

# **Factors Influencing Women’s Career Choices in the Construction Industry: An Exploratory Study**

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## **Abstract**

The construction industry has been challenged to increase the percentage of women it employs. Evidence suggest that while in some areas of the industry there has been a noticeable change, the industry still lags behind many other industries. This is despite initiatives that have targeted attracting women to the industry. The aim of the study was to investigate factors that influence women’s employment into the construction industry. It is considered that such an investigation is useful to highlight aspects that need to be considered in initiatives that seek to encourage women into the industry. A questionnaire survey was conducted and qualitative data collected on influences on women’s career choices in the construction industry. The data collected suggests that fewer woman than expected entered the industry as a result of the initiatives put in place to encourage women into the industry. The main conclusions are that there is clearly a lack of women in the industry which is a historical problem. With the need for skilled workers still pressing, encouraging women into the industry could help alleviate the skills gap.

## **Keywords**

Women in construction; skills; construction industry; career

## **1. Introduction**

This study concerns the employment of women in the construction industry. Evidence suggests that the industry has a low number of women it employs than many other industries. Fielden et al. (2000) for example suggest that the construction industry is the second most male dominated industry in the UK, surpassed only by mining and quarrying. The Equal Opportunities Commission report, (2006), concluded that women only account for ten per cent of the construction workforce. Briscoe (2005) also demonstrated that between 1990 and 2003 the percentage of women employed in the construction industry has remained largely stable between ten and twelve per cent.

There is much correlation in literature with regards to the barriers faced by women in the construction industry, with Amaratunga et al. (2006) proposing that three of the obstacles are entry, development and retention. This study concerns motivation factors for women’s entry into the construction industry. It considers that the understanding of influences on women’s’ career choices into the industry is essential to design and develop appropriate measures that can help to promote the industry to attract female employees.

## 2. A Review of Literature

A number of studies have been conducted regarding women in construction. Much of the literature discusses the barriers that women face in the entry, development and retention within the industry (Amaratunga et al., 2006). For example Watts' (2009, p. 37) focused on the work/life balance of female Civil Engineers and discusses their position as what she considers to be "minority workers" in construction.

Powell et al. (2009) focused on the gender differences in construction research, and draws parallels between the industry and academia. Like the construction industry, Powell et al. (2009, p. 803) state that research suggests that women in academia "face problematic career paths as a result of masculine cultures and horizontal segregation." Similarly Fielden et al. (2000) characterized the construction industry as having horizontal and vertical segregation in the construction industry. They concluded that further research is required to ascertain why women experience this segregation, and that this research should address factors that "both attract and hinder women from the different spectrums of construction research" (p. 806). Oldham (2004) considered the gender inequality in facilities management. Considering that facilities management is a relatively new profession and therefore with potentially less prejudicial baggage against women, one would expect that women would feel more welcome into the profession. However Oldham (2004) suggests that women are still under-represented in facilities management and this new profession has succumbed to the same issues faced by the construction industry at present.

Amaratunga et al. (2006) reviewed the barriers faced by the women in the construction industry. Issues such as the image of the industry, career knowledge, culture and environment, family commitments, male dominated training courses and recruitment practices, were found to be some of the key barriers to women's entry into the construction industry. Watts (2009) considered the culture of working long hours and working away from home, as a potential demotivating factor particularly for women with children. Importantly Watts (2009) argue that the reduction and elimination of the barriers discussed is an important step towards recruiting and retaining more women into the industry. Dainty and Lingard (2006) also examined the industry's culture and working practices combine to impede women's achievement within the industry. Issues such as occupational segregation by sex, along with traditional career models, family structures and life course perspectives of women's careers were considered.

The adversarial nature of the industry is also found to be a key factor in attracting women into the construction industry. Menches and Abraham (2007) for example highlight the current status of women in the construction industry, whether in trades, management education or research positions. Their aim was to identify many of the challenges faced by women in the industry, as well as the opportunities and support networks available to aid in their success. They considered that attracting women to the industry was "problematic" as it is an industry which is "dominated by conflict and aggression" (p. 701).

Clarke and Wall (2014, p. 17) also propose barriers, which are previously unidentified in the literature reviewed; "short term concerns with output, a lack of state regulation and of employer responsibility and the very nature of the training system and the labour market." They describe these barriers as obstacles to women's integration into the construction industry. Davis (2014, p. 47) describes the construction industry as having a "well developed blame culture" and concurs with much of the previous literature (Fielden et al., 2000, Amaratunga et al., 2006 and Watts, 2009) in her assertion that there is a confrontational environment. She also mentions the presenteeism culture described by Watts (2009), involving drinking sessions after work and late night emails, which are viewed as an important part of career progression.

Many other studies have considered women's entry and progression into the construction industry. For example, Dainty and Bagilhole (2006) explain that men tended to have entered the industry in response to

a family member who worked in the sector; however younger women usually entered the industry as a result of targeted recruitment campaigns. This led to a poor initial understanding of the industry's culture and the difficulties associated with working in construction (a very male dominated environment). Women joining the construction industry also tended to be ambitious and high academic achievers, so the disparate career progression dynamics discussed above soon led to dissatisfaction. The research also found that the women's experience of higher education provided a "sheltered and unrealistic interface between career choice and working life within the sector" (p. 102), again leading to women becoming disillusioned with their career choice and leaving the industry at an early stage in their career. This assertion is supported by Lowe (2014) who believes that retention in the construction industry is an even greater problem than recruitment and states that the vast majority of women entering the sector will leave within five years. Lowe also discusses the findings of a 2003 study for the Royal Institute of British Architects, which lists an array of issues which provide a slightly different perspective to the barriers discussed previously. These issues are: sidelining, limited areas of work, a glass ceiling, stressful working conditions, protective paternalism preventing development, lack of returner training and more job satisfaction elsewhere.

The poor retention of women in the industry is referred to as the attrition rate by McCarthy, Thomson and Dainty (2013) who describe it as the "leaky pipe syndrome". By this, they mean that the women who are recruited gradually drain away from the sector, after the initial enthusiasm has subsided. When these women leave the sector, they talk about the barriers they have faced and this deters new women from entering the industry. The attrition rate is also described by Fielden et al. (2000), whose article aims to establish the reason behind this phenomenon. Lowe (2014, p. 71) describes the "self-reinforcing spiral" of the lack of female role models and ambassadors, especially when the construction industry is dominated by family recruitment.

Ginige, Amaratunga and Haigh (2007) discuss gender stereotypes as a barrier to women's career development within the construction industry, and concentrate particularly on women in managerial positions. At the time of writing, Ginige, Amaratunga and Haigh (2007) found that women managerial representation made up less than 1% of the total construction workforce in the UK. They state that although other barriers to women's careers have been identified, gender stereotyping is the most notable barrier. The "think manager-think male" (p. 1) belief is discussed, which is the stereotypical assumption that if a woman in a managerial position portrays traditional male characteristics, then it is a better predictor for success. This, in turn, discriminates women with traditional female characteristics from reaching higher positions. Berthoin and Izraeli (1993, p. 63 cited in Schein, 2007) believe that "probably the single most important hurdle for women in management... is the persistent stereotype that associates management with being male."

The importance of initiatives to attract women into the construction industry is another important factor. There has been discussion of the lack of women in the industry for over 30 years and research on the topic of women in management since the mid-1970s (Powell, 1993 cited in Oldham, 2004), but reports like the latest Smith Institute publication (2014) highlight the need for change and for more women to be recruited to fill an impending skills shortage. Organisations such as Women into Science and Engineering (WISE) and Women and Manual Trades were founded with the purpose of encouraging women into the industry, and supporting further training in order to retain these women.

Reynolds (2014, p. 39) proposes that more women could be inspired to enter the industry if the energy is concentrated on attracting the "adult new entrant", and that once women are in the 26 – 35 age group they have more experience of both the job market and of life. Reynolds, who herself re-trained later in life to become an electrical contractor, believes that this experience leads adult learners to be more driven, resilient and to have a better work ethic. The barriers faced by Reynolds, and other successful female electrical contractors included; having to fund their own training (which was high-cost), having to be willing to work for no pay to be able to gain hands-on experience, feeling isolated and alone without

female advisors or mentors in the industry and feeling as if they had a work harder than their male counterparts to prove themselves. Munn (2014, p. 4) feels that the industry should “wake up” to the potential of recruiting men and women at a later stage in their life – at present there is an absence of funding and clear routes for training for those who may choose to enter the trades later in their life.

Munn (2014, p. 7) suggests that the government should take a stronger lead in “articulating the business case for change and helping to increase those programmes currently in operation.” She goes on to say that without a culture change, the industry will not become more welcoming of women or eliminate its perceived bullying culture and that working on this change would enhance the image of construction. Reynolds (2014) suggests that efforts be concentrated on the adult new entrant and Munn proposes that funding for apprenticeships and courses for those choosing a new career be a priority; this funding could be from government or the industry. To assist in retaining those women who have already joined the construction industry, Munn (2014) believes that better conditions, flexible working policies and a more support for those wishing to progress into management positions are required. She proposes that would build up a more diverse management who in turn would attract a more diverse workforce.

Bagilhole (2014) discusses the way forward at length, proposing four initiatives for change: leadership, effective implementation, culture change and enhancing the industry’s image. The recommendations suggested are based on a number of previous studies that have investigated the factors militating against the diversification of the construction workforce and the experiences of women working within the industry. Bagilhole believes that in order for equal opportunities to be developed and implemented a systematic approach is required, which will bring equality into the mainstream of the construction business. She elaborates that a well-developed business case for diversity is required rather than externally imposed legislation, with the leadership coming from senior managers within large construction companies, professional bodies, industry boards, trade unions and trade federations, who could advocate the need for change. The effective implementation could include an industry-wide code of practice to communicate the rights and responsibilities of individuals with regards to equality and would require a lead from both construction companies and clients. To change the ingrained practices and culture Bagilhole suggests that the industry must change unfair or onerous terms and conditions such as the needs to be mobile and the lack of part time working or job sharing. The final initiative proposed was to enhance the image of the industry, by ensuring that a more inviting image is projected. Publicity and advertising materials should be inclusive of women and use role models currently employed within the sector to demonstrate the career potential and opportunities. The use of outreach work is also recommended to take information directly to the target group.

One barrier identified is the poor career knowledge amongst children and adults and as Nelson (2014, p. 32) asserts “girls are not born having already set their faces against manual trades – they are socialised towards the mindset.” Bagilhole’s suggestion of outreach work could involve talks to school children, to promote the idea of working in construction from a younger age and to hinder the development of gender stereotypes. Menches and Abraham (2007) suggest ways to improve awareness of opportunities in construction for women and suggest that educational institutes have a role to play in the process, along with companies within the industry. Internships and mentoring are suggested as viable ways to improve the image of the industry, and the article proposes that flexibility should be created to facilitate a cultural change. Lowe (2014, p. 74) believes there has been movement with regards to the barriers set out above, however believes that this movement is “often only in isolated pockets of good practice.” There are a number of organisations concerned with changing the practices of the industry, but Lowe believes the culture will not change until an industry-wide effort is made.

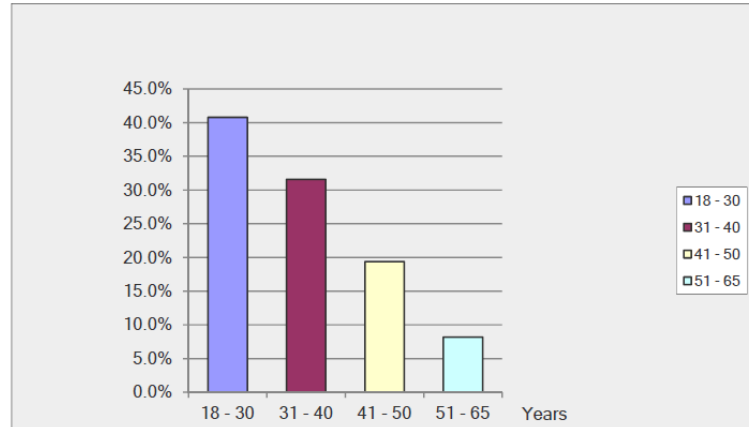
### 3. Presentation and Analysis of Primary data

#### 3.1 Methodology

A questionnaire survey was conducted targeting women in construction. The survey was administered as an online questionnaire. Participants were invited through various means including email and social media. As such it is difficult to estimate the number of women who were contacted and the response rate. However there were a total of 98 responses which was considered an adequate sample size for an exploratory study.

#### 3.2 Sample demographic

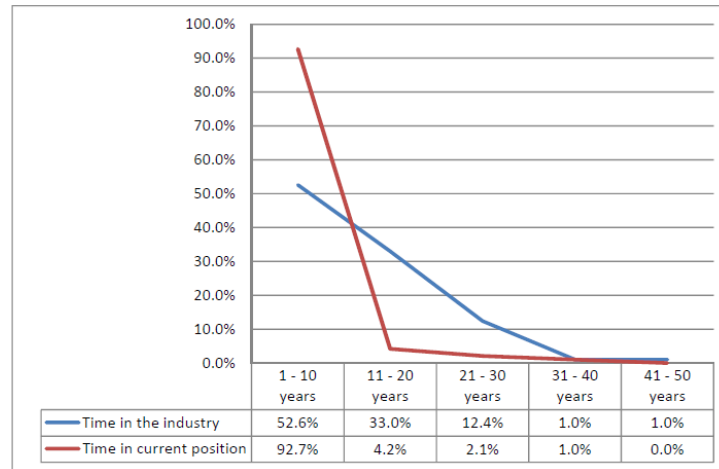
Figure 1 below shows the sample demography regarding age distribution of respondents. The graph indicates that the majority of the respondents were under 40 years of age and only 8.2% of the respondents were between 51 and 65. The distribution of the age of the respondents could support McCarthy, Thomson and Dainty's (2013) claim that there is a "leaky pipe syndrome" within the construction industry, where women join the industry but leave shortly after, after becoming disillusioned with their careers within the sector. Another prudent point to note is that a number of the younger respondents (between 18 – 30 years old) could have been encouraged into the industry by an increased number of more recent initiatives.



**Figure 1: Age group of the respondent**

Figure 2 show the career distribution of the respondents. The majority of the respondents worked as varying types of Engineer, with 18 of the 98 women working in the discipline. Second to this were women in commercial positions, of which there were 16. There were 25 women that were either directors or in management positions. This equates to 25.51% of the survey respondents. Lower numbers of the female survey respondents were found in Health, Safety and Environmental, Architectural, Operational, Design, Planning and Business Development roles. Only one of the respondents worked on site as an Electrician, which equates to 1.02% of the women surveyed. The lack of survey respondents who are tradeswomen is mirrored by a recent ONS survey where particularly the number of women who work as roofers, bricklayers and glaziers is seen to be very low.

Figure 2 shows the number of years respondents have been in their current position and in the industry. Of the 98 respondents, 96 answered the question of how long they had been in their current position. The majority of the respondents have been within their current position between 1 and 10 years, with only 7.3% having being in their current position between 11 and 40 years. No respondents had been employed between 41 and 50 in their current position. The findings also show that the majority of the women have been in the industry for less than 20 years. It should be noted that these figures could be influenced by the age group of the respondents, which is predominantly under 40 years old.



**Figure 2: Time in current position and in the industry**

### 3.3 Factors influencing women career choices into the construction industry

The focus of this paper is on the perception of factors influencing women to enter the construction industry. As such respondents were to indicate what factors motivated them to join the construction industry?’ was included within the survey. This was an open ended question and so only qualitative data was collected All 98 women responded to this question, and although their replies were mixed, there were some commonalities which will be discussed further below. The data was explored and the responses were grouped into 8 categories depending on their close alignment with the themed categories. The categories were mainly based on discussion in literature. For example Oldham (2004) describes facilities management for women as an [“Accidental Career”] where employees find themselves in a career path that they had never intended to go into. Dainty and Bagilhole (2006) believe that men tended to have entered the industry in response to a family member who worked in the sector [Family Influence], however younger women usually entered the industry as a result of targeted recruitment campaigns [Career Advice]. Bagilhole (2014) suggest that women in the construction industry are concentrated in secretarial or administrative positions. Evidence suggests that there are a number of people employed in the construction industry in other areas, but in the process of time have had to move into a construction related career, especially when this is seen as a [Moving Up] the ladder. Other categories included [Conscious Choice]; [Career Change]; [Attractive Industry]; and [Other Motivators- Nothing to do with the industry].

**Table 1: Factors influencing women career choices [Construction Industry]**

Factor	Frequency	Percentage
Passion for what it offers	28	29%
Conscious Choice	19	19%
Family Influence	12	12%
Accidental Career	9	9%
Moving Up	9	9%
Nothing to do with the industry	8	8%
Experiencing another world	7	7%
Career Advice	6	6%
	98	100%

Table 1 provides a summary of the responses from the survey. The data above show that almost a third of the respondents (29%) were attracted to the industry by what it offered [Passion for what it offered]. Statements such as an industry where I “can protect the public and make a difference to people’s live”; “I like buildings and the smell of building sites”; “interested in the built environment and how things work”. Clearly to these respondents the industry provided something that they may not get in another industry. A good proportion of respondents (19%) made a [conscious choice] to enter the construction industry. They were knowledgeable about what the industry was about. For example one respondent wrote “It’s something I wanted to do since I was 9”. Another wrote: “I always wanted to be an architect”; and another “Always interested in buildings and architecture”. Results also show that 12 of the 98 respondents (12%) reported that they had been encouraged into the industry by either family or close family friends [Family Influence]. There was also a mixture of maternal and paternal influence, with one respondent having a mother who was a Project Manager.

One of the barriers identified in the literature review was “poor career knowledge amongst children and adults” (Amaratunga et al., 2006). The data shows that only 6% of the respondents were influenced by a form of [Career advice] either at secondary school, university or in a different setting. Perhaps this low percentage should be worrying given that there are initiatives to encourage women into the industry. The percentage of those who may consider their entry into the construction industry [Accidental career] and those who were [Moving up] the ladder in their organization from low paid administrative jobs to a professional construction career were about the same [9%]. Bagilhole (2014) states that women in the industry are concentrated in secretarial or administrative positions, and it is interesting to note that seven of the respondents of this dissertation survey began their career working in these types of roles. One respondent wrote “I worked as an office junior and as part of my role I assisted quantity surveyors and I found the element of work interesting”. Another wrote “I worked as a site secretary ... and I loved it”. It is clear from such statements that exposing one to the workings of the construction professions can be useful to attract more women into the construction industry. It is interesting to note also a number of women (8%) who were attracted to take up positions in the construction industry for reasons not related to construction professions profession [Nothing to do with the industry]. Comments such as “sponsorship to university”; “availability of jobs”; “The Money”; “location” etc. were given. It was argued in the literature discussion earlier in the paper that the inflexibility of the industry especially for women with children can be a hindering factor. This may seem a contradiction with the statement regarding location. Eight percent (8%) indicated reasons that suggested that it was a career change. For example one respondent wrote: “wanted a change in direction from a previous career in ...”; “I wanted to do something different from the norm”; “after a career in ..., I went to college and wanted to try something different”.

#### **4. Conclusions**

It is interesting to note in the discussion of the results above that there is a plethora of factors that can impact on career choices for women into the construction industry. While there are a number of initiatives available designed to attract women into the construction industry, one of the key findings from this study suggest the need to provide an opportunity to women to be made aware of what the construction industry offers. A consideration of all the categories in table 1 above seems to suggest that the more women would be aware of what the industry offers, the more would be attracted to it. A consideration of the primary factor in the results for example regarding [passion for what it offers] can only be appreciated when one is aware of what the industry is about and how it impacts on the world. The findings that career advice has had the list impact among the respondent is disappointing. Overall it can be stated that any measures that would expose what the construction industry is about and what it can offer should be welcome as it is likely to have an impact on attracting women into the construction industry.

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