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THE 'GLASS CEILING' OF WOMEN QUANTITY SURVEYORS: MYTH OR REALITY?

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ABSTRACT

The glass ceiling remains a pervasive barrier to the advancement of women in the construction industry, despite their increasing entry into various professions within the sector. Despite the well-documented nature of the glass ceiling phenomenon, its specific impact on female Quantity Surveyors in the Nigerian construction industry remains a significant research gap. This study therefore empirically investigates the existence and underlying dynamics of this barrier for women Quantity Surveyors (QS). A pilot quantitative survey was administered through snow-ball sampling to female QS with over five years of experience and data was analysed using descriptive statistics. The findings reveal a fundamental dichotomy in career trajectories: women who overcame the ceiling were driven by a desire for positive change, career progression, and continuous learning, whereas those who remained constrained cited a perceived immutability of the ceiling (lack of confidence) and family commitments that forced them to forgo opportunities. In conclusion, this research confirms the existence of a glass ceiling for women QS and uncover a fundamental divergence in career trajectories, determined by factors such as personal ambition versus constraints like low confidence and family duties. Consequently, it is recommended that female Quantity Surveyors be supported in pursuing leadership roles and continuous learning, whilst institutional support systems should be established to build confidence through structured mentorship and family-friendly policies.

KEYWORDS: *Barrier, Career, Glass Ceiling, Quantity Surveyors, Women.*

INTRODUCTION

Since the 1970s, women's participation in the global labor force has significantly increased, with their representation in managerial roles growing across most countries (Powell & Graves, 2003). However, this progress has not translated equitably to the highest echelons of leadership. A persistent disparity remains, where women advance into lower and mid-level management but are disproportionately blocked from top executive positions, a phenomenon widely described as the "glass ceiling" (ILO, 1997; US Glass Ceiling Commission, 1995). The US Glass Ceiling Commission (1995) defines 'glass ceiling' as "*the unseen, yet unbreachable barrier that keeps minorities and women from rising to the upper rungs of the corporate ladder, regardless of their qualifications or achievements*".

This barrier is a global reality, with research across Asia, Africa, Europe, and America

consistently identifying patriarchal structures and organizational cultures as primary obstacles (Princess et al., 2018; Remya Lathabhavan & Balasubramanian, 2017). In Nigeria, studies confirm its presence in male-dominated sectors like banking and law enforcement, where male-dominated cultures and societal expectations limit female advancement (Omotayo et al., 2013). The construction industry epitomizes these challenges. Factors such as a reliance on site-based experience for promotion, long and inflexible hours, and a deeply entrenched exclusionary culture create significant hurdles (Adogbo et al., 2015). These pressures often force women into difficult choices between career and family, contributing to a "leaking pipeline" where qualified women eventually depart the profession (Arifeen, & Gatrell, 2020; Hoffman, Mullan, Nguyen & Bonney,2020; Maxwell, Connolly & Ní Laoire, 2019; Gurjao, 2006; Gatrell, 2013).

The glass escalator takes underrepresented men on an upwardly mobile internal career path at a speed that their female colleagues can hardly enjoy in female dominated professions (Hultin, 2003). In contrast, a decision to enter and remain in the construction industry does not guarantee an automatic progress in for women in contrast to men in a female dominated career where they usually experience the glass escalator. However, Pothuraju and Alekhya (2021) established that there is no significant relation between glass ceiling impact on women career development in academia. On the other hand, previous studies have shown that women could face barriers (glass ceiling) which would lead to underachievement and likely dissatisfaction in the women or they could adopt success strategies to deal with these barriers and experience career progress and promotions (Umar & Ribah, 2022; Imadoğlu *et al.,* 2020; Begum & Sarker, 2018; Jimoh, Oyewobi *et al.*, 2016; Andrijašević, Kužnin & Samardžija, 2014; Kolade & Kehinde, 2013; Pai & Vaidya, 2009).

Thus, a gap exists to verify this phenomenon within the Nigerian Construction Industry (NCI), particularly among professionals such as Quantity Surveyors. Establishing this phenomenon in the Quantity Surveying profession is important because according to the Royal Institute of Chartered Surveyors (RICS) there has been a substantial increase in the number of women entering surveying and becoming fellows from 2012 to date in UK. While the glass ceiling is a well-documented concept, its specific dynamics within the Nigerian context require further investigation. Prior research has established its existence in other fields, but a clear gap remains in understanding its impact on female Quantity Surveyors, who are critical to the construction industry. Therefore, this study aims to empirically investigate the existence and nature of the glass ceiling for women in the Quantity Surveying profession in Nigeria.

LITERATURE REVIEW

Glass Ceiling in the Workplace

The "glass ceiling" is a well-established global phenomenon, first identified in the 1970s, representing invisible barriers of attitudinal and organizational prejudice that block women from senior roles (Bharadwaj & Nagarkoti, 2012; Wirth, 2001). Evidence confirms its persistence across various sectors and countries, including private sector organizations (Fapohunda, 2018; De Alwis & Bombuwela, 2013; Simpson & Altman, 2003; Meyerson & Fletcher, 2000). This results in a concentration of women in lower-level positions, even in female-dominated fields (Simpson, 2004; Tiwari, 2021).

Glass Ceiling Barriers in Male Dominated Professions

Glass ceiling effect is most disadvantageous

towards females and individuals belonging to minority groups such as science, technology, Engineering and Maths (STEM) where women account for 29% of the STEM work force, 19% of STEM Company Board Members and only 3% of STEM industry CEOs (Maina, 2022). In construction, only 11% of construction related jobs are occupied by women who constantly face glass ceilings which begins from the hiring process and persist throughout all professional development; thus, perpetuating inequalities between women and men from one generation to another within the sector (Aydın & Erbil, 2022; Çivici & Yemişçioğlu, 2021; Rivera *et al.*, 2021; Umar & Ribah, 2020). Specifically, Shola and Abdulazeez (2020) found that Quantity surveying female undergraduate students are discouraged from going into practice due to the nature of working conditions and sexist attitudes that exist in the construction industry. Another reason for the low participation of women in the construction industry is a lack of confidence in their ability to work in a male-dominated environment. (Ling & Poh, 2004; Washington, 2022).

In addition, Adogbo, Ibrahim and Ibrahim (2015) reported that female undergraduates in construction related disciplines perceive construction practice to be synonymous with site activities and that family responsibility pose the greatest barrier to their participation. Also, Regis *et al.* (2019) reported that Effects of the glass ceiling and the leaky pipeline phenomena as well as harassment, discrimination and sexism were also evident for women working in construction sites.

Key Glass Ceiling Barriers

A synthesis by Taparia and Lenka (2022) categorizes the barriers into:

i. ***Organizational Factors*****:** Organizational culture, practices, and a lack of career development opportunities are significant barriers (Eghlidi & Karimi, 2020; Jauhar & Lau, 2018; Russell Reynolds Associates, 1990).

ii. ***Individual Factors*****:** Personality traits can influence outcomes, with traits like trust and modesty being compatible with success, while extraversion may sometimes be evaluated negatively (Bassir et al., 2022; Amirkhan et al., 1995). However, definitions of success may differ, with women often valuing internal criteria like accomplishment and work-life balance (Sturges, 1999).

iii. **Socio-Cultural Factors:** Gender inequality is a root cause (Wirth, 2001), and family responsibilities are consistently cited as a major constraint for women in construction (Adogbo et al., 2015).

A survey by Zaheer (2007) brought out reasons why females white and majority groups break through glass ceiling barriers and reasons why some women stayed within the constraints thereby unable to break the glass ceiling barrier. These identified reasons were adopted in this study to investigate the glass ceiling barrier effect of women quantity surveyors.

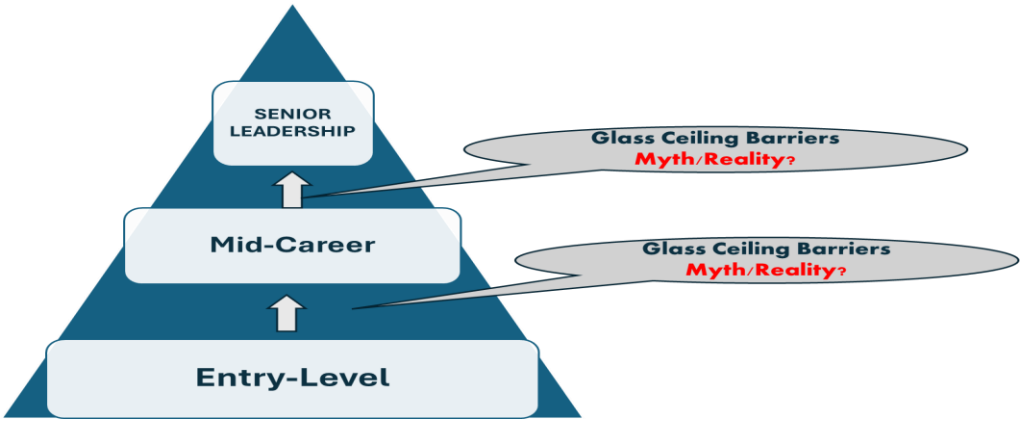

Fig 1: Conceptual Framework for Glass Ceiling Barriers of Women

RESEARCH METHODS

A quantitative research method was adopted for the study (pilot), and a well-Structured Questionnaire was self- administered to Professional women in Quantity Surveying. The questionnaire sought the perception of the respondents on the impact of the glass ceiling barriers investigate the existence of such a concept in the careers of women in Quantity Surveying. The first section captured demographic and professional data, including region, qualifications, professional membership grade, and nature of employment. The second section assessed the perception of glass ceiling barriers, while the third identified drivers for overcoming these barriers and constraints for those still hindered. The survey instrument was adapted from established literature (Zaheer, 2007) to ensure content validity. A pilot test was conducted to refine question clarity, and the final questionnaire demonstrated high internal consistency, with a Cronbach's alpha coefficient exceeding the accepted threshold of 0.7, confirming its reliability.

A non-probability snowball sampling technique was utilized to reach the niche population of female Quantity Surveyors in Nigeria. The study specifically targeted women with a minimum of five years of professional experience. This threshold was strategically chosen to ensure that respondents had sufficient career exposure to have encountered mid-career advancement challenges and could provide informed insights into the systemic barriers constituting the glass ceiling, as opposed to entry-level obstacles. Machin et al. (2018) stated that minimum sample size for a pilot survey is 30, thus a total number of Forty (40) questionnaires were distributed of which thirty-two (32) were retrieved and used in the analysis. The data analysis employed descriptive statistics namely frequency distribution, percentages, mean and standard deviation. This study is limited by its modest sample size (n=32) and geographical concentration in Southern Nigeria, which may affect generalisability.

RESULTS

A total of thirty-two (32) valid responses were used in the analysis. The questionnaire contained three sections. The first section (A) gathered information on the respondent's profile, the second section (B) collected data on the existence of glass ceiling and the third section collected data on reasons for breaking through glass ceiling. The results were analyzed and presented on tables and chart.

Table 1: Respondents profile

	Frequency	Percentage
1. Location of Respondents		
i. South	21	65.6
ii. North	11	34.4
2. Marital Status		
i. Married	25	78.1
ii. Single	6	18.8
iii. Others	1	3.1
3. Most recently completed diploma or qualification		
i. PHD	1	3.1
ii. PGD	2	6.3
iii. MSC	14	43.8
iv. BSC	3	9.4
v. HND	10	31.3
vi. OND	2	6.3
4. NIQS Membership Status		
i. Fellow	2	6.3
ii. Member	17	53.1
iii. Probationer	12	37.5
iv. Undisclosed	1	3.1
5. Nature of Employment		
i. Others	3	9.4
ii. Public Organisation	10	31.3
iii. Contracting	5	15.6
iv. Consultancy	6	18.8
v. Academic	8	25.0

From table 1, 65.6% of the respondents are from the south region of Nigeria while 34.4% are from the north. Also, the marital status of the respondents shows that, 78.1% are married, 18.8% are Single and 3.1% are not specified. This implies that majority of the respondents have family commitment which are known to affect women in the workplace. Also from table 1, the results shows that 3.1% of the respondents have PHD, 6.3% have PGD, 43.8% have MSC, 9.4% have BSC, while 31.30% have HND, and only 6.3% have OND. This implies that majority of the respondents are qualified enough to provide information on Impact of glass ceiling because minimum qualification for quantity surveying practice is a HND with membership of the NIQS and Quantity surveying Registration Board of Nigeria (QSRBN) registration. Consequently, respondents were asked to indicate the status of the membership to the NIQS which are shown on table 1 to be 6.3% fellows, 53.1% full members, 37.5% Probation members and 3.10% undisclosed membership status.

Lastly, table 1 also shows the representation of the respondents' Nature of Employment to be; 31.3% for public organization, 15.6% for contracting firm, 18.8% for Consultancy firm, 25.0% in Academics and 9.4% with others. This shows that female Quantity Surveyors are found in various organizations

with the Public/Academia sectors having larger percentage. In Nigeria, quantity surveyors work in government establishments, consulting firms, and construction companies, with research indicating their presence across these diverse sectors (Ojo et al., 2019).

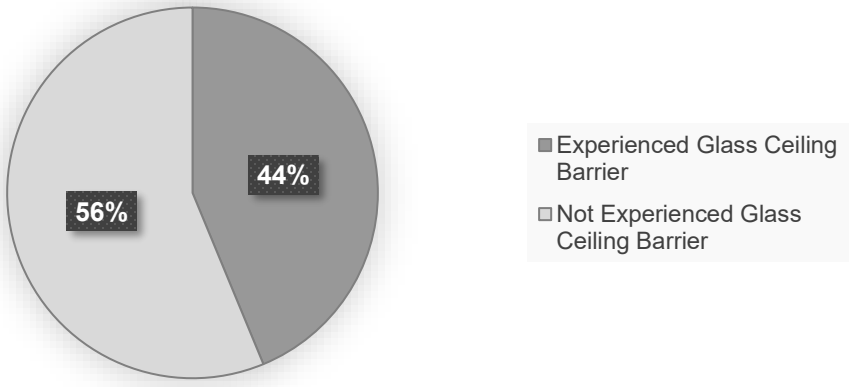

Fig. 1: Respondents' experience of glass ceiling in the workplace

From figure 1, it shows that 43.8% of the respondents have experienced glass ceiling effect, while 56.3% have not experienced the glass ceiling effect. The percentages suggest significant variation in workplace barriers for women. Saleem and Yusuf (2017) have reported, women face glass ceiling in the workforce. Furthermore, Agarwal *et al.* (2023) confirms that the glass ceiling remains a substantial barrier to women's professional advancement, with capable female professionals facing systemic obstacles.

The respondents were further asked if they have experienced the glass ceiling in their workplace. The result is shown in figure 2.

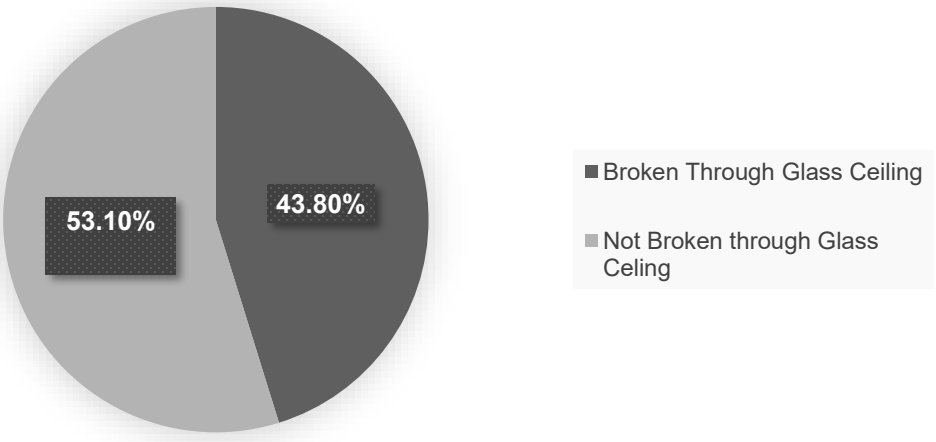

Fig 2: Breaking through glass ceiling barriers by female quantity surveyors

From figure 2, it shows that 43.8% have broken through the glass ceiling effect while 53.0% have not broken through glass ceiling effect. This implies that all females that have experienced the glass ceiling have broken through it in the survey. This indicates persistent challenges in women's career progression. Jauhar and Lau (2018) supports this, highlighting that despite women's increasing workforce participation, gender disparities continue to impede their advancement to top-level positions.

Further to the responses obtained on breaking the glass ceiling, respondents were asked for the reasons for breaking through the glass ceiling and reasons for not breaking the glass ceiling (staying within constraints) as applicable based on their responses. Tables 3 and 4 shows the responses for breaking through glass ceiling and staying within the constraints respectively.

Table 2: Reasons for breaking through glass ceiling by women quantity surveyors

S/N	Reasons for breaking through glass ceiling	Frequency	Rank
1	I want to be in a better position so that I can change the system from within (i.e. given the opportunity, recruiting individuals from minorities and females)	10	1st
2	I am very career centered person and it is important to me that people recognize my qualifications at work	8	2nd
3	I wanted to reach something beyond the glass ceiling (i.e. goal or dream that lies beyond the glass ceiling).	8	2nd
4	I am interested in continuous learning	8	2nd
5	Everyone should be given equal opportunity to excel in an organization; if such an opportunity does not exist then one should make one	7	5th
6	I know I deserve a better position.	4	6th
7	I like to take risks.	3	7th
8	It is just unfair and immoral to be treated like this, when I have the same qualifications and educational background as those at upper management	2	8th

The responses from the female quantity surveyors as regards to reasons for breaking the glass ceiling barrier shows that female quantity surveyors aspire to be in position so as to bring positive change thus the making this the first ranked reason why they break the glass ceiling barrier. In addition, career progression, aspiring to break the glass ceiling and interest in continuous learning are also driving factors to breaking glass ceiling by female quantity surveyors. However, the least ranked reasons for breaking glass ceiling by the female quantity surveyors are taking risk and unfair treatment based on gender. Previous studies reveal women overcome glass ceiling barriers by demonstrating competence through results and building self-confidence as well as having personal aspirations for advancement (Carneiro et al., 2021; Baumgartner & Schneider, 2010).

Table 3: Staying within constraints of the glass ceiling

S/N	Staying within those constraints	Frequency	Rank
1	Even if I try, I doubt I will be successful in breaking through glass ceiling effect.	6	1st
2	Need to support family, therefore cannot afford to lose this jobs	5	2nd
3	This is the best I can do right now.	5	2nd
4	It is less stressful to work at the bottom of the organization rather than the top of organization	2	4th
5	I am not really motivated to work (i.e. am making just enough to support myself)	1	5th
6	I value my family commitments more strongly than my work commitment.	1	5th
7	I don't have the qualifications to go higher up in the company	1	5th
8	I really don't need a job (just doing it for the sake of it. I have parents or spouse who are main bread winners)	1	5th

The reasons provided by the female quantity surveyors who have not broken the glass ceiling is shown on table 4. The top reason why the female quantity surveying is that they perceive that the glass ceiling cannot be broken no matter the amount of effort (lack of confidence). Also, the need to support family supersedes any desire for change and the respondents felt they had given their best and could not do more. On the other hand, not having higher qualification for career progression, valuing family commitment over career and lack of motivation are the least reasons why the female quantity surveyors are yet to break the glass ceiling barrier. Lastly doing the job for doing sake is not a reason why female stay below the glass ceiling. Rahim, *et al.* (2018) further supports this, noting that women's career advancement is impeded by cultural, societal, organizational, and psychological factors. Thus, women are not advancing to senior executive positions not due to lack of qualifications, but because of systemic barriers.

DISCUSSION OF FINDINGS

This study found that female Quantity Surveyors are found in various organisations with the Public/Academia sectors having larger percentage. This is supported by the findings of Ojo et al., (2019) that in Nigeria, quantity surveyors work in government establishments, consulting firms, and construction companies, with research indicating their presence across these diverse sectors. Babic and Hansez (2021) suggested that women themselves are essential players in breaking down barriers related to the vertical discrimination. This is confirmed by the results of this study that showed the will of women to foster change from within and other drivers to breaking the glass ceiling. Also, this study found that the lowest ranked reasons as to why female quantity surveyors stays within the constraint of a glass ceiling are family commitment, satisfaction with

current position and lack of qualification to go higher up. This however contradicts the study of Eghlidi and Karimi (2020) which they established a significant negative association between glass ceiling and family barrier and that of Sharma and Kaur (2019) who reported that women managers face glass ceiling in terms of organisational barriers. In addition, Fapohunda (2018) reported a significant effect of the glass ceiling on women career advancement.

Also, the findings from this study support the work of Hultin (2003) which reported that men and women have equal internal career chances in male-dominated occupations contrary to several studies that suggest women in male-dominated lines of work are subject to exclusionary treatment that impedes their career chances. The study further revealed that women tend to remain within the constraints of the glass ceiling majorly due to personal choices such as lack of self-confidence which conforms to the findings from Jimoh *et al.,* (2016).

The results further showed that the least ranked reasons for breaking the glass ceiling by the female quantity surveyors are taking risk and unfair treatment based on gender which implies that there is low gender discrimination in quantity surveying profession contrary to findings such as Ndweni and Ozumba (2021) where gender discrimination is a major challenge faced by female professionals thereby preventing them to go beyond the glass ceiling. Thus implying that gender discrimination alone does not hinder career progression of the women in quantity surveying profession.

CONCLUSION AND RECOMMENDATIONS

Conclusion

This study provides preliminary evidence on the glass ceiling phenomenon among female Quantity Surveyors in Nigeria by confirming the existence of a glass ceiling for women QS in Nigeria Its key contribution lies in revealing a fundamental dichotomy within the profession: career progression (breaking the glass ceiling) is primarily driven by personal ambition and a desire for change, while career stagnation (remaining with in the constraints) is predominantly constrained by a lack of confidence and significant family commitments

Recommendations

Based on the study's findings, it is recommended that female Quantity Surveyors be encouraged and supported to cultivate a proactive career strategy. This should be centered on the explicit aspiration for leadership roles, a strong sense of professional identity that demands recognition of their qualifications, a clear ambition to achieve goals beyond the perceived glass ceiling, and a committed pursuit of continuous learning. Professional bodies and mentors should integrate the development of this mindset into formal career guidance and mentorship programs. In addition, female Quantity Surveyors should actively combat constraints that reinforce the glass ceiling. This involves addressing self-limiting perceptions, such as the doubt in one's ability to break through, and mitigating the very real pressure of being the primary family supporter, which can force women to settle for roles beneath their capabilities**.** Support systems must therefore focus on building confidence through structured mentorship programs.

Recommendations for Further Studies

Future research should employ a larger, nationally representative sample and mixed methods approaches to quantitatively measure the prevalence of these barriers while using qualitative interviews to deeply explore the roots of low self-confidence and the efficacy of specific success strategies.

Furthermore, A critical gap remains in understanding the mechanisms of success. Future questionnaires should directly ask respondents to identify and rank effective strategies for breaking the glass ceiling.

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