsible for the global product launch project. A cross-cultural collaboration framework has been developed in order to show organizational and causal mechanisms that determine the motivation for knowledge-sharing and collaboration for front end innovation.

The cross-cultural collaboration framework presents five organizational mechanisms – innovation strategy, organizational culture, leadership competency, knowledge-sharing structure, and communication vehicles. Causal mechanisms are presented and linked to each of these organizational mechanisms as follows:

Innovation strategy

A global to local strategy with centralized planning.

A local to global strategy with decentralized planning.

Organizational culture and climate

Organizational culture

A focus on cross-cultural empathy through global teamwork and cultural diversity.

A focus on creativity through global ideation, risk-taking, and innovative thinking.

A focus on collaboration through knowledge-sharing and transparency.

Organizational climate

Market responsiveness with a customer-driven focus through adaptability and agility.

Entrepreneurial initiative with the ability to take risks and embrace new ideas.

Global team transparency with the ability to share and network across functions and cultures.

Execution efficiency through a structured and disciplined process.

Leadership competency

Directive leadership through an authoritative approach and decisive process.

Inclusive leadership through a cross-cultural mindset, collaboration, and relationship-building.

Communicative leadership through consistent communication and active listening.

Empowering leadership through a common vision, engagement, and inspiration for new ideas.

Knowledge-sharing structure

Implementer where local team member executes global strategy from HQ team.

Contributor where local team member supports and validates global strategy from HQ team.

Collaborator where local team member actively contributes to local and global strategies.

Intrapreneur where local team member initiates local concepts with global collaboration.

Communication vehicles

Face-to-face communication through visits, meetings, and innovation events.

Virtual communication through web and video communication technologies and a dedicated knowledge-sharing platform.

Integrated communication through live events and communication technologies.

Cross-cultural Collaboration Framework

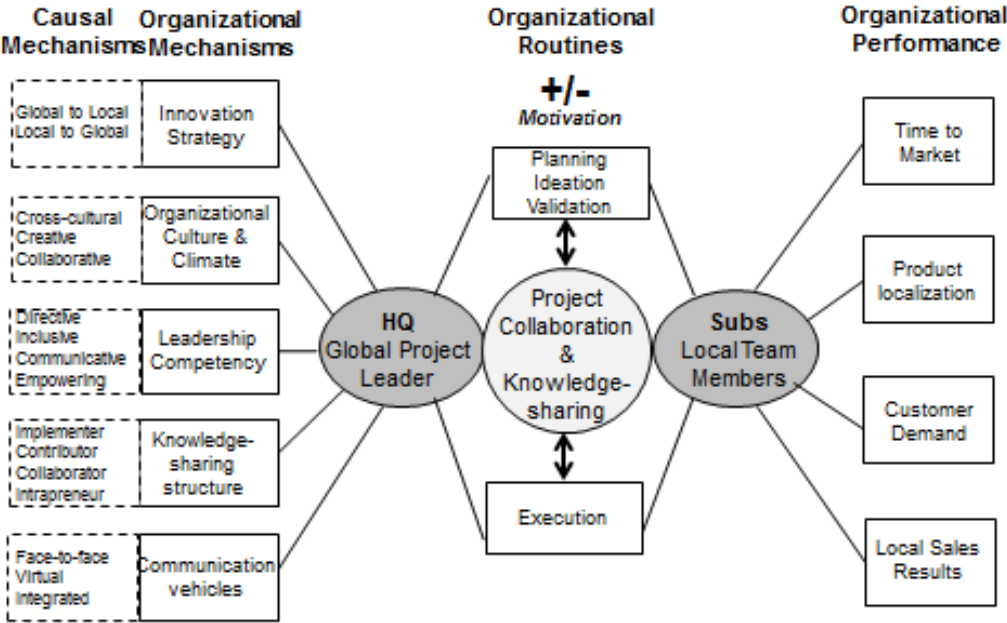


Figure 31. Cross-cultural collaboration framework

In addition to identifying organizational and causal mechanisms, the cross-cultural collaboration model shows the organizational routines of project collaboration and the key phases of planning, ideation, validation, and execution that are linked to front-end innovation and the global launch project. During the explanatory research phase, these routines allowed evaluation and identification of the organizational and causal mechanisms that produce specific outcomes linked to project performance as identified by time to market, product localization, customer demand, and local sales results. In the following section, I will examine the organizational mechanisms that show how their orchestrated functioning activates causal mechanisms linked to the outcome of project performance.

1. Critical incidents and knowledge governance mechanisms

In applying the cross-cultural collaboration framework, the organizational mechanisms and relevant causal mechanisms are identified and linked to critical incidents that were shared by the study participants concerning project collaboration for the global product launch. As noted in the methodology section, explanation by mechanisms can provide a key explanatory rationale for processual research design in clarifying causal ambiguity and how the process works through activation of mechanisms that interdependently generate outcome (Pajunen 2006). Since the intent is to identify mechanisms that influence knowledge-sharing, theorizing will be applied to knowledge governance mechanisms (Foss et al. 2010) which allow for an examination of mechanisms and structures at the organizational or macro level that influence behaviors of knowledge-sharing at the micro or individual level. By identifying how particular knowledge governance mechanisms influence the knowledge-sharing behavior of global project leaders and their interactions with cross-cultural team members, the researcher intends to further evaluate and test hypotheses concerning the relationships between innovation strategy, cross-cultural collaboration, and project performance for the front-end innovation process concerning international markets.

The following section presents five cases involving global project leaders and local team managers from five different MNCs. Critical incidents that occur during the front end innovation process are presented as follows: 1) the market situation, 2) the cause and outcome of the incident, 3) resolution, and 4) evaluation of causal mechanisms.

CASE A – Global to Local Strategy/Implementer

This MNC is one of the world's leading suppliers of software for information management with HQ based in the US. It has profited from the dynamic growth of the Internet with products serving organizational needs for effective data and information management through internet-enabled software solutions. Its product range primarily serves the corporate market as well as small businesses. The organization has enjoyed high growth and expansion into new markets through an aggressive acquisition strategy that has demanded continuous development and effective global launch execution of a broad product offering. It is facing heavy competition with five leading global MNCs in various product categories. The organization's global innovation culture is described as collaborative with an innovation climate that is described as a combination of market responsiveness, global team transparency and execution efficiency. Front-end innovation activities are primarily centralized with an emphasis on incremental innovation. The challenge is to maintain competitiveness while ensuring quick execution into key geographic markets around the world.

Challenge/Incident

The broad and numerous product offerings added to the challenges of conceiving and introducing new products into international markets. In order to integrate operations and maximize execution efficiency the organization focused on a global strategy with centralized ideation, planning, and validation. This resulted in limited interaction and communication with local team members. Although the organization emphasized collaboration through quarterly or annual planning meetings, the management teams in HQ and the local teams based in subsidiaries were not aligned and brought different expectations to new product initiatives. The lack of communication and trust led to conflicts and disagreements within the cross-cultural and geographically distributed teams.

Outcome

Due to the lack of an integrated knowledge-sharing and communication process, the global project leader and management teams in HQ have experienced challenges in obtaining local market requirements and accessing market knowledge from local team members in Europe and Asia. There is frustration for local team members due to the lack of visibility in the global MNC network which creates a disconnection from the front end innovation process. A local manager in Asia noted that "it's top down planning which comes from HQ for new product ideas. There's not much excitement in field sales... the company does not

allow involvement in the planning stage, it's very top down.” The local team manager emphasized the lack of product adaptation for local customers and the lack of resources for marketing and selling new concepts as well as the challenge of timely product introductions for local markets.

Resolution

The researcher did not identify a clear resolution, however, the research shows that global project leaders interviewed have expressed the need for a more structured process for knowledge-sharing in order to gather information and input from local team members. As noted by one of the global project leaders: “It’s important that local team members are part of the launch planning process in order to shape and impact the results. If they’re involved in the planning and execution phases, they have a better shot of meeting customer requirements and getting sales results.” The regional manager in Asia expressed a need for more interaction: “The corporate team is a closed circle and doesn’t interact well with local teams. They need to send more local teams to HQ or send HQ team to local subsidiaries.”

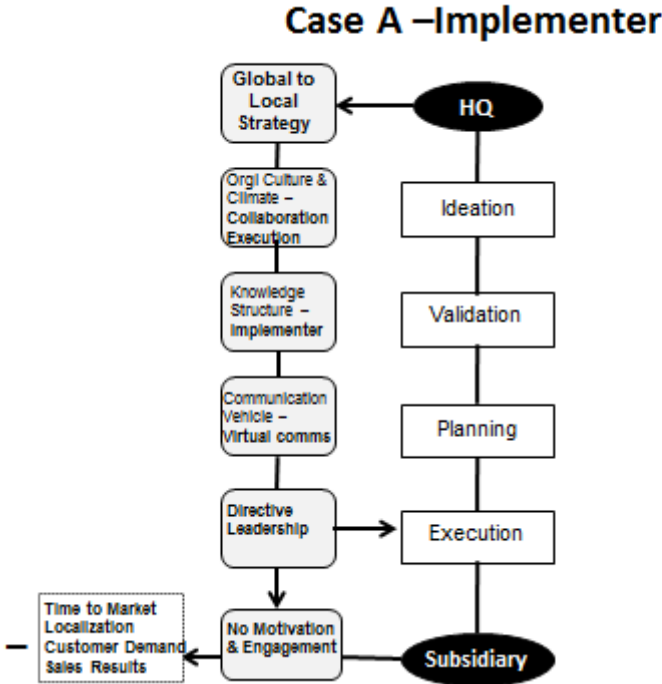


Figure 32. Case of global to local strategy and implementer role

Analysis of knowledge governance mechanisms/Implementer

The global to local approach was driven by the organizational climate focus on execution efficiency and market responsiveness and did not make use of the organizational culture values of collaboration, creativity, and cultural empathy. Since a global strategy was

directed from HQ to the subsidiary, the knowledge-sharing structure placed the local teams in the implementer role. There was no recognition of their cultural and market knowledge and no responsiveness to local customer needs. Although the organization used annual planning meetings, there was limited participation and the focus centered on contribution to the global strategy set by the HQ team. In addition, there was inconsistent communication that primarily relied on the use of virtual communications which further reduced the lack of trust and receptivity for contributing and sharing knowledge for the front end innovation process in launching the new product concept. These causal mechanisms resulted in a directive leadership role for the global project leaders who provided authority and direction for execution. Final outcome: Delayed time to market, limited concept localization and variable customer demand, variable local sales results depending on the levels of product adaptation.

CASE B – Global to Local Strategy/Contributor

In this case, the MNC is one of the world's leading automotive manufacturers with HQ based in Europe. It has producing, assembly, service and sales subsidiaries throughout the world. Its product range primarily serves the consumer market through broad automobile range. The organization has enjoyed consistent growth and expansion in mature and emerging markets. In order to maintain its solid brand reputation for quality and high performance, it is facing pressure to integrate both radical and incremental innovation technologies in its automobile range. Like many automotive makers, the rapid evolution of new technologies for car accessories such as navigation systems, smart phones, and MP3 players has posed a challenge due to the longer lifecycle of developing and manufacturing automobiles. Thus, the company needs to ensure effective planning and timing for new product introductions in order to respond to customer expectations for both automotive performance and state of the art technologies that enhance the driving experience. It is facing increasing demand from China which is one of its key growth markets. The organization's global innovation culture is described as collaborative and creative with an innovation climate that is described as a combination of market responsiveness and execution efficiency. Front-end innovation activities are primarily centralized with an emphasis on radical innovation. The challenge is to maintain product excellence while ensuring responsiveness and efficient execution into key growth markets such as China.

Challenge/Incident

Due to the high growth rate experienced in the Chinese market, local team members expect to take a more participatory role in the front end innovation process. Local customers are also making more requests and there is demand for more adaptation to Chinese market needs. This requires more interaction with the management team in HQ. The front-end innovation process for new product introductions is driven by a global product concept with some local adaptation depending on input from local teams. A senior manager based in HQ explained that “we have discussions with our markets but our HQ team leads the effort for front-end innovation... we discuss product development and check vehicle requirements for local needs.” There is less interaction between HQ and the local team in China due to the sensitive nature of new concept planning and the centralized focus of ideation, validation, and planning activities. However, it is also dependent on the local team for market and operations information. The lack of knowledge-sharing contributes to less trust and relationship-building.

Outcome

Similar to discoveries from interviews at other foreign subsidiaries in China, the organization has experienced some turnover since the local team does not have the same identification with the company culture and the brand. More relationship-building and engagement is needed with local team members where the company is increasing socialization and group events. There is also the cultural understanding needed in working with Chinese team members since there is less risk-taking and conflict avoidance for ideation. Knowledge-sharing and planning practices have been difficult due to the HQ management team’s focus on long-term planning and organizational efficiency where local team members have placed short-term as priority and focus on effective execution. Whereas the HQ team relied on email and electronic communication, they found that Chinese team members responded much better to face-to-face communication.

Resolution

The researcher did not find a clear resolution during the study, however the study participants indicated a strong interest in increasing collaboration and knowledge-sharing with local team members in China. “We need a higher exchange with people working in the local subsidiaries and HQ. We need more communication flow from our local office to HQ and we need to go to HQ to share the Chinese culture and create an understanding of local market needs and practices,” emphasized the local team manager.

Analysis of knowledge governance mechanisms/Contributor to Collaborator

In this case, the HQ management team applies a global to local strategy with a focus on local participation for the planning and execution phases. The organizational culture values of collaboration and execution are applied with an innovation climate focused on market responsiveness and execution efficiency. Since the local team is involved in the planning and validation of the global strategy, they serve the role of contributors in the knowledge-sharing structure. Due to the cultural communication needs of the Chinese team members, the company has moved from virtual to a combination of virtual and face-to-face communication. This has required the global project leader to use a directive and inclusive leadership style. The local team members are motivated to execute on global strategy, however there is still an interest to increase engagement in the planning, ideation, and validation phases. Final Outcome: Variable time to market, limited concept localization yet strong execution, growing customer demand for localization, strong sales potential.

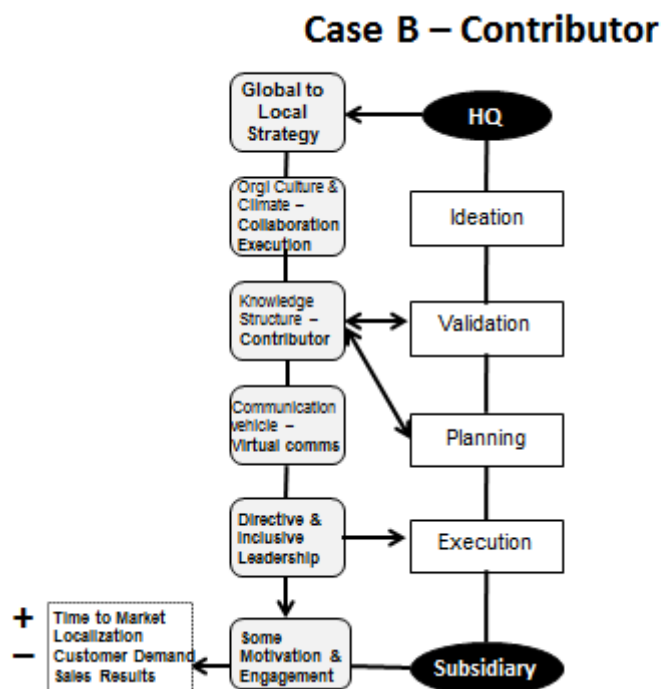


Figure 33. Case of global to local strategy and contributor role

CASE C – Global to Local Strategy/Implementer to Contributor

This organization is a US MNC that is a global market leader in networking equipment. It has profited from the dynamic growth of the Internet with products serving the increased need to manage bandwidth and internet traffic. Its product range primarily serves the corporate market as well as small businesses and a smaller market for home users. The organization has expanded into new markets through acquisitions as well as the development and introduction of new product lines. Similar to several MNCs during the last, few years, the organization has experienced challenges due to the economic downturn and increased competition in the key markets of North America, Europe, and Asia. It has been forced to reduce expenses as well as reduce the workforce. The organization's global innovation culture is described as collaborative with an innovation climate that is described as focused on market responsiveness and execution efficiency. Front-end innovation activities are primarily centralized with a focus on both radical and incremental innovation. The challenge is to ensure quick execution and effective adaptation to key geographic markets around the world.

Challenge/Incident

The global product leadership team sent global product concepts with a request for local teams to execute and introduce the new concepts into local markets. The launch information was only delivered through virtual communication technologies without face-to-face meetings which further reduced the trust and interaction needed for communication and relationship-building. Since the local teams were not involved in planning nor consulted about the new product concepts, there was a lot of frustration due to the misalignment of local market needs and the global product concepts designed at HQ. The local teams felt overwhelmed and expressed that HQ project leaders presented global concepts and did not take into account the resources needed in the local market. They were further challenged by the lack of their involvement in planning efforts while being measured on the execution and sales of new products.

Outcome

Since the local teams were not consulted and they did not feel the global project leader and management team at HQ had considered the necessary elements for local execution, the collaboration process collapsed. As noted by the project leader "the field people do their own thing, create a variation, or they feel it is not possible to execute so they may ignore the offer and make their own variation." The local teams decided to focus on local product sales

priorities which resulted in the abandonment of the new product concept. This action, in turn, resulted in an indefinite delay for a timely market introduction, the lack of a local product concept to increase customer demand, and the loss of local sales and market opportunities.

Resolution

The global project leader realized the need for a more inclusive approach by involving the local team members during the planning phase. A global planning template was used to identify requirements and then have a dialogue with local teams to show how the product concept could create a local market opportunity. There was increased travel to visit local team members and to hold joint planning sessions in order to align global business objectives with local market opportunities, including a marketing plan review and the prioritization of resource and budget allocation. As emphasized by the global project leader: “Before we go to the execution phase, they (local team) need to be part of the planning phase... being pulled in on execution only is not good for project success.”

Analysis of knowledge governance mechanisms

Global to local strategy - Implementer

As shown in figure 34, the project leadership initially decided to use a global to local innovation strategy which resulted in market failure where the solution was not implemented by the local team (grey column). The global to local approach was driven by the organizational climate focus on execution efficiency and did not make use of the organizational culture values of collaboration, creativity, and cultural empathy. Since information was only directed from HQ to the subsidiary, the knowledge structure placed the local teams in the implementer role. There was no recognition of their cultural and market knowledge and no responsiveness to local customer needs. The use of virtual communications further reduced the lack of trust and receptivity for implementing the new product concept. These causal mechanisms resulted in a directive leadership role for the global project leader who could only provide authority and direction for execution. The lack of involvement in the planning and front-end innovation activities and the misalignment of the global concept with local market opportunities resulted in the local teams’ lack of motivation and engagement to launch the new concept in the local market. The final outcome: Delayed or no time to market, lack of a localized concept and customer demand, and the loss of local sales and market opportunities.

Local to global strategy - Collaborator

In resolving the failed collaboration, the project leader and management teams in HQ developed a local to global innovation strategy where joint planning took place with the local team at the subsidiary level. The organizational culture values of collaboration and cultural empathy were applied in creating a more open and transparent environment. Since the project leader and management in HQ invited the local teams to participate in planning, local team members acted in a collaborator role to participate and shape ideation, planning, and validation for the global concept. This helped shape a more inclusive leadership role for the project leader which resulted in increased motivation and engagement for local team members during the front-end innovation process. The final outcome: Time to market, localized product, increased customer demand, and motivation to launch and sell the new concept.

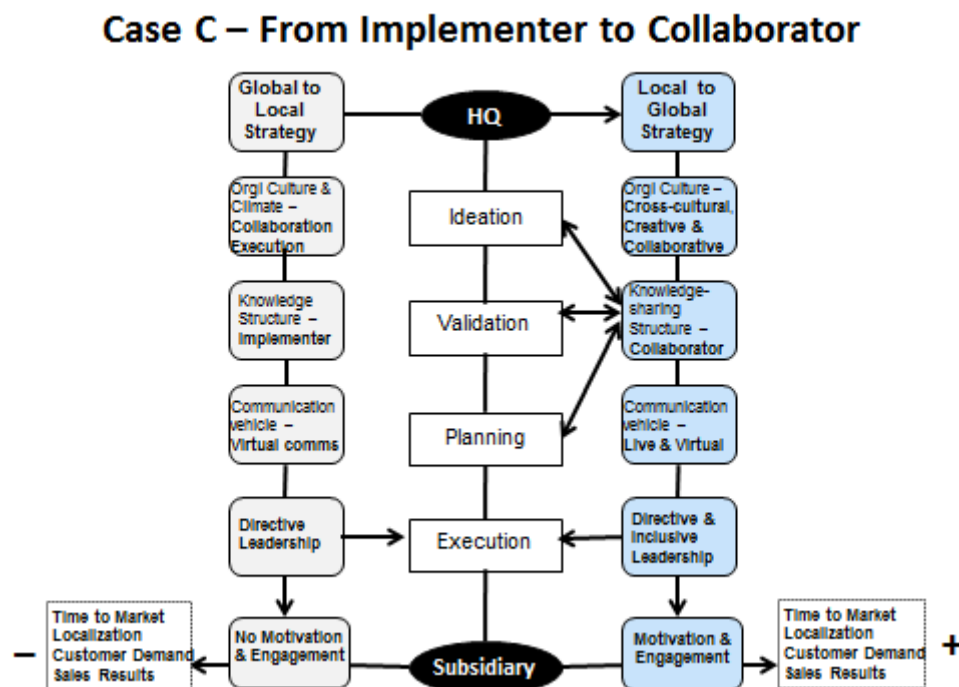


Figure 34. Case of local to global strategy/Implementer to Collaborator

CASE D- Local to Global Strategy/Contributor to Collaborator

This European MNC is a leading global manufacturer of mobile devices that has used innovation as a key driver for market growth. It offers a broad product portfolio to business and consumer with global and local solutions for mature and emerging markets. The organization's innovation focus is the development and introduction of devices that respond to customer needs for interconnection and design. Since it faces a few powerful competitors and a market with rapid changes in technologies and user preferences, it has experienced some challenges concerning product innovation and responsiveness to consumers in some of its key international markets. In order to remain competitive and innovative, this MNC welcomed new leadership and major organizational changes designed to create a more collaborative and creative culture. The organization's global innovation culture corresponds with the values found in the study – cultural empathy and an appreciation for cultural diversity, collaboration, and creativity. The innovation climate has a focus on global team transparency and execution efficiency. Front-end innovation activities are primarily centralized with a focus on both radical and incremental innovation. The challenge is to increase local market innovations and timely product introductions to key geographic markets around the world.

Challenge/Incident

While competitors were increasing their international market share for new devices and technologies, the company experienced several challenges in maintaining their market lead due to product innovation and responsiveness to consumers in some of its key international markets. While the company enjoyed successful growth and market success in the past, its focus on execution efficiency became a weakness due to complex decision-making and lack of accountability for local teams. There were challenges in accessing up-to-date information on customers, sales, and relevant market understanding from the local teams. There was also a concern that an execution focus was hindering the ability to encourage and manage creativity and innovation within the organization.

Outcome

The organization found the internal innovation process did not effectively respond to local market opportunities. Although the organization had achieved success in emerging markets through local adaptation of new mobile concepts, the focus on meeting sales goals and business objectives had created a culture of collaboration and execution for global

initiatives and business results. The organizational matrix structure with complex reporting and decision processes also complicated the ability to openly communicate and share knowledge. There was the lack of a dedicated process and sufficient time for geographically distributed team members to propose and share new ideas and initiatives. The local teams were not motivated to contribute since the management teams in HQ did not show interest for local proposals and prioritized the execution of global product initiatives.

Resolution

The company is undergoing rapid organizational change to be more responsive to local markets in order to meet needs for innovation and competitiveness. Rather than emphasizing its structured and disciplined approach, this MNC is focusing on collaboration and transparency in order to improve ownership and accountability for team members. This requires more openness to new ideas and new perspectives within geographically distributed teams for increased knowledge-sharing. The company now ensures that local team members participate in all of the front-end innovation phases (ideation, validation, planning, and execution/marketing). A global project leader noted that “knowledge-sharing is part of our new initiatives in gaining access to local markets.” The focus is now the acceleration of new ideas through increased communication and connection to local markets. The management team in the Chinese subsidiary appeared pleased with the change, stating that “We need to share and let local teams feel the responsibility. Accountability is welcomed. We are now asking for more and receiving more.”

Analysis of knowledge governance mechanisms

Global to local strategy – contributor

The organization had experienced past market success through a global to local strategy where concept development and strategic decisions for front end innovation were centralized at HQ. With an organizational culture focused on collaboration and execution, global team members were expected to effectively collaborate and support the execution of global concepts. In addition, there was the opportunity for active collaboration on planning for local adaptation in key geographic markets. However, the organizational culture did not optimize its values in cultural empathy and creativity. This created a knowledge-sharing structure where the local team members served as contributors in sharing knowledge during the planning and execution phases, with some participation in validation phases. This supported global innovation objectives and local adaptation needs. Communication vehicles used both

live and virtual interactions with cross-cultural team members which were sufficient for the project process. The global project leaders thus applied a directive and inclusive leadership style which supported the abovementioned mechanisms in creating motivation and engagement to execute on global directives. However, the lack of a stronger local market focus with engagement in the ideation process appeared to create the market challenges for this firm as described in the case. Final outcome: Time to market, localization, and sales results for global initiatives. Lack of attention to local customer demands and market opportunities.

Case D – from Contributor to Collaborator

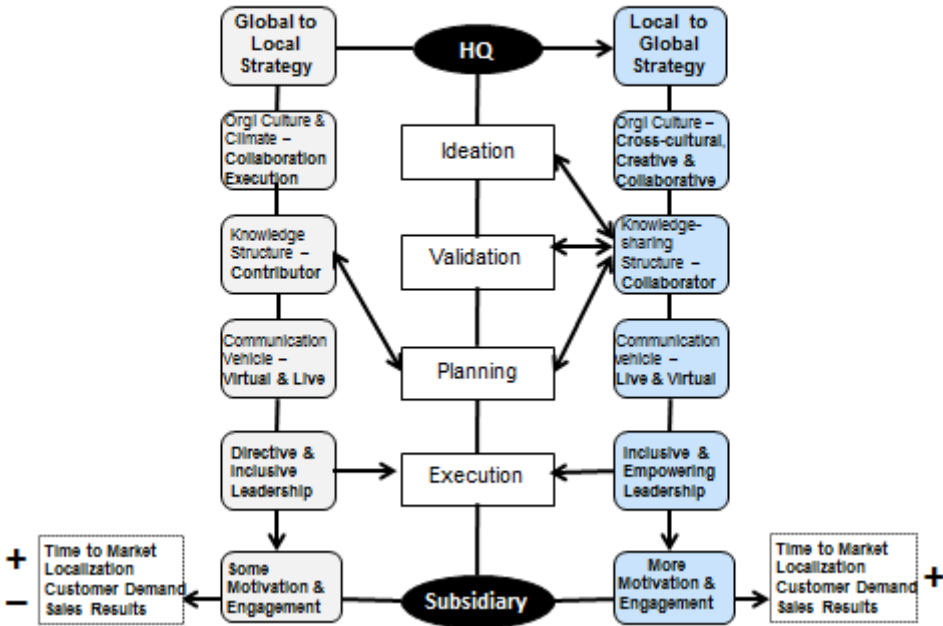


Figure 35. Case of local to global strategy/contributor to collaborator

Local to global strategy – collaborator and intrapreneur

In order to increase local market responsiveness and collaboration, the organization selected a local to global innovation strategy for facilitating knowledge-sharing and collaboration amongst cross-cultural and geographically distributed team members. It emphasized the cultural empathy, collaborative, and creative values of the organizational culture. Rather than strictly focus on execution efficiency, there was more emphasis on local market responsiveness and global team transparency within the organizational innovation climate. Global project leaders and management teams in HQ invited active participation from local team members in the ideation, validation, and planning phases of the front-end innovation process. This created both a collaborator role for the local team members with increased

knowledge-sharing; and an intrapreneurial role for the local team members with encouragement for new ideas and initiatives from local markets. The global project leaders were encouraged to apply an inclusive and empowering leadership style through a cross-cultural mindset, engagement, inspiration, and relationship-building. Final Outcome: New ideas and initiatives for meeting global and local customer demand, product localization, and increased sales results with time to market.

CASE E – Local to Global Strategy/Collaborator and Intrapreneur

In this case, the MNC is a world leader in healthcare, lifestyle, and lighting products that has used innovation as a key driver for market growth. With HQ based in Europe, it offers a broad product portfolio to consumers and businesses with global and local solutions for mature and emerging markets. The organization's innovation focus is the integration of technologies and design into people-centric solutions. The organization has expanded into new markets through acquisitions as well as the development and introduction of new product lines. Although it has enjoyed consistent growth throughout the years, it has experienced challenges due to the economic downturn and increased competition in the key markets of North America, Europe, and Asia which has resulted in a reduction of the workforce. The organization's global innovation culture corresponds with the values found in the study – cultural empathy and an appreciation for cultural diversity, collaboration, and creativity. The innovation climate has a focus on global team transparency, market responsiveness, entrepreneurial initiative and execution efficiency. Front-end innovation activities are both centralized and decentralized while integrating both radical and incremental innovation. The challenge is to sustain team transparency and market innovations that continue to deliver timely product introductions to key markets around the world.

Challenge/Incident

There were no particular incidents or challenges discovered by this researcher during interviews at the HQ site in Europe and the Shanghai office in China. The only challenge for the global project leaders and cross-cultural teams is to sustain the current successful effort in nurturing an organizational culture that demonstrates cultural empathy, creativity, and collaboration. In addition, it appears that the organizational innovation climate ensures global team transparency, market responsiveness, entrepreneurial initiative, and execution efficiency.

Outcome

The organization ensures full participation by all of the cross-cultural team members involved in the conception and introduction of new concepts, including planning, validation, ideation, and execution. While emphasizing collaboration, there is also a focus on developing an entrepreneurial spirit through creativity and innovation. As described by a senior manager based in China with global responsibilities: “Discipline is good but you shouldn’t overdo it. People should be allowed to make mistakes, we’d rather have people question the process than follow it to the ‘T’”. It drives both centralization and decentralization of front-end innovation activities in order to respond to customer, location, and resource requirements. As explained by a global project leader based in China: “If we’re too centralized, we may not meet market needs; if we’re too localized, we may not be as realistic for global needs.” There is also the attention to creating an integrated MNC network that has no boundaries as explained by a global project leader based in HQ in Europe: “Our culture has changed to an entrepreneurial mindset. We can see a big customer in Shanghai and then the architect of the project may be based in the US for conceptualization while the technology comes from Europe. So we’re always looking to build networks. Global is crucial where networking requires no limitation to physical boundaries. Thus, we’re a global team regardless of location.” In order to maintain global team transparency, the company integrates both live and virtual communication. In addition, it holds global communication meetings at key geographic locations in order to involve all of the regional and local team members in discussions and provide them with new insights to the product portfolio.

Resolution

The global project leaders interviewed at HQ in Europe and the Shanghai office seemed to agree on increased visits in order to ensure team visibility and increased knowledge-sharing. As emphasized by a global project leader based in China: “Knowledge-sharing gets better business and we share the win with the team in order to respect everyone’s work. Our company is very equal - we don’t have heroes - we focus on teamwork.” There is also the concern for building trust and increasing networking in order to develop local connections and to ensure the cross-cultural and geographically distributed team members feel part of the global organization. According to the global project leader based in HQ, the best way to create a collaborative space for engaging cross-cultural team members is to “stimulate creative spaces to foster cross-functional and cross-cultural dialogue.”

Analysis of knowledge governance mechanisms/Collaborator and Intrapreneur

This MNC applies a local to global strategy with emphasis on the MNC network to ensure alignment with cross-cultural and geographically distributed teams in any location around the world. This approach creates a global innovation culture that integrates its values of cultural empathy, creativity, and collaboration in order to create a common space for the front-end innovation process. The innovation climate is then supported for ensuring market responsiveness, entrepreneurial initiative, global team transparency, and execution efficiency. With an open and interactive team environment, the use of integrated communications such as virtual communication tools and live meetings build stronger trust and relationships. These mechanisms then help position the global project leader in an inclusive and empowering leadership role. With the opportunity to take initiative and fully engage in the front-end innovation process, the cross-cultural team is motivated to achieve increased success through time to market, localized products, increased customer demand and sales results.

Case E – Collaborator and Intrapreneur

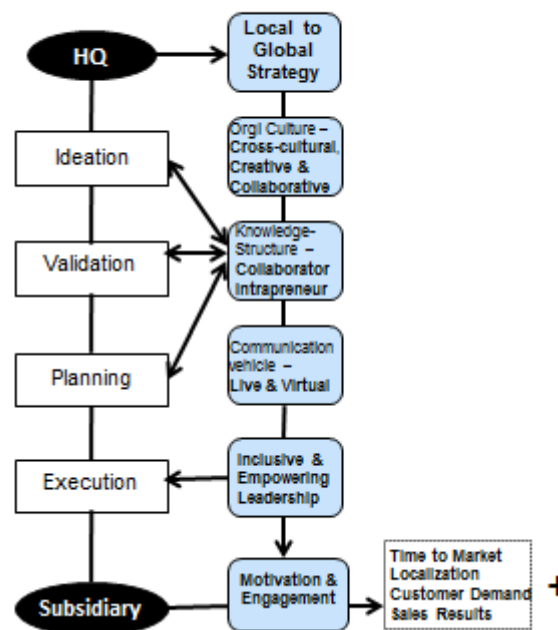


Figure 36. Case of local to global strategy/Collaborator and Intrapreneur

2. Case evaluations and findings

The initial findings of the explanatory phases with global project leaders and local managers in Asia showed partial or full support of the hypotheses from the original collaboration model (below figure). Since the findings showed variable support for the hypotheses, five cases from the explanatory phase were presented in order to further test the findings. In using explanation by mechanism, the evaluation focused on causal components of

organizational mechanisms that influence knowledge-sharing behaviors of the global project leader and cross-cultural team members during the global product launch project. The evaluation focused on the front-end innovation phases of planning, ideation, and validation and their impact on the execution phase and project performance.

In evaluating organizational and causal mechanisms, findings from cases A and B show that use of a global to local innovation strategy mostly decreases knowledge-sharing interactions for the ideation, validation, and planning phases of the front-end innovation process where local team members have limited roles. The reduced level of collaboration is determined through the interdependent orchestration of the following mechanisms and their causal components: a global innovation culture with some emphasis on collaboration and an innovation climate with a stronger emphasis on execution efficiency; the emphasis on virtual communication vehicles over face-to-face communication; and an emphasis on a directive leadership style. A knowledge-sharing structure where local team members serve as implementers appears to result in a lack of motivation and engagement in the execution and introduction of new product concepts that lead to delayed or no time to market, no product localization, no customer demand, and no sales results. When local team members serve the role of contributor in the knowledge-sharing structure, there appears to be some increase in motivation and engagement with variable results for time to market, product localization, customer demand, and sales results.

When examining cases C, D, and E, the findings show that use of a local to global strategy can increase knowledge-sharing interactions for the ideation, validation, and planning phases of the front-end innovation process. The level of collaboration is determined through the interdependent orchestration of the following mechanisms and their causal components: a global innovation culture (cross-cultural, creative, and collaborative) and an innovation climate focused on market responsiveness, global team transparency, and entrepreneurial initiative; face-to-face communication vehicles with virtual communication technologies as support tools for trust and relationship-building; a directive, inclusive, communicative, and empowering leadership style where certain styles are emphasized over others depending on the context. A knowledge-sharing structure where local team members serve as collaborators and intrapreneurs appears to increase motivation and engagement in the execution and introduction of new product concepts that lead to improved time to market, product localization, increased customer demand and sales results.

3. Confirmation of the model for cross-cultural collaboration

The evaluation and discussion of the five cases demonstrate the different outcomes in using a strategy-making and knowledge-sharing process emphasizing global centralization or local decentralization. The findings from Case C especially demonstrates the different outcomes of using a global to local innovation strategy and the key organizational mechanisms in comparison with the use of a local to global innovation strategy and key organizational mechanisms. As shown in case C and discussed in the above section for cases D and E, an increased level of cross-cultural collaboration is determined through the interdependent orchestration of the following organizational mechanisms:

- An innovation strategy that is focused on a local to global strategy-making process which emphasizes decentralization and local market adaptation as supported in H1.
- The integration of a global innovation culture with an emphasis on cultural empathy, knowledge-sharing, and creativity as supported in H2.
- The cultivation of an innovation climate that allows more emphasis on market responsiveness, global team transparency and entrepreneurial initiative and a moderate emphasis on execution efficiency.
- A project leader with an approach that integrates decisive, inclusive, communicative, and empowering leadership styles to facilitate cultural empathy, communication, and creativity as supported in H3.
- A knowledge-sharing structure that emphasizes a collaborative and intrapreneurial role for the local team members as supported in H4a, H4b, and H4c.
- Communication vehicles that emphasize more face-to-face interaction than virtual interaction increase cross-cultural collaboration as supported in H5.
- An emphasis on knowledge-sharing during the planning phase (as supported in H6a and H6b) as well as the ideation and validation phases increases cross-cultural collaboration.
- A collaborative and entrepreneurial role for the planning, ideation, and validation phases of the front-end innovation process increases knowledge-sharing and collaboration which positively impacts project performance for improved time to market, product localization, customer demand, and local sales as supported in H7.

The evaluation of the explanatory research findings as well as the evaluation of causal mechanisms resulted in the development of a model for cross-cultural collaboration that demonstrates the optimal orchestration of organizational mechanisms and causal components

in order to increase knowledge-sharing and cross-cultural collaboration during the front-end innovation process as well as ensure a positive impact on project performance (as shown in below figure).

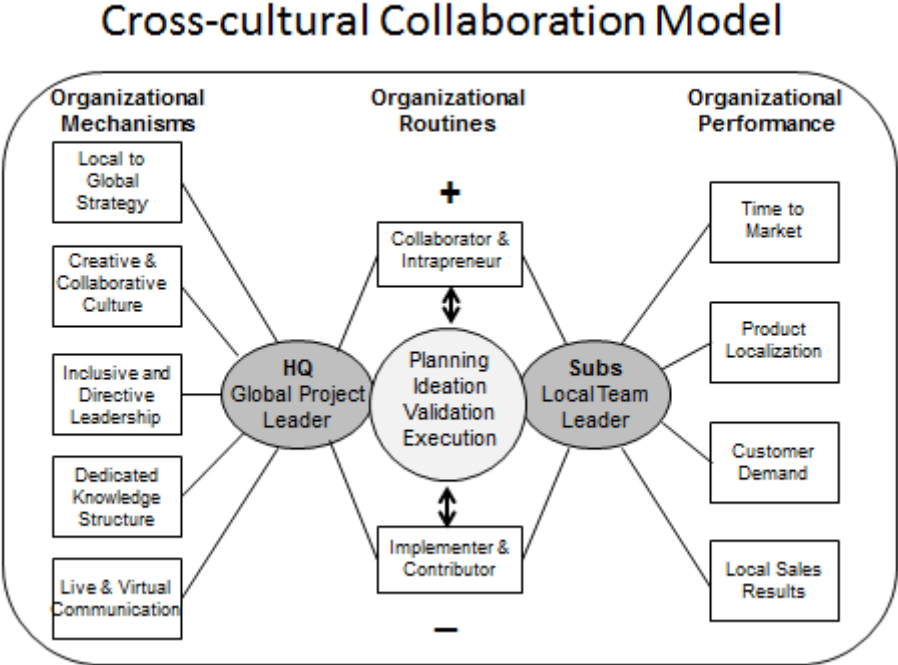
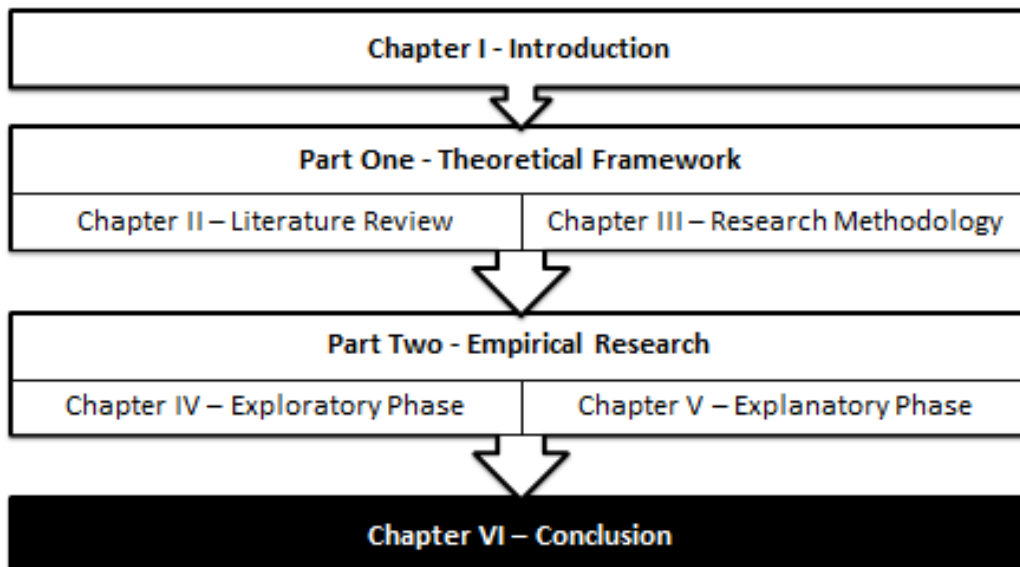


Figure 37. Final version of cross-cultural collaboration model

Conclusion

Dissertation Overview



VI. Conclusion and Recommendations

The literature review and dissertation research have confirmed the changing demands of achieving innovation in a dynamic, global marketplace. The growing role of emerging markets in international market expansion has placed increased importance in understanding cultural practices and responding to the particular needs of local consumers. While a global and centralized strategy-making process may have been applied in the past, MNCs are now discovering that a local approach to strategy-making for front-end innovation can achieve increased responsiveness to international market opportunities. Emerging markets especially require more attention to cultural understanding and relationship-building in sharing and co-creating knowledge for the front end innovation process. Both mature and emerging markets represent culturally diverse consumers where organizations need to meet expectations for innovative solutions, time to market, and competitive products.

A. Recommendations for International Managers and Organizations

The results from the exploratory and explanatory research phases as well as the causal mechanisms identified in the cases allowed the development and confirmation of the cross-cultural collaboration model. These findings provide insights and specific recommendations for managers and organizations seeking to increase cross-cultural collaboration and project performance for global product launches. The recommendations show how to facilitate cross-cultural collaboration during the front-end innovation process in order to improve launch execution and project performance for international markets. The following considerations for managing organizational resources and routines are thus recommended:

- When the project leader and management team in HQ is developing the global innovation strategy for introducing new products to international markets, they need to engage the local teams as planning partners in order to create a shared understanding of strategy-making. During the front-end innovation process, the ideation and planning phases should be co-created at the local level for integration at the global level. This results in a local to global innovation strategy.
- In order to create a stronger foundation for project collaboration, team values should be aligned with organizational culture values for cultural empathy or appreciation for cultural diversity, collaboration and transparency, and creativity.
- In supporting team collaboration throughout the global launch project, the team environment should be aligned with the innovation climate elements of market

responsiveness, global team transparency, entrepreneurial initiative, and execution efficiency.

- Leadership of front end innovation projects involving cross-cultural teams requires special attention to leadership skills that integrate authority with decisiveness, a cross-cultural mindset with collaboration and relationship-building, consistent communication and active listening, and the ability to develop team engagement through a common vision and the creation of new ideas.
- A formal knowledge-sharing structure should be aligned with the project process through clear roles for local team members within the front-end innovation phases (planning, ideation, and validation) as well as the execution phases could facilitate team engagement and collaboration.
- When conducting front end innovation activities with cross-cultural team members, special attention is needed for the ideation and planning phases due to cultural implications of knowledge-sharing including the structure and delivery, the role of power, the degree of openness, and ability for initiative-taking.
- When managing the global product launch project, front end innovation activities require face-to-face interaction through dedicated meetings and events on location with the team and supported by a knowledge-sharing platform with virtual communication technologies for integrated and consistent communications throughout the project.
- The opportunity to engage team members in collaborative and entrepreneurial roles during the front end innovation process can improve project performance through increased trust and motivation.
- When developing evaluations for global teams working on global innovation projects, practices and skills that incorporate collaboration and knowledge-sharing should be considered as measures for team and project performance.

The research results and findings provide new and practical insights to guide MNCs and global project leaders in facilitating cross-cultural collaboration for front end innovation and global launch projects. The findings emphasize practices for the front end innovation process for the planning, ideation, and validation phases that are critical to successful execution. Particular details concerning these findings are revealed within the dissertation in order to

assist in further understanding of the interdependence between strategy-making, the front end innovation process, and cross-cultural team knowledge.

B. Limitations of the Cross-cultural Collaboration Model

The development of the cross-cultural collaboration model is based upon the views and experiences of the global project leader or senior manager based in HQ as well as the regional and local managers based in subsidiaries in China and Asia. It is thus limited to the findings from qualitative research performed during two research phases: 1) exploratory research conducted with 45 senior managers and executives based in HQ and subsidiaries of 35 MNCs in North America, Europe, and Asia and 2) explanatory research conducted with 58 senior managers based in HQ and 26 local and regional managers based in subsidiaries located in Asia of 32 MNCs. The research is limited to the views of global project leaders and local managers since they were identified as the knowledge facilitators for cross-cultural and geographically distributed teams working with the global launch project and front-end innovation process.

The intent of the researcher is to answer the research question through the development of a theoretical framework and model based upon the experiences of senior managers leading innovation projects and cross-cultural teams. In order to strengthen theory and test the proposed model, further research is required in the form of a quantitative study and survey or longitudinal case studies where performance can be measured and evaluated with specific organizational mechanisms and their relationship with knowledge-sharing behaviors. The research is limited to retrospectives of the global launch project since the researcher determined that both front-end innovation and execution phases can be examined in order to better understand the impact of cross-cultural collaboration upon project outcome. Finally, the broad scope of the cross-collaboration framework and model is focused on the relationship between the firm-level mechanisms and their influence upon individual or managerial level behavior. In order to gain a deeper understanding of causal and team interactions, future research requires a separate focus on each organizational mechanism as well as studies involving more team members.

C. Significance of Research Results

This dissertation research contributes to theory by extending the resource-based (Barnett 1986, Peteraf 1993, Eisenhardt and Martin 2000, Teece, Pisano and Shuen 1997) and knowledge-based theories (Grant 1996) concerning innovation management capabilities

through a new conceptual framework and model. Theory and literature have mostly focused on the conditions for global teamwork and collaboration concerning research and new product development rather than investigating the front end innovation process. This dissertation brings attention to the organizational resources and routines that influence cross-cultural collaboration and knowledge-sharing during the front end innovation process, in conceiving and bringing new products to market. In order to increase success in conceiving and executing innovation strategies for international markets, this researcher proposes that cross-cultural collaboration is a competitive advantage for MNCs in accelerating innovation and market responsiveness. Cross-cultural team interactions facilitate the sharing of local market knowledge, cross-cultural understanding, and the creation of new ideas. The research findings demonstrate that increased cross-cultural collaboration can be achieved through a focus on knowledge-sharing and participation in the front end innovation process, specifically the planning, ideation, and validation phases.

The dissertation research also extends research concerning cultural synergy (Adler 1983, Holden 2002) and the role of cross-cultural collaboration and knowledge-sharing in innovation management. Finally, this dissertation provides new insights for knowledge governance mechanisms and micro-foundations which is lacking in the literature (Foss et al. 2010). The new conceptual framework and model provide new insights to cross-cultural collaboration and knowledge-sharing practices for the front end of innovation. The framework presents the firm-level mechanisms that influence knowledge-sharing behavior among cross-cultural teams collaborating on global innovation projects. The purpose of the cross-cultural collaboration model is to provide an explanatory model for identifying mechanisms that facilitate knowledge-sharing amongst cross-cultural teams from concept to market. In facilitating the ability to share and co-create knowledge, the model identifies a collaborative process that can assist managers and teams to effectively conceive and introduce new products and services. In this way, MNCs can consider the orchestration and configuration of cross-cultural team knowledge as a resource and competitive advantage in accelerating innovation for international markets.

D. Conclusion

In responding to the research question, the purpose of the dissertation research is to demonstrate how MNCs can facilitate cross-cultural collaboration in order to effectively conceive and execute global innovation strategies. The exploration and evaluation of this question led to a comprehensive literature review that created an initial research framework at

the intersection of global innovation, knowledge, and culture. Due to limited research concerning the role of cross-cultural collaboration in front end innovation, the researcher pursued both exploratory and explanatory research phases with senior managers responsible for global product innovation, from concept to market, at leading MNCs based in Asia, Europe, and the US. The findings in the exploratory phase led to the identification of key organizational mechanisms, project collaboration routines, and performance measures. The critical roles of knowledge-sharing and the front end innovation phases of planning, ideation, and validation were also discovered during this phase. The organizational mechanisms identified as innovation strategy, organizational culture and climate, leadership competencies, knowledge-sharing structure, and communication vehicles; routines were identified for the global launch project where the front-end innovation process and the planning, ideation, and validation phases serve a critical role; performance measures of time to market, product localization, customer demand, and sales results were then confirmed through field research and interviews with managers.

The explanatory phase with two study groups, global project leaders based in HQ and local team managers China and Asia, allowed closer examination of the interactions between the global project leader and local teams during the planning and execution phases in order to determine the causal components of the organizational mechanisms identified. In this way, the hypotheses could be tested and validated through a comparison of research results from both global project leaders in HQ and local team managers in subsidiaries in Asia. A framework for cross-cultural collaboration was developed in order to present the relationships between organizational mechanisms, their causal components, the front end innovation routines, and their impact upon project performance. Finally, five case studies examined and discussed the causal mechanisms and their influence on knowledge-sharing roles and project performance which allowed further testing and confirmation of the hypotheses.

The discoveries from the explanatory phase have demonstrated the need for increased cultural understanding and collaboration amongst geographically distributed teams in order to accelerate innovation and responsiveness to international markets. The issue identified in this dissertation research is the lack of communication and participation of local team members in the front end innovation process where local market knowledge is most critical for the effective execution and success of product introductions. The emphasis on a global innovation strategy and centralized planning at HQ with decentralized execution at subsidiary locations reduces the motivation of local team members to collaborate on the product

introduction which impacts market performance. The lack of shared understanding and interactions for strategy-making negatively impact the success of planning, ideation, and concept validation for the front end innovation process.

In order to increase success in conceiving and executing innovation strategies for international markets, this researcher proposes that cross-cultural collaboration should serve as a competitive advantage and critical resource for MNCs in accelerating innovation and market responsiveness. Cross-cultural team interactions facilitate the sharing of local market knowledge, cross-cultural understanding, and the creation of new ideas. The research findings demonstrate that increased cross-cultural collaboration can be achieved through a focus on knowledge-sharing and participation in the front end innovation process, specifically the planning, ideation, and validation phases. The orchestration and reconfiguration of organizational resources combined with project collaboration routines create front-end innovation process capabilities.

Cross-cultural collaboration and knowledge-sharing require consideration of specific organizational mechanisms and components that interdependently create a common space and environment for innovation. This environment involves organizational mechanisms such as a local to global innovation strategy; a global innovation culture focused on cultural empathy, collaboration, and creativity; an innovation climate that nurtures market responsiveness, global team transparency, entrepreneurial initiative, and execution efficiency; and a knowledge-sharing structure where local team members have collaborative and entrepreneurial roles.

In order to sustain a collaborative dialogue between cross-cultural teams, the global project leader serves an important role as knowledge facilitator while providing direction, inspiration, and communication from front end innovation to launch execution. The findings also showed the importance of listening, recognizing, and responding to knowledge shared by team members which further influence motivation. Sharing knowledge between cultures requires special attention to the structure and delivery, the role of power, the degree of openness, and ability for initiative-taking. MNCs need to consider communication vehicles that emphasize face-to-face interaction facilitate trust and relationship-building where communication technologies sustain continued interactions throughout the innovation process.

A framework and a model for understanding the organizational mechanisms that influence cross-cultural collaboration have been developed from the research findings. The

intention of developing a framework is to provide further understanding of the firm-level mechanisms that influence knowledge-sharing behavior among cross-cultural teams collaborating on global innovation projects. The purpose of the cross-cultural collaboration model is to provide an explanatory guide for facilitating collaboration from concept to market. In identifying mechanisms and routines that increase knowledge-sharing and strategy-making, the model identifies a collaborative process that can assist managers and teams to effectively conceive and introduce new products and services. In this way, MNCs can consider the orchestration and configuration of cross-cultural team knowledge as a resource and competitive advantage in accelerating innovation for international markets.

In addition to providing insights concerning the facilitation of cross-cultural collaboration, the purpose of the research and findings is to provide a new perspective and theory-building concerning the value of cross-cultural knowledge and collaboration for enhancing front end innovation. This dissertation research contributes to existing theory by extending resource-based and knowledge-based theories through a new conceptual framework and model. Furthermore, it extends research concerning cultural synergy and knowledge governance mechanisms in innovation management. Moreover, the cross-cultural collaboration framework and model provide recommendations and topics for future empirical research within an emerging field that is receiving increased attention from organizations seeking to accelerate innovation for international markets.

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Senior Managers and Executives at MNCs

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On site and telephone interviews conducted with senior managers and executives responsible for global product management (including research, design, development, marketing and innovation) at MNCs based in Asia, Europe, and North America:

Acer, Adobe, Applied Materials, BMW, Cisco, Danone, EMC, Fiat, Ford, GE Healthcare, Google, Hitachi, HP, Hyundai, Intel, LAM Research, Lego, Lenovo, L'Oréal, Mazda, Microsoft, Mindtree, Motorola, Nestlé, Nike, Nokia, Oracle, Philips, SAP, Samsung, Siemens, Symantec, Symphony, Tata Consultancy Services, and Toyota.

Company visits, California, USA, August 2009: Adobe, San Francisco and San Jose; Google, Mountain View; LAM Research, Fremont; Oracle, Redwood Shores; Symantec, Mountain View.

Company visits, California, USA, August 2010: Adobe, San Francisco, California; Google, Mountain View, California; HP, San Jose, California; Oracle, Redwood Shores, California; SAP, Palo Alto, California.

Company visits, Paris, France, September-November 2010: L'Oréal.

Explanatory study interviews by author. June – November 2011.

On site and telephone interviews conducted with 86 senior managers (60 global project leaders and 26 local managers in Asia) responsible for global product launches involving planning and execution while collaborating with or managing cross-cultural teams at 32 MNCs based in North America, Europe, and Asia in the automotive and information communication technologies industries:

Adobe, Alcatel-Lucent, Apple, Applied Materials, BMW, Cisco, EMC, Essilor, Ericsson, Fiat, Ford, GE Healthcare, Google, Hitachi, HP, HTC, Hyundai, Infosys, Intel, Lenovo, Mazda, Microsoft, Motorola, Nokia, Oracle, Philips, Renault, SAP, Samsung, Siemens, Symantec, and Toyota.

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Company visits, China, July 2011: Adobe, Beijing; BMW, Beijing; Ford, Shanghai; Google, Shanghai; Lenovo, Beijing; Nokia, Beijing; Philips, Shanghai.

Company visits, Singapore, July 2011: EMC, Singapore; Microsoft, Singapore.

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www.google.com , www.hitachi.com , www.hp.com , www.htc.com , www.hyundai.com ,
www.intel.com , www.lenovo.com , www.loreal.com , www.mazda.com ,
www.microsoft.com , www.mindtree.com , www.motorola.com , www.nestle.com ,
www.nike.com , www.nokia.com , www.oracle.com , www.philips.com , www.renault.fr ,
www.sap.com , www.samsung.com , www.siemens.com , www.symantec.com ,
www.tcs.com , www.toyota.com

APPENDICES

Appendix A - Participants in Exploratory Phase

Company	HQ Region/Country	Market Focus	Senior Managers – HQ and/or Subsidiary level
Adobe	NA/USA	B2C, B2B	HQ - Marketing, Prod Mgt
Applied Materials	NA/USA	B2B	HQ - Product Operations
Cisco	NA/USA	B2B	HQ - Global Marketing
EMC	NA/USA	B2B	HQ/Sub – Global Operations
Ford	NA/USA	B2C	HQ - Global Product Mgmt
GE Healthcare	NA/USA	B2C	HQ - Global Product Mgmt
Google	NA/USA	B2C, B2B	HQ - International Prod Mgt
HP	NA/USA	B2C, B2B	HQ – Global Product Mktg
Intel	NA/USA	B2B	HQ - Global Launch Mgmt
LAM Research	NA/USA	B2B	HQ - Global Product Mgmt
Microsoft	NA/USA	B2C, B2B	HQ/Sub - Global Product Mgmt, Regional Marketing
Motorola	NA/USA	B2C, B2B	HQ – Global Product Mgmt and Marketing
Nike	NA/USA	B2C	HQ - Global Product Mgmt
Oracle	NA/USA	B2B	HQ – Global Product Mgmt and Marketing
Symantec	NA/USA	B2C, B2B	HQ - Global Product Ops
BMW	EU/Germany	B2C	HQ - Global Product Mgmt
Danone	EU/France	B2C	HQ/Sub – Intl Product Marketing
Fiat	EU/Italy	B2C	HQ - Global Product Mgmt and Marketing
Lego	EU/Denmark	B2C	HQ - Global Product Mgmt
L’Oréal	EU/France	B2C	HQ – Intl Product Mktg
Nestlé	EU/Switzerland	B2C	HQ – Global Operations Mgmt
Nokia	EU/Finland	B2C	HQ/Sub - Global Product Mktg
Philips	EU/Netherlands	B2C	HQ - Global Prod Innovation
SAP	EU/Germany	B2B	HQ - Global Mktg
Siemens	EU/Germany	B2B	HQ – Global Operations Mgmt
Acer	ASIA/Taiwan	B2C, B2B	HQ - Global Product Mgmt
Hitachi	ASIA/Japan	B2C, B2B	HQ - Global Operations Mgmt
Hyundai	ASIA/South Korea	B2C	HQ – Global Product Planning
Lenovo	ASIA/China	B2C	HQ - Global Product Mgmt
Mazda	ASIA/Japan	B2C	HQ - Global Marketing
Mindtree	ASIA/India	B2B	HQ/Sub – Global Innovation
Samsung	ASIA/South Korea	B2C	HQ - Global Product Planning
Symphony	ASIA/India	B2B	HQ/Sub – Global Operations
TATA (TCS)	ASIA/India	B2B	Subs - Global Operations
Toyota	ASIA/Japan	B2C	Sub - Global Product Planning

Appendix B – Participants in Explanatory Phase, Global Project Leaders

Company	HQ Region/ Country	Market Focus	Innov Focus *	FEI Structure **	Global Project Leaders – HQ Level Global Launch Responsibilities
Adobe	NA/USA	B2C, B2B	R/I	C	Product Marketing Management, Product Launch, Product Management
Apple	NA/USA	B2C	R/I	C	Product Operations Management
Applied Materials	NA/USA	B2B	R/I	C	Product Development/Management
Cisco	NA/USA	B2B	R/I	C	Product Management, Product Marketing Management
EMC	NA/USA	B2B	R/I	C	Product Management, Program Management
Ford	NA/USA	B2C	I	C	Product Management
GE Healthcare	NA/USA	B2B, B2C	R/I	C	Product Management
Google	NA/USA	B2C, B2B	R/I	C/D	Product/Program Management
HP	NA/USA	B2C, B2B	I	C	Product Launch, Product Management
Intel	NA/USA	B2B	R	C	Product Marketing Management, Product Management
Microsoft	NA/USA	B2C, B2B	R/I	C/D	Product Marketing Management, Product Management
Motorola	NA/USA	B2C, B2B	R/I	C/D	Product Management
Oracle	NA/USA	B2B	I	C	Product Management, Product Marketing Management
Symantec	NA/USA	B2C, B2B	I	C	Product Operations Management
Alcatel-Lucent	EU/France	B2B	R/I	C/D	Product/Operations Management, Program Management
BMW	EU/Germany	B2C	R	C	Product Management
Ericsson	EU/Sweden	B2B	R/I	C/D	Product/Business Management
Essilor	EU/France	B2C	I	C	Product Management
Fiat	EU/Italy	B2C	R/I	C	Product Management
Nokia	EU/Finland	B2C, B2B	R/I	C/D	Product/Portfolio/Marketing Management
Philips	EU/ Netherlands	B2C	R/I	C/D	Product Management, Product Marketing Management
Renault	EU/France	B2C	R/I	C	Product Marketing Management, New Product Development
SAP	EU/Germany	B2B	R/I	C	Product Marketing Management
Siemens	EU/Germany	B2B	R/I	C	Product Management
Hitachi	ASIA/Japan	B2C, B2B	I	C/D	Product Business Management
HTC	ASIA/Taiwan	B2C	R/I	C	Product Management
Hyundai	ASIA/South Korea	B2C	I	C	Product Development Management
Infosys	ASIA/India	B2B	I	C/D	Product Management
Lenovo	ASIA/China	B2C, B2B	I	C	Product Management, Product Marketing Management
Mazda	ASIA/Japan	B2C	R/I	C/D	Product Management
Samsung	ASIA/South Korea	B2C		C	Product Management
Toyota	ASIA/Japan	B2C	R/I	C/D	Product Management

*C=Centralized Front-end Innovation activities ; D= Decentralized Front-end Innovation activities

**R=Radical Innovation; C=Incremental Innovation

Appendix C – Participants in Explanatory Phase, Local Managers, Asia Subsidiaries

Company	Region/Country	Market Focus	Innov Focus*	Local Managers – Subsidiary level Local Launch Responsibilities
Adobe	Asia/China	B2C, B2B	R/I	Product Management Program Management
	Asia/Japan		R/I	Product Marketing Management
Applied Materials	Asia/China	B2B	R/I	Product Marketing Management Product Marketing Management
Cisco	Asia/China	B2B	R/I	Product Business Management
EMC	Asia/Singapore	B2B	R/I	Product Development/Management
Ford	Asia/China	B2C	R/I	Product Management
Google	Asia/China	B2C, B2B	R/I	Product Management Marketing Operations
Microsoft	Asia/Singapore	B2C, B2B	R/I	Product Management Regional Marketing Management
Motorola	Asia/China	B2C, B2B	R/I	Product Marketing Management
Oracle	Asia/Japan	B2B	R/I	Product Marketing Management
BMW	Asia/China	B2C	R/I	Product Management Marketing Management
Nokia	Asia/China	B2C	R/I	Product Management Program Management Research and Planning Management Product Development/Management
Philips	Asia/China	B2B/B2C	R/I	Product Management Product Marketing Management
	Asia/India	B2B/B2C	R/I	Product Development/Management Business Management
Siemens	Asia/China	B2B	I	Program Management Business Management

Appendix D. Company Data/Overview of MNCs represented by study participants

Company	Industry	Revenue/ FY 2011 - million	International Sales	Countries offices & markets	Employees 2011
Adobe	Software	US\$4,2	50% +	32+ offices	9,925
Alcatel-Lucent	Telecommunications	€15,696	84%+ (36% NA, 32% Eu)	130+ markets	79,800
Apple	Hardware, software, consumer electronics	US\$108,249	60%+	21+ offices	60,400
Applied Materials	Semiconductor materials	US\$10,5	81%	19+ offices	14,600
BMW	Automotive	€8,821	83%	35+, 150 mkts	100,306
Cisco	Networking equipment	US\$43,2	50%+	95 offices	63,870
EMC	Data storage devices	US\$20	46%	57 offices	53,500
Essilor	Health care	€4,189	80%+	100+ ops	42,700+
Ericsson	Telecommunications	SEK 226,9	98%	180+ markets	108,551
Fiat	Automotive	€9,559	84%	61+ offcs/ 140 markets	137,800/10
Ford	Automotive	US\$136.26	55%+	105+ offcs	164,000
GE Healthcare	Health care	US\$18.8	60%+ (GE)	100+ markets	46,000+
Google	Internet, Software	US\$37,905	54%	40+ offices	33,077
Hitachi	Electronic component devices	US\$112,4 ¥9,315,807	43%	56+ offices	372,360
HP	Computer hardware, software	US\$127,24	65%	170+ markets	324,600
HTC	Telecommunications	US\$15,383	96%	75 markets	12,943
Hyundai	Automotive	US\$97,408	54%	193 markets	80,000
Infosys	Telecommunications, IT services	US\$6,041	97%	29 /offices	150,000
Intel	Semiconductors	US\$54	79%	63/offices	100,100
Lenovo	Computer hardware	US\$21,594	54%	8/key offices, 160 markets	26,341
Mazda	Automotive	¥2.326/10	84%	130 offices	38,117
Microsoft	Computer software	US\$69,943	46%	100+ offices	92,000
Motorola	Telecommunications	US\$6,068	45%+	29+ offices	60,000/10
Nokia	Telecommunications	€38,659	99%	120/offices, 150 markets	139,000
Oracle	Computer software	US\$35,6	50%+	145+ markets	111,297
Philips	Electronics	€25,579	95%+	60+ offices, 100+ markets	121,888
Renault	Automotive	€42,628	84%+	115/offices	128,000
SAP	Computer software	€14,233	84%	130 markets	55,000+
Samsung Electronics	Telecommunications	€220,1/10 165 trillion won	84%	68/offices	190,500
Siemens	Drive technologies	€73,515	77%	190/markets	360,000
Symantec	Computer software	US\$6,19	51%	43/offices	18,600
Toyota	Automotive	¥18,99 trillion	74%	26/offices, 170+ markets	317,716

Appendix E. Questionnaire for Exploratory Phase

Leveraging Cross-cultural Synergies for Global Innovation Interview Questionnaire August 2009 – February 2011

Name: (Confidential Information)
Position: (See Appendix A)
Company: (See Appendix A)
Global Team Role: (See Appendix A)

GLOBAL VIEW

1. In view of your experience in global product management and operations, how would you describe the global team process related to new product development and/or product marketing processes?

2. What do you find are the key success factors for global teamwork?

3. How is global team performance evaluated or measured today? What are the main external and internal pressures (market and organizational)?

4. In which categories do you find that your organization is innovative?

_29%_Product
_15%_Process
_16%_Business Model
_23%_Customer Focus
_17%_Teamwork

5. How does your company reflect a global innovation culture?

6. Which elements do you feel are necessary for developing a global innovation culture?

_17%_Encouraging contributions from team members worldwide
_17%_Emphasizing knowledge-sharing across different geographical subunits.
_14%_Emphasizing responsiveness to differences in local markets
_11%_Support formal and informal communication of NDP and GTM activities across subsidiaries
_8%_Support formal NPD management process
_10%_Full involvement of top management in global NPD program
_12%_Local resource commitment for international NPD research and marketing
_8%_Use of a formal NPD process – standardized set of stages from idea to launch
_3%_Other _____

GLOBAL PROCESSES

7. What are the operational systems and processes used by global NPD/product/marketing teams?

_34%_The organization uses a standardized set of stages from idea to launch.
_28%_They use a set of stage gates and gatekeepers.
_17%_They use a particular set of technologies.
_20%_They use networks – internal /tight or external/open?
_1%_Other _____

8.a. At which project phase do the following cross-cultural team processes occur (pre-launch, during launch process, post-launch)?

Shared goals and trust-building - _71%_Pre-Launch _5%_During Launch _24%_Throughout Launch
_0%_Post-Launch

Team creativity and brainstorming - _70%_Pre-Launch _14%_During Launch _11%_ Throughout Launch _5%_Post-Launch

Conflict management - _17%_Pre-Launch _25%_During Launch _54%_ Throughout Launch _2%_Post-Launch _2%_ None

Knowledge-sharing and exchange - _13%_Pre-Launch _11%_During Launch _68%_ Throughout Launch _8%_Post-Launch

8.b. Do you feel that culture is predictive for these team elements (culture as influence) –
__88%_ Yes __12%_ No

Shared goals and trust-building; Team creativity and brainstorming; Conflict management; Knowledge-sharing and exchange

8.c. When cross-cultural team conflicts occur, are they due to task or personal conflict?
__57%_ Task ; __43%_ Personal

8.d. When cross-cultural conflict occurs, what are the resolution methods available?

GLOBAL TEAMS

9.a. Which elements do you find most challenging in managing global teams (top three by priority)?

17% Team participation/engagement

21% Trust-building

7% Developing new ideas/team creativity

15% Creating interactive dialogue

8% Sharing practices

14% Understanding and support of global strategy

11% Understanding of team roles

6% Commitment to tasks

__Other_____

9.b. How would you rate current organizational performance for each element on a scale from 1 to 10 (where 10 represents excellence)?

7.02 Team participation/engagement

6.06 Trust-building

6.43 Developing new ideas/team creativity

6.6 Creating interactive dialogue

6.55 Sharing practices

7.05 Understanding and support of global strategy

6.81 Understanding of team roles

7.41 Commitment to tasks

__Other_____

10. Which of the following is most representative of global team communication between HQ and local subsidiaries?

41% Global to local

7% Local to local

0% Local to global

52% Global to local to global (from HQ to local office, from local office to HQ)

11.a. How are globally distributed teams facilitating knowledge sharing?

- _27%_The knowledge creation/concept development process involves HQ and intl offices
- _18%_The knowledge transfer process incorporates IT tools. Type of technology:_____
- _20%_The global process involves international exchange with offices worldwide.
- _18%_The global process facilitates coordination of global NPD information.
- _17%_The global process requires input from worldwide locations at each stage (idea, concept development/feasibility, development, testing, or launch).

11.b. When is communication and dialogue facilitated at the local level?

11.c. When are new ideas received from subsidiaries/local teams?

GLOBAL TOOLS

12. Does your organization incorporate the following activities for cross-cultural team learning?

- _28%_Global team process methodology used in organization (global or national).
- _20%_Cross-cultural training incorporated in team process.
- _30%_Tools used for global team education and training.
- _19%_Vehicle or process for sharing local practices with internal teams worldwide.
- _3%_Other

13. Which technologies do you find most effective for global team communication?

- _24%_Email
- _14%_Web Portal
- _25%_Live Meeting
- _18%_Web Conference
- _3%_Virtual Network
- _6%_Online Communities
- _10%_Other_____

14. Are social networks employed? _40%_Yes _60%_No

14.a. If so, which type of social network is used in your organization:

- _39%_Informal networks (informal communication outside official channels, i.e. café, water cooler)
- _44%_Formal networks (formal communication methods established by company, i.e. meetings, updates)
- _17%_Virtual networks (internal Web network similar to LinkedIn or Facebook)

14.b. If so, what is the role of social networks in the global team process?

Please describe the social Networking Platform and Process

- _34%_The social network employs virtual and/or live interactions.
- _20%_The social network helps establish a shared vision for the team.
- _27%_The social network employs a technology platform that facilitates knowledge-sharing
- _15%_The social network promotes and strengthens trust-building
- _4%_Other_____

Additional Comments:

Appendix F. Questionnaire for Explanatory Research Phase/Global Project Leaders

Optimizing Cross-cultural Collaboration for Global Product Innovation Interview Questionnaire June-Dec 2011

Name: (Confidential Information)

Position: (See Appendix B)

Company: (See Appendix B)

Global Team Role: (See Appendix B)

Nationality: Belgium (2%), Denmark (2%), Finland (5%), France (12%), Germany (7%), India (5%), Israel (2%), Italy (2%), Japan (5%), Netherlands (9%), Singapore (2%), South Korea (2%), Sweden (5%), US (40%)

Locations – HQ: US HQ/California, Connecticut, Illinois, Michigan, Michigan, New Jersey, Washington, Wisconsin; Europe HQ/France, Finland, Germany, Italy, Netherlands, Sweden; HQ Asia/China, India, Japan, South Korea, Taiwan

PART I INTERVIEW. Please answer the following questions in considering your experience with global product launch projects at your organization during the past two years (2009-11).

ORGANIZATIONAL CONTEXT

1. What do you find are the key phases of the global product/service innovation process (concept to market)? In which phases does knowledge-sharing serve a critical role between HQ and subsidiaries? How is this knowledge shared at present (systems and tools)?

2. Which type of product/service innovation is most representative of your global launch responsibilities?

_9%_Radical innovation (new concepts and initiatives)

_35%_Incremental innovation (upgrade or improvement upon existing products and concepts)

_56%_Both

3. Are front-end innovation activities (idea generation, product design and development, marketing and sales) mostly centralized (located at HQ) or decentralized (distributed at strategically important subsidiaries)?

_70%_Centralized

_30%_Decentralized

4.a. Which of the following best describes your organization's innovation process worldwide?

_15%_Chaotic and disruptive

_31%_Organic and collaborative

_29%_Structured and disciplined

_25%_Customer and relationship-focused

_Other

4.b. How does this process increase and/or decrease innovation? What are strengths and weaknesses?

5. Does the national culture of the company headquarters influence how innovation practices are managed within the organization? If yes, how?

_65%_Yes _35%_No

GLOBAL TEAM PROCESS

6.a. What kind of team leadership style do you feel is necessary for effectively managing and facilitating cross-cultural team collaboration during the global product innovation process (concept to go-to-market)?

6.b. How do you feel that trust can be improved for the global team?

7.a. What kind of team behaviors do you feel are needed in achieving effective collaboration and knowledge-sharing practices for geographically distributed teams during the global product launch?

7.b. Do you feel that national culture affects knowledge-sharing behaviors? 82% Yes 18% No How?

KNOWLEDGE-SHARING PROCESS

8.a. Which of the following is most representative of team communication flow between HQ and local subsidiaries during the planning phase?

40% HQ to Subsidiary (initiated by HQ)

0% Subsidiary to Subsidiary (between subsidiaries on local and regional levels)

4% Subsidiary to HQ (initiated by subsidiary)

56% HQ to subsidiary to HQ (initiated by HQ with feedback from subsidiary)

8.b. Which of the following is most representative of team communication flow between HQ and local subsidiaries during the execution (go-to-market) phase?

21% HQ to Subsidiary (initiated by HQ)

2% Subsidiary to Subsidiary (between subsidiaries on local and regional levels)

19% Subsidiary to HQ (initiated by subsidiary) – moving towards this model (local drives and informs HQ)

58% HQ to subsidiary to HQ (initiated by HQ with feedback from subsidiary)

8.c. In which of the global launch cycle phases are local subsidiaries most involved?

13% Ideation/Co-creation

20% Concept Validation (Local market and customers)

16% Product/Service Planning

51% Launch Preparation/Go-to-Market

9.a. During the concept/planning and GTM/execution phases,

What is the most critical information that you need from local/regional team members located in key subsidiaries (from local teams and subsidiaries to HQ) at this phase? How is this gathered?

9.b. What are the greatest challenges to knowledge-sharing and contribution from local team members based in subsidiaries (from subsidiary to HQ)?

9c. How do you feel local teams in subsidiaries *would be motivated* to increase knowledge-sharing and contribution during the planning and execution phases? Are there benefits for sharing knowledge?

10.a. From the first research phase, challenges were identified in facilitating cross-cultural collaboration through ideation/co-creation and conflict management (please feel free to include critical incidents)? How have you resolved these challenges?

10.b. Which organizational processes and tools were most effective for increasing ideation/co-creation and managing conflict with global and local team members?

ORGANIZATIONAL RESOURCES

11.a. How is local knowledge shared and diffused in the organization currently?

11.b. During the global product launch project (concept to market), what are the organizational resources (systems and tools) that could help facilitate knowledge-sharing and contribution from team members worldwide?

12. How would you find the following activities most support innovation during the global product launch process?

Social networking – How?

Type? _35%_ Formal _35%_ Informal _30%_ Virtual?

Sufficient? Yes_47%_ No_53%_

Cross-cultural learning – How?

Sufficient? Yes_31%_ No_69%_

Knowledge-sharing – How?

Sufficient? Yes_33%_ No_67%_

13.a. Do current performance measures include evaluations for team collaboration and knowledge-sharing? _33%_Yes _67%_No

13.b. What are the primary metrics for measuring success of the global product launch project?

14. What do you feel is the best way to create a collaborative space for engaging cross-cultural team members during the product innovation process?

Thank you for your valuable time and contribution to this study!

Appendix G. Questionnaire for Explanatory Research Phase – Local Study Participants

Optimizing Cross-cultural Collaboration for Global Product Innovation Interview Questionnaire June 2011-Feb 2012

Name: (Confidential Information)

Position: (see Appendix C)

Company: (see Appendix C)

Local Team Roles: (see Appendix C)

Nationality: American (8%), Australian (4%), Chinese (42%), Indian (8%), Japanese (8%), Dutch (11%), German (15%), Swedish (4%)

Locations – Subs: Beijing, Shanghai (China), Tokyo (Japan), Singapore, Bangalore (India)

PART I INTERVIEW. Please answer the following questions in considering your experience with global product launch projects at your organization during the past two years (2009-11).

ORGANIZATIONAL CONTEXT

1. What do you find are the key phases of the global product innovation process (concept to market)? In which phases does knowledge-sharing serve a critical role between HQ and subsidiaries?

2. Which type of product/service innovation is most representative of your global launch responsibilities?

_4%_Radical innovation (new concepts and initiatives)

_13%_Incremental innovation (upgrade or improvement upon existing products and concepts)

_83%_Both

3. Are front-end innovation activities (product design and development, marketing and sales) mostly centralized (located at HQ) or decentralized (distributed at strategically important subsidiaries)?

_52%_Centralized

_38%_Decentralized

_10%_Both

4.a. Which of the following best describes your organization's innovation process worldwide?

_12%_Chaotic and disruptive

_27%_Organic and collaborative

_34%_Structured and disciplined

_27%_Customer and relationship-focused

__Other

4.b. How does this process increase and/or decrease innovation? What are strengths and weaknesses?

5. Does the national culture of the company headquarters influence how innovation practices are managed within the organization? If yes, how?

_72%_Yes _18%_No

GLOBAL TEAM PROCESS

6.a. What kind of team leadership style do you feel is necessary for effectively managing and facilitating cross-cultural team collaboration during the global product innovation process (concept to go-to-market)?

6.b. How do you feel that trust can be improved for the local team?

7.a. What kind of team behaviors do you feel are needed in achieving effective collaboration and knowledge-sharing practices for local teams during the global product launch?

**7.b. Do you feel that national culture affects knowledge-sharing behaviors? 87% Yes 13% No
How?**

7.c. What are knowledge-sharing behaviors that are particular to Asian / Chinese cultures?

KNOWLEDGE-SHARING PROCESS

8.a. Which of the following is most representative of team communication flow between HQ and local subsidiaries during the planning phase?

53% HQ to Subsidiary (initiated by HQ)

0% Subsidiary to Subsidiary (between subsidiaries on local and regional levels)

16% Subsidiary to HQ (initiated by subsidiary)

31% HQ to subsidiary to HQ (initiated by HQ with feedback from subsidiary)

8.b. Which of the following is most representative of team communication flow between HQ and local subsidiaries during the execution (go-to-market) phase?

35% HQ to Subsidiary (initiated by HQ)

6% Subsidiary to Subsidiary (between subsidiaries on local and regional levels)

24% Subsidiary to HQ (initiated by subsidiary) – moving towards this model (local drives and informs HQ)

35% HQ to subsidiary to HQ (initiated by HQ with feedback from subsidiary)

9. In which of the global launch cycle phases are local subsidiaries most involved?

11% Ideation/Co-creation

26% Concept Validation (Local market and customers)

15% Product/Service Planning

48% Launch Preparation/Go-to-Market

10.a.1. During the concept/planning and GTM/execution phases,

What is the most critical information that HQ needs from local/regional team members located in key subsidiaries (from local teams and subsidiaries to HQ)?

10.a.2. How is this information gathered?

10.b. What are the greatest challenges to knowledge-sharing and contribution from local team members (from subsidiary to HQ)?

10.c. How do you feel local teams *would be more motivated* to increase knowledge-sharing and contribution during the global product planning and execution phases?

ORGANIZATIONAL RESOURCES

11.a. How is local knowledge shared and diffused in the organization currently?

11.b. During the global product launch project (concept to market), are there organizational resources (systems and tools) that could help facilitate knowledge-sharing and contribution from local team members?

12. How would you find the following activities most support innovation during the global product launch process?

Social networking

Type? _37%_Formal_37%_Informal _26%_Virtual

Sufficient? Yes_33%_ No_67%_

Cross-cultural learning

Sufficient? Yes_22%_ No_78%_

Knowledge-sharing

Sufficient? Yes_33%_ No_67%_

13.a. Do current performance measures include evaluations for team collaboration and knowledge-sharing? _30%_Yes _70%_No

13.b. What are the primary metrics for measuring success of the global product launch project?

14. What do you feel is the best way to create a collaborative space for engaging cross-cultural team members during the product innovation process?

Thank you for your valuable time and contribution to this study!

Resumé de thèse doctorale

L'innovation globale et la collaboration interculturelle: Les mécanismes organisationnels qui déterminent le partage du savoir dans les entreprises multinationales.

Karina R. Jensen

I. Abstract

La mondialisation, l'introduction d'un produit sur le marché, l'adaptation au consommateur représentent des défis permanents pour réussir l'innovation sur le marché à travers les cultures. Un environnement commercial interculturel et interconnecté a créé une demande croissante pour le partage des connaissances dans les entreprises multinationales (EMN). L'incapacité des membres d'une équipe dispersés géographiquement à partager et communiquer efficacement les idées et solutions peut entraîner un manque d'innovation des produits, un retard dans leur introduction, et réduire les ventes et opportunités de marchés. Cela nécessite de la part des dirigeants d'optimiser les connaissances interculturelles de l'équipe afin d'améliorer le design et la livraison de solutions innovantes pour les clients à l'échelle mondiale. Par conséquent cette thèse cherche à examiner et identifier les mécanismes organisationnels qui favorisent la collaboration interculturelle et le partage de connaissances au sein d'équipes dispersées géographiquement, dans l'élaboration d'un processus d'innovation (du front end of innovation).

Cette thèse se base sur l'approche par les ressources et par les connaissances de la firme, où les pratiques cognitives et sociales intégrées jouent un rôle important pour l'innovation. A travers une recherche qualitative j'examinerai les mécanismes organisationnels qui influencent les interactions entre le responsable de projet et l'équipe interculturelle durant les lancements globaux de produit, de la conception du produit jusqu'à sa mise sur le marché. Dans la mesure où il y a peu de recherche empirique sur la collaboration interculturelle et l'innovation global, c'est une opportunité considérable de contribuer à la recherche en management de l'innovation, et d'aider des organisations à développer leurs capacités de partage de connaissances, véritable avantage concurrentiel dans la conception et l'introduction de nouveaux produits sur les marchés internationaux.

L'objectif de cette thèse est d'étudier et démontrer comment les EMN peuvent faciliter le processus de collaboration interculturelle afin de concevoir et de mettre en œuvre

efficacement des stratégies d'innovation pour de nouveaux produits. Cette recherche vise à développer un cadre et un modèle théorique pour la collaboration des équipes interculturelles en répondant à la question suivante : Comment les EMN optimisent la collaboration des équipes interculturelles afin d'améliorer le planning et la mise en œuvre de stratégie globale d'innovation ? Ceci répond aux besoins des organisations de partager les connaissances du marché local entre les équipes interculturelles afin d'accélérer la réactivité aux opportunités du marché à l'international.

II. Question centrale recherche et objectif

L'objectif de cette thèse est d'étudier et démontrer comment les entreprises multinationales (EMN) peuvent faciliter le processus de collaboration interculturelle afin de concevoir et de mettre en œuvre efficacement des stratégies d'innovation pour nouveaux produits. La capacité des équipes interculturelles de partager et communiquer efficacement des informations pertinents sur le marché entre les sièges sociaux et les filiales, peut entraîner un manque d'innovation de produit retarde une introduction d'un produit et réduire les ventes et les opportunités des marchés. Cette recherche se reconcentrera sur les mécanismes organisationnels qui améliorent les processus d'interaction des équipes interculturelles, dans le but de créer et de partager des connaissances contribuant au succès de la mise sur le marché d'un produit à l'international. Ceci répond aux besoins des organisations de partager les connaissances du marché local entre les équipes interculturelles localisées aux sièges sociaux et aux filiales locales, afin d'accélérer la réactivité aux opportunités du marché à l'international.

III. Cadre Théorique

Le paysage commercial mondial en constante évolution exige une mise en marché rapide avec un accent centré sur le client et l'innovation continue à l'échelle mondiale. L'économie qui évolue et le marché exigent une organisation qui peut rapidement innover et s'adapter au changement global. La compétitivité d'une entreprise dépend de sa capacité à développer une capacité dynamique ou difficile à imiter une combinaison de ressources qui comprend la coordination des relations inter organisationnelles (Teece, Pisano et Shuen 1997). L'avantage de la mentalité globale d'une organisation découle de la capacité à construire des ponts cognitifs entre les besoins du marché local et propre à l'entreprise à son expérience mondiale et les capacités (Govindarajan et Gupta, 2001). La tâche cruciale pour la gestion d'entreprise est donc de reconnaître l'encastrement technique externe des filiales et de coordonner l'intégration des résultats d'apprentissage divers (Andersson 2003). Les réseaux

d'apprentissage locaux sont plus susceptibles de permettre des innovations tout en internationaux intra-organisationnelles car les réseaux d'apprentissage montrent la connaissance comme une ressource importante par diffusion encourageante (Tregaskis 2003). La recherche a montré l'importance de la décentralisation, de la crédibilité de gestion filiale, de la communication, ainsi qu'une perspective mondiale dans la détermination des initiatives entrepreneuriales au niveau de la filiale (Birkinshaw 1997, 1998), (Verbeke et al. 2007). La capacité de répondre aux opportunités du marché local et d'adapter les produits et services aux besoins du marché local nécessite un véritable processus de partage des connaissances pour les équipes distribuées globalement.

La reconfiguration et la recombinaison des ressources de connaissances servent un rôle de plus en plus important dans la capacité des multinationales pour obtenir un avantage concurrentiel sur les marchés internationaux. Des recherches récentes ont montré que de comprendre comment les filiales HQ et à l'étranger co-crément des connaissances est une question cruciale (Cui et al. 2005, Regner et Zander 2011). Alors que les marchés deviennent plus dynamiques, il y a la nécessité d'identifier rapidement les besoins particuliers et d'y répondre. Le rôle des mécanismes organisationnels en vue d'accélérer la réactivité et répondre aux demandes du marché est donc d'un intérêt croissant. La relation entre les questions de gouvernance et les processus de connaissance reste l'objet de recherches tandis que la gouvernance des connaissances en tant que concept n'est pas bien étudiée ou comprise (Foss et al. 2010). Des ressources et la combinaison des connaissances sont essentielles à la création de valeur et de réponse à la demande des clients tout en réalisant un avantage concurrentiel grâce à l'innovation continue ainsi que à l'exploitation efficace de l'innovation (Verbeke 2009). Il doit y avoir un équilibre entre des activités d'exploration et d'exploitation et des idées concernant des routines de connaissances particulières, et des capacités de recombinaison. Lors de l'introduction de nouveaux produits et services sur les marchés internationaux, il y a un processus d'interdépendance entre siège social et ses filiales pour les activités de planification et d'exécution. En apportant de nouveaux produits sur le marché, l'utilisation de la multinationale de connaissances en marketing filial se trouve être en incidence directe sur le développement des capacités d'autres filiales ainsi que sur la performance globale de l'entreprise multinationale (Holm et Sharma 2006). La capacité de l'organisation à se recombinaison et la connaissance du marché local pour reconfigurer les filiales, influence sa commercialisation internationale et les capacités de vente.

La demande pour l'organisation du partage des connaissances exige de nouvelles approches de gestion des interactions de l'équipe interculturelle. Plutôt que de gérer les différences culturelles, les équipes de projet internationales devront intégrer les différences et les similitudes culturelles, afin de partager, créer et mettre en œuvre des solutions innovantes pour nos clients qui répondent aux besoins du marché mondial et local. La diversité culturelle devient ainsi une ressource clé dans la conception et le développement des organismes d'apprentissage globaux (Adler, 1997). Pionnier de l'utilisation des dimensions culturelles, Hofstede (1997) a réussi à élargir la sensibilisation et la compréhension des différences régionales et locales et Trompenaars (1997) a montré l'impact des différences culturelles sur les affaires. Cependant, ces théories considèrent la culture nationale en tant que différence plutôt qu'une ressource. La gestion des différences culturelles ne supporte pas entièrement les besoins dynamiques et changeants de la MNC. Les organisations devront miser sur la diversité culturelle plutôt que de s'occuper de gérer les différences culturelles. Le déni de la diversité culturelle a été montré comme ayant un effet négatif sur les performances d'innovation et de performance de projet (Bouncken, Ratzman, et Winkler, 2008). Holden (2002) a fait valoir que la gestion interculturelle peut servir efficacement en tant que ressource organisationnelle en facilitant la traduction interactive et le partage des connaissances grâce à la compétence participative. Le management interculturel est donc conçu en termes d'apprentissage collaboratif, du transfert et du partage des connaissances et d'expérience. De cette façon, la gestion interculturelle offre un avantage concurrentiel dans la facilitation de la connaissance qui permet de réaliser des objectifs organisationnels grâce à des solutions de nouveaux produits qui répondent aux attentes du marché mondial et local.

Depuis la mise en œuvre de nouveaux produits de développement (NPD) des programmes a connu différents niveaux de succès, de nombreuses études ont mis l'accent sur l'identification des problèmes associés et de l'efficacité (Shepherd et Ahmed, 2000). Wong (2002) met en évidence une lacune de la recherche en mettant l'accent sur la nécessité pour la recherche qui s'étend et intègre les connaissances et les méthodes existant dans le marketing NPD et international pour la théorie et les pratiques au sein de l'avancement de gestion des produits mondiale. Kleinschmidt, de Brentani et Salomo (2007) ont avancé de cette recherche par le biais d'un modèle de performance du programme mondial de NPD qui montre la nécessité d'une culture de l'innovation mondiale (la prise de risque, l'ouverture aux marchés mondiaux et les clients) et de l'intégration mondiale de la connaissance (la capture et l'intégration des connaissances à travers les frontières). Bien que les auteurs insistent sur

l'importance de l'intégration mondiale de la connaissance et des capacités de préparation du lancement, ils n'ont pas exploré la façon dont ce processus est réalisé dans l'orchestration de ressources de l'entreprise pour améliorer la performance globale de lancement de produit. En outre, la création de capital social est important pour l'établissement de relations solides entre les personnes qui ont connaissance de la dispersion des activités de l'organisation liée à l'innovation globale des nouveaux produits (Athanassiou, Barczak, et McDonough, 2006). Une plus grande interaction sociale et les liens de réseau montrent plus de créativité pour les équipes de projet NPD (Chen, Chang, et Hung, 2008). Les réseaux et le capital social jouent un rôle important dans le développement de la collaboration d'équipe interculturelle grâce à la confiance des capacités, à la créativité d'équipe, et au partage des connaissances au cours du processus d'innovation mondiale. Les capacités sociales des capitaux et le partage des connaissances sont donc en train de devenir des solutions possibles pour optimiser le travail en équipe interculturelle et l'innovation dans l'organisation.

IV. Design de Recherche

A. Question de Recherche

Cette recherche vise à développer un modèle théorique pour la collaboration des équipes interculturelles en évaluant les mécanismes organisationnels qui facilitent l'interaction interculturelle. Pour poursuivre cet objectif, nous nous rattacherons à répondre à la question suivante :

Comment les EMN optimise la collaboration des équipes interculturelles afin d'améliorer le planning et la mise en œuvre de stratégie globale d'innovation ?

B. Méthodologie

Cette thèse se concentre sur une recherche qualitative en adoptant une approche méthodologique mixte. Outre les entretiens avec les experts dans ce domaine, une revue littéraire a été réalisée sur les théories et les pratiques en gestion de l'innovation, en gestion des connaissances, et en gestion interculturelle. Appliquant l'approche par les ressources et les connaissances de la firme, le cadre théorique qui guidera cette recherche mobilise la théorie des ressources ou Eisenhardt et Martin ont montrés que les capacités à travers lesquelles les managers intègrent, construisent, et reconfigurent les ressources et les compétences internes et externes de la firme, sont une source d'avantage concurrentiel. De plus, l'approche par les connaissances soulignent que les connaissances sont une des

ressources les plus importants pour aider les entreprises à acquérir un avantage concurrentiel sur les marchés internationaux (Grant 1996).

Les phases exploratoire et explicative nécessiteront les méthodes différentes. Dans la phase exploratoire, une recherche inductive sera entreprise pour la revue de la littérature et les entretiens avec les managers seniors qui collaborent avec des équipes interculturelles, impliqués dans l'introduction de produits globaux au sein d'entreprises multinationales. En appliquant une recherche synergique (Adler 1983) cette recherche évaluera comment les mécanismes organisationnels influencent l'interaction entre le chef de projet/manager senior et l'équipe interculturelle, où les patterns universels et spécifiques (culturellement) sont créés à partir d'une utilisation positive des similitudes et de différences culturelles. Ce type de recherche implique également l'identification des processus et structures particulières d'EMN qui sont efficaces pour la collaboration interculturelle entre les membres de l'organisation. Les découvertes de la phase exploratoire aideront à identifier les résultats des processus, et les mécanismes organisationnels pertinents pour la phase explicative. L'explication par mécanisme peut fournir une explication logique clé pour un design de recherche processuelle en clarifiant l'ambiguïté causale, et comment le processus fonctionne à travers l'activation de mécanismes qui génère de résultats de façon interdépendant (Pajunen 2006).

Comme cette recherche se concentre sur le front end of innovation, j'ai sélectionné le projet de lancement d'un produit global comme unité d'analyse pour étudier le processus de collaboration depuis la conception du produit jusqu'à sa mise sur le marché. Afin d'avoir une meilleure compréhension du processus de collaboration durant le projet de lancement d'un produit global, le chef de projet international a été sélectionné comme l'acteur dans cette recherche dans la mesure où le manager senior est responsable à la fois du processus d'innovation et collaboration avec les équipes interculturelles. Cette recherche se basera sur une recherche exploratoire et explicative, et utilisera une approche méthodologique mixte, basée sur le terrain de recherche avec des managers d'équipes internationaux et régionaux au sein d'entreprises EMNs ayant leur sièges sociaux aux Etats-Unis, Europe, et en Asie. Le but étant de contribuer à la recherche et à la compréhension sur la manière dont les organisations peuvent utiliser efficacement les connaissances interculturelles pour renforcer le processus de front end innovation et les résultats sur les marchés internationaux.

La première phase de recherche résulte d'entretiens avec 45 dirigeants et managers seniors responsables de la gestion d'équipes interculturelles et des produits globaux, du marketing, et de l'innovation dans 35 EMNs basés aux Etats-Unis, en Europe, et en Asie (voir annexe A

pour la liste des participants). Cette phase a été de nature exploratoire et a impliqué ces entretiens semi-structurés conduit par un chercheur. Un échantillon de diverses industries et de localisation a été recherché afin d'éviter des biais, et d'identifier des processus universels pour l'unité d'analyse. Des entretiens ont inclus un questionnaire, et ont été conduits par téléphone et durant des visites en entreprises d'effectuer entre août 2010 et mars 2011. Cette étude a permis d'améliorer l'instrument d'enquête tout en identifiant les mécanismes organisationnels qui influencent les processus de lancement de produits globaux, de la planification, à la phase de conceptualisation des produits, jusqu'à la phase de mise en œuvre et de mise sur le marché. Durant la seconde phase de la recherche (entre juin 2011 et janvier 2012), il y a eu une approche explicative impliquant une seconde phase d'entretiens en deux groupes : 1) les managers seniors, basés au sein des sièges sociaux, responsables du planning et de la gestion de projets de lancement de produits globaux et 2) les membres de l'équipe régional et local responsable de la mise en œuvre et des activités de la mise sur le marché dans les filiales localisées en Asie. Les résultats de la recherche explicative incluent les entretiens avec 60 managers seniors localisés dans les sièges sociaux, et 26 managers régionaux et locaux basés dans les filiales asiatiques. Une comparaison des réponses des managers d'équipe local (basés dans les filiales) et des managers basés dans les sièges sociaux améliore la compréhension des vues locales et globales du processus de collaboration de projet afin d'examiner entièrement, et de valider la question de recherche.

Il est utile d'examiner le processus de lancement global à travers un contexte extrême qui implique des secteurs des marchés concurrentiels. Des managers seniors et chefs de projets travaillant dans l'industrie automobile et dans l'industrie de l'information et de la communication ont été sélectionnés dans la mesure où ces secteurs se caractérisent par une compétition croissante, des besoins d'adaptation croissant, une réduction de temps de l'introduction sur le marché, par des innovations technologiques radicales. Par conséquent, il est nécessaire d'identifier une région ayant un fort potentiel de croissance ainsi qu'une forte intensité concurrentielle et une plus grande distance culturelle. Comme les découvertes de la recherche exploratoire trouvées dans la région asiatique correspondent à ces critères, les managers travaillant pour les filiales localisées en Asie (Japon, Chine, Singapour, et Inde) ont été sélectionnés et interrogés pendant un séjour de recherche et à l'issue de celui-ci. L'unité d'analyse est basée sur l'étude transversale en utilisant une rétrospective en discutant les plus récents processus de lancement de produits globaux, en évaluant les interactions entre les managers seniors et les chefs de projets basés dans les sièges sociaux, et les membres de

l'équipe interculturelle bases dans les filiales a travers le monde durant les phases clés de lancement du planning et la conceptualisation de produit, ainsi que la mise en œuvre et de la préparation de la mise sur le marché. Le terrain de recherche inclus des entretiens, questionnaires, visites sur place, observations, et la collecte de documents de presse de l'entreprise. Les critères pour le terrain de recherche ont bases sur les éléments suivants :

- Organisation – EMNs ayant des opérations multinationales avec des équipes repartis à l'échelle global, et une concentration sur l'introduction de produits globaux pour des marchés B2C et B2B.
- Culture et Géographie – EMNs ayant leurs sièges sociaux en Amérique du Nord, en Europe, et en Asie.
- Projet/Unité d'Analyse – Concentration sur un projet de mise sur le marché de produits globaux et en charge de développer et délivrer des concepts et éléments de mise en œuvre pour l'introduction des produits globaux.
- Industries - La recherche de terrain se concentreront sur les entreprises multinationales à travers les industries, en mettant l'accent sur les entreprises qui ont été reconnus pour l'innovation de produits et services par le biais classements:
 - La phase exploratoire: Cette étude porte sur les cadres et les cadres supérieurs ayant des responsabilités dans la gestion des produits au niveau mondial, la commercialisation et l'innovation.
 - La phase explicative: Cette étude porte sur deux groupes: les cadres supérieurs directement responsables de projets globaux de lancement de produits et des équipes multiculturelles, et les gestionnaires régionaux directement chargés de l'exécution lancement de produit local dans les technologies de la communication de l'information et l'industrie automobile.

La collecte des données

La collecte des données s'est déroulée de l'Août 2009-Janvier 2012 à travers deux phases de recherche. Les instruments pour la recherche sur le terrain comprennent un questionnaire, d'entrevues et d'observation. La validité interne du modèle proposé a été demandée par triangulation en utilisant la théorie des critiques approfondies dans la littérature en matière d'innovation, la gestion des connaissances, et la gestion interculturelle. Le filtrage est basé sur la revue de la littérature et sur l'expérience des gestionnaires dans l'étude pilote. La fiabilité a été recherchée par le protocole questionnaire, la collecte des données des entrevues, et l'utilisation de noms de sociétés. Les entrevues avec les dirigeants et les cadres supérieurs ont été faites grâce à l'accès du chercheur à des réseaux professionnels.

Limites

Le contexte de l'étude est appliqué à des organisations multinationales qui sont axées sur l'innovation mondiale par l'introduction de nouveaux produits et services. Cette phase exploratoire est un processus d'enquête, dans laquelle le chercheur est principalement lié à l'identification des facteurs organisationnels qui contribuent à l'innovation produit global. La deuxième phase est une approche explicative afin de tester des hypothèses élaborées à partir de la première phase de recherche. Le cadre de communication, des processus et des outils seront déterminés par les gestionnaires sélectionnés et les cadres responsables de lancement de produit leader mondial et des initiatives d'innovation dans leurs organisations. Cette étude reste limitée à la détermination des pratiques qui sont importantes pour faciliter la collaboration interculturelle et l'innovation au sein de l'organisation. L'étude reste également limitée à des entrevues en temps réel et des données d'enquête recueillies auprès de cadres supérieurs et dirigeants dans les industries sélectionnées.

V. Découvertes

A. Phase exploratoire

L'étude exploratoire a permis de découvrir les pratiques et les défis clés pour les chefs de projet dans la gestion et de faciliter la collaboration en équipe interculturelle pendant le cycle de lancement de produit global. En répondant aux attentes des clients locaux, le chef de projet et l'équipe de lancement sont confrontés à des pressions sur la réalisation de mise sur le marché, des coûts et des revenus, dans la différenciation des produits, et dans les résultats des ventes internationales. En réponse aux demandes du marché mondial, les organisations montrent un intérêt croissant pour le développement d'une culture d'innovation forte en facilitant la génération d'idées, la communication et la collaboration pour les équipes géographiquement dispersées afin d'assurer la réactivité du marché local. Cependant, les processus de collaboration, posent toujours un défi pour les chefs d'équipe, en particulier quand il s'agit de développer la confiance, l'engagement et le dialogue interactif. En stimulant l'innovation des produits et services, on rencontre des différences culturelles à prendre en compte pour la gestion de génération d'idées, les conflits et le partage des connaissances. Les ressources organisationnels de communication et d'apprentissage donnent un accès limité à la formation interculturelle, au processus d'équipe, et au partage des connaissances véhicules même si une majorité énumérée culture comme un élément prédictif.

Les équipes géographiquement distribuées ont besoin de plus de communication à distance ce qui met une forte dépendance à des technologies telles que la messagerie électronique, les conférences Web, les portails Web, les conférences vidéo et outils de médias

sociaux. Les organisations commencent à mettre en œuvre des plateformes de connaissances spécialisées et des technologies collaboratives, ainsi qu'elles accroissent les échanges formels et informels et la communication à travers les géographies. Ceux qui ont indiqué le plus de satisfaction avec le partage des connaissances ont cité le rôle de la culture et les valeurs organisationnelles équipe ont porté sur la création d'idées, l'apprentissage et le partage entre les cultures. Les outils et les processus organisationnels ont mis l'accent sur la communication en direct et en ligne et l'interaction où les membres de l'équipe pourraient facilement se connecter, se rencontrer, et échanger des idées et des pratiques. Bien que les médias sociaux soient de plus en plus disponibles, il y a un taux d'adoption lente dans l'utilisation de ces technologies et les outils. Une préférence est accordée au face-à-face et la communication vocale grâce à une combinaison de pratiques de réseautage formel et informel.

Les ressources organisationnelles et les mécanismes organisationnels

Comme l'ont démontré les recherches de terrain, une organisation avec une culture de l'innovation mondiale semble faciliter la collaboration en équipe interculturelle à travers des valeurs et des pratiques communes. Les organisations ayant de l'innovation de levier de la diversité culturelle forte cultures avec un accent sur la transparence, la communication, la collaboration et la génération d'idées. En développant une culture organisationnelle qui favorise l'innovation, les participants ont souligné le rôle du partage des connaissances, la contribution de l'équipe dans le monde entier, et l'importance de la communication tout en assurant la réactivité et l'engagement locaux des ressources locales. Ce résultat diffère de la Kleinschmidt, de Brentani, et Salomo étude (2007) où la participation de la haute direction et où la formalité processus de NPD (avec engagement de ressources) ont été considérés comme le plus important (les participants à l'étude étaient les seuls responsables pour les programmes de NPD dans les multinationales américaines et européennes). Cette étude exploratoire étend encore la Kleinschmidt, de Brentani, et le modèle Salomo en identifiant les caractéristiques particulières de la culture d'une organisation mondiale de l'innovation. En outre, l'étude exploratoire introduit la compréhension culturelle comme un élément clé dans la construction d'un environnement organisationnel pour l'innovation qui n'a pas été abordée dans la littérature sur la culture organisationnelle, ni l'innovation organisationnelle. Les éléments de la compréhension culturelle, la collaboration, et la créativité nécessitent des processus complémentaires pour développer un climat d'innovation. Une prise de conscience de la mentalité mondiale et interculturelle de permettront la communication et l'échange au sein des équipes culturellement diversifiées. La génération d'idées et la pensée créatrice sont facilitées

par le contribution mondial, tandis que l'équipe de collaboration et de transparence sont renforcées par le partage des connaissances et la réactivité locale. Ces valeurs organisationnelles réussissent à créer une culture de l'innovation mondiale qui fait de la diversité culturelle un atout.

L'orientation stratégique du projet de lancement de produit est un élément essentiel dans le développement des capacités de collaboration. Comme le montre l'étude exploratoire, la stratégie d'innovation produit peut influencer le degré de partage des connaissances qui se produit en fonction de l'accent mis sur la centralisation ou la décentralisation. Il y a aussi la prise en compte de l'autorité fonctionnelle et du contrôle entre l'ingénierie et les fonctions des produits en comparaison avec la commercialisation et la vente. En explorant le flux de communication entre le siège et les filiales, il est aussi devenu évident qu'une structure de partage des connaissances pour encourager davantage l'initiative filiale est nécessaire pour augmenter le flux de communication des filiales. La recherche exploratoire a montré que la majorité de la communication est initiée et contrôlée par le siège social qui permet un dialogue depuis la haut vers le bas. Enfin, c'est le chef de projet de lancement et les compétences en leadership de prendre en compte pour faciliter la compréhension culturelle, la communication et la collaboration de l'équipe répartie géographiquement.

Afin de favoriser et soutenir la collaboration inter-culturelle au cours du projet de lancement de produit mondial, les organisations ont encore besoin d'examiner le partage des connaissances et des ressources d'apprentissage qui permettent d'améliorer l'accessibilité et l'engagement des équipes mondiales. Bien que les organisations s'efforcent vers une culture globale, innovante et collaborative, les systèmes et les outils actuellement disponibles ne garantissent pas nécessairement un dialogue interactif dans le monde entier. Comme il a été démontré par l'étude exploratoire, les flux de communication organisationnelle visent à concentrer les équipes sur le siège mondial important plus que des filiales locales, qui pourraient jouer comme un défi dans l'échange de collaboration entre membres de l'équipe mondiale et locale. Les réponses concernant l'organisation des ressources d'apprentissage ont en outre souligné un manque d'engagement à 19% en utilisant un véhicule de partage des connaissances au cours du processus d'innovation. La question est donc centrée sur la façon dont les organisations peuvent encourager une plus grande contribution des membres de l'équipe de travail dans les filiales locales des pays. En mettant l'accent sur la collaboration et la visibilité, on peut se demander pourquoi y a-t-il encore des défis à engager les membres des équipes locales? Comment l'organisation peut assurer un échange plus dynamique entre les

membres de l'équipe mondiale et locale? L'étude exploratoire a donc mis en lumière les pratiques actuelles de l'organisation et a soulevé des questions concernant les défis dans la conception et la réalisation de nouveaux produits à travers le monde.

Les équipes ont besoin de partager efficacement les connaissances culturelles pour développer des solutions de produits innovants qui répondent aux besoins du marché local. Cela exige des processus de communication de l'organisation qui facilitent le partage des connaissances culturelles et contribuent ainsi à des solutions innovantes sur le marché et à des initiatives de projets réussis dans les différents pays. L'étude exploratoire a permis de découvrir plusieurs questions et lacunes de la recherche qui ont besoin d'être davantage explorées et examinées. La phase de recherche explicative est nécessaire pour évaluer les processus de communication et des outils organisationnels qui améliorent l'interaction interculturelle et le dialogue aux niveaux mondial et local. Il faut également examiner les différences culturelles pour le partage des connaissances entre les membres de l'équipe de pays différents. En outre, l'organisation des processus d'apprentissage et le partage des connaissances doivent encore être explorés en termes d'adoption et d'efficacité dans l'amélioration de la collaboration interculturelle. Dans cette étude, les participants n'ont pas trouvé que les outils de médias sociaux pourraient améliorer ou apporter un bénéfice à la collaboration interculturelle, ce qui montrait une préférence pour l'interaction en direct. Les médias sociaux et technologies de la communication Web, de plus en plus disponibles au sein des organisations, n'ont pas été encore activement utilisés par les équipes réparties géographiquement travaillant sur des projets de lancement de produits. Depuis, les médias sociaux pratiques liés à l'innovation organisationnelle n'ont pas encore reçu beaucoup d'attention des chercheurs, ce qui fournit une occasion d'explorer et d'examiner de nouvelles solutions et technologies qui peuvent améliorer les interactions pour les équipes répartis géographiquement.

Les routines et les capacités

Considérant la littérature actuellement disponible limitée, il doit y avoir une plus grande focalisation sur la recherche au sujet du processus d'innovation front-end où la conception et la planification de nouveaux concepts de produits sont déterminés. Dans cette étude exploratoire, les activités d'innovation front-end (planification, l'idéation, et les phases de validation) ont été identifiées comme des routines pour influencer la collaboration du projet et la performance du lancement mondial. L'étude exploratoire a découvert le rôle interdépendant de ces phases, l'importance de la communication ouverte et le partage des

connaissances pour engager les membres de l'équipe. La phase de recherche explicative a besoin d'examiner les processus qui renforcent la conception ainsi que l'exécution du projet de lancement de produit global. Comme la revue de littérature et l'étude exploratoire l'ont montré, il y a un écart entre la recherche et le besoin d'organisation pour l'intégration et l'avancement de la théorie et les pratiques pour la conception ainsi que l'exécution des innovations de produits nouveaux. La littérature qui a suffisamment exploré les capacités de traitement NPD n'a pas encore étendu la même rigueur aux capacités de processus d'innovation du front-end, afin d'améliorer la compréhension de la relation entre la conception et l'exécution du marché de nouveaux produits.

Il y a beaucoup à apprendre sur le développement des capacités quant à l'utilisation des ressources de connaissances à explorer le lien entre front-end de l'innovation, NPD et l'exécution GTM. Le marché concurrentiel et changeant mondial exige un processus agile qui peut développer des capacités dynamiques grâce à la collaboration et au partage des connaissances. Cette étude exploratoire a identifié les facteurs organisationnels et les processus de partage des connaissances qui doivent être pris en considération pour parvenir à une collaboration efficace entre les chefs d'équipe et des équipes géographiquement distribuées lors du lancement mondial du produit. L'étude exploratoire a découvert le rôle du processus d'innovation front-end dans l'engagement d'équipe où les routines doivent encore être évaluées au cours de la phase de recherche explicative. Afin de développer pleinement le cadre théorique et le modèle proposé, l'étude explicative devra se concentrer sur la façon dont la connaissance du marché local est recueillie et partagée à travers les interactions qui se produisent pendant les phases de planification et l'exécution du lancement mondial du produit. Cela permettra d'améliorer la compréhension des mécanismes qui déterminent la collaboration et le partage des connaissances dans la réalisation des objectifs globaux de lancement de produits.

Performance lancement mondial

Bien que le lancement de produit global implique l'examen de divers marchés, des cultures et des langues, il y a un manque de recherches concernant le processus de collaboration nécessaire pour réussir l'amélioration de nouveaux produits sur les marchés locaux. Compte tenu que l'impact de l'exécution du lancement de produit a une efficacité sur l'innovation mondiale et du succès sur le marché, la configuration et l'orchestration de la connaissance du marché local peuvent être considérées comme une ressource et un avantage compétitif. L'orchestration et la reconfiguration de la connaissance partagée entre les

membres de l'équipe interculturelles dans le contexte du lancement du produit global peuvent donc créer et façonner de nouvelles solutions clients et des opportunités de marché qui servent comme un avantage concurrentiel pour les multinationales sur les marchés internationaux. En répondant aux attentes des clients locaux, l'équipe produit global lancement est face à des pressions en réduisant le temps de mise sur le marché, la réalisation de coût et les objectifs de recettes, la différenciation des produits, et les résultats des ventes internationales. Il est également l'examen des mesures du rendement et l'évaluation des processus de l'équipe tels que le partage des connaissances. En réponse aux demandes du marché mondial, les organisations montrent un intérêt croissant pour développer une culture d'innovation forte en facilitant la compréhension culturelle, la créativité, et la collaboration pour les équipes distribuées globalement en vue d'assurer la réactivité du marché local. Dans cette thèse, je propose que la collaboration à travers le partage des connaissances est influencée par des mécanismes et des routines organisationnels qui à son tour impactent la performance des projets. Il est donc nécessaire d'examiner de plus près ces constructions pendant la phase de la recherche explicative afin de tester les hypothèses et d'évaluer les résultats.

Développement d'hypothèses pour la phase explicative

Les résultats de l'étude exploratoire sont précieux dans la construction des hypothèses pour évaluer les mécanismes organisationnels afin de comprendre leur influence et l'impact sur le leadership d'équipe et sur la performance du projet pour la conception et la réalisation de nouveaux produits. Sept hypothèses ont été élaborées à partir de la phase de recherche exploratoire dans le but d'identifier les mécanismes organisationnels qui influencent le processus de partage des connaissances. Les résultats ont montré que le partage des connaissances joue un rôle crucial dans la collaboration interculturelle au cours du processus d'innovation front-end. Afin d'étudier les mécanismes de gouvernance des connaissances au niveau de l'entreprise et leur impact sur le partage des connaissances des comportements des chefs de projet au niveau individuel, les hypothèses ont été construites afin d'identifier les mécanismes spécifiques d'organisation et de causalité qui influencent la collaboration et le partage des connaissances au cours du l'avant fin processus d'innovation.

C. Phase explicative

Le but de l'étude explicative est d'identifier les interactions spécifiques entre le chef de projet et l'équipe répartie géographiquement pour les phases clés du projet de planification et d'exécution au cours du projet de lancement de produit global. L'intention est de valider les résultats concernant les mécanismes d'organisation de la phase exploratoire et de continuer à

rechercher et identifier les mécanismes de causalité. L'étude explicative est menée au niveau directionnel ou individuel où le gestionnaire principal et chef de projet est basé au siège, tout en facilitant la communication et la collaboration avec des équipes géographiquement distribuées, principalement basées dans les régions du monde tels l'Amérique du Nord (Etats-Unis), l'Europe et l'Asie. Cela permet l'explication des phénomènes identifiés dans la phase exploratoire concernant les mécanismes organisationnels qui influencent sur la collaboration interculturelle. En outre, l'étude permet l'identification des interactions causales concernant les incidents critiques et des résolutions par le chef de projet ainsi que les défis dans la réalisation de la collaboration interculturelle au cours du processus de lancement de produit global, de l'idée au marché.

Les hypothèses ont été testées dans l'évaluation des interactions causales (les incidents et les résolutions) qui peuvent influencer les interactions entre le senior manager / chef de projet et les membres de l'équipe interculturelles responsables du lancement mondial du produit. J'ai d'abord réexaminé le rôle des systèmes d'organisation et les ressources disponibles pour les cadres supérieurs et de leurs équipes en vue de faciliter l'innovation produit de la conception à l'exécution. Ensuite, je me suis concentrée sur les incidents critiques, les défis et les résolutions des dirigeants de projets dans la gestion des interactions avec les équipes distribuées au niveau mondial. J'ai ensuite étudié et décrit les routines et les capacités qui influencent la collaboration et le partage des connaissances. Les résultats de la phase explicative ont aidé à développer le modèle des mécanismes organisationnels qui facilitent le partage des connaissances et la collaboration. Afin de fournir une vue approfondie des pratiques au cours de la phase explicative, je discute des opinions des chefs d'équipe mondiaux et de leur expérience dans la facilitation de la collaboration interculturelle pour des projets globaux de lancement de produits ainsi que des points de vue et de l'expérience de chefs d'équipe régionaux dans l'Asie qui sont responsables pour faciliter la communication avec le chef de projet et gestionnaire de la haute direction basée au siège.

En explorant le rôle des membres des équipes locales dans les filiales au cours du projet de lancement de produit global, on voit comment les résultats de la recherche ont montré que les membres subsidiaires sont principalement impliqués dans les détails tactiques de la préparation du lancement et de go-to-market de mise en œuvre. Certaines organisations ont assuré plutôt la participation à la phase de validation afin d'assurer l'adaptation des produits locaux tandis que seulement quelques organisations ont permis la participation entre le siège et les filiales de l'idéation et la planification. Les fonctions d'idéation et de

planification ont été considérées comme des rôles de siège social de gestion en matière d'évaluation pour organiser les besoins du marché et les opportunités mondiales. D'autre part, les conclusions de la section relative à l'orientation stratégique ont montré un intérêt croissant relatif à la décentralisation et la réactivité du marché local. En outre, la section sur la culture organisationnelle et le climat ont pointé un fort accent sur la clientèle et l'orientation vers le marché pour les gestionnaires du siège social et de leurs organisations. Compte tenu de l'attention accrue accordée à la connaissance du marché local, il semble que la collaboration et le soutien des membres de l'équipe et des gestionnaires locaux sont d'une importance croissante à la réussite du projet de lancement de produit. Il est donc nécessaire d'étudier les interactions entre le cadre supérieur responsable pour le projet de lancement mondial basé au siège et les membres de l'équipe subsidiaires chargés de l'exécution du marché local.

Afin d'explorer plus avant les compétences de leadership mondial de l'équipe identifiées dans la phase exploratoire, les participants de l'étude ont été interrogés sur ce type de leadership, s'ils le sentaient nécessaire pour gérer efficacement et faciliter la collaboration en équipe interculturelle au cours du processus d'innovation produit global (de la conception à go-to-market). Les quatre styles de leaderships identifiés dans cette étude étaient leadership directif, le leadership inclusif, le leadership de communication, l'autonomisation et le leadership. Afin d'explorer les éléments clés de renforcement de la confiance pour l'équipe interculturelle impliquée dans le projet de lancement mondial, les chefs d'équipe ont été interrogés sur la confiance, si elle pourrait être améliorée au sein de l'équipe. Il y avait quatre thèmes spécifiques identifiés dans l'amélioration de la confiance avec des équipes multiculturelles au cours du projet de lancement de produit mondial - interaction sociale, communication fréquente et ouverte, loi et tenue de ses promesses, et la contribution du projet. Ces thèmes ont indiqué le type d'actions et de compétences qui aident le chef de projet à établir la confiance avec les équipes de cross-culturelles et géographiquement distribuées.

Ensuite, j'ai examiné le rôle de la culture dans le partage des connaissances en demandant aux participants d'étudier comment la culture peut influencer le partage des connaissances. En passant en revue les commentaires des participants à l'entrevue, j'ai noté plusieurs points de vue communs ainsi que des interprétations divergentes concernant l'expérience des cadres supérieurs et chefs d'équipe en vue de faciliter la collaboration pour les équipes géographiquement dispersées et interculturelles. Leurs observations et leurs expériences ont porté sur quatre domaines distincts de partage des connaissances: la structure, la puissance, l'ouverture et l'initiative. En répondant à la place de la culture nationale en

affectant les comportements de partage des connaissances, les participants de l'étude ont fait part des références spécifiques aux cultures qu'ils jugeaient plus représentatives de partage des connaissances spécifiques relatives à la structure des comportements, la puissance, l'ouverture, et l'initiative. Les cultures qui ont été examinées plus en détail pour chaque région incluaient les États-Unis (Amérique du Nord), l'Allemagne, la France, et Royaume-Uni (Europe), le Japon, la Chine et l'Inde (Asie).

Afin d'explorer les interactions spécifiques entre le directeur du siège et les équipes des filiales, les participants de l'étude ont été invités à identifier et décrire les éléments suivants au cours des deux phases critiques du projet de planification et d'exécution: 1) l'information critique nécessaire à partir de membres de l'équipe locale, 2) les défis ou des incidents critiques dans le partage des connaissances et la contribution des membres de l'équipe locale, et 3) comment les membres des équipes locales seraient plus motivés pour accroître le partage des connaissances et la contribution. En examinant l'information recherchée par les leaders mondiaux du projet pour la phase de planification, on note une forte concentration sur le marché local, le client, et la connaissance des produits.

En cherchant une compréhension en profondeur des particularités de partage des connaissances et des défis pour diriger des équipes mondiales, les cadres supérieurs et chefs de projet ont été interrogés sur les plus grands défis en vue de faciliter le partage des connaissances et la contribution des membres de l'équipe locale. Les résultats ont été organisés et présentés suivant quatre domaines principaux incluant les défis de l'expérience - une communication ouverte et la transparence d'équipe, l'organisation de partage des connaissances pratiques, le processus de planification du projet, et la compréhension stratégique des équipes locales. La section précédente (au sujet des informations essentielles) indiquant la phase de planification démontre un accent particulier est mis sur l'accès et le partage de connaissance du marché local.

Afin d'explorer les incitations possibles et les raisons pour relever les défis dans la direction d'équipes géographiquement distribuées et en facilitant le partage des connaissances pratiques au cours du projet lancement mondial, les cadres supérieurs et chefs de projet ont été interrogés sur la façon dont ils se sentent membres de l'équipe locale dans les filiales, et s'ils seraient motivés pour augmenter le partage des connaissances et la contribution au cours des phases de planification et d'exécution. Leurs commentaires ont été examinés pour établir les similitudes et les différences à travers le codage de recherche, puis regroupés en des catégories particulières pour l'analyse. Les résultats ont été organisés et présentés en six

thèmes principaux qui influent sur la motivation - la reconnaissance, la réactivité, la responsabilisation, l'engagement, les systèmes organisationnels, et des incitations. Les chefs de projet global percevant ces thèmes pourraient accroître la motivation des membres de l'équipe locale dans le partage des connaissances au cours du projet de lancement.

Depuis que j'ai voulu déterminer le type de partage des connaissances structure et les outils de communication les plus efficaces pour faciliter la collaboration interculturelle, les participants à l'étude ont été interrogés sur l'organisation de partage des connaissances pratiques à travers deux questions connexes: 1) la manière dont les connaissances locales sont actuellement partagées et diffusées dans l'organisation et 2) les ressources organisationnelles (systèmes et outils) qui pourraient faciliter le partage des connaissances et la contribution des membres de l'équipe à travers le monde. En vue de rechercher des solutions possibles qui rendraient plus efficaces le partage des connaissances des processus et des outils, les participants de l'étude ont été interrogés sur les ressources organisationnelles (sous la forme de systèmes de communication et des outils) qui pourraient faciliter le partage des connaissances et la contribution des membres de l'équipe. Les besoins en ressources organisationnelles qui ont reçu le plus grand nombre étaient les réponses centrées sur les voyages accrus et face-à-face, l'engagement local, un espace commun pour la collaboration en équipe interculturelle, les plate-formes technologiques pour les idées et le partage des connaissances, et un environnement organisationnel favorable avec le temps pour l'apprentissage et le partage des connaissances interculturelles. L'étude a montré un vif intérêt pour la création de l'espace, du temps et des ressources dédiées à l'innovation.

C. Entrevues avec les gestionnaires locaux dans les filiales chinoises et asiatiques

L'étude des motifs impliquant les chefs de projet a présenté les résultats globaux concernant les mécanismes organisationnels et de causalité qui influencent la collaboration interculturelle au cours du projet de lancement de produit global. Toutefois, ces résultats ont été présentés du point de vue des cadres supérieurs responsables de l'initiative de lancement ainsi que la gestion et la facilitation des équipes interculturelles et géographiquement répartis. Bien que ces gestionnaires aient été identifiés comme les sources les plus appropriées, principalement en raison de leur rôle en tant que facilitateurs de connaissances entre les membres de l'équipe du siège social et les membres des équipes locales dans les filiales, il est également nécessaire de comparer leurs points de vue avec les perspectives des gestionnaires des équipes locales et membres de l'équipe de afin de valider complètement la question de recherche. Outre des entretiens avec 60 cadres supérieurs basés au siège, le chercheur a aussi mené des entrevues

avec 26 questionnaires régionaux et locaux basés dans les filiales asiatiques d'Europe et dans les multinationales américaines. Une comparaison des réponses des participants locaux à l'étude en Asie avec les réponses des chefs de projet globaux basés au siège améliore la compréhension des perspectives et des vues des sièges et des filiales dans le but d'examiner à fond et de valider la question de recherche ainsi que de confirmer les hypothèses.

Les points de vue des équipes locales ont fourni de précieuses informations relatives à des valeurs culturelles particulières et à des comportements, qui peuvent influencer sur le partage des connaissances en Asie et surtout en Chine. En examinant le partage des connaissances pratiques chinoises et les différences culturelles, il est devenu clair que les styles de puissance, la prévention des conflits, la propriété, et la communication peuvent servir de défis pour le chef de projet et l'équipe répartie géographiquement. Comme discuté dans la section du partage des connaissances pratiques interculturelles avec les chefs de projet global, le partage des connaissances pratiques en Asie en matière de forces générales offrent dans la structure de partage des connaissances la réalisation d'exécution efficace. Cependant il y a des défis à la mesure de l'ouverture et l'initiative prise par les membres de l'équipe en raison du rôle de la gestion de l'alimentation dans la hiérarchie organisationnelle. L'étude locale a montré que les vues traditionnelles de la concurrence, la connaissance en tant que puissance, le fait de sauver la face, cela peut être changé en mettant l'accent sur l'objectif commun pour la réalisation d'équipe et le succès organisationnel.

Afin de comprendre les particularités de partage des connaissances faisant défis du point de vue équipe locale, les questionnaires des équipes locales pour la Chine et la région Asie ont été interrogés sur les plus grands défis au partage des connaissances et la contribution des membres des équipes locales basées dans les filiales, à l'équipe de gestion siège social. Les vues de participants locaux à l'étude locales, qui diffèrent de celles des chefs de projet globaux, ont porté sur le manque d'implication locale dans le processus de planification et de la commercialisation et des ressources insuffisantes de vente. Le principal point de conflit qui existe entre le chef de projet global basé au siège et les membres de l'équipe locale est donc la perception et la compréhension des rôles des équipes globales et locales dans la conception et la mise sur le marché des nouveaux produits. Le processus de collaboration de projet consiste principalement en une planification centralisée au siège de l'exécution décentralisée conduit par le chef de projet global et les membres de l'équipe locale dans les marchés clés. Le chef de projet mondial du siège social mène la planification centralisée, des idées et des processus de validation avec ou sans la participation limitée des

membres de l'équipe locale. Le manque de partage des connaissances au cours du processus de conception et de planification empêche ou limite les membres de l'équipe locale d'amasser leurs connaissances sur la clientèle locale et les exigences du marché. Cette stratégie se traduit par de nouveaux concepts et des produits qui sont mal adaptés au marché local et aux besoins des clients. Les membres de l'équipe locale ne disposent généralement pas de la possibilité de contribuer à la création d'une solution pour de nouveaux produits au cours de la phase de planification qui pourrait aboutir à une solution répondant aux besoins des clients locaux. Au lieu de cela, l'équipe locale a prévu de vendre une solution globale ou une norme qui ne répond pas aux besoins des clients locaux. Cela contribue à réduire l'intérêt à la commercialisation et la vente du nouveau produit ainsi qu'à diminuer la motivation à contribuer à la création et la mise en œuvre de nouveaux concepts pour les lancements de produits futurs.

Afin de continuer à explorer les possibilités d'acquiescer de l'intérêt et l'engagement des membres de l'équipe locale, les participants à l'étude locale en Asie ont été demandés comment en tant qu'équipes locales ils seraient plus motivés d'accroître le partage des connaissances et la contribution au cours de la planification globale et les phases d'exécution. En comparant les thèmes identifiés par les chefs de projet global, la reconnaissance et l'autonomisation ont été alignées par les deux groupes dans leur importance pour le partage des connaissances. Les chefs de projet mondial ont souligné la réactivité de l'équipe tandis que les gestionnaires locaux en Asie ont souligné la communication ouverte qui traite des motivations similaires. Les chefs de projet global se sont référés à la réactivité à une plus grande transparence et à la rétroaction sur les initiatives et les demandes, alors que les responsables d'équipes locales se sont référés à la transparence et au partage des connaissances. Pour le travail en équipe, les chefs de projet ont identifié l'engagement mondial en tant que membres de l'équipe qui sont activement impliqués dans le processus d'innovation, tandis que les responsables d'équipes locales ont identifiés le thème connexe de l'interaction avec des visites fréquentes et les possibilités de face-à-face. Enfin, les deux groupes semblaient différer légèrement sur le thème des ressources organisationnelles et de soutien où les chefs de projet global identifiaient l'environnement organisationnel, la structure et la mobilité comme des domaines importants pour l'amélioration du processus de partage des connaissances. Alors que les participants locaux ont identifié le rôle du soutien organisationnel et financier pour des produits locaux, le marketing, et des initiatives de vente, ils ont également exprimé la

nécessité pour davantage de voyages et les interactions entre les membres de l'équipe mondiale lorsqu'ils examineront la communication ouverte.

Afin de mieux comprendre les motivations et les défis qui peuvent influencer sur le partage des connaissances et la contribution pour les membres de l'équipe locale pendant le processus d'innovation, une comparaison a été faite entre les motivations, les défis, et les incidents critiques signalés par les participants locaux à l'étude ainsi que participants globaux à l'étude. Cette évaluation a abouti à quatre rôles distincts de collaboration de projet qui sont basés sur les descriptions de chefs de projet et les questionnaires mondiaux des équipes locales concernant les défis et les motivations pour les membres des équipes locales. Les quatre rôles identifiés comprennent: l'Implementer, le Contributor, le collaborator et l'Intrapreneur. Ces rôles ont ensuite été cartographiés à la stratégie de l'innovation organisationnelle afin d'évaluer l'accent mis sur la normalisation mondiale (exploration et l'exploitation du marché mondial) par rapport à la réactivité locale (l'exploration du marché local et l'exploitation). Cette évaluation a abouti à une structure de partage des connaissances qui a permis d'identifier des rôles particuliers supportés par les membres des équipes locales en ce qui concerne le processus d'innovation de nouveaux produits.

En passant en revue les ressources organisationnelles qui pourraient faciliter le partage des connaissances et la contribution des membres de l'équipe locale, une comparaison finale a été faite entre les points de vue des questionnaires locaux en Asie et ceux des chefs de projet globaux basés au siège, afin de confirmer l'accord sur les ressources spécifiques. Les deux groupes ont exprimé un besoin pour un espace collaboratif où les membres de l'équipe globale et locale peuvent se rencontrer pour partager leurs idées et de connaissances concernant les possibilités du marché local. En abordant le partage des connaissances pratiques, les deux groupes ont insisté sur le face-à-face interaction et la communication avec un intérêt pour les voyages et davantage de visites entre l'emplacement siège social et filiales locales en Asie afin d'améliorer la compréhension culturelle et la connaissance du marché local. En outre, les chefs de projet mondiaux reconnaissent la nécessité d'améliorer la participation locale à travers une participation accrue des membres de l'équipe locale dans le processus de planification de l'innovation globale liée à l'introduction de nouveaux produits. En plus de mettre l'accent sur la collaboration en direct et l'interaction, les deux groupes ont convenu sur la nécessité d'une plate-forme technologique dédiée à l'idéation et au partage des connaissances ainsi que des outils technologiques complémentaires qui peuvent faciliter la cohésion de l'équipe et les pratiques organisationnelles. Les participants à l'étude locale ont

souligné la nécessité d'une structure d'innovation dédié au guidage du processus de la conception à l'exécution au sein de leurs organisations. Enfin, les deux groupes ont convenu sur la nécessité de ressources dédiées à l'innovation d'organisation, l'apprentissage et le partage des connaissances. Il y avait de nombreuses références en vue de permettre l'innovation grâce à plus de temps, d'espace et de liberté pour les membres de l'équipe au niveau mondial les engageant à créer de nouvelles idées et des concepts qui répondent à des débouchés internationaux.

Comparaison des résultats

Les résultats de la phase explicative avec les participants de l'étude globale et locale a fourni une vue approfondie des mécanismes organisationnels et de leur influence sur la capacité du chef de projet global pour faciliter la collaboration interculturelle avec des équipes géographiquement distribuées pour le processus d'innovation front-end. Les constats ont permis une évaluation plus poussée et de procéder à l'essai des hypothèses développées à partir de la phase exploratoire. Ces constatations ont conduit à l'identification des composantes des mécanismes causaux qui influent sur le partage des connaissances et pour la collaboration entre le chef de projet global et l'équipe de cross-culturelle responsable du projet de lancement de produit globale. Un cadre de collaboration interculturel a été développé afin de montrer les mécanismes d'organisation et de causalité qui déterminent la motivation pour le partage des connaissances et de collaboration pour l'innovation front-end.

En plus d'identifier les mécanismes d'organisation et de causalité, le modèle de collaboration interculturel montre les routines organisationnelles de collaboration de projet et les phases clés de la planification, l'idéation, la validation et l'exécution qui sont liées à l'innovation front-end et au lancement du projet global. Pendant la phase de la recherche explicative, ces routines ont permis d'évaluer et d'identifier les mécanismes organisationnels et de causalité qui produisent des résultats spécifiques liés à la performance des projets identifiés par le temps de marché, les résultats des ventes de localisation de produits, la demande des clients, et local. En utilisant des études de cas, j'ai examiné les mécanismes organisationnels qui montrent comment leur fonctionnement orchestré active les mécanismes causaux liés à l'issue de la performance du projet.

Les incidents critiques et la connaissance des mécanismes de gouvernance

En appliquant le cadre de collaboration interculturelle, les mécanismes organisationnels et mécanismes pertinents causaux sont identifiées et liées à des incidents critiques qui ont été partagées par les participants à l'étude concernant la collaboration de

projet pour le lancement mondial du produit. Comme il est indiqué dans la section méthodologie, l'explication par les mécanismes peuvent fournir une justification explicative clé pour la conception processus de recherche pour clarifier l'ambiguïté causale et comment le processus fonctionne grâce à l'activation des mécanismes qui génèrent des résultats de façon interdépendante (2006 Pajunen). Depuis l'intention est d'identifier les mécanismes qui influent sur le partage des connaissances, la théorisation est appliquée à la connaissance des mécanismes de gouvernance (Foss et al. 2010) qui permettent un examen des mécanismes et des structures au niveau organisationnel ou une macro qui comportements visant à influencer de partage des connaissances au niveau micro ou individuel. En identifiant la manière dont les mécanismes de gouvernance particuliers des connaissances influencent le comportement de partage des connaissances des chefs de projet global et de leurs interactions avec les membres de l'équipe interculturelles, le chercheur a l'intention de continuer a poursuivre évaluer et tester des hypothèses concernant les relations entre la stratégie d'innovation, la collaboration interculturelle, et le projet performance pour le processus d'innovation front-end sur les marchés internationaux. La thèse présente cinq études de cas impliquant des chefs de projet et les gestionnaires mondiaux de l'équipe locale de cinq différentes multinationales. Les incidents critiques qui se produisent pendant le processus d'innovation front-end sont présentés comme suit: 1) la situation du marché, 2) la cause et le résultat de l'incident, 3) la résolution, et 4) l'évaluation des mécanismes de causalité. L'évaluation des résultats de la recherche explicatives ainsi que l'évaluation des mécanismes de causalité conduit à l'élaboration d'un modèle de collaboration interculturelle qui démontre l'orchestration optimale des mécanismes organisationnels et des composants de causalité afin d'accroître la collaboration et le partage des connaissances interculturelles au cours du processus d'innovation frontal ainsi que d'assurer un impact positif sur la performance du projet.

VI. Conclusion et recommandations

La revue de la littérature et de recherche de thèse a confirmé l'évolution des besoins de la réalisation de l'innovation dans une dynamique, le marché mondial. Le rôle croissant des marchés émergents dans l'expansion du marché international a accordé une importance accrue dans la compréhension des pratiques culturelles et de la réponse aux besoins particuliers des consommateurs locaux. Bien qu'une approche globale et centralisée de la stratégie de décision processus puisse avoir été appliquée dans le passé, les multinationales sont en train de découvrir qu'une approche locale à la stratégie de prise de front-end de l'innovation peut atteindre une plus grande réactivité aux opportunités du marché international. Les marchés

émergents en particulier nécessitent plus d'attention à la compréhension culturelle, à l'établissement de relations de partage et de co-crédation de connaissances pour le processus d'innovation front-end. Les marchés émergents et matures représentent les consommateurs de diverses cultures où les organisations ont besoin pour répondre aux attentes de solutions innovantes, des délais de commercialisation et des produits compétitifs.

En réponse à la question de recherche, l'objectif de la thèse de recherche est de démontrer comment les multinationales peuvent faciliter la collaboration interculturelle afin de bien concevoir et exécuter des stratégies d'innovation mondiale. L'exploration et l'évaluation de cette question conduit à une révision exhaustive de la littérature qui a créé un cadre de recherche initiale à l'intersection de l'innovation mondiale, des connaissances et de la culture. Grâce à la recherche limitée concernant le rôle de collaboration interculturelle dans l'innovation du front-end, le chercheur a poursuivi les phases de recherche à la fois exploratoire et explicative avec les cadres supérieurs responsables de l'innovation produit global, à partir de la conceptualisation au mise sur le marché, chez les EMN principales basées en Asie, en Europe et États-Unis. Les conclusions de la phase exploratoire ont conduit à l'identification des principaux mécanismes organisationnels, des routines de collaboration de projet et des mesures de performance. Les rôles essentiels de partage des connaissances et des phases de l'innovation front-end de la planification, l'idéation, et la validation ont également été découverts au cours de cette phase. Les mécanismes organisationnels identifiés comme stratégie d'innovation, la culture organisationnelle et le climat, les compétences en leadership, les structures de partage des connaissances, et des véhicules de communication; les routines ont été identifiés pour le lancement du projet global où les processus de l'innovation du front-end de la planification, l'idéation, et les phases de validation jouent un rôle essentiel; les mesures de performance des temps de mise sur le marché, la localisation des produits, la demande des clients, et les résultats de vente ont ensuite été confirmés par des recherches de terrain et des entrevues avec les gestionnaires.

La phase explicative avec deux groupes d'étude, chefs de projets globaux basés au siège et l'équipe locale de gestionnaires de la Chine et l'Asie, a permis un examen plus approfondi des interactions entre le chef de projet global et des équipes locales au cours de la phase de planification et d'exécution afin de déterminer les composantes causales des mécanismes organisationnels identifiés. De cette manière, les hypothèses pourraient être testées et validées par une comparaison des résultats de recherche de deux chefs de projet global au siège social et les gestionnaires des équipes locales dans des filiales en Asie. Un

cadre pour la collaboration interculturelle a été développé afin de présenter les relations entre les mécanismes d'organisation, leurs composants de causalité, les routines avant d'innovation finaux, et leur impact sur la performance du projet. Enfin, cinq études de cas ont examiné et discuté les mécanismes causaux et leur influence sur le partage des connaissances et des rôles de performance du projet qui ont permis des essais supplémentaires et la confirmation des hypothèses.

Les découvertes de la phase explicative ont démontré la nécessité de la compréhension culturelle et une collaboration accrues entre les équipes géographiquement dispersées afin d'accélérer l'innovation et la réactivité aux marchés internationaux. La question soulevée dans cette recherche de thèse est le manque de communication et la participation des membres de l'équipe locale dans le processus d'innovation frontal où la connaissance du marché local est le point le plus critique pour l'exécution efficace et le succès de lancements de produits. L'accent mis sur une stratégie mondiale de l'innovation et de la planification centralisée au siège de l'exécution décentralisée à des endroits subsidiaires réduit la motivation des membres de l'équipe locale pour collaborer à l'introduction du produit, ce qui affecte les performances du marché. Le manque de compréhension commune et des interactions dans la stratégie prise nuisent à la réussite de la planification, l'idéation, et la validation du concept pour le processus d'innovation front-end.

Afin d'accroître la réussite dans la conception et l'exécution des stratégies d'innovation pour les marchés internationaux, je propose que la collaboration interculturelle devrait servir comme une ressource ayant un avantage concurrentiel et critique pour les EMN dans l'accélération de l'innovation et la réactivité du marché. Les interactions de l'équipe interculturelle peuvent faciliter le partage de la connaissance du marché local, la compréhension interculturelle, et la création de nouvelles idées. Les résultats de la recherche démontrent que l'augmentation de la collaboration interculturelle peut être atteinte en mettant l'accent sur le partage des connaissances et la participation dans le processus d'innovation extrémité avant, en particulier la planification, l'idéation, et les phases de validation. L'orchestration et la reconfiguration des ressources organisationnelles étant associées à des routines de collaboration de projet de créer les capacités de processus d'innovation du front-end.

La collaboration interculturelle et le partage des connaissances exigent un examen des mécanismes spécifiques d'organisation et des composantes qui peuvent inter dépendamment créer un espace commun et de l'environnement pour l'innovation. Cet environnement implique

des mécanismes organisationnels comme la stratégie d'innovation de locale à la globale, une culture mondiale de l'innovation axée sur l'empathie culturelle, la collaboration et la créativité; un climat d'innovation qui favorise la réactivité du marché, la transparence de l'équipe mondiale, l'initiative entrepreneuriale, l'efficacité d'exécution, et une connaissance de la structure de partage, où les membres des équipes locales ont un rôle de collaboration et l'esprit d'entreprise.

Afin de soutenir un dialogue de collaboration entre des équipes multiculturelles, le chef de projet mondial joue un rôle important en tant que facilitateur des connaissances tout en fournissant une orientation, de l'inspiration, et de la communication de l'innovation extrémité avant de lancer l'exécution. Les résultats montrent également l'importance de l'écoute, la reconnaissance, et de répondre à la connaissance partagée par les membres de l'équipe qui influence la motivation supplémentaire. Le partage des connaissances entre les cultures nécessite une attention particulière à la structure et la livraison, le rôle de la puissance, le degré d'ouverture, et la capacité pour la prise d'initiatives. Les EMN doivent tenir compte des moyens de communication qui mettent l'accent sur l'interaction en face-à-face qui favorise la confiance et l'établissement de relations où les technologies de communication chargées de maintenir les interactions continues tout au long du processus d'innovation.

Un cadre et un modèle pour comprendre les mécanismes organisationnels qui influent sur la collaboration interculturelle ont été développés à partir des résultats de la recherche. L'intention d'élaborer un cadre est de fournir une meilleure compréhension des mécanismes au niveau des entreprises qui influent sur le partage des connaissances de comportement chez les équipes multiculturelles collaborant à des projets mondiaux d'innovation. Le but du modèle de collaboration interculturelle est de fournir un guide explicatif pour faciliter la collaboration du concept sur le marché. En identifiant les mécanismes et les routines dès à l'augmentation du partage des connaissances et la stratégie de décision, le modèle identifie un processus de collaboration qui peuvent aider les gestionnaires et les équipes à concevoir et mettre en place efficacement de nouveaux produits et services. De cette façon, les multinationales peuvent envisager l'orchestration et la configuration de connaissances de l'équipe de la Croix-culturel comme une ressource et un avantage concurrentiel dans l'accélération de l'innovation pour les marchés internationaux.

En plus de fournir des vues relatives à la facilitation de la collaboration interculturelle, le but de la recherche et les résultats est de fournir une nouvelle perspective et une théorie des

capacités concernant la valeur de connaissances interculturelles et de collaboration pour renforcer l'innovation front-end. Cette thèse contribue à la recherche concernant la théorie existante en étendant les théories relatives aux ressources et de la connaissance à travers un nouveau cadre conceptuel et un modèle. En outre, elle étend la recherche concernant la synergie culturelle et les connaissances des mécanismes de gouvernance dans la gestion de l'innovation. En outre, le cadre et le modèle de collaboration interculturelle rendre un valeur pour formuler des recommandations et trouver des sujets pour la recherche empirique future au sein d'un domaine émergent qui est objet d'une attention accrue de la part des organisations cherchant à accélérer l'innovation pour les marchés internationaux.

Summary of PhD Dissertation
Accelerating Global Innovation through Cross-cultural Collaboration: Organizational Mechanisms that Influence Knowledge-sharing within the MNC

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I. Overview

Globalization, time to market, and customer responsiveness present continuous challenges for achieving market innovation across cultures. A cross-cultural and networked business environment has created increased demand for knowledge-sharing between headquarters and subsidiaries. The inability of geographically distributed team members to effectively share and communicate ideas and solutions can result in a lack of product innovation, delayed product introductions, and reduced sales and market opportunities. This requires managers to leverage cross-cultural team knowledge in order to improve the design and delivery of innovative customer solutions worldwide. My dissertation thus intends to examine and identify organizational mechanisms that facilitate cross-cultural collaboration and knowledge-sharing for geographically distributed teams responsible for the front end of innovation. The resource-based and knowledge-based views of the firm inform this dissertation where integrated cognitive and social practices serve an important role for innovation. Through qualitative research, I will examine organizational mechanisms that influence interactions between the project leader and the geographically distributed team during global product launches, from product concept to market introduction. Since there is a lack of empirical research conducted with organizations on cross-cultural collaboration and knowledge sharing for global product innovation, there is a significant opportunity to advance research within innovation management while assisting organizations in the development of knowledge-sharing capabilities that serve as competitive advantage in conceiving and introducing new products to international markets.

II. Central Research Question and Purpose

The purpose of this dissertation research is to investigate and demonstrate how multinational corporations (MNCs) can facilitate the cross-cultural collaboration process in order to effectively conceive and execute innovation strategies for new products. The inability of geographically distributed teams to effectively share and communicate relevant market

information between headquarters and local subsidiaries can result in a lack of product innovation, delayed product introductions, and reduced sales and market opportunities. The research will focus on organizational mechanisms that enhance cross-cultural team interaction processes with the objective of creating and sharing knowledge that contributes to successful product introductions worldwide. This responds to organizational needs for sharing local market knowledge amongst geographically distributed teams located in HQ and local subsidiaries in order to accelerate responsiveness to international market opportunities.

III. Theoretical Framework

The changing global business landscape is demanding a rapid time to market with a customer-centric focus and continuous innovation on a global scale. The evolving economy and marketplace demand an organization that can quickly innovate and adapt to global change. A firm's competitiveness is dependent upon its ability to develop a dynamic capability or difficult to imitate combination of resources which includes coordination of interorganizational relationships (Teece, Pisano, and Shuen 1997). The benefit of an organization's global mindset derives from the ability to build cognitive bridges across local market needs and the company's own global experience and capabilities (Govindarajan and Gupta 2001). The crucial task for corporate management is thus to recognize the external technical embeddedness of subsidiaries and to coordinate the integration of diverse learning outcomes (Andersson 2003). Local learning networks are more likely to enable innovations while international intra-organizational learning networks show knowledge as an important resource by encouraging diffusion (Tregaskis 2003). Research has shown the importance of decentralization, subsidiary management credibility, communication, and a global perspective in determining entrepreneurial initiatives at the subsidiary level (Birkinshaw 1997, 1998), (Verbeke et al. 2007). The ability to respond to local market opportunities and to adapt products and services to local market needs requires an effective knowledge-sharing process for globally distributed teams.

The reconfiguration and recombination of knowledge resources are serving an increasingly important role in the MNCs ability to achieve competitive advantage in international markets. Recent research has shown that understanding how HQ and overseas subsidiaries co-create knowledge is a critical issue (Cui et al. 2005, Regner and Zander 2011). As markets become more dynamic, there is the need to quickly identify and respond to particular needs or demands. The role of organizational mechanisms in accelerating responsiveness and meeting market demands is thus of growing interest. The relationship

between governance issues and knowledge processes remains under-researched while knowledge governance as a concept is not well explored or understood (Foss et al. 2010). Resource and knowledge combination are critical to creating value and responding to customer demand while achieving a competitive advantage through continuous innovation as well as effective exploitation of innovation (Verbeke 2009). There needs to be a balance of exploration and exploitation activities with insights to particular knowledge routines and recombination capabilities. When introducing new products and services to international markets, there is an interdependent process between HQ and subsidiaries for planning and execution activities. In bringing new products to market, the MNE's use of subsidiary marketing knowledge is found to directly affect the development of capabilities for other subsidiaries as well as the overall performance of the MNE (Holm and Sharma 2006). The organization's ability to recombine and reconfigure local market knowledge from subsidiaries influences its international marketing and sales capabilities.

The demand for organizational knowledge-sharing requires new approaches to managing cross-cultural team interactions. Rather than manage cultural differences, international project teams will need to integrate cultural differences and similarities in order to share, create, and implement innovative customer solutions that respond to global and local market needs. Cultural diversity thus becomes a key resource in designing and developing global learning organizations (Adler 1997). In pioneering the use of cultural dimensions, Hofstede (1997) has succeeded in expanding awareness and understanding of regional and local differences while Trompenaars (1997) showed the impact of cultural differences on doing business. However, these theories view national culture as difference rather than a resource. The management of cultural differences does not fully support the dynamic and changing needs of the MNC. Organizations will need to leverage cultural diversity rather than manage cultural differences. Denial of cultural diversity has been shown to have a negative effect on innovation performance and project performance (Bouncken, Ratzman, and Winkler 2008). Holden (2002) has argued that cross-cultural management can effectively serve as an organizational resource by facilitating interactive translation and knowledge-sharing through participative competence. Cross-cultural management is thus conceived in terms of collaborative learning, the transfer and sharing of knowledge and experience. In this way, cross-cultural management provides a competitive advantage in facilitating knowledge that helps achieve organizational goals through new product solutions that meet global and local market expectations.

Since the implementation of new product development (NPD) programs has experienced various levels of success, many studies have focused on identifying associated problems and efficiencies (Shepherd and Ahmed 2000). Wong (2002) highlights a research gap in emphasizing the need for research that extends and integrates extant knowledge and methodologies in NPD and international marketing for advancing theory and practices within global new product management. Kleinschmidt, de Brentani and Salomo (2007) have evolved this research through a model of global NPD program performance that shows the need for a global innovation culture (risk taking and openness to global markets and customers) and global knowledge integration (capturing and integrating knowledge across borders). Although the authors emphasize the importance of global knowledge integration and launch preparation capabilities, they have not explored how this process is achieved in orchestrating firm resources to enhance global product launch performance. Furthermore, social capital creation is important for building strong relationships among persons who have knowledge of the organization's dispersed activities related to global new product innovation (Athanassiou, Barczak, and McDonough 2006). Greater social interaction and network ties show higher creativity for NPD project teams (Chen, Chang, and Hung 2008). Networks and social capital play an important role in developing cross-cultural team collaboration through trust-building, team creativity, and knowledge-sharing during the global innovation process. Social capital and knowledge-sharing capabilities are thus emerging as potential solutions for optimizing cross-cultural team collaboration and innovation across the organization.

IV. Research Design and Criteria

A. Research Question

The research intends to develop a framework and model for cross-cultural team collaboration by evaluating the organizational mechanisms that facilitate cross-cultural interaction. In addressing this purpose, the researcher intends to answer the following research question:

- How can MNCs optimize cross-cultural team collaboration in order to strengthen the planning and execution of global innovation strategies?

B. Methodology

The dissertation is focused on qualitative research using a mixed methods approach. In addition to interviews with thought leaders and subject matter experts, a literature review has been conducted on theories and practices within innovation management, knowledge management, and cross-cultural management. Applying resource-based and knowledge-based

views, the theoretical framework that will guide this study involves resource-based theory where Eisenhardt and Martin (2000) have shown the capabilities by which managers integrate, build, and reconfigure the firm's internal and external competencies and resources are a source of competitive advantage. Furthermore, the knowledge-based view emphasizes that knowledge is one of the most critical resources in helping firms gain a competitive advantage in international markets (Grant 1996).

The exploratory and explanatory phases will require different methods. In the exploratory phase, inductive inquiry will be used for the literature review and interviews with senior managers collaborating with cross-cultural project teams involved in global product introductions within MNCs. In applying synergistic research (Adler 1983), this researcher will evaluate how organizational mechanisms influence interaction between the project leader/senior manager and the cross-cultural team where universal and culturally specific patterns are created from positive uses of cultural similarities and differences. This type of research also involves identification of particular MNC structures and processes that are effective for cross-cultural collaboration between organizational members. The discoveries from the exploratory phase will help identify the process outcomes and the relevant organizational mechanisms for the explanatory phase. Explanation by mechanisms can provide a key explanatory rationale for processual research design in clarifying causal ambiguity and how the process works through activation of mechanisms that interdependently generate outcome (Pajunen 2006).

Since the research is focused on the front end of innovation, the researcher selected the global product launch project as the unit of analysis in order to study the collaboration process from product concept to market introduction. In order to obtain a comprehensive view of the collaboration process during the global product launch project, the global project leader was selected as the actor in this research since this senior manager is responsible for both the innovation and the collaboration process with the geographically distributed team. The dissertation paper will build upon exploratory and explanatory research and utilize a mixed methods approach based upon field research with global and regional team leaders in MNCs with headquarters in the US, Europe, and Asia. The intent is to advance research and understanding of how organizations can effectively use cross-cultural knowledge to strengthen the front end innovation process and international market results.

The first research phase resulted in interviews with 45 executives and senior managers responsible for cross-cultural teams and global product management, marketing, and

innovation in 35 MNCs based in the US, Europe, and Asia-Pacific (please see Appendix A for a list of participants). It was exploratory in nature and involved semi-structured interviews conducted by one researcher. A diverse sample of industries and geographies was sought in order to avoid bias and to identify universal processes for the unit of analysis. The interviews included a questionnaire and were conducted via phone and through company visits between August 2009 and March 2011. This study helped refine the survey instrument while evaluating and identifying organizational mechanisms that influence the global product launch process, from the planning and product conceptualization phase to the execution and market introduction phase. During the second research phase (June 2011 to January 2012), there is an explanatory approach involving a second round of interviews in two groups: 1) senior managers responsible for planning and project management of global product launches based in headquarters and 2) regional team members responsible for execution and go-to-market activities in subsidiaries located in Asia. The explanatory research results include interviews with 60 senior managers based in headquarters and 26 regional and local managers based in Asian subsidiaries. A comparison of responses from local team managers based in subsidiaries with the responses from the global project leaders based in headquarters improves the understanding of global and local views of the project collaboration process in order to fully examine and validate the research question.

It is useful to examine the global launch process through an extreme context which involves competitive industries and markets. Senior managers and project leaders working for automotive and information communication technologies industries were selected since these sectors face growing competition, increased localization needs, reduced time to market, and a radical and technology-driven innovation focus. Consequently, it is necessary to identify a region with high growth potential yet intense competition and greater cultural distance. Since the discoveries from the exploratory research found the Asian region matched these criteria, managers working for subsidiaries located in Asia (Japan, China, Singapore, and India) were selected and interviewed during and after a three week research trip. The unit of analysis is based upon cross-sectional studies using a retrospective in discussing the most recent global product launch process in evaluating interactions between the senior manager and project leader based in headquarters and cross-cultural team members located in subsidiaries worldwide during the key launch phases of planning and product conceptualization as well as execution and go-to-market preparation. The field research includes interviews,

questionnaires, on-site visits, observations, and collection of corporate and press documents.

The criteria for the field research are based upon the following:

- **Organization** – MNEs with international operations, globally distributed teams, and a focus on global product introductions for consumer and business markets (see exhibit A for a list of participants from the pilot study).
- **Culture and Geography**– MNEs with headquarters based in North America, Europe, and Asia.
- **Project/Unit of Analysis** – Focus on global product introduction project and team leader/manager responsible for developing and delivering concept and execution elements for global product introductions.
- **Industries** – The field research will focus on MNEs across industries, with an emphasis on firms that have been recognized for product and service innovation through rankings:
 - *Exploratory phase*: This study involves executives and senior managers with responsibilities in global product management, marketing, and innovation.
 - *Explanatory phase*: This study involves two groups: senior managers directly responsible for global product launch projects and cross-cultural teams; and regional managers directly responsible for local product launch execution within the information communication technologies and automotive industries.

C. Data Collection

Data collection took place from August 2009-January 2012 through two research phases. The instruments for the field research include a questionnaire, interviews, and observation. Internal validity of the proposed model was sought through theory triangulation using extensive literature reviews in innovation, knowledge management, and cross-cultural management. Pattern matching is based upon the literature review and the experience of managers in the pilot study. Reliability was sought through the questionnaire protocol, collection of interview data, and the use of company names. Interviews with executives and senior managers were made through the researcher's access to professional networks.

Limitations

The context of the study is applied to multinational organizations that are focused on global innovation through the introduction of new products and services. This exploratory phase is an investigative process, wherein the researcher is primarily concerned with identifying organizational factors that contribute to global product innovation. The second

phase is an explanatory approach in order to test hypotheses developed from the first research phase. The communication framework, process, and tools will be determined by selected managers and executives responsible for leading global product launch and innovation initiatives in their organizations. This study remains limited to determining the practices that are important for facilitating cross-cultural collaboration and innovation within the organization. The study also remains limited to the real-time interviews and survey data gathered from senior managers and leaders in selected industries.

V. Findings

A. Exploratory Phase

The exploratory study uncovered key practices and challenges for project leaders in managing and facilitating cross-cultural team collaboration during the global product launch cycle. In meeting local customer expectations, the project leader and launch team are facing pressures in achieving time to market, cost and revenue objectives, product differentiation, and international sales results. In response to meeting global market demands, organizations show a growing focus on developing a strong innovation culture by facilitating idea generation, communication, and collaboration for geographically distributed teams in order to ensure local market responsiveness. However, collaboration processes still pose a challenge for team leaders, especially in developing trust, engagement, and interactive dialogue. In driving product and service innovation, there are cultural differences to consider for managing idea generation, conflict, and knowledge-sharing. Organizational communication and learning resources provide limited access to cross-cultural training, team process, and knowledge-sharing vehicles although a majority listed culture as a predictive element.

Geographically distributed teams require more communication over distance which places a heavy reliance on technologies such as email, web conferences, web portals, video conferences and social media tools. Organizations are starting to implement dedicated knowledge platforms and collaborative technologies as well as increasing formal and informal exchange and communication across geographies. Those that indicated most satisfaction with knowledge-sharing cited the role of organizational culture and team values focused on idea creation, learning and sharing across cultures. Organizational tools and processes placed an emphasis on live and online communication and interaction where team members could easily connect, meet, and exchange ideas and practices. Although social media is increasingly available, there is a slow adoption rate in using these technologies and tools. A preference is

placed upon face-to-face and voice communication through a combination of formal and informal networking practices.

Organizational resources and mechanisms

As demonstrated by the field research, an organization with a global innovation culture appears to facilitate cross-cultural team collaboration through common values and practices. Organizations with strong innovation cultures leverage cultural diversity with a focus on transparency, communication, collaboration, and idea generation. In developing an organizational culture that fosters innovation, participants emphasized the role of knowledge-sharing, worldwide team contribution, and communication while ensuring local responsiveness and local resource commitment. This outcome differed from the Kleinschmidt, de Brentani, and Salomo study (2007) where top management involvement and NPD process formality (along with resource commitment) were considered most important (the study participants were solely responsible for NPD programs in American and European MNCs). This exploratory study further extends the Kleinschmidt, de Brentani, and Salomo model by identifying particular characteristics of an organization's global innovation culture. In addition, the exploratory study introduces cultural understanding as a key element in building an organizational environment for innovation which has not been addressed in the literature on organizational culture nor organizational innovation. The elements of cultural understanding, collaboration, and creativity require complimentary processes for developing a climate of innovation. A global mindset and cross-cultural awareness enable communication and exchange within culturally diverse teams. Idea generation and creative thinking are facilitated through worldwide-team contribution while collaboration and transparency are strengthened by knowledge-sharing and local responsiveness. These organizational values succeed in creating a global innovation culture that makes cultural diversity an advantage.

The strategic focus of the product launch project is a critical element in developing collaboration capabilities. As shown by the exploratory study, the product innovation strategy can influence the degree of knowledge-sharing that occurs depending on the emphasis on centralization or decentralization. There is also the consideration of functional authority and control between the engineering and product functions in comparison with the marketing and sales functions. When exploring communication flow between HQ and subsidiaries, it also became evident that a knowledge-sharing structure for encouraging more subsidiary initiative is needed for increasing the communication flow from subsidiaries. The exploratory research showed that a majority of the communication is initiated and controlled by HQ which

provides a more top-down dialogue. Finally there is the senior manager responsible for the launch project and leadership competencies to consider for facilitating cultural understanding, communication, and collaboration for the geographically distributed team.

In order to foster and sustain cross-cultural collaboration during the global product launch project, organizations still need to examine knowledge-sharing and learning resources that improve accessibility and engagement for global teams. Although organizations are striving towards a global, innovative, and collaborative culture, the systems and tools currently available do not necessarily ensure an interactive dialogue around the world. As demonstrated by the exploratory study, organizational communication flow for teams focus on global headquarters rather than local subsidiaries which could serve as a challenge for collaborative exchange between global and local team members. The responses concerning organizational learning resources further underscored a lack of engagement with 19% using a knowledge-sharing vehicle during the innovation process. The question is thus centered on how organizations can encourage more contributions from local team members working in country subsidiaries. With a focus on collaboration and visibility, why are there still challenges to engaging local team members? How can the organization ensure a more dynamic exchange between global and local team members? The exploratory study has thus shed light upon current organizational practices and raised questions concerning challenges in conceiving and delivering new products worldwide.

Teams need to effectively share cultural knowledge for developing innovative product solutions that respond to local market needs. This demands organizational communication processes that facilitate the sharing of cultural knowledge and thus contribute to innovative market solutions and successful project initiatives across countries. The exploratory study has uncovered several issues and research gaps that need to be further explored and examined. The explanatory research phase needs to evaluate organizational communication processes and tools that enhance cross-cultural interaction and dialogue on global and local levels. It also needs to examine cultural differences for knowledge-sharing between team members of different countries. In addition, organizational learning and knowledge-sharing processes need to be further explored in terms of adoption and effectiveness in improving cross-cultural collaboration. In this study, participants did not find that social media tools could improve or benefit cross-cultural collaboration, showing a preference for live interaction. Social media and web communication technologies are increasingly available within organizations yet have not been actively used by globally distributed teams working on product launch projects.

Since social media practices tied to organizational innovation have not yet received much attention from researchers, it provides an opportunity to explore and examine new solutions and technologies that can enhance interactions for globally distributed teams.

Routines and capabilities

In view of the limited literature currently available, there needs to be a greater research focus on the front end innovation process where conception and planning of new product concepts are determined. In this exploratory study, the front-end innovation activities (planning, ideation, and validation phases) have been identified as the routines for influencing project collaboration and global launch performance. The exploratory study uncovered the interdependent role of these phases and the importance of open communication and knowledge-sharing for engaging team members. The explanatory research phase needs to examine the processes that strengthen the conception as well as the execution of the global product launch project. As the literature review and exploratory study have shown, there is a research gap and organizational need for integrating and advancing theory and practices for the conception as well as the execution of new product innovations. The literature has sufficiently explored NPD process capabilities yet has not extended the same rigor to front-end innovation process capabilities in order to improve understanding of the relationship between conception and market execution of new products.

There is much to learn about capability development and the use of knowledge resources in exploring the link between front-end innovation, NPD and GTM execution. The competitive and changing global marketplace demands an agile process that can develop dynamic capabilities through collaboration and knowledge-sharing. This exploratory study has identified organizational factors and knowledge-sharing processes that need to be considered for achieving effective collaboration between team leaders and geographically distributed teams during the global product launch. The exploratory study uncovered the role of the front-end innovation process in team engagement where the routines needs to be further evaluated during the explanatory research phase. In order to fully develop the theoretical framework and proposed model, the explanatory study will need to focus on how local market knowledge is gathered and shared through interactions that occur during the planning and execution phases of the global product launch. This will improve understanding of the mechanisms that influence collaboration and knowledge-sharing in achieving the global product launch objectives.

Global Launch Performance

Although global product launches involve consideration of diverse markets, cultures, and languages, there is a lack of research concerning the collaboration process required for enhancing success of new products in local markets. Given the impact of effective product launch execution on global innovation and market success, the configuration and orchestration of local market knowledge can be viewed as an organizational resource and competitive advantage. The orchestration and reconfiguration of knowledge shared between cross-cultural team members in the context of the global product launch can therefore create and shape new customer solutions and market opportunities that serve as a competitive advantage for MNCs in international markets. In meeting local customer expectations, the global product launch team is facing pressures in reducing time to market, achieving cost and revenue objectives, product differentiation, and international sales results. There is also the consideration of performance measures and the evaluation of team processes such as knowledge-sharing. As a response to meeting global market demands, organizations show a growing focus on developing a strong innovation culture by facilitating cultural understanding, creativity, and collaboration for globally distributed teams in order to ensure local market responsiveness. In this dissertation, I propose that collaboration through knowledge-sharing is influenced by organizational mechanisms and routines which in turn impact project performance. It is therefore necessary to examine these constructs more closely during the explanatory research phase in order to test the hypotheses and evaluate findings.

Development of hypotheses for the explanatory phase

The findings from the exploratory study are valuable in constructing hypotheses for evaluating organizational mechanisms in order to understand their influence and impact upon team leadership and project performance for conceiving and delivering new products. Seven hypotheses were developed from the exploratory research phase with the objective of identifying organizational mechanisms that influence the knowledge-sharing process. The findings showed that knowledge-sharing serves a critical role in cross-cultural collaboration during the front end innovation process. In order to investigate the knowledge governance mechanisms at the firm level and their impact on knowledge-sharing behaviors of project leaders at the individual level, the hypotheses were constructed to identify the specific organizational and causal mechanisms that influence collaboration and knowledge-sharing during the front end innovation process.

B. Explanatory Phase

The purpose of the explanatory study is to identify specific interactions between the project leader and the geographically distributed team for the key project phases of planning and execution during the global product launch project. The intention is to validate the findings concerning organizational mechanisms from the exploratory phase and to further investigate and identify causal mechanisms. The explanatory study is conducted at the managerial or individual level where the senior manager and project leader is based in HQ while facilitating communication and collaboration with geographically distributed teams primarily based in the world regions of North America (US), Europe, and Asia. This allows for the explanation of phenomena identified in the exploratory phase concerning organizational mechanisms that influence cross-cultural collaboration. Moreover, it allows for the identification of causal interactions concerning critical incidents and resolutions by the senior manager and project leader and challenges in achieving cross-cultural collaboration during the global product launch process, from concept to market.

The hypotheses were tested in evaluating causal interactions (incidents and resolutions) that influence collaboration between the senior manager/project leader and the cross-cultural team members responsible for the global product launch. I first re-examined the role of organizational systems and resources available to senior managers and their teams in facilitating product innovation from concept to execution. Next, I focused on the critical incidents, the challenges and resolutions for the senior manager and project leaders in managing interactions with globally distributed teams. I then investigated and described the routines and capabilities that influence collaboration and knowledge-sharing. The findings from the explanatory phase helped develop the model for organizational mechanisms that facilitate knowledge-sharing and collaboration. In order to provide an in depth view of the practices during the explanatory phase, I discuss the views of global team leaders and their experience in facilitating cross-cultural collaboration for global product launch projects as well as the views and experience of regional team leaders in Asia who are responsible for facilitating communication with the project leader and senior manager based in HQ.

In exploring the role of local team members in subsidiaries during the global product launch project, the research results showed that subsidiary members are mostly involved in the tactical details of launch preparation and go-to-market implementation. Some organizations ensured earlier involvement at the validation phase to ensure local product

adaptation while only a few organizations allowed participation between HQ and subsidiaries for ideation and planning. The ideation and planning functions were viewed as roles for HQ management in evaluating and organizing global market needs and opportunities. On the other hand, the findings in the section concerning strategic direction showed an increasing focus on decentralization and local market responsiveness. In addition, the section on organizational culture and climate showed a strong focus on customer and market-orientation for HQ managers and their organizations. In view of the increased attention placed on local market knowledge, it appears the collaboration and support of the local team members and managers are of increasing importance to the success of the product launch project. It is therefore necessary to investigate the interactions between the senior manager responsible for the global launch project based in HQ and the subsidiary team members responsible for local market execution.

In order to further explore the global team leadership skills identified in the exploratory phase, study participants were asked about what kind of leadership style they felt is necessary for effectively managing and facilitating cross-cultural team collaboration during the global product innovation process (from concept to go-to-market). The four leadership styles identified in this study were **directive leadership, inclusive leadership, communicative leadership, and empowering leadership**. In order to explore the key elements of trust-building for the cross-cultural team involved in the global launch project, team leaders were asked how trust could be improved within the team. There were four specific themes identified in improving trust with cross-cultural teams during the global product launch project – **social interaction, frequent and open communication, act and deliver on promises, and project contribution**. These themes indicated the type of actions and skills that help the project leader build trust with cross-cultural and geographically distributed teams.

Then I examined the role of culture in knowledge-sharing by asking the study participants how culture may influence knowledge-sharing. In reviewing the comments from the interview participants, there were several common perspectives as well as differing interpretations concerning the experience of the senior managers and team leaders in facilitating collaboration for geographically distributed and cross-cultural teams. Their observations and experiences focused on four distinct areas of knowledge-sharing: **structure, power, openness, and initiative**. When responding to the role of national culture in affecting knowledge-sharing behaviors, study participants made specific references to cultures that they

felt were more representative of specific knowledge-sharing behaviors pertaining to structure, power, openness, and initiative. The cultures that were examined in more detail for each region included the US (North America), Germany, France, and UK (Europe), Japan, China, and India (Asia).

In order to explore specific interactions between the HQ manager and the subsidiary teams, the study participants were asked to identify and describe the following during the two critical project phases of planning and execution: 1) critical information needed from local team members, 2) challenges or critical incidents in knowledge-sharing and contribution from local team members, and 3) how local team members would be more motivated to increase knowledge-sharing and contribution. In reviewing information sought by global project leaders for the planning phase, there is a strong focus on local market, customer, and product knowledge. In seeking an in-depth understanding of the particular knowledge-sharing challenges for leading global teams, the senior managers and project leaders were questioned about the greatest challenges in facilitating knowledge-sharing and contribution from local team members. The findings were organized and presented into four main areas that experience challenges – **open communication and team transparency, organizational knowledge-sharing practices, project planning process, and strategic understanding of local teams**. The previous section concerning critical information indicated the planning phase demonstrates particular emphasis on access to and sharing of local market knowledge.

In order to explore potential incentives and reasons for addressing the challenges in leading geographically distributed teams and facilitating knowledge-sharing practices during the global launch project, the senior managers and project leaders were questioned about how they feel local team members in subsidiaries would be motivated to increase knowledge-sharing and contribution during the planning and execution phases. Their comments were examined for similarities and differences through research coding and then grouped into particular categories for analysis. The findings were organized and presented into six main themes that influence motivation – **recognition, responsiveness, empowerment, engagement, organizational systems, and incentives**. The global project leaders perceived these themes could increase the motivation of local team members in sharing knowledge during the launch project.

Since I wanted to determine the kind of knowledge-sharing structure and communication tools that are most effective for facilitating cross-cultural collaboration, study participants were questioned about organizational knowledge-sharing practices through two

related questions: 1) the manner in which local knowledge is currently shared and diffused in the organization and 2) the organizational resources (systems and tools) that could help facilitate knowledge-sharing and contribution from team members worldwide. In order to seek potential solutions for providing more effective knowledge-sharing processes and tools, study participants were asked about the organizational resources (in the form of communication systems and tools) that could help facilitate knowledge-sharing and contribution from team members. The organizational resource needs that received the largest number of responses focused on increased **travel and face-to-face interaction, local engagement, a common space for cross-cultural team collaboration, technology platforms for ideation and knowledge-sharing, and a supportive organizational environment with time for knowledge-sharing and cross-cultural learning.** The study showed a strong interest in creating space, time, and resources dedicated to innovation.

C. Interviews with Local Managers in Chinese and Asian subsidiaries

The explanatory study involving global project leaders presented findings concerning the organizational and causal mechanisms that influence cross-cultural collaboration during the global product launch project. However, these findings were presented from the perspectives of the senior managers responsible for the launch initiative as well as management and facilitation of cross-cultural and geographically distributed teams. While these managers were identified as the most appropriate sources, primarily due to their role as knowledge facilitators between team members in HQ and local team members in subsidiaries, it is also necessary to compare their perspectives with the perspectives of local team managers and team members in order to fully validate the research question. Aside from interviews with 60 senior managers based in headquarters, the researcher also conducted interviews with 26 regional and local managers based in the Asian subsidiaries of European and US MNCs. A comparison of responses from local study participants in Asia with the responses from global project leaders based in HQ improves understanding of perspectives and views from both headquarters and subsidiaries in order to fully examine and validate the research question as well as confirm the hypotheses.

The views of the local teams provided valuable insights to particular cultural values and behaviors that can influence knowledge-sharing in Asia and especially in China. In examining Chinese knowledge-sharing practices and cultural differences, it became clear that power, conflict avoidance, ownership, and communication styles can serve as challenges for

the project leader and the geographically distributed team. As discussed in the section on cross-cultural knowledge-sharing practices with global project leaders, Asian knowledge-sharing practices in general offer strengths in the knowledge-sharing structure for achieving effective execution, however there are challenges to the degree of openness and initiative taken by team members due to the role of management power in the organizational hierarchy. The local study showed that traditional views of competition, knowledge as power, and saving face can be changed through a focus on the common goal for achieving team and organizational success.

In order to understand the particular knowledge-sharing challenges from the local team perspective, the local team managers for China and the Asia region were questioned about the greatest challenges to knowledge-sharing and contribution from local team members based in subsidiaries to the management team in HQ. Views of local study participants that differed from those of the global project leaders were focused on the lack of local involvement in the planning process and insufficient marketing and sales resources. The main point of conflict that exists between the global project leader based in HQ and the local team members is therefore the perception and understanding of global and local team roles in conceiving and bringing new products to market. The project collaboration process primarily involves centralized planning at HQ with decentralized execution driven by the global project leader and local team members in key markets. The global project leader in HQ is driving centralized planning, ideation, and validation processes without or with limited participation by local team members. The lack of knowledge-sharing during the conception and planning process prevents or limits local team members from contributing their knowledge about local customer and market requirements. This strategy results in new concepts and products that are poorly adapted to local market and customer needs. The local team members usually do not have the opportunity to contribute to the creation of a new product solution during the planning phase which could result in a solution that meets local customer needs. Instead, the local team is expected to sell a global or standard solution that does not meet local customer needs. This contributes to reduced interest and motivation to marketing and selling the new product as well as reduced motivation to contribute to the creation and implementation of new concepts for future product introductions.

In order to further explore the opportunities for gaining interest and engagement from local team members, the local study participants in Asia were asked how they feel local teams would be more motivated to increase knowledge-sharing and contribution during the global

planning and execution phases. In comparing the themes identified by global project leaders, recognition and empowerment were aligned with both groups in their importance for increased knowledge-sharing. Global project leaders emphasized responsiveness while local team managers in Asia emphasized open communication which addresses similar motivations. Global project leaders refer to responsiveness and more transparency and feedback concerning initiatives and requests, whereas local team managers refer to transparency and knowledge-sharing. For team collaboration, global project leaders identified engagement as team members who are actively involved in the innovation process, whereas local team managers identified the related theme of interaction with frequent visits and opportunities for face-to-face interaction. Finally, the two groups appeared to differ slightly on the topic of organizational resources and support where the global project leaders identified organizational environment and structure and mobility as important areas for improving the knowledge-sharing process. While the local study participants identified the role of organizational support and funding for local product, marketing, and sales initiatives, they also expressed the need for more travel and interactions between the global team members when addressing open communication.

In order to better understand the motivations and challenges that can influence knowledge-sharing and contribution for local team members during the innovation process, a comparison was made between the motivations, challenges, and critical incidents indicated by the local study participants as well as the global study participants. This evaluation resulted in four distinct project collaboration roles that are based upon the descriptions of global project leaders and local team managers concerning challenges and motivations for local team members. The four roles identified include: **Implementer**, **Contributor**, **Collaborator** and **Intrapreneur**. These roles were then mapped to the organizational innovation strategy in order to evaluate the emphasis on global standardization (global market exploration and exploitation) versus local responsiveness (local market exploration and exploitation). This evaluation resulted in a knowledge-sharing structure which identified particular roles served by local team members in relation to the new product innovation process.

In reviewing organizational resources that could help facilitate knowledge-sharing and contribution from local team members, a final comparison was made between the views of the local managers in Asia and those of the global project leaders based in HQ in order to confirm agreement with specific resources. Both groups expressed a need for a **collaborative space** where global and local team members can meet to share their ideas and knowledge

concerning local market opportunities. In addressing knowledge-sharing practices, both groups emphasized increased **face-to-face interaction and communication** with an interest for more travel and visits between the HQ location and local subsidiaries in Asia in order to improve cultural understanding and local market knowledge. In addition, the global project leaders acknowledge a need to improve local engagement through increased involvement of local team members in the global innovation planning process linked to new product introductions. In addition to an emphasis on live collaboration and interaction, both groups agreed upon the need for a dedicated **technology platform for ideation and knowledge-sharing** as well as complementary technology tools that can facilitate team and organizational practices. The local study participants emphasized the need for a dedicated innovation structure to guide the process from concept to execution within their organizations. Finally, both groups agreed upon the need for **dedicated organizational resources to innovation, learning and knowledge-sharing**. There were many references to enabling innovation through more time, space, and freedom for the global team members to create new ideas and concepts that respond to international market opportunities.

Comparison of findings

The results from the explanatory phase with global and local study participants provided an in depth view of organizational mechanisms and their influence upon the ability of the global project leader to facilitate cross-cultural collaboration with geographically distributed teams for the front end innovation process. The findings allowed further evaluation and testing of the hypotheses developed from the exploratory phase. These findings led to the identification of the components of causal mechanisms that influence knowledge-sharing and collaboration between the global project leader and the cross-cultural team responsible for the global product launch project. A cross-cultural collaboration framework has been developed in order to show organizational and causal mechanisms that determine the motivation for knowledge-sharing and collaboration for front end innovation.

In addition to identifying organizational and causal mechanisms, the cross-cultural collaboration model shows the organizational routines of project collaboration and the key phases of planning, ideation, validation, and execution that are linked to front-end innovation and the global launch project. During the explanatory research phase, these routines allowed evaluation and identification of the organizational and causal mechanisms that produce specific outcomes linked to project performance as identified by time to market, product localization, customer demand, and local sales results. Using case studies, I examine the

organizational mechanisms that show how their orchestrated functioning activates causal mechanisms linked to the outcome of project performance.

Critical incidents and knowledge governance mechanisms

In applying the cross-cultural collaboration framework, the organizational mechanisms and relevant causal mechanisms are identified and linked to critical incidents that were shared by the study participants concerning project collaboration for the global product launch. As noted in the methodology section, explanation by mechanisms can provide a key explanatory rationale for process research design in clarifying causal ambiguity and how the process works through activation of mechanisms that interdependently generate outcome (Pajunen 2006). Since the intent is to identify mechanisms that influence knowledge-sharing, theorizing is applied to knowledge governance mechanisms (Foss et al. 2010) which allow for an examination of mechanisms and structures at the organizational or macro level that influence behaviors of knowledge-sharing at the micro or individual level. By identifying how particular knowledge governance mechanisms influence the knowledge-sharing behavior of global project leaders and their interactions with cross-cultural team members, the researcher intends to further evaluate and test hypotheses concerning the relationships between innovation strategy, cross-cultural collaboration, and project performance for the front-end innovation process concerning international markets. The dissertation presents five cases involving global project leaders and local team managers from five different MNCs. Critical incidents that occur during the front end innovation process are presented as follows: 1) the market situation, 2) the cause and outcome of the incident, 3) resolution, and 4) evaluation of causal mechanisms. The evaluation of the explanatory research findings as well as the evaluation of causal mechanisms resulted in the development of a model for cross-cultural collaboration that demonstrates the optimal orchestration of organizational mechanisms and causal components in order to increase knowledge-sharing and cross-cultural collaboration during the front-end innovation process as well as ensure a positive impact on project performance.

VI. Conclusion and Recommendations

The literature review and dissertation research have confirmed the changing demands of achieving innovation in a dynamic, global marketplace. The growing role of emerging markets in international market expansion has placed increased importance in understanding cultural practices and responding to the particular needs of local consumers. While a global and centralized strategy-making process may have been applied in the past, MNCs are now

discovering that a local approach to strategy-making for front-end innovation can achieve increased responsiveness to international market opportunities. Emerging markets especially require more attention to cultural understanding and relationship-building in sharing and co-creating knowledge for the front end innovation process. Both mature and emerging markets represent culturally diverse consumers where organizations need to meet expectations for innovative solutions, time to market, and competitive products.

In responding to the research question, the purpose of the dissertation research is to demonstrate how MNCs can facilitate cross-cultural collaboration in order to effectively conceive and execute global innovation strategies. The exploration and evaluation of this question led to a comprehensive literature review that created an initial research framework at the intersection of global innovation, knowledge, and culture. Due to limited research concerning the role of cross-cultural collaboration in front end innovation, the researcher pursued both exploratory and explanatory research phases with senior managers responsible for global product innovation, from concept to market, at leading MNCs based in Asia, Europe, and the US. The findings in the exploratory phase led to the identification of key organizational mechanisms, project collaboration routines, and performance measures. The critical roles of knowledge-sharing and the front end innovation phases of planning, ideation, and validation were also discovered during this phase. The organizational mechanisms identified as innovation strategy, organizational culture and climate, leadership competencies, knowledge-sharing structure, and communication vehicles; routines were identified for the global launch project where the front-end innovation process and the planning, ideation, and validation phases serve a critical role; performance measures of time to market, product localization, customer demand, and sales results were then confirmed through field research and interviews with managers.

The explanatory phase with two study groups, global project leaders based in HQ and local team managers China and Asia, allowed closer examination of the interactions between the global project leader and local teams during the planning and execution phases in order to determine the causal components of the organizational mechanisms identified. In this way, the hypotheses could be tested and validated through a comparison of research results from both global project leaders in HQ and local team managers in subsidiaries in Asia. A framework for cross-cultural collaboration was developed in order to present the relationships between organizational mechanisms, their causal components, the front end innovation routines, and their impact upon project performance. Finally, five case studies examined and discussed the

causal mechanisms and their influence on knowledge-sharing roles and project performance which allowed further testing and confirmation of the hypotheses.

The discoveries from the explanatory phase have demonstrated the need for increased cultural understanding and collaboration amongst geographically distributed teams in order to accelerate innovation and responsiveness to international markets. The issue identified in this dissertation research is the lack of communication and participation of local team members in the front end innovation process where local market knowledge is most critical for the effective execution and success of product introductions. The emphasis on a global innovation strategy and centralized planning at HQ with decentralized execution at subsidiary locations reduces the motivation of local team members to collaborate on the product introduction which impacts market performance. The lack of shared understanding and interactions for strategy-making negatively impact the success of planning, ideation, and concept validation for the front end innovation process.

In order to increase success in conceiving and executing innovation strategies for international markets, this researcher proposes that cross-cultural collaboration should serve as a competitive advantage and critical resource for MNCs in accelerating innovation and market responsiveness. Cross-cultural team interactions facilitate the sharing of local market knowledge, cross-cultural understanding, and the creation of new ideas. The research findings demonstrate that increased cross-cultural collaboration can be achieved through a focus on knowledge-sharing and participation in the front end innovation process, specifically the planning, ideation, and validation phases. The orchestration and reconfiguration of organizational resources combined with project collaboration routines create front-end innovation process capabilities.

Cross-cultural collaboration and knowledge-sharing require consideration of specific organizational mechanisms and components that interdependently create a common space and environment for innovation. This environment involves organizational mechanisms such as a local to global innovation strategy; a global innovation culture focused on cultural empathy, collaboration, and creativity; an innovation climate that nurtures market responsiveness, global team transparency, entrepreneurial initiative, and execution efficiency; and a knowledge-sharing structure where local team members have collaborative and entrepreneurial roles.

In order to sustain a collaborative dialogue between cross-cultural teams, the global project leader serves an important role as knowledge facilitator while providing direction,

inspiration, and communication from front end innovation to launch execution. The findings also showed the importance of listening, recognizing, and responding to knowledge shared by team members which further influence motivation. Sharing knowledge between cultures requires special attention to the structure and delivery, the role of power, the degree of openness, and ability for initiative-taking. MNCs need to consider communication vehicles that emphasize face-to-face interaction facilitate trust and relationship-building where communication technologies sustain continued interactions throughout the innovation process.

A framework and a model for understanding the organizational mechanisms that influence cross-cultural collaboration have been developed from the research findings. The intention of developing a framework is to provide further understanding of the firm-level mechanisms that influence knowledge-sharing behavior among cross-cultural teams collaborating on global innovation projects. The purpose of the cross-cultural collaboration model is to provide an explanatory guide for facilitating collaboration from concept to market. In identifying mechanisms and routines that increase knowledge-sharing and strategy-making, the model identifies a collaborative process that can assist managers and teams to effectively conceive and introduce new products and services. In this way, MNCs can consider the orchestration and configuration of cross-cultural team knowledge as a resource and competitive advantage in accelerating innovation for international markets.

In addition to providing insights concerning the facilitation of cross-cultural collaboration, the purpose of the research and findings is to provide a new perspective and theory-building concerning the value of cross-cultural knowledge and collaboration for enhancing front end innovation. This dissertation research contributes to existing theory by extending resource-based and knowledge-based theories through a new conceptual framework and model. Furthermore, it extends research concerning cultural synergy and knowledge governance mechanisms in innovation management. Moreover, the cross-cultural collaboration framework and model provide recommendations and topics for future empirical research within an emerging field that is receiving increased attention from organizations seeking to accelerate innovation for international markets.

