Different Gender -- Different Rules? Assessment of Women in Asian Organization

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ABSTRACT

This study began with the question of what are the factors that lead to different outcomes of women in engineering profession in Bangladesh and Thailand. The primary data for answering this question were drawn from questionnaire surveys with 204 professional engineers, in-depth interviews with 80 professional women engineers, and informal discussions with employers/representatives in construction organizations in Bangladesh and Thailand. By comparing Thailand and Bangladesh, the findings identified several similar and different barriers that not only deter women from entering in construction organizations, but also stopped the stream of women engineering graduates to flow into the engineering job market. It is revealed that affirmative action (such as fellowships and quota systems for women in entering engineering employment) and educational encouragement from family members play an important role in Bangladeshi women’s entry in engineering education. In contrast, self-interest and role models are the two important determinants that influence Thai women’s career choice and entry in engineering education. Nonetheless, the increase of Bangladeshi women studying engineering do not necessarily lead to increase in women going for engineering job, especially in construction organizations. The study uncovered that it is not the stereotyped image that make women less involved in engineering profession. The study has shed light on how organizational cultural practices as well as the influence of external factors (such as socio-cultural norms and gender societal expectations) within construction organizations affect women’s entry and stay in construction organizations in Bangladesh and Thailand. The findings suggest that despite the concerted efforts by the government that are necessary in increasing the female engineer’s participation in employment, organizations should develop their own equal opportunity guidelines and policies to provide women with a suitable job and ensure that they remain employed.

Keywords: Women Engineers, Organizational Culture, Construction Organizations

INTRODUCTION

Engineering is considered to be a men’s profession. Thus, not only are there fewer women in both engineering education and occupation (Hughes, 1995), there is also a sharp segregation of the sexes in terms of positions (Wirth, 2004). Careers related to this employment generally provide a higher professional and social status than many other professions; however, the general image of the profession is tough, heavy, dirty and machinery-oriented (Zywno et al., 1998; Ogunlana et al., 1993; McILwee and Robinson, 1992). Any entry by women into this profession is considered an attempt to cross the sex barrier (Jaiswal, 1993).

Various schools of thoughts explained the reasons for the relative absence of women in engineering education and employment. Functionalist and gender-socialization theorists stress socialization and gender role behaviors as major sources of gender inequality and sex segregation in the workforce. It stressed that if women are socialized to be more interested in engineering, there will be more women in the engineering workforce; and that sex segregation in the engineering workforce will decrease. However, statistics belie this. Country statistics show a non-linear relationship between the ratio of women in engineering education and the ratio of women in engineering employment. This trend is also found in the United Kingdom (Powell et al., 2004).

Comparative engineering education and employment statistics in Thailand and Bangladesh show that women have made significant progress in both countries. For instance, in 2001, women constituted 19.8% of the engineering students (in all

1 Engineering is the art or science of creatively applying mathematical and scientific knowledge to solve practical problems which affect people, our communities and our environment. It’s about changing the world – it’s highly creative, exciting and challenging. Engineers find innovative solutions to contemporary problems and manage the wise use of the earth’s resources, both human and natural.
Disciplines) and 19.3% in civil engineering in Bangladesh (Figure 1). In Thailand, the corresponding figures were 16.7% and 8.3% (Figure 2). These figures are a massive leap forward from the early 1990s with 7.3% in engineering education (in all disciplines) and 6.7% in civil engineering for Bangladesh, and corresponding figures of 5.5% and 6.3% in Thailand (Figure 1 and Figure 2). It is noted that women had progressed further in the field of civil engineering in Bangladesh (19.3% in 2001) than women in Thailand (8.3% in 2001).

Despite this improvement in civil engineering education in the past decade, there has been little improvement in women’s employment in engineering in Bangladesh (around 2%). In Thailand, on the other hand, while civil engineering education among girls did not improve much, civil engineering employment among women kept pace with civil engineering education (Figure 2).

There are few researches conducted on the experience of women engineers in construction industry, particularly in the Asian region. A study reveals that one of the major problems associated with women engineer’s under-representation in construction industry is career development obstacles. Empirical research shows that women engineers in construction organizations confront a greater number of obstacles to their professional career development, which not only limits their career achievements but also prevents them from entering and staying in construction organizations (Dainty et al., 2000). According to the National Research Council in the United States of America (1994), the exit rate of women engineers is double that for men and substantially higher than for other employment sectors. Their higher exit rate from construction industry suggests that women perceive the climate in this industry as less favorable for the professional career (Preston, 1993).

There is a strand of knowledge in the literature about women’s career within organizations that suggests that it is the organization itself, which plays a key role in the advancement or absence of women in organizational hierarchy (e.g. Liff and Ward, 2001; Benschop and Doorewaard, 1998). That is, the structure and the culture of the organization, together with the social rules that guide and determine behaviors related to how individuals identify themselves and interact with each other within the organization contribute to the existence or absence of women.

Some empirical research indicates a range of inter-related organizational structural and cultural factors that directly and/or indirectly causes gender disparity in career development in construction industry, such as limited access to job, masculine image of construction engineering profession, gender bias in recruitment practices, workplace culture, poor careers advice, family responsibility, peer pressure, etc. (Powellet al., 2004; Dainty et al., 2000, 1999; Zywno et al., 1998; Wall, 1997; Evetts, 1996; Bronzini et al., 1995; NRC, 1994; Gale, 1994; Parikh and Sukhatme, 1993; Catalyst, 1992; Dorsey and Minkarah, 1992; McILwee and Robinson, 1992; Johnson et al., 1992; Srivastava, 1992; Gale and Skitmore, 1990). For example, the major noticeable organizational factor for women engineer’s less participation in construction industry is the limited job opportunities. Studies reveal that many organizations do not fully use the talents of their women engineers (Dainty et al., 2000). Employer prejudices in this regard may manifest themselves through the recruitment process (Morgan, 1992), particularly as recruitment in construction industry is said to be often informal and through personal contacts (Druker and White, 1996).

Nonetheless, recently, many researchers and scholars posit that the organizational culture plays a major role in women’s career progression (Dainty et al., 2000; McILwee and Robinson, 1992; Catalyst, 1992; and Carter and Kirkup, 1990). They

![Figure 2: Woman in Engineering Education and Employment in Thailand during 1992 and 2001 (%)](image)

**Figure 2:** Woman in Engineering Education and Employment in Thailand during 1992 and 2001 (%)

**Sources:** Calculated by various Thai universitys’ engineering department²; The Engineering Institute of Thailand

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² Chulalongkorn University, Chiang Mai University, Khon kaen University, Thamasat University, Kasetsat University and Mahidol University.
argue that organizations develop a cultural system, with an orderly set of rules that allow work to be carried out in a particular way. This culture reflects the differential power of employees, managers and employers to create these practices. In male-dominated construction organizations, men have more power to enforce discriminatory practices and policies to suit their interests, which reinforce women’s organizational powerlessness. Wirth (2004) noted that a survey of women corporate leaders in the United States in 2002, which focused on the reasons why women executives left their jobs, reveal that thirty nine per cent of respondents ranked corporate culture as the primary reason for leaving. They were not satisfied with the management style and felt they were not valued.

Many feminist scholars in developed countries (such as in USA, UK) also noted the existence of cultural barriers in their analyses of specific organizations (Rutherford, 2004; Maddock, 1999; Wajeman, 1998; McDowell, 1997; Gherardi, 1995; Hearn, 1992). Itzin (1995) connects the maleness of organizational cultures to gender inequality that exists in the wider society. Due Billing and Alvesson (1994) develop a theory which incorporates discrimination into organizational cultures by showing the gender symbolism of various functions, professions and positions. They use gender as a metaphor and usefully show the variety of different cultures which may exist within one organization. Following a symbolic, interpretive approach to culture and drawing on the symbolic order of gender, Gherardi (1995) provides fascinating evidence of the gendered nature of cultures, and the ways women have to do ceremonial work to redress the gender imbalance that is caused by their moving into the public male world. McDowell’s (1997) Capital Culture provides rich data on gender at work in the City, seeing work as an embodied performance and as the playing out of masculinities and femininities. Maddock (1999) gives a more materialist analysis of gender and culture in public sector organizations in her book Challenging Women. She refers to gender cultures by arguing that male cultures vary from organization to organization but one common theme is that men continue to underrate and undervalue women in general (Maddock, 1999:192).

Further, using the organizational culture typology, many studies have investigated the impact of organizational culture and culture change on the commitment and job satisfaction of organizational members working in various organizations (Cartwright and Cooper 1989, 1992). Such research indicates that individuals working in organizational cultures which are incongruent with their individual preference or values have a greater propensity to leave and are more likely to experience low job satisfaction. For example, based on the organizational culture typology, Harrison (1972) claims that power cultures place the highest degree of constraint on employees compared with other culture types. By exploring the characteristics of power culture organizations, Harrison argue that power culture organizations are likely to be experienced by the vast majority of men and women as being less satisfying than are task or team cultures which place a greater emphasis on expert knowledge than on positional power and allow members more individual autonomy. The report suggests that different organizational culture types promote and nurture different managerial styles, which may affect employee’s career prospects (Alimo-Metcalfe, 1993).

While theorists have become aware that differences in cultures may exist within the organization, there has been relatively little empirical research that directly addresses combinations of factors that lead to agreement or variance in these cultural viewpoints. Several factors may lead individuals and groups to agree or differ in their cultural viewpoints. For example, a position of power in the organizational hierarchy or a particular position within a functional unit may influence cultural viewpoint. Social interaction between individuals and groups may lead to cultural consensus. Social interaction may also lead to the development of informal positions in networks of interaction, with those occupying similar informal positions sharing similar cultural viewpoints.

Within these workplaces, women were seen as additional competitors for limited career opportunities. A study conducted by Dorsey and Minkarah in USA on “Women in Construction” reveal that 73% of women professional in construction industry believe that they do not have equal opportunity for their career advancement and 78% say that men with the same qualifications are given greater responsibilities. This study also indicates that women engineers usually get routine assignment, which tends to promote less chance for their career advancement (Dorsey and Minkarah, 1992). Men engineers are given more help, encouragement and support for their career advancement, while women engineers are considered as standbys, without any further promotions and thereby lower ultimate status achieved by women engineers compared to their male colleagues (Parikh and Sukhatme, 1993).

A substantial body of research in European countries has further investigated the role of marital and child-rearing responsibilities as aids or hindrances to progress women’s professional career (Bellas, 1992; Cole and Zuckerman, 1987; Astin and Davis, 1985). While men are generally engaged for their continuing professional career development and promotion achievement, women are assumed a degree of detachment from a profession and a postponement of promotion in favour of childcare and other family responsibilities. These continuing differences pose career difficulties and dilemmas for women engineers (Evetts, 1996).
In addition to organizational factors, a number of external environmental factors (such as socio-cultural norms and practices) were recognized as influencing gender differences in career experience, which may account for some gender differences in professional career outcomes (Maddock, 1999; Wacjman, 1998; Itzin, 1995; Flanders, 1994; and Fagenson, 1990). These external environmental factors shape organizational contexts through their influence on different groups within the organization. The combined result of these factors was that women are found not to have progressed in parity with their male peers. This is likely to lead to their poor retention levels. Rather than see their career progression slow down, many talented women engineers decide to move to another profession altogether (Dainty et al., 2000).

Recently, in response to imminent professional and skill shortages, many organizations in developed countries have been changing/transforming their working pattern from a competitive and hierarchical style to teamwork style of project development that is more collaborative, which could be more attractive to women as well as men (Fletcher, 1999). A study conducted by Dainty et al. (2000) in UK construction organizations also reported that many construction organizations in UK have made considerable efforts today to attract more women to its professions by changing their management work and practices. Such changes in the nature of management work and practice are beginning to have some impact in some organizations. Some empirical studies in UK also suggest that increased team- and project-based work in organizations might be to the promotional benefit of women because of the heightened importance of communication and interpersonal skills in management in which many women excel. These changes in the practice of management work might influence the promotional chances of women, at least to junior and middle levels of management (Metcalf and Alison, 2003).

Current research in developed countries further reveals that women who achieve advancement in their careers ascribe it to the efforts of their organizations. These women report that their organizations identify and develop high-potential employees, provide high visibility assignments, social support, mentoring programs, etc for women (Burke and Nelson, 2002). Similarly, in some developing countries (such as in Bangladesh, India), government has been taking initiatives to promote women’s participation in employment, by providing special provision such as quota system for women. This served as a positive incentive for women graduate to embrace a career in the government job. However, some authors argue that the quota system is linked to the concept of reverse discrimination. Under this system an employer would be required (or encouraged) by law to employ a certain proportion from the minority group, such as women. It causes psychological strain on quota appointees as they are generally looked down upon by those selected on the basis of merit (Zafarullah and Khan, 1989).

In sum, the literature suggests that both organizational cultural factors and external environmental factors can account for the low proportion of women engineers within the construction organizations, but the factors are context specific. Thus, the question is:

*What are the factors that lead to different outcomes of women in construction engineering employment in Bangladesh and Thailand?*

### 1.3 Rationale

The researcher concentrated on women engineers in engineering profession in Thailand and Bangladesh. The rationales behind the research in these two countries are as follows:

- In Bangladesh, women have made significant improvement in civil engineering education, but there has been little improvement in women’s employment in civil engineering. In Thailand, on the other hand, while civil engineering education among girls did not improve much, civil engineering employment among women kept pace with civil engineering education. It is good comparison, therefore, to investigate the above question.

- Construction organizations in both countries play a key role in the nation’s economic development, and are a major fount of employment opportunities, due to their labor-intensive nature. The contribution of the construction sector to GDP in 2002 was 7% in Thailand and 7.74% in Bangladesh. Thai construction organizations reached their highest of 28.3% annual growth rate in 1989 and 22% in 1990 during the economic boom, but were affected by the country’s economic crisis in 1997 (Thitipaisan, 1999). Although this profession is highly gender-segregated in both countries to different degrees, careers related to this occupation generally provide a higher professional and social status than many other professions. A wider range of their participation in such prestigious employment will not only increase more female intellectuals, but will also enable women to have more opportunities to engage in high level decision-making and management position as well as change the social outlook about women’s lives. It is interesting, therefore, to investigate the factors that are linked to women’s advancement in construction organizations of Bangladesh and Thailand.

- There has been little empirical comparative evidence that exists concerning what specific factors actually influence women’s relative absence from construction organizations in Bangladesh and Thailand. Until now, very few studies have...
documented the specific constraints that affect women’s career development of women engineers in the construction organizations. Almost without exception, these existing literatures have an exclusively Western focus. Furthermore, as far as the researcher is aware, no study to date has jointly examined why the barriers exist in the construction organizations based on the organizational typologies. This is a gap that this study hopes to fill with the survey result. Such information would be extraordinarily valuable to employers, academics, and potential students, amongst others.

The objective of this research is, thus, to examine and identify obstacles, which lead to women’s entry and remain in construction organizations in Bangladesh and Thailand. It aims to provide a contemporary understanding of the career experience of women engineers based on organizational cultural typologies, which could lead to better utilizing talented women in current competitive construction organizations in these countries. Understanding is the necessary foundation of constructive social change, and hopefully the research will contribute to both.

The dissertation is organized as follows: The preceding introduction (Chapter one) explained the research background, research problem and its importance, and research objectives. Chapter two reviewed relevant literature in the context of a conceptual framework that shows how the variables being examined can potentially be linked while Chapter three outlined the methodology and research design. Chapter four highlighted the overview studied construction organization, their organizational structures and corporate cultures, and identified type of construction organizations in Bangladesh and Thailand; Chapter five presented the socio-economic profile of the respondents; Chapter six explored the major factors related to women’s entry into the engineering education and employment in Bangladesh and Thailand; Chapter seven focused on the issues that could influence women’s stay and advancement into construction organizations. Chapter nine summarized and concluded the research findings along with some recommendations, which will help to signify the insight of women’s professional status as well as will generate strategies for women engineers’ career progression in construction organizations in Bangladesh and Thailand.

The thesis reports on research which examined the comparative experiences of women engineers working in Bangladesh and Thailand. The research investigated the hypothesis that women in each country face different issues and challenges with regards to their experiences in engineering education, their transition from education to paid employment and their experiences of working in the sector. The study draws upon a questionnaire survey of over 200 engineers together with depth interviews with 80 women engineers. This was supplemented with interviews with employers in both countries. The thesis is well developed and logically constructed. The aims and objectives are clear and aligned with the literature themes from which they are derived. The results are interesting and offer fresh insights in to the relative position of women working within these two countries’ construction industries. It makes a significant contribution to knowledge and it should be possible to publish ever aljournal papers from this work.

METHODOLOGY AND RESEARCH APPROACH

There search design is sound and the epistemological and methodological reasoning behind the design well justified. There search combined quantitative and qualitative methods to examine men’s and women’s perspectives on the issues explored. The questionnaire design was based on a literature synthesis of over 140 variables and yielded excellent response rate from both countries. The interviews provide rich insights in to women’s experiences of working in the sector. The study is conducted from a ‘feminist standpoint’ perspective which provide a more critical orientation to the analysis. The ways which the comparative careers of men and women within the two countries and various types of organization have been presented is excellent.

2.15 Conceptual Framework

This study is concerned with the careers of engineers working in construction organizations in Bangladesh and Thailand. The variables conceptualized in this framework could be useful in stimulating positive organizational change, which is critical to the entry and career advancement of women engineers in organizational employment in Bangladesh and Thailand.

Three key phases emerged from reviewed literature, which are used to conceptualize and analyze women’s entry and career advancement in construction organizations (Figure 2.2).

Phase 1: Career Entry

Career Entry is usually defined as a professional route or opportunity through one’s educational level and organizational employment. Career entry in engineering education could result from coincidences and chance encounters through parental
background (e.g. parental educational and occupational status), educational opportunity, good academic performance (e.g. ability in math and science subjects), financial support (e.g. fellowships), role models, career advice and encouragement from academic advisors (such as teachers), from family members, and affirmative action (such as, quota system).

Entry into employment or organizational entry could be positively and negatively influenced by the image of engineering profession and construction organization, organizational recruitment policies, special initiative (e.g. quota system), family obligation, and other external factors. Special initiative taken by some organizations (e.g. quota system offered by government-based organizations in some countries, such as in USA, Australia, and Bangladesh) could positively influence women’s entry in organizational employment.

In contrast, prior research revealed that one of the major reasons for women’s low participation in construction organizational employment is organizational recruitment barriers. In competitive male-dominated construction organizations, organizational recruitment practices could overlook the available pool of women professionals and influence women’s limited job opportunity in the organization.

Furthermore, the cultural image of engineering profession and construction organizations (such as male profession/male-dominated organization, tough, heavy and site-based job) could deter women engineers from considering a career within the construction organizational employment. Family obligation could be a major barrier, which deters women’s entry into organizational employment. For example, construction job is likely to be considered as being demanding and time-consuming and hence, could interrupt family activities (such as the responsibility of child care and other domestic duties), particularly in the patriarchal social environment (such as in Bangladesh), where women are still expected to be at home. They are not expected to compete with men in the workplace, unless economic necessities are involved.

External environmental factors (such as social norms, political pressure and unemployment) could influence women’s limited access to organizational employment. Social norms (such as restriction on women’s mobility outside home), political pressure (for example, request from members of Parliament or from ministers in selecting their candidates), and unemployment (due to over supply of engineers), etc. could reinforce the organizational culture that discourages women from entering male-dominated construction organizations.
Phase 2: Career Experience

Career experiences of women could be inter-related with the following career dimension-related factors:

3.1. Organizational Culture Dimensions of Career

As discussed earlier, organizational culture includes the distinctive norms, beliefs, principles and ways of behaving that combine to give each organization its distinct character (Arnold, 2005:625). This definition suggests that organizational culture differentiates one organization from another. This definition also highlights that organizational culture is the distinctive constellation of beliefs, values, work styles and relationships that dictate how individuals should act and how things are to be done within the organization.

Drawing from both organizational management and social literature (Schein, 1985; Trompenaars, 1993; Sackmann, 1997; Strati, 1992; Gherardi, 1995), the researcher identified the following parameters of organizational culture to examine the impact of organizational culture on women’s entry and career development. To determine the specific type of organizational culture, the researcher used a typological approach, which allowed her to draw extensively on research already done in that field (for details, see Chapter 4). The parameters of organizational cultural model are: company history, management style; decision-making in various type of organizations, working pattern, gender ratio, human resource management practices (such as recruitment process, employee evaluation system, and reward systems, rules and regulations on leave, and family friendly policies), interpersonal relationships, and communication patterns (Figure 2.2).

For example, some management, guided by their stereotypical notions, perceives that women are not as fit for construction engineering jobs as men, due to family commitments. Such notions could block women’s participation in the organizational employment and could also affect their career, in comparison with their male counterparts (e.g., less career development and promotion opportunities, low salary etc.). Similarly, in some male-dominated organizations, which emphasize hierarchy, independence, and top-down communication, managements usually tend to be associated with men and expressed in ‘culturally male’ ways. Such organizational management could reduce potential, talent and women’s creativity. In contrast, in organizations, which emphasize participation, inter-dependence and inter-personal relationships among the organizational members, managements usually provide an environment conducive to a diverse work group. This type of organization could be supportive to women’s professional development.

3.2. External Environmental Factors

As discussed in Phase 2, the external environmental factors, such as social norms (restriction on women’s mobility in field-based work opportunity), political pressure (for example, request from members of parliament or from ministers in selecting their candidates), and unemployment (due to over supply of engineers), etc. could not only discourage women from entering male-dominated construction organizations, but also could exacerbate sex segregation and lead to women’s low career development within organizations.

3.3. Family Obligation

Family obligation might not only impede women’s entry into organizational employment, but could also influence organizational culture to reinforce gender discrimination. As discussed above, construction work could be seen as time-consuming and hence, could impinge on family activities. The majority of men professionals have supportive non-working partners who can take on the responsibility of child care and other domestic duties. This is said to allow them to develop their professional careers. In contrast, the majority of women professionals bear the burden of both their professional career and family responsibilities (such as the responsibility of child care and other domestic duties). Organizational managements sometimes have doubts over women’s willingness or ability to handle both work and family responsibilities. Women professionals perceive that others doubt their ability and commitment, and may lose self-esteem and career confidence. They might feel unable to develop their own identities and strength to develop their professional careers in the work place.

In order to cope with the inherent difficulties of combining their work and family lives, many women try to make a career change to an office-based desk type job position, which can allow them the opportunity to combine their work and family responsibilities. Prior research revealed that women in office-based positions did not have the same career progression opportunities (Dainty et al., 2000).
Phase 3: Career Outcomes

Recent research revealed that the slow progress made by talented, educated, ambitious women is now having some negative effects on women’s career. Fewer women are entering professions, especially in male-dominated organizations (e.g., construction), despite the efforts of academic institutes to attract more women students. Thus, many organizations are facing an impending shortage of qualified professionals.

Due to skill shortages as well as in order to encourage entry and retention of women professionals in organizational employment, many organizations in developed countries have been changing their organizational working environment (Dainty et al., 1999). For instance, many organizations are trying to create a new participatory management approach – team-based project development work environment in which teamwork and project management are transforming the traditional working environment from a competitive and hierarchical style to one’s more collaborative (Fletcher, 1999). In this new participatory working environment, the responsibility for career development is shared among the individual employee, the team, and the organization. Teams could acquire the roles of supervisors, and help individuals by providing feedback on skills, identifying opportunities for growth and development, developing interpersonal relationships, mentoring, and serving as training grounds for the acquisition of new skills and knowledge areas.

From the above literature review and the conceptual framework of the study, it is hypothesized that organizational culture may not only influence women’s career progression, but also determine their entry in construction organizational employment in Bangladesh and Thailand. From this study, it is possible to enhance our understanding on how or what type of organizational culture would be creating a women-friendly work environment. Apart from organizational culture, other factors such as family obligation, social norms and expectations could also influence women’s entry and career progression in construction organizational employment in Bangladesh and Thailand. These factors are examined in the following chapters.

When the objective is to understand the career experiences of individuals within the organizational culture, then the relevant theoretical issue has to be considered. Theory is based on the daily experience of the social world, and so it helps us to understand the experience of women’s everyday life and how organizational culture influences their professional career. For this research, a theoretical approach is required and feminist standpoint theory is the best way in this regard. Dorothy Smith and Nancy Hartsock note that all research is done from a particular standpoint or location in the social system.

The Feminist standpoint: Why Women?

The researcher tried to explore this research in light of women’s standpoint or point of view, since historically; women are the most disadvantaged group in every society. Feminist standpoint theory has emerged from the experience of women’s everyday life (Harding, 1987). Standpoint theorists see the truth of social reality from the systematic analysis of marginalized women’s groups, such as their professional career, their formal-informal situation within the organization, interaction pattern, their emotional and intellectual involvement (Harding, 1987). This research strategy relies on data collection in real life settings in which the researcher has no control over events, interpretation or situations. The standpoint approach suggests the importance of viewing the world based on women’s experience in order to better understand the complexity of the world and to be able to explain what politics exist and how they affect women’s experience (Kusakabe, 1998). This research focused on the career experiences of women engineers in construction organizations in Bangladesh and Thailand.

Feminist standpoint research, what is more commonly called women’s voice research has developed a new gender research paradigm, which aimed to change the world. It implies that researchers need not search for the one “truth” but for the multiple “truths” that exist in researching the oppression of women (Harding, 1987). Since the world is constituted by the values and ideas of the ones with power, the oppressed can understand the viewpoints of oppressor (Kusakabe, 1998). It stresses underlying societal and cultural factors, which place women in an inferior position both at home and in the organization. The main contribution of this theory has been to show how women’s position in the workplace can be seen as part of a whole social system where women are subordinate.

Standpoint feminists believe that it takes the standpoint of the oppressed groups, for example, women, to recognize systems of oppression and privilege. Therefore, standpoint research must construct knowledge that reflects the experiences of both the dominant and subordinate groups in order that knowledge to spawn liberation. Dorothy Smith, Nancy Hartsock, and Sandra Harding, as well as Hilary Rose, Jane Flax, and Alison Jaggar, among others, all assisted in the development of the standpoint theory. These standpoint researchers/theorists focus on differences between men and women’s situations (Ardovini-Brooker, 2002). Sandra Harding argues, “Women’s specific location in patriarchal societies is actually a resource in the construction
of new knowledge” (1987). She argues that feminist standpoint epistemologies, must seek validation of the perspectives of knowledge that have been ignored by traditional research.

Today, with economic development, women are now taking more responsibility than ever for the economic support of their families, while the man’s role as principal breadwinner is weakening (Safa, 1996:188). But fewer job opportunities, traditional or transitional organizational cultures, carrier development obstacles and other factors have weakened women’s position in the work place; which in turn has kept women dependent on men and justified their performing domestic chores for men (Anker and Hein, 1986). Women are less able than their male counterparts to press their demands against employers, who continue to treat them as support groups, without the same legitimacy as men. Women are in separate, subordinate employee track, with lower opportunities.

From a feminist standpoint perspective, we can say the perception of women as supplementary workers should change and this suggests the need for a new definition of development in terms of equality, dignity, race, class, religio-cultural practices and alternative development strategies, where development enhances people’s lives, life options, and choices, especially appropriate for women, who historically have been the most disadvantaged in terms of autonomy and advancement. If women’s position is improved, the notion of women’s separate sphere will be replaced by the notion of individual rights for men and women.

3.2 Research Design

The research design is the operationalisation of the research objectives/questions. This includes the specification of data required to ‘answer the question’ or ‘test the hypotheses’ and how this data is to be collected. In the following, the researcher explains how research proceeded.

3.2.1 The study area

Since most large and medium construction organizations are located in the capital city, two capital cities - Dhaka (the capital city of Bangladesh) and Bangkok (the capital city of Thailand) are selected as research area for this study (Figure 3.1 and 3.2).

Further, to cover an adequate number of women engineers, fifteen construction organizations (four government organizations and eleven private construction and consulting organizations) in Dhaka, and eleven organizations in Bangkok (one government organization and ten private construction/consulting organizations) were selected (Table 3.1).

3.2.2 Sampling

In order to identify construction organizations in both study areas, snowball-sampling techniques were used to identify all types (e.g. private, joint venture and public) of construction organizations, where an adequate number of women engineers are working. In this method, informal contacts with company representatives/human resource personnel were made in the first instance and on their suggestions, new companies where adequate number of women graduate engineers were working, were identified and contacted for interview. Further, the rationale for selecting all types of construction organizations (e.g. private and public organizations) was to determine whether organizations’ own policies or the local socio-cultural environment would have most bearing on practices, and attitudes towards women engineers’ employment.

A deliberate choice was made in selecting the number of sample (respondents) for questionnaire survey in construction organizations in Bangladesh and Thailand. The decision for such choice reflected the researcher’s desire to explore in depth the experiences of as many women respondents as resources would permit. In this context, convenience sampling was employed because of the paucity of statistics on the target group (i.e. women respondents). In this method, respondents (both women and men engineers) were selected based on the actual number of women engineers in each organization. For example, if two women engineers were found in one organization, the researcher then contacted two men engineers in the same organization in order to collect information.

The primary data of this study were collected in Bangladesh and Thailand during September 2000-December 2001 through questionnaire surveys with 204 professional engineers (102 each from Bangladesh and Thailand, half women and half men), in-depth interviews with 80 professional women engineers3 and informal discussions with employers/representatives.

3 Among the 80, 40 (20 from each country) were exiters, i.e., who quit working in construction organizations. Some of them are now working with other engineering organizations (i.e., computer engineering) or academic institutes/universities, some of them have taken up other professions altogether and have their own business, some of them are engaged in higher studies, and some of them are engaged in household duties.
Initially, 300 questionnaires (150 each in Bangladesh and Thailand) were sent to the respondents in the selected organizations; however, the researcher eventually obtained 204 full responses of questionnaires (102 each from Bangladesh and Thailand) from respondents in both countries. Respondents, who had at least a bachelor degree (Bachelor of Engineering) and/or above level (i.e. masters or PhD degree) education in engineering, were selected both in Bangladesh and Thailand. The response rate is 68%. In Thailand, 70 respondents were from private organizations, while 32 respondents were from government organizations (an equal number of women and men from each organization). In Bangladesh, 36 respondents were from private firms and 66 were from government organizations (an equal number of women and men from each organization).

3.2.3 Data gathering process

Data were gathered by following process:

• Secondary Information: Books, journals, policy papers, project documents and study reports were reviewed at first as secondary sources.

• Questionnaire Survey: A standardised questionnaire prepared for the respondents, which contained both closed and open-ended questions regarding respondent’s professional roles and career experiences, and perceptions, and also their personal, family and academic background (see Figure 3.3). Before the actual field survey, a pilot study was conducted in two large construction organizations from the selected research area (One Dhaka–based construction company and one Bangkok-based construction company) from October to November 2000.

A research team consisting of three members was set up in order to assist the main researcher to collect primary data in Bangladesh. The standardised questionnaire was sent to the respondents personally by the researcher with a request to fill up the answer and collected with the help of the research team. In Thailand, all questionnaire survey was conducted by the researcher herself. A covering letter accompanied each questionnaire, which stated the purpose of the research, encouraged voluntary participation by the respondents, assured the respondents of anonymity, and thanked them for their cooperation. Written instructions were attached to each questionnaire, and a telephone number was provided to the potential respondent to call and ask questions or clarify issues (see in Annex B).

A total of 142 variables were identified and incorporated into a standardized questionnaire (Annex B). The questionnaire was composed of nine components: questions about the respondent’s personal background, family background, academic career, academic performance, professional/occupational background, organizational background, career experiences, professional career and family issues, and questions about the respondent’s career progression. Each component consisted of both quantitative and qualitative questions, quantitative question such as ‘years of work experience’ and qualitative question such as ‘reasons to study engineering’.

• In-depth Interview: Researcher also conducted in-depth interviews personally in both countries. The objectives of these in-depth interviews are to understand the perceptions and prospects of women engineers in the construction organizations in both countries. Interview had taken place at a location chosen by the respondent, such as, in office during lunch break, food shop, and respondent’s apartment.

Further, interviews with employer/representatives were also conducted by the researcher personally in both countries.

The interviews lasted 1 to 3 hours and, in some cases, occurred over two sessions. The language used in interviewing was English. The tape-recorded interviews were transcribed, and the transcripts were read repeatedly and inductively analyzed.

To ensure the confidentiality of participants, pseudonyms are used throughout this dissertation for all the studied organizations in both countries.

3.2.4 Data analysis

Both qualitative and quantitative data were analyzed. As stated by McILwee and Robinson (1992), the most fruitful area of sociological investigation is the intersection between the two. According to them, using only quantitative data, our explanation will be more strictly structural. For instance, the attitudinal measures from the questionnaires may indicate only minor gender-based differences between women and men engineers. Differences in organization type and occupational speciality stand out most strongly. Qualitative methods will enable the researcher to take into account the differences of women engineers, and attributes suitable for women to express their perceptions. Similarly, without the quantitative data, we might be less able to

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4 It is uncovered that some of large organizations in Thailand higher foreign professionals due to skill shortage in these organizations, Hence, among 70 respondents in private organizations in Thailand, 4 respondents are foreign professionals in this sample.
see the structural variables that prove so important (McI.lwee and Robinson, 1992). Therefore, this study tried to collect and analyze both quantitative and qualitative data.

For quantitative data, statistical analysis such as bi-variate and multivariate analysis were done by using SPSS computer software packages where appropriate. For example, multiple regression analysis was done to understand which factors influence women’s career progression in construction organizations strongly. The research findings are presented in descriptive, tabular and graphical forms.

Qualitative data were used in articulating, interpreting and explaining the facts that researcher has gathered from the field research by mostly in-depth interviews, questionnaire survey and researcher’s observations. This enabled researcher not only to provide a clear picture of the research findings, but also given way to justify researcher’s conclusion and recommendation. Gender analytical tool has applied for the discussion and interpretation of the findings, as gender is a category of analysis to explain the forms of gender inequality caused by various organizational and social forces. Gender analytical tool is a holistic and dynamic approach to understand the structure and dynamism of gender relations within the organization as well as in society.

3.3 Chapter Summary

This chapter highlighted research paradigm and research design. Research paradigm is comprised of all three aspects of research, that is, epistemology, methodology and methods. The researcher tried to conduct this research in light of the feminist standpoint theory or women’s voice research, which has developed a new gender research paradigm. It stresses underlying societal and cultural factors, which place women in an inferior position both at home and in the organization. The main contribution of this theory has been to show how women’s position in the work place can be seen as part of a whole social system where women are subordinate.

CAREER EXPERIENCE OF WOMEN ENGINEERS IN CONSTRUCTION ORGANIZATIONS

This chapter examines the barriers influencing women to enter and stay in construction organizations in Bangladesh and Thailand.

Regarding women’s employment in construction organizations in Bangladesh and Thailand, the findings show that women engineer’s participation rate in both countries are far below than men engineers (Chapter 6 – Figure 6.5).

Apart from women’s less participation rate in construction organizations in Bangladesh and Thailand, this study also shows a sharp segregation of the sexes in terms of positions in both countries. The findings reveal both horizontal and vertical sex segregation in private construction companies studied in Bangladesh. For example, according to the management of private construction organization G in Bangladesh, of the total 46 engineers, 45 are men and 28 of them are employed at project sites. Twelve are at the top/senior level, 13 at middle level and 20 at junior level. There is only one women engineer in this organization. She works in a junior-level position handling office-based support tasks.

Conversely, this study shows highly vertical sex segregation in private companies studied in Thailand, although horizontal sex segregation is not found to be significant. In one of Thai private construction organizations in this study, of the total four women engineers in construction organization, three are employed at a junior level and only one at a mid-level position. The contrast becomes stark when compared with the positions of men. Of the 31 men, ten hold top/senior level positions, 16 are at mid-level and only five are at junior level. Engineers in junior level positions are assigned specific tasks, whereas mid-level engineers do supervisory and managerial work. Engineers at the top/senior level positions usually help form organizational policies.

Interestingly, there is no statistically significant difference in terms of total years of work experience between the men and women respondents after graduation (see Chapter 5). The average total work experience of female respondents after graduation is more than eight years while average total work experience of male respondents after graduation is eleven years. The average work experience of both female and male respondents in their present organizations is more than two years. Thus, the scarcity of women in senior levels cannot be explained by their lack of work experience. This study found less sex segregation in government organizations in both countries. The respondents said one reason for this was the open recruitment and promotion by the Public Service Commission. Furthermore, the lower salary in government organizations might be unattractive to men engineers who have other options.
It is, therefore, necessary to investigate the career experiences of women engineers in Bangladesh and Thailand in order
togain an in-depth understanding on factors that could influence Bangladeshi and Thai women engineers to enter and stay in
construction organizational employment. The following section is designed to examine:
(1) The barriers experienced by women and men engineers in the identified five types of construction organizations based on
the organizational culture in Bangladesh and Thailand; and
(2) To draw comparisons among identified five types of construction organizations in Bangladesh and Thailand,where
appropriate, with regard to cross-cultural context, for example, the influence of external environmental factors (i.e., social,
cultural and political) that influence organizational culture.

As discussed in Chapter 4, this study identified five types of organizations in Bangladesh and Thailand, based on organizational
culture as follows: (1) Bangladesh – Private (Owner-centered) Organizations, (2) Bangladesh – Public (Top-down bureaucracy)
Organizations, (3) Thai – Private (Informal management) Organizations, (4) Thai – Joint Venture (Team working) Organizations,
and (5) Thai – Public (Facilitating bureaucracy) Organizations. (details in Chapter 4).

To identify the factors that may explain women’s under-representation in construction organizations in Bangladesh and Thailand,
respondents in different organizational types, i.e., Bangladesh – Private (Owner-centered) Organizations, Bangladesh – Public
(Top-down bureaucracy) Organizations, Thai – Private (Informal management) Organizations, Thai – Joint Venture (Team
working) Organizations, and Thai – Public (Facilitating bureaucracy) Organizations were asked whether they experienced
constraints that affect their professional careers. If so, they were requested to rank the most influential barriers experienced
in their professional lives which affect their professional careers and also prevent them to enter and stay in construction
organizations. According to the organizational culture type, gender differences in barriers were examined in each country in
order to establish the type of barriers that relate specifically to women.

The findings show both similar and different factors among organizations which may not only affect women engineer’s career
progression but may also prevent women to enter and stay in construction organizations in Bangladesh and Thailand. The result
shows in the following Table 7.1.

7.1 Factors that Influence Respondents’ Professional Careers in the Construction Organizations in Bangladesh and
Thailand

The results show that women respondents in all types of organizations, i.e., Bangladesh – Private (Owner-centered) Organizations,
Bangladesh – Public (Top-down bureaucracy) Organizations, Thai – Private (Informal management) Organizations, Thai –
Joint Venture (Team working) Organizations, and Thai – Public (Facilitating bureaucracy) Organizations, are more likely to
experience barriers compared to their male counterpart. The major influential barriers identified by women respondents in
Bangladesh – Private (Owner-centered) Organizations are: (1) hiring policies against women in construction organizations, (2)
unfavorable management/supervisor’s prejudice towards them, (3) less financial incentives (e.g. low salary, fringe benefits) for
work compared to their male colleagues, (4) discrimination in promotion opportunity, (5) unsatisfactory working environments,
(6) family demands, and (7) patronizing attitude towards women. While the major barriers men respondents identified for
themselves in Bangladesh – Private (Owner-centered) Organizations are: (1) low salary, (2) less promotion/career development
opportunity, (3) patronizing attitude towards Bangladeshi women, and (4) unsatisfactory working environments (Table 7.1).

In Bangladesh – Public (Top-down bureaucracy) Organizations, the major influential barriers identified by women respondents
are: (1) unfavorable management/supervisor’s prejudice towards them, (2) unsatisfactory working environments, and (3) family
demands (Table 7.1).

On the other hand, the major barriers Bangladeshi men respondents identified for themselves in this type of organizations are:
(1) low salary, (2) less promotion/career development opportunity, and (3) unsatisfactory working environments. (Table 7.1)

Likewise, the major influential barriers identified by women respondents in Thai – Private (Informal management) Organizations
are: (1) unfavorable management/supervisor’s prejudice towards women, (2) hiring policies against women in construction
organizations, (3) less financial incentives (e.g. low salary, fringe benefits) for work compared to their male colleagues, and
(4) discrimination in opportunity to professional development, and (5) job insecurity, (Table 7.1) On the other hand, the major
barriers men respondents identified for themselves in Thai – Private (Informal management) Organizations are: (1) low salary,
(2) less promotion/career development opportunity, and (3) unsatisfactory working environments. On the other hand, the major
barriers identified by men respondents for themselves in Market-oriented Organizations are: (1) low salary as compare to their
work (many assignments/tasks), and (2) less promotion. (Table 7.1)
In Thai – Joint Venture (Team working) Organizations, the major influential barriers identified by women respondents are: (1) unfavorable management/supervisor’s prejudice towards women, (2) less financial incentives (e.g., low salary) for work compared to their male colleagues, (3) job insecurity, and (4) discrimination in opportunity to professional development. While, the only barrier identified by men respondents for themselves in Thai – Joint Venture (Team working) Organizations is the job insecurity. (Table 7.1)

Similarly, the major influential barriers identified by women respondents in Thai – Public (Facilitating bureaucracy) Organizations are: (1) unfavorable management/supervisor’s prejudice towards women, (2) less financial incentives (e.g., low salary, fringe benefits) for work compared to their male colleagues, and (3) discrimination in opportunity to professional development. On the other hand, the major barriers identified by men respondents for themselves in Thai – Public (Facilitating bureaucracy) Organizations are: (1) low salary as compare to their work (many assignments/tasks), and (2) less promotion. (Table 7.1)

The above findings shows that women respondents comparatively experienced less barriers in Thai – Private (Informal management) Organizations, Thai – Joint Venture (Team working) Organizations, and Thai – Public (Facilitating bureaucracy) Organizations. Nonetheless, women respondents are more likely to experience barriers compared to their male counterparts in these organizations, i.e., Thai – Private (Informal management) Organizations, Thai – Joint Venture (Team working) Organizations, and Thai – Public (Facilitating bureaucracy) Organizations. (Table 7.1)

<table>
<thead>
<tr>
<th>Organizations</th>
<th>Women respondents</th>
<th></th>
<th></th>
<th>Men respondents</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Perceived barriers</td>
<td>#</td>
<td>%</td>
<td>Perceived barriers</td>
<td>#</td>
</tr>
<tr>
<td>Bangladesh - Private Organizations</td>
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<td>16</td>
<td>88.9</td>
<td>Low salary</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Management prejudice towards women</td>
<td>15</td>
<td>83.3</td>
<td>Less promotion opportunity</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Less financial incentives compared to men</td>
<td>11</td>
<td>61.1</td>
<td>Unsatisfactory working environments</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Discrimination in opportunity to professional development</td>
<td>11</td>
<td>61.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unsatisfactory working environments</td>
<td>7</td>
<td>38.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Family demands</td>
<td>7</td>
<td>38.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Patronizing attitude towards Bangladeshi women</td>
<td>5</td>
<td>27.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bangladesh - Public Organizations</td>
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<td>22</td>
<td>66.7</td>
<td>Low salary</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>Unsatisfactory working environments</td>
<td>13</td>
<td>39.4</td>
<td>Less career development opportunity</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Patronizing attitude towards Bangladeshi women</td>
<td>12</td>
<td>36.4</td>
<td>Unsatisfactory working environments</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Family demands</td>
<td>17</td>
<td>51.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thai - Private Organizations</td>
<td>Management prejudice towards women</td>
<td>15</td>
<td>83.3</td>
<td>Low salary</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Hiring policies against women</td>
<td>15</td>
<td>83.3</td>
<td>Less promotion</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Less financial incentives compared to men</td>
<td>14</td>
<td>77.8</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Job insecurity</td>
<td>11</td>
<td>61.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Discrimination in opportunity to professional development</td>
<td>13</td>
<td>72.2</td>
<td></td>
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<td>Thai – Joint Venture Organizations</td>
<td>Management prejudice towards women</td>
<td>4</td>
<td>23.5</td>
<td>Job insecurity</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Less financial incentives compare to men</td>
<td>5</td>
<td>29.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Job insecurity</td>
<td>11</td>
<td>64.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Discrimination in opportunity to professional development</td>
<td>2</td>
<td>11.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thai - Public Organizations</td>
<td>Management prejudice towards women</td>
<td>7</td>
<td>43.8</td>
<td>Low salary</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Low salary</td>
<td>10</td>
<td>62.5</td>
<td>Less promotion</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Less scope for professional development</td>
<td>12</td>
<td>75.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Questionnaire survey, 2000-2001
The following sections present a closer look at the findings which may not only exacerbate sex segregation in construction organizations but also impact on women engineer’s entry and stay in organizational employment in all types of construction organizations identified in Bangladesh and Thailand.

7.1.1 Management prejudice against women engineers

Apart from the gender bias in recruitment practices discussed in Chapter 6, another constraint reported by women respondents in all types of organizations identified, particularly in Bangladesh – Private (Owner-centered) Organizations, Bangladesh – Public (Top-down bureaucracy) Organizations and Thai – Private (Informal management) Organizations, is the management prejudice towards women engineers. Women experienced many difficulties compared to their male counterpart because of such prejudice, which affect their promotion opportunity in the organizational hierarchy. One hindrance is bias in job assignment. Exclusion from challenging tasks has been argued by many scholars to be a significant factor in women’s more general exclusion from influential positions and promotion ladder.

The study reveals that the majority of women respondents in this study is mainly involved in assisting their immediate seniors in design, drawing, estimation, and related support tasks. The reason is mainly because of the persistent belief in majority of management and their practices towards women, particularly in Bangladesh – Private (Owner-centered) Organizations, Bangladesh – Public (Top-down bureaucracy) Organizations and Thai – Private (Informal management) Organizations. Men at the same level (for example, at the junior level) are assigned specific tasks related to their disciplines both at the field level and design-related. Over 80% of the women respondents compared to only 2% men respondents in Bangladesh – Private (Owner-centered) Organizations reported management prejudices. According to them, they were excluded from any creative and challenging tasks. To quote a 32-year-old woman engineer employed in Bangladesh – Private (Owner-centered) Organizations (Organization C):

“We are only assigned desk work. Even (though) I am working in my father’s firm, I also feel discrimination in terms of site visits and supervision. My supervisor thinks that tough work is not for women. In field visits, I am always second or third preference. We could work hard to prove our capabilities if our supervisor relied on us like our male colleagues; like we sometimes do assignments before being given to them.” (Field note, 2001)

Likewise, over 80% of women respondents in Thai – Private (Informal management) Organizations compared to 3.6% of the men respondents reported that despite showing interest, they were not assigned any challenging tasks that could help them show their capability and performance. According to women respondents, supervisors generally believe that men are better suited for technical professions. The management’s prejudice against women can affect self-worth of Thai women engineers. To quote a Thai woman engineer employed in Thai – Private (Informal management) Organizations (Organization 9):

“I am working in this organization as support staff for more than three-and-a-half years without any reward and promotion. There is no space for me to show my performance and knowledge. I am not assigned to perform any challenging work where I can show my knowledge and ability. My male colleagues get priority as my boss think that we (women) cannot be as competent and efficient as our male counterparts.” (Field note, 2001)

It seems that workplace discrimination in Thai – Private (Informal management) Organizations is sustained by myths about the relative abilities of the sexes (e.g. the supposed physical weakness of women) as influenced by traditional gender norms. Within this type of organizations, supervisors “sort” women and men into different jobs or tasks (such as “women’s job” and “men’s job”) based on their traditional gender ideologies and prejudices. Hence, organizational policies and procedures may entail negative consequences for women as a group, irrespective of individual women’s capabilities and preferences. Although Thailand have ratified the UN Convention on the Equal Employment Opportunity programs and Elimination of Discrimination against Women policy, none of the Thai – Private (Informal management) Organizations have formal policies relating to anti-discrimination. Without the support of the organization, an equal opportunity program and policy is unlikely to be successful. All human resource management related policies must have the top-level commitment from within organization if they are to be effective.

In contrast, less than 23.5% of women respondents in Thai – Joint Venture (Team working) Organizations reported such organizational discrimination towards them. Although the cultural image of construction engineering profession as male-oriented still remains very powerful in this type of organization, this study reveals that Thai women respondents in Thai – Joint Venture (Team working) Organizations are in a much better position than women respondents in other types of organizations. By interviewing some Thai women respondents in this type of organizations, it has found that they are doing well within their
professional careers and also held decision-making positions. Some representatives of Thai – Joint Venture (Team working) Organizations also reported that some women engineers are doing much better performance than men engineers in these organizations.

The reason might be because the management of this type of organization exhibit team-based working pattern; particularly, they form a team to carry out work under each project. As discussed in Chapter 4, in order to ensure a successful project, management usually set up standard guidelines for the team such as responsibility, scope of work and facilities. They provide prospective team members with a lot of opportunities to work with each other, to understand each other and to learn from each other. In brief, the management of Thai – Joint Venture (Team working) Organizations practice participatory approach through team work and give more freedom to their prospective professionals in deciding their working schedules. This indeed, gives Thai women engineer’s way to explore their potentials and show capabilities. Management value their capabilities and it further enhance and encourage women engineer’s participation as well as reduce sex segregation in Thai – Joint Venture (Team working) Organizations. To quote two Thai women engineer working in Thai – Joint Venture (Team working) Organizations (Organization 3 and Organization 1):

“Team work provided me opportunity to show my technical skills and increased my self confidence. I have also received good support by interacting with my supervisors and colleagues to carry out work”.
(Field note, 2001)

“Team work is very important in this technical profession, since we are working in a project. When I was an engineering student, I never realized how much teamwork would be a part of my job. As I have been working as a project engineer, I really learned how to work with people. Here I have found a lot of formal and on-site job-related training, which is very important for our career development” (Field note, 2001)

On the other hand, 43% Thai women respondents in Thai – Public (Facilitating bureaucracy) Organizations reported supervisors’ prejudices. According to them, their supervisors assigned them administrative support work. One women respondent in Thai – Public (Facilitating bureaucracy) Organizations reported that although she was appointed as office engineer, she is currently assigned to public relations, often entertaining official foreign delegates even outside official working hours. Although the larger society do not marginalize Thai women from economic and productive activities, this kind of subtle organizational practices are being linked to the notion of “what is normally done” rather than openly be protective about women. Such practices also perpetuate gender-based image (e.g. femininity and masculinity) and symbol within the organizational culture, which reflect women’s marginal or ‘Other’ inferior status in Thailand. Siengthai and Leelakulthanit (1994) also argued that Thai women are not necessarily excluded from economic participation but there are important limitations. They can only operate in this realm by remaining within cultural norms of femininity.

Having identified such organizational discrimination, respondents in all these organizations were asked to indicate their coping strategies. The same responses are found in almost all organizations. The majority of women respondents (over 50%) in all organizations responded that they try to perform well in order to prove themselves at their workplace since they do not have any other options open. Other responses are be patience and self-confidence (20%), changed organization (20%), and by ignoring.

Management prejudice and workplace discrimination in engineering organizations has also been reported by previous researchers (e.g., Dainty et al., 2000; Itzin and Newman 1995; Ogunlana et al., 1993; McIlwee and Robinson, 1992). Itzin and Newman (1995) argue that within male-dominated construction companies, women-dominated tasks remain less prestigious and less rewarded than tasks based on traditional norms of masculinity. Further, men’s power reproduces itself not because women lack qualifications for management positions but because the power positions occupied by men operate as an exclusive and closed men’s club (Itzin and Newman 1995), and because of such prejudice and discrimination, the rates of unemployment and underemployment in engineering organizations are consistently higher for women than for men (Vetter, 1992).

### 7.1.2 Discrimination in promotion

Regarding promotion opportunity, this study reveals that women respondents in all types of organizations comparatively receive less promotion than their male counterparts. Table 7.2 shows that the majority of women respondents (88.9%) in Bangladesh – Private (Owner-centered) Organizations did not receive promotion since being employed in this type of organization compared to their male counterparts (11.1%). The chi-square test result also shows a highly significant difference between women and men respondent’s in Bangladesh – Private (Owner-centered) Organizations in terms of the number of the promotion they receive (p<.05). This result cannot be explained by their less work experience in their present organization since this findings
reveal that there is no significant difference between women and men engineers’ work experience in their present construction organizations.

The above finding in Bangladesh – Private (Owner-centered) Organizations suggests that management prejudices and discrimination not only underscore gender stereotypes in Bangladesh – Private (Owner-centered) Organizations, but also affect women’s promotion prospect. This finding is consistent with other researches in UK by Greed, 2000; Fielden et al., 2000, 2001; Dainty et al., 2000; 2004), who also argue that in male-dominated organizations, managements have stereotyped expectations of women’s career concern. This had led to many women engineers in UK being unable to secure their position and promotion opportunity within the organizational hierarchy (Dainty et al., 2000; 2004). McILwee and Robinson (1992) also argue that organizations develop a cultural system, with an orderly set of rules that allow work to be carried out in a particular way. This culture reflects the differential power of employees, managers and employers to create these practices. In male-dominated construction organizations, men have more power to enforce discriminatory practices and policies to suit their interests, which reinforce women’s organizational powerlessness (McILwee and Robinson, 1992).

In contrast, although women respondents in Bangladesh – Public (Top-down bureaucracy) Organizations comparatively receive less promotion than their male counterparts (Table 7.2), there is no significant difference between women and men respondent’s in this type of organizations in terms of the number of promotion they receive. The reason might be because in Bangladesh – Public (Top-down bureaucracy) Organizations, promotions depend almost exclusively on seniority and vacancy available irrespective of gender difference (details in Chapter 4).

In Thai – Private (Informal management) Organizations, women respondents receive comparatively less promotion than their male counterparts. (Table 7.2) Nonetheless, there is no significant difference between women and men respondents in this type of organizations in terms of the number of promotion they receive. The reason might be because of less horizontal sex segregation in this type of organizations. Furthermore, the study uncovered that despite the managements’ prejudice against Thai women, women respondents in Thai – Private (Informal management) Organizations reported having as many interpersonal relationships as men respondents (Table 7.3).

On the other hand, although women respondents in Thai – Joint Venture (Team working) Organizations comparatively receive more promotion than women in other organizations, they also receive less promotion than their male counterparts. (Table 7.2) The reason might be because of their young age and less work experience compared to their male counterpart. According to the representatives of Thai – Joint Venture (Team working) Organizations, technical professionals are assessed mainly on their merit and work experience for promotion. They usually provide skill development program for their technical professionals irrespective of gender in order to enhance their promotion prospects. Nonetheless, none of these Thai – Joint

<table>
<thead>
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<th>Respondents</th>
<th>Number of promotion received</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Bangladesh - Private Organizations*</td>
<td>Women</td>
<td>16 (88.9%)</td>
<td>2 (11.1%)</td>
</tr>
<tr>
<td></td>
<td>Men</td>
<td>2 (11.1%)</td>
<td>7 (38.9%)</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>18 (50%)</td>
<td>9 (25%)</td>
</tr>
<tr>
<td>Bangladesh - Public Organizations</td>
<td>Women</td>
<td>26 (78.8%)</td>
<td>6 (18.2%)</td>
</tr>
<tr>
<td></td>
<td>Men</td>
<td>21 (63.6%)</td>
<td>9 (27.3%)</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>47 (71.2%)</td>
<td>15 (22.7%)</td>
</tr>
<tr>
<td>Thai - Private Organizations</td>
<td>Women</td>
<td>9 (50%)</td>
<td>7 (38.9%)</td>
</tr>
<tr>
<td></td>
<td>Men</td>
<td>5 (27.8%)</td>
<td>4 (22.2%)</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>14 (38.9%)</td>
<td>11 (30.6%)</td>
</tr>
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<td>7 (41.2%)</td>
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<tr>
<td></td>
<td>Men</td>
<td>2 (11.8%)</td>
<td>6 (35.3%)</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>9 (26.5%)</td>
<td>13 (38.2%)</td>
</tr>
<tr>
<td>Thai - Public Organizations*</td>
<td>Women</td>
<td>14 (87.5%)</td>
<td>1 (6.3%)</td>
</tr>
<tr>
<td></td>
<td>Men</td>
<td>8 (50%)</td>
<td>7 (43.8%)</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>22 (68.8%)</td>
<td>8 (25%)</td>
</tr>
</tbody>
</table>

*Chi-Square test: p<0.05, Source: Questionnaire survey, 2000-2001
Venture (Team working) Organizations have specific programs in place to encourage women to apply for promotion. The reason provided by organization representatives is that to enact programs to specifically help women would be viewed as “actually encouraging inequity and discrimination”. To quote a representative in Thai – Joint Venture (Team working) Organizations:

“We do need to conform to the local environment. That means that we cannot actively help women’s promotion prospects. We can encourage them for their work performance but we cannot provide a specific program only for women professionals. Our entire skill development program is for any professionals irrespective of women or men for their progression. We cannot go beyond the social system operating in the local environment”.

Conversely, this study shows a significant difference between women and respondents in Thai – Public (Facilitating bureaucracy) Organizations in terms of the number of promotion they receive (p<.05). The reason might be because in Thai – Public (Facilitating bureaucracy) Organizations, promotions depend almost exclusively on employees’ seniority in these organizations.

### 7.1.3 Interpersonal relationships

This study further reveals that apart from organizational discrimination practices, other interpersonal factors such as access to interactions, communications among organization’s members, and mutual support as well as mentoring also directly or indirectly influence women as well as men respondents with the guidance and encouragement to seek promotion and career advancement in the organizational hierarchy.

As discussed in Chapter 2, interpersonal relationships can be conceptualized by the social network theory as the informal associations and connections that link the organizational members together and interact with each other, which provide ways for organizational members to gather information and introduce new ideas and opportunities. Interpersonal relationships has long been established as a critical element of success in a professional career. Many prior researches reveal that interpersonal relationships is a vital route to senior management level as the key benefits associated with it include access to visibility, support and upward mobility, and recognition within the organization (details in Chapter 2). Garavan et al. (2003) posit that interacting forms an essential dimension of organizational life and individuals who excel at interacting/communicating with each other generally excel within the organizations in which they work. In this regard, lack of access to interpersonal relationships resulted in a lack of access to contacts, information and professional opportunities.

The findings show that there is significant difference between women and men respondents in Bangladesh – Private (Owner-centered) Organizations in terms of their interpersonal relationships within the workplace. Table 7.3 showed that only 16.7%
women respondents consented that they have interpersonal relationships within the workplace compared to 50% of their male counterparts in Bangladesh – Private (Owner-centered) Organizations. On the other hand, there is no significant difference between women and men respondents in Bangladesh – Public (Top-down bureaucracy) Organizations in terms of their interpersonal relationships within the workplace. Nonetheless, women respondents reported to have comparatively less interpersonal relationships than their male counterparts in these types of organizations also (Table 7.3). The reason might be because of conservative nature of Bangladesh society which influences construction organizations to pose restrictions on women’s visibility, personal freedom and interaction with other staff in the male-dominated working environment.

In contrast, women respondents in Thai – Private (Informal management) Organizations, Thai – Joint Venture (Team working) Organizations, and Thai – Public (Facilitating bureaucracy) Organizations are found to have more interpersonal relationships as men respondents (Table 7.3). The above result reveals that all types of construction organizations in Thailand are more open and has less restriction in terms of Thai women’s visibility, personal freedom and interaction with other staff as the system operating in the local environment.

Although very few Bangladeshi women respondents in Bangladesh – Private (Owner-centered) Organizations and Bangladesh – Public (Top-down bureaucracy) Organizations reported to have interpersonal relationships within the workplace; nonetheless, majority of the respondents (both women and men) pointed out the importance of interpersonal relationships in building their self-confidence and providing them access to interactions, information and opportunities. To quote a woman engineer in Bangladesh – Private (Owner-centered) Organizations (Organization A) in Bangladesh who lacks interpersonal relationships in her organization:

“My boss (supervisor) helps me if I have problem in understanding some tasks but I cannot communicate with him easily like my male colleagues do. Moreover, as a woman there are some problems. For instance, we cannot go to our colleague’s room freely to discuss some important work like male colleagues. In this profession, consulting with supervisor/colleagues is very essential, which is not possible all the time due to lack of interpersonal relationships with them”.

(Field note, 2001)

Access to inter-personal relationships with peers or supervisors (Kram, 1985) have also been identified by previous researches as influential for less experienced organizational members in their career success (Bozionelos, 2004; De Janasz and Sullivan, 2004; Ensher et al., 2003; Higgins and Thomas, 2001; Kram, 1985). A study conducted by Kram and Isabella (1985) in USA identified several inter-personal relationships in career development within the organizations (e.g. career-enhancing function, psychological function, etc.), which can provide support for personal and professional development.

### 7.1.4 Gender wage discrimination

Another organizational constraint reported by women respondents in both countries is salary discrimination; an implicit barrier in almost all organizations in this study. This study reveals that women respondents, particularly in Bangladesh – Private (Owner-centered) Organizations and Thai – Private (Informal management) Organizations, receive comparatively less financial incentives (including fringe benefits) compared to their male counterparts even for the same task. To examine gender difference in the earning status of the respondents, the study collected information about the respondent’s monthly income in construction organizations in Bangladesh as detailed in Table 7.4. The findings show that the average monthly salary of Bangladeshi women respondents working in Bangladesh – Private (Owner-centered) Organizations is comparatively much lower (USD 159.83) than their male counterparts (USD 364.22). The t-test results also show a significant earning difference between women and men respondents in Bangladesh – Private (Owner-centered) Organizations (p<.05).

<table>
<thead>
<tr>
<th>Organizations</th>
<th>Women</th>
<th>Men</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number (N)</td>
<td>Mean salary</td>
</tr>
<tr>
<td>Bangladesh - Private Organizations*</td>
<td>18</td>
<td>159.83</td>
</tr>
<tr>
<td>Bangladesh - Public Organizations</td>
<td>33</td>
<td>130.94</td>
</tr>
<tr>
<td>Thai – Private Organizations*</td>
<td>18</td>
<td>541.67</td>
</tr>
<tr>
<td>Thai – Joint Venture Organizations*</td>
<td>17</td>
<td>648.53</td>
</tr>
<tr>
<td>Thai – Public Organizations</td>
<td>16</td>
<td>223.44</td>
</tr>
</tbody>
</table>

*Chi-Square test: p< 0.05, Source: Questionnaire survey, 2000-200
Likewise, the study shows that the average monthly salary of women respondents working in Thai – Private (Informal management) Organizations and Thai – Joint Venture (Team working) Organizations is USD 541.67 and USD 648.53, while the average monthly salary of male respondents in Thai – Private (Informal management) Organizations and Thai – Joint Venture (Team working) Organizations is USD 794.44 and USD 883.82 respectively (Table 7.4). The t-test results also show highly significant earning difference between women and men respondents in these types of organizations in Thailand (p<.05).

The study uncovered in the discussions with the management of all three types of organizations that one of the reasons for the unequal salary distribution between women and men are due to stereotype attitude of the management towards women. The representative of Bangladesh – Private (Owner-centered) Organizations and Thai – Private (Informal management) Organizations mentioned that they do not think that women can compete with men in this technical profession.

A common experience among the women respondents in all three types of organizations, i.e., Bangladesh – Private (Owner-centered) Organizations, Thai – Private (Informal management) Organizations and Thai – Joint Venture (Team working) Organizations is that their starting salary is much lower than their male counterparts in similar positions; even when there is no age and work experience differences among them. They reported that they did not know this kind of pay discrimination before entering the organization. Some of the women respondents further indicate that they have to accept this practice since they do not have other options due to the competitive job market. To quote a woman respondent working in a Bangladesh – Private (Owner-centered) Organizations:

“I accepted the low salary (USD 79) because I waited for one year after my graduation. I thought I will work hard and prove my worth within a short period of time, by which I will get a salary increase. But in reality, it took a long time (three years) to get a salary increase, which is not even satisfactory. My male colleague who joined at the same time received much more salary than me (USD 105) and his salary was increased within one and half year. I cannot protest as the job market is very competitive and employers are reluctant to hire women”. (Field note, 2001)

In contrast, this study found less earning difference between women and men respondents in Bangladesh – Public (Top-down bureaucracy) Organizations, and Thai – Public (Facilitating bureaucracy) Organizations. The average monthly salary of women respondents working in Bangladesh – Public (Top-down bureaucracy) Organizations, and Thai – Public (Facilitating bureaucracy) Organizations is USD 130.94 and USD 223.44, while the average monthly salary of male respondents in Bangladesh – Public (Top-down bureaucracy) Organizations, and Thai – Public (Facilitating bureaucracy) Organizations is USD 131.33 and USD 257.81 respectively. (Table 7.4) The explanation can be drawn from the fact that the Public Service Commission in Bangladesh and Thailand are responsible for civil service holder’s salary in these two types of organizations irrespective of women and men.

7.1.5 Professional development opportunity

Gender difference in organizational promotion is also reported in perceptions of organizational opportunities (Reynolds and Associates, 1990). Professional development opportunities i.e. training is crucial to enhance the ability of women and men to achieve and function effectively in their respective positions and to ensure that they have the skills required for career advancement. According to Powell (1999), the proportion of women in higher position can be influenced by the developmental experiences of lower-level employees. If lower-level women and men employees are not groomed for top management, they will be at a disadvantage when competing for scarce high-level positions.

This study reveals that very few Bangladesh – Private (Owner-centered) Organizations offer professional development opportunities (e.g., training) for their professionals; and women respondents are far behind for those opportunities. In Bangladesh – Private (Owner-centered) Organizations, 11 out of 18 (61.1%) female respondents in this study reported that they did not have much career progress within five years because of little opportunities for professional development. Most of them mentioned that they are not offered any training opportunities which could help them show their capabilities and performance. Further discussion with the management representatives in Bangladesh – Private (Owner-centered) Organizations reveals that most of the small and medium size organizations do not usually offer any training opportunities for their employees. Only some of larger organizations offer training opportunities with a limited number and on the basis of each organizational division/’unit’s own judgment. Since the ratio of women to men is found to be 1:58 in Bangladesh – Private (Owner-centered) Organizations (in Chapter 6), a woman engineer in this type of organizations has to compete with at least 58 male colleagues within her work team in order to avail training opportunities. Moreover, they are systematically excluded from these opportunities since the majority of women respondents in Bangladesh – Private (Owner-centered) Organizations are involved in support tasks.
Although the Bangladesh Constitution grants equal employment opportunity to women, this study reveals that none of the organizations studied in Bangladesh – Private (Owner-centered) Organizations have formal policies relating to equal employment opportunity. Progression was seen to be much more in the hands of one’s line manager than to be determined by formal organizational system in this type of organizations. Regarding human resource development, the Bangladesh – Private (Owner-centered) Organizations are not very committed to invest on staff development, especially for women professionals. The reason is notably because of their limited access to financial resources for staff development (in chapter 4) but also their stereotype attitudes towards women in this type of organizations.

On the other hand, Bangladesh – Public (Top-down bureaucracy) Organizations provide training opportunities and study leave to their employees on the basis of seniority, length of service to the organization, both locally and in foreign countries. Apart from political influence, there exists subtle gender discrimination in terms of training and higher studies, especially if the higher studies are in a foreign country. Therefore, the future of employment in these organizations is intimately dependent not only on bureaucratic organization policy but also in political pressure and internal organizational culture and its practices.

Likewise, Thai – Private (Informal management) Organizations also offer professional development opportunities (e.g. training) for their professionals. However, it is revealed that women respondents in this type of organizations are far behind such opportunities. This study reveals that lack of career development opportunities has also been cited as a career constraint of Thai women engineers in Thai – Private (Informal management) Organizations. Among 18, 13 women respondents (72.2%) in Thai – Private (Informal management) Organizations reported that they were not actively encouraged to participate in career development activities (e.g. training opportunity) because of their supervisor’s prejudice. The supervisors believe that men are more appropriate and capable than women for technical profession and get priority over women; even when they (female) are in the same rank and have equal work experience with their male counterparts. Such attitudes not only deprive women engineers but also affect their promotional prospect. To quote a Thai woman engineer employed in Thai – Private (Informal management) Organizations (Organization 10):

“Every year our company offers three trainings for the junior and mid-level engineers for their professional development. But we were always excluded from this opportunity, except those who have family connections with the management. To get the opportunity, we have to be a daughter or spouse of our boss”. (Field note, 2001)

In Thai – Public (Facilitating bureaucracy) Organizations, this study found less sex segregation in these organizations as working in these organizations is seen as more women-friendly because of its flexibility in terms of working hours and workload. Nonetheless, none of the respondents in this type of organizations mentioned flexible working hours as a benefit or complained of the workload. Majority of Thai women respondents in Thai – Public (Facilitating bureaucracy) Organizations are single and have less family responsibility; unlike the situation in Bangladesh. Also, in case of married women respondents, it is reported that they get more support from their spouse, especially when both couple are involved in the same organization or profession. However, the central issue for Thai women engineers working in Thai – Public (Facilitating bureaucracy) Organizations is the scope of work and promotion. Seventy five percent of the Thai women respondents working in Thai – Public (Facilitating bureaucracy) Organizations also reported dissatisfaction in their present jobs. One of the reasons cited is the smaller scope for creative work; government organizations usually outsourced the major part of the engineering work.

Further, in terms of opportunity to use professional skills in Thai – Public (Facilitating bureaucracy) Organizations, 8 out of 16 or 50% of Thai women respondents reported that supervisors sometimes offered them some work that did not match their position. For example, one of the female engineer in Thai – Public (Facilitating bureaucracy) Organizations reported that although she is a fully qualified engineer and was appointed as office engineer, her professional responsibilities at the workplace is public relation. She is mainly entrenched in the public relation aspects of the organization even outside official working hours, often entertaining official foreign delegates to the organization. This kind of constraints not only affects women’s career advancement but also undermine women’s technical skills and knowledge in Thai – Public (Facilitating bureaucracy) Organizations.

In contrast, only 11.8% women respondents in Thai – Joint Venture (Team working) Organizations reported that they were not actively encouraged to participate in career development activities (e.g., training opportunity) due to their short term contract with the organization. Since construction is a project based business, most Thai – Joint Venture (Team working) Organizations usually appoint engineers on a project basis; and usually do not offer professional development opportunity to employees with short term contract (less than one year) with the organization.
7.1.6 Job insecurity

Job insecurity is usually conceptualized from two points of view; that is, either as a global or as a multi-dimensional concept. According to the global view, job insecurity is defined as the threat of job loss or job uncertainty (De Witte, 1999; Ferrie, 1997; Hartley et al., 1991). This global definition has often been applied in the context of organizational crisis or change in which job insecurity is considered as the first phase in the process of job loss (Ferrie, 1997). On the other hand, according to the multi-dimensional view, job insecurity refers not only to the amount of uncertainty an employee feels about his or her job continuity but also about the continuity of certain dimensions of the job, such as opportunities for promotion or the possibility of being laid off for a short while (Mauno and Kinnunen, 1999; Rosenblatt and Ruvio, 1996; Rosenblatt, Talmud, and Ruvio, 1999; Ruvio and Rosenblatt, 1999). Furthermore, some scholars have defined job insecurity as a nonpermanent job contract (Pearce, 1998; Schmidt and Svorny, 1998).

In Thailand, another constraint identified by the respondents in both Thai – Private (Informal management) Organizations and Thai – Joint Venture (Team working) Organizations is job insecurity. The result show that more Thai women respondents are likely to report their experience of job insecurity compared to their male counterparts (Table 7.5) in Thai – Joint Venture (Team working) Organizations. The Chi-square test result also shows highly significant difference between women respondents and men respondents in Thai – Joint Venture (Team working) Organizations in terms of their feeling of job insecurity (p<0.05).

In contrast, 11 among 18 women respondents or 61.1% in Thai – Private (Informal management) Organizations reported their feeling of job insecurity. None of the men respondents in this type of organizations reported such experience (Table 7.5). Since construction is a project based business, most engineers are usually employed on project basis, particularly in Thai – Joint Venture (Team working) Organizations and Thai – Private (Informal management) Organizations. After project completion, these organizations retrench 10-15% of their employees (including engineers, especially at the junior level). Women suffer from insecure jobs more than men due to male-preference in this profession and also because it is more difficult for women to get a new job in the industry. According to the respondents, during Thailand’s financial crisis, more women engineers lost their jobs. A 34-year-old Thai female doctoral student reported that she once worked in Thai – Private (Informal management) Organizations where she was the only female among 27 engineers in that company. During the Thailand financial crisis, she was the only engineer who lost the job. After that, she failed to find another job and decided to go for higher studies.

Unfortunately, the researcher experienced limitations in terms of sources as there is no macro data available about the retrenchment of women and men in the Thai construction organizations during the Thailand financial crisis due to the reluctance of management of the studied organizations to provide any information about the matter. The researcher also tried to communicate with some of the respondents, particularly women interviewees, a few months later (in 2002) to get some more information but was unable to contact them. The management of these organizations reported that they retrenched some of their support staff, including women engineers at the junior level, to cope their financial crisis.

Over 60% Thai women respondents (44% from Thai – Private (Informal management) Organizations and 22% from Thai – Joint Venture (Team working) Organizations) reported that the main reason they move to other organizations is mainly to find a stable job; while Thai men respondents (70% from Thai – private (Informal management) Organizations and 31% from Thai – Joint Venture (Team working) Organizations) reported the main reason is for better remuneration.

7.1.7 Hostile working environment

This study reveals that another major constraint experienced by women respondents, particularly in Bangladesh – Public (Top-down bureaucracy) Organizations and Bangladesh – Private (Owner-centered) Organizations, is the hostile and insecure working environment. Hostile and insecure working environment in these two types of organizations not only affect Bangladeshi women engineers in entering into the construction organizations but also sometimes forced women respondents to quit their

<table>
<thead>
<tr>
<th>Organizations</th>
<th>Respondents</th>
<th>Men # %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thai – Joint Venture Organizations*</td>
<td>11 64.7</td>
<td>6 35.3</td>
</tr>
<tr>
<td>Thai – Private Organizations*</td>
<td>11 61.1</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>2262.9</td>
<td>6 17.1</td>
</tr>
</tbody>
</table>

*Chi-Square test: p<0.05, Source: Questionnaire survey, 2000-2001
jobs in these two types of organizations. They faced more threats from extortionists compared to their male counterparts at the workplace and also from colleagues aligned to religious fundamentalist forces.

According to women respondents in Bangladesh – Public (Top-down bureaucracy) Organizations, terms are set for women working at the project site i.e. they must wear a veil, must leave before sunset, etc. Buckling under the pressure, women engineers either quit their jobs from Bangladesh – Public (Top-down bureaucracy) Organizations or move to office-based desk work in Bangladesh – Private (Owner-centered) Organizations; thus limiting their prospects for promotion. A 35-year-old woman engineer worked in Bangladesh – Public (Top-down bureaucracy) Organizations (Organization L) reported that she was threatened by some people at the project site. She reported:

> At the project site, I was responsible to supervise the execution work. One day a group of people came to our site and asked me why I was working here. (They said) If I work, I have to follow their rules such as for this project we have to buy some construction/building materials from them and compromise with them. I told them that my job is only to supervise work and not to be involved in other matters. They told me to communicate with the person in-charge of buying materials. I refused. One evening they came to my house when I was not home. They threatened my family. After that, my family members, especially my spouse, did not allow me to work in any construction organization. To avoid family conflict, I had to sacrifice my career and quit the job. Now I am just doing my household duties. (Field note, 2000)

Insecure working conditions are a major barrier of women’s employment in Bangladesh. The law and order situation of Bangladesh is much worse than Thailand but there are no government regulations to protect Bangladeshi women against such harassment.

Due to prevailing insecure working conditions in Bangladesh, many families are reluctant to encourage women’s outside field-based work, which affect women’s occupational career. To avoid family conflict, they more likely prefer to go into teaching, research and development institute rather than engineering organizations. Some of the women engineers interviewed planned to work in the constructions organizations in Bangladesh but was discouraged by their family because of the persistent insecure working conditions. For example, Samina, a 33-year-old engineer, is a lecturer in an engineering academic institute in Bangladesh. Her father was a professor in the same profession and she was the only daughter. She was inspired by both her engineer father and only brother. To quote her:

> “In my secondary schooling, I planned to be an engineer and was one of the few lucky girls who got support from my family for my future career. My father and brother are both engineers and encouraged me to study in the engineering field. But after graduation, I had to wait six months to look for a job not only because I was a fresh graduate but also because employers do not like to hire women engineers in our country. My engineering GPA (Grade Point Average) was much higher than my elder brother but my brother got job without waiting for graduation.

> Later, I had the opportunity to work in the same private organization where my brother is working. I worked in that organization for only four months and had to quit the job because after I got married, my in-laws’ family strongly discouraged me to continue work in the organization. During my engineering academic life, I planned to work some years in a private construction organization to get practical experience and then planned to start my own business. But after got married, I had to change my future prospect. To avoid family conflict, I had to quit that job and continued higher education. I completed master’s degree in structural design and am now teaching engineering students”. (Field note, 2001)

However, the experience is not only with lower level engineers in Bangladesh – Public (Top-down bureaucracy) Organizations and Bangladesh – Private (Owner-centered) Organizations in Bangladesh. Women respondents in high-level positions (such as design engineers or project engineers) in Bangladesh – Private (Owner-centered) Organizations also experienced problems working with their subordinates and colleagues as men are reluctant to accept women as superiors. To quote a senior male engineer in Bangladesh – Private (Owner-centered) Organizations (Organization A) in Bangladesh:

> “Bangladeshi people (men) are not used to work under female supervisors and our society also doesn’t encourage women to be in the leading position in any profession”. (Field note, 2001)

The above statement reflects gender ideologies and patriarchal exclusionary practices within organizations in Bangladesh, which excluded women from influential positions and exacerbated sex segregation in the construction organizations.

On the other hand, this study did find less hostile environment in Thai – Private (Informal management) Organizations, Thai – Joint Venture (Team working) Organizations and Thai – Public (Facilitating bureaucracy) Organizations in Thailand compared
to the situation in Bangladesh. The construction project sites are much better organized in all these types of organizations in Thailand and more secure for women to work. Another advantage for Thai women is their greater mobility than Bangladeshi women. Because of less restriction in their mobility, Thai women are getting more opportunities to go to sites compared to Bangladeshi women. The social norm of seclusion of women is tighter in Bangladesh which influences Bangladesh – Private (Owner-centered) Organizations to exacerbate horizontal sex segregation in these organizations.

The above findings in Bangladesh are consistent with some previous research by Maddock, 1999; Wajcman, 1998; Itzin, 1995; Flanders, 1994; and Fagenson, 1990. They argue that hostile working environment lead to specific behaviors within an organization and help to curb gender discrimination.

7.1.8 Patronizing attitudes against women engineers

Another constraint reported by women respondents in Bangladesh – Private (Owner-centered) Organizations and Bangladesh – Public (Top-down bureaucracy) Organizations in this study is the patronizing attitude towards women, particularly in Bangladesh – Public (Top-down bureaucracy) Organizations. Bangladeshi women respondents (69.7%) in this type of organizations complained that they were treated as women rather than as engineers; and their male supervisors took a protective attitude toward them. This placed constraints on their visibility, personal freedom, and interaction with other staff in Bangladesh – Public (Top-down bureaucracy) Organizations. The patriarchal Bangladeshi society believes that women should be protected by men. This study observed that the seating arrangement for women engineers is usually next to their supervisor’s room. In the name of protection, the employer assumes the patriarchal role and controls women’s sexuality and mobility. Women thus interact less with male colleagues and are treated as different (inferior). Most of the young (25-35 years) and career-committed women respondents in Static Role-oriented Organizations reported that this attitude not only undermines their capacity to compete on an equal footing with men but also demoralizes them.

Women respondents both in Bangladesh – Private (Owner-centered) Organizations and Bangladesh – Public (Top-down bureaucracy) Organizations also complained that they were excluded from all kinds of informal communication and attending important official meetings. To quote a women working in Bangladesh – Private (Owner-centered) Organizations (Organization G) in Bangladesh:

“I think it is really important to have the freedom to speak, to communicate with others (‘i.e. colleagues), through which we could get the opportunity to learn new knowledge and skills. People are allowed to interact with others for the acquisition of new technical skills and broaden their competencies, which depicts the importance of empowerment. But my boss did not allow me a lot of autonomy to interact with my colleagues; and the only reason is due to being a woman”. (Field note, 2001)

Similarly, a bright, talented woman interviewee in a Bangladesh – Public (Top-down bureaucracy) Organization reported that her supervisor discourages her not to attend the meeting since she is wearing veil. This kind of subtle discrimination not only make women engineer unable to develop their own identities and maturity but also make their low status in Bangladesh – Private (Owner-centered) Organizations and Bangladesh – Public (Top-down bureaucracy) Organizations.

Unlike the situation of women respondents in Bangladesh – Private (Owner-centered) Organizations and Bangladesh – Public (Top-down bureaucracy) Organizations in Bangladesh, this study found less restrictions in terms of Thai women’s visibility, personal freedom and interaction with other staff both in Thai – Private (Informal management) Organizations, Thai – Joint Venture (Team working) Organizations and Thai – Public (Facilitating bureaucracy) Organizations in Thailand. This might be because of the generally high labor force participation rate among Thai women, which makes people feel normal to have women in the workplaces. An additional advantage in Thai – Joint Venture (Team working) Organizations is that this type of organization practice team-based working pattern, which provide team members with a lot of opportunities to work with each other, to understand each other, and to learn from each other. As discussed above, the management of Thai – Joint Venture (Team working) Organizations practice participatory approach through team work, which give Thai women engineer’s more freedom and way to explore their potentials and show capabilities. Management values their capabilities and it further enhances and encourages women engineer’s participation as well as reduced sex segregation in Thai – Joint Venture (Team working) Organizations in Thailand.

7.1.9 Career and family issues

Apart from organizational factors, another constraint reported by women respondents in Bangladesh – Private (Owner-centered) Organizations and Bangladesh – Public (Top-down bureaucracy) Organizations is the dilemma of career and family. This reveals
one of the major individual constraint influenced women respondents from entering and staying in the Bangladesh – Private (Owner-centered) Organizations and Bangladesh – Public (Top-down bureaucracy) Organizations. In particular, married women respondents in these two types of organizations, who are the members of dual-career families, reported to experience greater pressures from both their professional tasks and family life. While none of the male respondents in these types of organizations reported such constraints in this study (Table 7.1).

Career-family issue has been identified as one of the major barrier to women’s organizational entry and professional development in many countries. (Dainty and Lingard, 2006; Lingard and Francis, 2005; Ng et al., 2002; Aryee et al., 1999) Historically, it is widely recognized that professional women experience a pressure between the role of a mother, wife, and as a professional. These dual responsibilities not only put a strain on them but also have an impact on their professional career development and marital satisfaction. Nonetheless, the issue of career-family role, particularly the experience of women engineers in Bangladesh and Thailand, remains relatively unexplored. In order to understand the women engineer’s situation in both countries, the respondents were asked a series of open-ended questions that focused on their work and family roles, responsibilities, role conflict, and its impact on their professional career development. For example, how women and men engineers in all the studied construction organizations in Bangladesh and Thailand balance their professional career and family lives? Do their family roles affect their career progression in the workplace? Do they face any major work-family conflict? If so, what kinds of conflicts between work and family do they experience who has a dependent child and works full-time as a professional? How do they cope with such intense work-family conflict?

The career-family issues investigated by the researcher fall under following four groups:
(1) Family roles and responsibilities;
(2) Work-family conflict;
(3) Benefits/Support; and
(4) Coping strategies

Family Roles and Responsibilities

Many scholars discovered that family responsibility is a critical element of the work/family interface. (e.g. Metz and Tharenou, 1999) The study find that in Bangladesh – Private (Owner-centered) Organizations and Bangladesh – Public (Top-down bureaucracy) Organizations the relationship between Bangladeshi women respondents’ professional career and family roles is comparatively more complex than their male counterpart. This is mainly because the women respondent’s careers are constrained by their family roles. Like in many other countries, childcare and other family responsibilities are defined primarily as women’s responsibility (chapter 5). As a result, while male respondents are free from the domestic tasks and mainly concentrate on their professional success, women respondents balance their professional commitments and family responsibilities in Bangladesh – Private (Owner-centered) Organizations and Bangladesh – Public (Top-down bureaucracy) Organizations.

Conversely in Thailand, Thai women respondents’ professional career and family roles are comparatively less complex in Thai – Private (Informal management) Organizations, Thai – Joint Venture (Team working) Organizations and Thai – Public (Facilitating bureaucracy) Organizations. This is might be because Thai women respondents get more support from their spouse in managing their family roles. The findings further reveal that Thai married women also receive considerable support from their parents and relatives, including help with child care from parents, grandparents, sisters, and relatives, as they belong to extended families. This might help Thai women respondents in Thai – Private (Informal management) Organizations, Thai – Joint Venture (Team working) Organizations and Thai – Public (Facilitating bureaucracy) Organizations to get more involved in their professional career development.

Work – Family Conflict

Work-family conflict is the term often used to characterize the conflict between work and family domains. Kahn et al. (1964) defined work-family conflict as a form of inter-role conflict in which demands from the work role conflict with the demands from the family role and vice versa. Given the uneven distribution of family responsibilities between couples, it is commonly believed that working women may experience more work-family conflict than their spouses. Prior research has explored this notion (Aryee & Luk, 1996; Carlson et al., 1995; Wiersma, 1990).

In order to understand the degree of work-family role conflict, Bangladeshi respondents were asked whether they face any major work-family conflict. The majority of married women respondents (over 62%) in Bangladesh – Private (Owner-centered) Organizations and Bangladesh – Public (Top-down bureaucracy) Organizations experience work-family conflict, while less
than 10% men respondents reported work-family conflict in these types of organizations (see in Annex A). The chi-square test results also show highly significant difference between women and men in terms of their work-family role conflict in Bangladesh – Private (Owner-centered) Organizations and Bangladesh – Public (Top-down bureaucracy) Organizations in Bangladesh (p<.05). On the other hand, very few Thai women respondents experience work-family conflict in all types of construction organizations in Thailand.

The findings further identified a range of job-related and family factors, which influence the respondent’s work-family conflict. Job-related factors such as long working hours, working environment, nature of job, job mobility, etc. is high on Bangladeshi women respondent’s work-family conflict in this study. For example, 25% Bangladeshi women respondents in Bangladesh – Private (Owner-centered) Organizations reported time constraints (i.e. less time for the family) due to long working hours and the nature of their job. According to them, they sometimes have to work long even during weekend to complete some activities or due to job client demand, which affect their family responsibilities. Long working hours culture is a pervasive feature of the construction organizations (Lewis, 2001), which systematically disadvantages women engineers with caring responsibilities in career terms.

Further, the findings reveals that the engineering job market of Bangladesh is highly competitive and engineers strive hard for career success. Being fully committed to their jobs, most of these engineers spend long hours at work. Thus, they may find that their career interferes with family life much more than the other way around because most of these married women respondents belong to a nuclear family and they bear major responsibility for maintaining their family roles. Thompson, et al. (1999) and Campbell (2001) also found that longer working hours are associated with, respectively, work-to-family conflict, and greater role conflict.

Some women respondents in Bangladesh – Public (Top-down bureaucracy) Organizations further reported job mobility in this occupation. For example, construction works sometimes requires high degree of mobility under difficult conditions such as RCC casting, going on till midnight, and carpeting going on half day long. According to the respondent, their family usually does not support them to be part of it and create work-family conflict on the ground that their (women) careers caused them to neglect their domestic responsibilities.

On the other hand, job-related factors do not affect men respondents in both types of organizations in Bangladesh. One explanation might be because for men respondents, it is their spouses who are mainly responsible for maintaining their family roles (see Chapter 5).

Further, regarding family related factors, the majority of the Bangladeshi women respondents (47%) in Bangladesh – Public (Top-down bureaucracy) Organizations in Bangladesh reported that family responsibilities such as childcare, household duties, spouse’s career, etc. affect their professional career and increase greater role conflict. The ‘gender’ model also highlights the importance of household responsibilities faced by working wives in generating conflict between domestic and work roles. (Voydanoff, 1988)

In contrast, the findings show that unlike the situation in Bangladesh, Thai women engineers’ position, particularly married women having children in Thai – Private (Informal management) Organizations, Thai – Joint Venture (Team working) Organizations and Thai – Public (Facilitating bureaucracy) Organizations seem to be much better in terms of work-family role conflict. They reported less constraint with regard their career and family lives, as they can have support from their spouse in order to balance their work-family responsibilities. Nonetheless, the result shows that they are not free from the work-family conflict. Seven among 11 (38.9%) married female respondents in the sample reported their family conflict (in Annex A6). Nonetheless, most of them reported that this do not happen often. For example, all of them married Thai women respondents reported time constraints (i.e. less time for the family) due to job related factors, such as work commitment, long working hours and job mobility.

Conversely, only one family-related factor, namely, presence of children at home is an important factor; but have no significant effect for the Thai women engineers. It could be that some families obtained assistance from domestic helpers or grandparents as noted earlier, and thus the need of child care is not so severe. In addition, only very few families have more than one child. Thus, the family variables may have limited effects on work interference with family. Unlike the situation in Bangladesh that women with child care responsibilities and stronger family commitment found more difficult for Bangladeshi women engineers to fulfill dual roles. This is not the case for Thai women engineers in Thai – Private (Informal management) Organizations, Thai – Joint Venture (Team working) Organizations and Thai – Public (Facilitating bureaucracy) Organizations.
Benefits/Supports

In order to reduce work-family conflict, an effective way for organizations is to set up family-friendly policies such as increase in job flexibility, provide child care arrangement, etc., so that employees will be in a better position to balance the demands from the two domains (career and family) of life (Scandura and Lankau, 1997). However, none of the construction organizations both in Bangladesh and Thailand is found to have provision or family-friendly policies, except for maternity benefit. According to the Maternity Benefit Act in Bangladesh, women employees are entitled to 12 weeks of maternity leave with mandatory post-natal leave of six weeks. A specified period of nine months of employment is required before the benefits are given. Nonetheless, Bangladesh – Private (Owner-centered) Organizations do not follow this government act. They only provide 45 days paid maternity leave. Moreover, this study uncovered that women engineers who return to work after childbirth are likely to experience a different treatment in terms of lower level job position with lesser responsibilities and promotion opportunities. To quote a women respondent employed as a design engineer in a Bangladesh – Private (Owner-centered) Organizations (Organization 1) in Bangladesh:

“After graduation I joined this organization and have been working for nine years; but without any progress because I took maternity leave thrice. When I came back, the authority counted me as a beginner. Now I feel frustrated when I see myself working under my junior. I sometimes think of leaving this job”. (Field note, 2001)

Employers in Bangladesh – Private (Owner-centered) Organizations, on the other hand, claim that they are actually helping the working mothers lighten their burden in coping with work and family demands, often justifying all these seemingly unfair practices. This kind of organizational practice may not only affect women’s future career but also demoralize them and put them in inferior status in Bangladesh – Private (Owner-centered) Organizations. With regard to provision or family-friendly policies, recent research in UK and Australia also report that family-friendly policies have not been widely adopted in construction organizations in these countries (Dainty and Lingard, 2006; Lingard and Francis, 2005). Lingard and Francis (2004) argue that in the absence of such policies, role conflict between work and family may have a negative impact on organizational commitment, particularly among female employees.

In contrast, the findings reveal that more Bangladeshi women apply and continue to work in Bangladesh – Public (Top-down bureaucracy) Organizations not only because of the quota system but also because the organizational system in this type of organizations allows them to fulfill their family duties better. Bangladesh – Public (Top-down bureaucracy) Organizations also give women professionals the preference for transfer to the areas of their husband’s workplace and vice versa. Even if their husband work in private firms, Bangladesh – Public (Top-down bureaucracy) Organizations consider their (women’s) application if they want to transfer to their husband’s areas.

Current research suggest another effective way to reduce work-family conflict is the career encourage/social support (Voydanoff, 1988). Career encourage/social support is an important resource that has been associated with positive individual and organizational outcomes, especially in relation to job satisfaction, absenteeism, and turnover (Perrew and Carlson, 2002). Social support is typically derived from a variety of sources i.e. family, work colleagues, supervisor, and friends. The most important form of family support is spousal support.

The findings show that the majority of the women respondents (over 60%) in both Bangladesh – Private (Owner-centered) Organizations and Bangladesh – Public (Top-down bureaucracy) Organizations reported that their spouse does not encourage their (women respondents) professional development as they (spouse) feel children are more important than women’s career. Only 30% of the women respondents who have spouse in the same profession (engineering) agreed that their spouse encourage their career (see Annex A7). They also indicate that spousal support enables them to perform their dual roles well.

On the other hand, Thai women engineers in Thai – private (Informal management) Organizations, Thai – Joint Venture (Team working) Organizations and Thai – Public (Facilitating bureaucracy) Organizations receive more social support for their professional career development. Majority of Thai women respondents (over 80%) in all types of organizations reported that their spouse always encourage their (women respondents) professional career development (see Annex A7). Thai women respondents who succeed at the balancing act stress the importance of a supportive family environment. In particular, they get more support from their husband when both couple is in the same organization/same profession. Majority of the married Thai women respondents in this study have professional spouse (engineers). Since both couple is in same profession, they have good understanding of each other’s profession and help each other in every aspect of their professional and family life. A Thai women respondent in Thai – Joint Venture (Team working) Organizations (Organization 4) reported her husband’s support:
“Actually what my husband contributes is not ideas about. it is not really because he knows my field, it is just coincidental. I think what we derive from each other is the intellectual sparing partner. Moreover, we have a flexible family life since my husband takes care of our children much of the time. I could not succeed in my career goals without his full support”.
(Field note, 2001)

Another Thai women respondent, working as a Project Manager in a Thai – Private (Informal management) Organization in Thailand (Organization 7) pointed out:

“I would not be in this position if I don’t have a supportive husband and parents-in-law, grown-up children, and live-in household help. Now, I can relax after a stressful day at work by going to my daughter’s home and play with my grandchildren”.(Field note, 2001)

Apart from family support, Thai women respondents in all types of organizations also report support from their colleagues who are more understanding of family affairs. This finding is consistent with previous research (e.g., Burges and Tharerou, 2000), which emphasize that women who gain more career support and more encouragement for their careers (e.g., from family, colleagues, superiors) may persist to rise to high level positions in the organizations. Dainty and Lingard (2006) also argue that where employees experience strong social support from co-workers, the perception that work negatively interferes with family life is less likely to lead to career dissatisfaction.

Coping Strategies: Bangladesh

Having identified the major perceived causes of work-family conflict, the respondents were asked to indicate their coping strategies. The responses varied widely. The analyses of this research were based on Hall’s (1972) typology. He classifies coping activities into three types: (1) personal role redefinition, (2) reactive role behavior and (3) structural role redefinition.

Personal role definition is one where women make one or more adjustments to their family and personal lives to deal with work-family conflict. The majority of Bangladeshi women respondents’ responses (28 out of 43) in both Bangladesh – Private (Owner-centered) Organizations and Bangladesh – Public (Top-down bureaucracy) Organizations fell in the “personal role definition” category. To cope with the dual responsibilities of career and family, female respondents reported try to give more time for their family by cutting their personal and social life. Although the employment of a domestic helper appears to play an important role to adjust women’s multiple roles, however, some women respondents (six out of 28) in Bangladesh – Public (Top-down bureaucracy) Organizations reported that this option is not very effective for them in this coping process. One respondent (29 years old), working in a Bangladesh – Public (Top-down bureaucracy) Organizations reported:

My family demand more time. I have two domestic helpers mainly for taking care of my 3-year-old daughter and they are very efficient. But my husband does not like my job. He thinks our child is more important than my career. He insisted that I quit this job until our children grow; and after that I can do the job. But this is quite impossible since government jobs have age limitation. Beyond 30 years old, we will not get a government job or find a job in the private organization; it is very difficult for us women. I cannot resolve my work-family conflict. There is no way open for me – I either have to continue my job or quit this job on behalf of family harmony. (Field note, 2001)

The second group of responses are with concerned “reactive role behavior” with eight women respondents on this category. A reactive role behavior is one where the woman expects to meet all the demands of being an employee, a spouse, and a mother. Work-family stress is greatest when both roles are perceived as equally important (Holahan and Gilbert, 1979) The study reveals that respondents in this category reported no solution open for them to cope the work-family conflict. To quote a respondent working in Bangladesh – Private (Owner-centered) Organizations:

My career and family are both equally important for me. My husband was not against my career, but never encourages me. Also, he does not like my official mission to up country or abroad which is very important for my career. Moreover, since I am working in a private firm, I have to work even after office hours. I could do some work at home and at the same time care for my children and family but my supervisor does not allow this system. On the other hand, my husband think that I should give priority for my family roles and this cause family conflict. I do not want to give up my job; I am trying to balance time both for my family and job.(Field note, 2001)

Besides “personal role redefinition” and “reactive role behavior”, the remaining category of coping strategies in Hall’s (1972) model is “structured role redefinition”. In this study, seven Bangladeshi women respondents attempt structured role
redefinitions i.e. coping strategies designed around job changes or drop out. For example, to avoid family conflict, when men engineers develop their careers through working in different project sites without interrupting any family duties or social stigma, career-oriented women engineers try to make a career change to office-based stereo-type work, which allows them the opportunity to combine their work and family responsibilities. However, such roles do not alter the same career progression opportunities.

This study also found cases where some Bangladeshi women engineers who used to work in Bangladesh – Private (Owner-centered) Organizations and Bangladesh – Public (Top-down bureaucracy) Organizations voluntarily keep themselves away from professional career to assure family harmony and societal expectation. One case is Sabina who used to work in Bangladesh – Private (Owner-centered) Organizations.

Sabina had to sacrifice her career to avoid family conflict. She is a stay-at-home mother of two young children. She was a brilliant student in the Civil engineering department of Bangladesh University of Engineering and Technology (BUET). She was inspired to study in engineering field by her father who was also a civil engineer in Bangladesh. After her graduation, she was one of the few women respondents who got a job in a private organization in Bangladesh without work experience. Although she preferred to work at the project site, her spouse insisted her to do office-based work. She was one of the System Analyst in her division and was very happy with her job. She loved her career and had progressed into a higher position within a few years. Her spouse, who was a Bank Officer, was supportive and encouraged her career development. But her parent-in-laws discouraged her career as they did not like to see their daughter-in-law’s professional career better than their son. She had to see her parents-in-law’s unhappy face when she comes back from office. They prefer her to stay at home and take care of the children. When she got an opportunity for higher study abroad, she did not get permission from her father-in-law. If she took this opportunity, she not only had to risk separation from her husband but also from her children. Later, she had decided to quit her job in favor of her children and to avoid family conflict.

Another case is Neema Ahmed. In her mid-30s, she is a stay-at-home mother of a one-year-old daughter. She held a B.Sc. in Civil Engineering in 1996 and M.Sc. in Structural Design of Pavements in 1998 from Bangladesh University of Engineering and Technology (BUET). She was mainly inspired to study engineering by her mother who was an Associate Faculty in the Department of Bio-chemistry in the University of Dhaka in Bangladesh. Her father was a Government high official. She was the only daughter and had one young brother. During her Masters program, she worked in the design section in a Bangladesh – Private (Owner-centered) Organizations in Bangladesh for more than two years. She wished to go for higher study abroad but she had to get married through her parents’ choice after her Master degree. Her spouse is an engineer and used to work in the Bangladesh Air Force Defense Section. After marriage, she had to quit her job as there was a restriction in the Bangladesh Air Force Defense Section where her spouse used to work. To quote her:

“After I got married, I had to quit job because my husband is working in the Bangladesh Air Force Defense Section and there was a restriction for the staff and their family members to work outside the Bangladesh Air Force. Without the official permission of the Bangladesh Air Force we can not get involved in outside work. So, as a wife, it was not only difficult for me to continue my previous job; my husband also forced me to quit. If I want to continue my job, I have to leave my husband’s house forever. Now I am a full-time mother. I wish I can find a job inside the Bangladesh Air Force when my daughter grows up. ” (Field note, 2001)

Organizational personnel practices in Bangladesh – Private (Owner-centered) Organizations, on the other hand, proved to be very inflexible in family issue, very strict in maintaining their work commitment, and in maintaining traditional male model of work. For example, the “best employee” is one who works full time, overtime, and takes little or no time off from work for childbearing or child rearing. The findings reveal that in Bangladesh, the traditional personnel practices in Bangladesh – Private (Owner-centered) Organizations make it difficult for women respondents who have children under five years old. Both women and men respondents in Bangladesh perceive that children would affect the mother’s career, but not the father’s. Childbirth undermine women engineer in progressing in their careers as revealed in discussion with female respondents in private construction organizations.

Natasha (not the real name), a 37-year-old woman respondent working in a Bangladesh – Private (Owner-centered) Organizations reported that her professional career got affected by childbirth. She held a Bachelor degree in Civil Engineering in Bangladesh University of Engineering and Technology (BUET). Her elder brother, who is an Architect, encouraged her to study in this field as she was very good at mathematics and science subjects in high school. In her time, very few girls study engineering because the image of engineering field is closely associated with men’s profession. After graduation, she was able to get job in a large private consulting engineering firm as an assistant design engineer. One male classmate also joined in the same organization
at the same time as an assistant design engineer; his initial salary was higher than her salary. The reason, according to her, is not only because of his personal connection but because management perceives that a man engineer possesses more engineering knowledge than a female engineer.

She had to accept the organizational practices as it was very difficult to get a job for women engineers in a private organization. She got married after two years on the job. Her husband is a singer. He is not against her professional career but he never encouraged her. He is always busy with his profession and frequently travels inside the country and abroad as part of his job. Thus, she has to manage both office work and family responsibilities. Sometimes, it is very difficult for her to manage everything, particularly after childbirth. Natasha reported that she has to take maternity leave for three times (for two months in each time) to have a child. She has been working for the same organization for more than nine years but every time she returns to work, the management counts her as a beginner, which not only made her frustrated as she is working now under her juniors but also insists her to quit the job. To quote her:

“After graduation I joined in this organization and have been working for nine years without any progress. I had to take maternity leave for thrice. The authority counts me as a beginner when I come back. Now, I feel frustrated when I see myself working under my junior. Sometimes, think of leaving this job”. (Field note, 2001)

With regard to career-family issues in Bangladesh, the above findings demonstrate that work-family conflict is an influential barrier for Bangladeshi women engineers in entering and staying in the construction organization in Bangladesh. Both job-related factors and family-related factors are strongly associated with work-family conflict. This result highlights the prevailing work and organization culture in which women engineers are employed and the impact of gender division of labor in the household upon work-family conflict as experienced by women engineers in Bangladesh.

The findings reveal that women tend to work (with some exceptions) in corporate cultures characterized by authoritarian management and weak labor legislation (i.e., less/lack of family-friendly policies/programs/activities that would benefit the women professionals). At the same time, the social/family roles of women still tend to be very traditional. Relative to other societies (such as in Thailand), there has been little movement toward increased sharing of family responsibilities in marriage. The tasks of child and home care fall predominantly on the women’s responsibility, which affect their professional career. The result is consistent with other research work that confirms the fact that women tend to spend many more hours than men on household responsibilities (e.g., Yalom, 2000; Aryee, 1993)

This study finds that Bangladeshi women, as men, are more inclined to build up their professional career but receive comparatively less organizational and social support which could help their professional development. In order to cope these situations, Bangladeshi women engineers withdraw from the profession or move to other organizations (such as government organization) where the organizational system allows them to fulfill their family duties better; even with less scope for their professional development. This may be one explanation why men occupied higher organizational positions, while women who are both career and family oriented are at a disadvantage. Research in other western countries reveals that many professionals tend to remain single and childless having the difficulty of both a career and a family life (Davidson and Cooper, 1992; Vianen and Fischer, 2002; White, 1994) It is impossible for Bangladeshi women to follow such option in the Bangladeshi cultural context where marriage receives religious and social sanction (see Chapter 5).

Coping Strategies: Thailand

Having identified the major perceived causes of work-family conflict, respondents were then asked to indicate their coping strategies. Five out of seven women respondent’s responses fell in the “personal role definition” category and reported that they try to give more time for their family to avoid family conflict. In order to cope with the work-family conflict, these women expect and prefer childcare center for their children from their employers.

On the other hand, two of seven Thai women respondents under the “structured role redefinition” reported that in order to resolve the family conflict, they had to take leave from their organization to raise their children. Some empirical research in Thailand and other countries also uncovered that because of the possibility of career interruption (for example, to raise children), organizations/employers are reluctant to hire married women, especially those who have small children. As such, some career-oriented Thai women decide not to marry and would prefer to stay single. (Adler, 1993; Parasuraman and Greenhaus, 1993)

Furthermore, apart from this questionnaire survey result, this study also found some cases that Thai women engineers who used to work in Thai – Private (Informal management) Organizations, Thai – Joint Venture (Team working) Organizations and


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Thai–Public (Facilitating bureaucracy) Organizations find other ways to resolve their work-family conflict. For example, some women either move to other organizations/academic institutes or other occupations (e.g., their own/family business) by which they can manage their family responsibilities.

Wantanee Amaritachad (not the real name) is a lecturer in Thamassart University, Bangkok. She is married with a two-year-old son. Her husband is a scientific officer working in a private organization in Bangkok. She did her B.Sc. in Civil Engineering in 1992 and M.Sc. in Geotechnical engineering in 1993 from Kassesart University, Bangkok. She was inspired and motivated by her elder brother, who was also an engineer, to study in engineering subject. After completing her Masters degree, she worked in a Thai – Private (Informal management) Organizations for two years. At that time, it was very difficult for her to balance her official work and family roles as most of the time she spent for the official duties. She could not meet family demands due to time constraints. To quote her:

“My job at a private construction organization had taken too much time from my family. I could not give more time to my family members as they demand. My son was nine-months-old then. My husband insisted me to leave my job. I tried to find another job in which I can manage both my career and family responsibilities. Luckily, I got an opportunity to apply for a lecturer post in my present academic university and got appointed as a lecturer. I am working in this university for more than eight years. Now, I can meet my family demands because the working hours in the academic university is fixed from 08:00 to 17:00. Also my son is studying at the children school in the university. So, it is easy for me to work here in the academic institute rather than private organizations”. (Field survey, 2001)

She also got an opportunity from the university to complete her Ph.D. in Geotechnical engineering in Japan in 1999. In the future, she desires to continue her job in the teaching profession.

Another case is that of Tasneenart Kerdsuwan, a business entrepreneur of construction materials in Minburi, Bangkok. She is in her mid-40s, married, and with four children. Her spouse is also a businessman. She did her B.Sc. in Civil Engineering from Chiang Mai University, Thailand in 1983. She has two brothers who were studying in Civil Engineering in Chiang Mai University who encouraged her to study engineering. In her class, there were only four women out of 125 students; and female student’s presence was so surprising. People perceive that these students are very brilliant to get a chance in the very competitive engineering field.

After graduation, she worked in a Thai – Public (Facilitating bureaucracy) Organizations for more than one year but had to quit due to less scope for her career development. She moved to a Thai – Joint Venture (Team working) Organizations and worked there for nearly three years as construction supervisor in the project site. Sometimes, it was very difficult for her to manage laborers in the project site as men usually do not want listen to women’s instructions. She was the only women engineer in the project site; however, she did not feel isolated as she loved her profession. Due to work commitment, she sometimes works at night, which created conflict in her family. Her family members discouraged her to work in the construction organization and insisted her to be a part of their family business. She got involved in that family business for more than two years but could not utilize her academic knowledge on this business. She decided to start her own business in Building and Construction Materials in 1990. Her spouse is very supportive; she has no problem to run her business. She also got support from her other family members to start this business.

Thai women engineers experienced less work-family conflict compared to the situation of Bangladeshi women engineers. Nonetheless, they are not free from this role conflict and most of their conflict is found to be related to their career commitment (i.e., they spend more time and energy on their work in order to prove their capability). This finding is inconsistent with the other research that revealed that women are not as deeply involved in their work as much as men because of family affiliation (e.g., Lewis, 1994). This study uncovered that Thai – Private (Informal management) Organizations and Thai – Joint Venture (Team working) Organizations in Thailand usually prefer to hire young female engineers, who can devote more time and give more importance for their professional work.

With regard to benefit and support, which could reduce work-family interface, Thai women in Thai women engineers, who used to work in Thai – Private (Informal management) Organizations, Thai – Joint Venture (Team working) Organizations and Thai – Public (Facilitating bureaucracy) Organizations in this study are in a better position compared to Bangladeshi women respondents in Bangladesh – Private (Owner-centered) Organizations and Bangladesh – Public (Top-down bureaucracy) Organizations; although they received more social support than organizational formal benefit. Having support from family and colleagues, Thai women can reduce work-family conflict, which shows one major constraint for Bangladeshi women to pursue their professional career.
Regarding coping strategies, the findings reveal that in order to cope with these situations, Thai women engineers in all types of organizations withdraw from the organization and join their family business or move to other institute where they can get opportunity to manage their family and professional life. The finding suggests that both organizational and social support is crucial to retain women engineers and reduce skill shortage. Moreover, apart from creating family-friendly working environment which would attract women engineers in the organization, the perceptions and thinking of employees have to be considered.

7.2 Discussion

The previous chapter (Chapter 6) examines women engineer’s entry barriers in the construction education and employment in Bangladesh and Thailand. This chapter set out to explore the career barriers to women engineers entering and working within the construction organizations in Bangladesh and Thailand. The findings shed light on how organizational cultural practices as well as the external environmental factors such as the influence of socio-cultural norms and gender ideologies within the organizations exacerbate sex segregation as well as to limit women engineer’s career progression in the construction organizations in both countries. By comparing Thailand and Bangladesh, the study reveals several constraints to professional development encountered by women engineers in both countries, which not only marginalize their position in the construction organizations but also limit their career advancement.

Organizational hiring practices

The first barrier women respondents’ encountered in entering in organizational employment is the organizational cultural practices in hiring employees. As discussed in previous the chapter (Chapter 6), Bangladesh – Private (Owner-centered) Organizations and Thai – Private (Informal management) Organizations tend to be more exclusionary to hiring women. This result not only deters women respondents in entering in construction organizational employment but also exacerbates sex segregation in these types of organizations.

In contrast, Bangladesh – Public (Top-down bureaucracy) Organizations, Thai – Joint Venture (Team working) Organizations and Thai – Public (Facilitating bureaucracy) Organizations in this study seem to be positive in their vision to recruit women because of their formalized recruitment procedures. Also, there has been a general shortage of engineers during the economic boom in Thailand in the early 1990s. This might have influenced Thai – Joint Venture (Team working) Organizations to recruit women engineers in order secure enough professionals to meet the construction demand. On the other hand, the quota system for women’s recruitment in government services encouraged Bangladeshi women engineers to enter into the Bangladesh – Public (Top-down bureaucracy) Organizations in Bangladesh. This may help women in overcoming the entry barrier; but due to management’s stereotyping attitude towards women, the quota does not help women build a career in this type of organizations or even to stay employed. Furthermore, due to socio-cultural restrictions on women’s mobility and political pressures, two-third of the quotas is not generally met and where they are, the women are regarded as token appointees and assigned secondary roles (discussed in Chapter 6).

Management prejudice against women engineers

Apart from the recruitment barriers, another constraint reported by women respondents in identified all types of organizations, particularly in Bangladesh – Private (Owner-centered) Organizations, Bangladesh – Public (Top-down bureaucracy) Organizations and Thai – Private (Informal management) Organizations was management prejudice towards women engineers. Because of such prejudice, women respondents are excluded from any creative and challenging tasks that could help them show their capability and performance. Exclusion from challenging tasks has been argued by many scholars to be a significant factor in women’s more general exclusion from influential positions and promotion ladder.

In contrast, few women respondents in Thai – Joint Venture (Team working) Organizations reported such management prejudice towards them. Although the cultural image of construction engineering profession as male-oriented still remains very powerful in this type of organizations, this study reveals that Thai women respondents in this type of organizations are in a much better position than women respondents in other types of organizations in this study. The reason might be because the management of Thai – Joint Venture (Team working) Organizations practices participatory approach through team work. They provide prospective team members with a lot of opportunities to work with each other, to understand each other and to learn from each other. This indeed, gives Thai women engineer’s way to explore their potentials and show capabilities. Management value their capabilities and it further enhance and encourage women engineer’s participation as well as reduced sex segregation in Thai – Joint Venture (Team working) Organizations.
Organizational promotion processes

Another crucial point is that in Bangladesh – Private (Owner-centered) Organizations, Thai – Private (Informal management) Organizations and Thai – Joint Venture (Team working) Organizations, engineers from field based positions are promoted to top positions more easily and in this way women engineer are systematically excluded from the promotion processes. This is more noticeable in Bangladesh – Private (Owner-centered) Organizations. Despite social restrictions on women’s mobility, management’s own interpretation of religio-cultural norms and gender ideological preconceptions reinforce organizational management to undermine women’s technical capabilities with respect to men in Bangladesh – Private (Owner-centered) Organizations. This affects women’s professional opportunity, their salary, and exacerbates sex segregation in the Bangladesh – Private (Owner-centered) Organizations in Bangladesh more compared to women in Thai – Private (Informal management) Organizations and Thai – Joint Venture (Team working) Organizations in Thailand. This does not mean that Thai women are free from such organizational discriminatory practices.

As discussed above, Thai women engineers also suffer from discrimination in their promotion processes due to management’s prejudices towards Thai women’s roles. This is more noticeable in Thai – Private (Informal management) Organizations. As a result, like in Bangladesh – Private (Owner-centered) Organizations, they are systematically excluded from involving any challenging assignments and also limits their upward mobility by offering little scope or opportunities for their professional development (such as training) in Thai – Private (Informal management) Organizations. Further, this kind of informal practice within organizations play a major force in the continued dominance of sex segregation and limits women’s promotional prospect in the organizations.

Differences in interpersonal relationships

It is likely to state that both interpersonal relationships could facilitate women’s career development in organizational employment. Women respondents in Thai – Private (Informal management) Organizations, Thai – Joint Venture (Team working) Organizations, and Thai – Public (Facilitating bureaucracy) Organizations have more interpersonal relationships as men respondents than in Bangladesh. The reason might be because all types of construction organizations in Thailand are more open and have less restriction in terms of Thai women’s visibility, personal freedom and interaction with other staff, as the system operating in the local environment. Whereas protective and top-down management system in both Bangladesh – Private (Owner-centered) Organizations and Bangladesh – Public (Top-down bureaucracy) Organizations in Bangladesh systematically discourage entrances of women engineers as well as affect women’s career development in organizational employment.

Hostile organizational environment

For construction engineers, it is important to have site experience in order to be promoted to managerial positions. In Thailand, women in all types of organizations are getting more opportunities to go to sites as compared to Bangladeshi women because construction sites are better organized and more secure for women to work in Thailand. This shows that even though sites are generally seen to be dangerous for women, it is possible to improve the security situation in order to allow women to work. On the other hand, hostile and insecure working conditions are another major barrier of women’s employment in both Bangladesh – Private (Owner-centered) Organizations and Bangladesh – Public (Top-down bureaucracy) Organizations. They faced more threats from extortionists compared to their male counterparts at the workplace and also from colleagues aligned to religious fundamentalist forces. Moreover, the social norms of seclusion of women are tighter in Bangladesh. Buckling under the pressure, sometimes women engineers are forced to quit their jobs or move to office-based desk work; thus limiting their prospects for promotion.

Patronizing attitude towards women

Another constraint encountered by Bangladeshi women is the patronizing attitude towards them, particularly in Bangladesh – Public (Top-down bureaucracy) Organizations. For example, the supervisor’s protective attitude toward them placed constraints on their visibility, personal freedom and interaction with other staff. This subtle discrimination not only makes Bangladeshi women engineers unable to develop their own identities and maturity but also make their inferior status within the Bangladesh – Public (Top-down bureaucracy) Organizations.

In contrast, Thai women engineer face less restrictions in terms of their visibility, personal freedom and interaction with other staff in Thai – Private (Informal management) Organizations, Thai – Joint Venture (Team working) Organizations and Thai – Public (Facilitating bureaucracy) Organizations in Thailand. Another advantage for Thai women is less restriction in their mobility than Bangladeshi women. Thus, Thai women are getting more opportunities to develop their own identity, which could strengthen their self-confidence.
Reconciliation of career and family

In Thailand, women traditionally support the family financially, thus there is more support both from the family and from society for working professional women. Colleagues show more understanding of family affairs as compared to Bangladesh. By contrast, in Bangladesh, due to socio-cultural norms and its practices, many families are reluctant to encourage women’s outside field-based work, which affect Bangladeshi women’s occupational career. This kind of exclusion is defined by Witz (1992) as “patriarchal exclusion” strategies, whereby one group monopolizes advantages by closing off opportunities to another group of outsiders beneath it, which it defines as inferior and ineligible. To avoid family conflict, they prefer more likely to go into teaching, research and development institute rather than engineering organizations. This may be one of the explanations of Bangladeshi women’s less participation in the construction engineering employment.

7.3 Chapter Summary

The findings of the study in this chapter suggest that both organizational culture and other factors (such as social norms, work environment, family obligation, etc.) can account for women engineers’ career constraints within the construction organizations in both countries. Nonetheless, the study underline the importance of organizational culture and its practices in creating a women friendly or unfriendly workplace in Bangladesh and Thailand. The wider society’s culture and norms do guide the way women and men expect each gender to behave and act. However, organizations are able to create their own culture and practices that does not necessarily reinforce the societal gender expectation. The Thai example shows that even though sites are generally seen to be dangerous for women, it is possible to improve the security situation in order to allow women to work. Consequently, participatory working pattern (through team work) introduce its technical professionals to new ways of working in Thai – Joint Venture (Team working) Organizations in Thailand. These changes in the practice of management work not only open more space for Thai women in organizations but could also enhance their self-confidence, credentials and credibility as well.

CONCLUSION AND RECOMMENDATIONS

This chapter summarizes the research findings and its reflections in the concluding part, along with some recommendations. This could be helpful in utilizing women’s talent and improving their professional careers in construction organizations in Bangladesh and Thailand.

9.1 Summary and Conclusion

In this study, the researcher explored the socio-cultural and organizational factors that influence women engineers’ entry and career development in construction organizations in Bangladesh and Thailand. Analysis involves data collected from questionnaire surveys with 204 professional engineers, in-depth interviews with 80 professional women engineers, and informal discussions with employers/representatives in construction organizations in Bangladesh and Thailand.

Construction organizations in bangladesh and thailand

Based on the typology of organizational culture, this study identified five types of construction organizations in Bangladesh and Thailand as follows: (1) Bangladesh – Private (Owner-centered) Organizations, (2) Bangladesh – Public (Top-down bureaucracy) Organizations, (3) Thai – Private (Informal management) Organizations, (4) Thai – Joint Venture (Team working) Organizations, and (5) Thai – Public (Facilitating bureaucracy) Organizations.

The study revealed significant differences among these five types of organizations in Bangladesh and Thailand, particularly in terms of organizational culture and its practices. For instance, the dominant characteristics of Bangladesh – Private (Owner-centered) Organizations are: high centralization but low formal modes of operation; top-down command and control of management system; decisions are taken on the basis of influence rather than procedures or logical grounds. For instance, the reward system (i.e., promotion and salary increase) is based more on knowing and impressing than on formal systems of assessment of one’s ability. The dominant characteristics of Bangladesh – Public (Top-down bureaucracy) Organizations are: hierarchical nature of structure and old-fashioned management systems in which high authority (usually men) maintain patriarchal power relations; jobs are secure, but give little room to contribute one’s talents and abilities, where members of the management also tend to adopt a paternalistic approach, by keeping their subordinates under close supervision.

In contrast, the dominant characteristics of Thai – Private (Informal management) Organizations are: highly competitive and result-oriented organizations, but an informal favoritism overshadows the formal management systems. The dominant
characteristics of Thai – Joint Venture (Team working) Organizations are: participation, team work orientation; maintaining good inter-personal relationships among organizational members; innovation, and opportunity for professional development. While Thai – Public (Facilitating bureaucracy) Organizations are described as: low risk, slow feedback organizational environment; bureaucratic management style; top-down systems of communication; work is controlled by formal procedures and policies; predictability and continuity are the basic values; non-innovative, but cooperative.

Career entry into engineering education and employment

Regarding factors relating to women’s and men’s entry into engineering education in Bangladesh and Thailand, this study found that women in Bangladesh have made significant progress in entering this stream, as compared to women in Thailand. The main reasons for Bangladeshi women’s significant progress in career choice as well as entering engineering in Bangladesh are affirmative action from the government, and educational encouragement from family members. Affirmative action, such as full fellowship for public sector engineering academic institutions and quota system for women entering engineering employment, and encouragement from family members play an important role in their career choice and entry into engineering education and profession. In contrast, self-interest and role models are the two important determinants that influence Thai women’s career aspirations and choice in engineering education and profession.

This study further identified that despite women’s improvement in engineering education, there has been little improvement in their employment in construction engineering organizations in Bangladesh, as compared to Thailand. The findings show that the average number of women engineers in all types of organizations examined in this study is far below that of men engineers (Table 6.5). The study uncovers that the increase in Bangladeshi women studying civil engineering does not necessarily lead to an increase in women going for civil engineering jobs, especially in construction organizations.

The study has found that construction organizational cultures and its formal and informal practices not only deter women from working in construction organizations but also stop the stream of women engineering graduates from flowing into the engineering job market in Bangladesh and Thailand. One mechanism is through hiring and recruitment practices. The study reveals that Bangladesh – Private (Owner-centered) Organizations and Thai – Private (Informal management) Organizations tend to be more exclusionary in hiring women engineers because of their stereotypical attitudes towards women. In Bangladesh, this is further reinforced by additional complicating factors such as over-supply of engineers, and socio-cultural restrictions on women’s mobility. Recruiting practices highlight aspects of organizational culture and its practices in the construction labor market that is deeply embedded in the country’s social systems.

On the other hand, the image of Bangladesh – Public (Top-down bureaucracy) Organizations is inviting due to the quota system for women’s recruitment in government services, which encourage Bangladeshi women engineers to enter this type of organizations. This may help women in overcoming the entry barrier but due to the management’s stereotypical attitude towards women and political influence, quota does not help women to build a career in Bangladesh – Public (Top-down bureaucracy) Organizations or even to stay employed. In contrast, Thai – Joint Venture (Team working) Organizations and Thai – Public (Facilitating bureaucracy) Organizations seem to be positive in recruiting women due to a general shortage of engineers during the economic boom from 1989 – 1996 in Thailand. This could have influenced Thai – Joint Venture (Team working) Organizations and Thai – Public (Facilitating bureaucracy) Organizations to recruit women engineers in order to secure enough professionals to meet the construction demand in Thailand.

Career barriers

The study reveals that women engineers experienced many barriers in continuing their professional career within the organizations, which not only restrict their entry in the organizations, but also affect their career and continued employment in construction organizations. The findings shed light on how organizational cultural practices and other factors within the organizations exacerbate sex segregation and limit women engineers’ career progression in construction organizations.

Apart from the recruitment barriers, one common constraint which affects women engineers in all identified construction organizations (except Thai – Joint Venture Organizations) is management prejudice against women engineers. It is reported that managements’ own interpretation of religio-cultural norms and gender ideological preconceptions reinforce organizations to undermine women’s technical capabilities with respect to men in these organizations. Because of such prejudice, women are excluded from any creative and challenging tasks; thus limiting their prospects for promotion and affecting women’s career development within organizations.

In Thai – Public (Facilitating bureaucracy) Organizations, women engineers further reported experiencing organizational discrimination in terms of professional development opportunities, when compared to their male counterparts. Although the
civil service regulations allow for promotion to a higher level in rank, nonetheless, women in Thai – Public (Facilitating bureaucracy) reported that at the higher levels, promotion almost requires becoming involved in politics, which most women find culturally difficult. Women also reported fewer opportunities for risk-taking and high-performance activities, because preconceptions reinforce managements to undermine women’s technical capabilities when compared to men in this type of organization as well.

Similarly, hostile and insecure working conditions are another major barrier to women’s employment in Bangladesh – Private (Owner-centered) Organizations and Bangladesh – Public (Top-down bureaucracy) Organizations. They faced more threats from extortionists when compared to their male counterparts at the workplace, and also from colleagues aligned to religious fundamentalist forces. Buckling under these pressures, sometimes women engineers are forced to move to office-based desk work or to quit their jobs. These kind of informal practices play a major role in the continued dominance of sex segregation and limit women’s promotional prospect in these types of organizations. Another major constraint encountered by Bangladeshi women in Bangladesh – Public (Top-down bureaucracy) Organizations is the patronizing attitude towards them. For example, the supervisor’s protective attitude toward them placed constraints on their visibility, personal freedom and interaction with other staff. This subtle discrimination not only makes them unable to develop their professional career but also make their status inferior within the Bangladesh – Public (Top-down bureaucracy) Organizations.

Although women respondents in Thai – Joint Venture (Team working) Organizations experienced comparatively fewer barriers than women respondents in other types of organizations, they are not free from career barriers. One of the major constraints reported by a majority of women respondents (64.7%) in Thai – Joint Venture (Team working) Organizations is job insecurity. Since construction is a project-based business, most Thai – Joint Venture (Team working) Organizations usually appoint engineers on a project basis and engineers at the junior level rarely get a chance to be recruited in new projects. Since more women, compared to their male counterparts, are engaged in junior-level positions, they suffer from insecure jobs more than men. Moreover, it is more difficult for women to get a new job in male-dominated construction organizations.

Despite organizational barriers, other factors such as reconciliation of career and family issues, religio-cultural norms, etc. affect women engineers, particularly Bangladeshi women engineers in entering and staying in construction organizations. Bangladeshi women, like men, are more inclined to build their professional career, but they receive comparatively less organizational and social support, which could help their professional development. In contrast, in Thailand, traditionally women support the family financially, thus there is more support both from the family and from society for working professional women. Colleagues also show more understanding of family affairs, compared to Bangladesh. Furthermore, women in Thailand have comparatively lower fertility rate (total fertility rate – 1.6 children born per woman in 2006) than women in Bangladesh (total fertility rate – 3.2 children born per woman in 2006), which might help them continue their professional development without a career break.

**Career progression**

Despite significant career constraints experienced by women in construction organizations in both countries, the study uncovered that organizational culture type also plays a major role in enhancing women engineers’ professional advancement. For example, although the cultural image of construction engineering profession as male-oriented still remains very powerful in Thai – Joint Venture (Team working) Organizations, like in other types of organizations, this study reveals that women respondents in these types of organizations are in a much better position than women respondents in other types of organizations. The multiple regression analysis results also indicated that the culture of Thai - Joint Venture Organizations is most influential for Thai women’s promotion opportunity and career advancement. The reason might be the influence of organizational culture, where organizational management practices participatory approach through teamwork. Managements value their team members’ capabilities and provide prospective team members with a lot of scope for work and professional development opportunities, irrespective of gender. This indeed, gives Thai women engineers employed in this type of organization, ways to explore their potential and enhance their career development, as well as reduce sex segregation.

Further, interpersonal relationships (such as access to interaction, association, knowledge and information sharing and mutual career support among the organizational members) might also indirectly influence women’s professional advancement in this type of organization. In contrast, the cultures of Bangladesh – Private Organizations, Bangladesh – Public (Top-down bureaucracy) Organizations and Thai- Private Organizations were found to have a negative impact on women’s promotion opportunity and career advancement within construction organizations. The above findings suggest that women engineers’ professional career could be improved in those organizational cultural environments where participative, inter-personal relationships and team skills are emphasized over competition.
In conclusion, although the above findings provide insights into a variety of factors that account for women engineers’ entry and career progression in the construction organization in both countries, the following themes seem to be particularly important and deserving of further discussion:

- In Bangladesh, there is a quota for the employment of women in Bangladesh – Public (Top-down bureaucracy) Organizations. Despite this, few women are employed. One of the explanations often given is that construction is seen as men’s work. But the increase in women studying civil engineering shows that such stereotypes are changing, and it is not the stereotyped image that makes women less involved in construction industry. What the researcher has seen here is that to some extent, quotas might help women in overcoming the entry barrier, but it does not help women build a career in construction organizations or even to stay employed in Bangladesh – Public (Top-down bureaucracy) Organizations.

P. The study has shed light on how organizational cultural practices as well as the influence of socio-cultural norms and gender ideologies within the organizations affect women’s entry and continued employment in construction companies, in both countries. Some scholars like Gherardi (1995), and Hearn (1994) also indicate that organizational culture has consistently been identified as a source of attitude and behavior which not only reinforces sex segregation at the workplace, but also maintains barriers to women’s professional advancement. Acker (1991) argues that organizational culture is closely linked to and influenced by external factors, such as dominant cultural practices and behavior in the capital, which lead to specific behavior within organizations.

- Thailand had more women in construction organizations as compared to Bangladesh, because the demand for employment was much higher, and the growth is also higher than in Bangladesh. In order to secure enough professionals, Thai – Joint Venture Organizations and Thai – Public Organizations hired women.

- Further, participatory approach through teamwork in Thai – Joint Venture Organizations was encouraged in order to ensure high quality of work and maintain rapport and credibility with their clients. This gave women the opportunity to do work that would not be assigned to them as individuals. They received good support by interacting with their supervisors and colleagues to carry out work. Through teamwork, the participatory working pattern enhances and encourages women engineers’ professional development as well as reduced sex segregation in Thai – Joint Venture construction organizations in Thailand.

Previous research in other countries indicated that teamwork can lead to changes in work attitudes and orientation to work and such changes allow women more space in organizations (Metcalf and Alison, 2003; Cianni and Wnuck, 1997). If women get the opportunity to use their skills and work performance as well as if their work is valued by the organization, women engineers, like their men counterparts, will be able to develop their professional career in construction organizations.

- The other theme of particular consequence relates to the importance of establishing inter-personal relationships among members within organizations. The findings of the study suggest that inter-personal relationships among organizational members are instrumental in helping women advance to higher level positions. This finding lends support to arguments by Mueller et al. (1994) that organizations need to integrate employees so as to create group cohesion among employees. In Thailand, inter-personal relationships within the organization facilitates Thai women engineers’ visibility, personal freedom and interaction with other colleagues in Thai – Private (Informal management) Organizations, Thai – Joint Venture (Team working) Organizations and Thai – Public (Facilitating bureaucracy) Organizations. Thus, Thai women are getting more opportunities to develop their identity, which could strengthen their self-confidence as well.

In contrast, the restricted nature of inter-personal relationships within organizations in Bangladesh limits women engineers in using their abilities, and has a negative impact on their visibility, personal freedom and interaction with other colleagues. This kind of subtle discrimination not only undermines their capacity to compete on an equal footing with men, but also makes their status inferior in Bangladesh – Private (Owner-centered) Organizations and Bangladesh – Public (Top-down bureaucracy) Organizations.

- Apart from organizational practices, Bangladeshi women engineers’ situation within organizations is further reinforced by the country’s traditional religio-cultural norms and gender ideologies. For construction engineers, it is important to have site experience in order to be promoted to managerial positions. In Thailand, women are getting more opportunities to go to sites compared to Bangladesh, not only because the social norms of seclusion of women are tighter in Bangladesh, but also because sites are better organized and more secure for women to work. This shows that even though sites are generally seen to be dangerous for women, it is possible to improve the security situation in order to allow women to work.

The study suggests that both organizational culture and external factors need to be taken into account in order to allow more space for women’s entry and career advancement in construction organizations in both countries. This is because construction organizations in both countries are not purely rational in their organizational practices but bound by social concerns and constraints, and traditions as well. Nonetheless, the findings underline the importance of organizational policies, practices and culture in creating a women-friendly environment. Despite the reinforcement of societal gender expectations, organizations,
with conscious effort, would be able to create a platform for gender equality. The respondents in both countries expressed their desire to be in more challenging positions and a high level of enthusiasm to work on development projects even at sites, to gain valuable experience which will help them build their professional careers. To quote a woman engineer employed in Bangladesh – Private (Owner-centered) Organizations:

“I am still very much interested to work at construction site, to have technical experience and after field experience I would like to work at the management level. I think if companies encourage us and the overall social conditions do not go against women, we will be able to manage the construction site” (Field note, 2000).

In order to utilize talent, women’s potential and also to maintain a highly productive and creative workforce in construction organizations, there is an increasing need to employ women engineers in construction engineering organizations in both countries. In order to achieve this, it is important for construction managers to review their organizational culture from a gender perspective.

**Researcher’s contribution**

This is the first systematic research into the participation of women at the professional level in the construction industry in Bangladesh. The research has contributed to our knowledge of the situation of women engineers in Bangladesh and Thailand in many respects:

- One of the contributions of this research is the impact of quota system on women’s (Bangladeshi) significant progress in engineering education in Bangladesh. Although the 10% quota system was mainly operational to attract women entering public sector engineering organizations, quotas indirectly influence women’s career choice and entry in engineering education rather than increase their participation in engineering employment.

- The second contribution is that this study shed light on how organizational culture and its practices affect women’s entry and career development by using organizational culture typology. As discussed in Chapter 2, researchers have earlier made theoretical and methodological advances, mainly in understanding the influence of organizational culture on organizational effectiveness, commitment, performance, etc. rather than in determining the influence of organizational culture type on women’s career experience, particularly in Asian countries (such as Bangladesh and Thailand).

- The third contribution is that the research found that despite external barriers (such as the reinforcement of societal gender expectations), organizations, with their conscious effort, would be able to create a women-friendly working environment, which could help women engineers to build their professional career within construction organizations in Bangladesh and Thailand.

Though there are limitations associated with this study, the researcher believes the above findings represent a much-needed step in building literature devoted to the understanding of women’s career progression in construction organizational employment in Asian countries, specifically in Bangladesh and Thailand.

### 9.2 Recommendations

Construction organizations in both countries will not be competitive if they do not fully and effectively utilize human resources, regardless of gender. Women in both countries are a potential human resource that can contribute to the social and economic development of the country. To this end, the following recommendations are proposed:

**Recruitment policies**

Recruitment and promotion policies need scrutinizing to eliminate bias and to ensure that women who demonstrate technical skills are encouraged to apply for promotion within the organization. Clear job descriptions are essential and, together with the conditions of employment, should be distributed to all applicants whether they are internal or external to the organization. The assessment criteria for the position should be objective and gender-free. Members of appointment panels, whether internal or external, will require gender-awareness training that promotes equal opportunities. This study uncovered that the selection committee has not been aware of the need to ensure an unbiased interview. Negative and otherwise illegal questions about family still sometimes slip into the interview process. Care in setting up appointment panels can ensure that they do not consist only of men; prospective women professionals may gain a negative impression of the organization from an all-male panel.

**Effective quota systems**

In Bangladesh, administrative barriers and political influence should be eliminated with regard to effective participation of women in government organizations under this quota system. In this context, both the Public Service Commission, which is
responsible for recruitment, and government organizations need to regularly monitor and evaluate the working of the quota 
system and its impact on equity and access issues. In Thailand, in order to attract more women in construction organizational 
employment, the Thai government should take the initiative to introduce effective quota systems.

Transformation of gender ideologies in organizations through changing work pattern

There is a need for a fundamental change of gender ideologies in organizations in both countries. Organizational members 
need to be aware of gender issues and the importance of gender mainstreaming. To achieve this, organizations need to change 
their work pattern from centralized bureaucratic management system to participative organizations, involving both women 
and men. According to this study, participatory approach was found to be the most significant factor in women engineers’ 
career advancement. Thus, organizations can assist women to advance by implementing and monitoring practices that ensure 
that women at all levels have equal access to developmental work experiences when compared to men. Such an egalitarian 
approach to staff development may partly remove some barriers to advancement such as lack of opportunities, as reported by women.

Organizations should remove barriers that impede women’s advancement

In the context of global competition, it is important for organizations to understand and to rectify the barriers to women’s 
advancement, because the exit of women in engineering organizations reduces the pool of talented professionals. In order to 
retain talented women professionals, managements need to determine the barriers to women’s advancement, as highlighted 
in this study. Organizations need to be aware of possible gender discrimination, negative stereotypes and attitudes, and 
immediate bosses (who do not develop their staff, see appendix), all of which may prevent the organizations from fully 
utilizing the female talent in their workforce. Organizations should, therefore, embark on programs to find out exactly what 
are the barriers women in their organizations encounter. Organizations need to then communicate that information, implement 
an equal employment opportunity plan, track its progress, and make managements accountable for the progress achieved. 
Such programs have been successfully undertaken before, both as major change programs driven by top executives (Martinez, 
1995) and as incremental changes that gradually address the barriers women encounter to advancement (Meyerson and 
Fletcher, 2000).

Provide challenging and proactive tasks for female engineers in their professions

Women engineers, like men engineers, want work that is interesting, challenging, and that has an impact. They also expect 
work to be appropriately designed, with adequate resources available, and with effective management. Organizations 
should redesign work, relationships, workflows and teams to create more exciting and challenging work. For instance, 
both women and men engineers can be co-managers (jointly) in order to undertake the project assignment. Providing them 
with challenging assignments with well-defined performance measures and feedback is important for a high-performance 
environment in which women engineers, like their male counterparts, can achieve their career aspirations. People stay 
when they have strong relationships with others they work with. Companies should encourage team-building, project 
assignments involving work with peers and opportunities for social interaction both on and off the job. One value of team-
based organizations is the bond they establish among members. Effective relationships with immediate managers are also 
important.

Establish inter-personal relationships among organizational members

Inter-personal relationships among organizational members are a vital route to career progression, as the key benefits associated 
with it include access to visibility, support and upward mobility, job satisfaction and greater respect and recognition within the 
organization. In this regard, lack of inter-personal relationships among organizational members can result in a lack of access 
to interaction, opportunities and information. This, in turn, increases their feelings of exclusion, isolation and frustration. 
Organizations should provide access to networking and communication facilities to all their professionals, irrespective of 
gender.

Professional recognition

Recognition is an act of validation and mutual respect. Women tend to stay in an organization when they feel their capabilities, 
efforts and performance contributions are recognized and appreciated by others. They want a sense of accomplishment. 
Organizations need to recognize women’s potential and eliminate the inequality in hiring practices and wages. Compensation 
provides recognition, but other forms of non-monetary recognition are also important – from managers, team members and 
peers, customers, and others. Particularly important are opportunities to participate and to influence actions and decisions.
Organizations can assist women by implementing practices that ensure that women have access to information on training and career development opportunities, valued in organizational employment. Organizations need to change their corporate culture to value the contributions of a diverse workforce to ensure that women are not under-utilized, disadvantaged, marginalized or become detached from their organizations.

**Family-friendly policies**

Organizations should implement policies to help women manage their work and personal life issues. Organizations must provide their professionals with facilities to help them save time in other non-work-related activities. This would allow them to work and to spend high-quality time with their children. Such policies include maternal leave with pay for longer than 45 days, flexible working hours, work assignments in the home, child-care centers at the workplace, and incentives for high-quality children’s schools. Organizational initiatives relating to family-friendly policies should be directed at both women and men in organizations, in order to facilitate culture change and changes in the expectations and stereotyping relating to women as the main domestic carers.

**Further research**

The main reason for conducting this research leads to the question - why do more women in Bangladesh study civil engineering than in Thailand, but fewer Bangladeshi women take employment in construction companies? In order to find out the answer, the researcher mainly examined socio-cultural and organizational factors, particularly in relation to organizational culture and its practices. However, there are some limitations to this research. One of the main study limitations is study area. Since most large and medium construction organizations are located in the capital city, two capital cities, Dhaka (the capital of Bangladesh) and Bangkok (the capital of Thailand) are selected as research area for this study. It is uncovered that although the main office (head office) of most large organizations is based in the capital city, their site offices are also located in other districts/provinces. Another limitation in this study is a relatively small sample.

Further research is needed to cover these limitations. It would be interesting to conduct cross-country research on the experience of personnel (both women and men) who have left the construction organizations they used to work for, and compare their situations. It would also be intriguing to look at different stages of women’s and men’s careers, with the experience of women and men in other male-dominated professions (such as medicine, law, etc.), particularly in relation to the impact of organizational culture typology and other aspects of gendered organizations. This could result in the development of new approaches incorporating issues pertinent to both genders.
The book I would like to publish will be based on my PhD dissertation on “Women Engineers in the Construction Industry: A Comparative Study in Bangladesh and Thailand”. Here is the synopsis of my dissertation:

**WOMEN ENGINEERS IN CONSTRUCTION INDUSTRY: A COMPARATIVE STUDY IN BANGLADESH AND THAILAND**

**Synopsis**

The dissertation reports on research which examined the comparative experiences of women engineers working in Bangladesh and Thailand. The research investigated the hypothesis that women in each country face different issues and challenges with regards to their experiences in engineering education, their transition from education to paid employment and their experiences of working in the sector. The study draws upon a questionnaire survey of over 200 engineers together with in-depth interviews with 80 women engineers. This was supplemented with interviews with employers in both countries. The research combined quantitative and qualitative methods to examine men’s and women’s perspectives on the issues explored. The questionnaire design was based on a literature synthesis of over 140 variables and yielded an excellent response rate from both countries. The interviews provide rich insights into women’s experiences of working in the sector. The study is conducted from a ‘feminist standpoint’ perspective which provided a more critical orientation to the analysis.

The analysis is rich and multi-layered. It examines both the issues confronting women working in different countries and cultures, and the interplay of organizational cultural factors on women’s careers. The cumulative effects of societal expectation, industry exclusion and organizational climate provides a problematic environment for women to develop successful careers within the industry.

The results reveal, inter alia, fundamental differences between the public and private sector organizations in Bangladesh (centralized and hierarchical) and Thailand (competitive and bureaucratic). Women have been afforded greater opportunities to enter construction education in Bangladesh, largely through affirmative action programmes and quota schemes. However, this does not translate into larger numbers working in the industry. Indeed, in many respects opportunities for women appear better in Thailand, although this should be viewed in the context of very low female representation overall. Discrimination and prejudice against women appears rife in both countries. Women are often formed into office-based positions which detrimentally affect their career prospects. An interesting anomaly is that Thai joint-venture projects appear to offer a better arena for women to develop their careers in; the different cultural climate and professional development opportunities appear to eradicate many of the ingrained cultural and structural barriers which effect women’s careers in other types of organization. There are resonances here for many other countries. A range of recommendations for improving the position of women in both countries flows logically from the analysis. These will be of relevance to organizations and institutions within both countries.