



Jiehua Huang

**MANAGERIAL CAREERS IN THE IT INDUSTRY:
WOMEN IN CHINA AND IN FINLAND**

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ABSTRACT

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This research focuses on the career experiences of women managers in the IT industry in China and Finland, two countries with different cultures, policies, size of population, and social and economic structures regarding work-life support and equal opportunities. The object of this research is to present a cross-cultural comparison of women's career experiences and how women themselves understand and account for their careers. The study explores how the macro and the micro levels of cultural and social processes become manifested in the lives of individual women.

The main argument in this thesis is that culture plays a crucial role in making sense of women's career experiences, although its role should be understood through its interrelationship with other social processes, e.g., institutional relations, social policies, industrial structures and organizations, as well as globalization. The interrelationship of a series of cultural and social processes affects individuals' attitudes to, and arrangement and organization of, their work and family lives.

This thesis consists of two parts. The first part introduces the research topic and discusses the overall results. The second part comprises five research papers. The main research question of the study is: How do cultural and social processes affect the experiences of women managers? Quantitative and qualitative research methods, which include in-depth interviews, Q-methodology, interpretive analysis, and questionnaires, are used in the study. The main theoretical background is culturally sensitive career theory and the theory of individual differences. The results of this study are viewed through a feminist lens. The research methodology applied allows new explorations on how demographic factors, work experiences, lifestyle issues, and organizational cultures can jointly affect women's managerial careers.

The sample group used in the research is 42 women managers working in IT companies in China (21) and Finland (21). The results of the study illustrate the impact of history, tradition, culture, institutional relations, social politics, industry and organizations, and globalization on the careers of women managers. It is claimed that the role of culture – cultural norms within nations and organizations – is of great importance in the relationship of gender and work. Women's managerial careers are affected by multiple factors (personal, social and cultural) reflecting national and inter-individual differences.

The results of the study contribute to research on careers, adding particularly to the literature on gender, work and culture, and offering a complex and holistic perspective for a richer understanding of pluralism and global diversity. The results of the study indicate how old and new career perspectives are evidenced in women managers in the IT industry. The research further contributes to an understanding of women's managerial careers from a cross-culture perspective. In addition, the study contributes to the literature on culture and extends understanding of Hofstede's work. Further, most traditional career theories do not perceive the importance of culture in determining an individual's career experience and this study enriches understanding of women managers' careers and has considerable implications for international human resource management.

The results of this study emphasize the need, when discussing women managers' careers, to understand the ways by which gendering is produced rather than merely examining gender differences. It is argued that the meaning of self-knowledge is critical. Further, the environment where the careers under study develop differs greatly; China and Finland are very different – culturally, historically and socially. The findings of this study should, therefore, be understood as a holistic, specific, and contextually-bound.

Keywords: culture, career, women managers, networking, IT, China, Finland

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It is a sunny evening in early May. I am looking through the window in my office – the green trees and blue sky in sight. This tranquil landscape has accompanied me during this thesis journey. I know I will always miss it.

Lappeenranta, May 10th, 2009

Jiehua Huang

黄洁华

2009年5月10日于芬兰拉彭兰塔理工大学

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ABBREVIATIONS

CEO	Chief Executive Officer
GDP	Gross Domestic Product
HR	Human Resource Department
HRM	Human Resource Management
ICT	Information and Communication Technology
IM	Impression Management
MNC	Multinational Company
MBA	Master of Business Administration
OC	Organizational Culture
OECD	Organization for Economic Cooperation and Development

PART II: PUBLICATIONS

1. Iris Aaltio and Jiehua Huang (2007). Women managers' careers in information technology in China: High flyers with emotional costs. *Journal of Organizational Change Management*, 20(2), 227-244 (**Highly Commended Award Winner** at the Emerald Literati Network Awards for Excellence 2008)
2. Jiehua Huang and Iris Aaltio (2009). Social interaction technologies: A case study of *guanxi* and women managers' careers in information technology in China. In T. Dumova and R. Fiordo (Eds.), *Handbook of research on social interaction technologies and collaboration software: Concepts and trends*. IGI Global.
3. Jiehua Huang and Iris Aaltio (2008). Gendered *guanxi*: Women managers' networking in the information technology field in China. The XXIX International Congress of Psychology, 20-25 July 2008, Berlin, Germany. See <http://www1.icp2008.org/guest/AbstractView?ABSID=7567>.
4. Jiehua Huang and Iris Aaltio (2008). Exploring the networking of women managers in China and in Finland: *Guanxi* and social capital. The 6th International Conference on Management, 7-10 July 2008, Athens, Greece. See http://www.atiner.gr/docs/2008AAAPROGRAM_BUS.htm.
5. Jiehua Huang and Iris Aaltio (2008). Women managers' careers in the IT field: A cross-cultural study between China and Finland. Nordic Feminism and Gender Research 2008, 6-8 October 2008, Karlstad, Sweden. See http://www1.kau.se/corral/intra.lasso?page_id=2342.

The contribution of Jiehua Huang to the publications:

1. Made the research design, conducted the fieldwork and wrote most of the paper. The revision of the paper based on reviewers' comments was a joint effort.
2. Wrote most of the paper. Conclusion section was a joint effort.
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5. Made the research design, conducted the fieldwork and wrote most of the paper.

PART I: OVERVIEW OF THE DISSERTATION

1 INTRODUCTION

1.1 Background

Gender issues in management became a research topic in the late 1970s when Rosabeth Moss Kanter (1977) started the debate on the “blind spots” of organizational analysis, which uncovers the aspects of organizational life that hide gender attributes of leadership and power. This challenges the previous gender-neutral tradition. Since the 1990s, women’s relative failure to move into the ranks of senior management both in private and public sector organizations in all developed countries has been well documented in western literature (Acker, 1992; Burke & Nelson, 2002; Catalyst, 2003; Davidson & Burke, 2000; Gherardi, 1995; Kauppinen & Aaltio, 2004; Wajcman, 1998). Some gender and management studies focus on the “glass ceiling” phenomenon (Kauppinen-Toropainen, 1994; Powell, 1999, 2000), the work-life balance (Blair-Loy, 2003; Jackson, 2002; White, 2000) and coping strategies of women managers in work-life conflicts (Hochschild, 1997). Others concentrate on women managers’ networks (Eriksson et al., 2004; Ibarra, 1992, 1993, 1995, 1997), and career development, aspirations and success (Arthur et al., 1999; Vinnicombe & Colwill, 1996; Wentling, 2003; White, 1995). Most of the above studies are, however, based on Western society; little literature includes women managers in China^[1] in the research data, especially within a cross-cultural context.

Since the classic work of Hofstede (1980, 1991, 2001), national culture – broadly defined as values, beliefs, norms, and behavioral patterns of a national group (Leung et al., 2005) – has become increasingly important in management and organization studies. Scholars have remarked on the ways in which management and organizational theory and research itself are culture-bound (Aaltio & Mills, 2002; Adler & Jelinek, 1986; Boyacigiller & Adler, 1991; Calas, 1994). This finding, together with the impact of globalization and high technology, suggests that cross-cultural comprehension of, and comparison with, the “other” – other work norms, habits, and ways of learning and doing business – is of considerable importance.

¹ In this thesis, China refers to Mainland China, not including Hong Kong, Macau and Taiwan.

Recently, there has been considerable interest in the topic of diversity^[1] in the information technology (IT) field (see Trauth, 2006). Researchers cite the perceived masculinity (Aaltio, 2006a; Ahuja, 2002; Trauth, 2002) of IT as one of the main reasons why more women are not in the field. There is, however, little research addressing the experience of women currently in IT positions. These women are already aware of the degree to which IT is a masculine profession. They have entered the field in spite of this and because they may have a natural affinity for the work and have developed coping strategies.

Correspondingly, women in managerial positions are rare, especially at the top of IT organizations (Aaltio, 2006a; Ahuja, 2002). The path for women intending to pursue a managerial career in IT is an uphill one. While acknowledging that women are overtly discriminated against concerning the disparity between the numbers of men and women working in the IT field, it is important for women to become aware of the hidden ways in which the discrimination occurs, how they may inadvertently contribute to such discrimination, and possible methods for overcoming it (Kaplan & Niederman, 2006). Further, Kaplan and Niederman (2006) argue that inadequate social networks, skill obsolescence and limited vertical/internal job mobility present challenges to the career success of women in IT.

Diversity^[2] in organizations leads to cultural diversity, and vice versa. Cultural diversity, together with globalization, poses great challenges to the traditional career concept. Career theorists have noticed the impact of culture and globalization on career with the presentation of the boundaryless career (Arthur & Rousseau, 1996) and protean career (Hall, 2004; Hall & Moss, 1998), which are independent from traditional organizational career arrangements (see Table 5). Cross-cultural career studies question the applicability of western originated theories to non-western countries (Pang, 2003; Chay & Aryee, 1999) on the grounds that the content of career is inseparable from its underlying culture. Granrose (2007) following the work of Hall (2004) on the protean career argues that the

¹ According to Trauth (2006), the significant component of this diversity quest is the recruitment and retention of women in the IT field.

² Here the definition of diversity is beyond gender and race to include such things as socioeconomic status, age, ability, and religion.

connection between culturally-bound values and individual careers is important enough to require considerable additional emphasis. Further, researchers argue that career theories need to become more culturally sensitive (Young et al., 2007).

Organizational researchers have long been interested in the determinants of career success (e.g., Judge & Bretz, 1994; Kirchmeyer, 1998). In Western literature, perhaps the most often cited and relevant determinants are those related to social networking (e.g., Burt, 1992, 1997; Granovetter, 1995). According to Granovetter (1973, 1995), network ties, especially weak ties, are key to career opportunities and advancement, as they build social capital (Burt, 1992, 1998). Recently, the concept of the Career Success Network (CSN, see Bu & Roy, 2005), which is a subset of a manager's entire social network (Burt, 1992) that consists of ties that the manager considers important to his or her job/career success, has attracted attention. Accordingly, successful women tend to find alternative network routes to the top (Ibarra, 1997). Most related studies are, however, based on Western contexts, there is a lack of understanding of such work-related social networking practices in the Chinese context.

Since the late 1990s, China's re-emergence as an economic power is having a huge impact on global trade. With China's accession to the World Trade Organization in December 2001, China has become a popular host country for many MNCs, especially those related to the IT industry. Organization and management scholars are showing great interest in the impact of Chinese culture on management. For example, studies on *guanxi* (personal networks and relations related to Chinese culture) dominate Chinese management literature, indicating the importance of *guanxi* to job and career success (Ambler, 1995; Tsang, 1998; Tsui & Farh, 1997; Xin & Pearce, 1996). Though "*guanxi*" activities conducted by Chinese managers are strongly influenced by the country's Confucian cultural background (Luo, 1997; Faure & Fang, 2008; Yang, 1994) some authors argue that *guanxi* does not only exist in China, similar interpersonal relationships are found in other cultures (Jacobs, 1979; Tsui & Farh, 1997). Prosperity and social capital cumulate in the interplay between human partners and organizations (Bourdieu, 2005; Granovetter, 1992). Following this argument, it is assumed here that *guanxi* activity is not a unique

practice for Chinese managers, but a universal managerial role that varies only in the form and degree of its manifestation across different cultures.

Most network research is gender-neutral and there is rather little knowledge about what women's networks are like and how they are formed, or how women in managerial positions give meanings to their networks. With some exceptions (cf. Ibarra, 1993; Tallberg, 2004) such studies that exist are western-based. Exploring the networking of women managers is important given that in China: (a) interpersonal relations are very important to job and career success (Tsang, 1998; Xin & Pearce, 1996); (b) the female labor force participation rate is one of the highest in the world (World Bank, 2005); and (c) women are still drastically underrepresented in positions of authority in both the public and private sectors (Leung & Westwood, 1998).

1.2 Research gaps and objectives

Women's increasing participation in the labor force has attracted interest from the fields of both organization and feminist study. An increasing number of studies have been witnessed which aim to problematize the role of gender in organizations. Wajcman (1998) suggests that an investigation of the gender relations of senior management in a 'post-feminist' age may be instructive in understanding gender inequality in the workplace. Following this perspective, it is important to study women in management in order to understand gendered organizations. First, managerial jobs are related to power and authority, the site of decision-making and rule-making within organizations. Women's access to management, especially at senior levels, is both a symbol and a measure of organizational change. Therefore, women who have gained institutional power may make a difference to the way organizations operate. Second, women managers occupy positions traditionally filled by men. When a woman works in a male-dominated corporate structure – an atypical context – the significance of her sex is subjected to scrutiny (Kanter, 1977). Lastly, there is an increasing preoccupation in both feminist theory and organization theory with questions of culture and subjectivity. These issues are critical to management, because managers themselves have certain attributes and personalities, and leadership styles.

Previous studies on women in management are mainly based on Western contexts, and focus on the following questions: “Can women be managers? Do male and female managers differ in their behavior and actions in organizations? Why aren't women managers getting to the top?” These questions show possible positions for women. In other words, to ask whether women can be managers opens the possibility for women to become managers; to ask whether male and female managers differ in their behavior means that women are managers and it is possible for women to be different; and to ask why women managers are not getting to the top means that women are established in management and it is possible to see women in senior positions within organizations. In response to the above questions, organization and feminine scholars have focused on gendered organizations and organizational culture (Acker, 1990, 1992; Alvesson & Billing, 1997; Calas & Smircich, 1996; Connell, 1987; Gherardi, 1995; Kanter, 1977; Mills & Tancred, 1992; Fenstermaker & West, 2002), gender equality and differences (Guerrina, 2001; Hughes, 2002), gendered management styles (Alvesson & Billing, 1997; Gherardi, 1995; Rosener, 1990), psychological traits (Wood & Eagly, 2002), background factors (Alvesson & Billing, 1997), work and family (Greenhaus & Parasuraman, 1999; Wajcman, 1998; Wood & Newton, 2006), and networking (Ibarra, 1993, 1997; Travers & Pemberton, 2000). There is a growing recognition that larger social, cultural, and political contexts affect individuals’ perceptions and experiences of women in management (Aaltio, 2002, 2006a; Alvesson & Billing, 1997; Calas & Smircich, 1996; Wajcman, 1998).

Since the foundation of ‘New China’ in 1949, Chinese women have legally enjoyed equal rights with men in employment as demonstrated in the well-known slogan from the era of Chairman Mao, “women can hold up half of the sky” (see Bowen et al, 2007). However, Chinese women are under-represented in the managerial arena. The worldwide application of IT opens a great opportunity to women. The representation of women in the IT workforce raises new management concerns for researchers and practitioners. This is well documented in the *Encyclopedia of Gender and Information Technology*, edited by Eileen M. Trauth (2006), concerning gender imbalance and barriers women face in IT careers. With fewer women, IT is deprived of a workforce component that can contribute

alternative perspectives on systems design, development, and utilization. The more diverse the IT workplace and the larger the pool of talent from which to draw, the more likely IT solutions will address a broad range of issues and the needs of diverse end-users (Florida & Gates, 2002). However, the underrepresentation of women in the IT industry has been reported largely in developed countries such as the United States, Australia, New Zealand, and Ireland (see Trauth, 1995, 2002; Trauth, 2006; von Hellens et al., 2001). In contrast, since the 1990s, China has seen an influx of female talent, which may be due to the explosive growth in the Chinese IT sector. It is important to learn how cultural, social, and individual factors influence career perceptions and experiences of Chinese women in the IT industry and compare these experiences to those of western women.

Since the 1990s, IT has become one of the major forces in China's economy. Recently, the role of women and their careers in the IT field have been the concern of both researchers and practitioners, though related studies are very few compared with those in Western society. Previous studies of Chinese women in the IT industry have focused on the following topics: (1) women and IT from an application and occupational perspective (Shen & Ge, 2005), (2) the way successful women manage their careers (Xian & Woodhams, 2008), and (3) work-life conflict (Duxbury & Higgins, 2005; Liu, 2004). Studies find that Chinese women are different from their western counterparts. For instance, Chinese women with career success are seen as over-ambitious and less feminine (Cooke, 2005). Studies (Bu & McKeen, 2000, 2001; Bu & Roy, 2005) also find that highly educated Chinese women emphasize power, workflow and strategic information ties, and are as committed to their career as their male counterparts. Studies also argue that typical western ideas of career goals and career tactics might not apply to the Chinese situation. For example, Xian and Woodhams's (2008) study argues that deeply embedded values in China encourage a rejection of planning and proactivity in women's career management, resulting in a lack of applicability of Western theory. The above studies suggest that Chinese women's careers are likely to be influenced by cultural constraints and social sex-stereotypes that do not apply to the same degree to Western women (Granrose, 2007).

In the literature, there are very few empirical studies focusing specifically on the careers of Chinese women managers in the IT sector. Chinese women who work as managers in the IT sector are an interesting sample to study gender and work, in view of the masculine Chinese culture and the fact that both management and IT are male-dominated. My interest in the career experiences of Chinese women managers motivated me to conduct the current study. There are several reasons for choosing Finnish women managers in the IT field as a sample for comparison. Firstly, within the last decade, Finland has become a leading country in the global IT field. The Finnish IT Company, Nokia is a world leader in mobile communications and has established its largest factory in China. Secondly, as a Nordic country, Finland offers interesting material to investigate the gendering process because of its long tradition in gender equality policy and parental leave policy (Kuusipalo et al., 2000; Rantalaaho et al., 1997). Thirdly, since the IT industry is a new industry worldwide, I assume that the impact of traditional/national culture on the IT industry is less than in traditional industries. Therefore, women managers in China who participate in the IT industry might share more in common culturally with women managers in Finland's IT industry than they do with many of their sisters in other sectors in China. Lastly, the national culture and the social and economy development of China and Finland are quite different (see Table 7 and Table 8). The above all makes the research results comparable and of considerable interest.

This study will approach these issues with the aim of understanding the lived experience of women managers in the IT sector in China and Finland, two countries with different cultures, policies and social and economic structures concerning work-life support and equal opportunities. The object of this research is to provide a cross-cultural comparison of women's career experiences and how the women themselves understand and account for their careers, and the study will explore how the macro and the micro levels of cultural and social processes become manifested in the lives of individuals.

The main research question is: "How do cultural and social processes affect the experiences of women managers?" Two key elements in the study are career scripts and networking. The data for this study were gathered by interviewing 21 women managers in the IT sector respectively in China (during March 2003-March 2004 and March 2005-June

2005) and Finland (during September 2005-February 2006). Their statements were analyzed and arranged around the themes of their managerial identities, careers and work-life, and especially their relationship with national and organizational cultures. In-depth interviews, Q-methodology, questionnaires and reflexivity were used as research methodologies, and this study links the lived experience of women IT managers with the concrete historical, political, and economic structures of the nations and organizations. The results portray in a cross-cultural context the career scripts (Jacobson & Aaltio-Marjosola, 2001) of women managers and indicate the gendered nature of IT and management, and cultural notions of what is an ideal woman.

The main argument in this thesis is that culture plays a crucial role in making sense of women's career experiences, although its role should be understood through its interrelationship with other social processes, e.g., institutional relations, social policies, industry and organizations, as well as globalization. The interrelationship of a series of cultural and social processes affects individuals' attitude to, and arrangement and organization of, their work and family lives.

This study provides academic interest in issues related to an emerging society like China, which offers a fertile ground for organization and management research (Peng et al., 2001; Tsui, 2006; Xiao & Tsui, 2007) and an ideal context for examining the cultural boundaries of social networks. Second, earlier studies on women managers' careers were either based on one single national culture (Xian & Woodhams, 2008; Wong, 2007) or based on a multi-cultural background within a national culture context (Adya, 2008). There are very few cross-cultural studies on the careers of women managers, especially in the IT industry. Third, previous studies on women managers' careers suggest women-friendly policies and programs to support women's career development, and the findings of this study indicate that even in Finland, a country with a well established social welfare system and gender equality policy, women still encounter work-life conflict and a gender system constructed in hierarchy. This finding reinforces the importance of the role of culture – cultural norms within nations and organizations - concerning the relationship of gender and work. Fourth, much literature on women and management is descriptive in nature, while this study integrates both qualitative and quantitative methods. Lastly, many of the earlier studies on

Chinese women managers were either conducted among Chinese outside mainland China, or conducted by foreign researcher(s) inside or outside mainland China (e.g., Chow & Ng, 2004; Cooke, 2005; Granovetter, 2007). The current study benefits from the fact that it was conducted in mainland China by a native Chinese researcher.

In summary, the current research is based on empirical study exploring the experience of the careers of women managers in the IT field in China and Finland. By focusing on how individuals interpreted their career experiences, what situations or factors led to their particular decisions and current positions, this research aims to establish the importance of culture for the women studied. By starting from the premise of what is important to these individual women, it is possible to avoid the pitfall of imposing particular cultural biases on cross-cultural research (Jacobson, 1991; Jacobson & Aaltio-Marjosola, 2001; Venter, 2002). This research contributes to the literature on gender, work and culture, offering a complex and holistic perspective for a richer understanding of pluralism and global diversity.

1.3 Key concepts used in the study

Career is “temporally extended scripts that mediate between individuals and interactions” (Barley, 1989, p. 44). This definition of career as script recognizes both the objective and subjective dimensions of the notion of career. On the one hand, some organizations and societies create and value one kind of career script, while others define the same career script quite differently. In an anthropological sense, career scripts are primary artifacts of organizations, national cultures, and subcultures (Jacobson & Aaltio-Marjosola, 2001). In any given society, some career scripts are available, others are not. Gowler and Legge (1989) suggest that to understand careers, research must look to the interplay between subjective experience and social structure, arguing that “careers are not only determined by our social environments, but also create and legitimate them” (p. 437, *ibid*). Therefore, in this study, while the descriptions of career experience derive from perceptions of individually lived experience, these individual career experiences depend on the possibilities of a given historical, cultural, and structural context.

Culture refers to beliefs, values and assumptions, which are reflected in behaviors, artifacts and symbols (Hofstede, 1980; Kroeber & Kluckhohn, 1963). On the one hand, culture is relatively stable. On the other hand, it has the dynamic characteristic of adapting to political, economic and industrial changes. Culture is viewed as a multi-level construct (Karahanna et al., 2005; Leung et al., 2005). For an individual in a specific national culture, his/her behavior and values are affected, where relevant, by national culture, professional/industrial culture, organizational culture, group culture, and global culture. The influence of the different levels of culture depends on the context and the individual.

Feminist, according to the American Heritage Dictionary, refers to someone, male or female, who believes in social, political and economic equality between the sexes. However, this word did come to have negative connotations mainly because the previous, male-dominated power structure felt threatened. In some degree I would say I am a feminist. I agree women are different from men, however, women and men should be treated equally and given the same rights.

Gender refers to the cultural construction of femininity and masculinity. This study utilizes the basic understanding of gender proposed by West and Zimmerman (1987) emphasizing that gender is something that people do in their social activities. Accordingly, gender is constituted in and through interaction, rooted in the activities of people. "Gender is complex, multifaceted, and deeply internalized in individual behavior. It is also persistently, although differentially, embedded in societal as well as organizational structures and cultural notions of what it is to be a 'good' person." (Jacobson & Aaltio-Marjosola, 2001, p. 228). Cultural dimensions are prerequisites for understanding gender (Aaltio & Mills, 2002). Particularly, the cultural dimensions related to our organizational and family lives are consequential for understanding the construct of gender in the work-family context of managers.

Guanxi, a central concept in Chinese society, is defined as a personal network, a network of ties, or as a special relationship between two or more individuals (see Chow & Ng, 2004). In this study, *guanxi* is related to the networking of Chinese women managers.

Information technology (IT) is the study, design, development, implementation, support or management of computer-based information systems, particularly software applications and computer hardware (ITAA, 2008). The term “ICT” – information and communication technology – is the broader term and is often used to encompass network technologies. However, “IT” is the older term and many people use this term to include network technologies, even though, “ICT” should be used in such cases. “IS” – information systems – encompasses the study of IT and ICT in social and organizational settings (Adam et al., 2006). In this study, IT refers to both IT and ICT.

Manager is a person working at the mid-level and above of an organization with subordinate(s). He/she plans, organizes, leads and controls or coordinates organizational activities (cf. Aaltio & Heilmann, 2006).

Social capital is defined as the relational resources embedded in networks of relationships which are possessed by an individual or social unit (Coleman, 1988; Burt, 1997; Nahapiet & Ghoshal, 1998). There are three dimensions of social capital (Nahapiet & Ghoshal, 1998): the structural dimension refers to the overall pattern of connections between actors – that is, who you reach and how you reach them (Burt, 1992); the relational dimension refers to the assets created and leveraged through relationships; and the cognitive dimension refers to the resources providing shared representations, interpretations, and systems of meaning among parties. In the current research, social capital is presented as a Western approach to social networks.

Social interaction technology (SIT) refers to the technology powered by social software to advance people’s social interaction, collaboration, and sharing of information (cf. Dumova & Fiordo, forthcoming). Applications of SIT include: Online social networking, blogs, wikis, social search, and other tools used to further social interaction, collaboration, and information sharing.

Social network means a social structure made of nodes (which are generally individuals or organizations) that are tied by one or more specific types of interdependency (such as values, visions, exchange, friendship, kinship, dislike, trade, or sexual relations). The

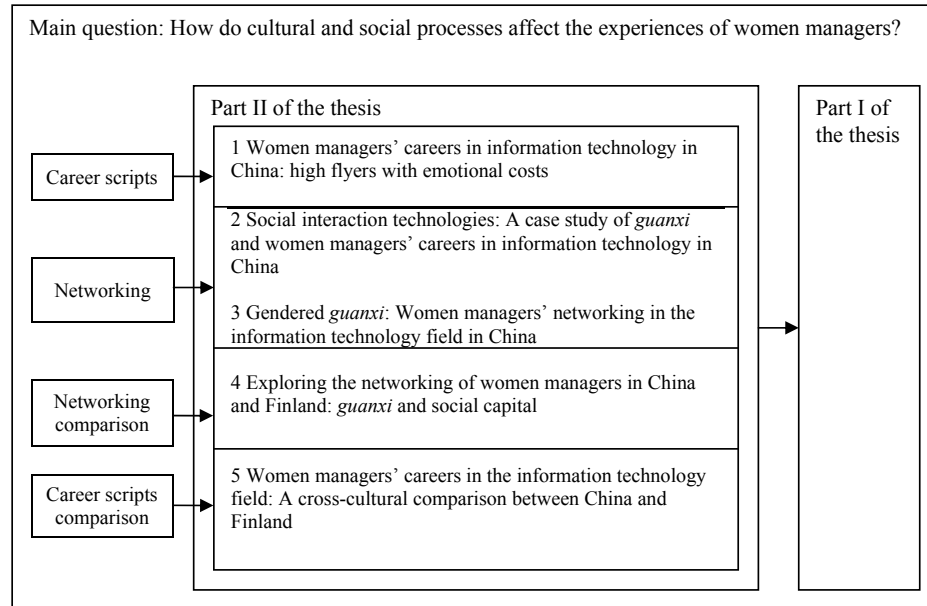
network can also be used to determine the social capital of individual actors (see Wellman et al., 2002).

Social network analysis (SNA) conceives of social structure as the patterned organization of network members and their relationships. Analysis starts with a set of *network members* (sometimes called nodes) and a set of *ties* that connect some or all of these nodes. Ties consist of one or more specific *relationships*, such as kinship, frequent contact, information flow, conflict or emotional support. The interconnections of these ties channel resources to specific structural locations in social systems. The pattern of these relationships --- the social network structure --- organize systems of exchange, control, dependency, cooperation, and conflict (Wellman et al., 2002).

Weak ties In his classic work – *The Strength of Weak Ties*, Granovetter (1973) divides social network into strong ties (close friends and family) and weak ties (acquaintances). Accordingly, weak ties are relationships we have with people outside our own social networks. He highlights the importance of acquaintances in social networks and argues that the only thing what can connect two social networks with strong ties is a weak tie. Most importantly, weak ties gives us a perspective outside of the normal groups of which we are a part, whose perspectives tend to become homogenized over time as we learn and become familiar with the people we spend the most time with.

1.4 Outline of the study

Figure 1. Outline of the study



This thesis consists of two parts. Figure 1 illustrates the relationships between Part I of the thesis and Part II of the thesis (the five publications) in relation to the research questions. Publications 1-3 are about Chinese women managers, in which publication 1 deals with career scripts, publication 2 relates social interaction technologies to women managers' careers by a case study of *guanxi*, and publication 3 is about networking. Publications 4-5 contribute to the comparison of Chinese and Finnish women managers' networking and career scripts respectively.

The first part comprises six chapters, in which the first presents the research background and motivation, the research objectives and the research process. Chapter 2 provides a broader theoretical and literature background covering culture and career, gender and organizations, women in management, gender and IT, and social network theory. The context of the research is presented in Chapter 3, while the research design, methodology and data are presented in Chapter 4. Chapter 5 reviews the findings of the study. Finally,

Chapter 6 identifies the theoretical and practical/managerial contributions, presents research limitations and provides suggestions for future research. The second part of the thesis comprises five research papers addressing the research questions presented on pages 81-82. The outline of Part I is presented in Table 1, while the outline of the publications in Part II of this thesis is given in Table 2.

Table 1. Outline of Part I

Chapter	Aim of Chapter	Output
1. Introduction	Introduction to the study	Research background Research gaps and objectives Key concepts Outline of the study The research process
2. Theoretical background	Theoretical background of the study	Gender and organizations Culture and career Women in management Gender and IT Social network theory
3. The context of research in China and Finland	The context of research	Culture, women's labor force participation and IT industry in China and Finland
4. Research design and methodology	Research objectives, research questions, and research methods	Research design Research methods Data collection process Data analysis
5. Findings of the research	Results from all the five publications	Summary of the most important findings Differences and commonalities of the two groups
6. Discussion and conclusions	Summary of the research and value of contribution to the research	Theoretical and practical contribution Limitations of the study Personal reflections on the study

Table 2. Outline of Part II

	Publication 1	Publication 2	Publication 3	Publication 4	Publication 5
Title	Women managers' career in information technology in china: high flyers with emotional costs	Social interaction technologies: A case study of <i>guanxi</i> and women managers' careers in information technology in China	Gendered <i>guanxi</i> : how women managers in information technology field in china network	Exploring the networking of women managers in China and Finland: <i>Guanxi</i> and social capital	Women managers' careers in information technology: A cross-cultural study between China and Finland
Objective	Explore Chinese women managers' careers and gender aspects in IT industry	Explore the effect of SITs and <i>guanxi</i> on women managers' careers in the IT field in China	Explore the networking of Chinese women managers in IT field	A cross-cultural comparison of women managers' social networks in IT field in China and Finland	A cross-cultural exploration of the career experience of women managers in IT industry in China and Finland
Type of data and data sources	Literature review, quantitative and qualitative data	Literature review, quantitative and qualitative data	Literature review, quantitative and qualitative data	Literature review, quantitative and qualitative data	Literature review, quantitative and qualitative data
Main results	Two career scripts of Chinese women managers in the IT industry	SITs may serve as a positive source for women managers' career development to surpass the negative effect of gendered <i>guanxi</i> in organizations	Gendered <i>guanxi</i> of Chinese women managers' networking in the IT industry, which is affected by traditional Chinese culture	Comparison of the composition and structure of social network, networking strategies of women managers in IT field in China and Finland	Career scripts of women managers in the IT industry in China and Finland, and their comparison

1.5 Research process

My personal interest in women's lives may date back to my early years when I saw my mother in tears after she had delivered my youngest sister, who had been expected to be a boy, the fifth girl in the family (I am the third). My hometown is in the countryside in south China, where there is a strong tradition that boys are superior to girls, as in many other parts of China. Although, three years later, my young brother – the only boy in the family - was born, my mother always reminded us that only through education could girls get a better and independent life. As I grew up, I gradually learned that boys and girls are treated differently, for example, most of the girls of my acquaintance left school in grade 8, some of them even left in grade 5, because their parents (like other ordinary people in my hometown) thought: (1) girls are not good at academic things, it is waste of time if they remain in school, (2) girls belong to domestic life, they should help to make money to support their brother(s) to go to school. Fortunately, my parents did their best to support us to go to school to get an education. I remember very well when I was in grade 9, I was the only girl from my primary class (originally 15 girls) who moved to grade 9. I often wonder what I would be if I had left school at an early age as most of my female primary school classmates.

In Chinese, there is only one word to mean both sex and gender^[1]. I gradually noticed the existence of social sex – gender since I grew up. In the 1990s, with fierce competition in the labor market, job advertisements often indicated that the applicants must be male. I wondered why women are always isolated from some positions, for instance, management.

My interest in women's working life motivated me to enter the field of gender studies. This field is quite new in China. Compared with Western society, gender studies in China lack sound theories and best practices. After reading an interesting paper by Jacobson and Aaltio-Marjosola (2001) on the career scripts of women managers in banks in Finland and the United States in late 2001, I was inspired by the research design – the use of Q-methodology and “strong” objectivity. I was thinking of using the same method for a cross-cultural research

¹ There is also only one word to mean both sex and gender in Finnish.

project on women managers' careers in the IT field in China and Finland, because the IT industry is a new and developing industry worldwide, and women managers in China who participate in the IT industry might share more in common culturally with women managers in the IT industry in Finland than they do with many of their sisters in other sectors in China.

This project became possible when I first visited Finland in 2002. After contacting Professor Iiris Aaltio and explaining my ideas about this project, she invited me for a research visit to Lappeenranta University of Technology (LUT). I saw in person the high labor force participation of Finnish women and the country's concern for family issues and provision of extensive support for families. As a researcher, I was impressed by the booming women studies in the country and in Europe in general. Previously, like most people in China at that time, my direct impression related to Finland was from the products of the giant mobile company Nokia – Nokia mobile phones. Compared to the products of other brands in China, Nokia mobiles had a person-oriented design, especially its long-lasting battery, though at that time they were not as fashionable in design compared with the mobile products of other brands available in China. Like most Chinese, I was also curious about what contributes to the country's large GDP compared with the country's small population.

I discussed my preliminary study plan with Professor Aaltio and collected the related literature. Then I started the fieldwork in China in March 2003. The research focus was initially on the career scripts of women managers in the IT field in China (presented in publication 1). Later, after discussing with Professor Aaltio, I included the issue of the networking of women managers, which related to the traditional Chinese cultural characteristic – *guanxi* (see publications 2-4) and Western social network theory (see publication 4). In fall 2005, Professor Aaltio invited me for a research visit at LUT. I had the opportunity to conduct fieldwork in Finland, where I collected data on Finnish women managers' careers and networking. These data made the cross-cultural comparison presented in publications 4-5 possible. In August 2007, I received an invitation from the Dean of the School of Business at LUT, Professor Kalevi Kyläheiko and formally started my doctoral study. The idea of relating social interaction technologies to the careers of Chinese women IT

managers was inspired by a call for papers for the *Handbook of Research on Social Interaction Technologies and Collaboration Software* (see publication 2). The research plan and earlier versions of the five publications have been revised several times after I attended national and international conferences and doctoral courses.

Overall, during the dissertation process I published several refereed papers about the careers of women managers and their networking in the IT field in China and Finland in international journal, book and conferences. I also contributed to seminar presentations and refereed journals in Chinese. The publications reflect my interest in the field of women in management, and they have played an important role in building up understanding about the field of the dissertation (see Table 3).

Table 3. List of publications during the dissertation process

Authors	Title	Publisher
Jiehua Huang and Iris Aaltio	Social interaction technologies: A case study of <i>guanxi</i> and women managers' careers in information technology in China	In T. Dumova and R. Fiordo (Eds.) (2009), <i>Handbook of research on social interaction technologies and collaboration software: Concepts and trends</i> . IGI Global.
Jiehua Huang and Iris Aaltio	Women managers' careers in information technology: A cross-cultural study between China and Finland	"Changing Gender Relations: Nordic Feminism and Gender Research 2008", 6 - 8 October 2008, Karlstad University, Sweden.
Jiehua Huang and Iris Aaltio	Gendered <i>guanxi</i> : Women managers' networking in the information technology field in China	The XXIX International Congress of Psychology, 20-25 July 2008, Berlin, Germany.
Jiehua Huang and Iris Aaltio	Exploring women managers' networking in cross-cultural context: <i>Guanxi</i> and social capital	The 6 th International Conference on Management, 7-10 July 2008 Athens, Greece.
Jiehua Huang	Theories and practices of women's career development: New progress	<i>Journal of Guangzhou University</i> , 2008, (3), 47-52 (in Chinese)
Iris Aaltio and Jiehua Huang	Women managers' career in information technology in China: High flyers with emotional costs	<i>Journal of Organizational Change Management</i> , 2007, 20(2), 227-244
Jiehua Huang and Tian Tian	A study on the factors frame of university teachers' occupational career management	<i>Psychological Science</i> , 2007, (3), 689-692, 682 (in Chinese)
Jiehua Huang and Iris Aaltio	A study on gender difference about career concept: Evidence from men and women managers	<i>Journal of South China Normal University</i> , 2007, (4), 119-124 (in Chinese)
Jiehua Huang and Iris Aaltio	A study on the career scripts of Chinese women managers in IT industry	<i>Journal of South China Normal University</i> , 2005(1), 117-124 (in Chinese); collected in <i>Women Studies</i> , 2005 (3), 47-53 (in Chinese)

2 THEORETICAL BACKGROUND

The purpose of this research is to explore the career experiences of women managers in China and Finland from a cross-cultural perspective. The background literature covers the areas of gender and organizations, culture and careers, gender and IT, and social network theory, with *guanxi* and social capital introduced as Eastern and Western approaches to social networks. The research is based theoretically on culturally sensitive career theories (Young et al., 2007), the theory of individual differences (Trauth, 2002; Trauth et al., 2004), and feminist perspectives.

2.1 Gender and organizations

The feminization of the paid labor force has been regarded as one of the most important social changes in the twentieth century (Wajcman, 1998). With the emergence of a new consciousness and widespread public discourse about gender equity, women's newly-achieved economic independence, accompanied by a profound cultural shift, has been the subject of much study by scholars and practitioners in the past two decades. In Western societies, some progress has been achieved towards gender equity in the public sphere of the labor market. In the private sphere, personal relationships and roles are changing as well (Hogarth *et al.*, 2000; Wajcman, 1998). Gendered identities have undergone a major transformation. However, in almost all regions of the world, men continue to monopolize corporate power. Organizations are gendered, with masculine norms prevailing, and organized in ways that give men power and keep women in subordinate positions (cf. Acker, 1990, 1992; Kanter, 1977). Male-dominated material and institutional structures still largely intact.

2.1.1 Gendered organizations

Sociological research has found that organizations are gendered in many ways (Kanter, 1977; Acker, 1990; Cockburn, 1991; Wajcman, 1998). Joan Acker is regarded as the first researcher

to formally define gendered organizations. The following is Acker's definition of a gendered organization:

To say that an organization, or any other analytic unit, is gendered means that advantage and disadvantage, exploitation and control, action and emotion, meaning and identity, are patterned through and in terms of a distinction between male and female, masculine and feminine. (Acker, 1990, p. 146)

In her landmark work (Acker, 1990), Acker argues that organizational structure is not gender neutral; on the contrary, assumptions about gender underline the documents and contracts used to construct organizations and to provide the commonsense ground for theorizing about them. The gendered nature of organizations is partly masked by obscuring the embodied nature of work. Abstract jobs and hierarchies, common concepts in organizational thinking, assume a disembodied and universal worker, who is actually a man; a man's body, sexuality, and relationships to procreation and paid work are subsumed in the image of the worker. Images of men's bodies and masculinity pervade organizational processes, marginalizing women and contributing to the maintenance of gender segregation in organizations.

Gender is an integral part of organizational processes. Therefore, they cannot be properly understood without an analysis of gender (Connell, 1987; West & Zimmerman, 1987). According to Scott (1986, see also Acker, 1990), gendering – the construction of gender – occurs in at least five interacting processes. First is the construction of divisions along lines of gender – divisions of labor, of allowed behaviors, of locations in physical space, of power, including the institutionalized means of maintaining the divisions in the structures of labor markets, the family and the state (see also Kanter, 1977). Second is the construction of symbols and images that explain, express, reinforce, or sometimes oppose those divisions (Gherardi, 1995). Third are the interactions between women and men, women and women, men and men, including all the patterns that enact dominance and submission - “doing gender” (West & Zimmerman, 1987) and “doing difference” (West & Fenstermaker, 1995). Fourth, the processes which help to produce gendered components of individual identity,

which may include consciousness of the existence of the other three aspects of gender in organizations, such as choice of appropriate work, language use, clothing, and presentation of self as a gendered member of an organization. And finally, gender is implicated in the fundamental, ongoing processes of creating and conceptualizing social structures. Therefore, gendering processes include the ways in which people construct the meaning of emotion displays, use metaphors to describe social interaction and relations, and how they consciously shape their personas to fit the demands of society.

Feminist scholarship has contributed to the sociology of organizations by offering insight into the gendered nature of bureaucracy (Acker, 1990), the domination of particular occupations and workplaces by men or women, and the value respectively assigned to them (Reskin, 1988), and the gendered symbols or characteristics associated with particular occupations (Gherardi, 1995; Kanter, 1977). Acker's theory of gendered organizations suggests that gender inequality is an inherent characteristic of bureaucratic organizations. The theory is criticized as leaving little hope or guidance for the development of egalitarian organizations. As Dana Britton (2000) argues:

The gendered organizations approach remains theoretically and empirically underdeveloped, as there have as yet been few clear answers to the question central to the perspective: What does it really mean to say that an organization itself, or a policy, practice, or slot in the hierarchy, is "gendered?" (P. 418)

Britton (2000) suggests that what is required is a better understanding of the contexts and methods through which organizations are gendered. Britton emphasizes the importance of context as a means of discovering how gendered characteristics of organizations change and develop over time, how members of an organization understand and interact with these characteristics, and how organizations might become less gendered.

2.1.2 Gendered organizational culture

Feminists have deployed the concept of organizational culture to theorize the way in which male power operates through the discourses and practices that constitute and permeate organizations. In her influential paper, Smircich (1983) distinguishes two theoretical approaches: Organizational culture can be conceived as a variable, something an organization *has*, or as something emerging from social interaction, something an organization *is*. In the second approach, culture is both produced and reproduced through the negotiation and sharing of symbols and meanings. This dynamic concept of culture highlights the limits of managerial power to manipulate cultural change, because it is not something wholly within the control of managers. This approach is known as gender and organizational analysis, which attempts to integrate analyses of organizational structures with explorations of organizational cultures and places patriarchal power relations centre stage (Acker, 1990; Calas & Smircich, 1992; Gherardi, 1995; Green & Cassell, 1996; Hearn & Parkin, 1987; Mills & Tancred, 1992; Fenstermaker & West, 2002).

Researchers using gender and organizational analysis focus on the gendered aspects of organizational culture with the aim of gaining insight into the origins of gender inequality and discrimination, and how organizations contribute to the institutional processes of the social construction of women and men, as well as making marginalized female voices hearable in work-life localities and relating them to the overall knowledge of organizations and work-life (cf. Aaltio, 2002; Aaltio et al., 2002; Aaltio & Kovalainen, 2003; Alvesson & Billing, 1997). In return, these marginalized women will also bring epistemological insight to the field of organizational studies by raising questions about what constitutes the gendering of organizations (Aaltio et al., 2002).

Gherardi (1996) discusses the “positioning” of senior women within male cultures in a way that highlights the role of the interaction between an individual woman and her work colleagues in the construction of her identity as a woman manager. Gherardi’s (1996) above discussion is echoed by organizational researchers discussing ways of understanding careers. For example, Herriot (1992) argues that “an organizational career is the sequence of renegotiations of the psychological contract which the individual and the organization

conduct during his or her period of employment” (p. 8) rather than seeing careers as individual “plans” or as “paths” which the organization manages for its members. Organizational culture is a negotiated, subjective context in that organizational culture is also open to symbolization (Aaltio et al., 2002).

Through the renewed social construction of gender in work-life localities, it is, therefore, possible for change in organizational cultures. The strength of the above literature is its focus on gendered cultural processes, for example, the way people talk to each other, how they interact informally, and their taken-for-granted assumptions, values and ideas. Within organizations, people build their understandings of the gendered structure of work and opportunity mainly through such cultural representations and meanings. As the dominant symbolism of corporations is suffused with masculine images, women managers are out of place, in foreign territory, ‘travelers in a male world’ (Marshall, 1984).

2.2 Culture and career

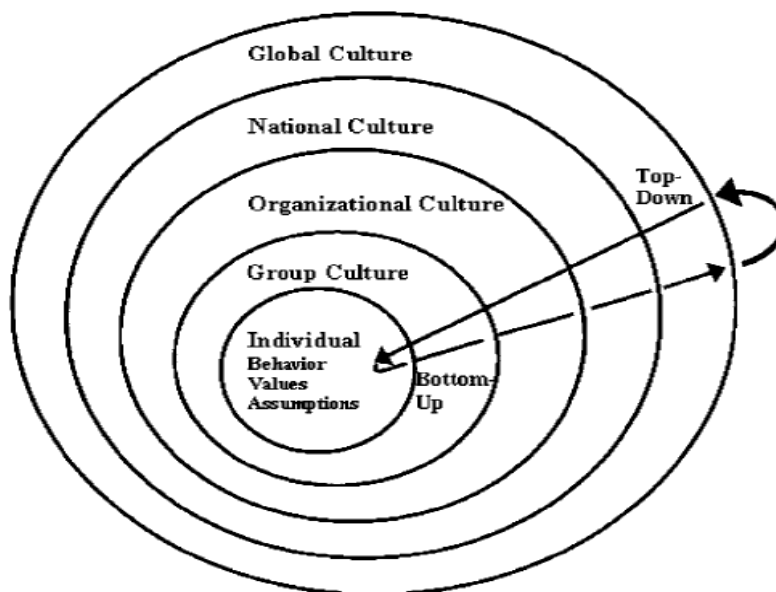
2.2.1 What is culture?

Scholars have different views on culture depending on the degree to which it is believed to be fixed and immutable or variable and emergent. Hofstede (1980, p. 25) defines culture as “the collective programming of the mind” which distinguishes human groups. Others define culture as beliefs, values and assumptions, which are reflected in behaviors, artifacts and symbols (e.g., Kroeber & Kluckhohn, 1963). At the organizational level, culture has been defined as “the set of shared, taken-for-granted implicit assumptions that a group holds and that determines how it perceives, thinks about, and reacts to its various environments” (Schein, 1992). The above definitions view culture as a holistic and relatively stable set of characteristics.

An alternative view is that culture is fragmented, variable, and historically situated (Brightman, 1995). In contrast to the fixed perspective, this view emphasizes the permeability

and fluid nature of culture. According to this view, culture does not exist in the minds of people but rather in their behavior. Instead of referring to stable, generalized dimensions assumed to be held in common by members of a particular group, culture is fluid, contextually dependent, and created by actors within a group who may hold conflicting assumptions and worldviews. “Culture is what culture does” (Weisinger & Salipante, 2000).

Figure 2. Dynamic of top-down–bottom-up processes across levels of culture



Source: Leung, K., Bhagat, R. S., Buchan, N. R., Erez, M., & Gibson, C. B. (2005, p. 363).

Leung et al. (2005) propose a dynamics of culture model, which consists of two building blocks (see Figure 2). One is a multi-level approach, viewing culture as a multi-level construct that consists of various levels nested within each other from global culture, through national cultures, organizational cultures, group cultures, and cultural values that are represented in the self at the individual level. The second building block is based on Schein’s (1992) model viewing culture as a multi-layer construct consisting of the most external layer of observed artifacts and behaviors, the deeper level of values, which is testable by social consensus, and the deepest level of basic assumption, which is invisible and taken for granted.

This model proposes that culture is a multi-layer construct existing at all levels – from the global to the individual – and that at each level change first occurs at the most external layer of behavior, and then, when shared by individuals who belong to the same cultural context, it becomes a shared value that characterizes the aggregated unit (group, organizations, or nations).

There is general acceptance that the value-based framework for measuring cultures has been helpful in deciphering cultures (Leung et al., 2002; Leung et al., 2005). Although the construct is inherently complex, it is possible to label many of its different aspects or dimensions. A summary of cultural value dimensions is presented in Table 4.

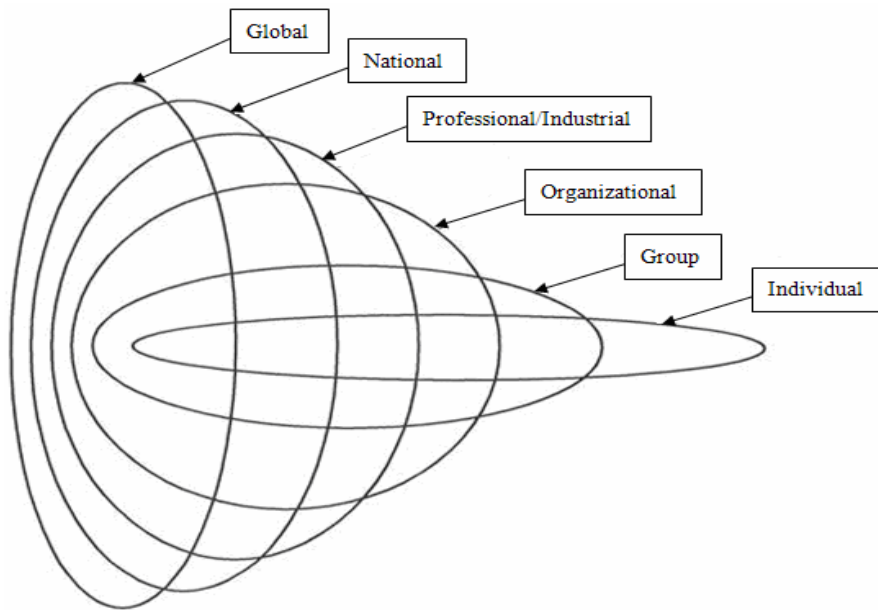
Table 4. Summary of cultural value dimensions

Culture Dimension	Definition
Uncertainty avoidance (Hofstede, 1980, 2001)	Degree to which people in a country prefer structured over unstructured situations.
Power distance (Hofstede, 1980, 2001); Hierarchy vs. egalitarian ¹ ; Equality – hierarchy ²	Degree of inequality among people which the population of a country considers as normal. A country with a high Power Distance score both accepts and perpetuates inequalities between people. A low Power Distance indicates that a society does not emphasize differences in people's status, power or wealth, and equality is seen as the collective aim of society and upward mobility is common.
Masculinity/femininity (Hofstede, 1980, 2001)	Degree to which "masculine" values like assertiveness, performance, success and competition prevail over "feminine" values like the quality of life, maintaining warm personal relationships, service, caring, and solidarity.
Individualism/collectivism (Hofstede, 1980, 2001)	The extend to which people feel they are supposed to take care for, or to be cared for by themselves, their families or organizations they belong to.
Long-term orientation vs. short term orientation (Hofstede, 2001); Confucian Dynamism (Hofstede & Bond, 1988).	Long-term orientation cultures value virtues oriented toward future rewards, in particular perseverance and thrift. Short term orientation stands for the fostering of virtues related to the past and present, in particular respect for tradition, preservation of 'face' and fulfilling social obligations. East Asian countries have a long-term orientation – also called Confucian Dynamism, while Western countries have a short-term orientation.
Universalism-Particularism ^{2,3}	Degree to which people in a country compare generalist rules about what is right with more situation-specific relationship obligations and unique circumstances.
Specific vs. diffuse orientations ³ ; Inner-directed vs. outer-directed ²	Degree to which people in a country involved in a business relationships demarcate and 'segregate-out' private and work encounters.
Achieved status vs. ascribed status ² ; Achievement vs. ascription ³	Degree to which people in a country make their judgments of others based on actual individual accomplishments (achievement oriented societies) or ascribed status on grounds of birth, group membership or similar criteria.
Conservatism vs. Affective/intellectual autonomy ²	Degree to which people in a country emphasize maintenance of status quo (conservatism), or emphasize creativity or affective autonomy stressing the desire for pleasure and an exciting life.
Time as sequence vs. time as synchronization ²	Attitudes toward use of time in performing tasks either focusing on issues one at a time (monochronic) or performing of activities in parallel (polychronic).

Source: 1. Schwartz (1994); 2. Hampden-Turner and Trompenaars (1994); 3. Trompenaars and Hampden-Turner (1998).

In this study, culture is viewed as relatively stable, but it also has dynamic characteristics to adapt to political and economic changes. For an individual in a specific national culture, his/her behavior and values are affected by national culture, organizational culture (if a member of an organization), group culture (if a member of a group) and global culture. The influence of the different levels of culture depends on the context and the individual. As shown in Figure 3, the area labeled individual represents the subjective culture or the individual level of culture where an individual's culture is the product of several levels of culture. Each individual belongs to a specific national culture. In addition, individuals may have a religious orientation, a professional degree and belong to a specific ethnic, linguistic group, and so on, which is represented by different sub-culture groups. Individuals may also work in an organization, which is represented by organizational culture. The cultures that enfold the individual interact and comprise the individual's unique culture, eventually influencing the individual's subsequent actions and behavior (Karahanna, et al, 2005).

Figure 3. Interrelated levels of culture (Adapted from Karahanna et al., 2005)



2.2.2 Situating culture in cross-cultural study

Weisinger & Trauth (2003) present a theoretical approach – situating culture to understanding the local culture of firms in the multinational information sector. This approach is used in the current study because this study is situated in the cross-culture and IT fields. The situating culture approach (Weisinger & Trauth, 2003) holds that cultural understanding is locally situated, behavioral and embedded in everyday, socially negotiated work practices, indicating how the local culture of a global IT firm represents the interaction of industry, corporate and national contexts. The theoretical approach of situating culture contributes to a better understanding of contextualism in the cross-cultural IT environment.

Fundamental to understanding of the situated nature of the cross-cultural IT environment is an understanding of two concepts: context and culture. Context, according to Giddens (1984), is the structure or environment within which social interactions occur, while culture is concerned with the meanings that are ascribed to that context.

Both explicit and implicit characteristics of the cultural context can be found in the literature of cross-cultural studies. The explicit aspects include such things as language, local laws, and national information infrastructure. The implicit aspects refer to the more subtle and less visible aspects of culture such as unstated assumptions, values, and norms that define “acceptable” management practices in the workplace. This situated view of context and culture has several implications for cross-cultural study. First, it means that the research frameworks and findings should allow for the reshaping of culture. Second, it means that the study should take into account the interaction of contextual factors of cultures. Finally, it means that researchers should explore behavior and practice as signals for the very local cultures being studied.

2.2.3 Dynamics of organizational culture

According to Schein (2004, p. 17) organizational culture (OC) refers to a “pattern of shared basic assumptions that was learned by a group as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems”. There are three critical elements of OC: stability (culture is shared and rather stable because it defines the group); depth (it involves unconscious parts of organizational life); and breadth (it covers all of the organization’s functioning and patterning, because OC ties together the various elements) (Schein, 2004, p. 14–15). Alvesson (2002, p. 4) argues that culture is “central in governing the understanding of behavior, social events, institutions and processes”. Therefore, the stability of OC interferes in two ways. On the one hand, OC keeps the organization together, but on the other, the culture may become a barrier to the innovation process. Stability in this context does not exclude changes *per se*, but rather refers to the fact that transformation of OC is a slow process. Nevertheless, critical events (e.g. drastic changes in environment) may accelerate culture transformation (Reino et al., 2007).

Schein’s definition summarizes the essence of OC, it has, however, been criticized because there is no univocal position about culture formation, but the impact of the general and specific environment on OC (e.g. industry and regulations in the industry) is clearly evident (Reino et al., 2007). Hatch (1993) introduces dynamism into OC theory by reformulating Schein's original model in processual terms. In the new model called cultural dynamics, Hatch (1993) proposes that culture is constituted by manifestation, realization, symbolization, and interpretation processes, and the elements of culture are assumptions, values, artifacts, and symbols. This move initiates the shift from static to dynamic conceptions of culture and incorporates symbolic-interpretive approaches.

Meanwhile, Scholars (e.g. Padaki, 2000, Chatman & Jehn, 1994) have stressed that the OC of those organizations which belong to relatively homogeneous industries are similar. Trice and Beyer (1993, p. 300) also regard organizations as open systems which are dependent on their environments. They propose that the influence of industry on the organization comes first of all through industry ideology which serves as a ground for organizational culture. Similarly,

Barney (1986) argues that high-performing organizations share many common traits of organizational culture, but each organization benefits from those traits in a different manner. The study of Bullinger et al (2000) analyzes global trends in the development of the IT sector. It may be argued that these global trends are more or less universal, although differences could be brought out in the light of dynamics and complexity (Hatch, 1993, 1997). Reino et al's (2007) longitudinal case study of an Estonian IT sector company from 1992 to 2006 also shows how the OC in the IT sector received influences from global and local developments, which suggests that this IT company's dynamics is analogous with the global pattern, although the speed of development differs tangibly. Similarly, the study of Björkman and colleagues (Björkman et al., 2008) which investigated the changes taking place in HRM practices found in European-owned units in China between 1996 and 2006 in conjunction with the transformation of the context in which they are operating, presents clear evidence for the convergence of HRM found in local Chinese firms with those of European MNC units in China, which also indicates a convergence within European MNCs since the HRM practices in units located in China have become significantly more similar to those of their parent companies. Therefore I assume that the OC of IT industry in China and Finland shares more similarities than that in other industries.

2.2.4 Culture in career theories

According to Arthur and colleagues, career refers to “the evolving sequence of a person's work experiences over time’ (Arthur et al., 1989, p. 8). This definition provides an opportunity for interdisciplinary inquiry of career. It restricts us to the work arena, but leaves us free to appreciate the interdependence between work and the wider life course (Arthur, 2008).

Organizational researchers have been showing great interest in career. There is a range of theories on career. Some theories have strong psychology root, for example, psychologist John L. Holland's (1973) well known and widely researched theory of career choice. According to Holland's theory, most people represent one of six personality types: Realistic,

Investigative, Artistic, Social, Enterprising, and Conventional. Later, Holland (1985) created a Vocational Preference Inventory (VPI) to measure an individual's type and match it with a list of career choices that would theoretically be good for that individual. Other studies are from a sociological perspective, with an emphasis on the changes that have affected employment and work organizations. Boudon and Bourricaud (1994, cited in Young & Collin, 2000), for example, state that career is usually examined in terms of social mobility, which describes the movement of individuals or family units within the systems of occupational categories or the social class system. Status attainment theory asserts that motivation allows people to seize the opportunities offered by the labor market, while reproduction theory emphasizes that a career is assigned on the bases of an individual's social and economic origin. This, on the other hand, leads to a cultural perspective of career.

In recent decades, career systems have witnessed major changes because of the dynamic nature of labor markets: public and private organizations all experience a combination of fast developments in multiple areas – economy, technology, and society in general. “The ever-changing processes of restructuring, often accompanied by redundancies, have shattered traditional bureaucracies” (Baruch, 2004). In fact, since the 1990s, career theorists have acknowledged the impact of culture and globalization on career by the presentation of the concepts of boundaryless career (DeFillippi & Arthur, 1994; Arthur & Rousseau, 1996), kaleidoscope career (Mainero & Sullivan, 2006), new career (Arthur et al., 1999), post-corporate career (Peiperl & Baruch, 1997) and protean career (Hall & Moss, 1998), all of which are independent from traditional organizational career arrangements and are labeled as *contemporary* careers (Arthur, 2008). Such careers, reflecting the times in which we live, can be broadly described as being responsive to: a) shifting boundaries in occupational, organizational, national and global work arrangements; b) greater uncertainty given the rapid generation of knowledge and the unpredictability of its effects; c) greater individual agency, not only as a response to shifting boundaries and uncertainty, but also because of the wider combinations of job experiences that can be incorporated into one career, and d) a transition from linear to multidirectional career paths (Arthur, 2008; Baruch, 2004). As careers are changing from formal, hierarchy-based structures to more fluid arrangements, mobility

between employers, networks, and different departments in the same organization, as well as for individual and family reasons are theorized to bring further changes to career patterns in the future. Table 5 summarizes the changes from traditional career to contemporary careers.

Table 5. Summary of the transition of career

Issue	Traditional career	Contemporary careers (mainly boundaryless career and protean career)
Environment characteristic	Stability	Dynamism
Career choice being made	Once, at an early career age	Repeated, sometimes cyclical, at different age stages
Employer expect /employee give	Loyalty and commitment	Long time working hours
Employer give /employee expect	Job security	Investment in employability
Who is in charge?	Organization	Individual
Core values	Vertical advancement	Freedom Multidirectional growth
Scope of mobility	Within organizations	Both within and across organizations
Degree of mobility	Lower	High
Career relationship	Long-term	Short-term
Success criteria	Position level, salary	Psychological success
Key attitudes	Organizational commitment	Work satisfaction Professional commitment
Training	Formal programmes, generalist	On-the-job, company specific
Career direction	Linear	Multidirectional

Globalization refers to the increasing integration of economies around the world, particularly through trade and financial flows (International Monetary Fund, 2000). It suggests a greater need for an awareness of cultural differences and uniqueness. Although significant efforts

have been made to address diversity^[1] in the career field (e.g., Arnold, 1997) Stead (2004) critiques most extant career theories for their extreme ethnocentric view. He suggests that theoretical concepts in the career domain have to have meaning and salience in the particular cultures in which they are developed. This means that culturally sensitive theories should be based on the recognition of particular cultures and their artifacts (Young et al., 2007). Within this view, what people do in their daily lives is central to career and their actions provide an important link to culture. Thus, one can extend the relationship between action and culture to career. It is through career that one can engage more fully with culture, and it is culture that allows one to engage in career. As regards its impact on career theories, globalization can be seen as a factor that simultaneously highlights career development issues in many cultures and pushes scholars and practitioners toward recognizing greater cultural diversity in career theory (Ibid).

2.3 Women in management

Career can be seen as an artifact reflecting a cultural and rhetorical context in its use. Managerial careers from gender perspective, gendered “blind spots” in organizations and the invisibility of women in the management have been an object of study since 1970’s (Aaltio, 2006a). Over the past decades, there has been a marked focus within organization studies on women in management. Women’s career choices can not be fully understood without understanding the circumstances in which the decisions were made. Researchers regularly refer to two issues which have considerable impact on women’s careers internationally: the “glass ceiling” and the “glass border.” The term “glass ceiling” means an invisible but impenetrable barrier that prevents qualified women from advancing to senior-management jobs (Powell, 1999, 2000). Similarly, one of the reasons cited in Europe and elsewhere for not promoting women to senior board positions is their lack of international experience, the “glass border” issue (cf. Linehan & Walsh, 1999). Recently, Eagly and Carli (2008) have used the metaphor of “through the labyrinth” to describe how difficult it is for women to become

¹ According to Arnold (1997), as work-forces are becoming more diverse in terms of ethnicity, gender, age, disability, family circumstances and lifestyle, career patterns are becoming more diverse, with more moves between organizations and occupations, more periods of unemployment and more participation in education during adulthood.

leaders. This new metaphor connotes “a complex journey that entails challenges and offers goals worth striving for. . . .” (p. x). The labyrinth metaphor offers women hope, suggesting that if a woman is resilient, resourceful, and more than a little talented, she might be able to make her way to the managerial role she wants.

Alvesson and Billing (1997) argue that sometimes one even gets the impression that the representation and functioning of women in senior managerial jobs is believed to be *the* crucial issue in gender equality. The situation that there are only very few women in top management calls for an exploration of women's different leadership styles and ways of organizing work, as well as women’s managerial careers.

2.3.1 Changing ideas about leadership

Traditionally, “management” is related to influential writers about management, for example Henry Mintzberg or Peter Drucker, indicating management is a masculine thing. A good example is Mintzberg’s (1975, p. 49) definition of the manager's job: “If you ask a manager what *he* does, *he* will most likely tell you that *he* plans, organizes, coordinates and controls” (italics added). As women have entered into senior management in organizations (though only few) the change has brought debate on management and leadership. As Bartram (2005) argues, if theories of management are based on masculine ways of doing things then management development is a tool that reinforces these biases and maintains women in subject positions that are “other” to the “one” (De Beauvoir, 1953) who has been given legitimacy to be a manager through the prevailing discourses relating management and a manager with men. There is a call for changing ideas about leadership from more bureaucratic-technocratic modes to more personal-ideological forms, or a blend of traditional male and female values (Alvesson & Billing, 1997; Colwill & Townsend, 1999; Kauppinen & Aaltio, 2004; Powell, 1993). It is quite likely that changes in management and organizational practices are grossly exaggerated in many accounts of the ‘postmodern world’, the ‘knowledge-society’, ‘post-modern society’, etc. (Alvesson, 1995; Thompson, 1993).

During the 1980s management theory underwent a paradigm shift. The new approach emphasized that effective management needs a softer edge, a more qualitative, people-oriented approach. Accordingly, leadership is now concerned with fostering shared visions, shared values, shared directions and shared responsibility. At the same time, gender images are being deployed in new management theories. In the report *Management Development to the Millennium*, the British Institute of Management (1994) argues that 'female ways of managing will be more appropriate in the millennium.' Further, they say organizations will be less hierarchical, will rely more on teamwork and consensus management, and 'feminine' skills of communication and collaborative working will come to the fore. So the advantage men formerly enjoyed in 'command and control' style organizations will pass to women in these new organizations. Here, the popularity of concepts such as adhocracies, flexible forms, decentralization, service management, quality, innovation, empowerment, networks, charisma, emotionality etc. provide space for less masculine constructions of management and leadership than has traditionally been the case (Alvesson & Billing, 1997; Gherardi, 1995).

The discussion of gendered management style is consistent with feminist theory of the 1980s when feminist scholars began to emphasize women's difference and to celebrate what they saw as specifically female values and ways of behaving, feeling and thinking (Gilligan, 1982), assuming that women-centred modes of organization were more democratic and participatory (Ferguson, 1984). Rosener's (1990) work on the ways women lead offered a new subject position for women: as managers who have their own way of doing things. Rosener argues that 'they [women executives] are succeeding because of – not in spite of – certain characteristics generally considered to be "feminine" and inappropriate in leaders' (p. 120), for example, women executives ascribe their power to personal characteristics like interpersonal skills, hard work, or personal contacts. Similarly, Martin (1993) argues that female managers are ideally suited to today's decentralized organizations where teamwork and delegation, rather than hierarchy and direction, are the key.

Wajcman's (1998) study concludes that the similarities between women and men who have achieved senior management positions far outweigh any differences between women and men as groups. She explains that this is because women's presence in the world of men is conditional on them being willing to modify their behavior to become more like men. Here the question is in what ways are women disadvantaged by the fact that they are not men, if there are no significant sex differences in management style?

2.3.2 Women's managerial careers

Researchers' explanations of the limited number of women in managerial jobs are often grouped into two categories: social psychological factors, and institutional and organizational factors. Social psychological factors are due to the inherent group dynamics involving a minority and a majority and include views of organization and management which can best be described as andro-centric or male centered and which claim that women may adopt passive or self-limiting behaviors and attitudes to management (cf. Singh & Vinnicombe, 2001). Institutional and organizational factors which feature in discussions of why women find it difficult to progress in managerial careers include the level of work-life balance, employment practices, and the working culture of particular industries or organizations.

Social psychological factors

Psychological traits. Conventionally, managerial jobs, especially at senior level, have been defined as demanding instrumentality, autonomy and result-orientation, which is not in line with the traits of a typical female. This is supported by psychologically oriented theorists. For example, a study by Hennig and Jardim (1977) of 25 female managers presents the finding that women managers identify with their father rather than their mother. Further, the study of Danish managers by Carlsen and Toft (1986, cited in Alvesson & Billing, 1997) indicates that women identifying with their father may be more inclined to become managers. Studies of psychological characteristics have, however, had mixed results. Some researchers emphasize that women and men in management have similar aspirations, values and other personality

traits as well as job-related skills and behaviors (Dobbins & Platz, 1986; Marshall, 1984). Others suggest that women differ from men in terms of some orientation, including being less-selfish (Lipman-Blumen, 1992) and having a different leadership style (Eagly & Carli, 2008; Eagly & Johnson, 1990).

Background factor. According to the human capital theory, developed by economists such as Gary S. Becker, individuals with better qualifications, such as more education, job training, and relevant work experience, receive better jobs and organizational rewards because they have more to offer their organizations than individuals who are less qualified (Lyness, 2006). In the West, career theorists have invoked investment in human capital (Arthur *et al.*, 1999; Wayne *et al.*, 1999), for example, investment in education, training and other forms of qualifying experiences as the key factor behind careers (cf. Alvesson & Billing, 1997; Igarria & Chidambaram, 1997); the greater the individual's stock of human capital, the richer the opportunities for career improvement. Accordingly, women's disadvantaged position is attributed to a lower or less relevant kind of education, and the lack of qualified work experience associated with working in different places, including international assignments, which are seen to be a crucial factor for promotion.

Stereotyping. Stereotyping is a common cognitive strategy in multi-task situations, where people revert to "cognitive shortcuts" (Macrae *et al.*, 1994), and is more likely to be used to categorize individuals as opposed to groups. Categorizing others is a way of simplifying information based on simple and easily accessible cognitive categories (Macrae *et al.*, 1994). People categorize others on the basis of obvious attributes such as race, gender, or age, and often do so without realizing it regardless of whether these characteristics are associated with positive traits (such as "women are better at in social skilled", "Asians are hardworking") or negative ones ("women are emotional", "accountants are not creative").

Psychologist Henri Tajfel has shown that the simple act of separating people in groups was enough to trigger inter-group discrimination (Tajfel *et al.*, 1971). Stereotyping is most likely to occur when there is a clear "out-group" member, such as a single woman in a male

technical team, where the sole woman will be the subject of more stereotyping than the male members (Mannix & Neale, 2005). Tokenism has been identified as a specific kind of stereotyping that occurs when someone clearly belongs to a minority group, such as the sole technical woman in a group of men (Kanter, 1977). Tokenism leads the majority group member to treat the single woman in the group as representing all the stereotypical characteristics of the female gender. This leads to the work actions, communication, and performance of the woman to be judged through a stereotypical gender lens, which represents a significant barrier to women at the upper echelons of the organization as their performance evaluations are likely to suffer (Flynn & Ames, 2006).

There is other stereotyping of women in organizations. For example, women who are in a minority status are more likely to be pushed toward tasks that are stereotypically feminine, such as support and assistant work (Boldrey et al, 2001). Women are also stereotyped as “family focused” and “unwilling to travel” and therefore tend to be passed up for promotions (Liff & Ward, 2001).

Scholars have examined the social and cultural aspects of educational choices and experiences. Sinclair (1995), for example, documents a bias against female students in an Australian MBA programme regarding content as well as social interaction. Other studies stress the differentiated treatment of male and female employees in terms of qualifying assignments as a crucial factor in the processes disadvantaging women. The interplay between the background, the non-organizational life situation of females and their experiences in organizations should be considered in order to understand their prospects in terms of managerial careers (Alvesson & Billing, 1997).

Networking. Networking has long been considered a crucial factor for success in professional careers because of the many advantages to be gained by its practice, including information exchange, collaboration, career planning and strategy making, professional support and encouragement, and access to visibility and upward mobility (cf. Travers & Pemberton, 2000). Researchers have stressed the importance of networking as a career management tool

for women, given the recognized strength of networks for male career development (e.g. Ibarra, 1993, 1997; Travers & Pemberton, 2000). Therefore access to informal networks is an important determinant of women's power and success in an organization. Lack of access to informal networks can hinder a woman's chances of career advancement and limit access to resources critical to doing her job properly (see Kauppinen & Aaltio, 2004; Travers & Pemberton, 2000).

Studies on individuals' networking and personal network structure emphasize the gendered nature of networking and networks in organizational contexts (Singh *et al.*, 2006). Ibarra (1992) for example argues that two network mechanisms function to reinforce gendered inequalities in the workplace, homophily or the tendency to form same-sex network relationships, and the ability to convert individual attributes and positional resources into network advantages. By surveying seventy-three members of a social network in an advertising firm, she finds that men have greater centrality and better relationships with the same sex in their network relationships than women. Men are more likely than women with the same education and experience to gain access to the networks of their mentors and to be drawn into key political groups. Alternatively, women find themselves between two networks: a women's network which provide social support and a male-dominated network which provides assistance in attainment of workplace effectiveness. Ibarra suggests that these two groups often subject women to the stress of conflicting advice, forcing them to maintain a delicate balance between the two since one network may reject them because of their commitment to the other.

Research on a large IT firm showed that women need to use networks differently from men to achieve the same promotion and career benefits (Burt, 1998). That is, as opposed to only creating structural holes by linking to a wide set of people in a wide set of departments, they especially benefit from having ties to influential others who are hierarchically well placed within the organization and have wide networks. This means that women need to borrow social capital from key sponsors in order to achieve network benefits, pointing to the fact that

women suffer from a legitimacy problem in the high technology organization under study (Burt, 1998).

Further, Van Emmerik and colleagues (2006) emphasize that specific elements of networking may also relate differentially to men and women's career success. Studies have reported that women in particular may experience a range of barriers to networking. For instance, women are excluded from key networks traditionally composed of individuals who hold power in the organization (Fagenson, 1986). Women may also have less fully developed informal networks than men, which could affect their advancement to high levels of management (Powell, 1993), and may need to penetrate male networks to a greater extent to become sufficiently visible to win organizational promotions (Parker & Fagenson, 1994).

Glass ceiling, glass border and glass cliff. The term “glass ceiling” is a metaphor that refers to an invisible but impenetrable barrier that prevents qualified women from advancing to senior-management positions in organizations (Kauppinen-Toropainen, 1994; Lyness, 2006; Powell, 1999, 2000). In order for a woman to surmount the glass ceiling, she has to perform better than her male coworkers. However, if a woman rises to top management, she is still a “loner” or a token (Kanter, 1977) – the only or almost only representative of her own sex/gender (cf. Kauppinen & Aaltio, 2004). Similarly, scholars point that one of the reasons for women not being promoted to senior board positions is women's lack of international experience, the “glass border” issue (cf. Linehan & Walsh, 1999).

Further, if a woman is fortunate enough to break through the glass ceiling, a glass cliff may be awaiting her. Recent research suggests that women are more likely to be put in precarious leadership positions (Ryan & Haslam, 2005, 2007). Once a woman possesses a position of senior management she often has experiences that are different from her male counterparts. For instance, women are more likely to be chosen for jobs that are considered unstable, due to the company's financial position or the lack of cooperation needed for success (Ryan & Haslam, 2005, 2007). Consequently, women tend to inherit teams and organizations in crises, where performance and financial fortunes have plummeted, putting them in the vulnerable

position of getting criticized for poor company or team performance even though they inherited the problems rather than caused them. Women tend to get promoted to positions where success is already unlikely. Overall, the metaphors of glass ceiling, glass border and glass cliff indicate the difficulty women face on their way to top management.

Institutional and organizational factors

Organizational structure and practices. The ways in which organizations are structured and the policies and practices implemented have great impact on women's attainment to leadership positions (Blum et al, 1994). There is a large body of literature on the ways in which workplaces are organized around, and support, men's work styles and life cycles, even in workplaces that appear to be "gender-neutral" and meritocratic (Acker, 1990; Ely & Meyerson, 2000; Reskin & McBrier, 2000). Organizations engage in "homosocial reproduction" and tend to evaluate minorities and women senior managers in terms of "white upper middle class men" criteria (Kanter, 1977). According to Bartram (2005), the fact that the feminization of management has not been explicitly named in modern management suggests that it would not be acceptable. Firstly, to acknowledge the feminization of management would be to acknowledge the need to question notions of masculinity and challenge what is commonly held as the dominant position: men and maleness as the 'one', as the standard bearer for all. Secondly, the feminization of management would be seen as a downgrading of management (Calas & Smircich, 1993). This may be why women find it difficult to break into the top level of organizations because men are preserving a site of power and knowledge, to let women in would be to lose this status (Bartram, 2005).

The subordination of women to men forms a basic rule in a patriarchal society. Some scholars focusing on the structural perspective emphasize the ratio of men to women and the problems minorities experience in being fully recognized, feeling comfortable and being promoted (Kanter, 1977; Martin, 1985). This is the critical mass idea, meaning that only when there are enough women – Kanter (1977) says 30 percent – can they have equal opportunities with men.

Work and life/family: conflict, integration and enrichment. A successful work-life balance constitutes an important health resource for working women. One of the principle factors influencing the satisfaction with work-life balance for working women is the volume of hours worked outside the home: the more hours, the greater the difficulty in reconciling work and non-work activities (Kauppinen, 2008). Researchers have pointed that the work-family connection gives women significant disadvantages (cf. Kirchmeyer, 1998). For example, women often take family as a priority, which make them less mobile and less willing to take a position with longer working hours, more travel or involving moving geographically to a new site of employment – a common requirement to be a manager. The conflict between family obligations and male-normative managerial jobs – where the job holders are expected to be able to spend most of their time and energy on the job – is seen as the major problem preventing women from advancing (Martin, 1993). As a result, it is common that female managers are single and childless (Wajcman, 1998; Wood & Newton, 2006). As Liff and Ward (2001) point out, a new image of a female manager seems to have been created – that is ‘think female manager, think childless superwoman’, to paraphrase Schein’s (1973) well-known argument ‘think manager, think male’. The above indicates that family issues clash with women’s ability to make a career in management. Deeply culturally ingrained assumptions and expectations that women have a primary responsibility for family, in particular for small children, affect attitudes toward women’s careers and women’s attitudes and interest in careers (see also Bowen et al., 2007; Kuusipalo et al., 2000).

There is a growing recognition that larger social, cultural, and political contexts may affect individuals' perceptions and experiences within the work-family domain (Adya, 2008; Bu & McKeen, 2000; Lewis, 1992, 1999; Lobel, 1991). In many Chinese societies, the extended family is a robust institution buttressed by ties of regular visits and transfers of care and financial support (Joplin et. al., 2003; Zhan & Montgomery, 2003). Cultural differences are also found in the meanings attributed to work and family roles by individuals (Yang et al., 2000). People from collectivistic cultures may view work primarily in terms of securing the family's well-being, and people from individualistic cultures may consider work to be one of

the main sources of self-actualization (Yang et al., 2000). Furthermore, individuals in different countries may have different amounts of resources (e.g., higher income; more extended family social support) available to them (Spector et al., 2004). For example, in collectivistic countries higher levels of assistance received from close others may help people to balance their work and family responsibilities better (e.g., Triandis, 1995). Similarly, people from a society dominated by Chinese Confucian philosophy see family as the most important unit, and hence, they tend to perceive work mainly as a means of providing for and maintaining family well-being – an integration (or combination) perspective of work and family (cf. Aryee et al., 1999) which blurs the boundaries between work and family.

With the increasing representation of dual-earner partners and single parents in the workforce, a blurring of gender roles, and a shift in employee values (Greenhaus & Singh, 2004), researchers have sought to explain the numerous ways in which work and family roles are interdependent (Barnett, 1998, 1999; Edwards & Rothbard, 2000). In contrast to the dominating conflict perspective, researchers have called for a more balanced approach to recognize the positive effects of combining work and family roles (Barnett, 1998; Greenhaus & Parasuraman, 1999), employing such concepts as enrichment, positive spillover, enhancement, and facilitation (cf. Greenhaus & Powell, 2006). The increased emphasis on positive interdependencies between work life and family life is consistent with emerging trends in psychology (Seligman, 2002), organizational behavior (Luthans, 2002) and family studies (Patterson, 2002) that focus on strengths rather than weaknesses in understanding the potential of individuals and social systems.

Greenhaus and Powell (2006) present a theory of work-family enrichment that specifies the conditions under which work and family roles are “allies” rather than “enemies” (Friedman & Greenhaus, 2000). Accordingly, work-family enrichment refers to the extent to which experiences in one role improve the quality of life in the other role. Like work-family conflict, work-family enrichment is bidirectional: Work-to-family enrichment occurs when work experiences improve the quality of family life, and family-to-work enrichment occurs when family experiences improve the quality of work life. There are two paths to enrichment: an

instrumental path, for example, a woman may apply a skill learned in the family role (e.g., listening attentively to her child or husband) to her role as a supervisor at work, thereby boosting her performance at work, and an affective path, for example, a woman's psychological resources such as optimism and hope derived from her role as a mother can trigger a positive mood or satisfaction, which then produces increased performance in her role as a manager at work.

Overall, researchers tend to use role theory to explain the linkages between work and family (Hammer & Hanson, 2006). The two predominant perspectives are the scarcity hypothesis and the enhancement hypothesis. The scarcity hypothesis suggests that a person has a limited amount of time and energy and that strain is normal and inevitable, given the over-demanding nature of engaging in multiple roles. This hypothesis forms the basis for much of the research on work-family conflict. In contrast, the enhancement hypothesis proposes that occupying multiple roles can result in a variety of benefits such as the development of new skills, increased self-complexity, a larger social network, and increased monetary resources. This hypothesis forms the basis for research on work-family enrichment. It is believed that these benefits facilitate the integration and management of work and family roles, leading to a more positive outcome – family as a resource of work.

2.4 Gender and IT

As a part of the high technology revolution of the late twentieth century, IT has taken the world by storm. It is changing the way businesses learn and also the nature and characteristics of businesses. Some researchers argue that the implementation of information technologies within and across organizations may reduce the importance of the hierarchical and command-and-control authoritarian systems that are used to structure power within them (Senge, 1990; Saxenian, 1994). In this context, the under-representation of women in the IT sector has been widely studied in western countries. These studies indicate that the under-representation of women in the IT sector is seen in multiple areas, including IT access, the development, adoption and use of IT, IT education, and the IT workforce in general and within the IT

organization structure itself (e.g., different levels of IT positions) (Huang, 2006, Trauth, 2002). In the following, three dominant theoretical viewpoints reflected in recent literature about gender and IT are introduced; essentialism, social constructivism, and the theory of individual differences (Trauth, 2002; Trauth et al, 2004).

2.4.1 Essentialism

Essentialism is the assertion of fixed, unified and opposed female and male natures (Wajcman, 1991, p. 9). When discussing the world of IT, this theory tends to focus on inherent differences between men and women to explain the observed differences in their relationship to IT. It attributes observed differences in men's and women's behavior to what are believed to be inherent, fixed, group-level differences that are based upon bio-psychological characteristics. Essentialism has long been a part of the debate in feminist literature about biology and destiny (Trauth, 2002) underpinning research on gender and IT that views gender as a fixed variable that is manipulated within a positivist epistemology (e.g. Venkatesh & Morris, 2000). Adam et al. (2001) provide an analysis of this perspective in their critique of research on gender and IT. They point out that focusing on a background literature of psychology, alone, places too much emphasis on individual gender characteristics where a form of essentialism may creep in. Looking only to psychological explanations of observations without giving attention to the influence of context, this perspective adopts a determinist stance with respect to gender.

An essentialist approach to gender and IT research is that women and men should be treated differently. For example, Venkatesh and Morris (2000, p. 131) recommend that trainers adopt different approaches toward men and women and that marketers design different marketing campaigns for men and women, implying that there ought to be two different workforces: a "women in IT" workforce and a "men in IT" workforce. Thus, policies for addressing the gender imbalance would focus on differences between women and men and the equality issue focus would be "separate but equal."

2.4.2 Social constructivism

The social construction viewpoint refers to societal rather than biological forces to explain women's relationship to information technology. The literature of gender and technology in general (e.g. Cockburn & Ormrod, 1993; Wajcman, 1991) and that of gender and information technology in particular (e.g. Balka & Smith, 2000; Webster, 1996) looks to social construction theory (Berger & Luckmann, 1966) rather than biological and psychological theories. According to this view, the influences of various socio-cultural factors are the primary constructs that shape individuals and their relationship to IT, hence, the social shaping of information technology as "men's work" places IT careers outside the domain of women.

Different social construction perspectives give different recommendations how to improve the career status of women in IT. Based on a multi-year project to study the reasons for female under-representation in university-level information technology education and within the IT profession, von Hellens et al (2000, 2001) explored the development of strategies to help women fit into this male domain. Other scholars have focused on the need to reconstruct the world of computing to allow it to become more of a "female domain." For example, Webster (1996) focuses on the social shaping of female gender identity and the implications for women's relationships to workplace technologies. Based on analysis of women as a social group in cyberspace, Spender (1995) predicts an influx of female values into this new virtual world will accompany increased female presence.

Wajcman (1991) analyzes the social construction perspective on gender and technology and reveals the following issues and assumptions: First, there is no universal definition of masculine or feminine behavior; what is considered masculine in some societies is considered feminine or gender-neutral in others. Second, while gender differences exist, they are manifested differently in different societies. Hence, addressing the gender gap in IT employment based upon an assumed "woman's perspective" is problematic.

2.4.3 Theory of individual differences

Trauth (2002) develops an alternative understanding of the way in which social shaping of gender and the IT profession operates at an individual level – a combination of personal characteristics, social shaping, and cultural, environmental and institutional influences – the theory of individual differences.

The theory of individual differences posits that the group-level emphasis of the essentialism and social constructivism perspectives force generalizations that may inadequately represent the impact of institutional and cultural factors on the individual. The theory explicitly recognizes the impact of culture that is missing in essentialism and the impact of individual factors such as personality that are lacking in both essentialism and social constructivism. A complex interplay of individual, social, cultural, environmental and institutional factors shapes perceptions of IT work and careers.

This theory focuses on the similarities between men and women as individuals, and the variation among members of each gender group with respect to IT skills and inclination to participate in the IT sector. It looks to a socio-cultural interpretation of IT work and power relations to explain the level of participation by women in IT. In this way, it presents an individual differences perspective on gender and IT (Trauth, 2002). According to this theory, both gender and IT are socio-culturally constructed at the individual level. That is, women as individuals experience a range of different socio-cultural influences which shape, in a variety of individual ways, their inclination to participate in the IT profession.

The motivation for adopting this theoretical perspective arises from awareness that gender roles, expectations, and stereotypes regarding women's involvement in management and in IT vary significantly when factors such as nationality, race, age, sexual orientation, marital status, socio-economic status and education level are taken into account. Trauth et al. (2006) investigate cross-cultural influences on women in the IT field and classify them into four factors: motherhood and careers, family dynamics, career choice, and gender stereotypes.

Women respond in a range of individual ways to the social shaping of gender and IT work. Thus, the individual differences perspective inhabits the middle ground between the essentialist and the social constructivist explanations of the under representation of women in the IT profession.

Compared to the essentialism and social construction perspectives, the theory of individual differences notices the significance of the various organizational domains, or institutions, that structure personal experiences in the workplace. Throughout their life course, men and women workers experience occupational and personal changes related to these domains that directly reshape their career paths. From this perspective, IT is a socially constructed phenomenon that historically has reflected a masculine gender, while simultaneously enhancing the power of certain segments of society. An occupational career as a life-long process is influenced by key social institutions, including educational institutions, industrial markets, workplace organizations, and families. These institutions link the individual to the much larger context – culture. Based on the theory of individual differences, Table 6 presents the related factors which affect an individual's career.

Table 6. Conceptual framework of the individual differences perspective of women's careers in IT

Personal data	Demographic data	Age Ethnicity Gender Nationality Race Religion Sexual orientation
	Lifestyle data	Children Family background Spouse/partner
	Workplace data	Career characteristics Industry type Job title Technical level Type of work
Shaping and influencing factors	Personal characteristics	Education Career identity Interests & abilities Personality traits Gender identity
	Personal influences	Exposure to IT Educational experiences Life and work experiences Role models and mentors
Environmental context	Cultural attitudes and values	Attitudes and values toward women, women working, and women working in IT
	Geographic data	Location Population History
	Economic data	Employment overall Employment in IT related industry
	Policy data	Relevant laws and policies

Source: Trauth et al. (2004, p. 117)

Consequently, the theory of individual differences forms the basis for the current study, emphasizing the individual differences perspective in the belief that cultural, environmental and institutional factors have an effect on the social construction of managerial and IT work and that individual differences shape perceptions and experiences of managerial careers in IT. Accordingly, there are three aspects that are influencing women's managerial careers in the IT industry: Personal data, shaping and influencing factors, and environmental context. Personal data is correlated with individual women's differences in experience, influence and responses

to them. Shaping and influencing factors are factors that have an influence on a woman's decision to enter and remain in the IT field, which are a combination of personal characteristics possessed by the individual and influences experienced by that individual. Environmental context refers to the context within which the individual's responses can be situated, including cultural attitudes & values, geographic data, and economic and policy data. This study extends previous works based on the theory of individual differences in the following aspects: (1) it presents the contribution of theory of individual differences in explaining women's managerial career; (2) it examines in depth in a cross-culture context that was seldom explored in prior gender studies—China and Finland, two cultures that differ greatly on individualism, power distance, long-term orientation, and masculinity (Hofstede, 1980, 2001); and finally (3) concerning that China is the largest host country for MNCs while Finland is a leading country for the IT industry, the study has significant implications for international HRM.

2.5 Social network theory

Networking literature is based on social network theory that examines how networks are used to attain organizational power (Brass, 1985; Oakley, 2000). Social network theory views any set of social relationships as embedded within a larger social context that provides access to various social contacts (Wellman et al., 2002; Ibarra, 1995). Basically, the more contacts a person has in the social network and the more contacts these people have, the more knowledge, influence, and power the original person controls. People take active roles in structuring their social networks in pursuit of their goals (Bierema, 2005a, 2005b). Scholars have stressed the effect of culture on social networks (Chow & Ng, 2004; Faure & Fang, 2008; Ordonez de Pablos, 2005; Wellman et al., 2002), noting in particular differences between eastern and western social networking.

2.5.1 Social capital: Western approaches to social networks

Social science researchers have offered a number of definitions of social capital. Among them, Putnam (1995, p. 67) sees social capital as ‘features of social organization such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit’, while Nahapiet and Ghoshal (1998) define social capital as ‘the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit’. There are three dimensions of social capital (Nahapiet & Ghoshal, 1998): the structural dimension refers to the overall pattern of connections between actors – that is, who you reach and how you reach them (Burt, 1992); the relational dimension refers to those assets created and leveraged through relationships; and the cognitive dimension refers to those resources providing shared representations, interpretations, and systems of meaning among parties.

These three dimensions are highly interrelated. The structural dimension represents the *opportunity* to benefit from other actors’ resources and to act together, thus representing one source of social capital (Adler & Kwon, 2002). The relational dimension, on the other hand, represents relation-based *motivations* for explaining such behavior: such motivations facilitate materialization of the benefits of social capital and norms, trust being its source (Putnam, 1993; Adler & Kwon, 2002). Finally, the cognitive dimension refers to the *ability* of the collective to become embedded in such exchange and its content. Perspectives on social capital are diverse but researchers agree that social capital is a metaphor about advantage, referring to the fact that people or groups who succeed are somehow better connected and this becomes an asset in its own right, which can create a competitive advantage in pursuing their ends (Burt, 2001).

Ronald S. Burt formalizes social capital by using the structural holes theory, which describes how certain network structures offer a competitive advantage by providing access to more opportunities and the ability to act on those opportunities (see Burt, 1992, 1997, 2001). The presence of structural holes enables access to diverse sets of information, control of the flow of information between disjoined parties, and determination of the form of projects that bring together disconnected others. For example, a manager stepping into a structural hole at the

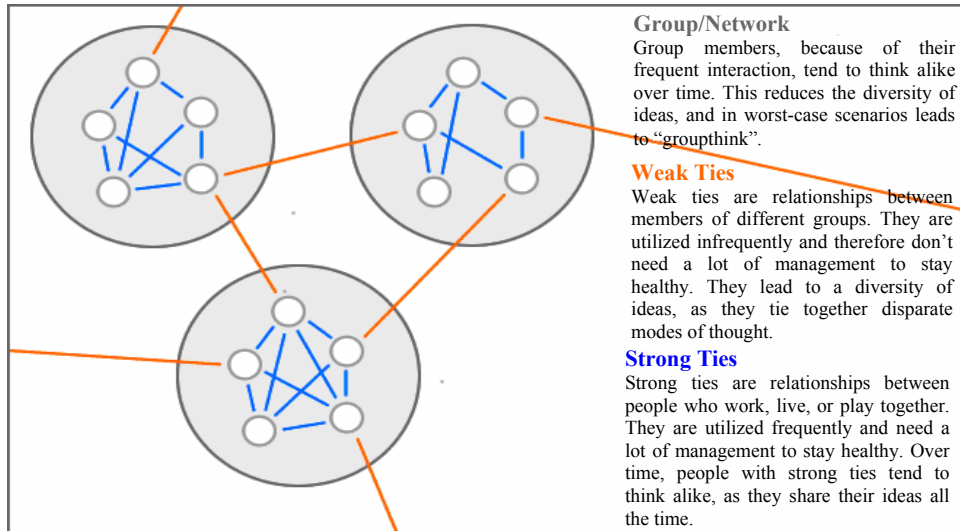
right time will have the power and the control to negotiate the relationship between the two actors divided by the hole, most often by playing their demands against one another. Structural holes are the setting in which the third who benefits operates. There are several ways to optimize structural holes in a network to ensure maximum information benefits:

(1) *Network size*. The size of a network determines the amount of information that is shared within the network. A person has a much better chance to receive timely, relevant information in a big network than in a small one.

(2) *Network efficiency*. Efficiency in a network is concerned with maximizing the number of non-redundant contacts in a network in order to maximize the number of structural holes per actor in the network. The more non-redundant contacts in the network, the better chance a person has to receive information.

(3) *Weak ties*. Granovetter (1973) developed the theory of weak ties, which states that because a person with strong ties in a cluster more or less knows what the other people in the cluster know (e.g. within close friendships or a board of directors) the effective spread of information relies on the weak ties between people in separate clusters. “Weak ties are essential to the flow of information that integrates otherwise disconnected social clusters into a broader society” (Burt, 1992). Figure 4 is a sketch of strong and weak ties.

Figure 4. Sketch of strong and weak ties (Source: Porter, 2007)



To achieve networks rich in information benefits, it is necessary to build large networks with non-redundant contacts and many weak ties over structural holes. Within this sense, social capital refers to ‘the structure of an individual’s contact networks – the pattern of interconnection among various people with whom each person is tied’ (Raider & Burt, 1996). Literature and empirical evidence identifies three major benefits of social capital: (1) it smoothens access to broader sources of information, (2) it provides control and influence, and (3) it provides solidarity benefits of closure and trust (Leana & Van Buren, 1999). From this perspective, social capital should benefit women’s careers in non-traditional fields. The larger a woman manager’s network, with non-redundant contacts, the greater the opportunities she has to benefit for her career development.

2.5.2 Guanxi: Eastern approaches to social networks

The concept in Chinese culture most closely related to social capital is *guanxi* (Putnam, 2004), which bears witness to the importance of trust, obligations, and reciprocity in Chinese people’s social interactions (Xiao & Tsui, 2007). Generally, *guanxi* refers to relationships

between individuals or social connections based on mutual interests and benefits (Bian, 1994; Gold et al, 2002; Yang, 1994). In this paper, *guanxi* is defined as a network of ties and is analyzed in multi-person networks.

Guanxi begins with a *guanxi* base, which is defined as “a base [in] which two or more persons have a commonality of shared identification” (Jacobs, 1979, p. 243). Three elements are key for the building of these bases: kinship, friendship and other personal relations. There are two basic ways to build this base: group identification and alter casting. The first refers to the fact that the creation of a *guanxi* base generally demands the existence of some common identity, entailing either a blood relationship or some social interconnection. This type of connection represents “ascribed” or inherited *guanxi*. Kinship and locality are the two most common forms of ascribed *guanxi* bases. The second type of connection refers to “achieved” or “cultivated” *guanxi* (Tsang, 1998), which is developed through alter casting. This term refers to “the building of *guanxi* between individuals who have no ascribed commonality” (Yeung & Tung, 1996, p. 61-62). To achieve this goal, individuals use a mediator. Generally, this person is a mutual friend of both individuals.

Guanxi characterizes traditional Chinese culture. Differentiated attitudes toward parents, children, siblings, kinsmen and friends are at the core of Chinese values. Individual rights in the Chinese context are not universal but *guanxi* specific and particularistic and they bind a person to the outer context where she or he lives—that is, “no tie, no obligation, and no rights” (Lee & Dawes, 2005, p. 29). *Guanxi* is implicitly based on mutual interests and benefits, such as respect towards seniors coupled with respect from juniors or the soliciting and giving of favors explicitly or implicitly (Yang, 1994). With the emergence of a rational-legal system to govern and guide business transactions in China, scholars posit that *guanxi* practices (using *guanxi* to get things done) should have declined, although studies indicate the importance of *guanxi* relations has remained (Faure & Fang, 2008; Xiao & Tsui, 2007). However, managers still consider *guanxi* or informal relationships embedded in *guanxi* to be an important part of the Chinese social fabric that effective managers cannot afford to ignore (Tsui, 1997; Luo, 2005).

Guanxi comprises particularistic ties in which instrumental and expressive-moral elements intertwine (Tsui & Farh, 1997). The value and importance of a tie rests in the type of resources it may provide and the extent to which such resources fulfill the focal person's (or ego's) objectives. Accordingly, *guanxi* consists of power ties (e.g., the focal actor's supervisor, who through his or her position of authority may determine whether or not the focal actor receives a promotion), workflow ties (e.g., the focal actor's colleague who works as a team member with the focal actor), strategic information ties (i.e., links on whom the focal actor relies for information, guidance and coaching), and social support ties (e.g., a friend or family member offering the focal actor constant encouragement) (Ibarra, 1993). The study by Bu and Roy (2005) on career success networks indicates that Chinese male and female managers' power ties are mainly with men. Scholars emphasize that the nature of social exchanges in Chinese society is that of the in-group (Leung & Bond, 1984). People form in-groups on the basis of characteristics such as kinship, hometown, common schooling, or work experiences. Many resources flow through these inner networks in the form of favors and return of favors (Yang, 1994).

In Chinese culture, to establish the right *guanxi* and to be included in the in-group is crucial for career and business success or survival. People who stay at the boundary of two in-groups tend to be distrusted by both groups and are likely to be regarded as out-group members who do not deserve in-group treatment (Xiao & Tsui, 2007). These arguments suggest that in a collectivistic culture such as China's, it is network closure – the linkages among individuals within a collectivity – that gives the collectivity cohesiveness and thereby facilitates the pursuit of collective goals (Coleman, 1988, 1990) rather than structural holes that creates social capital.

3 CONTEXT OF THIS RESEARCH IN CHINA AND FINLAND

3.1 Culture, women's labor force participation and the IT industry in China

Although Chinese women have legally enjoyed equal rights with men in employment since the foundation of 'New China' in 1949 as demonstrated in the well-known slogan from the era of Chairman Mao, "women can hold up half of the sky" (see Bowen et al, 2007) Chinese women are under-represented in the managerial arena. The Fifth Census of China conducted in 2000 showed that only 16.8 per cent of senior managers are women. Women are still over-represented in labor-intensive industries such as textiles and garments, rather than knowledge-intensive or technology-intensive industries. Very few women occupy higher paying technical or managerial positions (NBSC, 2001). China's traditional culture emphasizes women's domestic roles and responsibilities, which focus on caring and on the wellbeing of family members. Thinking of the Confucian adage that states "it is a virtue if a woman does not have ability (*Analects of Confucius*)" it is not surprising that in the past, Chinese women were socialized to be shy and unassertive.

Many Chinese nowadays still have the stereotype of "well done is inferior to well married" (*gan de hao bu ru jia de hao*) implying that a formal career path to success is not becoming of women. However, the impact of China's modernization during the past decades (since 1978 when China launched its reforms and openness policies under Deng Xiao-Ping) on changes in Chinese modes of behavior is salient. Globalization, foreign direct investment and the Internet are exposing China, for the first time in its history, to unprecedented global knowledge transfer, information sharing and cultural learning. These changes have had a great impact on Chinese values, with the values of western concepts of management and lifestyle impacting the Chinese mindset. Since the late 1980s, China has been changing from a planned economy to a market economy. University graduates are being encouraged to seek employment according to the demands of the labor market. Life-long employment is being replaced by contract employment with flexible career mobility. Market-led careers are restructuring the opportunities available to women who want to progress their careers. Economically and

within career structures, China and the West have begun to converge (Xian & Woodhams, 2008).

Faure and Fang (2008) list eight pairs of contradictory value orientations as essential references in understanding the dynamics of the current Chinese culture: 1) *guanxi* vs. professionalism; 2) importance of face vs. self-expression and directness; 3) thrift vs. materialism and ostentatious consumption; 4) family and group orientation vs. individuation; 5) aversion to law vs. respect for legal practices; 6) respect for etiquette, age and hierarchy vs. respect for simplicity, creativity and competence; 7) long-term vs. short-term orientation; and 8) traditional creeds vs. modern approaches. The eight pairs of values represent the interaction of traditional Chinese culture (the former) and modern, western values (the latter).

Family is traditionally the basic unit of Chinese society. However, nowadays family values are challenged in many respects. With industrialization, modernization and people's increasing mobility, the family as a model for structuring relations is being weakened. This, together with the launch of family planning policy (One-child policy, 2009)^[1], has turned the traditional big family into a core-family. Further, the loosening of social controls in China over the past few years has given rise to many people opting to sacrifice family life in favor of making careers. A significant indicator of this phenomenon is the emergence of a Chinese form of double income no kids (DINK) families (Faure & Fang, 2008).

The emergence of the IT industry in the 1980s is changing the way businesses learn and also the nature and characteristics of business (Senge, 1990; Zeleny, 1990; Fountain, 2000). In China, the IT industry is one of the major forces in the country's economy. It is among the largest export industries of China, producing 28 percent of the total exports of the country (Ministry of the Information Industry, 2003). Foreign direct investment is the driving engine of the industry, and foreign investment accounts for 68 percent of industry revenue and 64 percent of industry profits, though local Chinese companies also have very strong holdings in

¹ To discuss the effects of family planning policy is beyond the scope of this study. However, I would point that in some degree the policy has been changing Chinese people's attitudes to women and raising women's social status and increasing opportunities for education and pursuing careers.

the industry due to their intimate knowledge of the local market. In recent years, local companies have begun to catch up with their multinational competitors in technological competence by pouring resources into research and development (R&D) and recruiting large numbers of graduates from engineering schools (both domestic and foreign). It is a highly competitive industry, full of innovation, uncertainty, and rapid change. The hyper-competition creates a high level of interdependence inside organizations and gives rise to the “soft stuff,” such as a high-commitment culture, as an important competitive advantage for companies (Xiao & Tsui, 2007). The longitudinal study of Björkman and colleagues (Björkman et al., 2008) finds the convergence of HRM found in local Chinese firms with those of European MNC units in China. The results also indicate a convergence within European MNCs since the HRM practices in units located in China have become significantly more similar to those of their parent companies.

As in the West, women are still underrepresented in positions of authority in both Chinese business and government organizations (All-China Women’s Federation, 2004). While an anti-discrimination law was enacted in 1993, it is weakly enforced and women’s relative lack of access to leading administrative and managerial positions has continued (Leung & Westwood, 1998). In addition, the retirement age for civil servants given in ‘The Ordinance of National Civil Servants for the Present’ issued by the Ministry of Labor and Social Security on 14 August 1993 is 55 for women and 60 for men. Private corporations and non-government organizations usually refer to this ordinance to decide employees’ retirement age. Women’s earlier retirement age shortens their career advancement and may prevent them from reaching senior management levels (Borchard, 1995).

A study conducted by the Guanghua School of Management at Peking University shows that in a typical IT enterprise in China, females are concentrated in the departments of human resources and administration (73%) and the areas of marketing and finance (60%). Of women employees, 12% are research employees, of which 16% are in manufacturing (cited in Shen & Ge, 2005). Women IT managers face both opportunities and challenges in their career. On the one hand, they have passion and confidence; among female university graduates who can

choose their career, the IT industry still takes precedence and has become one of the most preferred occupations because of the higher salary and modern working environment compared with other industries. On the other hand, because of the male-dominated and competitive nature of IT industry, there are still many constraining factors preventing women's career development in the field (cf. Liu, 2004; Shen & Ge, 2005; Xian & Woodhams, 2008).

A recent study (Bowen et al., 2007) on attitudes toward women as managers among university students (average 20.4 years old and no work experience) and workers in China show significant gender and sample effects. Women have a more positive attitude toward women as managers than men, while the unfortunate similarities in attitudes between younger male students and older male workers suggest that "we still have a while to wait before women really hold up half of the sky in China" (Bowen et al., 2007).

3.2 Culture, women's labor force participation and the IT industry in Finland

Finland can be described as a culturally homogenous, Nordic country with a large land mass and a relatively small population. Since Finland joined the European Union in 1995, Finland has become more globally-oriented in both its economic policy and social outlook.

In 1906, women in Finland were the first in Europe and second in the world to exercise their democratic right to vote and also stand for election. Finnish women have long been involved in paid employment in large numbers, particularly since World War II. Because the country remained predominantly agricultural until the 1960s, it lacks a "strong bourgeois-housewife tradition" (Lewis, 1999, p.94). As a consequence, home and work have never been as strongly differentiated in Finland as in other European nations. Today, a majority of Finnish women are in paid employment. For females aged 15-64, the labor force participation rate is 68.1%, while the female unemployment rate is 7.0% (Statistics Finland, 2007). Thanks to pro-age attitude change, the age-friendly attitude in Finland "has particularly enhanced the position and status of older women" (Kauppinen, 2008). More than half (50.3%) of women who are 60

years of age are in paid employment, while in 2000 the figure was less than 30% (Statistics Finland, 2007). Women make a significant contribution to family income because it rests on a dual income model. Public, relatively low cost day-care is available to all children (Pietiläinen et al., 2006) though in practice other forms of childcare, such as domestic help and private day care, are often used (Kuusipalo et al., 2000).

Training and education have always been an important issue in Finnish women's efforts to improve their status. Lots of efforts have been launched to encourage and support women's career development especially in technology fields; examples are the 'WomEqual', 'Equal Mirror' and 'WomenIT' programmes^[1]. "Women and men have about the same educational level and rate of participation in working life, and it is considered a social right of citizens that society provides full day-care for children, school meals and other services that help people combine work and family responsibilities" (Rantalaiho et al., 1997, p. 4). Despite their equal participation in work life, women still bear primary responsibility for childcare and housework (Rantalaiho et al., 1997). This results in prevalent work-family conflict among both men and women in the country, though Finland is known for its high levels of family life support systems (Jacobson & Aaltio-Marjosola, 2001, Kuusipalo et al., 2000).

While equal opportunity legislation was adopted in Finland already in 1987, there continues to be both vertical and horizontal labor market segregation. Vertical segregation means that men hold high ranking positions in public and private organizations; horizontal segregation means that men and women work in different occupations. Management level work in administration, business and finance is 90% male dominated (Kolbe, 2005). The division of labor between the sexes is also evidenced in salary levels. In 2005, women earned 80.9 per cent of men's earnings (Statistics Finland, 2007) even though women in every age group are more highly educated than men (Kolbe, 2005).

¹ WomEqual: <http://www.weme.fi/>, aimed to support women's career development especially in technology fields, and implement tools for women's networking. Equal MIRROR: <http://www.mirror4u.net/>, the project challenged old fashioned attitudes towards job segregation which claim that there are jobs better suited for men and conversely, jobs better suited for women. WomenIT - Women in Industry and Technology was a development, training and research project, which aimed to carry out desegregation of the working life of gender identified traditional women's and men's jobs and tasks (see http://www.kajaaninyliopistokeskus oulu.fi/proj/womenit/in_english.php).

On a basis of technical development and competence, the IT industry has become the second most important basic industry in Finland. The industry benefits from the country's developed and free education. In the OECD PISA 2006, Finnish students got excellent results ^[1]. A fresh OECD study (2009) also indicates that high schools in Finland have the best science results in the world ^[2]. According to Statistics Finland (2007) in 2006 for those aged 15-74, there are around 95% mobile phone users, more than 75% internet users and about 74% email users in the country, showing no gender difference. Finnish IT company, Nokia is a world leader in mobile communications. Meanwhile, there are hundreds of small and medium fast growing IT companies networking and co-operating with Nokia. In over half of Finnish IT companies, the majority of employees are males under 35. Women are welcomed into the IT sector by men, though there is a lack of female workers and managers in the IT companies (cf. Aaltio & Heilmann, 2006). According to the study of Heilmann (2004), the pressure for change in Finnish ICT companies is continuous, including both technological change and business philosophy change. There appears to be more new career conceptions and more boundaryless work is done, but there is also a sort of hierarchy in career progression that can be seen as an expression of traditional career thinking. On the one hand, the career of an ICT manager progresses through growth in competence – the manager is given new challenging positions as he/she is ready. On the other hand, frequently growing competences pushes the career holder upwards in hierarchy. In the ICT sector, “the most important recruiting channel is one's network”, while safe support and the possibility of position in the future is also considered (Heilmann, 2004, p. 213).

This strength, ‘*sisu*’ is said to define the national character of Finland. *Sisu* (mental strength) is Finland's national trademark in sport, but in practice all Finns know the meaning of *sisu* (inner strength) as a psychophysical characteristic. In the mirror of ordinary language, the

¹ PISA (The Programme for International Student Assessment) is a joint survey of the OECD member countries and a number of other countries. The main focus in PISA 2006 was science literacy, which indicates that the knowledge and skills of Finnish students in science, mathematics and reading are of the highest order. See: <http://www.minedu.fi/OPM/Koulutus/artikkelit/pisa-tutkimus/index.html?lang=en>

² YLE news: Finland tops OECD science study. See: http://www.yle.fi/uutiset/news/2009/04/finland_tops_oecd_science_study_711356.html

word *sisu* has had the following meanings: (a) raw, ruthless; *sisu* is expressed in an individual's (b) courage and daring, but also in his/her (c) indifference, craftiness and bad temper; *sisu* can also mean (d) perseverance, capacity to survive or endure trials, patience (Alho, 1997). It is in this last meaning that *sisu* is so often encountered in the names of ice breakers, truck trailers, sweets, and sporting societies. While *sisu* is today generally interpreted as positive perseverance, its negative connotations continue to live a life of their own. For example, despite the effects of 'Europeanization' and 'globalization', Finland has still kept its 'national character'. This uniformity of cultural outlook is reinforced by an immigration policy which tends to limit the numbers of outsiders allowed to enter Finland permanently and, also, by considerable national pride in Finnishness. At the end of 2006, the total number of foreign citizens is 2.31% of the country's total population (121,739), of which women 49 per cent (Statistics Finland, 2007). Further, economic and social life in Finland changed a great deal in the 1980s, which has led to an industrial restructuring in which knowledge has replaced capital, raw materials and energy as the dominant factor in production.

Table 7. Selected background data about China and Finland

	China	Finland
Population, total (millions)	1320.3 (48.5% female)	5.3 (51.0% female)
GDP (current US\$)(billions)	3280.1	246
Fixed line and mobile phone subscribers (per 100 people)	69	148
Internet users (per 100 people)	16 (42.8% female)	68 (nearly half female)
Life expectancy at birth, total (years) (2005)	Female: 73.7 Male: 70.1	Female: 82.3 Male: 75.5
Labor force participation rate (%), female vs male)	76.2 vs 88.0	72.8 vs 76.8
Maternity/parental leave (paid)	120 – 134 days ^[1]	263 days (60 additional days with 2 or more children)
Parental leave (unpaid)	Negotiate with the employer	Additional years until child is 3 years old (compensation by municipality)
Day care	Parents pay for their child(ren)'s day care	Subsidized facilities
Flexible scheduling	Negotiate with the employer	6 hours per day for parents of children under 7 (in practice, only few parents use this entitlement)
Equal employment/wages policy	Established in 1992 ^[2]	Mandated 1987
Women's wages as a % men	No statistics available	80 in 2006
% managers who are female	20	29.5
Female to male gross tertiary school enrollment ratio %	97.8	120.7
Expected years of schooling: female vs male	11.2 vs 11.2	17.7 vs 16.7
Proportion of seats held by women in national parliament %	20.3	42.0
Gender Gap Index ^[3]	0.6643 (rank 73)	0.8044 (rank 3)

1. If a woman needs an operation to deliver the baby, she will have 134 days for paid maternity leave. Otherwise, the paid maternity leave is 120 days.

2. It is criticized for its lack of penalties and general imprecision (Pearson, 1995).

3. The Global Gender Gap Index examines the gap between men and women in four fundamental categories: economic participation and opportunity, educational attainment, political empowerment, and health and survival (Hausmann, Tyson & Zahidi, 2007).

Source: National Bureau of Statistics of China (www.stats.gov.cn); Statistic Finland (www.stat.fi/index_en.html); World Bank database (www.worldbank.org). Unless specific stated, the data concern the year 2007.

To sum up, China and Finland differ greatly in social welfare system and economic structure (see Table 7) as well as national culture (cf. Hofstede, 1980, 2001, see Table 8). Both countries have experienced profound transformation: China from a planned economy to a market economy, and Finland from a natural-resource-based economy into a competitive and knowledge intensive economy, although the degree of transformation may be different. Since the IT industry is a new and developing industry worldwide, it is posited that in the context of current globalization, the impact of national culture on the IT industry is less than in traditional industries. It seems, therefore, that women managers in China who participate in the IT industry might share more in common culturally with women managers in Finland's IT industry than they do with many of their sisters in China representing other sectors, which will make the research results comparable.

Table 8. Culture dimensions of China and Finland

Dimension	China	Finland
Power distance	High	Low
Individualism vs Collectivism	Collectivist More orientation to group	Individualistic More orientation to self
Masculinity vs femininity	High score Masculine values predominate	Low score Feminine values predominate
Uncertainty avoidance	Mid score Lack concern on ambiguity and uncertainty	High score Concern on ambiguity and uncertainty
Long-term vs short-term orientation	Long-term orientation	Short-term orientation
Universalism vs particularism	Particularism	Universalism
Specific vs. diffuse	Diffuse orientation	More specific orientation
Achievement vs. ascription	More ascribed	Achievement orientation
Affective vs neutral	Middle	More neutral
Time as sequence vs. time as synchronization	Synchronous	Sequential
Inner-directed vs. outer-directed	More outer-directed	Inner-directed

Based on Hofstede (1980, 2001), Hampden-Turner and Trompenaars (1994), Schwartz (1994), and Trompenaars and Hampden-Turner (1998).

4 RESEARCH DESIGN AND METHODOLOGY

Statistics tell one story; [qualitative] research tells the story behind that story (Trauth, 2002, p. 104).

4.1 Research design

4.1.1 Cross-cultural career research: Development of research question

Cross-cultural career research examines culture as an explanatory variable of careers and has two central purposes: to broaden our understanding of careers beyond established Western career concepts, and to identify universal concepts and cultural variations (Tams & Arthur, 2007). The development and focus of the cross-cultural research question has important implications for further design and measurement within a study (Schaffer & Riordan, 2003). A most important consideration in development of the research question is the emic-etic issue. The first purpose – to broaden our understanding of careers beyond established Western career concepts - is often descriptive and builds on the emic approach, according to which cross-cultural knowledge and meaning are local and culture specific (Berry, 1997). It requires research from within particular cultures (Kjeldgaard et al., 2006).

The second purpose of cross-cultural career research is to identify more systematically whether variation in cultural context influences career-related variables, and if so, how (Tams & Arthur, 2007). The aims of such research may be to demonstrate the universal nature of career concepts, or to reveal their culture specific interpretations. The second purpose builds on the etic approach – concerned with generating cross-cultural knowledge. This study uses a combined emic-etic approach (cf. Polska, 2002; Schaffer & Riordan, 2003) to make cross-cultural comparisons.

The emic aspect can be approached by qualitative methods, including literature review of the topic, context knowledge, in-depth interviews of the sample, and interpretive analysis (ref.

Aaltio, 2002; Polsa, 2002, 2007; Trauth, 2006). Similarly, the etic aspect can be attained by quantitative methods, including Q-methodology (ref. Brown, 1986; Jacobson & Aaltio-Marjosola 2001; Stainton Rogers, 1995) and questionnaire. In fact, Q-methodology is a combination of qualitative and quantitative methods (Brown, 1999). The combined approach requires researchers to first attain emic knowledge about the cultures in the study (usually through observation and/or participation) (Berry, 1990; Cheung et al., 1992) allowing researchers to put aside their culture biases and to become familiar with the relevant cultural differences in each setting. I am a native Chinese and have studied and worked as a researcher in management psychology and human resource management for more than 15 years, and at the same time, I have studied and worked in Finland as a researcher in management and organization for about three years. These experiences provide me with the basic resources and cultural knowledge to conduct this research.

4.1.2 Research questions

This study is motivated by interest in the career experiences of women managers in the IT industry in a cross-cultural context; experiences which are assumed to be affected by internal and external factors, for example, individual, social, cultural, environmental and institutional factors. The main research question is how do cultural and social processes affect the experiences of women managers? The empirical analysis focuses on several interrelated questions and explores the gender aspects of organizations and management, recounting the career experiences of Chinese and Finnish women managers. The research includes the following sub-questions:

- RQ1. How do women managers frame the subjective experience of “career”?
- RQ2. What comprise women managers’ *guanxi*/social network bases and how do these *guanxi*/ social network bases relate to power, work, and person?
- RQ3. How does social interaction technology (SIT) benefit women managers’ networking?
- RQ4. What can be learned about cultural, institutional and organizational values and priorities from the subjective expression of individually experienced lives?

RQ5. What are the barriers handicapping women from entering senior managerial jobs?

RQ6. How do women managers balance work and life?

RQ7. What is the cultural framing of an “ideal woman”?

4.2 Research methods

To achieve the goal of making women managers’ experiences visible, a combined emic-etic approach, including both qualitative and quantitative methods – in-depth interviews, reflexivity, Q-methodology, and questionnaires - is employed in the study. Qualitative methods include open-ended in-depth interviews, context knowledge about national and IT industry, reflexivity of the research and interpretive analysis. Quantitative methods allow testing of the composition and structure of *guanxi*/social network bases related to women managers’ career and life, and establishing women’s career scripts. These scripts make it possible to explore the manifestation of individual differences in women managers’ work-life stories and statistical data. The study emphasizes not only women managers’ subjective representation of their career histories, but also their reflections on contradictions, and the role of external forces and power relations (*guanxi*, or network) in shaping their decisions and behaviors.

4.2.1 Reflexivity in the research

Organization study is greatly determined by earlier knowledge, metaphors and concepts (Aaltio, 2006b). Qualitative aspect of organization studies share similar challenges and opportunities: the position of the researcher in the research process, the special features of data gathering, and the analysis and interpretation of the data in the search for new understanding and contributions to the field are all important. Reflexivity on the researcher’s part is, therefore, required from the very beginning because qualitative studies do not usually start from a strict theory or model. Questioning one’s own knowledge creation basis is part of good research practice (Aaltio, 2006b; Keso et.al., 2006).

Piekkari and Welch (2006) argue that increased awareness of how research findings are generated will ultimately lead to enhanced quality in research. In addition, calls are often made for qualitative researchers to show greater reflexivity or sensitivity towards the ways in which the researcher “is part of the social world that is studied” (Alvesson, 2003, p. 24; Hardy et al., 2001).

The sources of reflexivity in the qualitative aspect of this research include the following three aspects (cf. Aaltio, 2006b; Piekkari & Welch, 2006): The first is my own fieldwork experiences. During the fieldwork for this study, I got access to and interviewed 21 participants both in China and Finland. These experiences help better understand these women’s comments. The second is the academic community in which I participate. As Hardy and colleagues (2001) point out, reflexivity concerns not just the individual researcher, but also the wider research community. As an active researcher and doctoral student, I have attended several seminars and presented parts of my research, during which I have received feedback from faculty and peer researchers that shapes the final research outcomes. The third source of insight comes from my own experience as a female Chinese and my different academic roles within the field, e.g., as researcher, as Associate Professor, as reviewer, and as doctoral student. All these sources are the foundation of reflexivity in this research.

4.2.2 Q-methodology

Q-methodology (also called Q-sort) has been used in a variety of feminist studies, including women’s experiences of pornography (Senn, 1996), gender identities (Thomas 1990), feminist identities (Snelling, 1996), and women managers’ scripts of career (Jacobson & Aaltio-Marjosola, 2001). Q-methodology can be seen to adhere to the feminist principle of placing personal experience at the forefront of the research process, which allows individual subjectivity to be considered both in an interpretive and objective way (Brown, 1986, 1999; McKeown & Thomas, 1988; Jacobson & Aaltio-Marjosola, 2001). One of the advantages of Q-methodology is its utility in examining single cases (Brown, 1999). Therefore, I chose Q-methodology as one of the research methods.

Operationally, Q-methodology asks research participants to systematically sort a sample of statements on a topic of interest along one or more conditions of instruction and rank them to fit into a quasi-normal distribution according to the extent of their agreement or disagreement with the statements (Brown, 1986, 1999). It is the participants' articulation of shared understandings of a particular topic that is of interest, rather than the participants themselves (Stainton Rogers, 1995). The set of statements to be sorted is derived in one of two ways: (a) "naturalistic"---when the statements that comprise the research instrument are drawn from the oral or written communication of the participant, or (b) "ready-made"---when the instrument is developed from published theory and /or expert opinion. In this study, I made a compromise of the above two ways. First, I developed a 75-item questionnaire from a literature review and preliminary research. In the first interview, I asked the participants to select those statements with which they agreed most strongly. At the same time, with some basic questions (see Appendix 1) regarding demographic information, life and career as women managers, and the chronology of their experience in the companies, I conducted an in-depth interview with the participants. The non-directive open-ended questions might encourage the telling of stories which often diverge from the apparent topic at hand. With the data collected in the first interview, I developed a 70-item Q-sort (see Appendix 2 and 3) to be used in the second interview.

The reason why I preferred not to use the first interview to produce a series of concept statements is the fact that it is not easy for a researcher to ask a woman manager to pose questions assuming that she was the researcher, especially in the context of China. It seems that the participants in this study would rather answer questions from the researcher than pose questions themselves.

4.2.3 Questionnaire

An in-depth interview and questionnaire were used to explore women managers' networking. The participants were asked to provide information on the associates in five network contents.

The name-generator approach (Marsden, 1987) can be employed to ascertain the composition of social networks. This approach focuses on a core discussion network. I adopted a simplified name-eliciting method that allowed the associates to remain anonymous. This works well to help reduce any misgivings the participants might have about revealing the true identities of members of their networks. As previous results indicate that 95 percent of people report fewer than five individuals in their (core discussion) networks (Marsden, 1987) the participants were asked to “identify up to five persons with whom you have discussed: (1) to seek advice on a decision you have to make, (2) to seek information on what is going on in the organization, (3) to seek help when you want to influence the outcome of an important decision at work, (4) to seek help in times of (personal) crisis, and (5) to socialize with outside work” (cf. Chow & Ng, 2004). The five questions summarize the network contents of the participants’ work and life.

For the five network contents from which one can seek favors, the first three (advice, information, and influence) are more work-related, while the last two (crisis and socialization) are more personal life-related. Work and life are, however, not clearly separated, often they overlap. From a cost perspective, both advice and information contents can be considered to have similar values. However, the ‘influence’ content requires the favor granter to do more than converse with the recipient and the favor granter should show his/her power, professional expertise or rich experience to have influence. Therefore, the ‘influence’ network content belongs to power-related ties. Similarly, help during a ‘crisis’ situation suggests a level of deep involvement and trust. From a work-life balance perspective, ‘socialize’ is also important in nowadays information society; one cannot live alone without social networks.

In the design, the maximum number of associates in a participant’s network was limited to 25. However, because an associate can be named in several networks, the actual number of associates in a participant’s list is generally less than 25.

4.3 Data collection process

4.3.1 Sampling

Research subjects included 21 women managers respectively in IT organizations in China (see Appendix 1) and Finland (21 Finnish women managers participated in the in-depth interviews. However, because of scheduling constraints, 14 of them finished both the Q-sort and the questionnaire, and one of them finished only the questionnaire, see Appendix 2). Snow-ball (cf. Singleton & Straits, 1999) and convenience sample methods were used in sampling. This study, therefore, does not intend to ensure the equivalence of samples. The use of the term ‘manager’ varies from one organization to another. It is used in some organizations to represent a level of status or personal prestige, while in others it represents different functional responsibilities. In this study I defined manager as a person who plans, organizes, motivates, directs and controls organizational activities at the mid-level and above of an organization and who has a subordinate(s). Given that there are few women in the IT field, this broad definition of management allowed for a reasonable sample size.

A senior editor of the IT column of Yangcheng Evening Post (*Yangchengwanbao*), a Chinese newspaper in southern China, introduced me to six possible participants, who were women managers from IT companies in the region. Then, each participant was asked to introduce one or two female counterparts in the field. In Finland, some participants were introduced to the study by my Finnish colleagues, some were introduced by the participants, and some were introduced by their companies’ HR department which I had contacted by email. It is interesting to note that I directly contacted two participants after my Finnish colleague had given me a list of IT managers’ names in a Finnish newspaper, with two participants’ names in the list. This indicates that Finnish people are more likely to participate voluntarily in academic research than Chinese people, which reflects my experience in Finland. The “snowball” method worked well not only in China, but also in Finland.

Table 9. *Demographic characteristics of the participants*

	Participants	
	Chinese (%) (n=21)	Finnish (%) (n=21)
Female	100	100
Age		
≤30	23.8	
31-35	28.6	14.3
36-40	33.3	23.8
41-45	14.3	33.3
45+		28.6
Married	52.4 ^a	71.4 ^b
University degree (Master and above)	90.5 (33.4)	100 (81.0)

a. 29% of the Chinese participants were married and had one child.

b. 42.9% of the Finnish participants were married and had 1-3 child(ren), with most having 2 children.

The demographic characteristics of the participants are presented in Table 5. Of the 21 Chinese participants, 11 are married, with six of them having one child and five of them being without a child. This reflects a phenomenon in modern Chinese career women. Usually, they marry in their late 20s or over 30, and either postpone having children or choose not to have them (see publication 1 and 5). The majority of the participants have a university degree, with 33.4% holding a master and above degree, which is much higher than the national average. The hierarchical positions of the 21 participants include one CEO, five who are one level from CEO, and fifteen managers.

Of the 21 Finnish participants, five are single; one divorced with two children; others are married. Of the fifteen married participants, six are childless, one has one child, six have two children and two have three children. All the Finnish participants have a university degree; 81% hold a Master of Science or MBA, though an MBA is not seen as an academic degree in Finland. The hierarchical positions of the Finnish participants are three CEOs, five who are one level from CEO, and thirteen managers. Although human capital theory (cf. Alvesson & Billing, 1997) emphasizes women's supposed lack of qualifications, the women managers

participating in this study are all well-educated and their educational level is higher than national average in both contexts.

The average age of the Finnish participants is much older than that of their Chinese counterparts. This may be explained by the following reasons: (1) the development of higher education in China was static during 1966-1976 because of the *Cultural Revolution*, which has resulted in few technology major graduates from that period or its immediate aftermath; (2) the IT industry and computer science fields are younger in China than in Finland; (3) there were very few female computer science graduates in China during the 1980s and early 1990s; and (4) the dual standard of the mandatory retirement age in China (e.g., 55 for women and 60 for men) prevents women from getting promoted after the age of 45, or even earlier. In contrast, in Finland the age-friendly attitude seems to have enhanced the position and status of older women (Kauppinen, 2008).

Two field studies are included in this project: The fieldwork in China was conducted between March 2003 and March 2004 (on career scripts), and between March 2005 and June 2005 (on networking). The fieldwork in Finland was conducted in the period September 2005 to February 2006. However, because of the schedule of some Finnish participants, only fourteen Finnish participants completed both the Q-sort and the questionnaire, and one of them completed only the questionnaire (see publications 4-5).

4.3.2 Data collection

Prior to the interview, I called or emailed each participant to confirm her participation in the project and, as preparation, asked her to think broadly about her life both in terms of issues specific to the work environment and also those related to personal life. The in-depth interview was based on a list of open-ended questions (see Appendix 3). After the interview, each participant was given a questionnaire which I had developed from literature review, with the following instructions:

For my research I want to learn as much as possible about the history of your working life, how you arrived at the point you are at today, doing the work you are doing now. I am interested not only in issues which have been important in the work setting, but also those in your personal life which have affected your work in one way or another. Please carefully read the following items, select those which are strongest agreement in your career and life or are most suited to your situation. Please add items which can describe your situation (or are strongest agreement in your career and life) but are missed here at the end. When you are reading, you can make any comments on the items according to your own situation and context in your company.

The face-to face interviews were conducted at various sites, either in the interviewees' offices, or at sites chosen by the interviewees. Each interview lasted about 60-120 minutes. Based on the interview data and questionnaire collected, I developed the 70-item Q-sort. Then I sent the 70-item Q-sort (see Appendix 4 and 5) and questionnaire on personal ties (see Appendix 6) to the participants. I asked the participants to individually finish the questionnaire and sort the Q-sort, along the dimensions "those concepts that are strongest agreement in my career and in my life, 11" to "those concepts that are strongest disagreement in my career and in my life, 1". After finishing, the participants sent back the results.

The language used in the interviews was Chinese (or Mandarin) in China. In fact, most of the interviewees could speak at least a little English; they often even used some single English words when they were telling their stories. The language used in the interviews in Finland was English. All the Finnish participants spoke English very well, though their native language was Finnish. The interviews were tape-recorded. This gave me the opportunity to observe the facial expressions and body language of the interviewee, which helped to interpret the factors that emerged in statistical analysis. Each interview recording was transcribed in detail after the event^[1]. Then two female English major students respectively translated the transcription of the Chinese participants' interviews from Chinese to English and a third person, a male English language teacher, revised both translations and developed the final

¹ The interviews in China were transcribed by research assistants in China, and the interviews in Finland were transcribed by a transcription service company in Finland.

version of the translation. Both the English major students and the English teacher were unaware of the purpose of the research. The related methodology and the data of the studies (see publications 1-5) are presented in Table 10.

Table 10. Studies, related methodology and data

Studies and publications	Methods	Data
1. Women managers' career in information technology in china: high flyers with emotional costs	In-depth interview; Q-methodology	21 interviews (textual dataset of 300 pages), 21 Q-sorts
2. Social interaction technologies: A case study of <i>guanxi</i> and women managers' careers in information technology in China	In-depth interview; Questionnaire	21 interviews (textual dataset of 300 pages), 21 questionnaires on network structure and composition
3. Gendered <i>guanxi</i> : how women managers in information technology field in china network	In-depth interview; Questionnaire	21 interviews (textual dataset of 300 pages), 21 questionnaires on network structure and composition
4. Exploring women managers' networking: <i>guanxi</i> and social networks within cross-cultural context	In-depth interview; Questionnaire	Chinese: 21 interviews (textual dataset of 300 pages), 21 questionnaires on network structure and composition; Finnish: 21 interviews (textual dataset of 312 pages), 15 questionnaires on network structure and composition
5. Women managers' careers in information technology field: A cross-cultural comparison between China and Finland	In-depth interview; Q-methodology	Chinese: 21 interviews (textual dataset of 300 pages), 21 Q-sorts; Finnish: 21 interviews (textual dataset of 312 pages), 14 Q-sorts

4.4 Data analysis

The perceptions of the participants served as a “window” to the context. Interpretation of the results depended on mapping knowledge of the national, industrial, and organizational contexts in which the research was conducted, insights drawn from the interviews, as well as statistical analysis of the Q-sorts. Data analysis was conducted in two phases: (a) the statistical analysis of the Q-sorts—the results in each setting are factor analysis and creating factor arrays, and the questionnaire on personal ties; (b) an interpretive approach to transform

the factors into scripts of career, which focused on participants' descriptions of, and reflections on their career experiences.

4.4.1 Statistical analysis

After collection of the data, factor analysis of the principal components was done using the Varimax method, which enables the grouping of subjects into factors. The following three rules (Jacobson & Aaltio-Marjosola, 2001) decided factors to be considered for further analysis:

Rule 1: Those factors having eigenvalues greater than 1 were included for initial consideration. In this manner, factors 1, 2, 3, 4, 5, 6, 7 were considered for Chinese data, while factors 1, 2, 3 were considered for Finnish data.

Rule 2: In further refinement, using Humphrey's rule (Brown, 1986), only those factors where the cross product of the two highest loadings exceeded the standard error of the Q-sort were considered. Then factors 1, 2, 3, 4 were considered for Chinese data (Factor 1=0.50; Factor 2=0.30; Factor 3=0.31; Factor 4=0.31), and factors 1 and 2 were considered for Finnish data (Factor 1=0.545; Factor 2=0.295).

Rule 3: Only those factors where two or more Q-sorts were solely and significantly loaded after rotation were finally selected. For Chinese data, these were factors 1, 2 (factor 1=Q-sorts 20 and 8; factor 2=Q-sorts 14 and 16), and Finnish data also had factors 1 and 2 (Factor 1=Q-sorts 6 and 11; Factor 2=Q-sorts 4 and 13).

A "factor array" (Brown, 1986) was created for each of the factors selected as significant in both contexts. Based on a weighted composite of the Q-sorts of those participants who loaded significantly on each factor, the factor arrays created a kind of ideal type for each of the factors which were described as scripts (cf. Jacobson & Aaltio-Marjosola, 2001). The items which were selected as being in strongest agreement and strongest disagreement for each of the factors have been listed in Appendix 7 and 8.

4.4.2 Interpretive analysis

Objective factors to the career scripts could be abstracted from the “factor arrays”. To describe the meaning in the factors, a broader characterization of career as scripts was adopted (Barley, 1989) which connected the experience of concrete individuals with the broader cultural and institutional context in which those expressions are located. The development process of the career scripts involved observing patterns according to the items assigned to each of the factors, and returning to the interview transcripts in which the concrete life situations of the women managers might help in understanding those patterns. Following the research process of Jacobson & Aaltio-Marjosola’s study (2001), the final step of data analysis involved abstracting from the objective factors that emerged in the statistical analysis to the career scripts. The characterization of careers as scripts provides a metaphoric and practical way to link the expressed experience of concrete individuals with the broader cultural and institutional context, which allows micro and macro levels of analysis. It also echoes the view of “culture is what culture does” (Weisinger & Salipante, 2000) and extends the relationship between culture and individual action to career.

Meaning is collective and how we interpret it is framed by what our culture holds as meaningful. Because our understanding of anything may be too simple, or too incomplete, we need to pick up and move the light so that we can see something that we have not seen before. To interpret the meaning in the factors of this study, I considered the following questions: “What seems to have been most important to the women who defined this factor in terms of their careers and private lives?” “How did they explain the course of their lives?” “How might cultural values, institutional arrangements, and organizational realities contribute to women's descriptions of experience and to the Q-sort results?” The interpretation, therefore, began with a careful reading of the factor arrays, looking for similarities and differences in the relative placement of Q-sort items. Then, patterns were observed in the ways in which the combined Q-sorts for each of the factors had assigned relative levels of “truth” to each of the 70 statements. Further, I returned to the interview transcripts and concept statements of each of the women who collectively defined each of the factors and looked for ways in which the

concrete life situations of the women might help in understanding those patterns. Finally, details of the context in each situation were mapped onto the factors consisting of the scripts. The approach inevitably reflects the social construction and reflexivity of the researcher, depending on the researcher's ability to make meaning clear. Overall, the data was collected and analyzed using an interpretive ethnographic approach through a feminist lens.

5 RESULTS

In this chapter, the findings derived from the individual publications comprising Part II are discussed and reflected upon in the light of previous research. The chapter is organized in line with the main findings concerning women managers' careers in China and Finland, as well as the differences and similarities between them. Although Hofstede's (1980, 2001) cultural dimensions may provide useful explanations for these findings, other individual, economic, labor market, and sociological explanations cannot be ignored. As an introduction, Table 11 below gives a summary of the publications. Publications 1-3 deal with the fieldwork in China about the career experience and networking of Chinese women managers in the IT sector, with publication 2 relating SITs to these women's social networks. Publications 4-5 compare the differences and similarities of women managers' careers and networking between China and Finland.

Table 11. Summary of the five publications

Title	Main goal	Main contribution and findings
1. Women managers' careers in information technology in China: high flyers with emotional costs	Explore Chinese women managers' careers and gender aspects in the IT industry	Women managers' experiences of career are explored in relation to the Chinese cultural environment and within the IT industry, with Q-methodology and interpretive analysis as the background methodology. The findings show that IT women managers are high achievers with a high level of ambition and experience certain emotional costs from career advancement.
2. Social interaction technologies: A case study of <i>guanxi</i> and women managers' careers in information technology in China	Explore the effect of SITs and <i>guanxi</i> on women managers' careers in the IT field in China	This paper links SITs with women managers' careers in the IT field and presents how SITs may impact the five types of women managers' networking, arguing that SIT's influence is empowering for women who build careers in IT and management. The case study indicates that SITs and <i>guanxi</i> should be viewed as two complementary and interactive rather than mutually exclusive or separate principles.
3. Gendered <i>guanxi</i> : how women managers in the information technology field in China network	Explore the networking of Chinese women managers in the IT field	<i>Guanxi</i> presents a Chinese way of networking. This paper contributes to gender and work literature by exploring the gender aspect of <i>guanxi</i> , and linking it to women managers' careers in IT field. The study accumulates the understanding on women managers' networking and networking strategies in China.
4. Exploring women managers' networking: <i>guanxi</i> and social networks within a cross-cultural context	Explore women managers' social networks in the IT field in China and Finland	This paper links western social capital with Chinese <i>guanxi</i> using a social network analysis approach. The findings indicate an effect of female-to-male dyads within power- and work-related networks; Chinese participants' smaller network size; and structure and strategy differences between Chinese and Finnish. The study contributes to the literature on women's networking in cross-cultural contexts, with implications for international HRM practices.
5. Women managers' careers in the information technology field: A cross-cultural comparison between China and Finland	A cross-cultural exploration of the career experience of women managers in the IT industry in China and Finland	This study contributes to the literature on gender and career, and enriches the existing knowledge on the impact of culture on women's career by presenting a greater diversity of women managers' experiences. Results indicate the gendered nature of IT and management, the diversity of women's career development strategies, and cultural notions of what is an ideal woman. This study also contributes to international human resource management practices.

5.1 Summary of the most important findings

To better understand women managers' careers in emerging societies like China, this research compares career experiences of these women with those of their Finnish counterparts. It contrasts cultural, institutional, social, and individual factors that impact their career experiences. The results reveal that while most Chinese women managers do not identify career genderization in the workplace, their Finnish counterparts report gender stereotyping. Although both groups perceive the pressures of work-life balance, the impact of these pressures and the follow-up strategies adopted are different between the two groups. Differences also are evident in the composition and structure of social networks, and the related coping strategies.

5.1.1 Educational and familial background

Human capital theory (cf. Alvesson & Billing, 1997; Igbaria & Chidambaram, 1997) emphasizes that the under-representation of women managers in organizations is because women are not as well-educated as their male counterparts. Women managers participating in this study are all well-educated and their educational level is much higher than national average in both contexts. In China, since the late 1980s, there is a national system that prizes science and technology. The IT major is very popular in the country's universities because an IT graduate can gain a position in the IT industry with a modern work place and a high salary superior to graduates in other majors. In Finland, the boom of the IT industry in the country is related to the popularity of the country's IT related higher education, and vice versa.

The influence of families on individuals' career decisions is reported in both groups. About 6 of the Chinese participants highlighted the significant role of parents and family in their choice of careers in IT. This can be explained by the collectivist nature of China, where parents and spouses often influence career decisions. It is interesting to note that three Finnish women in this study reported the same influence from their families.

My father was the only university graduate in his hometown. He always encouraged me and supported my education. Since I was in my childhood, I had already known how important education is, and had been studying hard for it. (37, Chinese, Director)

My mother used to tell me that a woman has to have a profession. She has to study and go to work and earn her own money. ...she was a kind of, not a feminist, but a kind of thing that made me believe that it's very important for me to work. And work in a company and achieve something. I think that is very important for my background. (55, Finnish, CIO)

5.1.2 Gender stereotyping

Gender stereotyping is related with workplace discrimination and unequal success of men and women in the workplace (Eagly & Mladinic, 1994). Such effects are exaggerated in male domain occupations and organizations (Heilman, 1995; Wajcman, 1998). Female representation in managerial IT positions is disproportionately lower compared to men (Aaltio & Heilmann, 2006; Trauth, 2006) since women often encounter a “glass ceiling” effect in midlevel positions (cf. Adya, 2008). Workplace discrimination generally relates to salary and quality of work assigned. I focus on the latter as salary in China is not as transparent as in Finland, and none of the Finnish participants reported salary-related discrimination, which is mainly because of the gender equality policy in the country, although the average salary of Finnish women is about 80% of that of their male counterparts (Statistics Finland, 2007). Almost all the Chinese participants did not report work discrimination, however, from their profiles it is obvious that very few of the women were holding top management positions. From the interviews, I found that Chinese women accept workplace discrimination as normal. In contrast, Finnish participants' strategies for dealing with workplace discrimination varied. They either rebel against the organization and system, accept it, or leave the current position.

When discussing with my manager and the managing director, I said that I want to be the manager of the product marketing function. And they said “No, no, you can't, you have been here only a year, how can you do that?” That was their reasoning. It was actually the first

time that I noticed that OK, there would be different if you are a man. They were not that keen on having me as manager in that position even though I was the first one who had done that job in practice in the company. But somehow I think they thought that "OK, there should be a man for that management position". ...Two weeks after I left the company they hired a guy from X company [omit the name of the company] to do my job and to be manager for that product marketing function, and he didn't have background in the company. (39, Finnish, Senior Manager)

While the literature illustrates the glass-ceiling as a significant barrier to women's career advancement (Kauppinen & Aaltio, 2004; Kauppinen-Toropainen, 1994; Powell, 1999, 2000) the women in this study tend to report very little glass-ceiling experience. Only one Finnish participant stated that she encountered a glass ceiling:

I have to say that I have a feeling that I have a glass roof [glass ceiling] currently, but I don't know the reason. I don't know if it's because I'm a woman or is it because they can't find for my skills a position inside the organization, or is it because I don't, they have suggested a few roles and I have said no. ...I don't want to do service management because it's boring. I don't want to change to something that I don't like. (34, Finnish, Manager)

However, some Chinese participants think that Chinese women in general lack motivation and self-confidence in pursuing their careers. As one of them said:

Sacrifice is required for both men and women in pursuit of their career. It is a matter of opportunity but it is more of a matter of choice. (39, Chinese, CEO)

Chinese participants have several coping strategies to deal with the glass-ceiling. They accept it, work harder than their male counterparts, receive part-time education to make themselves better qualified, or use gendered *guanxi* (see publications 2-4). Finnish women, it seems,

know more about modern management science and they use impression management^[1] to make themselves more visible to the persons who make decisions.

I think the barriers (I will encounter in the future) are more related to how good I have got my network and how well the right people know me. And then I need to understand from my point of view I need to be patient. So think that is important that I have my network, and then be patient, wait. It will, something will happen someday as long as I do a good job, and then I am visible to the right people, presenting myself well enough..., but not pressure too much though [laughs]. (34, Finnish, Manager)

Sexual harassment is unwanted conduct of sexual nature, or other conduct based on sex affecting the dignity of women and men at work (European Commission, 1991). Sexual harassment is an abuse of power that can demoralize women in careers, cause professional and psychological distress, and affect career outcomes. Individuals who experience harassment may lose out on promotions, change positions to avoid harassers, and experience reprisal for reporting their harassment (Gilbert, 2006). None of the Chinese participants in this study reported “sexual harassment”. During the interview, many of them quickly replied “No, no” when they were asked if they had experienced sexual harassment. From their responses and body language it seems that these women tried to distance themselves from this topic. For Finnish participants, only one reported having experienced sexual harassment, and this while she was in her 20s.

Q: Have you ever experienced sexual harassment in your work setting? (Researcher)

¹ Impression management (IM) theory, originated by Erving Goffman (1959), states that any individual or organization must establish and maintain impressions that are congruent with the perceptions they want to convey to their publics. From both a communications and public relations viewpoint, the theory of IM includes the vital ways in which one establishes and communicates this congruence between personal or organizational goals and their intended actions which create public perception. Research indicates that IM is a valuable tool which, if used well, can enhance the visibility of individual’s true strengths and committed performance (Singh & Vinnicombe, 2001).

A: Yes, I have, when I was younger, but no, not when I'm older now. When I was between 20 and 30, yes, but not since then. (40, Finnish, Manager)

It seems that most of the participants in this study did not want to talk much about sexual harassment. Although these women are among the few females who get managerial positions in male-dominated organizations, they were reluctant to discuss the issue of gender in promotion, preferring rather to focus on the role of qualifications. This is coincident with early works that women are reluctant to talk about subjective experience on gender – the meaning of gender often remains undervalued, invisible or even denied (see Aaltio & Kovalainen 2003; Acker 1992; Korvajärvi 2002; Hearn et al., 2008; Mills & Tancred 1992). The study of Kauppinen and Patoluoto (2005) on policewomen in Finland indicates that women in the police force react to sexual harassment using *internally focused strategies* – ignoring the behavior, redefining their treatment as something other than harassment, or reassessing their harasser's motives (cf. Fitzgerald et al., 1995), which are seen as part of a job in a male-dominated work culture where group loyalty and solidarity are highly valued. This might also apply to women in the IT field – both cases are about women working in male-dominated organizations. In addition, usually the managerial position (and age for senior women) protects women from sexual harassment and other forms of unwanted behavior.

5.1.3 Career development

Career development is about how individuals manage their careers within and between organizations, and how organizations structure the career progress of their members (cf. Greenhaus & Callanan, 2006). Analysis of the participants' career history data indicates that most of the Chinese participants started their careers in IT companies that were related to their higher education in IT. In contrast, seven Finnish participants reported that their first jobs were not in the IT field. Most of the Finnish participants emphasized the importance of their summer jobs to their first jobs and careers. Very few participants in both groups reported having career goals.

In addition, a large number of women in both groups emphasized support from men – their fathers, husbands, and most of the time, their male bosses or ex-bosses, who are willing to support and nurture them. During their career path, these women have been accepted by both male and female colleagues. Although they have to work doubly hard to prove themselves, once their efforts are admitted and gain respect, gender seems to become a non-issue.

Many men help me in my career – my father, my husband and my supervisor [laughs], especially my husband. He was my classmate in university and we both majored in computer science. When I have to make a decision on my work, he always gives me his advices... You know this is very important. You feel that you have support. (37, Chinese, Manager)

Most of the participants reported no career planning. However, some Chinese participants talked about how they work hard and prepare themselves well for possible opportunities. They also mentioned the influence of their supervisors or ex-supervisors on their careers. Some Finnish participants emphasized that they were promoted to the right place at the right time, though they did not mention all their efforts before the promotions. In addition, almost all the Finnish women in this study stressed the importance of being flexible and open to opportunities in career development.

My definition of career is that your work is changing. It doesn't always mean that I'm getting higher up, but that I'm getting other things to do, other responsibilities, so that I'm not doing the same thing from year one to year five. So career is also not just going up, but also sideways. You can't just go directly upstairs; you need to go sideways also. So quite a lot I've had the same title, for example, but the title has been having different things in it. So as long as I feel that the work is changing, then the career is going up, so to say. ...I more value that I feel good inside. To get the social status, that is nice, and to get the higher salary, yes. But a high salary and work that you don't like, that is not a combination for me. I'd rather have a lower salary and feel good about myself and feel that I can affect things. So my definition of a

career is mainly that you are going further, you are doing different things, you are getting more knowledge, and people value you more. (40, Finnish, Manager)

Mainly there are four career strategies used by the participants in this study: knowledge and skill development, being open to challenging work, networking, and IM. Women in both groups emphasize the importance of knowledge and skill development, while very few Chinese women seem to stress being open to challenging work and the use of IM, which are common strategies for most Finnish participants (see publications 4-5).

Publication 2 demonstrates how Chinese women use SITs to surpass the negative effect of gendered *guanxi* on their careers. SITs aid women in collecting information and advice. For example, two of them report that they got their current positions by posting their resumes on a headhunter's website, while another three mentioned that their companies used a website for recruitment. Similarly, two Finnish participants also emphasized that they got their current positions through headhunters. In addition, in Finland, lots of SIT-based projects have been launched nationally to encourage and support women's career development in technology fields, for example, 'WomEqual' and 'WomenIT' (see publication 4), although this study did not explore the effect of SITs on women's managerial careers in Finland. In contrast, more Finnish women in this study report that they were recommended by their former supervisors for the current positions. This supports the study by Heilmann (2004) that in the ICT sector in Finland, "the most important recruiting channel is one's network" (p. 213).

Although mentoring has been documented as a strategy for career success (Ibarra, 1992, 1993, 1995; Adya, 2008) none of the women in this research stated they had a mentor. Most of the participants in both contexts agreed about the benefits of mentoring and some of them mention they had informal mentors (see publication 1 and 5).

How to get forward? I think in the company you have to be competent of course, and you have to have a, a boss who sees your competences and supports your career steps. When I joined

this corporate, in fact at that time they tried to get a male but they didn't get one. So I think I was more competent even in that sense. (47, Finnish, Senior Manager)

5.1.4 Work-life balance

Perceived job rewards are often critical in enhancing job satisfaction and reducing turnover intentions (Lawler, 1986). Simultaneously, professional challenges may increase turnover intentions or work alienation (Adya, 2008). During the interviews, in both contexts, women identified numerous benefits of their paid work. Some women enjoyed the social interaction, self-esteem, challenge and the identity their jobs afforded them. Others appreciated the work and had a sense of self-actualization. However, most women in both groups reported challenges associated with work-life balance.

Similar to women in other professions, women in IT face social barriers that restrict their career persistence and advancement (Ahuja, 2002). The social pressure of work-life balance is one of the commonly cited challenges of IT work (Adya, 2008; Xian & Woodhams, 2008). Most women in this research viewed the demands of their profession as significant and conflicting with work-life balance, irrespective of cultural background, maybe because of the competitive, long working hours, work overload and frequent travel found in the IT industry. The working time of a manager does not fit in with the time schedule of a mother who wants to look after her children (see Kuusipalo et al., 2000).

For the great proportion of single Chinese participants, it seems that marriage poses a problem for career women. Because traditional Chinese culture advocates that females are inferior to males, it is thought an unsuitable marriage if the wife is more educated (or earns more salary, or has a higher position) than her husband. For this reason, women who are well-educated find it difficult to get married in China. In addition, Chinese traditions see it as an obligation to have children after getting married. Pregnancy and taking care of a child or children act as a final obstacle preventing women from continuing their careers. The above shows that Chinese participants also have problems of combining children and work. Further, this

implies that in some degree, the One-child Family Planning Policy (One-child policy, 2009) frees women from the role of traditional childcarer to pursue paid career, seen in the dual-career family model found in cities in China. However, the traditional culture value placed on women's domestic responsibilities and the dual-career family model obviously load women with double burdens (see publication 1). In contrast, Finnish women managers' great proportion of childlessness indicates that children, rather than marriage, are a hindrance for career women (cf. Kuusipalo et al., 2000).

The assignment of housework and the forms of childcare reflect the respective dominant family ideologies, the level of equality policy and social policies (Adya, 2008; Kuusipalo et al., 2000; Lewis, 1992, 1999). Coping mechanisms for work-life balance are different between women in the two groups.

Housework. Most of the married Chinese participants in this study emphasized that their housework is done either by their parents, parents-in-law or by maids they hire (see publication 1 and 5). In contrast, since Finland is a country with a weak male breadwinner model (cf. Kuusipalo et al., 2000), most of the married Finnish women managers in this research reported sharing the housework with their husbands or partners.

We live in the countryside, so there is a lot of outside work, so we have divided (housework). I do the housework, he does more the outside work, such as snow work during the winter, and fixing the car, fixing the tractor, these kinds of things. But then we do quite a lot together. So we try to, because we are travelling both, and staying long hours, we also try and do things together, so we work together. (40, Finnish, Manager)

Childcare. As having children is a more difficult choice for women managers, the childcare arrangement should also illustrate how women managers deal with work-life balance. Thanks to the Chinese Confucian idea of the family – in the broader sense that family should take care of its own members (for example, grandparents take care of their grandchildren, while grandparents are cared for by their adult children), most of the childcare needs of the Chinese

participants were met by extended family support or by hire maids (and/or a tutor for the child's homework, see publication 1; see also Spector et al., 2004; Triandis, 1995). Nonetheless, these Chinese women pay particular attention to their children. Despite their busy schedule, they make an effort to spend time with their children. Some of them seem to have a sense of guilt but accept the sacrifices that they have to make. Most of the Chinese women in this study highlight the importance of family support, particularly support from the husband of married women.

In Finland, the principles of the social policy and welfare system presuppose that adults should take care of themselves, and if this is not possible, society is responsible for their well-being. Furthermore, most of the grandparents are in paid employment themselves, which makes it rare for grandparents or relatives to act as babysitters for Finnish participants. Overall, the state childcare policy of Finland embodies the principle of gender equality: both parents have an opportunity to leave their children in good care while they are working (cf. Kauppinen, 2008; Kuusipalo et al., 2000). The principle of social equality is also important, considering most of the married Finnish women in this study reported their husbands always help with housework and childcare. In addition, some Finnish women in this research mentioned the following coping strategies: (1) a flexible working schedule agreed with the company, and (2) reducing company responsibilities when the children are small.

Since my son was born, my parents have been staying with us. They take charge of the housework and take care of my son. With my parents' help, I can concentrate on my work, which I would not otherwise. I'm very grateful for their help. (37, Chinese, Director)

When my older son was 3 and my younger son was 1, I had to ask the company to reduce my responsibilities. ...yes, this in some degree made my career progress slow. (47, Finnish, Director)

5.2 Differences between the two groups

The results of this research suggest that the differences between the two groups have two dimensions: national and inter-individual. In the national dimension, while both the Chinese and the Finnish women hold management positions in IT companies, they have different experiences because of the different contexts in the two countries (see publications 4-5 for details). In the individual dimension, different women have different experiences, even though they are from the same cultural context (e.g., national and professional/industrial). This finding challenges early studies which show women are the same when considering their experience, gender identity and career development. As Kauppinen (2006) points out, "...male-female differences may sometimes be smaller than individual differences within gender." It also confirms that women's managerial careers are affected by multiple factors rather than any single one. Table 12 summarizes the main differences between the two groups.

Table 12. Summary of the main differences between the two groups

Point of Comparison	Chinese Participants	Finnish Participants	Explanation
Definition of career	Career is part of life and is related to salary, position and social status – a practical perspective on career. Lack of formal career plan and career management.	Separate career and personal life, though career is very important. See career as a means for self-actualization and for new challenges, which may lead to promotion, but promotion is not the only aim of a career.	National culture, social welfare system and social economic structure.
Definition of the ideal woman	Both a high-flying professional and a successful family caretaker; or gains economic independence and has a happy family.	No ideal woman; or the one who is really being herself; or who can balance work and private life.	Culture, especially feminine-masculine and individual-collective dimensions.
Perception of gender-stereotype and glass-ceiling	Less perception.	More perception.	Education and culture, especially feminine-masculine and individual-collective dimensions.

Coping strategies	Acceptance of the male-dominated organizational culture. Work harder and gain better education.	Rebellion or acceptance. Work harder and gain better education.	Feminine-masculine and individual-collective dimensions.
Mentoring	No formal mentoring during the educational process at school, but referring to their male supervisors as mentors.	Few report having senior male mentors. Most are informal ones from senior and peer males.	Education system; power distance; patriarchal society and organization; labor market.
Role model	Some refer to their fathers or senior male supervisors as role models.	Some refer to their mothers or previous supervisors (of both sexes) as role models.	Education system; power distance; patriarchal society and organization; labor market.
Network size	Relatively small (average 9 associates)	Relatively large (average 14 associates)	Culture, especially feminine-masculine and individual-collective dimensions.
Networking strategies	Gendered <i>guanxi</i> , or “who you know” strategies: networking with senior male supervisors for “influence”.	Function-oriented and “who knows you” strategies: networking with male associates on work-related networks and female associates on life-related networks; visibility to key persons.	Culture, especially feminine-masculine and individual-collective dimensions.
Work-life balance	Choose or integrate work and life; support from extended family.	Separate work and life; national or organizational based support.	National culture, social welfare system and Feminine-masculine dimension.

5.2.1 The meaning of career

Like many Chinese textbooks, which make no distinction between career and occupation (cf. Zhou, 1997), most of the Chinese women in this study see career in more practical terms – as equal to occupation. Career is defined as a role, as social status, and as a way to earn a living.

In today's China, career is an important arena for individuals to show their personal competence and realize self-development. People not only gain material benefit from enacting a certain kind of career role, but they achieve psychological or mental satisfaction as well. A large proportion of Chinese women in this study referred to career as a ladder to climb to top managerial positions and make a fortune, though some of them see career as an arena for self-development.

For me career means at least a good salary, then keeping me occupied, not idle, and having at least some position in society. (29, Chinese, Manager)

Career is a journey. Actually everything is a journey, the aim of the journey is important, but the process is more important, you enjoy it and experience it. (39, Chinese, CEO)

In comparison, Finnish women in this study separate career and personal life, though career is very important for them. In addition, most of them see career as a means for self-actualization and for new challenges, which may lead to promotion, but promotion is not the only aim of career (see publication 5). The Finnish women's view of career is very consistent with Arthur's (2008) idea of contemporary careers, though traditional career thinking is still prevalent.

The career experiences of the Chinese participants show fewer changes after their career choice compared with their Finnish counterparts. A social, economic, and educational structure that permits few deviations from chosen careers may have much to do with the situation of the Chinese participants. Deviations from chosen careers are rare and often at the cost of reduced marketability to graduate programs and potential employers (Adya, 2008). In some degree, the outcome of these factors is a prolonged career commitment to one's chosen field of specialization. While these factors might explain the greater career entrenchment of Chinese women, they may also result in greater alienation, restrictions, and frustration if women are not satisfied with their work environments.

Compared with other industries, the IT industry is a popular field of employment and usually has a higher level of salary and working conditions than other industries, especially in China, which seems to be an important condition for a career in terms of economic and cultural capital (cf. Bourdieu, 1984).

5.2.2 Work perceptions and coping mechanisms

The high power distance of Chinese culture may partially explain the fewer reports of negative gender stereotyping in the IT sector. In China, status differences are accepted as part of the social framework. Higher status may be attributed to fate or external power sources (Smith et al., 1995) rather than to individual control. The masculinity dimension of Chinese culture, embodied as a desire for high achievement, may be used to rationalize the ambition and career-orientation shown by the Chinese women in this study. In addition, long-term orientation may also explain that Chinese women may accept short-term challenges at work and in balancing work-life in return for long-term career advancement. However, this may give rise to the risk of creating a work culture where inequalities are overlooked, resulting in less than ideal work conditions for women in general (Adya, 2008). Similarly, low power distance and short-term orientation may account for the higher awareness of workplace discrimination and greater intolerance for such discrimination among Finnish women. Furthermore, growing up in an individualistic society and the country's strict implementation of gender equality law perhaps make Finnish women more conscious of genderization in their professional structures, increasing their sensitivity to events that might be overlooked by their Chinese counterparts.

The passive coping mechanisms Chinese participants used potentially demonstrate the indirect form of confrontation avoidance associated with collectivist, long-term-oriented culture wherein loyalty to social structures is expected in exchange for a close-knit and harmonious community. In contrast, as an individualistic society, Finnish culture is based on competition, with individual achievement and success being rewarded. In Finland, privacy is important, and immediacy of results is more critical than a long-term orientation. This

difference most likely explains observations of Finnish women who showed sensitive responses to protect their career paths and challenged the odds against them. However, such combativeness is characteristic of masculine societies, where the contribution of women may be undervalued. These findings offer a more complex understanding of the masculinity/femininity dimension identified by Hofstede (1980, 2001). The “feminine” Finland is not a “wonderland” in terms of gender equality as some have interpreted Hofstede's findings to imply (Jacobson & Aaltio-Marjosola, 2001). Family policy supports have been created more with families and children in mind than to support female careers (Kuusipalo et al., 2000). A gender system constructed in hierarchy is very much reflected in Finland's organizations, generally characterized by vertical and horizontal segregation and substantial wage gaps between men and women (Acker, 2006).

5.2.3 Differences in networking: Composition, structure and strategies

Publications 2-4 demonstrate that Chinese women mostly had networking concerning influence with their senior male supervisors, which may be reflective of the patriarchal nature of Chinese culture. It is also a manifestation of the power-distance dimension of the national culture. Patriarchal authority begins with the father and continues into the workplace and married lives of most Chinese women. In the hierarchical structure in the workplace, superior-subordinate relationships are sensitive and viewed as important to career progression. For these Chinese women, *guanxi* is crucial for their career success. Their work-related networks are mainly male, with senior men for power-related networks. However, the average network size of Chinese women is significantly smaller than that of their Finnish counterparts. The reason why fewer women are associates for influence may be because of the fact that very few women hold top management positions in China (one Chinese participant added that women are not as generous as males when offering help and advice).

In contrast, Finnish women showed more networking with peer males concerning influence, information and advice. This may be explained by the less hierarchical structure in the IT sector in Finland compared with that in China. In addition, Finnish women demonstrated a

function-oriented networking strategy, reflected as networking with male associates on work-related networks (for instrumental support) and with female associates on life-related networks (for social support) – they separated work- and life-related networks and reported unwillingness to make friends with their co-workers. In Finland, there are several national and Europe-based networks aiming to help women managers' networking. In contrast, there are very few similar networks in China (see publication 4). Participating in clubs and other activities may contribute to Finnish participants' richer range of multiple roles in other spheres of life. This might explain why Finnish participants had larger network size. Research evidence shows that multiple roles can contribute to better health and well-being among women (and men) (cited in Kauppinen, 2008).

Further, Finnish women think “who knows you” is more important than “what you know,” which motivates them to use IM to make themselves visible in organizations, especially to their supervisors. Compared with their Chinese counterparts, Finnish participants have a higher proportion of supervisors and colleagues who are their associates in “influence” and “crisis”. In addition, Finnish participants have a greater proportion of male associates in “influence”. These results support the earlier discussion on the cultural dimensions and the IT industries in both countries.

5.2.4 Strategies on work-life balance: Choose, integrate or balance

In this study, it does not seem easy for Chinese women to balance work and life; instead they often have to make a choice between work and family, or integrate work and life, seeing work as contributing to their lives. The Chinese participants displayed complex attitudes toward work and personal life. Work and career development was a priority when everything was going well in the personal sphere. If there were negative aspects to their personal life, then issues of work and career were perceived as less important. Otherwise, a transformed identity may cost a woman emotionally in her closest network (see publication 1). In contrast, Finnish women like to separate work and life to keep work-life balance. This also bases on the country's social welfare system (see publication 5).

I made some rules for myself. So I come to work normally before 8 o'clock in the morning, and I leave the office in the normal circumstances half past 4 or to 5, between that time at the latest. So very often if I have something which I need to complete by the following day for instance, I do so. I prepare the meal for the family and take kids to their hobbies, and then I work later in the evening. But I don't work during the weekends, there I make the separation. There has to be something which is very exceptional if I work during the weekends. And I'm not working every evening at home either, so I'm quite selective when I work at home, and it has to be honestly needed. Otherwise I don't even start opening my laptop [laughs]. So I try to be quite clear in a way that when I'm at work I do my work, and when I'm at home I try not to mix too much, but phone rings quite often in a way that.. but even that I actually check who is calling, and I make the decision based on that will I answer or not. (40, Finnish, Director)

As discussed above, women from both groups reported the pressures of balancing work-life. However, women in this study rarely expressed a desire to leave their current positions or IT careers, particularly Chinese women. Only two Chinese women in the study expressed the possibility of leaving their current positions on the condition that they had earned enough money. Two Finnish women said they would not like to go up to a higher position as they want more time with their family. This reflects the fact that Finnish women have more freedom to choose their careers than their Chinese counterparts thanks to the country's social welfare system and individualistic culture. As an example, in winter 2008, the Minister of Education in Finland – Mrs Sari Sarkomaa left her post as she wanted to spend more time with her family. Because of the national culture, this would be impossible in China.

Yes, because I'm already now part of management team and so I don't wanna be (promoted) at the moment, I don't wanna be a CEO so I'm the next level. So that's very good for me at the moment because I have 2 little children at home and this is perfect now. Maybe later on, maybe some changes in company where I am working but today I am very happy with the position and everything. (37, Finnish, Board Member)

5.2.5 Definitions of an ideal woman

Most of the Chinese participants agreed that an ideal woman is both a high-flying professional and a successful family caretaker, consistent with what most Chinese people think is the ideal women nowadays (Xinhuanet, 2001). Some Chinese women in this study define an ideal woman as one who gains economic independence and has a happy family. This implies that even contemporary career women still hold traditional ideas about women, referring to the importance of women's domestic responsibility. No doubt this perspective of ideal woman puts double burdens on career women in China.

(Ideal woman) can enjoy both life and work. (37, Chinese, Manager)

(Ideal woman) is one who gains a certain economic and social status and has a happy family (34, Chinese, Manager)

Of the Finnish participants, some said there is no ideal woman, and if there is one, she should really be being herself. Others defined an ideal woman as one who balances work and private life, indicating work-life balance is an issue for these Finnish women (see publication 5).

We can all be the ideal woman. However, we should know that everyone has shortcoming. Why many of us rebuild our own barriers by imaging we have to become something that is impossible, we're special already. (55, Finnish, CEO)

Ideal woman would be somebody who manages to do everything [laughs]. Somehow to balance not only work but also private life. And somebody who would be happy doing what they do, ... I hope to be that kind of someday [laughs], but not yet. (39, Finnish, Manager)

The summary of the main differences of the main findings from this study and the related explanations also refer to publications 4-5. As mentioned earlier, while the results are presented at the group level, inter-individual differences caused by personality, social and

work experiences, socioeconomic status, and family background did exist within each group, which supports the individual differences theory (see publications 4-5).

5.3 Similarities between the two groups

From this study, we can see that all the women managers in the IT sector in China and Finland are well-educated, hard-working, showing ambitions for career progress. Although there are obstacles and challenges, of which one of the most commonly cited is related to the competitive, long working hours and mobility-based nature of the IT industry, women in this study stress that it is important to have an optimistic attitude, which means having confidence in yourself and knowing that you can do a job well, even if you have not done it before. If you have an optimistic attitude, you are bound to succeed. For this purpose, a woman should prepare herself very well then she can accept career challenges at any time. Therefore, education (or on-the-job training) is seen as a crucial career strategy for women in both groups.

Most women in both groups admitted that women must make more effort than men to be promoted. In addition, women in both groups display gendered networks, with more male associates concerning work-related networks (see publication 4).

Of course men also have kind of networks, I have, I have had a kind of bosses who prefer talking with their male subordinates about things and they discuss during the lunch and he takes them to the visits to other companies and travel with them and so on. And so in that way they get more and more educated about the issues and trends and ways of business and ways of talking to the customer and so on. They will be trained more and more all the time even if their job is something like this. And they are trained all the time for the positions of the manager. But ladies or women are not, normally. So they have to take care of themselves. (55, Finnish, CIO)

Although women in both groups experience difficulty with work-life balance, their comments indicate that family provide great support for their careers. This echoes the idea of work-family enrichment (Greenhaus & Powell, 2006; Greenhaus & Singh, 2004). Further, most of women in both groups insist that they would like their feminine qualities, such as people-oriented, consensus building and sensitive, to be valued, although few of them admitted that they do not dress too ladylike in male-dominated companies. That is why they do not like to be called “iron lady” or “super woman”.

The findings on career development of women managers in both groups indicate that in the IT industry career is transforming from a traditional to a contemporary perspective– the traditional career perspective of career development, e.g., career goals, career planning, career choice, career strategies and career success, is changing to become flexible and dynamic. The new model of careers comprises a variety of options and many possible directions of development, rather than a traditional career based on a hierarchical, strictly defined and rigid structure with a clear, uni-dimensional or linear direction for advancement. The career experiences of the participants support the idea that career is in transition (see Table 5). In addition, all women managers in this study show their enthusiasm and ambition for work and career (see publication 1 and 5). This seems to contradict some findings regarding women’s motivation (Höpfl, 2001), which tend to simply attribute women’s minor representation in leadership positions to a lesser desire for achievement and ambition.

The similarities in career experiences between the two groups may be explained by the characteristics of the IT industry, the dynamics of organizational culture, globalization, and the interaction of culture and career, which were discussed in Chapter 2 (Arthur, 2008; Björkman et al., 2008; Leung et al., 2005; Reino et al., 2007; Weisinger & Trauth, 2003; Young et al., 2007).

6 DISCUSSION AND CONCLUSIONS

6.1 Theoretical contribution

The research extends previous studies on gender and work, especially in the field of women's careers, in the following areas: (1) it explores in depth two cultures that have only briefly been explored in prior gender studies—China and Finland; (2) based on Hofstede's (1980) cultural lens, the research compares two cultures that differ greatly in the factors of individualism, power distance, long-term orientation, and masculinity; and finally (3) it examines further the contribution of culturally sensitive career theory (Young et al., 2007) and the theory of individual differences (Trauth, 2002; Trauth et al., 2004) in explaining career experience.

The research supports the impact of historical tradition, values, culture, social and economic system, and politics on the careers of women managers. The findings on Finnish women's work perceptions and coping mechanisms offer a more complex understanding of the masculinity/femininity dimension identified by Hofstede (1980, 2001). The "feminine" Finland is not a "wonderland" in terms of gender equality as some have interpreted Hofstede's findings as implying (Jacobson & Aaltio-Marjosola, 2001). It seems that a gender system constructed in hierarchy is still reflected in most Finnish organizations.

The findings also indicate there are two dimensions of differences between the career experiences of women managers in China and Finland – national and inter-individual. It confirms that women's managerial careers are affected by multiple factors. On the one hand, the effect of cultural and social processes makes managerial careers different. On the other hand, considering current globalization and industrialization, there is a tendency of widespread cultural and managerial practice convergence, which then affects convergence in managerial careers. Further, the interaction of cultural and social processes and the individual results in individual differences in managerial careers.

When considering the applied research methodology, mixed methods – including both emic and etic methods - have proved to be an effective approach to conducting cross-cultural study. Using both qualitative and quantitative methods can serve as compensation for the weaknesses of each approach. This study also raises multiple methodological considerations about how to study meanings related to gender and equality in work-life.

Scholars argue that the implementation of IT within and across organizations may change organizational hierarchies and organizational pyramids are becoming flatter (Senge, 1990; Zeleny, 1990). It no longer seems necessary to maintain a rigid male-dominated organizational culture. The competitive nature of global business and the growing need for diversity and pluralism may make organizations more open for women to join in management positions. However, as organizational structures become flatter and team-based work increases, competition becomes more intense both between and within gender groups: fewer managerial positions are available. Consequently new possibilities for change are created in that women may contest men's power, while some men challenge other men.

The results indicate how traditional and contemporary career perspectives (Arthur, 2008), including the idea of boundaryless careers, new careers, post-corporate careers and protean careers, are evidenced in women managers in the IT industry. As careers are changing from formal, hierarchy-based structures to more fluid, horizontal arrangements, mobility between employers, networks, and different departments in the same organization, as well as mobility for individual and family reasons are theorized to bring changes to future career patterns. Although the pace and degree of change in careers will vary between China and Finland, the contemporary career perspective helps women's career development in both countries, especially in non-traditional fields.

Further, this study recognizes that deeper-level comparisons of national cultures include the social construction of technology and technology careers that shape individual perceptions (Gallivan & Srite, 2005). Culture-specific experiences are shown to emerge via ethnic similarities in individual experiences (Adya, 2008).

6.2 Practical contribution

With fluid global mobility and diversity in the IT workplace, the challenge to HRM is how to create an organizational environment that effectively integrates these new characteristics. The findings of this research offer some practical implications for international HRM and individual women managers' career development.

6.2.1 Creating a supportive culture

The findings of this study indicate that the social welfare system, the equality policy and best practices in Finland have great implications for the situation in China. For example, in Finland, the family support system is friendlier towards women's full-time work than that in China. Finland's education system acts as a role model for China, which has a controversial examination-oriented school system which even demands that a mother acts as a tutor for her child(ren) in primary school. This would suggest that the school system in China has a role in work-life conflict and that government education policy should be more favorable to the working mother (see publication 1).

In addition to the national level culture, the organizational level culture is also crucial for creating a supportive environment for women's managerial careers. According to Carr-Ruffino (2007) changing a corporate culture to be more inclusive of diverse groups requires sustained commitment and exemplary behaviors from top management. This means top management must recognize that diverse groups have the freedom to follow their beliefs and practices and convey this recognition through organizational policies and communications (Adya, 2008). Thus, it is important for organization leaders to build equal opportunity principles that support recruiting, pay, staffing, evaluations, training and promotion, and dismissal (Carr-Ruffino, 2007). At the same time, management should design strategies that are based on reliable sources of data on group characteristics, avoid negative connotations,

and resist the tendency to evaluate differences (Carr-Ruffino, 2007), focusing instead on understanding and accommodating differences (Adya, 2008).

Further, previous studies have documented the prevalence of negative gender stereotyping and its impact on the workplace. To overcome negative gender stereotyping, organizations must recognize the potentially negative outcomes of positive stereotyping. As discussed earlier, positive stereotyping may restrict women from moving into areas that are considered atypical. Related HRM strategies must be developed to adjust individual skills rather than focus on pre-existing stereotypes (Carr-Ruffino, 2007).

6.2.2 Effective networking and mentoring

Researchers have argued the importance of effective networking and mentoring for career success (Ibarra, 1992, 1993, 1995; Adya, 2008). The composition and structure of women managers' networks and the networking strategies found in this study have the following implications for HRM:

Diversity networking programs. The dominant discourse on networks is that they work, that all women should get involved, and that organizations should support them (Catalyst, 1999). However, the issue is not that simple. Since networks may serve to reproduce patriarchy (Bierema, 2005), both networks and the way in which they are organized must function with high awareness and action around issues of gendered power relations in order to effectively erode structural inequality and create atmospheres conducive to women. Network success is impacted by organization culture (Bierema, 2005). Some strategies would benefit women in both countries: these include informal networking, visibility in organizations, IM techniques, and the application of SITs. As regards the gendered network phenomenon, the industry needs to do more to make networking events and activities more gender neutral. In addition, as more women move up the career pipeline, they should be encouraged to access networks that tap into their equivalent "female networks". Therefore, the best solution perhaps is to join in various networks for various purposes – such as emotional support, and career progress.

Organizations should create diversity networking programs, for example, within- and cross-gender networking and company networking, which seem to be ideal for women who are looking to move up. Contact between associates from diverse cultural and professional backgrounds that would otherwise not routinely meet may provide opportunities for cultural exchange and understanding that might otherwise not exist. HR needs to be involved in setting up such networking groups to ensure adequate diversity. Further strategies include: investing in development programs that enhance women's self-efficacy (see Bandura, 1997, 2001) and sense of identity; assessing the organization's level of gender consciousness; assessing the network level of gender consciousness; securing commitment from both management and network members; and rewarding action aimed at accomplishing the network's goals.

Career success for women today not only depends on 'what you know', but also 'who you know' and 'who knows you'. Both formal and informal networks may turn into useful social capital and social trust, benefiting both individuals and organizations. Considering the different networking strategies and the composition and structure of women managers' networks in both countries, I argue that networking strategies should be based on the culture of the networking situation. There is no best networking strategy but the most suitable one. The implication for international HRM is that women managers in China need some training for IM and should be encouraged toward mentoring roles (cf. Adya, 2008), which will improve their networking strategies. In addition, expatriate women managers in China can be role models to local Chinese women manager, and vice versa.

Establishment of a mentoring environment. Although most of the participants did not have a formal mentor, informal mentoring was reported and contributed to women's career success. It is important for organizations to establish a mentoring environment. Self-selected mentoring may be more prominent and successful for women in both countries, considering the negative effect of mismatch. Organizations may avoid mismatches by allowing mentees to identify their preferred mentors. Practically, this will enable women to identify mentors who

will support their career growth and can provide cultural, professional, and social networks, as well as support workplace integration when needed.

6.2.3 Strategies for balancing work and life

Most women managers in this study reported experiencing work-life conflict, which affects work exhaustion and job satisfaction and has been a predictor of turnover intention (see also Ahuja et al, 2002; Boyar et al, 2003). However, both Chinese and Finnish participants reported of the great support (both spiritual and practical) they received from their families. From this perspective, family is also a positive factor for these women's career development.

Some strategies drawn from this research seem useful for women's work-life balance in both countries, for example, telecommuting (working from home) and flexible hours. Such flexibility may reduce the potential for employee alienation and related turnover intentions (Greenhill & Wilson, 2006). Finnish parental leave policies have been shown to be an effective and woman-friendly strategy to help women pursue career progress while also being able to be mothers.

Organization and feminist study researchers have emphasized the difficulties and barriers women face to being promoted to management positions. Prevailing social, cultural and societal circumstances, in particular, have a profound impact on the advancement and careers of female manager applicants. The women sense the expressed cultural demands but also their subtexts in building a future for themselves both at work and in private life. The findings of this research show that women as leaders in both studied contexts are faced with the same questions as women globally of how to combine work, family and private life, and how to build social networks in male-dominated organizations. Despite the difficulties and barriers on their career paths, their impressions of work and career are still marked by a joy of advancement and full use of their potential (cf. publication 1 and 5). This contradicts some findings regarding women's motivation (Höpfl, 2001), which tend to oversimplify women's

minor representation in leadership positions as based on less desire for achievement and less ambition.

Examining work-life experiences in the light of such cultural variables as values, gender role ideology, social support available to individuals, and political and economic systems should help researchers to understand differences and similarities in work-family experiences across the globe. Further, with increased globalization and a growing number of multinational companies, practitioners will benefit from the knowledge that can be gained from cross-cultural research. In addition, learning about global approaches to work and family may contribute to the development of better policies and practices at the national level, especially in emerging societies. Managers in multicultural and transnational organizations will be more effective if they understand variations in work-family cultural assumptions and understandings.

6.2.4 Strategies for cracking the glass-ceiling

Recent management research concerning employees' psychological contracts regarding work indicates that employees expect to be considered a valued employee of the organization, to experience growth and improvement opportunities, and to be integrated smoothly into the organizational environment (see Conway & Briner, 2005). Considering the possible glass-ceiling ahead of women managers pursuing top management positions, organizations should monitor and minimize the gap of such expectations through socialization that reinforces the organizational commitment to women managers' growth, providing mentoring and formal integration opportunities and commitment to diversity improvements. For some women managers who demonstrate less willingness to move into higher managerial positions for more responsibility, HR may benefit from managing their psychological contract during hiring (O'Neill & Adya, 2007) by indicating expectations about possible further promotion.

However, women managers should not be treated as a homogenous group, but as individuals whose careers are motivated by many factors. The results of this study imply that traditions,

practices, and views that impede women's equality in managerial careers are embedded in all cultures. Recognizing managerial stereotyping as a major barrier to women's opportunities can unite women managers in their efforts for change and will enhance the rights, freedom, strategies and opportunities of women all over the world. Besides, organizations should tailor their organizational practices and support systems to attract and benefit from the enormous potential of women managers. Further, women need to perform strategically, then they would be able to make their ways to the managerial positions they want.

6.3 Limitations and further research

As stated in each publication, the individual research method has its limitation. For instance, the assigned normal distribution of Q-sorts may limit the presentation of women's career experiences. Meanwhile, the requirement of the questionnaire to list five associates in each network content regarding the participants' network ties may also restrict the list of associates. Furthermore, due to time and financial issues, the fieldwork in China and Finland could not be conducted in the same year. Additionally, English is not the native language of the Finnish participants nor the researcher (myself) so there might be some problems related to understanding and common interpretation of meaning. Finally, since the participants are all from the IT industry and have different national culture backgrounds, the research results should be understood as a whole and contextually-bounded.

Longitudinal research is needed to investigate changes in women's careers as managers in both countries. The scope of the investigation also needs to be broadened to cover different careers and include both men and women. Further, empirical research investigating potential gender differences in actual job performance may be used to correct stereotypical perceptions.

Due to the complex and interdependent nature of culture, gender and work, this research is exploratory. Based theoretically on culturally sensitive career theories, the theory of individual differences, and analyzed with a feminist lens, this research links the experiences of the careers of women managers with subjective expressions of national culture and

organization with concrete historical, political and economic structures, which together bridge micro and macro levels of analysis. Focused empirical research is necessary to prove or disprove these preliminary findings. For example, the incongruous patterns that have emerged between gender stereotyping and networking for the two groups must be explored further. Further research may include both genders as the sample, or women from traditional female occupations, aiming to establish the degree of generalization of the results.

Future research must also focus on the concrete influences of national, ethnic, ethical, professional, and organizational cultures upon women's career experience. With the globalization of IT work, there is value in examining workplace perceptions of employees (both managers and subordinates) across borders. Organizations must extend HR policies to multicultural teams. The above can potentially stimulate important cross-disciplinary research. Moreover, additional empirical comparison of the two cultures is needed. It is also worth comparing women managers from other cultures that are experiencing growth in female representation. For instance, India and Russia, both being host countries of Finnish IT companies, are rich areas for extended research on the topic.

The current research shows distinct cultures are converging towards a common global culture, indicating the role of careers in mediating the effect of economic globalization on culture change. The similarity between Chinese and Finnish women managers suggests that the opening of the Chinese economy to foreign investments and joint venture partners has fostered a shift away from traditional Chinese values, in particular among those employed in these emerging sectors of the economy.

When considering the interaction between Western culture and Eastern culture, and the influence of Western culture on Eastern culture, it would be too simplistic to only consider these observations as further evidence for the widespread cultural convergence toward the Western capitalist system. The blind transfer of particular Western career management practices may be as problematic as some of them are within their countries of origin (Tams & Arthur, 2007).

Concerning the impact of SITs, future research should focus more on the impact of SITs on social networking, especially from the gender aspect: for example, how women can be trained to use SITs; comparing how women and men can benefit from using SITs; and drafting a legal system to support the application of SITs. Furthermore, the application of SITs within a cross-cultural context should be studied to see how Chinese women's social networking differs from their Western counterparts, in view of *guanxi* being a central concept in Chinese society.

6.4 Personal reflections on the research

The Chinese proverb that 'women hold up half the sky' has long been more an aspiration than a fact. For a long time, around much of the world, women have lagged men in terms of education, access to healthcare, work, wages and involvement in political institutions. Although evolving views of women's roles over the past half-century have moved the reality closer to the aspiration, there are still significant gaps in many countries.

Benefits of diversity management range from the ability to obtain the best talent for an organization's resource pool to the ethical desirability of workforce integration (Jayne & Dipboye, 2004). Findings from this study support the impact of culture on group-level differences and similarities. This study indicates that although the careers of women managers differ on a general level between China and Finland, individual differences also exist. I hope this study will initiate further research on explicit cross-cultural comparisons in IT and career experiences beyond gender issues.

The socio-political context in both countries is different. Finland has comprehensive social welfare provisions, whereas there is less state provision in China. Since I came to Finland, I have been impressed by the parent-friendly public facilities and the country's free

education^[1]. In contrast to the main source of support being the state in Finland, family is the main source of support and help in China. The importance of the extended family in China underlines that the country's culture differs from Finland. In China, the group is seen as more important than the individual, and the individual's identity is merged within the extended family. Finland's culture is more individualistic. Each individual is expected to take responsibility for personal needs and family support is not as extensive or systematic as in China. However, considering the three burdens^[2] of people in China, Finland is really a paradise from a Chinese perspective.

From my experience here in Finland what has impressed me most is the highly efficient and human-oriented administrative service, as well as a business society inclined to support academic research. Maybe for most Finns this is just "how things should be done." However, compared with China, I really appreciate the Finnish administrative service model. It might be one of the reasons why Finland has become a developed country, economically and technologically. From this perspective, Finland offers best practices to China.

The differences in career experiences in two countries can be partly explained by cultural dimensions (see Table 4 and 8), mainly the individualism-collectivism dimension, power distance, the long-term versus short-term orientation (or Confucian Dynamism), and the specific versus diffuse category. China is seen as having a more diffuse culture, meaning that for people in this culture, the separate facets of life all meld together and influence each other. For example, in China, educational choices are liable to be made with a view to work and the needs of the extended family, while in Finland, education is a separate step in the sequence of life stages, after which one moves on to working life. A more interesting phenomenon is that most of the Finnish women in this study started their first formal job before they graduated

¹ In Finland, adults with a baby in pram are free to use the local transport system at no cost, and many public buildings and trains are equipped with parent-friendly facilities, such as a kettle for warming baby milk, diaper-changing facilities, and a play-room (or corner) for children. These facilities make it easier for parents to travel and combine work and life. In addition, education in Finland (from primary school to doctoral study) is tuition free. It is quite normal that Finns are still receiving higher education in universities when they have already had their child(ren).

² Housing, health care and education have been named as three burdens for modern Chinese, because most people in China have to pay for these three items themselves.

from university, with the majority starting their master level study after they had been in management positions. Some of them started their master program when they were still on maternity leave. This indicates that Finland has a more flexible education system, which has crucial implications for China. Further, the effect of globalization, together with the particular industrial and organizational culture found in the IT sector, contributes considerably to the similarities of women managers' career experiences in the two countries.

When I was finalizing the manuscript of this thesis, I talked with my mother on the phone and I recalled the moment when I saw her crying after she had delivered my youngest sister. For the first time I asked her about the reason for her tears. My mother said it was because she felt guilty that she could not give birth to a boy for the family. Like most other Chinese women of the time, she just thought it her responsibility to comply and obey cultural values and social norms.

When considering attitudes towards gender politics, women's groups in China are not politicized or based on ideology or feminist principles. Instead, they work on practical issues to improve women's well-being, though their work is in its very beginnings because of inadequate resources. Finland was the first country in Europe and the second in the world to legislate an equality act. The Global Gender Gap Report 2008 (Hausmann, Tyson & Zahidi, 2008) indicates that the Gender Gap Index of Finland has moved from third in 2007 to the second (0.820), showing that the gender gap in Finland is one of the smallest in the world. China has also made progress in the Gender Gap Index (0.6878, rank 57, as compared to 0.6643, rank 73 in 2007) by narrowing gender gaps in educational attainment, economic participation and opportunity, political empowerment, and health and survival. The development is positive news for women in both countries. Considering women's different perception of and coping strategies for gender-stereotyping and workplace discrimination in both groups (see Table 12), I argue that it is crucial for women to perceive the workplace inequality and strategically rebel against it.

Overall, women managers in the IT field in the two countries have different experiences because of different cultural contexts. Women in the two countries also have some similarities in their lives, but the way that they interpret their experiences is quite different. I have learnt a lot from conducting this research project, both theoretically and practically. The results of this project made me wonder about the questions: “whether or not feminism could be harmful to one’s career goals, considering that Chinese women in this study seldom reported workplace discrimination?” and “Would ignorance be good?” This study makes one question some of these assumptions and gives a deeper understanding of the impact of culture on working life.

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APPENDIX 1

Demographic information of the Chinese participants

No.	Title	Age	Marital status	Number of child	Educational level	Type of Companies
1	Regional Manager*	34	Married	0	Bachelor	JVC
2	Manager	37	Married	One daughter	MBA	FC
3	Department Manager	29	Single	0	Master	JSC
4	Manager	34	Married	One daughter	Junior college	JVC
5	General* Manager	34	Married	0	MBA	JVC
6	President and CEO	39	Married, one son	One son	Bachelor	JSC
7	Senior Manager*	38	Married, one son	One son	Bachelor	SOC
8	Customer Manager	29	Single	0	Junior college	JVC
9	Sales Manager	30	Married	0	Bachelor	FC
10	Marketing Manager	30	Single	0	Bachelor	FC
11	PR Manager	26	Single	0	Bachelor	JVC
12	Sales Manager	35	Married	One daughter	Bachelor	FC
13	Marketing Manager	30	Married	0	Bachelor	JVC
14	Director*	37	Married	One son	Bachelor	SOC
15	Financial Manager	33	Married	0	Bachelor	FC
16	HR Manager	40	Single	0	Junior college	JSC
17	Customer Manager	32	Single	0	Bachelor	JVC
18	Senior Manager	32	Married	0	Bachelor	FC
19	Department Manager	33	Married	One daughter	Doctor	JSC
20	Assistant of President*	49	Married	One son	MBA	SOC
21	Customer manager	26	Single	0	Bachelor	JVC

* In this study, it is categorized as one level from CEO.

FC=Foreign company, JVC=Joint venture company, JSC=Joint stock company, SOC=State-owned company

APPENDIX 2

Demographic information of the Finnish participants

No.	Title	Age	Marriage status	Number of children	Education
1	Vice President*	43	Married	0	M.Sc.
2	CEO	50	Married	2	M.Sc.(BA)
3	CIO*	55	Married	1	M.Sc. (Econ.)
4	Program Manager	34	Single	0	M.Sc. (Engi.)
5	Engagement Manager	35	Single	0	M.Sc. (Business)
6	CEO	55	Married	3	M.Sc. (Engi.)
7	Director	40	Married	2	Diploma in Marketing
8	Senior solution Manager	39	Married	2	B.Sc., MBA
9	Senior Manager	47	Single	0	M.Sc. (Comp. sci)
10	Director	47	Married	2	Diploma in Business
11	Director	44	Married (common-law)	0	Diploma in Business
12	Director	35	Married	0	EMBA
13	IT Manager	45	Divorced	2	M.Sc.(Engi.)
14	CEO	37	Single	0	M.Sc.
15	Development Director*	44	Married	2	M.Sc. (Tech.)
16	Solution Manager	48	Single	0	B.Sc., MBA
17	Director	45	Married	3	Diploma in Business
18	Board Member*	37	Married	2	M.Sc. (Business)
19	Manager	40	Married	0	M.Sc. (Business)
20	Director*	43	Married	0	M.Sc. (Economics)
21	Director	42	Married	0	M.Sc. (Comp. Sci.)

* In this study, it is categorized as one level from CEO.

No. 1-21 participated in the face-to-face interview. Among them, No. 1-14 completed both Q-sort and questionnaire, while No. 15 completed only questionnaire. No. 16-21 completed neither Q-sort and questionnaire.

APPENDIX 3

Open-ended questions for the face-to-face in-depth interview

1. What has been your work history?
2. Did you get promotion during the latest 3 years? How long should you wait before you are considered eligible for advancement? The normal criteria for gaining a higher managerial position in your company are...? How do you think about glass-ceiling? Is there a glass-ceiling for women to go up to the top position?
3. As a woman manager, the difficulties you face in work setting are...?
4. As a woman manager, what merits do you have?
 - a. Compared with your male counterparts, you have the following merits:
 - b. Compared with your female counterparts, you have the following merits:
5. What do you think are most important for a woman to enter top managerial position?
6. Does your family give you supports? What are they?
7. How did you get the current position? By appointment, by recruitment, or by application?
8. How do you evaluate your company? Are you satisfied with it?
9. Does your company give you opportunities for training? Are they important to your work? How do you think continuing education and on-the-job learning and training?
10. What do you think about career? Have you ever had a mentor? If yes, what is the gender of the mentor? What are your career ambitions for the future?
11. Do you often concern your appearance?
12. What do you think an ideal woman is?
13. Have you experienced sexual harassment in work setting?

APPENDIX 4

70-item Q-sort for Chinese participants

- 1 I generally have a good deal of support from my male colleagues.
- 2 I think my work assignments correspond to my competence.
- 3 My male colleagues have the same hobbies as my male supervisor, e.g., smoking, playing card game, drinking. Then they have more opportunities to make contact with the supervisor and receive a better chance for promotion.
- 4 Organizations should look for qualification and personal merit, and disregard gender, class, race, and religion.
- 5 I feel it is difficult to fulfill demands at home.
- 6 I try to collect information about the interesting companies or positions.
- 7 I spend more time on household work/childcare than my partner /female colleagues.
- 8 I generally have a good deal of support from my female colleagues.
- 9 I experience stress from combining work and family demands.
- 10 While sometimes I have made choices in my life based on the desire to accommodate a relationship (for example, moving with my husband so that he could take a new and better job), it has been worth it.
- 11 My work is difficult and often makes me tired.
- 12 Freedom to do and to manage my work is very important to me.
- 13 Women are believed to influence leadership-style into a more cooperative, less hierarchical, and more socioemotional way.
- 14 The fact that I am a native here has affected my career in one way or another.
- 15 I want my work to be "fun." A career should be something one would do even if s(he) were not being paid to do it.
- 16 I set up my career goals according to my competence.
- 17 Sometimes maternity leave can be an advantage. For example, sometimes it offers the chance to change jobs.
- 18 The first job I had at the company was important to me for one reason or another-either because I was in a spot to learn about the business, or because I was given lots of

responsibility or because I met people who were important to me later, or for some other reason.

19 I formulate my strategies to realize my career goals.

20 "Contacts" within and/or outside the company have been important to me in my career for one reason or another. Knowing the "right" people can make a difference in one's work and career.

21 I often reflect if the current job fits me.

22 According to the development of the organization, I know very well my career goals in the following years.

23 To achieve my career goals, I do my best to overcome or supplement my shortcomings.

24 My career has had a lot to do with careful planning.

25 I concentrate on cultivating a variety of occupational skills related to my job.

26 In IT (Information Technology) industry, the under-representation of female managers might be the result of negative self-selection, that is, lack of motivation to pursue a managerial career.

27 Women's priorities are directed towards home and family responsibilities and do not include a career that would conflict with family demands.

28 I hope the company develops fundamental changes that take female skills and values into account and thus make the company more "women-friendly".

29 I have wanted to show that as a woman I could be as "good as a man."

30 I often talk to someone about my feelings.

31 I make decisions without consulting others.

32 I am competitive.

33 I try to take the role of leader in group settings.

34 I pay attention to my coworkers' feelings.

35 I try to perform better for every new task I am assigned.

36 Men can move directly into management whereas women benefit from having pronounced managerial aspirations in order to enter management settings.

37 Women have to prove their motivation more than men in order to get promoted.

38 It could have a negative impact on the selection process for female aspirants to demonstrate their ambition too much.

39 I made a plan and followed it.

40 I am cooperative.

41 When facing difficulty, I always hope a miracle might happen.

42 I always blame myself for bad results.

43 I often avoid unsatisfying things, pretending that nothing has happened.

44 As a manager, man and woman will behave similarly in similar positions and situations.

45 Selection and socialization factors within the organization seem to promote both men and women aspiring to a managerial position who conform to a traditional, "masculine" managerial norm.

46 Women with certain gender and personality characteristics opt for managerial advancement.

47 Women entering managerial settings could bring new and important contributions to the field of management.

48 Compared with my male counterparts, I lack self-confidence and self-assertiveness.

49 Managerial women exposing an assertive or "masculine" leadership style are strongly devaluated, especially by men.

50 When I look ahead, I sense no realistic possibility for further advancement in my corporation.

51 I, as well as my co-workers and supervisors, are trapped into a mode of thinking and behaving that favors a "male" mode of being in the world.

52 I recognize that with my warm and open preferred mode of behavior I would feel more comfortable in a place with a less rigid hierarchy, surrounded by other women like myself.

53 I try to network with influential persons in the organization.

54 Men and women come to the organization with different psychological characteristics and values where the female rationality might be incongruent with what is seen as necessary rationality for a manager.

55 I let my supervisors know my career pursuit and my career goals.

56 I obtained the current position because of my competence and network.

- 57 Sometimes I experience a sense of guilt that I am neglecting the traditional roles I feel I should be fulfilling.
- 58 The company I work for helps me a lot with my family responsibilities.
- 59 My family are so supportive that I can concentrate on my work.
- 60 I obtained the current position because I'm qualified.
- 61 I reason that a possible way for me to the top is to literally continue to go places, that is, to continue traveling for assignments in other places often.
- 62 As a dual-career family of the 21st century, we are also dual parenting our child (ren) as a way to eventually break up patriarchal domination in organizations and society.
- 63 Mentoring has played an effective role in helping me to build my career path.
- 64 I work hard in order to enhance my performance.
- 65 I have experienced gender discrimination at work, for example in salary negotiations, promotional decisions, work assignments.
- 66 Because the environment of the IT industry is dynamic, it's hard to predict what will happen in the future, what jobs will be available, what opportunities will open up. To some extent, my career depends upon what happens to the IT industry.
- 67 It's important that the work I do requires the special talents I have (related to IT).
- 68 I like work which offers variety and a chance to develop myself. I ask "can I grow in this job?" Bearing in mind that the company must benefit too.
- 69 I view my job as an important part of my life.
- 70 Knowing about the Chinese economy in general and Chinese corporations has been important to me as well as having contacts there.

APPENDIX 5

70-item Q-sort for Finnish participants

1. Work (career) is a means of living (life).
2. I have been in right place in right time.
3. My work is difficult and often makes me tired.
4. Freedom to do and to manage my work is very important to me.
5. Women are believed to influence leadership-style into a more cooperative, less hierarchical, and more socioemotional way.
6. The fact that I am a native here has affected my career in one way or another.
7. I want my work to be “fun.”, a career should be something one would do even if s(he) were not being paid to do it.
8. I try to collect information about the interesting companies or positions.
9. I can be in the top managerial position, but I don’t want because I want to spend more time with my family.
10. I spend more time on household work/childcare than my partner /female colleagues.
11. I generally have a good deal of support from my female colleagues.
12. I experience stress from combining work and family demands.
13. While sometimes I have made choices in my life based on the desire to accommodate a relationship (for example, moving with my husband so that he could take a new and better job), it has been worth it.
14. The first job I had at the company was important to me for one reason or another-either because I was in a spot to learn about the business, or because I was given lots of responsibility or because I met people who were important to me later, or for some other reason.
15. I formulate my strategies to realize my career goals.
16. “Contacts” within and/or outside the company have been important to me in my career for one reason or another. Knowing the “right” people can make a difference in one’s work and career.
17. I set up my career goals according to my competence.

18. Sometimes maternity leave can be an advantage. For example, sometimes it offers the chance to change jobs.
19. My experience in different managerial positions gives me great support to get promotion in a higher managerial position.
20. I generally have a good deal of support from my male colleagues.
21. I think my work assignments correspond to my competence.
22. My male colleagues have the same hobbies as my male supervisor, e.g., smoking, playing card game, drinking. Then they have more opportunities to make contact with the supervisor and receive a better chance for promotion.
23. I have wanted to show that as a woman I could be as “good as a man.”
24. I often talk to someone about my feelings.
25. I make decisions without consulting others.
26. I am competitive.
27. I try to take the role of leader in group settings.
28. I pay attention to my coworkers’ feelings.
29. Organizations should look for qualification and personal merit, and disregard gender, class, race, and religion.
30. I often reflect if the current job fits me.
31. According to the development of the organization, I know very well my career goals in the following years.
32. To achieve my career goals, I do my best to overcome or supplement my shortcomings.
33. I concentrate on cultivating a variety of occupational skills related to my job.
34. I made a plan and followed it.
35. I am cooperative.
36. The company I work for helps me a lot with my family responsibilities.
37. I always blame myself for bad results.
38. Managerial women exposing an assertive or “masculine” leadership style are strongly devaluated, especially by men.
39. When I look ahead, I sense no realistic possibility for further advancement in my corporation.

40. I, as well as my co-workers and supervisors, are trapped into a mode of thinking and behaving that favors a “male” mode of being in the world.
41. My family is so supportive that I can concentrate on my work.
42. I obtained the current position because I’m qualified.
43. As a dual-career family of the 21st century, we are also dual parenting our child (ren) as a way to eventually break up patriarchal domination in organizations and society.
44. Mentoring has played an effective role in helping me to build my career path.
45. As a manager, man and woman will behave similarly in similar positions and situations.
46. Selection and socialization factors within the organization seem to promote both men and women aspiring to a managerial position who conform to a traditional, “masculine” managerial norm.
47. In IT (Information Technology) industry, the under-representation of female managers might be the result of negative self-selection, that is, lack of motivation to pursue a managerial career.
48. Women’s priorities are directed towards home and family responsibilities and do not include a career that would conflict with family demands.
49. I hope the company develops fundamental changes that take female skills and values into account and thus make the company more “women-friendly”.
50. I try to perform better for every new task I am assigned.
51. Men can move directly into management whereas women benefit from having pronounced managerial aspirations in order to enter management settings.
52. Women have to prove their motivation more than men in order to get promoted.
53. It could have a negative impact on the selection process for female aspirants to demonstrate their ambition too much.
54. My family background has contributed to my coming up the ranks, but patriarchy is still at work here.
55. Women with certain gender and personality characteristics opt for managerial advancement.
56. Women entering managerial settings could bring new and important contributions to the field of management.

57. Compared with my male counterparts, I lack self-confidence and self-assertiveness.
58. I work hard in order to enhance my performance.
59. I have experienced gender discrimination at work, for example in salary negotiations, promotional decisions, and work assignments.
60. I view my job as an important part of my life.
61. Knowing about the Finnish economy in general and Finnish corporations has been important to me as well as having contacts there.
62. I recognize that with my warm and open preferred mode of behavior I would feel more comfortable in a place with a less rigid hierarchy, surrounded by other women like myself.
63. I try to network with influential persons in the organization.
64. Men and women come to the organization with different psychological characteristics and values where the female rationality might be incongruent with what is seen as necessary rationality for a manager.
65. Because the environment of the IT industry is dynamic, it's hard to predict what will happen in the future, what jobs will be available, what opportunities will open up. To some extent, my career depends upon what happens to the IT industry.
66. It's important that the work I do requires the special talents I have (related to IT).
67. I like work which offers variety and a chance to develop myself. I ask "can I grow in this job?" bearing in mind that the company must benefit too.
68. I let my supervisors know my career pursuit and my career goals.
69. I obtained the current position because of my competence and network.
70. Sometimes I experience a sense of guilt that I am neglecting the traditional roles I feel I should be fulfilling.

APPENDIX 6

Questionnaire on personal ties

Hello! This is a questionnaire on personal ties. Please identify up to five individuals you interact with in each of the following network contents. Then fill in the information about the associates. Thank you in advance!

Your information

Date of birth__ Education__ Marriage Status__ Number of Child(ren)__ Position (title)___

1. From whom you seek advice on a decision you have to make.

A. Relationship with you_____ Gender___ Age___ Education_____

Marriage Status_____ Occupation (title)_____

B. Relationship with you_____ Gender___ Age___ Education_____

Marriage Status_____ Occupation (title)_____

C. Relationship with you_____ Gender___ Age___ Education_____

Marriage Status_____ Occupation (title)_____

D. Relationship with you_____ Gender___ Age___ Education_____

Marriage Status_____ Occupation (title)_____

E. Relationship with you_____ Gender___ Age___ Education_____

Marriage Status_____ Occupation (title)_____

2. From whom you seek information on what is going on in the organization.

A. Relationship with you_____ Gender___ Age___ Education_____

Marriage Status_____ Occupation (title)_____

B. Relationship with you_____ Gender___ Age___ Education_____

Marriage Status_____ Occupation (title)_____

C. Relationship with you_____ Gender___ Age___ Education_____

Marriage Status_____ Occupation (title)_____

D. Relationship with you_____ Gender___ Age___ Education_____

Marriage Status_____ Occupation (title)_____

E. Relationship with you_____ Gender___ Age___ Education_____

Marriage Status_____ Occupation (title)_____

3. From whom you seek help when you wanted to influence the outcome of an important decision at work.

- A. Relationship with you _____ Gender ___ Age ___ Education _____
 Marriage Status _____ Occupation (title) _____
- B. Relationship with you _____ Gender ___ Age ___ Education _____
 Marriage Status _____ Occupation (title) _____
- C. Relationship with you _____ Gender ___ Age ___ Education _____
 Marriage Status _____ Occupation (title) _____
- D. Relationship with you _____ Gender ___ Age ___ Education _____
 Marriage Status _____ Occupation (title) _____
- E. Relationship with you _____ Gender ___ Age ___ Education _____
 Marriage Status _____ Occupation (title) _____

4. From whom you seek help in times of crisis.

- A. Relationship with you _____ Gender ___ Age ___ Education _____
 Marriage Status _____ Occupation (title) _____
- B. Relationship with you _____ Gender ___ Age ___ Education _____
 Marriage Status _____ Occupation (title) _____
- C. Relationship with you _____ Gender ___ Age ___ Education _____
 Marriage Status _____ Occupation (title) _____
- D. Relationship with you _____ Gender ___ Age ___ Education _____
 Marriage Status _____ Occupation (title) _____
- E. Relationship with you _____ Gender ___ Age ___ Education _____
 Marriage Status _____ Occupation (title) _____

5. Whom you socialize with outside work.

- A. Relationship with you _____ Gender ___ Age ___ Education _____
 Marriage Status _____ Occupation (title) _____
- B. Relationship with you _____ Gender ___ Age ___ Education _____
 Marriage Status _____ Occupation (title) _____
- C. Relationship with you _____ Gender ___ Age ___ Education _____
 Marriage Status _____ Occupation (title) _____

D. Relationship with you_____ Gender___ Age___ Education_____

Marriage Status_____ Occupation (title)_____

E. Relationship with you_____ Gender___ Age___ Education_____

Marriage Status_____ Occupation (title)_____

6. Other network contents? If yes, what's it about? who are they?

APPENDIX 7

Career scripts of Chinese women managers in the IT industry

Script 1: *The optimist*

Strongest Agreement (11, 11, 10, 10, 10)

I generally have a good deal of support from my male colleagues.

I have wanted to show that as a woman I could be as “good as a man.”

Organizations should look for qualification and personal merit, and disregard gender, class, race, and religion.

Women are believed to influence leadership-style into a more cooperative, less hierarchical, and more socio-emotional way.

My career has had a lot to do with careful planning.

Strongest Disagreement (1, 1, 2, 2, 2)

My male colleagues have the same hobbies as my male supervisor, e.g., smoking, playing card game, drinking. Then they have more opportunities to make contact with the supervisor and receive a better chance for promotion.

I spend more time on household work/childcare than my partner /female colleagues.

I feel it is difficult to fulfill demands at home.

I often avoid unsatisfying things, pretending that nothing has happened.

I have experienced gender discrimination at work, for example in salary negotiations, promotional decisions, work assignments.

Script 2: *The striver*

Strongest Agreement (11, 11, 10, 10, 10)

I obtained the current position because I’m qualified.

It’s important that the work I do requires the special talents I have (related to IT).

I think my work assignments correspond to my competence.

I try to perform better for every new task I am assigned.

I have wanted to show that as a woman I can be as “good as a man.”

Strongest Disagreement (1, 1, 2, 2, 2)

I want my work to be “fun.” A career should be something one would do even if s(he) were not being paid to do it.

I feel it is difficult to fulfill demands at home.

I try to network with influential persons in the organization.

Because the environment of the IT industry is dynamic, it's hard to predict what will happen in the future, what jobs will be available, what opportunities will open up.

To some extent, my career depends upon what happens to the IT industry.

I reason that a possible way for me to the top is to literally continue to go places, that is, to continue traveling for assignments in other places often.

APPENDIX 8

Career scripts of Finnish women managers in the IT industry

Script 1: *The inner-motivated*

Strongest Agreement (11, 11, 10, 10, 10)

Freedom to do and to manage my work is very important to me.

I am cooperative.

I want my work to be “fun”, a career should be something one would do even if s(he) were not being paid to do it.

I pay attention to my coworkers’ feelings.

I view my job as an important part of my life.

Strongest Disagreement (1, 1, 2, 2, 2)

My work is difficult and often makes me tired.

I formulate my strategies to realize my career goals.

I have been in right place in right time.

The fact that I am a native here has affected my career in one way or another.

I spend more time on household work/childcare than my partner /female colleagues.

Script 2: *The pragmatist*

Strongest Agreement (11, 11, 10, 10, 10)

My experience in different managerial positions gives me great support to get promotion in a higher managerial position.

I obtained the current position because I’m qualified.

Women are believed to influence leadership-style into a more cooperative, less hierarchical, and more socio-emotional way.

I like work which offers variety and a chance to develop myself. I ask “can I grow in this job?” bearing in mind that the company must benefit too.

I obtained the current position because of my competence and network.

Strongest Disagreement (1, 1, 2, 2, 2)

I spend more time on household work/childcare than my partner /female colleagues.

My family background has contributed to my coming up the ranks, but patriarchy is still at work here.

I can be in the top managerial position, but I don't want because I want to spend more time with my family.

Mentoring has played an effective role in helping me to build my career path.

Compared with my male counterparts, I lack self-confidence and self-assertiveness.