

# Challenges and Barriers to Women in the UK Construction Industry

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## Abstract

This paper raises various challenges and barriers faced by women in UK construction industry. Women working in construction industry are observed to be very low when compared to men. It was observed that currently women work force in construction sector is less than 15%, of which most of them are observed to be working in planning and office based jobs. This paper discusses about various barriers and challenges faced by current women in construction sector focusing on UK. Various issues and barriers faced by women have been debated. Lack of awareness to join construction industry is also being one of the major barrier. From the research study, it was observed that women working are mostly into non-technical skills but it is because of difficulty to balance work life balance due to lack of flexible work hours. Lack of these will not let women balance between family needs and fruitful career. This study helped to focus and work towards various recommendations which help to improve work atmosphere. These suggestions help for better women retention and contribution in construction sector which is known to be male dominated sector. Few of them being creating better training towards equality, creating awareness at young age and encouraging to enter construction industry. Recruiting more women also encourages towards a better women employment rate.

## Keywords

Women, Barriers, Challenges, Commitments, Safety, Training, Site Job, Employee, Recruitment construction industry

## 1.Introduction

Currently, women have made some significant great advances in work globally. The women employment rate has been raised continuously, as today the number of employed women in work are becoming higher than ever before (account by half of the workforce approximately). However, in construction industry sector the progress of using women performance and efficiency is very low, while construction sector is described as one of the largest employers in the UK. Authors point out that the women account only for 11 percent of workers. Moreover, the gap of gender in construction is wider than in other industries. Obviously, the sector could not give neither justification nor presence of the remained 'no-go is 'for the women (CIOB, 2016). Thus, recruitment and retaining more women is needed in order to fill the skills gap, not only in support roles. Hence, this report will pick up and show the barriers and challenges facing the sector and that change can happen.

The construction industry has an annual output in which is ranked as the global top ten, and it has a high role in Britain's prosperity. Consequently, it is a substantial employer and it provides 10% of UK's GDP in which the people employment number in this sector is over 2 million (DTI 2003b; CITB 2003a). Consequently, construction industry is not a symmetrical industry in which it includes a broad range of skills, products, and activities. It is comprised from design, building, civil engineering, manufacturing and fabrication firms' components used by the industry (Newman and Itzin 2010). The workforce is made up from multiplicity of trades and skills. Consequently, meeting the assumption by supply of manpower to match the demand, in time of booms the market used to pay higher wages in order to attract skills, and used out-source labors and sub-contractors has helped in bust times; this is rarely because of acute skills gap (Lynch 2006). Hence, the continuous sector growth is fueled by increasing government expenditure by placing a strain in the construction labor market to increase skills demands. This demand has threatened satisfaction of client as the industry ability is affected in delivering projects on time and meeting the budget of client (CIOB, 2015). Thus, the Government aims to improve the performance in the industry. As Egan's Reconsidering Construction report and the subsequent Accelerating Change (2002) consultation document) are unlikely to be met except if there is a motivation, skills, availability, and stability in the workforce.

## **2. Literature Review**

### **2.1. Overview of women status in Construction industry**

Despite the range of the initiative in the last 20 years, the construction sector remains largely white of able-bodied and male. The UK women employees across all industries are made up of 46%, compared to 10% approximately in construction (ONS 2009). Consequently, figures represent that in higher education is a little better, in which female represent 18% of students in civil engineering, 31% of building, planning and architecture students (HESA 2009). Distinctly, clue shows that gender inequality persistence have an effect in construction in retention, progress, and recruitment of female's and it is highly related to structural and cultural obstructions (Sang and Powell 2012). Certainly, business case studies have argued that calls for increasing diversity and various work teams can have higher efficiency (Ely and Thomas 2001) and it could develop the available talent pool (EHRC 2009). Loose more et al. (2003) has proven that for a good employment practice a fair treatment of all employees must be fundamental in the construction industry. Perhaps, Henwood (1996) claim that business case had encourage female employers to be seen as a final resource during time of skills shortage. This lead to vulnerability for women essentially in economic crisis periods (Government Equalities Office, 2009, Griffiths et al. 2006).

Generally, women have been known that they will have more obstructions as their career evolve. This is applied essentially to non-traditional jobs such as the construction sector, in which it has the smallest representation of women out of all British industries' workforces (Gale 1995). Employers' attitudes in the construction industry researches including females, and on identification of women barriers specifications when they enter the construction industry has a previous investigation (e.g. Rodgers, 1991; Srivastava, 1992; Wilkinson, 1992; Gale, 1994a). Presently, concerns of attracting the females to the industry and retaining ways of women are there. However, a wastage seems to be occurred and factors behind this is not understood yet (Stone and Atkins 1992). The employment role of female has a significant change in most of the societies, while in UK female are above the half of the workforce totally (Employment Service 1998). Notwithstanding, gender segregation indications in the industrial sector and work area still exist. According to the Equal Opportunities Commission (1997) in most sector females are still under representation, with the construction sector is still being on men maintain as in 1997 female contribution was only by 13%. They are in oftentimes enter an arena in which the women have not been there before, except in a clerical capacity, and professional women experience "entrenched sexism".

## 2.1.UK Perspective

Construction industry is known to be one of the most country's employers which provides employment to about 2 million people. The contribution of female employees is transforming radically in majority of societies and constitutes about 50% of overall Britain's workforce. According to Construction Industry Training Board (2016) report there is about 9.9% increase in the number of female workers in construction industry by 2015. It shows that the rate of women entering construction industry comparatively higher than men. Statistics shows that the male workers were increased only by 6.6%. During the period of recovery from recession the construction industry has got huge number of vacancies, in 2013 it was reported that there were 14000 jobs available and within one year in 2014 it has increased to 21000. According to surveys conducted by Royal Institution of Chartered Surveyors it was seen that there is increase in demand for construction workforce despite the fact that lacking skilled labour. Regardless this fact the proportion of women in construction in UK has not changed much which can be seen from above figure. This issue is well supported by both forms supply and demand perspectives. Considering the supply side the number of enrolments on construction industry courses has decreased and major deficit of managers and supervisors contribute to maintain the industry under qualified (Equate Scotland 2017).

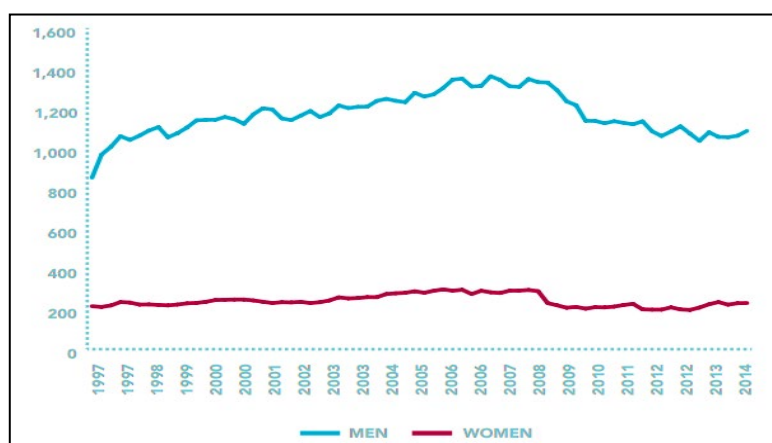


Figure 1. Construction Workers Statistics (1000s) ONS, 2014

## 2.3. Women Leadership in Construction Industry

In UK economy construction industry is said to be second most male dominated industry after mining and quarrying industries. Though it employs more than 13 million women contributing to 50% of total workforce still it lessens the construction industry in UK (Nirooja 2010). Despite the fact in increase in amount of women workforce in construction industry still contributes only to 12% which remains unchanged over the years (CITB 2016). The improvement in women workforce and across various positions of leadership has raised several questions such as whether women are being placed same as men. However, modern thinking has completely conceptualised the typical feminine leadership style contrasts from its male competent. According to researchers' certain characteristics are specifically classified as feminine such as communication skills, interpersonal skills, subtle approach in handling people and advanced negotiation and handling conflicts skills (Thuraiajah, Amaratunga and High 2007).

In 2003 a Greek research organisation has conducted research says that women have got qualities that are capable of contributing to the development of communication, organisational commitment and climate and other typical generic leadership requirements (A, 2009). However, advanced studies say that these qualities are not well exhibited in managerial behaviour of women. Also, it was found out that main source of the discomfort is weak human relations mainly because of lack of mutual understanding between women leaders and organisation members and inefficient in communication while pursuing the mutual needs. It was also understood that given an opportunity women managers and supervisors can express their characteristics of empathy and understanding which are typical features by nature and can be overcome by appropriate encouragement (Constructionyouth 2017).

For several years' people are in belief that majority of leaders are very confident, competitive, assertive, decisive and task oriented which are commonly viewed as muscular features. But one should also consider that effective leadership also requires some excellent interpersonal skills, trustworthy relationships, interest in building

cooperative organisation and utilisation of other behaviours which are viewed as feminine specifically to the modern organisations (Clapp 2017).

## 2.4. Gender Stereotypes

The never ended gender discrimination against women leadership has become fundamental reason behind the attraction of researchers in discovering the major differences between women and men leadership attributes. In construction industry women are underrepresented even in organisational ranking schemes. One of the key factors required to seek change in an established environment is should be able to reach highest position in the management to reform the policies and planning (N, D and Haigh 2007). Some of the recent studies shows that even though increase in number of women in construction industry most of them are skewed in the leadership positions. Though its known that current women's leadership is being suppressed in the construction industry thus to overcome such suppressions new management and policies should come into existence. In this research, it will briefly discuss about how to overcome the current issues of women leadership in construction industry. In order to enhance the women leadership in construction industry it is vital to understand the influences and impacts on the developing leaders.

## 2.5. Career Barriers

The major problem is image of construction sector is aggregated by lack of general knowledge and information about industry, its career opportunities and qualification requirements. According to CITB (2003) research it's found that the teachers and parents were under belief that the jobs in construction industry are very limited to specific roles and responsibilities. Also in earlier days, the girls career choices were quite limited by parents and teachers and encourage them to embark onto non-traditional professions (Agapiou 2003).

## 2.6 Work Culture

In this section, it provides an overview of the career barriers confronting the women in construction industry. As discussed above the construction industry has a major problem with its image that makes people even more uninterested. The report discovers that the image of industry weighs against the women's entry into the industry. The dominant image is that industry is male dominated which always requires strong muscular attributes to on site working conditions. Which mainly causes disinterest to women who are willing to join the industry. One of the researches shows that majority of male students prefer to consider career options in construction than the female students at their engineering or apprenticeship levels and another underlying fact was that even females consider construction industry was worst and it is place for males only. The CITB found out that about 63% of women who were interviewed sense that it's practically difficult for women to get jobs in construction industry and only about 17% of them believed that it is a suitable career option for them (Shanmugam et al. 2007).



Figure 2. KEEPMOAT Survey (Construction News 2016)

As it displays masculine culture where the organisational relations are highly characterised by means of conflict, argument and crisis. Which results in exposing the employees to a hostile environment (Construction News 2016). Women who are usually attracted by the construction industry confronts the identical stereotypical situations in

other industries. However, in construction industry there are additional stereotypes associated to nature of profession and professionals. Women who usually enter the industry tries to fill under managerial positions which gives the impression that construction industry is most biased industry in UK because of extreme masculine culture which is quite discriminatory to women (Construction News 2016). This has resulted in emergence of differentiated opportunities which has an immediate impact on the women staff turnover in construction companies. The younger women who were highly disappointed with their career choices more quickly than men and started leaving the industry at earlier stages itself. This environment has displayed even more distressing terms such as sexual harassment which has become a huge concern for women. It was also highlighted that male values are standard, women who are willing to join the industry should act like men or be adaptable to the culture to become successful. Also, the male managerial leaders have put stringent requirements which has let down several women applicants making the industry even more destructive (Randstad 2017).

## 2.7. Industry Image

Several colleges and institutions has setup mainstream trainings and courses to create the host for problems being faced by women in male dominated industry such as construction. As discussed change can be achieved by reaching to managerial positions which are gained by the informal networks and mentors at work. But research says that women lack access to such networks which provide information of those kind of opportunities.

In addition to image, the industry has got very poor retention. As very less number of women join the industry most of them leave within very short period say about five years. According to Human Rights Commission's interview session in 2011 it was identified that majority of women workers' opinions was classified as there is no enough progress being made in mitigating the discrimination. In 2003, Royal Institute of British Architects conducted a survey in identifying the issues associated to women leaving the construction industry. It was found out that several factors contributing to it:

- Long working hours and Low pay rates
- Unfriendly working environment and redundancies
- Limited work areas
- High stressful conditions
- No development
- Sexism
- Extreme masculine culture

The below table highlights the major issues confronting the various age groups in construction industry (N, D and Haigh 2007). The table clearly indicates that woman continue to fight against the male dominated organisation perception and culture (Constructionyouth 2017).

Table 1. Major Issues (Organisational Cultures. Obstacles to Women in the UK Construction Industry)

Obstacle	Age (years)					
	18-24	25-35	36-45	46-55	56-65	65+
Attitudes, behaviours, and perceptions	1	36	35	9	10	0
Inflexible working practices	0	11	32	13	2	0
Lack of training opportunities	2	4	15	8	12	0
Lack of support, networking and mentoring opportunities	5	17	9	4	1	0
Other issues	1	0	3	1	0	0
Subtotal	9	68	94	35	25	0
Total						231

## 2.8. Statistics

As discussed earlier there are confronting barriers for women in leadership in construction industry. In addition to above discussed barriers the shortage of leadership in the sector also prevents women entering the industry. Its known that construction industry lacks understanding of future needs to drive respect, inclusion and fairness. Industries lacks understanding of long term impacts of supporting the women indicates less retentions (N, D and Haigh 2007). According to ONS 2016 Statistics at the end of fourth quarter of 2016 women constitute to 12.8 % of

construction workforce where 18.8 % of that are directly employed and 4.2 % are self-employed. Studies shows there isn't much increase in comparison to 2007 workforce. Also, the Keepmoat survey is evident showing that only 13% of women aged 16 to 25 years are interested in construction career opportunities (Equate Scotland 2017). Director of research firm says that it's no surprise considering the facts of stereotyping prevailing in the youth, instead the survey becomes evident for all such stereotypes. It indicates that there are still so much needs to be done to increase the number of women in construction industry. It also says that as construction industry is a low margin thus less investments are made in promoting more training and development sessions. Therefore, a team approach should be considered and contractors should be encouraged to conduct such training programs and let employers make believe that it does not cost any extra to recruit a woman. Moving further in the research it also indicates there is expanding gap in wages with male workers earning about £11000 more than female from similar role (ONS 2016).

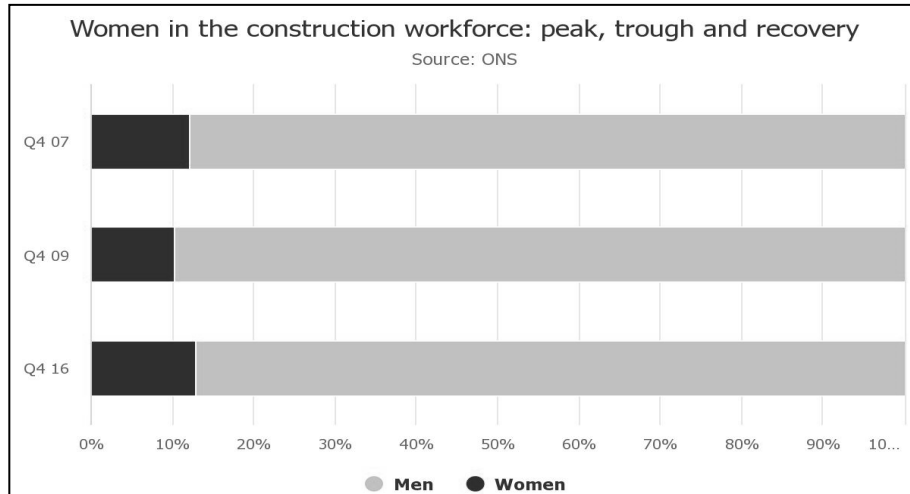


Figure 3. Workforce Statistics (ONS 2016)

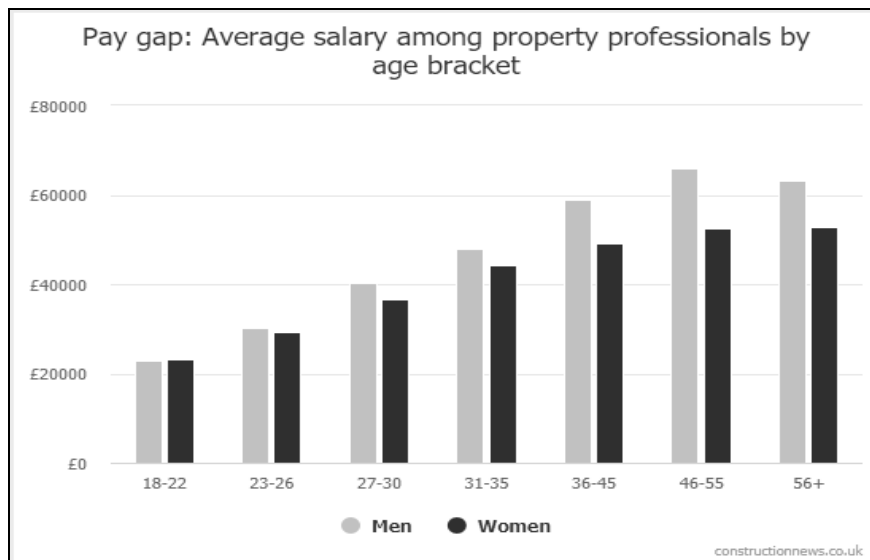


Figure 4. Wage Statistics (ONS 2016)

The above data shows that as men and women aged group of 18 to 22 years earn about almost same but with the increase in age bracket the difference also increases. This is also one of major factors that's failing to attract women into construction industry (ONS 2016).

## 2.9 Recruitment Strategies

### 2.9.1 Educate Educators

Resonantly, the current suggestions for women recruitment in construction industry it should be focused on promoting industry at base levels such as elementary and secondary schools itself (Moore 2006). It can be initiated by creating a bridge between the employers and educational institutions. An organisation named Hawaii's Women in Technology Program has conducted research about the companies' strategies implemented in marketing their job vacancies and how female applicants responded. As Women in Technology aim is to improve the relationship between guidance counsellors and educational institutions through this they have access to database of female students (Wangle 2009).

Through this relationships enhancement it encourages to invest in talented female individuals by offering internships and apprenticeships which leads to full time employment. It was also identified that the recruitment process could be much improved by promoting the coordination and develop communication strategies at root levels of career which are nothing but secondary schools and post-secondary construction management programs. Undoubtedly, it can be said that in recent years' women are being attracted to construction industry by unleashing the potential career benefits and educating them right from school level. Director of one of the well reputed construction firms says that it is essential to emphasize the economic benefits of career in construction. Just letting the people educate about the construction industry does not improve women career in construction industry it should also discuss monetary terms as a young girl she looks at the career options as what it can be and how much she can earn (Fisher 2007). Another major barrier is the recruitment process for apprenticeships and successful retention as discussed earlier among the least joined the industry majority of them leaving within very short period. Therefore, Hawaii's Women in Technology Program handled this scenario by initiating the production of flyers with image of women construction employee and attractive titles. It also displayed the salary range for apprentices and other benefits along with key information about the role. There are several other initiatives were taken by Women in Technology Program in Hawaii which increased the number apprenticeships in construction industry from 3.2 % to 5.1% in 2003 with an overall increase of 59% (Andrews 2008). To make this kind of recruitment strategies more successful the change should start within the industry by incorporating various cultural competencies ways for hiring process and discriminatory practices should be mitigated. In addition, managers should be able to trained to settle up the cross cultural and gender conflicts across the organisation.

Developing legislation only will not be sufficient the women should be given more flexibility in making their career choices preventing them from following traditional choices at early ages. Once women given complete training at companies about work environment and attributes they should be also given support throughout the work life by providing flexibility in work schedules, shared work basis and even childcare options (Andrews 2008). Prior to successful recruitment of women into industry it should be ready to change and develop an atmosphere where female workers are well treated.

## 3. Research Methodology

Various techniques or methods adopted to conduct any research is called Research method and research methodology is the process or way of solving research problems systematically. (Quraishi 2012). Research methodology can be defined as a process in which data is collected and analysed for any research most efficiently. Certain unanswered questions and missing data in literature study can be answered by choosing a most efficient method. So, choosing right and most reliable and efficient research method is most important for any research. Research methods can be classified into various types. One or more different methods can be adopted to obtain data required for the research. ("II. PROJECT DESCRIPTION AND RESEARCH METHODOLOGY" 2010), It involves numerous stages such as research question, research design and research approach which are interconnected. Research method chosen is good when it comprises of the following:

- Well organized research question
- Critical Literature review
- Effective results for the research questionnaire
- Effective data analysis
- Sufficient data collection
- Research method should be most effective which helps to achieve aim of the research

Various research methods are available of which few of them are explained below which helps in understanding each method and its efficiency in detail which further helps in choosing the most appropriate and effective research method for the dissertation. Below are the few types of research methods which are as follows:

- Deductive vs Inductive method
- Empirical vs Conceptual
- Descriptive vs Analytical
- Fundamental vs Applied
- Problem oriented research
- Quantitative vs Qualitative

### 3.1. Deductive vs Inductive method

#### 2.1.1. Deductive Approach

Developing hypothesis (or assumed) based on existing theories and relating to design strategies for hypothesis testing and interpretation. Deductive approach starts with a true statement or theory and studies various possibilities to reach a precise, logical conclusion as required for research. As the name suggests this study uses deduction method after selecting theory based on its various predictions are made and its consequences are analysed. So, it is very important and accurate only when the theory is appropriate. So it is a process as said by Dr.Sylvi Smaller that it starts with theory or a statement and then various observations will be concluded. This theory follows logic from a known theory so the end logical conclusions might be true or not based on theory. This is usually adopted when there is lack of time for research.

It is also popularly known as “top to bottom method. This is usually linked with quantitative method such as conducting surveys.

#### 3.1.2 Inductive Method

Inductive method uses existing data and emphasizes on developing new theories from it. This method is also known as “Bottom Up” due to its approach method. Inductive method is theory generating in contrast to the deductive which is theory testing. In this method, Precise observations are first identified and it later works towards finding theory or conclusions which is quite opposite method of working when compared to Deductive method. (Ryan et al. 2002) In between observation and conclusion development various stages such as hypothesis and patterns are framed.

These two research methods are quite different in nature as they are quite opposite. Deductive method in nature is very narrow and is mostly concerned with theory and hypothesis. Inductive on the other hand is open minded in contrast to Deductive method. These two methods might seem confusing while conducting certain research as both methods are used to solve social research.

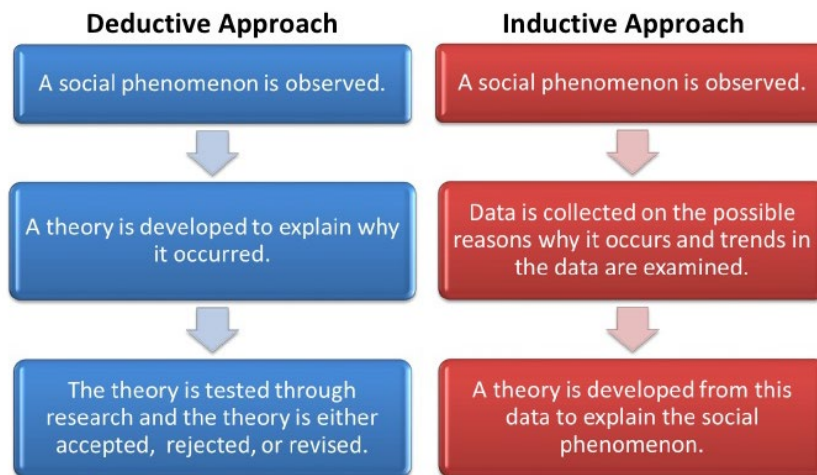


Figure 5. Showing Deductive vs Inductive Method

### 3.2 Empirical vs Conceptual Method

Empirical and Conceptual methods which are generally used to conduct research. Empirical method is a procedure in which with the help of investigation and observation a given hypothesis is tested. Conceptual method can also be referred as analytical method. Both the research methods are useful in their own way of approaches depending on the research requirement.



### 3.2.1 Empirical Research

Empirical research is done through data collection which is supported by research and observation. (Quraishi 2012) With the given hypothesis when two people research and collect information individually through various methods they attain diverse results because the observation done by them will be different with varied perception. Empirical method is preferably used in fields of scientific studies.

### 3.2.2 Conceptual Research

Conceptual analysis is most sought out method of research in philosophy and social science fields. In this a concept or theory would be divided into various components, to understand it better and deeper philosophical questions related to theory. However, this method is relatively popular, there are few critics related to this method. Conceptual method is very much useful when combined with other methods for better research results and which can be more precise and reliable.

## 3.3 Descriptive vs Analytical Method

### 3.3.1 Descriptive method

Descriptive method mainly focuses on survey and question based research method. As it is survey based research there will not be any control of researcher on the figures generated through survey. (Kothari 2016) Apart from survey and question based research this method also uses various fact finding methods such as correlational and comparative method. It helps in understanding the present or current scenario from large group of audiences which will be from their personal experience or knowledge. Major purpose of this research method is to describe present existing state affairs.

### 3.3.2 Analytical Method

The main objective of the analytical writing section doesn't provide the reader with information or the actual facts, but it helps to judge the existing facts to compare and evaluation. Analytical method helps in building support for analysis of collaborative relationships. Analytical method tries to describe how and why which can be further classified as cause and effect relationship.

## 3.4 Fundamental vs applied Research

### 3.4.1 Applied Research

Applied research purpose is finding solution to the existing instant problem faced by the research group or person. Example of applied research is it aims at finding solution to the problems faced by business oriented or social problems. Applied research aims at determining solution to real-world problems.

### 3.4.2 Fundamental Approach

Fundamental research is the study of some natural phenomena or purely related to mathematics is an example of basic research. Similarly, the investigation of human behavior in order to make the generalization of human behavior is carried out, is also an example of basic research.

## 3.5 Qualitative vs Quantitative Method.

Research methods can be broadly classified into two major types they are Qualitative and Quantitative research methods. All the above-mentioned research methods either use qualitative or quantitative approach to achieve research aim. As any research conducted should either use Quantitative method which uses number or statistics based research such as survey based research in which data is collected from survey participants, qualitative method in which data collection such as case studies or interviews etc., are conducted.

### 3.5.1 Qualitative Method

Qualitative method uses non-quantitative method to analyse. This method of research is mostly based on collecting, observing, analysing and understanding what people say from their experiences. This type of research focuses on in depth interviews either individually or in groups. This is an open end and exploratory research. There should be a schedule as necessary before conducting the interview and questions related to interview are to be framed beforehand because this helps the research be more efficient and effective. (Brown 2006) Interview questions should be direct and focused on obtaining clear data and facts as required. This method helps in understanding various perspectives and analyzing various opinions.

Apart from interview various case studies as required for research would be studied to understand incidents happened in past which would act as experiences, these experiences further help individuals to understand

unanswered questions in a better way. One or more research type should be understanding for a better understanding of research. (Corbin and Strauss n.d.) Various incidents from past can be researched in depth which help us generate facts. Any type of research has its own set of advantages and disadvantages which are as follows.

### 3.5.2 Quantitative Method.

Quantitative method as the term proposes focuses on quantity or statistics. Quantitative method uses numerical data to explain. The numerical data collected is later developed into statistical information by using mathematical process. (Aliaga and Gunderson 2000) In this method first a phenomenon is established and numerical data is established by using mathematical models and theories or hypothesis. Quantitative method usually relies on data obtained by surveys and experiments. This type of research is mostly used for market based research.

Advantages.

- High number of audience can be participated which gives more reliable data.
- Less time consuming for respondent as questions are close ended.
- Data analysis consumes less time comparatively once the required data is collected.
- Various opinions can be obtained from different people form varied backgrounds from experience.
- Information obtained cannot be misinterpreted as it is numerical based.

Disadvantages.

- Requires large group of people to have better and reliable statistical data.
- It is expensive when compared to qualitative method as survey requires more money.
- Hypothesis is fixed before so any new findings cannot be added due to fixed parameters.

<b>Difference Between Quantitative &amp; Qualitative Research Design</b>	
<b>Quantitative</b>	<b>Qualitative</b>
<ul style="list-style-type: none"><li>• Quantitative research focuses on numbers or quantities.</li><li>• Results that are based on numeric analysis and statistics.</li><li>• Often, these studies have many participants.</li><li>• It is ideal to have a large number of participants because this gives analysis more statistical power.</li></ul>	<ul style="list-style-type: none"><li>• Qualitative research studies are focused on differences in quality.</li><li>• Results are in words or pictures rather than numbers.</li><li>• Have fewer participants than quantitative studies because the depth of the data collection does not allow for large numbers of participants.</li></ul>

Figure 6. showing difference between Quantitative and Qualitative research design

## 4. Questionnaire Analysis

Questionnaire survey has been sent to 42 people working or related to construction sector in UK. This includes various professionals from varied fields such as working professionals, students studying construction etc., Out of 42 people 34 people have responded to the survey with their valuable feedback. Each research question is analyzed in detail with the help of statistics obtained and this is further presented in the form of pie charts, graphs, bar charts etc., for a better understanding.

First question was optional which was responded by most of them which being name of the respondent's organization. It was observed that people from different organizations from large scale firm to small firms have taken part in survey from different parts of UK. Out of 34 people responded more than half of them were Females being 22 of them and remaining being male respondents.

As survey is mainly focused on women centric survey questionnaire was sent to maximum working respondents compare to men as this helps in much better to understand barriers faced by women. Next being age group it was observed that out of 34 people 12 of them are below 25 years and 15 members above 25 and below 40 and 7 people

above 40 and below 75 years of age. This clearly explains that more than 50% of them being in middle age gives a better understanding and experiences in a better way.

Experience in construction industry was questioned to understand the reliability and to know how strong the response is. Of the total number of respondents 14 people being 1 to 5 years' experience and 12 people being 5 to 10 years' experience and 8 being above 10 years experienced in UK construction industry.

Next question focuses on number of male and female workers in different job roles, this helps us to understand roles preferred by women and male. Below table shows job role of the respondent showing male and female proportions separately. Women are more into architecture and planning related jobs which are mostly office based with occasional site visits. Whereas men are into management and labour. From the current finding it is observed that women prefer office-based jobs than site based where as men prefer both site based and office based jobs.

Table 2. Number of male and female workers in different job roles

Job Role	Male	Female
Site Engineer /Manager	5	1
Architect	2	6
Management	4	3
Labour	5	4
Craftsmen	2	2

Next question focuses on job location preference, as construction jobs can be divided into site based and office based jobs. Examples of site based jobs are site manager, engineer, contractor, labor etc. Site based jobs must deal with various weather conditions and is risk oriented. Site based job might sometimes require night shifts which is not suitable and preferable by most of them especially women. Out of 34 people 12 men preferred working in site and 8 men preferred working in office based jobs. 11 women preferred working in office and 3 women preferred working in site. Thus, its clearly shows that women prefer office based jobs when compared to site job and on the other hand men preferred site based jobs and office based jobs being least. When asked about same career opportunities for men and women in UK construction industry. 22 people have responded saying no and 9 being yes and 3 responded as don't know. This explains that career opportunities for men and women are different and men being given more better opportunities when compared to women. Career barriers were questioned next for which the response rate is yes being highest as 24 and 7 being no and remaining don't know or can't say. This clearly explains that its largely accepted fact that carrier barriers are comparatively more for women especially in construction sector.

Gender discrimination at work place in UK construction industry has been questioned for which most of women respondents answered yes. This clearly shows that gender discrimination at work exists globally including developed countries like UK. It was specified that women were treated less during various activities women were not treated same as men but it was said that women are being given equal importance with changing times, but still gender discrimination at work place exists today.

Please rate the significance of the following barriers, that you believe are prohibiting development and entry of women into construction industry from 1 (being, very important) and 5 (being least important)

Table 3. Number of male and female workers in different job roles

	1	2	3	4	5
Low wages compare to men			4		7
Male domination at work	2	7	4		
Sexual Harassment or Discrimination	8	5		1	
Family Commitment	12		3		
Lack of Knowledge about construction career at young age		2	8	3	
Absence of proper information towards job opportunities		4		3	2
Lack of same opportunities for men and women	5		3		

Inflexible working hours	7	7			
Others (Please Specify)					

The above responses from survey clearly states that family commitment is the top most major barrier which is prohibiting women development in UK construction industry. Inflexible working hours being the next major barrier and lack of career opportunities as next important barrier. sexual harassment as the next major barrier which is prohibiting women. Factors and measures which help towards development of women in construction industry. Please rate the following measures to promote and sustain successful women in the industry, do you think they will? (1 and 5 is very successful, very successful).

Table 4. Promote and sustain successful women in the industry

	1	2	3	4	5
Exposure towards career opportunities in construction sector at early age	3	7		2	
Giving more priority towards employing women	6	3	5		
Training towards equality at work	4	5		1	
Flexible working time	7		7		1
Increase in on site facilities	4			5	
Strict rules to be made by company to gender discrimination and sexual harassment towards women	5		6		
To provide safer atmosphere on site at odd working hours (Late night shifts)	3	7			2
To introduce women centred schemes	4	5		1	

From the above responses and ranking it was observed that flexible working hours is the most important and successful factor followed by giving more priority towards women employment. Next successful factors being introducing women centered schemes and better training towards equality at work place helps for a better women employment growth. Providing better on site facilities for women and creating safer atmosphere when working late night. Least being exposure towards opportunities in construction industry at early age such as schooling. Strict rules and law towards female discrimination and sexual harassment being another important factor.

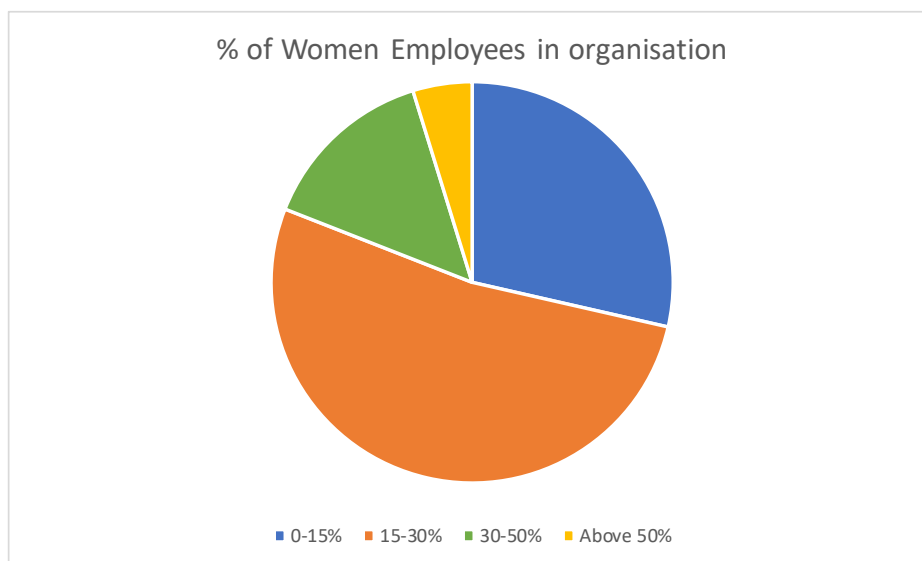


Figure 7. Showing percentage of women employees in organization

Percentage of women employees in respondent's organization can be observed as shown below with 15 to 30% being highest and 30 to 50% as least and 50% and more being very minimum. This explains that percentage of women is less than men in UK construction industry. Women centric schemes by organization is questioned next which is responded as few respondents have explained about various schemes in their organization. Few schemes adding advantage and supporting women. But only 30% of respondents have mentioned about a scheme being applied. Which shows high need of schemes helping women to retain in construction sector. Apart from the survey questions additional valuable suggestions were sent by the respondents stating that site based jobs are biggest issues due to tough conditions and it is always seen that men are stronger than women from ages which is still being continued. Lack of flexibility at work place being the major issue for most of the women workers.

### CONCLUSION

This study revealed that there is scarcity of women in UK construction industry, this supports the statement that UK construction industry is male dominated. Majority women are featured to be working in architecture and administration departments which are mostly office based jobs. On site, it was observed that majority of the women hired on site are labors was observed that women were absent in craft trade and site engineer and management. Women training towards better position is absent from past which are causing under performance of women in different job roles within construction industry.

Construction firm's recruitment guidelines are based on employees work experience and women tend to face issues as the company expect employees who can take up various tasks involving physical effort and long work hours in different weather conditions and other varied. uncomfortable and unhygienic conditions. When compared to men, it is considered that women's work efficiency in outdoor events is low but on the other hand female employees don't accept it as they believe that they can work equally with men in all conditions. Design related works such as architects, planning, designing fields are best considered for women and other job roles like estimating, cost management, quantity surveyor which are mostly related to intellect.

Women in UK construction sector are comparatively on far better side when compared to other developing countries. Need to establish more jobs for women in construction sector. Need for better conditions on site are very much required. Safety equipment and vests should be well fitted which is the major concern among women. Males outnumber women in overall number of jobs. There is vast improvement and betterment in women job opportunities compare to previous days.

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