

# Contributions of Women Managers to UK Construction Industry

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## Abstract

Women managers are highly under-represented in the UK construction industry, which is typically considered as male-dominated, despite the various initiatives taken by the government and other organisations to improve the status of women in construction. The vertical and horizontal segregations in the industry are clearly evident for the less number of women in top managerial level and in mainstream construction respectively. The industry has been facing many challenges, including skills, labour shortages and recruitment difficulties, for many years now. Therefore widening the recruitment pool with potential candidates, targeting at non-traditional entrants, has become a necessity. This further emphasises to give more consideration on equality and diversity issues. But in reality little has been changed when looking at the number of women entering, retaining and progressing in the construction. Number of research studies conducted has focused on what industry could do for women in order to attract more women. On the other hand, this research intends to explore what women managers can do to the industry. In doing so, it tries to find out the ways in which women managers, despite their vulnerability, contribute, using their power, authority and leadership styles, to make the industry more attractive to women and other disadvantaged groups. This paper presents the research findings on the contribution of women managers in the context of the UK construction industry.

**Keywords:** women managers, contributions, construction industry, UK

# 1. Introduction

Improving the representation of women at managerial levels in construction is vital to address the skills shortages and recruitment difficulties in the industry. The industry culture and the image act as one of the major barriers for many women to consider construction as a career. The changes happening within the industry in terms of the culture and image is so slow to realise. This research argues that it is part of the responsibility for the women managers, who have gone through a career phase in construction (might have faced barriers and challenges on the way) and have now come to a position where they have certain level of power and authority in construction, to make a contribute for the industry to become less hostile and more attractive not only for the women who are already in the industry but also for any women who would like to choose a career in construction in future.

The under representation of women managers in construction has been reviewed and the reasons behind the under-representation have also been highlighted from the literature. The focus of this research, which was on 'women managers in construction', is justified. The contribution of women managers towards the construction industry is provided with the support of both the literature and the empirical evidences.

Accordingly, this paper is structured as follows. First, the research justification is provided. Second, the study focus is introduced. Third, the literature review on the key areas of the research is presented. Fourth, the research methodology adopted is presented. Fifth, the key findings are given followed by the conclusions.

## 2. Research justification

Construction in United Kingdom (UK) is one of the pillars of its economy. Construction output was predicted to grow by around 11% by 2011, led by a surge in the building of schools, ambitious housing targets and developments for the London Olympics (CIOB, 2008). But a shortage of buyers in the current market conditions is impeding the progress. Increased demand of construction will also increase the demand for construction personnel as it is labour intensive. In order to meet this demand, nearly 88,000 people were reported to be required annually, to add to the existing workforce of the industry (Construction Skills, 2007). However, the current economic climate challenges the industry to fulfil this requirement. A later report by Construction Skills (2008) revealed that the slowdown in the housing market and related sectors has reduced the annual requirement of construction from the previous average of 88,000 people per annum to 42,000 per annum between the years 2009 and 2013. From the previous forecast produced at the end of 2007, this is a total fall of 184,000 new recruits needed by the industry over 4 years.

Therefore the major problem that the industry has at the moment is its survival with the economic crisis. The construction industry faces difficulties in delivering projects in time, at the required quantity, within the anticipated budget and at the optimal quality. The other problems that exist in the industry for a long time are identified as low productivity; low performance; high fragmentation; poor image; high dissatisfaction among clients; skills and labour shortages; and recruitment difficulties.

The shortage of people, with the technical and managerial skills, to fully utilise the new technologies and skills demands has been a problem for many years in the construction industry (Egan, 1998; Whittock, 2002; Construction Skills, 2007). The results of a new skills survey conducted by the Chartered Institute of Building (CIOB, 2008) show that skilled trades and crafts people, and those with senior and middle management experience are in great demand within the construction industry. The survey found that the demand for middle and senior managers is an on-going and increasing problem within the industry (more than 80% of the respondents found recruiting senior management and middle management difficult).

The current rate of recruitment is not sufficient to meet the current and future demands of the construction industry. The industry faces recruitment problems with its traditional source of labour – young men aged 16-19 (Gurjao, 2008). The industry's reliance on migrant workers for senior and middle level managers is not always a possibility (migrant workers are not common as senior and middle managers in UK construction due to their poor English language competence, see CIOB, 2008). The recent immigration regulations (such as restricted skilled workers see UKBA, 2011) impose further challenges on recruiting workers from outside the European Economic Area (EEA). Therefore recruiting from a wider pool of talents and skills will be a requisite to address these recruitment difficulties and the skills shortages (Dainty *et al.*, 2004).

Women are highly under-represented in the UK construction industry despite the various initiatives taken by the government and other organisations to improve the status of women in construction. The role of the women in employment is changing radically in most societies and in Britain, nearly half of the total workforce is women (CIC, 2009). However, women constitute nearly 10% of the UK construction workforce (NAWIC, 2009; Opportunity Now, 2007; CITB, 2003). When this 10% is further divided into various occupations, nearly 85% hold administrative and secretarial posts, 10% are employed in a professional capacity in design and management areas, and the rest are attached to craft and trade level employees (CITB, 2003). Therefore, construction specific work carried out by women as a percentage of the total construction workforce is just 1.5%, of which 2/3 is in professional capacity.

Increasing the number of women working in construction will improve the status of the industry in terms of utilising the full range of skills available in the population and assisting construction organisations to become more efficient and adaptable to the needs of its customers (Agapiou, 2002; Davey *et al.*, 1999). Agapiou (2002) claims that the aim of the researches that focused on improving the participation of women in the construction workplace were more to solving the labour resources crisis and skill shortages rather than improving equal opportunities for women. High dissatisfaction among clients, being one of the problems in the industry, can be addressed by increasing the women numbers as they are, by nature, good with people, less confrontational and are more likely to listen to the opinions of others, which will be beneficial when dealing with clients (Bennett *et al.*, 1999). The construction industry involves stakeholders from multi-disciplines and at different levels. This aspect makes the industry more fragmented. Promoting collaboration and teamwork are crucial in order to reduce the fragmentation and increase integration among stakeholders. Female values generally tend to be developed through socialisation processes that include building relationships, communication, consensus building, power as influence, and working together for a common purpose (Trinidad and

Normore, 2005). In support of that, studies by Gale (1994) also acknowledged that these ‘feminine traits’ were beneficial in negotiation situations. Further, EOC (2005) have identified the benefits of having a diverse workforce as addressing skills shortages, meeting wider customer demand, widening the range of skills and aptitudes among employees to improving the quality of service delivery, and projecting a modern, positive and corporate image to both potential recruits and potential customers. Despite these advantages and the number of efforts taken to solve the skill shortages and to improve the equal opportunities for women, the industry has failed to make significant progress in recruiting and retaining more women.

The main reasons behind the low number of women in construction are the barriers they face in recruitment, retention and progression. The image of the construction (Fielden *et al.*, 2001; Fielden *et al.*, 2000; Bennett *et al.*, 1999; Gale, 1994); lack of career knowledge even among the professional career advisors (Agaipou, 2002; Fielden *et al.*, 2000; Gale, 1994; Harris, 1989); culture and working environment Dainty *et al.*, 2000; Fielden *et al.*, 2000; Bennett *et al.*, 1999); informal recruitment practices (Fielden *et al.*, 2001; Fielden *et al.*, 2000); family commitments (Lingard and Lin, 2004; Agapiou, 2002; Lingard and Francis, 2002; Fielden *et al.* 2000; Greckol, 1987) have been pointed as the major barriers by various scholars (see Amaratunga *et al.*, 2008). Lack of women on recruitment panels was also identified as a particular problem for the low representation of women in construction as it increases the likelihood of informal recruitment practices in the industry (Amaratunga *et al.*, 2007). In addition to these identified organisational factors, the personal factors such as ‘domestic responsibilities’, ‘undervaluing own leadership skills and competence’, ‘limiting personal beliefs’, ‘insufficient self-confidence’ etc. have been highlighted as the top barriers for women’s progression into senior roles (Manning, 2007).

Taking both the problems faced by the industry and the barriers faced by women into account, it can be argued that a ‘two-way’ contribution is needed between women and the industry in order to improve the representation of women in construction and also to address the skills shortages, recruitment difficulties, and equality & diversity issues in construction. Number of studies has been conducted on how to make the industry more attractive to women. However, little has been researched on the contribution women could make towards the construction industry. In this context, this research aims to explore the contribution women could make towards the construction industry.

The nature of the in-depth analysis limits the possibilities to explore the contribution of all the women who are attached to the industry. Women are found at various levels and occupations within the construction industry. This research focuses on the women who are at managerial levels in construction.

### **3. Research focus**

This research focuses on women managers in construction. The vertical and horizontal gender segregation pattern in the industry clearly indicates the underrepresentation of women in management levels and in professional capacity respectively. Vertical segregation is the concentration of men and women in different levels of the professional hierarchy whereas horizontal segregation refers to the concentration of men and women in various sectors or occupations of the industry. The typical gender

segregation in the construction industry indicates that the concentration of men and women in different kinds of jobs are conforming to societal expectations of the gender (EOC, 2004). In this regard, women are more likely to work in administrative and secretarial, personnel services and sales occupations, whereas men predominate in skilled trade occupations, process, plant and machine operative occupations and managerial occupations (Hibbett, 2003).

Based on the statistics given in the previous section, women are concentrated in administrative and secretarial positions, or other positions not directly involved with the construction process. Greed (2000) refers that these women appear to exist in a quite different 'social space' within the 'same' physical space that women professionals might find demanding and alienating (p.188). Among the women involved in mainstream construction, the women in professional capacity comparatively shows better representation than those in craft and trade levels. Since women at the professional level are amongst the most represented, by implication the scope for removing barriers is greatest. However, the under-representation of women at senior management roles (see EOC, 2006; Dainty *et al.*, 2004) makes the process slow in terms of minimising the barriers to improve the entrance, retention and progression of women.

There are three main reasons to set the research focus on women managers in construction. First, they have been in the industry long enough to understand the context, culture and difficulties; second, they have really progressed in their career while in the industry, despite the barriers identified; third, they have come to a position where they possess certain level of power and authority to take decisions and make influences. Therefore, it is appropriate to mention that women managers are comparatively in a better position to make a contribution towards the construction.

Managers and professionals in the industry can be categorised under four types as non-management roles (these positions are generally self-directed); supervisory roles (these positions typically fulfil a supporting role to middle management); middle management roles (these positions are mainly responsible for managing the whole process of a project and for leading a project team); senior management roles (these positions are often the ones of power where company-wide decisions are made) (Bennett *et al.*, 1999). The women managers who are at the middle and senior management levels have been considered for this study.

## **4. A review on the key areas of the research**

The research on contribution of women managers in construction can be linked to key knowledge domains such as gender, leadership and construction. The gender role definition and leadership styles women typically exhibit influence the contribution women could make. Brief literature review on the key areas is presented.

### **4.1 Gender role definitions**

In our society it can obviously be observed that men and women play distinctively different roles. Each gender in a society shows a standard set of behaviours and characteristics. Sex role stereotypes are widely held beliefs about such behaviours and characteristics (Singleton, 1987). An essentialist

viewpoint argues that gender roles are the result of innate biological differences between the sexes (Sammons, 2009). Contrary to the biological determinism perspective, the constructionist view argues that “gender is a social institution that has produced historically variable sets of norms and expectations regarding how one ought to behave, decide, think, how one should relate, where and how one should work” (Barrett, 1995, p.9). The researcher’s viewpoint does not totally disagree with the essentialist view about gender which says that biological sex has an influence over the gender behaviours and roles. However, the claim that the gender is an invariant factor and lack of evidences to confirm the direct relationship between biological sex and gender behaviours (see Renzetti and Curran, 1989; Sammons, 2009) fade the researcher’s level of agreement to this viewpoint. As we can see in our day today life, the changing gender role in the society fairly convinces the fact that the gender behaviour can be learned and changed to fit to the environment and culture and to perform accordingly. For example, in the context of this research, women who were once considered as unsuitable to hold positions of power and leadership or careers involving intelligence, have now begun to serve in such capacities. This made the researcher to support the constructionist viewpoint of the gender role, where it is the social factors that determine one’s gender role and in accordance with such factors people adopt different gender behaviours. The gender stereotype expects the people to behave in certain manner based on the societal expectations. When women behaviours are not according to the expectations, then they are accused for gender discrepancy. This stereotype acts as a barrier for women to change or learn the gender role, even though changing is mandatory at certain circumstances. This sets back women to make effective contribution in construction.

## **4.2 Leadership styles in construction**

Women managers being the main focus of this study, the contribution they can make towards the industry is explored having taken their leadership styles into consideration. Organisations have paid attention to leadership styles of their people who occupy managerial positions, holding the belief that leadership is an important factor in achieving business success (Giritli and Oraz, 2004). The leadership attributes and management attributes are not the same but closely related. One of Peter Drucker’s quotes say ‘management is doing things right; leadership is doing the right things’. Cunningham (1986) viewed the relationship between leadership and management in three different ways such as leadership is one competence among a range required for effective management; leadership and management are two concepts but related; leadership and management are two concepts but with a partial overlap. Sadler (2003) expresses that management is a rational process, calling in to play abilities such as verbal and numerical reasoning, whereas leadership is more intuitive, involving emotional intelligence. Zaleznik (1992) suggests goals are viewed impersonally for managers, in contrast, leaders adopt a personal approach to goals that reflect their own visions or deeply held beliefs. According to Kotter (1990) management is about dealing with complexity whereas leadership is about coping with change.

These comparisons indicate that there is a blurred line between leadership and management and they are not absolutely separate. Therefore isolating leadership from management may not be effective to achieve business success. A leader-manager model is believed to be more effective and ideal to be placed in top positions, than leader alone or manager alone models. This idea is supported by Stevens (2007), who proposes a leader-manager model as an effective one for construction. He believes the

leader-manager skill is the new driver in the construction industry, as the reality of the industry demands we have dual roles. Thus, he concludes that in order to better serve the construction industry the leadership role is to be redefined as having a business management component.

The appropriateness of particular type of leadership behaviour largely depends on the situational variables such as culture of the organisation, nature of tasks, characteristics of followers and societal values (Eagly, 2007). The project-based nature of construction industry with its temporary multi-organisations will almost certainly have an important influence on the managerial leadership styles of professionals working in it (Giritli and Oraz, 2004). Although, in most project environments, there is a strong preference for a democratic participative style, it may not be the most effective for all situations. Naum (2001) states that large capital investment projects coupled with high complexity of decision issues can require different styles of leadership, and he admits that a participative style of leadership with bureaucratic organisation is expected to be more appropriate than a directive style. Nevertheless, the leaders may have to impose more authoritarian styles at times when there is a need to control the workers. Nicholas (1990) suggests that a less participative, more directive style might be more appropriate when there is less time and high pressure to complete the work. Another study, by Pheng and Lee (1997), on construction project managers revealed that most of the respondents agreed that the project manager should possess firm and capable leadership qualities. The study by Bresnen *et al.* (1986) showed that task-oriented forms of leader behaviour are more appropriate where subcontractor labour forms the bulk of the workplace. During the different phases of the design process, styles may need to allow for more debates, fine-tuning and deliberation (Giritli and Oraz, 2004).

The literature argues that the construction industry uses a combination of different leadership styles due to the nature of the industry. Thus, it is difficult to determine the most appropriate leadership style to conform to each particular situation in the development of a project. Naum (2001) says that leaders may have to switch from one style of leadership to another or combine elements of different styles until the right balance between concerns for tasks and concerns for people is reached.

### **4.3 Leadership styles of women manages**

The gender role definitions discussed earlier seems to affect the leadership characteristics men and women exhibit. Based on a review of the extant literature on female leadership and survey of comparative studies of male and female leaders, it was concluded that among managers, women tended to be more democratic or participative in their leadership styles compared to men (Carli and Eagly, 2007; Eagly and Carli, 2003). They also reported that a meta-analysis of 45 studies, examining gender differences in transformational leader behaviours, found that female leaders used a more transformational style compared to male leaders. Research findings of Trinidad and Normore (2005) show that women adopt democratic and participative leadership styles in the corporate world and in education. Several studies focusing on transformational leadership indicated that women are perceived, and perceive themselves, as using transformational leadership styles more than men (Eagly, 2007; Bass *et al.*, 1996; Druskat, 1994; Rosener, 1990; Kark, 2004).

In contrast, other scholars have argued that there are no significant gender differences between men and women in their leadership behaviours. Powell (1990) in his analysis of a number of research studies found that male and female leaders exhibit a similar amount of task oriented and people oriented leadership behaviour. Further Pounder and Coleman (2002), based on various studies, have summarised the idea of 'little or no difference' and 'no evidence for any dissimilarity' in the leadership styles, leadership effectiveness and competencies of men and women.

The particular leader role in construction can demand the styles of leaderships to be exhibited, irrespective of whether the role is played by men or women. Therefore, to be an effective leader in construction, women managers are required to exhibit a range of behaviours within the boundaries of their style, and outside the boundaries if the situation demands so.

#### **4.4 Summary**

The literature points out three key points. First, the gender role definition and gender stereotypes influence the characteristics and behaviours of women; second, the appropriate leadership styles for construction varies on situational attributes thus demands a combination of different leadership styles; third, women are perceived as using transformational or participative or democratic or people oriented type leadership styles more than men, though some other researchers argue that there are no significant gender differences between men and women.

These key points have been considered when analysing the contribution of women managers. As construction industry demands different styles of leadership on different occasions, in order to be effective, women managers who are playing leading role in construction are required to exhibit different styles. Though they are perceived as better transformational leaders, there are instances where they have to exhibit transactional or authoritative styles. Then the element of gender stereotype evaluates the behaviour of women (who are authoritative) negatively and gives less respect. If women behave in a stereotypically female gendered way in a leadership role, they are not respected for not leading effectively, but if they behave overlay in a male way they are not respected either for their gender discrepant behaviour. This contradiction imposes a challenge for women managers in leading roles in getting the right balance between the gender behaviours and the effective leadership styles. These aspects are linked with the empirical evidences in exploring the contributions of women managers towards the construction industry.

### **5. Research methodology**

This research adopted a case study strategy. Case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident (Yin, 2009, p.18). This study considered individual as the case, in this scenario it was the 'woman manager in construction'. Three case studies have been conducted to explore and investigate the contributions of women managers, thus this research adopts a multiple, holistic case study approach. The women managers have been selected based on the following selection criteria, where the woman manager performs senior management role in the construction industry and has been in the construction industry at last for ten years. As this research

has an exploratory nature, a self-selection sampling was used as the most appropriate technique. Self-selection sampling occurs when the researcher allows each case, usually individuals, to identify their desire to take part in the research, where a request is made to the respondents to take part in the research and the data will be collected from those who respond (Saunders *et al.*, 2009, p.241).

In addition, expert interviews also conducted to explore the contribution of women managers. Purposive sampling, which facilitates the researcher to select cases that will best enable to meet the objectives (Saunders *et al.*, 2009), was used to select the experts. 5 experts, who excelled in areas related to gender, leadership and construction, were selected to represent the fields of study, which in turn ensured the adequacy in capturing the necessary information from the identified knowledge domains.

Data collection and analysis are developed together in an iterative process in a case study (Hartley, 2004). In-depth interviews, Multiple Leadership Questionnaire (MLQ) and Personal Attribute Questionnaire (PAQ) formed the main data collection tools within the case studies conducted. The in-depth expert interviews were also conducted using semi-structured interviews. Figure 1 illustrates the data collection techniques and the sources of evidence used for this research.

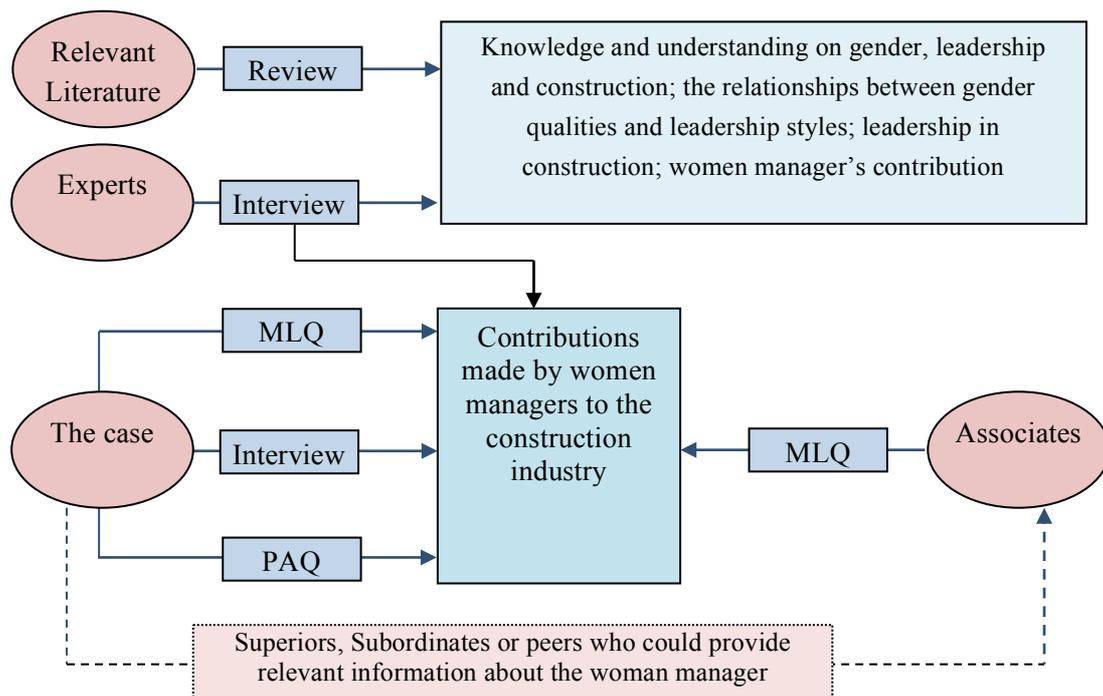


Figure 1: Research techniques and the sources of evidence used for the research

MLQ was used to identify the leadership styles exhibited by women managers in construction. MLQ identifies the characteristics of leaders and helps individuals discover how they measure up in their own eyes and in the eyes of those with whom they work. Thus it facilitates to capture a 360 degree view on the leadership styles exhibited by women managers. In order to increase the use of multiple sources of evidence, document review in the form of company websites, professional magazines and news articles were used to collect data about the women managers. Personal Attributes Questionnaire

(PAQ) by Spence *et al.* (1975) was used to measure the personal traits of women managers in terms of masculine or feminine adjectives. In-depth interviews were conducted to explore the contributions women managers make or willing to make towards the construction; the barriers they face and the ways of eliminating or minimising such barriers; the benefits women managers could bring through their contribution. The interviews used to capture expert knowledge also identified the possible contribution that women could make towards the construction industry.

## 6. Key findings

This paper summarises the key findings from the case studies and expert interviews on women managers' personal traits; the leadership styles; and the contributions they made to the industry.

The study on their personal traits, also with the support of PAQ, reveals that two women managers have strong personality almost equally in both masculine and feminine gender qualities. But the third woman manager possesses relatively more masculine personality compared to what she possesses as femininity adjectives. She mentioned the reason may be due to her cultural background as she is from a culture where being direct or showing masculine qualities was not a problem at all.

The leadership styles are classified in many different ways by various scholars. This research used the classification given in the Multiple Leadership Questionnaire (MLQ) (See Bass and Avolio, 2006) to identify the leadership styles of the senior women managers in the construction industry. The main classifications used are transformational, transactional and passive-avoidant. Transformational leadership is a process of influencing in which leaders change their associates' awareness of what is important, and move them to see themselves and the opportunities and challenges of their environment in a new way. This leadership styles has five behaviours such as Idealized Attributes (IA) (builds trust); Idealized Behaviours (IB) (acts with integrity); Inspirational Motivation (IM) (Inspires others); Intellectual Stimulation (IS) (encourages innovative thinking); and Individual Consideration (IC) (Coaches people). Transactional leaders display behaviours associated with constructive and corrective transactions. The constructive behaviour is labelled Contingent Reward (rewards achievements) and the corrective behaviour is labelled Management-by-Exception - Active (monitors mistakes). Another form of Management-by-Exception - Passive (fights fires) leadership is more passive and "reactive": it does not respond to situations and problems systematically. In this regard it is similar to laissez-faire styles – or "no leadership" (avoids involvement). Accordingly, both styles can be grouped together as 'Passive - Avoidant Leadership'. Both types of behaviour have negative impacts on followers and associates. However this style is appropriate where the staff is highly skilled, experienced, educated, have pride in their work and have the drive to do it successfully on their own.

All three women managers exhibit a degree of leadership styles that is more than the expected universal norm and their level of exhibit is classified as high. However in the styles Management-By-Exception Active (MBEA), Management-By-Exception Passive (MBEP) and Laissez-faire (LF), all have shown a lower value. In these three styles the leader's involvement is minimal and these styles are appropriate to lead an individual or a group of people who are self-motivated and self-leading. Showing lower values in such styles interprets that the women managers do not avoid getting involved. In all three cases, it shows that the women managers exhibit both transformational and

transactional leadership styles at a higher frequency rate compared to the Non-transactional (or Passive-Avoidant) behaviour. At the same time all three women managers perceive themselves as using transformational leadership styles more often than the transactional styles. The women managers feel that the transformational style is effective in construction, though it is not the only style which is effective at all the time. The experts also supported that since the industry is moving towards collaboration, mentoring, guidance, relationship building, and communication, transformational leadership is to be used by the managers, irrespective of their gender. But they all agreed that certain situations demand authoritative styles. Women managers also agreed that they have to act in an authoritative way depending on the situation, though they comparatively feel less comfortable in such instances.

The major factors that influence women managers' contributions are categorised under personal, social and organisational factors. Personal factors consist of childhood experience, personal traits, leadership, educational background, family background, domestic responsibilities, personal beliefs, level of confidence, knowledge and expertise and gender qualities etc; social factors includes societal expectations, gender stereotype, respect for women's behaviours etc; and organisational factors consist of role performed, gender composition and segregation, organisational culture, barriers and opportunities, legislation, recruitment and promotions etc.

The contributions they made are captured at five different levels such as individual, team, project, organisation and industry levels. The 'individual level' mainly refers to the their subordinates and peers. The team level refers to the team that they are leading. The project level refers to the entire projects that are under their purview. The organisation level refers to the board level activities and decisions they make. The industry level refers to their contribution in general not only within their organisational boundaries but also outside the organisation, through professional institutions, network or associations and engagement with other bodies. Contributions made by women managers at individual level are mentoring, motivation, career advice, and problem resolution; at team levels are forming effective team, avoiding isolation (for female employees), problem resolution, encourage collaboration and motivation; at project level are problem resolution, taking responsibilities, avoiding isolation, making structural changes, leadership and decision making; at organisation level are decision making, policy development, problem resolution, promoting family friendly culture, and leadership; and at industry level being a role model, attract more women, increase awareness, engage with school students and career guidance.

The employees and the organisation will benefit with better work life balance, training and development particularly for female employees, better working environment, networking and collaboration. The potential recruits will have better knowledge on careers in construction, will have increased access to career guidance, have networking opportunities and will be inspired to consider careers in construction. In effect the industry will benefit by having a mixed workforce, improved image, improved equal opportunities, and fair recruitment practices. Thus, these contributions not only benefit the employees and the organisation, but also benefit potential recruits to the industry and the construction industry as a whole.

## 7. Conclusions

This paper is produced based on the literature review and on empirical analysis on the contributions of women managers to the construction industry.

The problems that the industry faces in terms of skills shortages, recruitment difficulties, poor image, high fragmentation, low productivity, low performance and high dissatisfaction among clients and the barriers that the women face to enter, retain and progress in the industry need to be addressed. Addressing these problems are the responsibilities for the industry as well the disadvantaged women. Women managers who have progressed in the industry and been there for long enough to understand the culture and the difficulties are in a position to make a contribution towards the industry. The contribution of women managers has been presented at five levels ranging from individual to industry.

The empirical evidences support the literature that the transformational leadership is a preferred style by women managers, though they are able to exhibit transactional styles when necessary. The experts' interviews reveal that the culture in construction is moving slowly towards collaboration leaving more scope for women to join the industry. The women who were studied have the power to influence organisational policies. However, they admit that the few number of women in managerial position (less than 1%) is not sufficient to make a shift in the culture. In order to achieve the critical mass, the industry needs to attract more women particularly to the mainstream construction. This would make an impact in the culture and the image of the construction.

This research has made a contribution to knowledge by exploring the contribution of women managers towards the construction, thus highlighting the benefits women managers could bring to the construction and women. This paper will be a supportive resource to any reader interested in women managers' contribution.

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