



Confederation of Indian Industry



Beyond Barriers and Biases

Engendering the Indian Construction Industry

Supported by



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***“Development if not
engendered is endangered.”***

- Mahbub-ul Haq, Development Economist

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Executive Summary



Out of the 57 million people employed in the sector, only 7 million are women. Among this, only one to two per cent of women reach top level management positions and the number of women engaged in other technical and managerial roles (architects, civil engineers, supervisors) stands at a mere 1.4 per cent .

The declining and persistently low female labour force in India has raised concerns among policy makers and feminist groups. The construction industry is a key industry in the Indian economy, contributing to nine per cent of India's GDP and showcasing an upward growth curve¹. However, out of the 57 million people employed in the sector, only 7 million are women. Among this, only one to two per cent of women reach top level management positions and the number of women engaged in other technical and managerial roles (architects, civil engineers, supervisors) stands at a mere 1.4 per cent².

This study titled 'Beyond barriers and biases: Engendering the Indian construction industry' is the outcome of an exploratory research on women in

construction conducted by the Employers' Federation of India (EFI) and Confederation of Indian Industries (CII) in collaboration with the International Labour Organization (ILO). The research design and implementation was done in partnership with Avtar, a Diversity, Equity and Inclusion consulting solutions organization based in Chennai, India.

The primary target audience for the study are the employers and managers of enterprises in the construction industry, and other enterprises in STEM looking to advance gender equality and women's empowerment. The study also holds importance for women working in the organized segment of the construction industry in India along with women students pursuing diplomas/degrees in STEM fields.

¹ India Today, "Here's Why Indian Construction Industry Needs More Skills in This Fast-paced Era".

² Primus Partners, "Pink Collar Skilling: Unleashing the Women's Power in the Real Estate Sector".

The study focused on understanding the challenges faced by women in the industry so as to suggest specific measures for promoting gender equality in the industry and advance women's participation in the construction industry. The study also aimed to gain an understanding of the existing good practices in the industry that not only promote participation and retention of women in the construction industry but also support professional growth and occupational mobility of women for advancement to leadership/management positions.

The study employed a mixed research methodology combining both qualitative and quantitative research methods. The research team carried out a desk review to gather relevant information on gender issues in the STEM industry through primary and secondary data collection. The primary data collection involved surveys and Focus Group Discussions (FGDs). The survey done on men and women working in the construction industry from across the country and saw a participation of 345 respondents (100 women and 245 men) from the industry. Another survey was done in which 62 women students currently pursuing higher education in STEM streams participated. FGDs were also conducted with different cohorts of women such as women from early, mid, and senior levels in the construction industry as well as with women students pursuing an education in STEM fields. A total of 64 women participated in the FGDs. Companies were also contacted to compile good practices from leading construction companies.

The findings from the study revealed the differences in perceptions of men and women about the challenges women face in the industry. Stereotypes, lack of support from supervisor, biased appraisal processes emerge as key challenges for women in the industry while men felt that family support, stereotyping and sexual harassment could be women's biggest challenges. The findings also showcased the career hurdles women face in the industry as well as the enablers that will help them thrive in the industry. Several career hurdles such as discriminatory practices, work-life conflict, lack of role models and infrastructural problems deter women from

pursuing a career in the industry. At the same time, career enablers such as equal pay and equal opportunity, flexibility, DEI intentionality, skill building and employee wellness programs can ensure the much needed support women are looking for to build successful careers in the construction industry.

Study findings also emphasized on the need for societal support, women-friendly policies, women-friendly workplace infrastructure, upskilling opportunities, opportunities for growth into leadership roles and the overall need for a more inclusive workplace culture. The good practices from leading companies in the industry which also formed a part of the study findings are policies and practices that can help in creating an inclusive and conducive culture. Overall the study findings not only touched on why the industry has low participation of women but also revealed how the under-representation of women can be tackled. The way forward section provides specific actions to be taken by governments, organizations, and educational institutions based on the study findings to increase women's participation in the construction industry.

We hope that through this study, we will be able to provide organizations in the construction industry valuable inputs on attracting and retaining women talent and building an inclusive and diverse culture. Similarly, we also hope that this study will inspire more women to participate and seek employment in this industry.

Background

The construction industry³ in India is the largest non-farm industry providing employment to over 13 per cent of the total labour force (Periodic Labour Force Survey (PLFS), 2022/2023)⁴, directly employing almost 27 million workers (computed from the Population Census of India, 2011), out of which only 4 per cent are women. With strong forward and backward linkages this sector is believed to provide employment to an estimated 51 million workers and contributes to nine per cent of the Gross Domestic Product⁵ (GDP) of the country.

³ Construction industry is taken as defined in National Industrial Classification Codes, 2004 (Section F, Division 45) and includes site preparation; building of complete constructions or parts thereof, civil engineering; building installation and building completion and renting of construction or demolition equipment with operator.

⁴ Ministry of Statistics and Programme Implementation, "Periodic Labour Force Survey 2022-23".

⁵ Ministry of Commerce and Industry, "About Real Estate Sector".

The ripple effect of the slow and steady recovery of the Indian economy after the pandemic should reflect in the construction industry. For instance, availability of housing loans and personal loans are increasing, prices are firming up, and construction of new dwellings and other construction activities (including public works) is also increasing. This can enable the numerous backward and forward linkages that the construction industry is known to carry thereby opening up opportunities to push through the agenda of increasing women's employment across all occupations (entry level, mid and top management) and promoting gender equality in the industry.

Despite being a key industry in the Indian economy, the construction industry continues to employ women workers mostly for low-skill and low-paying job roles with 412 rupees being the average daily earning of a casual worker in the industry (PLFS, 2021/2022). In addition, the industry continues to employ a significant proportion of workers as casual workers. 85.5 per cent of men and 96.9 per cent of women employed in the construction industry work as casual labour as per PLFS 2022/23 data.

The recent PLFS data suggests that only 2.6 per cent of men in the industry are employed as regular or salaried workers as compared to 12 per cent who are self-employed. As for the women, only 0.5 per cent are self-employed and 2.6 per cent are regular or salaried workers. Between 1977/78 and 2022/23, in the construction industry, the proportion of women workers increased from 0.6 per cent in 1977/78 to 4.2 per cent in 2022/23 for rural women and from 2.2 per cent in 1977/78 to 4.9 per cent in 2019/20 before declining again to 3.1 per cent in 2022/23 for urban women (PLFS, 2017/18, 2022/2023)⁶. The percentage of urban men employed in the construction industry has decreased from 13.1 per cent in 2020/21 to 12.6 per cent in 2022/23 as compared to a rise in rural men's participation in the industry which has risen from 15.6 per cent in 2020/21 to 19 per cent in 2022/23.

Although the COVID-19 pandemic and the consequent lockdowns had a dampening effect on the industry for some time, migrant construction

workers have now returned to work reducing the housing inventories as is reflected in the inventory overhang dipping to 33 months during Q3 of FY23 from 42 months of FY22 (Economic Survey, 2022/23).

The striking pay gap between women and men is another factor that derails the economic development. The latest report by Primus Partners and World Trade Center indicates informal women workers in Indian construction and real estate industry earn 30–40 per cent less than men. The number of women engaged in technical and managerial roles (architects, civil engineers, supervisors) stood at just 1.4 per cent. Out of this, less than two per cent reach top level management or leadership positions.⁷ This is as opposed to UK's 14 per cent and US's seven per cent women in leadership positions in the same industry.

In the period 2011–2017, the dip in agricultural employment was not met with a commensurate increase in non-agricultural employment owing majorly to women exiting from the workforce. While men seemed to move from agriculture to mainly construction, women workers just quietly moved out of the workforce pointing to a probable gendered process of selection in the construction industry.⁸

The inherent gender discrimination against women due to prevailing gender stereotypes and biases regarding their 'physical and intellectual capacity' to perform tasks on par with men, is a significant barrier for women to enter the industry, and it also adversely impacts the growth prospects and occupational mobility of women workers.

The Indian economy had a significant retraction in the year leading up to the pandemic, adding to the prevailing grim numbers. The on-ground realities range from stark gender inequity in recruiting women to stagnating promotions and appraisals in their employee life cycle. The glass ceiling acts as a barrier in advancing their career. In India, 47.6 per cent of licensed architects are women, with a gender pay gap of 15 per cent⁹ in the field, which is another significant deterrent to achieving higher representation of women in this industry.

⁶ Ministry of Statistics and Programme Implementation, "Periodic Labour Force Survey 2022-23", 44.

⁷ Primus Partners, "Pink Collar Skilling: Unleashing the Women's Power in the Real Estate Sector".

⁸ Azim Premji University, "State of Working India Report 2021".

⁹ "Female Construction Workers Earn 30-40% Less Than Male Workers, Says Report by Primus Partners & World Trade Center", Business Insider, 9 January 2023.

Another study by Kelly Global Workforce Insights, highlighted that women in STEM reported that they experienced gender bias in performance evaluation and a large proportion felt that their companies would not offer them top positions. This leads to increasing pay gap between men and women in the same industry. Workplace inequality and bias are also seen in the US construction industry with men earning more than 4.2 per cent that of women along with low representation of women in supervisory positions as compared to their overall representation in the workforce.¹⁰

Ironically, in India, women slip through the gap between graduation and recruitment. The All-India Survey on Higher Education (AISHE) reports a steady improvement in the number of women enrolling in STEM (Science Technology Engineering Mathematics) education, with women comprising 43 per cent (41,93,000) of all enrolment in STEM (at U.G., P.G., M.Phil. and Ph.D. levels) and the net enrolment for women in science increasing from 49 per cent in 2016/17 to 52.1 per cent in 2021/22¹¹, thus outnumbering men in the recent years.

However, the enrolment for women in Engineering and Technology has been fluctuating in the range of 28.9 per cent to 29.5 per cent in the years between 2016/17 and 2020/21 (AISHE, 2020/21). The report also highlights India having more women graduates (43 per cent), enrolled in STEM fields compared to the US (34 per cent), UK (38 per cent), and Canada (33 per cent).

In India, only 14 per cent of scientists, engineers, and technologists in research development institutions and universities are women. This indicates that even though India scores well in producing higher number of women graduates in STEM, globally it ranks only 19th in employing them, a UN study reports.¹²

Achieving parity in the STEM labour market will require a focus not only on specific STEM-related drivers, but also on the myriad complex factors that drive global gender gaps in the workplace.

A convergence of multiple factors impedes women in the workplace worldwide. These include disproportionate childcare responsibilities at home (gender chore gap), the challenges of eldercare, mobility restrictions because of safety concerns and sexual harassment, discriminatory labour laws, and a range of social norms in the workplace that create hostile work environments, unequal pay, and lack of opportunities for professional advancement of women (World Bank, 2020).

That said, several empowering and enabling initiatives are in the pipeline to effectively address gender differentiation and discrimination in the industry. Government of India's Skill India Mission aims to train over 400 million people including women in areas such as masonry, plumbing and electrical work, to help them enter the construction industry among others¹³. In Jharkhand, over 50000 women skilled themselves in masonry work under the 'Rani Mistri' scheme launched by the state government to skill women in toilet construction work that was to be carried out as part of the central government's Swachh Bharat Scheme¹⁴. Further in this report, you will also read the good practices being employed by the construction companies to boost women's participation and retention in the industry.

In the context of promoting gender equality and advancing women's participation in STEM with a focus on construction industry, the Employers' Federation of India (EFI), Confederation of Indian Industries (CII) and International Labour Organization (ILO) collaborated to carry out this study that will be a springboard for subsequent initiatives. The focus of the study is on women engineers, diploma holders in STEM and women employees in the organized segment of the construction industry in India. The research design and implementation is done in partnership with Avtar, a Diversity Equity and Inclusion consulting solutions organization based in Chennai, India.

¹⁰ Jin Ouk Choi, et al., "An Investigation of Construction Workforce Inequalities and Biases in the Architecture, Engineering, and Construction (AEC) Industry", (Construction Research Congress, 2018)

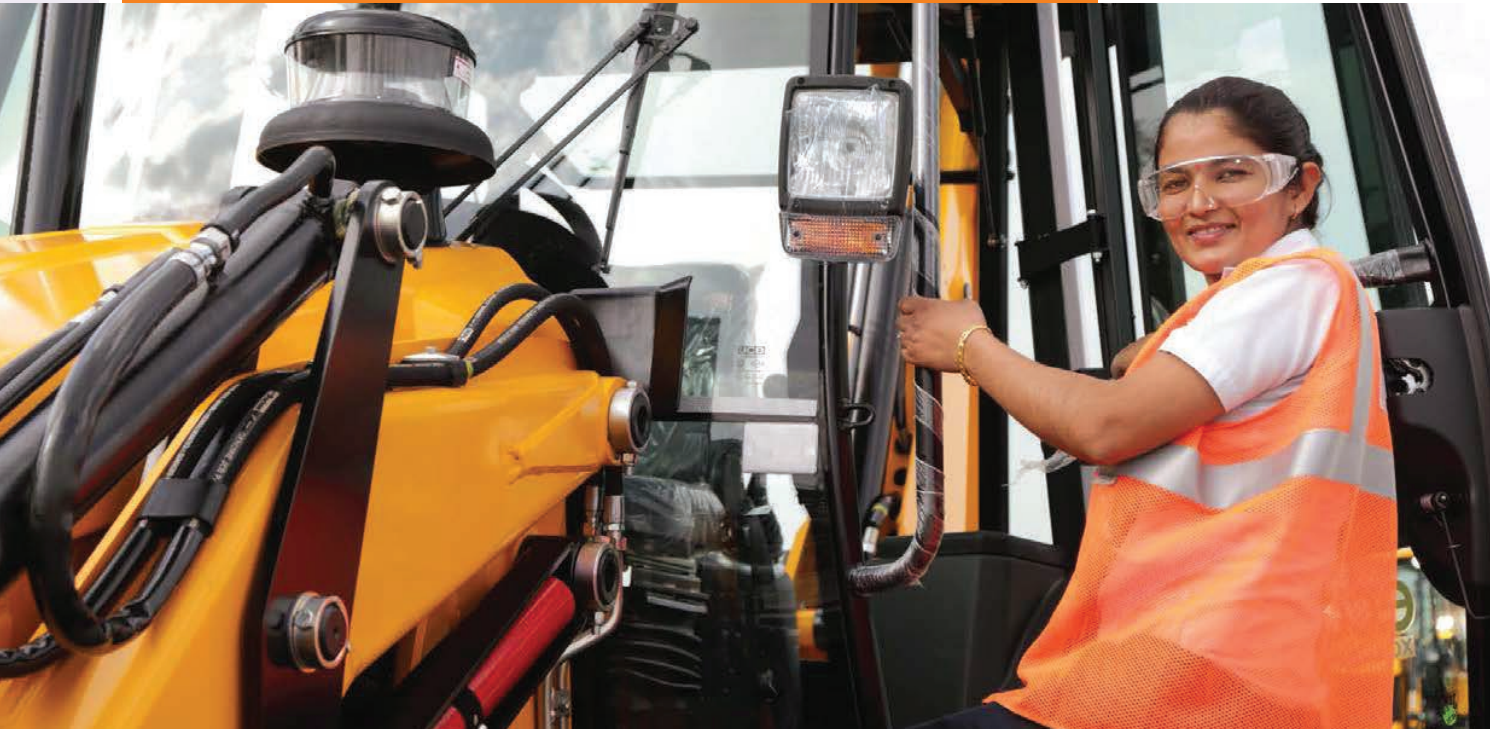
¹¹ Ministry of Education, "All India Survey on Higher Education 2020-21".

¹² Prerna Sindwani, "India Tops the World in Producing Female Graduates in STEM but Ranks 19th in Employing Them", Business Insider, 28 February 2020

¹³ "Building a more inclusive future: Promoting women's inclusion in the construction industry", Times of India, 2023

¹⁴ "Jharkhand's 50,000 women masons complete toilet construction work", Business Standard, 23 April 2023

Rationale of the Study



The non-utilization of more than 50 per cent of the country's talent pool disempowers society.

The declining and persistently low female labour force in India has raised concerns among policy makers and feminist groups. The recent PLFS 2022/23 data

as shown in Table 1 raises some hope in improving the Female Labour Force Participation rate in the country.

Table 1: Female Labour Force Participation Rate in India as per the Periodic Labour Force Survey 2022-23 (age group: 15+ years)

Rural (%)		Urban (%)		Rural + Urban (%)	
PLFS 2022-23					
Male	Female	Male	Female	Male	Female
80.2	41.5	74.5	25.4	78.5	37.0
PLFS 2022-23					
Male	Female	Male	Female	Male	Female
80.2	41.5	74.5	25.4	78.5	37.0
PLFS 2022-23					
Male	Female	Male	Female	Male	Female
80.2	41.5	74.5	25.4	78.5	37.0

It is interesting to note that women's labour force participation rate in rural India has been consistently higher than that of their urban counterparts but the reverse is true for men. However, the changes haven't been homogenous for all women – in 2021-22, the LFPR saw small dips for rural women, women from Scheduled Tribe, Scheduled Caste, and Other Backward Class communities, as well as women who were illiterate or had primary-to-middle level of education. On the other hand, the LFPR among urban women, women with graduate (or higher) level education, or who were illiterate saw a marginal improvement between 2020-21 and 2021-22.

It is also interesting to note that employment increased in households which experienced sharp financial/income shocks as consequences of the COVID-19 pandemic. In India, women's labour often acts as an insurance during low-income periods for poorer households.

In this context, the study has the potential to enhance the understanding of good practices and measures that not only promote participation and retention of women in the construction industry but also support professional growth/occupational mobility of women in advancing into leadership/management positions. Hence, to enhance female labour force participation in India, it is imperative to understand factors that limit women's employment in the construction industry. Historically, this industry has been perceived as "unfeminine" for a range of reasons.

The study and its findings will have a significant impact in a growing economy like India. Gender balance in economic activity is important, not just to achieve higher growth but also for overall social development. Hence, companies need to prioritise strategies to engage women equitably in the workforce. Not doing so is to run the risk of not employing a significant section of our human resource.

Key Research Assumptions



Gender responsive policies and practices at the workplace have a positive impact in encouraging increasing numbers of women.

The study pivoted on the following research assumptions based on prevailing critical issues and trends in STEM education and construction industry in India:

- A range of institutionalized/systemic barriers contribute to the under representation of women in the construction industry in India.
- Internalized barriers such as self-limiting beliefs and internalized discrimination (conscious/unconscious) are significant barriers for women to enter the construction industry, navigate their careers with intentionality and ensure representation in senior leadership positions.
- Men as advocates, allies and champions of gender inclusion significantly enable increasing numbers of women to create successful and sustainable careers in the construction industry.
- Consciously embedded enablers in the workplace have the potential to counter the multiple derailers that confront women in the construction industry across levels.
- Gender inclusive language, gender responsive policies and practices at the workplace have a positive impact in encouraging increasing numbers of women with STEM qualifications to emerge as a significant segment of employees in the construction industry in India.

Study Objectives



Gender responsive policies and practices at the workplace have a positive impact in encouraging increasing numbers of women.

The overall objective of the study is to understand the factors that limit women's employment in the construction industry with the intent of aiding organizations in the industry (as also governments and educational institutions) to undertake measures to increase women's participation in the industry. The specific objectives of the study are as follows:

- Understand gender issues in the STEM industry with a focus on the construction industry in India.
- Understand the experiences of women students on school-to-work transition in the STEM industry with a focus on the construction industry in India.
- Understand the perceptions of women students pursuing STEM education and their employment aspirations which is linked to the STEM industry, with a focus on the construction industry (including but not limited to the barriers to entry and growth within the industry).

- Understand promising practices and solutions that are in place to promote women's participation in the construction industry and thereby cascade them throughout the industry.
- Identify areas of improvement for promoting gender equality which can inform the industry, government, and educational institutions to initiate equitable strategies towards gender equality.
- Identify steps and prepare an action plan to be undertaken by EFI and its member organizations to advance gender equality and women's participation in STEM, with a focus on the construction industry in India.

Research Approach and Methodology



This explains the survey response rate, even while the survey was shared with 500+ students pursuing engineering/technical courses.

The research team envisaged the following three-part approach to address the proposed research objectives.

Part 1 Surveys: To meet the study objectives two surveys were conducted.

1. Survey (S1) of women and men currently employed in the construction industry to understand the challenges women face in the industry.
 - The survey garnered 345 responses (245 men and 100 women) from professionals working in the construction industry across India.
2. Survey (S2) of girl students pursuing education in STEM to understand what hinders women in entering the construction industry and how to best

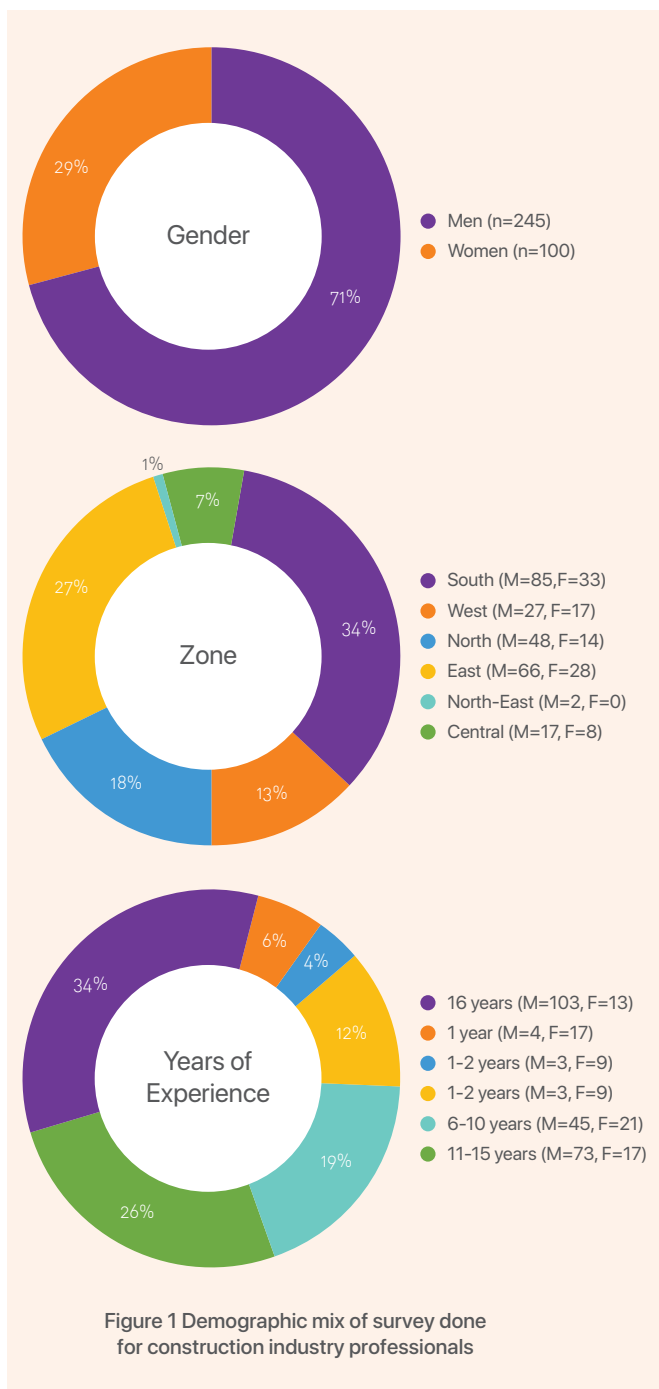
facilitate women in STEM to join the industry.

- The survey garnered 66 responses (62 girls and 4 boys) from students pursuing education in the STEM field. It is worth noting that the survey was floated amongst students pursuing engineering and technical courses in streams allied to construction industry; while 29.1% of all enrolled undergraduate students in engineering today are women, they are largely concentrated in Computer science and Information Technology streams. This explains the survey response rate, even while the survey was shared with 500+ students pursuing engineering/technical courses.

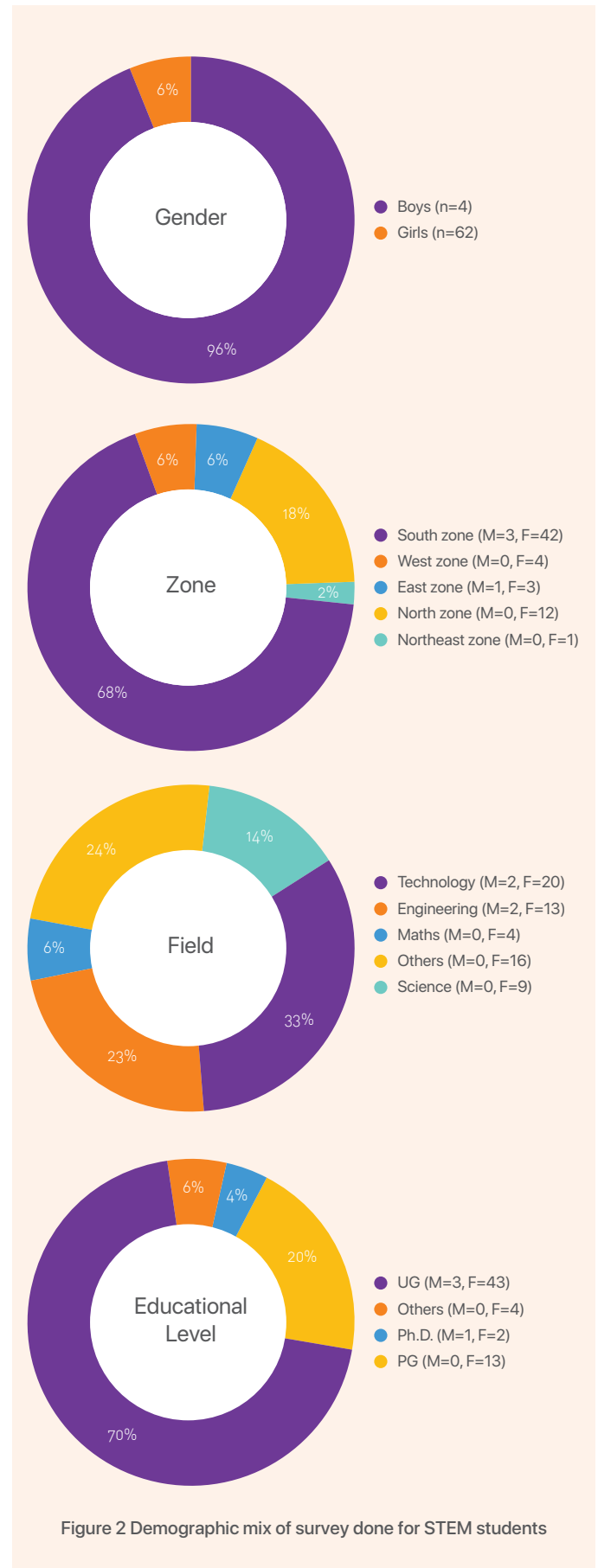
Table 2 shows the mapping of research objectives with the methodology used

Research Objective	Methodology
<p>Understand gender issues in the STEM industry with a focus on the construction industry in India.</p>	<ul style="list-style-type: none"> • Survey (S1) of women and men currently employed in the construction industry. • Focus Group Discussions (FGDs) of women employed in the construction industry.
<p>Understand the experiences of women students on school-to-work transition in the STEM industry with a focus on the construction industry in India.</p>	<ul style="list-style-type: none"> • Survey (S2) of girl students pursuing education in STEM. • Focus Group Discussions of women students pursuing relevant STEM degrees.
<p>Understand the perceptions of women students pursuing STEM education and their employment aspirations which is linked to the STEM industry, with a focus on the construction industry.</p>	<ul style="list-style-type: none"> • Survey (S2) of girl students pursuing education in STEM. • Focus Group Discussions of women students pursuing relevant STEM degrees.
<p>Understand promising practices and solutions that are in place to promote women’s participation in the construction industry and thereby cascade them throughout the industry.</p>	<ul style="list-style-type: none"> • Profiling of companies from the construction industry on their gender inclusion practices.
<p>Identify areas of improvement for promoting gender equality which can inform the industry, government, and educational institutions to initiate equitable strategies towards gender equality.</p>	<ul style="list-style-type: none"> • Survey (S1) of women and men currently employed in the construction industry. • Survey (S2) of girl students pursuing education in STEM. • Focus Group Discussions of women students pursuing relevant STEM degrees. • Focus Group Discussions (FGDs) of women employed in the construction industry. • Profiling of companies from the construction industry on their gender inclusion practices.
<p>Identify steps and prepare an action plan to be undertaken by EFI and its member organizations to advance gender equality and women’s participation in STEM, with a focus on the construction industry in India.</p>	<ul style="list-style-type: none"> • Survey (S1) of women and men currently employed in the construction industry. • Survey (S2) of girl students pursuing education in STEM. • Focus Group Discussions of women students pursuing relevant STEM degrees. • Focus Group Discussions (FGDs) of women employed in the construction industry. • Profiling of companies from the construction industry on their gender inclusion practices.

For both the surveys, random snowball sampling technique was employed to gather data from participants. Random snowball sampling involves initially selecting a random set of individuals from the target population, who then provide referrals to other potential participants within their network. The initial random sample was collected through existing organisational and educational network of CII and Avtar from the construction industry. This method was chosen to ensure a diverse and representative sample while leveraging existing social networks. The demographic mix of the survey sample S1 is as indicated in Figure 1.



The demographic mix of survey sample S2 is shown in Figure 2.



Part 2 Focus Group Discussions (FGDs)

1. Focus Group Discussions of women students pursuing relevant STEM degrees.
 - Three such FGDs were conducted with a total of 27 participants split across 3 discussions.
2. Focus Group Discussions (FGDs) of women employed in the construction industry.
 - Three FGDs of senior women leaders with an experience of 15 years and above in the industry. A total of 10 women leaders participated in this FGDs.
 - Three FGDs of women at mid-career levels with experience of six to 14 years in the industry. A total of 14 women participated in these three FGDs.
 - Two FGDs of women at junior/entry levels with experience of one to five years in the industry. A total of 13 women participated in these three FGDs.

Overall, a total of eleven Focus Group Discussions (FGD) were held with women engaged in the industry, tracing the entire career arc in the industry from being students to professionals in the industry. Each FGD was for a duration of 1.5 hours and was conducted virtually. The participants of the FGDs were promised anonymity to ensure they were able to contribute their lived experiences freely.

Part 3 Good Practices

Profiling of companies from the construction industry on their gender inclusion practices to identify existing good practices of these organizations (multinationals) from a global perspective. Good practices from EFI membership companies are covering the contours of recruitment, retention, and advancement of women talent as also that of fostering an inclusive culture.

The findings of the report begin with what influences women and students to enter the construction industry and goes on to explain the hurdles they are currently facing in their career in the industry. The report then looks at what are some of the career enablers that motivate them, and link them to recommendations for government and policy makers, organisations and educational institutions. The annexures provide the details of the instruments used as well as lists the best practices followed by vanguard organisations in the industry.

Key Highlights of the Research



This explains the survey response rate, even while the survey was shared with 500+ students pursuing engineering/technical courses.

Through the surveys and FGDs, several challenges faced by women in the industry were documented. While male perceptions about the challenges women face in the industry came to the fore through the survey along with views of women themselves, the FGDs further shed light on the challenges as also measures to mitigate them. The FGDs also provided views of a cross-section of women from the industry ranging from early career women to senior executives. In this section we will look at the key influencers that help women pursue a career in the industry alongside career hurdles and career enablers that have emerged through the study.

Key Influencers

For both men and women, their own interest in the construction industry emerged as the most influencing factor. Men and women responded very similarly

when asked about the key influencers that motivated them to pursue a career in construction industry, as shown in Figure 3.

Both men and women felt their own interest and research about the industry was the most important influence for them in choosing a career in this industry (57 per cent women and 52 per cent men). The second most important influencer for men and women were their parents. Twenty-five per cent men reported it as the biggest influencer and an even higher percentage of women (38 per cent) reported the same. This is a welcome insight because it indicates that objections faced by women to join the construction industry is probably fading away and families are recognising women's passion towards making it big in the industry.

It is interesting to note that men (16 per cent) more than women (10 per cent) cite mentors as key career influencers.

This could be an indication that there is a clear dearth of role-models and networking opportunities for women in the industry.

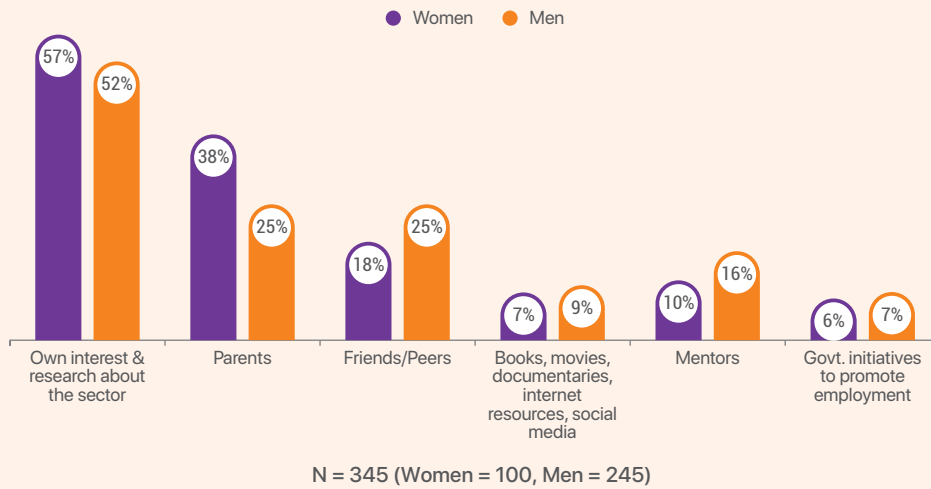


Figure 3: Key influencers to pursue a career in the construction industry

The most important influencer that motivated women students to choose and pursue education in STEM was their own interest and research about the field. 57% of the girl students (n=62), have indicated own interest and research as the key influencer.

This is followed by family and friends (49%) and mentors and role models (31%). Governmental initiatives to promote employment in the industry has been found to be the least impactful influencer to pursue education in STEM (see Figure 4).

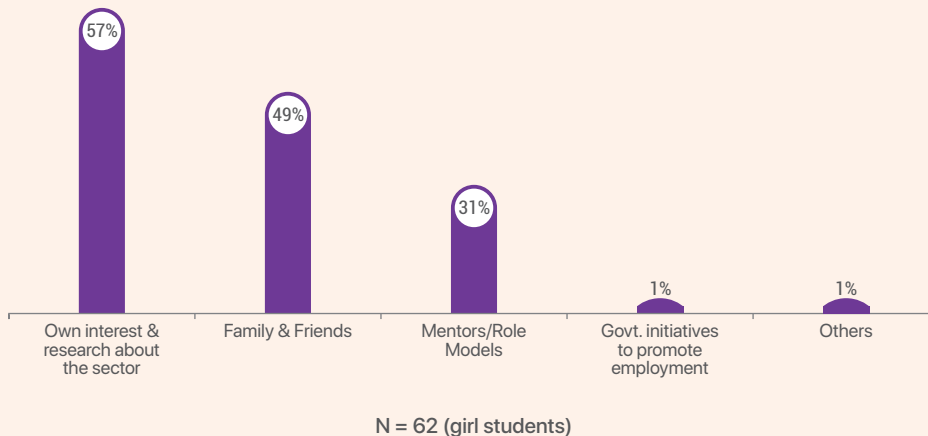


Figure 4: Key influencers to pursue STEM education

In the FGDs conducted students said that parents and families viewed the construction industry as unsuitable for women. The reasons range from their perceived lack of opportunities in the industry, the physically demanding nature of jobs that are incompatible for women and its adverse impact on women's lives after marriage. Thus, they experienced considerable persuasion from parents or extended family members to choose alternative courses. They had to spend considerable time and effort to convince parents of their choices. Other than this, the lack of adequate knowledge and exposure to the field added to the concerns leading families to doubt the ability of women to be able to align themselves to the construction industry.

Some of the early career women said they had made a conscious choice to be in the industry driven by different factors. Even though their families were initially sceptical about their decision to work in what is traditionally considered a male-dominated industry, they were able to convince their families and pursue a career in their chosen field. While some were driven and influenced by people around them, the others chanced upon the industry through a recruiter and despite opposition from family decided to find out for themselves how they would navigate this industry. Others were curious about what goes on in

the industry witnessing a lot of construction work around them and noticing some renowned construction companies operating in their area. Some of them also made a switch from IT and Finance to construction and manufacturing inspired by the other women in the industry. Some women consciously joined the industry to break the stereotypes that confined them to roles more suited to women, such as teaching and bank jobs, according to the prevailing societal norms.

Career Hurdles

As described in the previous section, women have to struggle their way into an industry convincing their parents and extended family who think of the construction industry as most unsuitable for women. Despite this, once they enter the industry, they are faced with several other challenges which we highlight in this section.

Unfair Treatment

In the survey done on women students pursuing education in STEM they were asked whether they were treated differently or unfairly at a college/institution because of their gender. Thirty per cent of the student respondents (n=62), responded in the affirmative. Figure 5 shows the specific type of unfair treatment they faced.

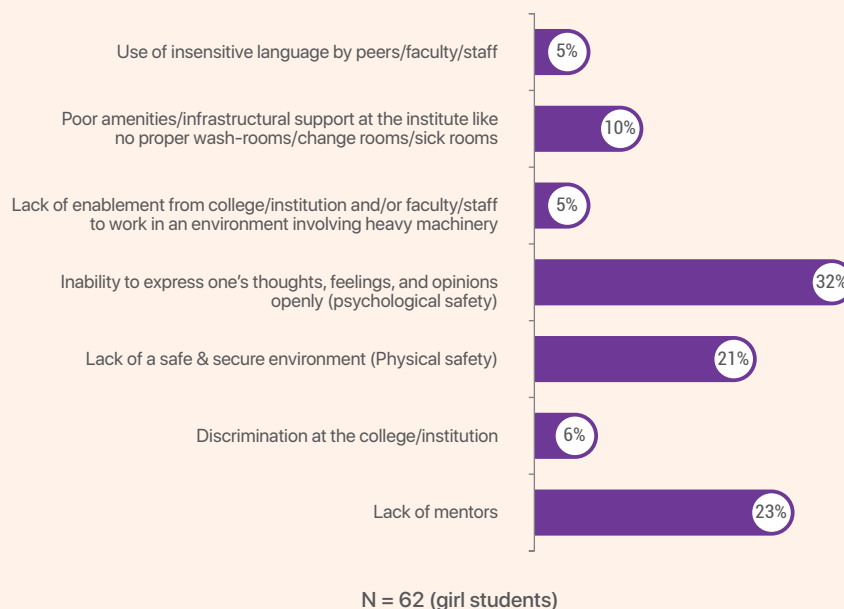


Figure 5: Types of unfair treatment faced by women students in STEM

Lack of psychological safety (inability to express one's thoughts, feelings, and opinions openly) was found to be the most pertinent challenge faced by the women student respondents (32%) followed by the lack of mentors (23%) and lack of a safe and secure physical environment (21%) as the other common challenges.

The student respondents were also asked what challenges they anticipate as they choose to pursue

a career in this industry. Thirty-five per cent women student respondents expect lack of job opportunities or growth prospects in the industry to be a major hindrance in them pursuing a career in STEM. The other key challenges (see Figure 6) that they anticipate are their own self-limiting bias (26%), safety and security concerns about work environment (24%) and challenges of working in remote areas (23%).

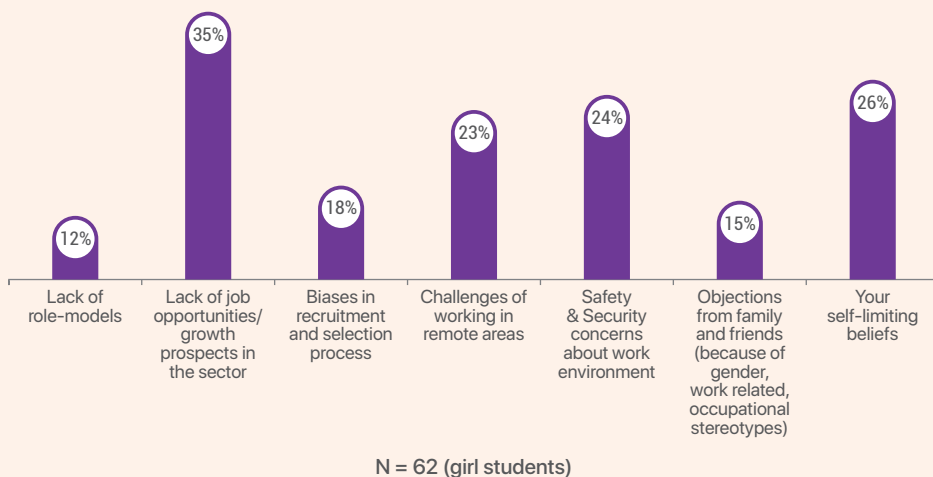


Figure 6: Challenges anticipated by women students in pursuing a career in the construction industry



Unfortunately, some of these fears are actualised once the women join the workforce. Women employees in the survey were asked what kind of discriminatory practices they faced at their workplaces. A quarter of the women respondents alluded to facing unfair treatment because of their

gender. The nature of the discriminatory treatment faced by women is shown in Figure 7. Gender stereotypes on what one can or cannot do as a woman was the biggest discrimination experienced by (21 per cent) of the women respondents.



Figure 7: Unfair treatment owing to gender

Work-life Conflict

In the survey, when asked about challenges respondents were currently facing while working in the construction industry (see Figure 8), lack of up-skilling opportunities came up as the biggest challenge for women (30 per cent) while challenges related to working in remote sites/locations was the biggest for men (29 per cent). Surprisingly more men (26 per cent) than women (17 per cent) cite work-life conflict as an ongoing challenge in the industry. This insight is strengthened by an almost equal percentage of women (22 per cent) and men (23 per cent) aspiring for greater work flexibility as per the survey.

Additionally, there is a considerable difference between perceptions of psychological safety in men and women respondents. Psychological safety refers to the ability to take interpersonal risks, speak up, disagree openly and voice concerns without the fear of negative repercussions.¹⁵ While 15 per cent women feel lack of psychological safety as a challenge, only eight per cent men felt so. In a male dominated industry, it is important to allow women to be heard and seen so that they are able to navigate their way as also encourage other women to join the industry by instituting necessary changes that lead to inclusion and a feeling of belongingness. This, therefore, is an important finding on which organizations in the industry must act.

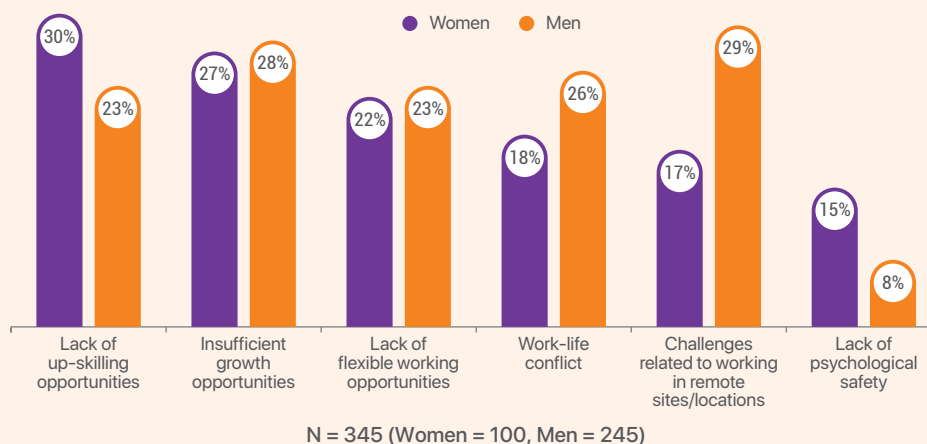


Figure 8: Challenges faced while working in the construction industry

¹⁵ Psychological safety nurtures an environment where people feel encouraged to share creative ideas without fear of personal judgment (McKinsey & Co, 2023).

While the early career women worried about how they will manage their careers post marriage and motherhood, the mid-career women said that marriage and motherhood didn't impact their work so much, however, it has increased their responsibilities at home owing to which they are unable to find time for personal growth in their careers. This coincides with the survey findings where only 17 per cent women cited work life conflict as a challenge. However, some of them mentioned that they had to take a break to tend to their children and that set them back in their careers by a few years. Some of them had very supportive families and husbands who helped them navigate work and home responsibilities with ease. For some participants, COVID was a blessing in disguise as they were able to tend to their children with the work-from-home facility that came through because of COVID restrictions. Others found supportive bosses but were subjected to harsh treatment by peers on resuming work. The role of supportive employers and families in the lives of working women cannot be stressed enough. They are usually the deciding factors in ensuring women don't drop off from the workplace owing to marriage and motherhood. The support from family is a stronger motivating factor for women (31 per cent) compared men (16 per cent).

The senior women executives who participated in the FGDs specifically spoke about the need for unconditional support of the family owing to the non-normative aspects of the work such as remote locations and long commute. They pointed out that successful women in the industry have consciously created and nurtured allies at home by discussing aspects of their work and establishing how their careers were a means of fulfilment and satisfaction for them. This supportive ecosystem was imperative if women were to advance in their career trajectory.

Lack of adequate Infrastructure

Lack of adequate and appropriate infrastructure results in a skewed gender ratio at the construction workplace. While early career women participants in the FGDs pointed out the absence of toilets at outdoor work sites, senior executives rued that the shopfloor is still very masculine. The equipment and safety gears are originally made for men. Further, traditional mindsets and policies preventing women in working with machines add to under representation of women in operations and leads to paucity of women in direct business roles.



Table 3 Insights on challenges faced by women in the construction industry as expressed by the four different cohorts of women who participated in the Focus Group Discussions (FGDs)

Challenges	Students in STEM	Early career women	Mid-career women	Senior women
Self-limiting beliefs			Self-limiting beliefs, imposter syndrome and inadequate representation of women in the workforce cause lack of confidence at work	Self-limiting beliefs don't allow women to come out of their comfort zones
Lack of family support	Family members want girls to pursue courses that don't have field work doesn't involve travelling	Pressure from family to choose more women-friendly industries such as IT/ITES		
Gender-based discrimination	Girl students are discriminated against in campus placements	Task delegation at the workplace based on gender stereotypes	Biased personal questions from recruiters and colleagues, assigning important projects to men based on stereotypes regarding physical capabilities	Women experience internalized misogyny, which is expressed through minimizing the value of women, mistrusting women, and showing gender bias in favour of men
Lack of effective allyship	Male students tend to be overprotective in classrooms leading to loss of opportunities for girls	Males colleagues have preconceived notions of differences in physical strengths of the genders which makes them overprotective at the workplace	Overprotection of women at the workplace by men leading to loss of opportunities; men are insensitive to women returning from maternity breaks	Overprotective, patronizing and paternalistic attitudes of men are observed
Lack of women role models			Lack of robust role models and women mentors	Overprotective, patronizing and paternalistic attitudes of men are observed
3Ms (Marriage, maternity, motherhood)			Career breaks due to the 3Ms impact career growth	Women have to deal with the gender stereotypes of women's care giving commitments adversely impacting their professional roles and responsibilities
Infrastructural and logistical challenges		Other sectors pay better, don't have gruelling work hours and it is also easier workwise	Late night work timings and professional networking after office hours are hard to manage; lack of toilet facilities at work sites	Equipment and safety practices are not currently designed keeping in mind female anatomy; shop floor still very masculine

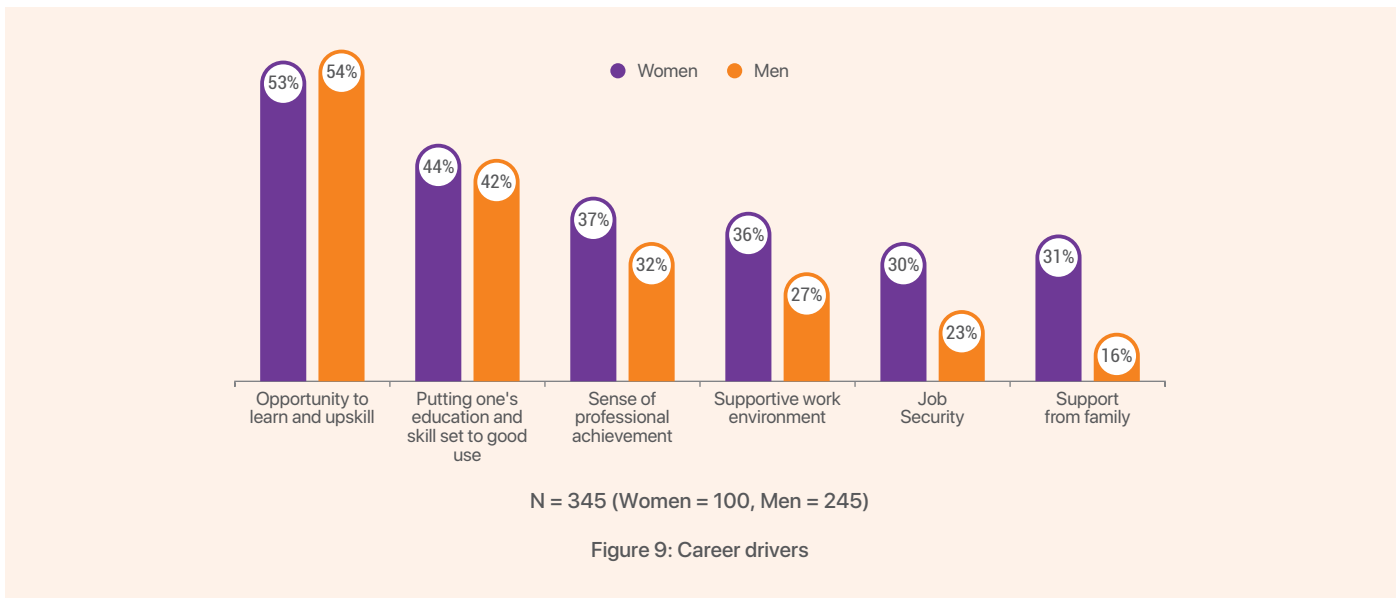
Annexure 2 on FGD Insights provides further detail on each of these career hurdles along with direct quotes from women participants on their lived experiences.

Career Enablers

While career hurdles can stand in the way of more women joining the industry, all is not lost, as voiced by the women in the industry. In the FGDs women participants talked about the enablers they have experienced and expressed the hope that organizations will continue to consciously work towards increasing women’s representation in the industry.

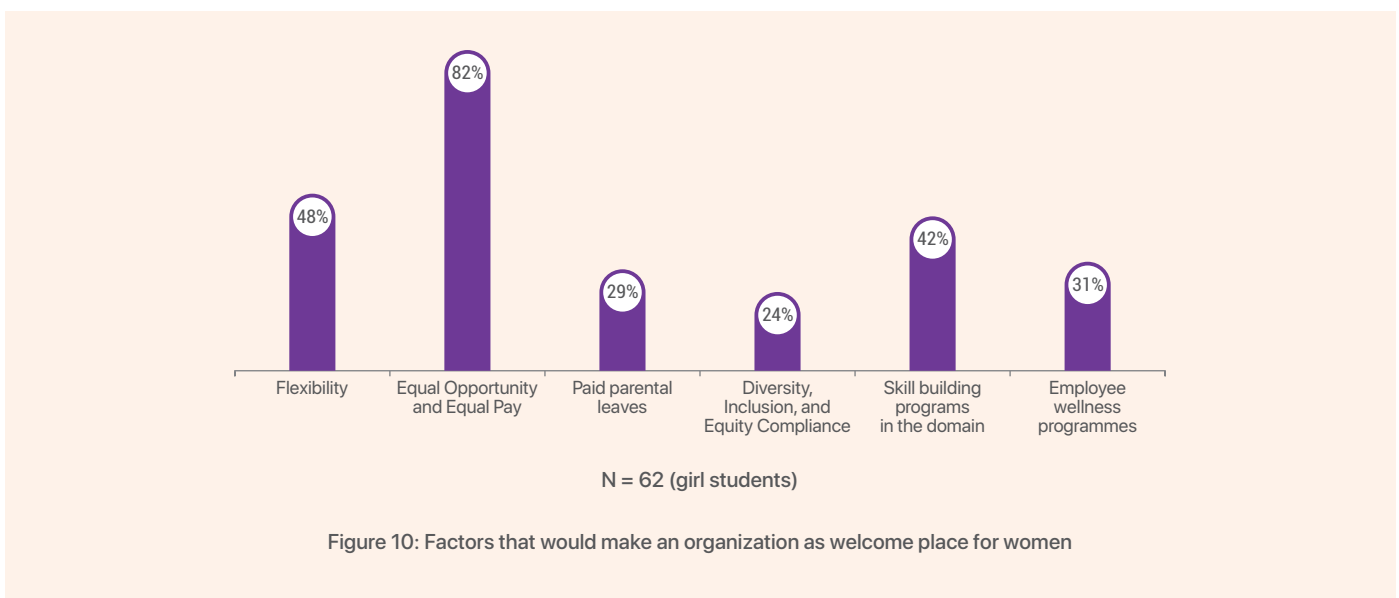
Skill enrichment and utilization

Skill enrichment and utilization were the top two career drivers for men and women. Only 27% men and 36% women in the survey opined that their current work environments are supportive Figure 9 lists the key factors that motivate them to work in the construction industry.



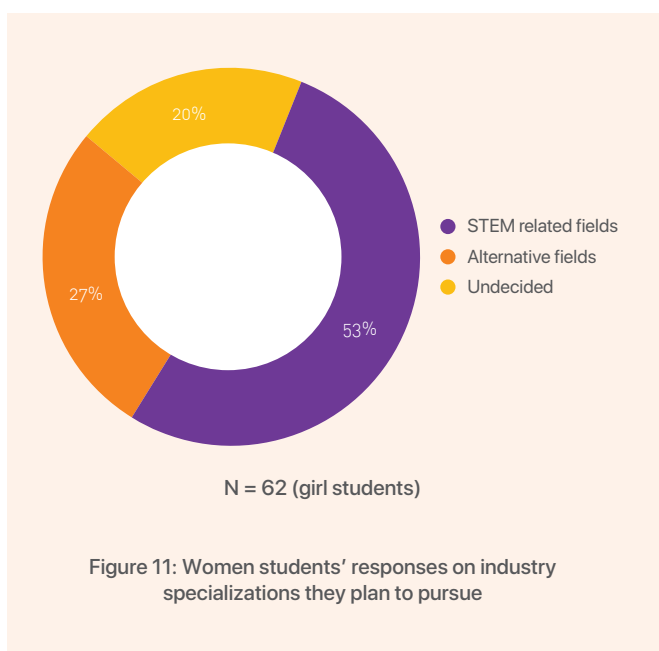
For both men and women, the opportunity to learn and upskill and putting one’s education and skill set to good use are the top two motivating factors in their job.

This is also interesting, when aligned with the inputs from the survey of, women students when probed about the factors that would make an organization a welcoming workplace for women, equal pay and equal opportunity found the highest support. The findings are shown in Figure 10.



Eight-two per cent of the women student respondents (n=62) think equal opportunity and equal pay are the most important enablers they want from their future organisation. Almost half the women student respondents (48%) want flexibility and skill building programs in their domain (43%) as career enablers to make them feel welcome in their organisations.

The students were also asked about the industry specializations they are planning to pursue. Fifty-three per cent of the women students responded that they are looking at pursuing their career in STEM related fields (see Figure 11) which is heartening but places a huge responsibility on organizations in the industry to prepare an equitable and inclusive space that will not only attract this talent but also retain it.



Organizational Policies and Practices

Path breaking initiatives by organization have made it possible for many women to continue working in sectors that were hitherto unavailable for women. The role of organizations and the policies and practices they set up are therefore invaluable as was echoed by the participants in the FGDs

conducted for early career women. Participants shared instances of how their organizations tweaked policies to support them in times of need. Mid-career women went a step further to say that it is not enough to have policies and practices but efforts must be made to ensure correct and fair implementation of those policies.

Participants pointed out that timely reminders about existing policies, timely monitoring of whether these policies are being effectively implemented and sensitizing all employees on the need and benefits of these policies is crucial. While some organizations already have a generous leave policy, flexi timings, work from home policy and crèches, other organizations that are serious about their commitment to gender diversity need to work towards emulating these policies and practices.

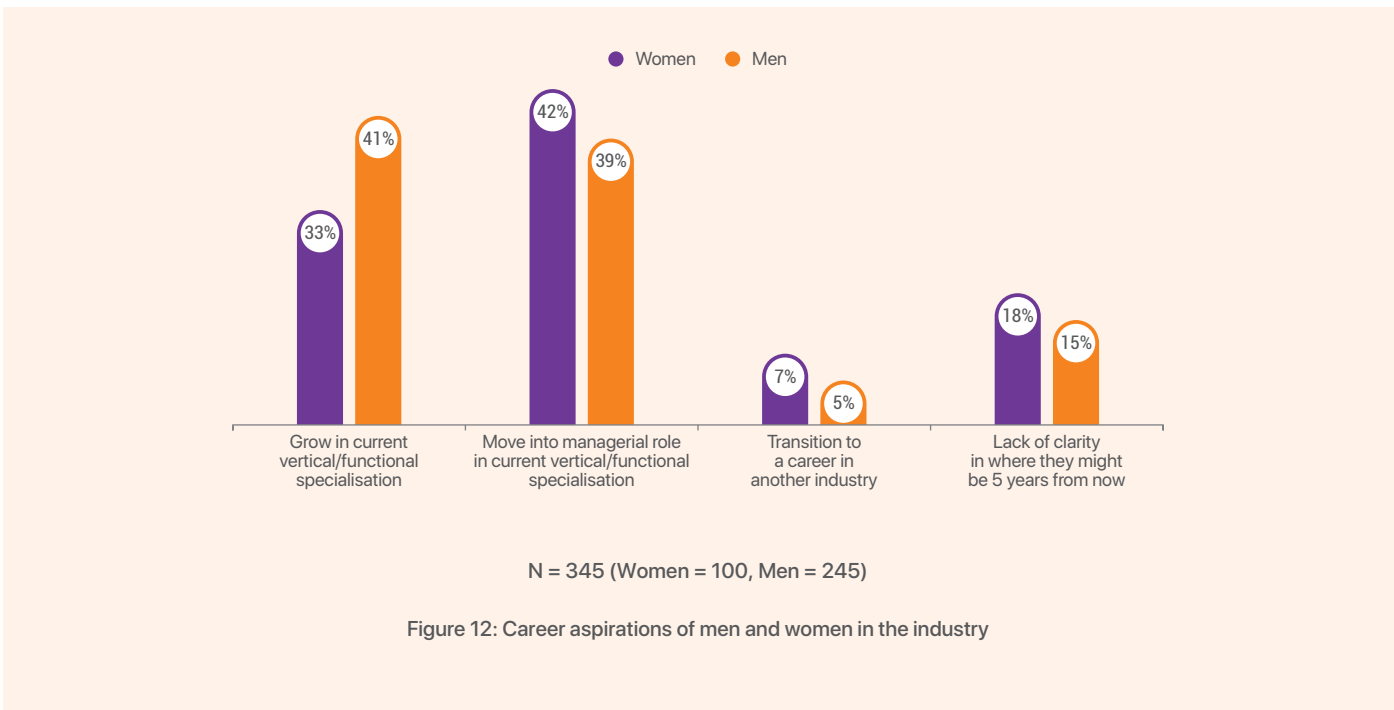
Senior women executives wanted flexible working hours, hybrid working if possible, crèche facilities, and clear opportunities for growth and learning. Even though some of these participants had older children, they wanted these flexibilities for their younger colleagues and for the scores of women who would someday join the industry. They also talked about creating awareness and sensitization on non-conscious bias across the organization. Equally important, they said, is the role of people-initiated responses even in the absence of organizational policies. They stressed on the need to have a robust Diversity, Equity and Inclusion (DEI) agenda in organizations to springboard such initiatives.

Career growth, mentorship and sponsorship

While women want to pivot to managerial roles, majority of the men preferred functional growth (career growth in the same vertical or organisational function they are working in). Survey results on employees' career growth and aspirations and where they see themselves in five years' time had some similarities and deviations, as can be seen in Figure 12.

Forty-two per cent women aspired for managerial roles, even though majority of the men surveyed preferred functional growth (41 per cent). This shows clear intentionality especially by the talent to progress in their careers; it is likely that that the non-conducive work-environments in

sites/locations prompt women to look at managerial roles as their path of growth where for men, functional growth remains the number one preference. A positive finding is that only 7% women respondents and 5% male respondents are looking to move out of the industry.



Mid-career women in the industry spoke about having very few women role models in the industry, however, there are male allies in leadership positions who mentored and supported them. They also felt that there is a general hesitation in elevating women to decision making roles. While chances will be taken with men, the same risk appetite is not shown towards elevating women to senior leadership roles. This is supported by the finding from the survey that 21% of the women responded that gender stereotypes on what a woman can or cannot do as the most prominent unfair treatment they faced while joining or after joining in the sector (Figure 7). 16% women respondents also mentioned that they faced unfair treatment through biased appraisal processes which hindered their career growth.

Senior women executive pointed out that mentorship and sponsorship were significant enablers in the career trajectories of women. They enabled them to engage with their careers with informed perspectives. The presence of family members who were part of the construction industry was an added advantage in imparting fresh perspectives to knotty workplace issues. Interestingly, women expressed that formal mentorship programmes and executive coaching were critical. However, equally important was the mentoring provided by a spouse who is part of the construction industry. Table 3 highlights all the career enablers women stressed on in the FGDs.

Table 4 Insights on career enablers women want in the construction industry as expressed by the four different cohorts of women who participated in the Focus Group Discussions (FGDs)

Career Enablers	Students in STEM	Early career women	Mid-career women	Senior women
Awareness and sensitization about the industry	Making STEM education available, accessible, and affordable for girls, especially from rural backgrounds	Create awareness among family members and the student community on the range of opportunities for women in the construction industry; allay fears about safety in the industry	Making more information about the industry available so women can consciously choose/aspire to work here	
Inclusive work environment	Awareness and sensitization for peers and managers on bias and stereotypes	Provision of online training and skill building programmes, career enhancing opportunities	Periodic sensitization sessions on company policies and their implications; embedding a culture of male allyship in the organization through regular awareness and sensitization sessions for men on inclusive allyship	Sensitization on non-conscious bias, mentorship and sponsorship programmes to enable women's careers; Intentional effort to break stereotypes, cultivate culture of allyship and advocacy
Social support	Shift in attitudes and mindsets of family members about the industry			Family members who act as mentors are able to guard women against orthodox and conservative voices; supportive spouse sharing household responsibilities
Supportive policies	Appreciation and acknowledgement of women's contribution; health benefits, bonus, pregnancy, maternity phase support, and peer support	Accommodation and transport support for work sites, flexible work hours	Flexibility, remote working, compliance with government mandated maternity break policies, adequate, appropriate and accessible crèche facility onsite, five-day work week, infrastructural facilities, incentivising referral of qualified women candidates, organizational support for professional growth and development, sensitive and responsive employers	Mentor women in the threshold of careers to aspire for growth within the industry
Career Intentionality (extent to which a professional invests intent in furthering in their careers)				Intentional involvement in sustaining career and pursuit of career goals, conscious choice to identify and effectively address self-limiting beliefs, courage and conviction to step out of comfort zones

Male Allyship

One of the most heartening findings of the survey was the perception of men regarding employing more women in the manufacturing, operations, and engineering services industry. A whopping 90 per cent of the male respondents believed that the construction industry would benefit from employing more women. This is a clear indication that men have started identifying the true potential of a gender diverse workplace and are conscious of the need for inclusive workplaces.

In the FGDs as well, women participants expressed that for better representation of women in the industry, men have to come forward and be allies and advocates. They have to be allies at work as well as home. Some participants talked about how they are educating their sons to be allies as it is their duty to nurture the next generation of men to be allies as their husbands have been.

Senior women executives opined that decision making in the construction industry is still a male prerogative. Most men are often perceived by women as condescending, patronizing or overprotective of women. Women value equality of opportunities and sensitivity towards a woman's responsibilities and commitments in the domestic space. Hence accommodations such as work from home and time off for care giving responsibilities for a child who is ill are equitable measures. However, policies alone do not mandate change. Mindset matters. It requires attitudinal shifts. There is survey evidence as well to support this (Figure 7) as women have faced different types of unfair treatment like lack of support from their manager/supervisor (by 14% women respondents), lack of collaborative mindset from the teams that they manage (by 13% women respondents), and lack of support from their peer group (by 10% women respondents). Women also felt the need to be acknowledged that they are equal to men but different.

Gender gap in perception of discrimination in the industry

Men in construction perceive lack of family support as the biggest challenge for women while women

opined that stereotyping is the biggest barrier as per the survey results. Not surprisingly, there were stark differences in the perceptions of male and female employees regarding the nature of challenges faced by women in the construction industry, as shown in Figure 13. Stereotypes, lack of support from supervisor, biased appraisal processes emerge as key challenges for women in the industry. Men feel that family support, stereotyping and sexual harassment could be women's biggest challenges.

Majority of the male survey respondents (40 per cent) felt that the biggest challenge faced by women was lack of family support. This indicates that men felt that the discrimination faced by women is because of societal norms and family circumstances, rather than unconscious biases and other attitudinal factors. The same factor was reported as a challenge by only 28 per cent women respondents. In the FGDs too women participants talked about the need for family support in different stages of their career whether it is at the time of entry into the industry or when they have successfully established themselves in the industry. However, it wasn't their topmost concern. As female respondents point out in the survey, they felt discriminated the most due to the stereotypical notions on what they can do and cannot do as a woman. This was felt by a massive 38 per cent of the women respondents. The second most cited type of challenge for women was lack of support from manager/supervisor. This was reported by 28 per cent of the women respondents.

The least common challenges faced by women (as seen by men), was the biased appraisal process hindering women's career growth, lack of support from supervisor and lack of support from peer group (nine per cent). All these challenges were reported among the top five challenges by women respondents. This again echoes the inference that male respondents do not believe biases to have a significant impact on the work environment.

The result also shows that the least commonly perceived challenge by women is sexual harassment at the workplace (five per cent).

It can be an indication that if there are stringent organizational policies and governmental regulations against sexual harassment at the workplace, the discrimination women face in this context can be lessened or that women have

confidence in the existing policies to act as deterrents to sexual harassment at the workplace. However, it may be noted that close to 17 per cent men reported sexual harassment as the fourth critical challenge women experience in the industry.



Figure 13: Nature of discrimination experienced by women in construction

Refer to Annexure 1 for the survey questionnaires used and Annexure 2 for the FGD questionnaires and the complete FGD analysis for all the four cohorts.

Conclusion



At the same time, career enablers such as equal pay and equal opportunity, flexibility, DEI intentionality, skill building and employee wellness programs can ensure the much needed support women are looking for to build successful careers in the construction industry.

Engaging with women and men for this study has helped understand the influencers, challengers and enablers for women in the construction industry. It also threw light on the different perceptions of men and women about the industry. While men felt that the discrimination faced by women was due to societal norms rather than unconscious biases and other attitudinal factors, women felt discriminated the most due to the stereotypical notions on what they can do and cannot do.

Most women are driven to the industry by their own interest followed by their parent's or role model's influence. It can be said that the industry is becoming more accessible to women than it was a few decades ago. However, several career hurdles such as discriminatory practices, work-life conflict and infrastructural problems deter them from pursuing a career in the industry. At the same time, career enablers such as equal

pay and equal opportunity, flexibility, DEI intentionality, skill building and employee wellness programs can ensure the much needed support women are looking for to build successful careers in the construction industry.

Ensuring safe, inclusive, supportive, affirmative, and equitable workspaces in the construction industry is a business imperative for organizations engaged in this industry. The recommendations in the previous section specify what governments, organizations and educational institutions can do increase women's participation in the industry.

A willingness to move beyond barriers and biases requires courage, clarity, and vision. An engendered construction industry is embedded with possibilities for all employees to thrive and flourish centered on infinite inclusion, choice, respect, equity, equality, and dignity for all.

Way Forward



Gender responsive policies and practices at the workplace have a positive impact in encouraging increasing numbers of women.

The research findings clearly point to specific action points for the Government and policy makers, organizations, and institutions. If all the three groups work towards meeting the below recommendations, the construction industry will surely be able to engage more women in the workforce.

Government and policy makers

Gender inclusive initiatives are a must to promote employment of women in the industry. A few of these initiatives are listed below:

- Better visibility of STEM courses and incentives for women/girls to join these courses (such as fee waiver or subsidies for women). As the study findings suggest, lack of awareness about STEM courses and career options is the major reason why families dissuade women from taking up these courses or pursuing a career in the STEM sector.

- One of the concerns that came through from the study findings was that of safety. The construction industry requires work to be done at outdoor locations and at odd hours. Women mostly shy away from such work because of safety concerns. This is a larger issue and one that will affect women working in other industries as well. Ensuring well-lit roads, night patrolling, CCTV cameras, improved gender ratios in police force and effective crime response mechanism overall throughout the country is a must for working women to feel safe. Apart from this state and central governments must also focus on providing adequate affordable government run working women's hostels, well networked local transportation facilities, adequate crèches, eldercare facilities, and reliable and affordable healthcare facilities for physical and mental well-being.

- Governments also have a major role to play in gender sensitization. Empowerment initiatives and social messaging that promotes gender equality will go a long way in changing social narratives that keep women away from traditional male domains such as the construction industry.

Organizations

- Women who participated in the research have emphasized on the importance of enabling organizational policies such as flexible and remote working options, appropriate and accessible crèche facility onsite, etc. as well as the need for infrastructural facilities such as more women friendly equipment and safety gears, availability of clean toilets, changing rooms, etc.
- The study findings dwell on discriminatory practices which cause women to quit the industry. Organizations need to look into gender inclusive policies and practices that can enable women to build a successful and sustainable career in the construction industry. Further, consciously creating, nurturing and embedding a robust culture of male allyship in the organization that enables men to emerge as gender champions and advocates. This can be done through training employees in non-conscious bias and gender sensitization across the organization. To do all this a robust DEI agenda needs to be created. This DEI agenda needs to be articulated and championed by the leadership team. Such an agenda can be created organically or through the help of DEI firms that provide such consulting services. Alongside creating a DEI agenda, organizations also need to carry out DEI audits to see if the implementation of the DEI agenda has been beneficial. For example, looking at the number of women promoted annually and checking if this number is too low and if so, investigating the reasons for the same.
- FGDs with senior and mid-career women indicated the gaps that need to be looked into to ensure more women can reach the senior leadership level. Making provisions for curated skill building and career enhancement opportunities for women by mapping their growth charts and providing them adequate support for work life integration as well as mentorship to aim higher is essential to address the leaky pipeline.
- Organizations need to be also seen as equal opportunity employers, especially sensitive and responsive to gender inclusion at the workplace. This will encourage women to confidently seek employment opportunities in these organizations.

One of the specific suggestions from the FGDs was to incentivise referral plans where women can refer other women to join the organizations and get some benefits in return. One of the study findings is also a comprehensive list of good practices from organizations engaged in the construction industry (see Annexure 3) that can be emulated by other organizations.

Educational institutions

Educational institutions have a very important role to play in evangelising the STEM sector as a whole and encouraging more women not just to join STEM courses but also to build a career in the industry. Here are a few specific aspects educational institutions can look into as per the study findings.

- First and foremost, educational institutions should work on making STEM education accessible and affordable for women, especially from rural backgrounds through scholarships and other enabling policies and practices such as ease of access of information on courses and counselling sessions with faculty or industry experts.
- Secondly, they need to provide comprehensive training for students in gender sensitization and non-conscious bias and encourage candid conversations between students (both women and men) and faculty on gendered mindsets and attitudes and their impact on personal and professional lives. For example, one of the study findings pointed to the patronising behaviour of male students towards female students.
- They also need to initiate industry-academia partnerships to showcase career opportunities for women in the industry. They need to offer sufficient opportunities for students (both women and men) to interact with inspirational women role models from the construction industry and conduct career intentionality workshops for women students to enable them to map their career paths based on conscious choices and informed decisions.
- Most importantly, they need to ensure that campus selection engagements with corporates are not biased and job opportunities are equally accessible to both female and male students. As a next step they also need to gather data on how many men and women pursue a career in STEM after graduating to understand the challenges students face in pursuing a career in the industry so that it can inform their actions on bettering the course curriculum as well as engagement with the industry.

Annexure 1

Survey Questionnaire (for men and women in the industry)

Please click here for the survey questionnaire for the employees from the construction industry.

Survey Questionnaire (for women students in STEM fields)

Please click here for the survey questionnaire for women students in STEM fields.

Annexure 2

FGD Questionnaires

Please click here for the FGD questionnaires for the different cohorts – students, women from the construction industry (early career), women from the construction industry (mid career), and women leaders from the construction industry.

FGD Detailed Insights

Students pursuing education in construction streams

Theme 1: Challenges and roadblocks that hinder students' progress before, during and after education.

Sub-theme 1: Experienced Challenges

Personal

Most parents and families viewed the construction industry as unsuitable for women. Reasons range from parents' perceived lack of opportunities in the industry, the physically demanding nature of jobs that are incompatible with women and its adverse impact on women's lives after marriage. Thus, they experienced considerable persuasion from parents or extended family members to choose alternative courses. Students also spent considerable time and effort to convince parents of their choices.

They expressed their feeling of discouragement and demotivation when families doubt their abilities to pursue a traditionally male dominated academic stream. While they were aware that these stemmed from concerns, the impact was not reflective of the intent and viewed by students as disempowering. Lack of adequate knowledge and exposure to the field, the anticipated challenges, and self-doubts adds to the existing concerns that leads them to doubt the ability of women to be able to align themselves in the construction industry.

Most students expressed an unwillingness to move out of their cities if the job required relocation.

Ironically, this results in perpetuating the age old preference of male candidates over women.

"Civil Engineering comes with a stigma... people wonder if there is any scope for placements as its male dominated."

"Why didn't you take something like IT, where you can sit in the AC?"

"More than half of students are girls. However, when an opportunity is given, women are not willing to move out of their city. So, companies prefer male candidates."

Educational

Paradoxically, participants find immense support being offered at their respective institutions encouraging them to pursue STEM fields. They also perceive their faculty as supportive and mentoring them towards a successful and sustainable career path.

In certain instances, however, students said that their male counterparts in class are asked to do heavy lifting or tasks such as concrete mixing. Interestingly, male peers themselves offer to do this, out of concern and care. However, girls perceive this attitude as patronizing and condescending and assert their ability to do these tasks themselves.

A major challenge arises mainly during the placement period. According to the students, companies come up with gendered job descriptions and recruitment calls, which are discriminatory and biased against women. Unlike IT/ITES or some of the manufacturing fields, gender is a major roadblock in even gaining a foothold in the industry. A woman's capability is questioned as a woman candidate tries to occupy a position that hitherto has been the exclusive preserve of men.

"Companies don't give an opportunity for women to apply, even if they are interested."

Social

Gendered stereotypes are deeply entrenched and is perceived by students as a major decelerator in their career aspirations and career paths. This perception is widespread even in their male classmates and sexism seems to be the norm rather than the exception. One of the participants expressed how she faces unambiguous sexism in physical labs especially, when men are assigned physical task and presume that women don't have the requisite ability to do so.

"When I was given group projects or assignments in class, boys don't listen to what you have to say. Also, they take credit for what I have done."

Participants also agreed that there is a clear line between being genuinely supportive and sensitive over a condescending and patronizing attitude that trivializes, minimizes, and objectifies women.

Sub-theme 2: Career related challenges anticipated

Personal

One of the challenges anticipated by students is the demanding job shift timings and responsibilities might adversely impact their personal lives and perpetuate work-life integration issues.

"Even if you are at a good position in the organization during night shifts, site challenges can call for late-night visits and meetings."

Professional

A major challenge as freshers who also happen to be women is being able to find suitable jobs in the construction industry. More men candidates compared to women candidates are offered jobs in campus placements. Hence women don't get the opportunity to join the industry and instead pursue teaching or join other sectors such as IT.

They are also cognizant of the gender pay gap that exists even though both men and women start with the same salary when recruited from college. The lack of basic infrastructural facilities at job sites also emerged as a major concern. Participants expressed that they were aware of the various opportunities that existed in the construction

industry other than field work. However, they felt this may not be true for the larger student community, especially women, and this has the potential to offset the narrative that the construction industry is incompatible with women's career aspirations and growth. This lack of knowledge leads people to make erroneous perceptions that this industry is unsuitable for women.

"There are very few women selecting this sector. However, I know that there are several opportunities for women in this sector. But what is embedded in people's mind that civil engineering is just about field work, which is the reason why women do not choose this field."

Widespread discrimination at the workplace in assigning tasks and activities to women and men emerged as a major concern that could adversely impact women's career growth.

"People at higher posts are men—the project manager, personal assistant, executive engineers, etc. They tend to communicate and delegate work to people whom they are comfortable with—the men in the team."

Social

Marriage, Maternity and Motherhood (3Ms) emerged as major decelerators in a woman's career aspirations, career path and career trajectory. However, they also expressed a willingness to return to work after a career break for these reasons. In addition, families still subscribe to restrictive gendered norms of men as protectors, providers and procreators and women to engage in the feminized task of cooking, cleaning, and caring in the personal space. Women's career aspirations are often subsumed in the world of domesticity.

"Marriage and parenthood will impact career 100 percent. In most Indian households, stereotypes continue to call the shots. Family members say that a woman's work is secondary, and her primary duty is towards the family. Even if a woman is earning more than the man in the family, the situation remains the same."

"Working women may be considered arrogant or bold."

Inadequate onsite infrastructure facilities emerged as a major concern.

“When women consider a career in construction sector, we must consider safety, commute, security, and other related factors. Men do not have to worry about this”.

Theme 2: Enablers and opportunities

Family/Friends/Peer Enablers

Many of the participants chose to study their current discipline inspired by parents who are either part of the construction industry or unconditionally encouraged them.

“My dad is a civil engineer, and he is my inspiration. As there are only a few women are working in the construction sector, he tells me that and we must change that.”

Participants perceived their families their greatest support in motivating and inspiring them to stay on their chosen paths. Family support acts as a shock absorber when they are demotivated or stressed.

They also felt that family members with civil engineering background can be their source of acquiring accurate and reliable information about the field.

The unconditionally supportive role of a spouse emerged as another potential enabler in a woman’s career path and aspirations.

Institutional Support

Students expressed tremendous satisfaction in the inclusive, safe, supportive, and affirmative classroom spaces in their institutions, especially by faculty community. Women students’ dedication and commitment endeared them towards faculty and made them more supportive of them compared to male students. However, this is genuine unbiased support and not to be construed as favoritism.

Theme 3: Beyond Barriers

Individual

Awareness and sensitization of students, family as the greatest support, guide and inspiration, role of men in the family as robust advocates and allies. Importance of career intentionality for women.

Career

Women role models in the construction industry for training and sensitization sessions, institutional policy to support gender inclusive recruitment practices, providing accessible education through scholarships for girls to pursue STEM, career intentionality among women in charting one’s career trajectory, making STEM education available, accessible, and affordable for girls from rural backgrounds, a clear vision and strong focus to build sustainable and successful career in the construction industry.

Organization

Appreciation and acknowledgement of women’s career related skills and accomplishments, health benefits, bonus, pregnancy and maternity phase support, and peer support, women mentor, or a guide.

Culture

Shifts in attitudes and mindsets of family, peers, organization through candid conversations and awareness sessions. Awareness and sensitization for peers and organization on bias and

“Changes seen in perspectives of people as women are rising in their career. But if society is patriarchal, we cannot change it.”

Early career women in the construction industry

The focus group discussion with early career women in the construction and manufacturing industry saw a wide mix of participants from different parts of the country. Participants belonged to all regions of the country: North, East, West, South and North-east.

Theme 1: Entry into the construction industry:

Influences, inspirations and challenges

Sub-theme 1: Driven by intrigue/inspiration

Most of these younger women had made conscious choices to be in the industry driven by different factors. Even though their families were initially sceptical about their decision to work in what is traditional considered a male-dominated industry, they were able to convince their families and pursue a career in their chosen field.

"I work with my company specializing in underground mines. My grandfather, father worked in this field, and I used to get details from them on the work. My father brought us up without showing any difference as a boy or a girl. My mother is happy and proud, even though she was sceptical about my job at first."

"I was passionate about learning engineering. Family was a little sceptical at first but they are okay now."

Sub-theme 2: Breaking Age-old Barriers

Some of them chose to work in the mining industry in jobs that are considered to be very difficult for women. They broke not just the traditional mindsets of their families but also that of organizations in the industry that did not want to employ women.

"Women are not allowed to work under the underground mining division. It has been like that for over a hundred years. Even companies who came for placement did not take our resumes. They do not even allow us to attend the interview. But one company did. As a fresher, I was appointed in West Bengal. There were around 1000 members. Me and another women colleague were the first two to go underground. Many questions were asked on what we faced. But seniors taught us to be compliant and calm."

Sub-theme 3: Challenges

Other than having to convince families and companies that women can work in this industry, participants also talked about other challenges such as some eligibility criteria organizations had which was impossible for them to match such as

having a certain body weight and height which may have been put together keeping male employees in mind. The other challenges were to do with working in outdoor locations and in regions far away from their hometowns. Parents found it very difficult to let their girl children leave homes for such faraway places basically concerned for their safety and well-being.

"Weird conditions put by companies, weight 60 kg, height – in 2016 – They were not specific to girls but boys."

"In the initial days when companies offered jobs, at the age we are in – 19 - 20, parents find it difficult to let us go. It's difficult to find jobs in this sector and companies do not offer opportunities for girls. But my company did and feels fortunate to have this opportunity to learn and grow."

Participants who were posted in far off regions also faced language challenges but with time they were able to overcome it.

"I am from north India, posted in south India. There was a language barrier and communication problem, but later, learnt, understood everything, turned out to be good. I'm learning Tamil, I appreciate myself for my effort."

Participants also mentioned that there is little awareness about the industry and the different types of jobs women can avail in the industry. Families don't want to allow their girl children to join the industry because of the misconception that it is a very hard job for women. This is not entirely true as the industry has a wide range of job roles, some of which are very probably very similar to desk jobs in other industries.

"We need to create awareness on how there are multiple jobs within the construction industry. The only laborious work is handled by the people in Execution, that too once you reach a certain Cadre, you will not be expected to spend day in and out at site. There are numerous other jobs at the site which the women can effectively take up, even in the management roles."

Especially in the mining industry, which is still quite male-dominated, women employees reported being subjected to abusive language.

“Underground mines as a sector predominantly occupied by men, especially from lower grades, we get to hear local slangs and terms that are offensive. They are used to using them but are conscious too. But they lose it at some point.”

Sub-theme 4: Pay parity and work timings

One participant raised some specific issues about pay parity with other industries and long working hours in the construction industry. She felt that these issues keep women from entering the industry. Women feel that other industries pay better, don't have grueling work hours and it is also easier on them workwise. It is also easier for their families to allow them to work in other industries where all these aspects look more conducive than the construction and manufacturing industry.

“The subject of work timings is what is hindering most women from getting into this industry. If you look at Labour laws, any labour working more than 40 Hours a week has to be paid overtime, however for employees who are working for almost 72 hours each week there is no such provision. If the labour laws are strictly enforced and companies are made to shift to eight hour shifts rather than 12-hour shift, it will make a huge difference.”

“The other major concern is that of pay scale. Any fresher joining IT or any other industry is getting paid the same as an employee having four to five years' experience in the construction field. All projects are won on the concept of L1 bid, i.e., the Contractor quoting the least amount for completing the Project wins the bid. Therefore, the Contractor firms are under huge pressure to keep the manpower costs down. Just imagine, in construction firms, how many times the appraisals given are to the tune of 4-5%, which doesn't even commensurate with the inflation.”

Theme 2: Biases and discrimination

Participants felt that while the industry comes with its own biases, as they spend more time in the industry, they are learning to overcome them. Some also mentioned that they haven't faced any biases at all. Some stereotypes, however, still continue such as assuming that girls aren't strong enough. Also, some male employees tend to be overprotective of young women who join the industry because they are concerned for their safety and well-being.

“People from older generations think girls are not strong. But there are other leaders who support and give extra attention and come across protective. Guys are given any job as they anyway do it.”

“I am the first women to join this firm, as also I have a team of women here today – which is the very first batch of women. Girls were not eligible to apply for this post initially. I learned as well as taught. Now, three shifts are being handled by girls, which was previously done only by boys.”

Some participants related instances of having been discriminated against and being neglected or ignored because of their gender.

“We were two in the team with our boss. The boy used to get assignments directly from the boss. My boss did not used to communicate with me directly, rather ask the boy colleague to communicate to me. 80% work done by him. I was frustrated with not having any work assigned. That obviously affects performance appraisal.”

“When junior women are given opportunities, a lot of senior persons keep asking why she was given opportunity.”

Theme 3: Career planning

Most of the participants in this cohort were unmarried and relatively new to their jobs and the industry. They were asked about their career goals and aspirations. Barring one participant, everyone else envisaged themselves continuing in the same industry. They were conscious that after getting married work life integration would be harder but they seemed confident to be able to navigate these life stages with ease.

“Marriage and everything is far away. Lucky to have supportive parents, who trusted me, helped me throughout as I had interest in the field. So, I want to stay in this field, in future I want to be a guide or mentor and keep learning. No interest in shifting to another field.”

“I will try to keep working in this field irrespective of marriage or maternity challenges.”

“Not thinking about marriage – we are in the learning phase; company has also given us opportunities. My parents must obviously be thinking about getting me married but maybe within five years or so. Company supports married women; hence I am not worried. Not going to shift from this industry.”

Some participants expressed concerns about how they will manage motherhood while working.

“I am worried about being relevant once I come back from maternity break. Worked hard to get here. I am confident that my organization will support throughout. So, probably ask them to assign lighter projects during the phase. I would like to continue in the same sector.”

“Talks about my marriage are going in the family. Not everyone is alright with my job. I have made my family understand that it is important to talk about my job and give a clear picture, as the prospective family would not know much about underground mining.”

Sub-theme 1: Self-limiting Beliefs

Participants shared some self-limiting beliefs that formed obstacles in their career path. They also conveyed that most of the time, they only needed some support from family, colleagues and bosses to overcome these self-limiting beliefs and stay committed to their career path.

“I doubted myself when I was doing my MBA. Had a gap of 10 years in completing my education. After two - three days of joining, I went to the dean crying, asking him to let me go. He convinced me to stay for a week and then see if I wanted to go or not. Given the time, I was able to adjust.”

These self-limiting beliefs are inherent and a result of the social conditioning. Participants talked about how it has been an uphill task to get the acceptance of the society and of colleagues who are narrow minded.

“Discrimination comes from within for women. We are not confident to acknowledge our skills or work. Boys are just the opposite. When women push for more credit, it’s seen as negative thing – ‘why is she pushing for it?’. But for guys, whatever they do is perceived as positive or is seen as having leadership qualities. The older generation especially find it difficult to accept women working.”

Theme 4: Organizational Policies and Practices

Path breaking initiatives by organization have made it possible for many women to continue working in sectors that were hitherto unavailable for women. The role of organizations and the policies and practices they set up are therefore invaluable as was echoed by the participants.

“Organization is providing online training programmes – ethics, customer dealing, etc. There are assessments every month. Compulsory for all employees. This is a very good initiative. But they can provide opportunity for getting into exhibition. I’m in the marketing sector and has not received any opportunity for this. I’m good in promotional activities, this support will help us grow.”

“I am the first women to join this firm, as also I have a team of women here today – which is the very first batch of women. Girls were not eligible to apply for this post initially. I learned as well as taught. Now, three shifts are being handled by girls, which was previously done only by boys.”

Organizational policies and practices should represent the vision and mission of your business but they shouldn’t act as barriers for your employees. Participants shared instances of how their organizations tweaked policies to support them in times of need.

“Company provides accommodation/guest house, as infra facilities. The work site is three to four kms away. That said, washrooms are not available underground. Our company supports us by allowing us to go home after completion of work otherwise we need to stay for eight or nine hours as per protocol.”

“Covid 19 was a challenge, especially working in the construction sector. People mandatorily has to stay in office for 12 hours – one of the biggest hindrances, esp. for women. But working in TATA Projects was a boon as I was offered flexibility whenever I wanted.”

Theme 5: Governmental and organizational support needed

Most participants seemed to be quite satisfied with the organizational support they were receiving. They had some feedback on what the Government should be doing to increase women’s representation in the industry.

“Kolkata seems to be the best place for women. As I have been to other cities, I can tell. Government should make companies liable for women’s safety.”

“Government should provide basic facilities, our company is doing the best possible for us.”

“Career guidance to be given when girls are in college.”

Mid-career women in the construction industry

Theme 1: Entry into the construction industry: Influences and inspirations

Social conditioning about gender roles has been a big barrier in women’s entry into the construction industry. Going beyond the socially defined roles, some women joined the industry even at a time when they had no role models at all to look up to. They did so for varying reasons.

Sub-theme 1: Driven by intrigue/inspiration

While some were driven and influenced by people around them, the others chanced upon the industry through a recruiter call and despite opposition from family decided to find out for themselves how they would navigate this industry. Others were curious about what goes on in the construction industry witnessing a lot of construction work around them and noticing some renowned construction companies operating in their area.

“My family friend is an architect in Gujarat state government. When I thought after what next to do after 12th – I was inclined to becoming an architect or civil engineer. It was an option because it was inspired by him.”

“My father is a vet but has more interest in construction. He used to draw layouts of flats – I have seen his papers. If we are out he will see construction work - so I chose civil engineering.”

Sub-theme 2: Conscious choices to break stereotypes

Some of them also made a switch from IT and Finance to construction and manufacturing inspired by the other women in the industry. Some women were conscious about joining the industry to break the stereotypes that confined them to roles more suited to women, such as teaching and bank jobs, according to the prevailing societal concepts.

“There is no engineer in my family everyone is in teaching. I have seen girls not interested in mechanical engineering. I chose mechanical.”

“When I completed engineering in 2002, everyone went to software sector, but I wanted to do core engineering. I got two opportunities in software and manufacturing and I chose this core manufacturing field.”

Theme 2: Biases and challenges in the industry
Being a traditionally male-dominated industry, most women in the early parts of their career faced a lot of challenges, biases and were at the receiving end of age-old stereotypes. However, as they grew in their careers and navigated the industry and they have been able to navigate these

setbacks with the help of supportive families, organizational policies and better sensitized co-workers. Some of the challenges and biases they faced and continue to face are as follows:

Sub-theme 1: Being lone representatives

Owing to the low representation of women in the industry, sometimes, they are the only women in their function or their team or at a location. While they are accepted into the team, the problems they face are usually theirs alone.

“I’m the only woman in Guwahati but ... they have accepted me very well.”

“There are no female colleagues in core facility. Team members do help but challenges are there.”

Sub-theme 2: Gender stereotypes

Most women have faced some stereotype or the other in their career barring a few who felt they were lucky to not have faced any such issues. However, some of them had witnessed or heard of other women were subjected to biases. Whether being asked about their life plans on marriage and motherhood, as that would affect their work, or whether it is about being told they cannot do certain tasks because they are not physically strong enough, there are several such stereotypes about women prevalent in organizations.

“I have faced gender biases previously. At that time, when I stood behind or beside any person, they stopped the work because I’m a girl. They said you are pampered; how will you dirty your hand. I had to prove myself.”

“In the first organization I joined, I was going to get married in first year so senior asked which company am I planning to shift to. It was an assumption that if I’m getting married, I’ll leave and join my husband’s company. So, I wondered am I not a good resource?”

These women were also able to deal with these biases head on by proving themselves on the job. They taught themselves by gathering knowledge through all sources possible and leaning on those

who supported them. They also learnt how to respond to such situations where they were being discriminated against because of non-conscious biases. Gradually they saw such incidents reducing.

“My manager said I don’t want another female because I already have four to five. It was not a good vibe to start with. But once you prove yourself acceptance becomes easy.”

Sub-theme 3: Making your voice heard

It is difficult when you are outnumbered to be able to make your presence felt and stand up to be counted. Women in the construction and manufacturing industry have been marginalised and therefore it takes them double the effort to be heard. It is especially difficult to put across your views when you are seen as someone who needs to be protected or inexperienced or not knowledgeable enough or someone to be pampered because of your gender.

“You have to be loud enough to be heard. With ten to 15 males and one female you have to put extra effort to get recognized, to get more work. If you visit a site and come back and fall ill, it’s because you are a girl.”

“Putting the point forth becomes difficult when your point is not necessarily in line with what other people are agreeing to. So you need to have the strength to put the point forth. Sometimes men also be slightly over protective. They look at you like they may look at daughters. While the intent might be good it restricts opportunities for growth and development.”

Sub-theme 4: Logistical Challenges

The industry has some very hands-on and outdoorsy roles which were typically done by men but with the number of women employees growing, some of these roles are now being assigned to women too. However, it has taken time and effort to sensitize organizations towards understanding and considering the needs of women employees entrusted with such field roles.

“When company sends you to the site you can’t expect toilets for women. There are no female colleagues in core facility. Team members do help but challenges are there.”

“Many years back people told me because of you we are paying rent for one washroom. Many people don’t speak up. You have to request for dustbin, tissue papers. If you request, you get. These challenges are rectifiable but they exist.”

“Washroom facilities are an issue. My colleague had to be at a project for a month the washroom was at a hotel one hour away from the project. Just because she was the only female there, she made requests. But because she was there temporarily, her need was not recognized.”

Sub-theme 5: Cultural Challenges

Organizational culture also needs to be conducive for women employees to thrive. Certain unsaid organizational practices of late working, networking after work, etc. are difficult for women to adapt to because of their care giving responsibilities.

“Time is a challenge - women need support with time. Even if we complete all tasks assigned on time, we cannot leave office. There will be late night discussion that happens between people who stay back at office. May be regarding important decisions that are official. We miss this, as a result of which our appraisals, promotions get affected.”

“As a female candidate, I will have to put double the effort to show my talent.”

Such basic challenges can drive away women who are new to the industry and are one of the reasons for the low representation of women in the industry according to the participants.

Theme 3: Career Derailers

Marriage, motherhood and migration have been career derailers for women in the workforce. We asked the participants how these affected them. A

few of them said that marriage and motherhood didn’t impact their work so much, however, it has increased their responsibilities at home a lot more owing to which they are unable to find time for personal growth in their careers. Some of them mentioned that they had to take a break to tend to their little ones and that set them back in their careers by a few years. Some of them had very supportive families and husbands who helped them to navigate career and home responsibilities with ease.

“I took a career break of three years, which obviously impacted my career. I could have been at a higher position now.”

“To reach the apex of org is not the easiest task in the world. Even calculating the time duration, it is difficult to attain such a position. This is the issue with the industry as well as organization. There are many levels – AM, AFM, DGM, GM, Senior GM, VP. Minimum threshold for each level is three years. But because of the dominance of the other gender there is rare probability of reaching a higher position.”

For some participants, COVID was a blessing in disguise as they were able to tend to their children with the work from home facility that came through because of COVID restrictions. Others found supportive bosses but were subjected to harsh treatment by peers.

“I have a two y/o but there was no impact after marriage or kid. But after joining from maternity, handling can be difficult. Being on shop floor WFH was not possible. So I spoke to my reporting manager and I convinced about getting the option to go home during the lunch break. For one month I requested to go to my room during breaks. He approved it.”

“Some peers treated me like I’ve never worked here. They asked me if I enjoyed my holiday. I can’t change their thought process. My reporting manager was not like that because in that same year I got a promotion. My work ethic and boss didn’t let me impact my career.”

The role of supportive employers and families in the lives of working women cannot be stressed enough. They are usually the deciding factors in ensuring women don't drop off from the workplace owing to marriage and motherhood.

Sub-theme 1: Self-limiting beliefs

Participants acknowledged the role of self-limiting beliefs in their career advancement. Some participants mentioned that post having a family, they have put their family first and so career always took a back seat. They put their career on hold to tend to their children.

"Before marriage, I thought I could reach any level. Marriage and maternity threw some challenges. But the thing is sometimes we demotivate ourselves. We do work efficiently at office and do not take cigarette or tea breaks."

While there were some participants whose self-belief kept them firmly on the path of career progress, others said they were filled with self-doubt and that hampered their career.

"People trust more in me than I do. If I get opportunities, I wonder there are people who are better than me... so why me. But I have been aware of this trait since two years. I have learned to give myself a pep talk. If I question myself, my husband supports me – pulls me out of it. It was in a program that I learned I'm capable. It's not just me, other women also think about this."

"I had case of imposter syndrome – I feel I got through luck. But contribution and guidance from seniors, constructive feedback helped me overcome it."

Theme 4: The Role of Organizational Policies and Practices

Enabling organizational policies and practices will go a long way in ensuring more women join and contribute to this industry, echoed the participants. They felt that it is not just enough to have policies and practices but efforts must be made to ensure correct and fair implementation of those policies. While these policies are meant to ensure equity, some male employees see them as special

provisions for women. Participants pointed out that the governmental policy of six months' maternity leave benefitted so many women to continue with their jobs. Before the maternity leave policy was revised, a whole generation of women had to come back to work after leaving their new born old month babies and those who couldn't, had to drop out of the workforce.

"Inclusion policies give us some benefits but also raises questions from other sides. We should not be treated specially. We should be treated equally. Having policies increases percentage of women but at the mid-management level men should be sensitized more rather than making policies for women. Everyone is equal."

"Policies are there but culture needs to be improvised to give us better environments. We still get comments like why is men's day not celebrated, or you get extra benefits."

The other reason to have good organizational policies and to monitor their effective implementation is to ensure that there is no unfair or differential treatment.

"I had a colleague who was planning to go on a maternity leave. We were on a project so the overall outlook for her was not positive from the management. It was like okay if she is going don't give important assignments to her. She was under-utilized. She was only able to continue because of policies. You can't give them low rating, terminate them."

"Women at different age groups have different requirement. And they are not extraordinary requests. Providing those facilities will only motivate us at work."

Timely reminders about existing policies, timely monitoring of whether these policies are being effectively implemented and sensitizing all employees on the need and benefits of these policies is crucial. While some organizations have a generous leave policy, flexi timings, work from home policy and crèches, other organizations that are serious about their commitment to gender diversity need to work towards emulating these policies and practices.

Theme 5: Increasing women's representation in the industry

Participants talked about a whole host of existing organizational policies that aid women's retention in the industry and also policies that are desirable to achieve greater representation of women in the industry. Besides this, the need for strong women role models in the industry as well as the male allies is important to achieve this objective.

Participants pointed out several challenges in moving up the ladder in their industry. The first and foremost being the lack of women role models in the higher rungs of the organization. The low representation of women in senior leadership roles acts as a barrier of thought: if no woman has been able to reach there, how would I?

Sub-theme 1: Role models in the industry

Participants felt there are very few role models in the industry to look up to. However, there are a lot of supportive men in leadership positions who mentor and support them. Even one strong women leader can make a lot of difference to the organization.

"My boss is a female and this is the first time in the last 12 years that this has happened. Otherwise, I've only had male bosses. The difference is huge. You realize the difference in creativity and thought women bring. If we try to do something it shouldn't be a challenge."

"Till the position of deputy managers, women are there. I have not seen anybody in a leadership position. I feel this should change, should not downgrade women's capability."

"Absence of women in the senior leadership level is a problem and this affects appraisal and many decisions."

Participants also felt that there is a general hesitation in elevating women to decision making roles. While chances will be taken with men, the same risk appetite is not shown towards elevating women to senior leadership roles.

"My colleague was eligible to become the department head. But some person who has not worked in this field was given the job. Decision making is not given to ladies. Only two or three ladies at GM level in 70 years, that too started seeing only in the past 20 years that ladies are joining this organization."

Making sure more women are seen and heard in the leadership team will attract more women to the industry.

Sub-theme 2: Men as gender allies and advocates

Participants believed that if we want better representation of women in the industry, men have to come forward and be allies and advocates. They have to be allies at work as well as home. Some participants talked about how they are educating their sons to be allies as it is their duty to nurture the next generation of men to be allies as their husbands have been.

"Acknowledging that women bring in as much as they do to the table are the real allies. Not considering opposite sex as a weaker or a stronger sex. Sensitization for both men and women is important in terms of how to support either gender. Of course, physical capabilities are different. But intellectually we are equal."

"We are in a male dominated industry and rather than going into assigning roles or giving special treatment we need awareness and a change in mindset. We need an equality mindset."

Sub-theme 3: Enabling Policies

Almost all participants wanted flexible working hours, hybrid working if possible, crèche facilities, and clear opportunities for growth and learning. Even though some participants had older children, they wanted some of these flexibilities for their younger colleagues and for the scores of women who would someday join the industry.

"Retention is very important. Our HR has given us a policy that we can do WFH twice in a week. Coming to office is not a challenge. People can manage. Hybrid working policy helps. We are moving beyond money."

“Women referral policies – women employees will get a higher chance. Top management gives a target to top leaders to recommend women talent. It helps ensure women stay back in the organization. They are creating environment where women are also working in underground mining. There are female operators too.”

“The company has also targeted to increase the number of women. During recruitment we have referral policy. You get monetary gift for referring women. Vacancies preferred for women than men.”

“Main problem lies with the physical facilities like washroom, and other infrastructure. Second problem is mindset. So many organizations are helping with the first point. But handling with the second point is difficult for the organizations. These changes should come from home also.”

“Higher education policy – motivating all employees to learn new skills. Creating different learning modules.”

“Flexibility, WFH option, crèche facility, five-day working – all can motivate more ladies to enter our field.”

Senior women leaders in the construction industry

Theme 1: Challenges and constraints along the pathway to leadership

Widespread myths and misconceptions about the construction industry

In the absence of accurate and reliable information, the dominant perception of most people is that the industry is male dominated and thus incompatible with women, especially regarding their safety and security. In addition, when women join the industry at the entry level, they do not have clarity about their career paths and the various career opportunities and roles in the industry.

“I am a mechanical engineer. But when I joined the industry, I was assigned to the billing section! When I mentioned the matter with my reporting

officer, I succeeded in getting a transfer. I have been in construction industry for past 20 years – core construction (roads, bridges, machinery) but the absence of relevant information is a huge challenge that blocks growth.”

Stereotypes and biases women negotiate along their career trajectory

The construction industry is perceived by senior women leaders as a sanitized, sterile workplace where emotions have been outlawed. Participants expressed that emotions and feelings are devalued in contrast to logic and rationality that are overvalued.

“If a woman is aspirational and ambitious, she is not seen in the same lens as a man. When men do not know how to respond to a woman who knows what she is doing, they say, ‘You are emotional!’ I tell them, ‘Passion is an emotion!’”

- Gender stereotypes of women whose care giving commitments related to children might adversely impact their professional roles and responsibilities is widespread. However, perceptions of men involved in parenting roles is viewed as a badge of honour.
- Gender stereotypes of women as incapable of demanding physical work. Although one sees shifts, women continue to be underrepresented at the shop floor. A significant reason is that despite the advent of automation, regressive attitudes, and mindsets about the physical capability of women are pervasive and persistent.
- The masculinized world of the shop floor. Unlike active business roles in the construction industry such as HR and Marketing, where women are visible, the conventions and mores of the shop floor are perceived to be incompatible with women.

“The language used in the shop floor is rough and tough. The moment a woman joins, they [men] say, ‘We don’t’ know how to manage!’”

- Nonconscious bias experienced by women at the workplace. Career aspirations and ambitions are viewed as incompatible for women professionals in this industry. Women must work twice as hard as men to prove their mettle. They also grapple with the non-conscious bias of most men that women and technology are incompatible.

“Today I head sales but people outside the organization are not comfortable. Customers do not want to talk to you and every time you must prove to them you know what you are doing.”

“It is time women began to address non-conscious bias. In my training sessions I ask how many women are ready to marry men who have studied lesser or earn lesser than them. None! Women too have biases, and we must resolve them. Even in conference rooms, women take the seats behind. Why?”

- Women experience internalized misogyny, which is expressed through minimizing the value of women, mistrusting women, and showing gender bias in favour of men. Most women in construction are comfortable in subordinate roles. In addition, they experience internal resistance and pushback in reporting to women.
- The normative model of leadership in the construction industry in India is the masculine model. Women expressed that this meant that the leadership style was top down, hierarchical, assertive, and often aggressive. Ironically, most women also internalized this leadership style and divorced themselves from the feminine style of leadership that is collaborative, empathetic, intuitive, and relational. Paradoxically, when women adopt masculine styles of leadership, they are branded as “bossy” and “difficult.”

“The industry is aggressive, maybe because it is male dominated. You must understand how to maintain your core because women getting bossy is seen as aggressive not assertive.”

Construction equipment and safety practices are designed on the male-as-norm principle. As a result women are disadvantaged and face safety hazards when inspecting equipment and machinery.

“The equipment and safety are not designed based on female anatomy. I once visited a testing station. I wanted to go closer to the structure and inspect it, but this was not possible without safety shoes, and they did not have my shoe size. Even if I did wear the bigger shoes and something were to happen, there was no way I could run. But the next time I visited the facility, they made sure women’s shoe sizes were also available.”

Theme 2: Under representation of women at apex levels in the construction industry

There are historical underpinnings to the underrepresentation of women in this industry. A male dominated industry, by default women have been underrepresented. Not surprisingly, its impact is felt even currently when doors are being opened for women to be part of the industry. However, the absence of awareness of the “missing” women, perpetuates status quoism of under representation of women.

An important reason for the “funnelling” of women’s representation at the apex levels is the pervasive gender bias that women lack the competencies required for senior leadership, even though women have proved that their work is on par with men.

- Long working hours in the construction industry is perceived to be incompatible with women. Along with negative perceptions of a woman’s ability this is a significant barrier in a woman’s career trajectory.

“Men are reluctant to contact us post working hours for any urgent work-related matter. As we have a nontraditional style of working, women are not involved in any work that extends beyond 6.30 pm. This is a hindrance to our professional growth.”

- Absence of robust role models of women in the construction industry This is an off shoot of the under representation of women in the industry. The absence of inspirational role models limits women from taking charge of the careers and navigate their career trajectory with informed perspectives.

“We need to have women as robust role models. We see women as the finance head or CHRO. We do not see them in manufacturing, supplies or as the heads of these divisions.”

- Lack of adequate and appropriate infrastructure results in a skewed gender ratio at the construction workplace.

“Infrastructure and facilities are not great in the field. You find only 30 percent of the employees in the factory and workshop. Seventy percent are in the field. As a result of this the field has become male-dominated.”

- Paucity of women in direct business roles: In order to get to apex positions it is imperative that women drive direct business roles such as sales. Currently, women in construction are often seen in operational roles, which disadvantages them.

“Women will not get a seat at the table unless they are in direct business roles. However, this is never acknowledged. There are women leaders on company boards but how many are there in the EXCON committee? There are still men sitting around discussing women’s issues. I have no hope!”

- Under representation of women in operation aspects of the construction industry: In some organizations, focussed efforts on improving the presence of women, has resulted in women’s presence at shop floors being as high as 50 percent. These women participate in making huge machinery. However, there are only a handful of women involved in operating machines.

“Our machines operate in an area where infrastructure is not developed. Overall, the environment does not support women working in these spaces- so it is men who operate the machines. We focus on having women in our factories but, what about outside? Machines are easier to operate even when compared to cars. But we see only a handful of women operators in the company.”

- A focussed strategy to ensure adequate representation of women across the construction industry. Ensuring significant representation of women in manufacturing and direct business roles is certainly paramount. However, it is imperative that women are involved significantly in roles such as sales and marketing as buyers in the construction industry are mostly men.

“How do we influence our suppliers, dealers, and customers to have women? Now our dealers are also in smaller locations – this is where women are in support roles – invoicing, call centres – but women selling?”

“If you look at the buyer’s profiles, they are all men. How do we influence people to get women into this? There are places you need support from the government and external agencies. It is a mission that needs a lot of effort. We must ensure the road we leave behind is easier.”

- Self-limiting beliefs that negatively impacted women’s careers and strategies they evolved to address them effectively. A major self-limiting belief was a tendency for most women to stay in the comfort zone of support roles in the construction industry. The transition from a support role to an active business role involved a leap of faith that was an imperative career enabler. For others, it was a conscious choice not to subscribe to self-limiting beliefs.

“I moved from a support role to an active business role. But I shifted and I had to learn. You need to be in the business to understand it.”

- Conscious choice to step beyond comfort zones and explore functional areas regraded as men-only zones. The ability of women to take calculated risks to explore areas in construction where women have traditionally been even more invisible is an indication of a growth mindset and willingness to embrace change.

“Our openness to take the opportunities that come our way and move out of our comfort zone matters because this is how we grow.”

- Overprotective attitudes of men resulting from over glorifying stereotypically feminine traits such as women’s so called inherent weakness is counterproductive. On the other hand, women value being recognized and validated for their assertiveness and ability to take care of themselves.

“If people are being protective, I tell them I can take care of myself. So being bold, and assertive is important.”

Theme 3: Enablers in the career trajectories of women in the constructions industry in India

The role of organizational policies and practices that enables women to build a successful and sustainable career

Participants were unanimous about the role of equitable, sensitive, and informed organizational policies and practices in attracting and retaining women in the workforce to realize this vision, it is imperative to create an organizational climate where women’s career gets focus and direction. A major initiative in this regard is to create awareness and sensitization on non-conscious bias across the organization. Equally important, is the role of people-initiated responses even in the absence of organizational policies. However, a robust DEI agenda is important to springboard such initiatives.

“Sometimes the policy might not be there in the organization, but the manager can give you the comfort. The efforts can be people driven. In my previous organization there was no work from home but after my childbirth, my manager gave me work from home option for a year.”

The role of the family as an enabler

The unconditional support of the family is a non-negotiable for women in this industry because of the non-normative aspects of the work such as remote locations and long commute. Successful women also consciously created and nurtured allies at home by discussing aspects of their work and that their careers were a means of fulfilment and satisfaction for them. This supportive eco family system was imperative if women were to advance in their career trajectory.

The lives of women from small towns, are circumscribed by restrictions on mobility. In such instances, the presence of an ally in the family, usually the mother, is an antidote to the voices of orthodoxy and conservatism that impose restrictions on women’s mobility.

In addition, a supportive spouse and sharing of household responsibilities decrease the gender chore gap and thereby decreases the dual burdens faced by women who work outside the home.

“Until and unless you have support from the family you cannot think of working in this field because it is hectic. But to grow, your family needs to give support. My husband switched places (relocated) because I got a new job. We need to create that ecosystem. My family recognizes this job is important to me.”

“I come from a small town where girls are not allowed to go out. But my mother was a strong woman and inspired me to pursue my education. Thanks to my determination, and my mother’s support, I could achieve what I have today.”

Role of mentorship and sponsorship in enabling women’s careers

Mentorship and sponsorship were significant enablers in the career trajectories of women by enabling them to engage with their careers with informed perspectives. The presence of family members who were part of the construction industry was an added advantage in imparting fresh perspectives to knotty workplace issues. Interestingly, women expressed that formal mentorship programmes and executive coaching

were critical. However, equally important was the mentoring provided by a spouse who is part of the construction industry.

“My husband is my mentor because he has seen all aspects of construction. He has pushed me to be a part of the industry. He knows women’s representation is low, so he guides me to mentor other women.”

“It is important to have male allies because they help open doors for you. How you take that opportunity is up to you – opening that door can be difficult.”

Role of men as gender allies, gender champions, and gender advocates in making STEM workplaces gender inclusive

Decision making in the construction industry is a male prerogative. In the absence of gender sensitive and gender inclusive perspectives, most men are often perceived by women as condescending, patronizing or overprotective of women. Women value equality of opportunities and sensitivity towards a woman’s responsibilities and commitments in the domestic space. Hence accommodations such as work from home and time off for care giving responsibilities for a child who is ill are equitable measures.

However, policies alone do not mandate change. Mindset matters. It requires attitudinal shifts. Women also felt the need to be acknowledged that they are equal to men but different. Equality, however, is not sameness.

“Men need to be conscious that women have more responsibility toward home so if a child falls sick, the mother takes a holiday in most cases - so we need support like Work from Home. Currently we need such support from men because we end up reporting to them.”
“It is important to have men acknowledge that we are different but equal; we do not need special treatment.”

Theme 4: Strategic pointers for women aspiring to be part of the construction industry

It is imperative for women to have the courage of conviction to step out of their comfort zones—it is then that personal and professional growth begins to manifest. It is also important for women to own their voices and their stories unapologetically.

“Work speaks volumes in any industry or role. There will be times when you must step out of your comfort zones. Taking up those challenges are differentiators. If you take these new challenges, they will become key differentiator in your career path.”

“Do not suppress your voice even with men in the room. It is important to voice your opinion.”



Confederation of Indian Industry

The Confederation of Indian Industry (CII) works to create and sustain an environment conducive to the development of India, partnering Industry, Government and civil society, through advisory and consultative processes.

For more than 125 years, CII has been engaged in shaping India's development journey and works proactively on transforming Indian Industry's engagement in national development. With its extensive network across the country and the world, CII serves as a reference point for Indian industry and the international business community.

As India strategizes for the next 25 years to India@100, Indian industry must scale the competitiveness ladder to drive growth. CII, with the Theme for 2023-24 as 'Towards a Competitive and Sustainable India@100: Growth, Livelihood, Globalisation, Building Trust' has prioritized 6 action themes that will catalyze the journey of the country towards the vision of India@100.



The CII Centre for Women Leadership aims at co-creating ecosystems to enable women to achieve their full economic potential. Through this center, CII aims at to address the barriers to the entry, retention, and growth of women as leaders in the economy, both within the formal and informal sector. This will be achieved through catalysing innovative ideas and solutions amongst all stakeholders, in India, and globally, to enable women to participate, grow, and lead within the Economy.

CII has been focussed on Women Empowerment since early 2000s. In 2013, with the formation of the CII Indian Women Network, these efforts have taken the form of advocacy, capacity building and ground interventions with Industry and Women.

Confederation of Indian Industry

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