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Abstract. For many years, there has been an assumption that the UK construction industry is devoid of gender diversity. Part of this assumption was predicated on the representation of workers in construction sites, who are predominantly male. However, there are many positions in the construction industry that are not public-facing, and the question is whether the assumption that males fill most of these roles is also true. This issue has existed in the construction industry for many years; it appears that placing the sole onus on construction companies to employ more women may not be producing the desired level of progress. This research aim to establish whether clients can influence gender diversity in the construction industry with an objective of determining the current position of inequality in the construction industry; and existing incentives and frameworks. The research adopted an exploratory approach, with data collected through existing literature and records of 20 major construction companies, followed by interviews with Six individuals working for UK construction companies and clients of varying sizes. The study will awaken the construction industry and how it can initiate new proposals or support schemes that have worked previously, to encourage more women to join the construction industry. It reveals that clients have an important role to play if the construction industry is to improve on gender diversity through contractual commitments that could be monitored regularly throughout the duration of a project.

1. Introduction

Construction is not an attractive prospect to most women [1, 2]. The construction industry for many years has seen men on building sites, wolf-whistling at women passing by. Construction jobs have been perceived only as site-based, out in the open with sometimes inclement conditions that some women may not find appealing [3].

The construction industry has the worst gender pay gap of any industry in the UK [4], which also equates to one of the worst ratios of men to women in any industry within the UK. The industry continues to be the most male dominated of all the major industrial groups [5]. It seems widely recognised that the construction industry is suffering from its lack of diversity even though, at least publicly the industry seems committed to change with recent pronouncements by industry players on inclusiveness and diversity.

Dainty et al.'s [6] stated that when comparing men and women's career progression, women progressed at slower rates and faced more obstacles which precedes to a higher turnover of male managers. This comparison was based on four components encompassing these phenomena: competitive sub-culture, structural constraints and cultural values, discriminatory mechanisms, and behaviour in support of cultural values. This starts with lack of visibility in schools for possible career

paths within the construction industry, and a lack of promotion information emphasising, that construction jobs are as appropriate to girls as they are to boys. Education is seen as an important tool in promoting careers in construction [7].

Employment figures demonstrates that only 12% of the construction industry workforce are women. This can be distilled into 15% of white-collar managers and professionals, and only 1% of blue-collar trades [8]. Hence, "Workplace gender equality is achieved when people are able to access and enjoy the same rewards, resources and opportunities regardless of gender." [9]. The Farmer [10] Review stresses on workforce size and demographics, and recognises that the industry needs to change and modernise to become a more compelling proposition for prospective new entrants. This change needs to be government-led, followed by the construction client, and involves modernisation and mapping out the future needs of the industry, so that the requirements for the evolving labour supply, workforce training, and the adoption of new delivery technologies can be developed. This should include women and diverse candidates to give the construction industry the best chance of innovating and developing in a way that makes the construction industry more efficient, as efficiency is not currently a quality attributed to it [11]. This leads to the conclusion that gender diversity needs to be addressed at board level if construction companies want a successful and resilient business [12].

2. Literature Review

2.1 Inequality in the construction industry

Different figures on the percentage of women in the construction industry spanning 40 years is as illustrated below:

Table 1: Percentage of Women in Construction Industry.

Years	Percentages of Workforce. %	Source of information
1971	5.8	Fielden et al. (2001, p.
1981	8	294)
1991	9	
2004	13	Pepper, (2005, p. 1)
2011	11	Gayani Fernando et al.,
		(2014, p. 54)
2017	13	Wates, (2017)

The Equal Opportunities Commission (EOC) [13] and the Construction Industry training Board (CITB) [14] reveals that women are only 13% of the total construction industry in 2005, which was compared at the time to an economically active female population of 46% of the national workforce in the UK. Women accounted for 11.6% of the managers and professionals but only 1% of the construction trades. Pepper [15] pointed out that women accounted for 20% of students studying construction professions at undergraduate level, but nearly half of those studying leave the industry after qualifying. Women worked mostly in secretarial and sales positions where they make up 81% of the workforce, and there are approximately 27 million people working in the UK with a 50-50 split of men and women [16]. The UK construction industry employs 2.3million people but only 296 thousand of those are women, which is an 87:13 percent ration of men and women, and 12.8% of the workforce in the last quarter of 2016 representing 1.2% increase in 11 years (Key Stats About the Role of Women in Construction, 2018).

Women make up 13% of the construction industry but only 2% of on-site workers [17]. McKinsey's report [18], Why Diversity Matters, shows that gender-diverse companies are 14% more likely to perform better than those that are not gender diverse. Women in the construction industry only increased in the last 46 years by 7.2%, which is less than 0.16% increase annually, and in the last 7 years there is barely any increase at all. Men fill 99% of on-site Construction Global roles [19] with only 6% women

in senior roles in the UK construction industry in 2005, increased to 16% in 2015 whilst 79% were unhappy with their job progression compare to 2015 with only 29%. There has been a 60% increase in the average salary of women in the construction industry from 2005-2015, it seems things are changing, though this does not necessarily mean that women feels comfortable or supported by their male colleagues, though a decrease of dissatisfied women in the industry is a positive move [20].

2.2 Lessons learnt from other industries

The construction industry is often compared to STEM (science, technology, engineering, mathematics) and are recognise as male dominated area. WISE, Women In Science and Engineering, which is an organisation that supports women in STEM and is aiming for gender equality from the classroom to the boardroom have developed a framework for achieving this purpose as shown in figure 1 below. They have been tracking the number of women in the STEM industries for several years, as shown below [21]:

- 2014 - 13% of all those working in occupations classed as STEM are women
- 2015 - 14.4% of all those working in occupations classed as STEM are women
- 2016 - Women make up 21.1% of the core STEM workforce in the UK
- 2017 - Women make up 23% of the core STEM occupations in the UK
- 2018 - Women make up 22% of the Core STEM workforce in the UK

Source: The number of women in the STEM industries [21].

The 2018 year seem to flatten with some impressive progression been made, with a 10% increase within three years (2014-2017). Compared with the progression in the construction industry of a 7.2% increase over 40 years. The Ten step adopted by WISE over the years to drive the necessary shift in workplace culture is as illustrated below:

Figure 1: Women In Science and Engineering Ten Step. **Source**: [22].

If the framework is widely shared and adopted in the construction industry this could help promote positive change, and signify to women that companies are actively trying to address gender inequality whilst emphasizing that if they take up a position, they will be supported in the workplace. The WISE Report [23] - Making a Difference - why women in STEM become innovators, stated that Improving the ratio of women to men in STEM innovation by just 1% has the potential to increase company revenues in the sector by over £300 million per annum. McKinsey report Delivering on Diversity [18] correlate gender diversity and profit and concur that the companies with the most gender diverse executive teams were 21% more likely to have above-average profitability than companies with poor gender diversity.

The imagery used and the diversity of staff that appears in adverts or on websites, or language used is just as important in attracting diverse minds to the construction industry. Focusing on education to promote careers to youths at young age; such as schemes run by Inspiring The Future, which will involve bringing professionals such as women (whose gender is not typical of the present day construction industry), into schools and have the children question the professionals and try to ascertain the nitty-gritty of their various professional practices in real work environment. This may of course, challenge gender stereotyping and encourage the children to consider careers they might have already discounted and employers also recognising the complexity and importance of flexible career paths by providing different opportunities to reskill and develop their employees [23].

3. Research Methodology

The research method adopt a combination of explorative data from organisation web site, and substantiated with an In-depth interview with Six Senior personnel, from the construction organisation and client representative to assess if clients can influence gender diversity in the construction industry. Data was collected from company websites to ascertain; how they present themselves, if women featured in the images on their home page and the diversity of their board members. Sample of construction companies interviewed were selected using the top list of 20 construction companies in the UK, whilst exploring their financial year 2017/18. This information was taken from the UK Construction Index, and helps to draw comparisons with the top 20 construction Companies to identify the companies for interview, in terms of gender equality and the way they present themselves. The companies will be coded as RB1, RB2, RB3, RB4, RB5 and RB6 for ethical purpose. Interview was secure with the companies senior managers with lowest and highest scoring for displaying gender equality or employing women in their top management.

The six interviewee are Senior Managers' working for an organisations with company turnover between £1.2m - £6m and have over 20 years of management experience within them.

Participant	Information
RB1	Three women out of a total of eight board members. The best figure for women in the top quartile of the 10 largest construction firms
RB2	Two women out of eight board members with four women staff out of eight staff in the 'Spotlight'
RB3	One woman out of nine board members with three women staff out of nine staff in 'Our People' Section.
RB4	No woman among the four executive directors and only one woman in fourteen European management team.
RB5	Client representative on Commercial Project in London with every senior position working on the project being female
RB6	Government agency

4. Findings and Discussion.

4.1 Company Websites for Provision of Women in webpage and Diversity of their Boards

The construction companies and clients were keen that the industry should begin to recognise that diversity makes business sense [24], and should not be viewed as an aspect of corporate social responsibility, but rather as an approach to enhance business success. If the issue of gender diversity become an absolute requirement through more rigorous reporting and monitoring, businesses will begin to recognise the efficiencies and contributions of gender diversity and could realise a real transformation of the construction industry, where gender diversity would benefits good business sense [25]. The table 2 from the top 20 construction Companies websites was compared to identify their policy in terms of gender equality and the way they present themselves in term of women representation. Of course, each website was different, but the information in Table below demonstrates where information was from on each website.

Table 2: Analysis of Women Provision and Diversity of Company Boards Member.

Images of Women on Websites Home page	Company Number	How are Women represented on the Website
Less than 1	**4**	• No Board information, Graduate Images, 20 staff, no women. • Statutory Board - 10 in total, 1 woman, Senior Management Team - 12 in total 2 women (the HR and Finance Directors). • Executive Directors - 4 in total, no women European Management - 14 in total, 1 woman. • Board - 4 in total 1 woman (director of HR) Senior Management Team - 16 in total, 2 women.
Between 1 and 5	**13**	• Directors – 9 directors in total, 2 women including 9 women out of 12 graduates staff. • Board - 8 directors 2 women 8 Staff profiles 4 women. • Board - 12 in total 2 women. 6 staff, 2 women. • Board - 6 in total 1 woman. 4 staff, 1 woman. • Board - 9 in total, 2 women. • Board - 9 in total, 1 woman. 9 staff, 3 women. • Senior leadership team - 12 in total, 2 women. • Board - 8 in total, 3 women. 18 staff, 13 women. • Board - 8 in total, 4 women. Executive Board - 8 in total, 3 women. • Senior Leadership Team - 14 in total, 2 women. 9 staff in total, 3 women. • Board Directors - 8 in total, 1 woman Reginal Directors - 8 in total, no women. • Board of Directors - 10 in total, 3 women. • Board - 8 in total, 2 women. Executive Committee - 5 in total, no women
Between 6 and 10	**2**	• Board of Directors - 9 in total 2 women and 12 employees 5 women. • Group Board - 12 in total,1 woman. Executive committee - 10 in total, 1 woman.
Greater Than 10	**1**	• Main Board - 8 in total,1 woman and 10 trainees with 7 women.

Source: Company Websites Author Accessed., (2019).

Where the companies' boards only had one or two women; the women were directors of either HR or finance and not heads of construction. However, there was one company who had an equal split of men and women on their board, whilst some are slightly behind with three women out of a total of eight board members, they did show a majority of women. Based on ranking by turnover, it showed that company with between 1 and 5 women represented on the board is among the top 10 companies with the highest turnover. Hence, companies with the most gender diverse executive teams were 21% more likely to have above-average profitability than companies with poor gender diversity [18].

4.2 Current practice on Gender diversity in the Construction Industry.

All interviewees agreed that more could be done to increase gender diversity in the construction industry and all agreed that this would be a positive step. The companies (RB1,RB2, RB3 & RB4), had equality and diversity policies in place but only half of those interviewed could recount any details of the policy. Three out of four interviewees were not sure where to find them, but assumed they sat with Human Recourses (HR). Considering RB2 findings, which showed the importance of policy and procedures on ethnic diversity and inclusion (EDI), particularly for Black and Asia Minority Ethnicity (BAME) candidates, RB2 further echoed that 'there is more to be done on promoting diversity within organisations'.

The construction companies responded affirmatively when asked if they had ambitions to change gender diversity in the construction industry. The larger clients (RB1, RB2 & RB3) also had this ambition, but it seemed harder for smaller clients (RB4) to imagine how they could influence this or find a way for it to be a priority.

The difficulty came when trying to pinpoint how gender diversity could be improved and identifying already successful initiatives. Some of the construction companies had female-focused management schemes, which was encouraging. There was also discussion around the different women in construction groups and the work they are doing, although the feeling was that gender diversity needs to become an issue of business success and profitability rather than the right thing to do from a social aspect [23]. Flexible working was brought up in most of the interviews as a way to make the industry more appealing to women, and although there are some issues with this in terms of productivity and a shift in culture, it feels like a simple change that could have a big impact. Flexible working should of course be available and encouraged for both men and women, so it is seen as a legitimate option and not viewed as a method of not being working hard [26]. The other common possibilities was going into schools at several intervals, starting in primary school to counsel on career path. Also, when students are picking exam subjects, they should be informed of the different career options within construction and explain further than the visible roles on site by trades men [23].

All the interviewees agreed that clients could influence gender diversity and RB1 stated that there was no easy solution as to how this would work whilst suggesting that the straight forward solution might be through contractual obligations on gender-diverse construction teams. However, these agreements would need to be monitored to ensure compliance. Three of those interviewed touched on the issue of how construction skills are taught in the UK and if investment in training specifically for women would begin to reflect a change in the diversity of the construction industry.

If similar enforcement to that of the introduction of building information modelling (BIM) level two for all government project could work and there was an overall support but again RB1 did not show any clear route how this would work. There were also reservations among the interviewees (RB1, RB2, RB3 RB4) on hard enforcements, as there would need to be more sensitivity and nuance about equality and diversity that might be difficult to achieve. However, there was consensus that the government has a role to play in this lingering issue and there were several suggestions such as building regulations to achieve it.

All the interviewees confirmed that clients absolutely have a role to play in gender diversity in the construction industry whilst RB2 concurs that ''it's about stepping into that space and saying you can't leave it to them, you can't leave it to schools; we as employers in the sector have a role to be the best advocates about what it's like to have a career in our sector. The best advocates for that are the people that are doing the jobs today''. The framework/guidance below draws from this research and can be followed to ameliorate these issues. These includes:

Figure 2: Framework for gender diversity in the construction industry.

A recurring theme throughout the literature review has been that of communication, which includes both the imagery used in the construction industry and also the language. A report by WISE [23], found that women were not inspired to get involved in STEM industries when words such as innovation or innovator were used, though there is a large part in the STEM industries suggesting that women could contribute to it. However, it was discovered that languages such as problem solving, making a difference, improving people's lives, having a positive or lasting impact and simplifying complex situations seemed to be much more appealing. Therefore, languages used on any form of communications in the construction industry including construction websites should be viewed through the lenses of this research. Job descriptions and advertisements require reviewing to evaluate, if the language used creates barriers for women and perhaps other diverse candidates. The construction companies referred to the negative image of the construction industry, but overhauling the languages used whilst working in the industry combined with the form of inclusiveness with imagery utilised for advertisements, could be very vital in making sure that more women and diverse groups are reflected in the construction industry. Hence, the industry should view this as an opportunity; to change the makeup of the UK construction workforce, as a real chance to make people realize that these jobs are not just for men and that perhaps with a renewed workforce, would become the ever lust-after such image changes for the construction industry.

Furthermore, RB5 and RB6 concurs, that the industry needs female-focused training to introduce more women into the construction industry. This could be skill-based training centred on specific roles in the industry that lend themselves to this format. Roles such as project managers, which is a huge potential to attract women from other industries and could really commence the bringing of diverse individuals to the sector and therefore push the industry to evolve and innovate. Therefore, it seems necessary that a national training programme be set up, potentially for apprenticeships but specifically for women. This would enable clients to write into contracts the need for any contractor or sub-contractor to contribute to this scheme and bring on a certain number of female apprentices to contribute to the industry. The national training programme could start to address issues such as lack of skills-based training. European workers currently take most of the trade-based roles in the UK construction industry such as plasterers or bricklayers. Therefore, it raises the question of why are these roles are not being perform by British-born workers? The present day construction industry, needs to teach these skills as widely as we should or in a fashion, that attracts enough people, and particularly women [27]. The government needs to support a major change in the training of women for the construction industry, which in turn could change the make-up of the workforce.

5. Conclusions

The construction industry would benefit from a strategic body that regulates the industry. They should be responsible for creating benchmarks that client, project, and construction companies could measure themselves against and could assist the industry in undertaking more rigorous reporting to inform the necessary changes. They could serve as a body that help to establish a strategic fund to pay for new initiatives and support national training programmes inclusive for women. Peters [28] Framework for Action for the construction section is very important if fully implemented, as it could have a profound effect on the construction industry.

The most obvious solution seemed to be through contractual requirements and ensuring that these requirements are adhered with during project executions. There were more grand suggestions, such as connecting with national training programmes or centring projects on diversity, but these were more complex and the answer on how to achieve these are not so straightforward. Government setting standards of diversity for projects had widespread support but there would obviously be need to be careful, because of thinking about the regional nuances of these standards.

This paper is limited in scope of women presence in the UK construction industry. Since construction is global and very often plays a major role in determining countries GDP, it may therefore be absolutely necessary to further explore women presence in the construction industry in other developed countries.

References

[1] Atkinson J, Higham M and Shortland S 2019 Attracting, retaining, and developing a diverse workforce. Available from: https://www.kier.co.uk/media/3524/kier-diversity-research-report.

[2] Gayani F N, Amaratunga D and Haigh R 2014 The career advancement of the professional women in the UK construction industry, Journal of Engineering, Design and Technology, **12 (1)**, pp. 53-70.

[3] Griffiths S 2008 George Wimpey bans the wolf whistle. Building Available from: https: //www.building.co.uk/news/george-wimpey-bans-the-wolf-whistle.

[4] Ali B 2018 Gender pay gap: Construction exposed as the worst offender. Construction News Available from: https: //www.constructionnews.co.uk/best-practice/skills/gender-pay-gap-construction-exposed-as-the-worst-offender.

[5] Fielden S L, Davidson M J, Gale A and Davey C L 2001 Women, equality and construction, Journal of Management Development, **20 (4)**, pp. 293-305.

[6] Dainty A R J, Bagilhole B M and Neale R H 2001 Male and female perspectives on equality measures for the UK construction sector, Women in Management Review, **16 (6)**, pp. 297-304.

[7] Francis V and Prosser A 2014 Exploring vocational guidance and gender in construction International Journal of Construction Education and Research **10(1)** 39-57.

[8] Galea N R 2017 Rigid, Narrow and Informal: Shifting the gender imbalance in construction.

[9] Commonwealth of Australia 2018 Workplace gender equality: the business case, available from: https: //www.wgea.gov.au/publications/gender-equality-business-case.

[10] Farmer M 2016 The Farmer Review of the UK Construction Labour Model. UK: Construction Leadership Council.

[11] Cummins R A 2008 The Wellbeing of Australians Differences between Statistical Sub-divisions, Towns and Cities, Report 19.1 Australian Centre on Quality of Life, Deakin University available from http://www.deakin.edu.au/research/acqol/index_wellbeing/index.htm

[12] Women In Construction 2021 The Business Case for addressing the gender imbalance in Construction. Available from: https://www.women-into-construction.org/wp-content/uploads /2021/02/

[13] Equal Opportunities Commission 2004a 'Plugging Britain's skills gap: challenging gender segregation in training and work', Report of Phase One of the EOC, pp1-31, ISBN 1842061119

[14] Construction Industry Training Board (CITB) 2004 'Women in construction', CITB Construction Skills, Factsheet, March 04

[15] Pepper C 2005 A critical evaluation of diversity and equality in the UK construction sector. Available from: https://search.ebscohost.com .

[16] Office of National Statistic (ONS) 2016 Families and the labour market, England. Available from https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/ articles.

[17] Wates J 2017 Building an Inclusive Workforce. Available from: https: //www.ciob.org/blog/building-inclusive-workforce .
[18] McKinsey 2017 Delivering through Diversity. Available from https://www.mckinsey.com.
[19] Manley S 2010 Managing diversity and equality in construction, Construction Management & Economics, **28 (1)**, pp. 103-105.
[20] McKinsey Report 2020 Women in the Workplace Available from: https: //www.mckinsey.com/featured-insights/diversity-and-inclusion.
[21] WISE 2018 Work Force Statistics. Available from: https://www.wisecampaign.org.uk/statistics-category/workforce/ .
[22] WISE 2014 Women in Science, Technology, Engineering and Mathematics: The Talent Pipeline from Classroom to Boardroom. Available from: https://www.wisecampaign.org.uk/statistics/wise-uk-statistics .
[23] WISE 2019 Making a Difference - why women in STEM become innovators. Available from: https: //wisecampaign/ Making-a-Difference-why-women-in-STEM-become-innovators.pdf . Women and Work: The Facts. (2013) Available from: https://gender.bitc.org.uk/all-resources/factsheets/women-and-work-facts.
[24] Loosemore M, Phua F, Dunn K and Umut O 2010 Operatives' experiences of cultural diversity on Australian construction sites, Journal Construction Management and Economics Volume **28**, 2010 - Issue 2, London: Taylor & Francis.
[25] Cummins R A 2008 The Wellbeing of Australians - Differences between Statistical Sub-divisions, Towns and Cities, Report 19.1. Australian Centre on Quality of Life, Deakin University. available at http://www.deakin.edu.au/research/acqol/index_wellbeing/index.htm
[26] Fielden S L, Davidson M J, Gale A and Davey C L 2001 Women, equality and construction, Journal of Management Development, **20 (4)**, pp. 293-305.
[27] Galea N, Powell A, Loosemore M and Chappell L 2015 Designing robust and revisable policies for gender equality: Lessons from the Australian construction industry, Construction Management & Economics, **33 (5)**, pp. 375-389.
[28] Peters J 2011 Equality and diversity: good practice for the construction sector. Available from: https ://www.equalityhumanrights.com/site