

CHALLENGES FACED BY FEMALE PROFESSIONALS IN THE BUILDING INDUSTRY: EVIDENCE FROM BAUCHI STATE, NIGERIA

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Abstract

The construction industry remains one of the most gender-segregated sectors globally, with women continuing to experience significant barriers to participation and career advancement. In Nigeria, particularly in the northern region, socio-cultural norms and workplace practices further constrain women's opportunities within the building industry. This study examined the challenges faced by female professionals in Bauchi State's construction industry and identified strategies to enhance their participation and career progression. A descriptive survey research design was adopted, targeting female professionals, including engineers, architects, builders, quantity surveyors, and project managers operating within Bauchi metropolis. Using Yamane's sampling formula, a sample size of 171 respondents was determined from a population of 300 professionals. A structured questionnaire was administered, yielding 160 valid responses, representing a response rate of 93.6%. Data were analysed using descriptive statistics, including frequencies, percentages, and mean scores. The findings revealed that female professionals experience persistent barriers such as limited access to leadership positions, wage disparities, exclusion from high-profile projects, and workplace discrimination. Work-life balance challenges (Mean = 3.84) and gender discrimination in hiring and career progression (Mean = 3.79) emerged as the most significant barriers affecting women's professional advancement. Cultural expectations and gender stereotypes were also found to exert considerable influence on women's participation and career development within the industry. Respondents strongly supported interventions such as mentorship programmes, leadership development initiatives, gender-inclusive policies, professional networking opportunities, scholarships, and targeted educational programmes. The study contributes empirical evidence from northeastern Nigeria, where socio-cultural norms strongly influence professional participation. The findings provide practical guidance for policymakers, construction firms, professional associations, and educational institutions seeking to promote gender inclusivity in the built environment. The study concludes that addressing structural, organisational, and socio-cultural barriers is essential for improving female representation, enhancing workforce diversity, and promoting sustainable growth within the construction sector.

Keywords: Bauchi State; Career advancement; Construction industry; Female professionals; Gender inequality; Women in construction

1. INTRODUCTION

The building industry is globally recognised as a male-dominated sector, with women facing significant barriers to entry and advancement. Women remain substantially underrepresented within the Nigerian construction workforce (Jimoh et al., 2016; Adeyemi et al., 2006). While women have made strides in other sectors such as education, health, and banking, they remain underrepresented in construction, where cultural norms, gender stereotypes, and structural barriers reinforce inequality (Jimoh et al., 2016).

Bauchi State presents a unique case for examining gender disparities in construction. As the capital of northeastern Nigeria, Bauchi has experienced substantial growth in its construction industry, driven by population growth, real estate development, and government infrastructure projects (Bauchi State Government, 2022; National Bureau of Statistics, 2023). Despite these opportunities, women remain marginalised due to persistent challenges, including limited access to training and mentorship, exclusion from leadership roles, wage disparities, and difficulties balancing family and professional responsibilities (Jwasshaka and Amin, 2020; Asadian et al., 2024).

Scholars emphasise that societal and cultural expectations play a critical role in shaping women's career paths, often pressuring them to prioritise domestic responsibilities over professional advancement (Eagly and Karau, 2002; Akanji et al., 2020). In northern Nigeria, where Bauchi is located, such norms are particularly strong, further restricting women's participation in male-dominated professions (Okeke, 2017). Although national frameworks such as the Federal Ministry of Women Affairs (2006) advocate for gender equity, implementation within the construction sector remains limited (Para-Mallam, 2006).

This study addresses this gap by examining the specific challenges faced by female professionals in Bauchi's building industry and proposing strategies to foster inclusivity.

Aim: The study investigates the challenges faced by female professionals in Bauchi State's building industry and proposes solutions to mitigate these barriers.

Research questions:

1. What challenges affect women's participation and career advancement in Bauchi's building industry?
2. How do gender stereotypes and biases shape women's opportunities?
3. What role do cultural and social norms play in restricting women's progression?
4. What strategies can increase women's representation and retention?
5. How can education and training support women's entry and advancement?

2. LITERATURE REVIEW

2.1 Gender and the Construction Industry

Globally, the construction industry is among the least gender-diverse, with women often excluded from technical and managerial roles due to stereotypes and discrimination (Asadian et al., 2024). Research indicates that women constitute less than 10% of the construction workforce in Nigeria, highlighting a significant gender gap (ILO, 2020). While female participation in professions such as education and healthcare has increased, their presence in construction remains constrained by cultural expectations, workplace discrimination, and structural barriers (Jimoh et al., 2016; Adeyemi et al., 2006).

2.2 Cultural Norms and Gender Roles

Cultural and social norms play a critical role in restricting women's involvement in male-dominated industries. In Nigeria, prevailing cultural expectations continue to assign

domestic and caregiving responsibilities to women, thereby affecting their career progression and work-life balance (Akanji et al., 2020). In northern regions such as Bauchi, conservative cultural values reinforce the perception that construction is unsuitable for women, further reducing their participation (Jwasshaka and Amin, 2020). These norms discourage women from pursuing leadership positions and lead to criticism of those who enter the industry (Jimoh et al., 2016).

2.3 Workplace Discrimination and Barriers

Discrimination remains a major obstacle for female professionals in construction. Studies reveal that women are less likely to be hired, promoted, or fairly compensated compared to men, even when equally qualified (Navarro-Astor et al., 2017). They are often excluded from high-profile projects and challenging assignments due to stereotypes about physical ability and technical competence (Bridges et al., 2020). Moreover, workplace cultures in construction are frequently male-dominated, fostering harassment and bias that discourage women from pursuing long-term careers (Oyewole, 2021).

2.4 Education, Training, and Mentorship

Access to education and professional development is essential for women's advancement in construction. However, women in Nigeria often face barriers to vocational training and mentorship opportunities, limiting their skills and career growth (Anakor et al., 2025). The lack of female role models in engineering and construction education further reduces retention (Francis and Prosser, 2014). Initiatives such as Women in Construction Nigeria (WICN) and the Association of Professional Women Engineers of Nigeria (APWEN) seek to address these gaps by providing mentorship and networking opportunities (Tunji-Olayeni et al., 2024).

2.5 Policies and Support Systems

At the policy level, frameworks such as Nigeria's National Gender Policy aim to promote inclusivity in employment. However, enforcement within the construction industry has been inconsistent, with cultural resistance and weak institutional support limiting effectiveness (Oyiana, 2021). International best practices suggest that affirmative action policies, mentorship programs, and inclusive workplace cultures can significantly increase women's representation in male-dominated fields (International Labour Organisation and UN Women, 2020).

2.6 Theoretical Framework

This study is underpinned by Role Congruity Theory developed by Eagly and Karau (2002). The theory posits that prejudice arises when there is perceived incongruity between societal expectations associated with a gender and the attributes required for particular occupational or leadership roles. In male-dominated industries such as construction, leadership, technical competence, and physical capability are often stereotypically associated with men. Consequently, women may be perceived as less suitable for construction-related responsibilities regardless of their qualifications or performance.

The theory provides a useful framework for understanding the challenges experienced by female professionals in Bauchi State. It explains how gender stereotypes influence recruitment decisions, promotion opportunities, access to leadership positions, and assignment to high-profile projects. Furthermore, it highlights the societal and cultural expectations that pressure women to prioritise domestic responsibilities over career advancement.

By applying Role Congruity Theory, this study examines how organisational practices and cultural norms interact to shape the

experiences of women in the building industry and identifies strategies to reduce gender-based barriers.

2.7 Identified Gaps

Despite increasing attention to gender issues in Nigeria's workforce, limited research has examined the specific experiences of female professionals in Bauchi State's building industry. Most studies generalise findings across Nigeria without accounting for regional cultural dynamics (Ajemba, 2023; Akanji et al., 2020). There is also a lack of empirical evidence on how education, mentorship, and policy initiatives directly impact women's participation in Bauchi's construction sector (Haruna et al., 2016). This study addresses these gaps by investigating barriers, societal influences, and potential strategies to improve female representation in Bauchi's construction industry.

3. METHODOLOGY

3.1 Research Design

The study adopted a descriptive survey design, which is appropriate for identifying and analysing the challenges faced by female professionals in Bauchi State's building industry. This approach enabled the collection of quantitative data to explore workplace barriers, cultural influences, and gender-related issues.

3.2 Study Area

The research was conducted in Bauchi metropolis, the capital of Bauchi State in northeastern Nigeria. Bauchi has experienced rapid growth in construction activities due to government infrastructure investment and real estate development (Bauchi State Government, 2022; National Bureau of Statistics, 2023)

3.3 Population and Sample Size

The target population comprised 300 female professionals working in the Bauchi building

industry, including engineers, architects, builders, quantity surveyors, and project managers. Using Yamane's finite population formula with a 5% margin of error, the sample size was determined to be 171 respondents.

3.4 Sampling Technique

A combination of purposive and simple random sampling was employed. Purposive sampling ensured that only women actively engaged in the building industry were selected, while random sampling provided equal opportunity for participation across different professional roles.

3.5 Data Collection

Primary data were collected using a structured questionnaire comprising multiple-choice and Likert-scale questions. The instrument covered demographic information, workplace challenges, cultural influences, gender discrimination, and support systems. Questionnaires were administered both physically and electronically.

3.6 Validity and Reliability

The questionnaire was pre-tested with a small group of respondents to ensure clarity and relevance. Necessary modifications were made before full administration. Reliability was enhanced through consistent administration and standardised coding of responses.

3.6.1 Validity and Reliability Assessment

To ensure content validity, the questionnaire was reviewed by three experts in construction management, gender studies, and research methodology. Their observations informed modifications relating to clarity, relevance, and adequacy of the measurement items. A pilot study involving 20 female construction professionals from outside the study area was conducted to evaluate the instrument's suitability.

The reliability of the questionnaire was assessed using Cronbach's Alpha coefficient (Nunnally and Bernstein, 1994). The overall reliability coefficient obtained was 0.84, exceeding the minimum threshold of 0.70 recommended by Hair et al. (2019), indicating satisfactory internal consistency of the instrument. The pilot responses were excluded from the final analysis to prevent bias.

Ethical considerations were also observed throughout the study. Participation was voluntary, respondents were informed about the purpose of the study, and confidentiality of responses was assured. No personal identifiers were collected, and informed consent was obtained before questionnaire administration

3.7 Data Analysis

Data were analysed using descriptive statistics, including frequencies, percentages,

and means. Cross-tabulation was used to examine relationships among demographic variables and to identify challenges. Results are presented in tables and interpreted in relation to the research objectives.

4. RESULTS

This section presents the findings from the survey of female professionals in Bauchi State's building industry. Results are organised around the research questions, with descriptive statistics summarised in tables.

4.1 Response Rate

Out of the 171 questionnaires distributed, 160 were returned, representing a **93.6% response rate**. This high participation demonstrates strong engagement among female professionals in Bauchi (Table 1).

Table 1. Questionnaire Distribution and Response Rate

Distribution Status	Frequency	Percentage (%)
Total distributed	171	100.0
Responses received	160	93.6
Responses not received	11	6.4

Source: Field Survey (2024)

4.2 Demographic Profile of Respondents

Table 2 summarises respondents' demographic characteristics. The majority were aged 31–40 years (35.6%), with most holding at least a Bachelor's degree (46.9%). Engineers (35.0%), project managers

(23.1%), and architects (17.5%) made up the largest professional groups. More than half of respondents were married (52.5%), and the majority had 6–10 years of experience (38.1%).

Table 2. Demographic Characteristics of Respondents

Variable	Category	%
Age	31–40 years	35.6
	21–30 years	26.3
	41–50 years	23.1
	Others	15.0
Education	Bachelor’s degree	46.9
	Master’s degree	23.1
	Others	30.0
Professional Role	Engineer	35.0
	Project Manager	23.1
	Architect	17.5
	Others	24.4
Marital Status	Married	52.5
	Single	40.6
	Others	6.9

Source: Field Survey (2024)

4.3 Challenges in Career Advancement

Respondents identified several barriers to career advancement. Limited access to leadership roles (Mean = 3.55), underpayment compared to men (Mean = 3.78), and restricted opportunities for high-

profile projects (Mean = 3.75) were widely reported. Work–life balance was considered a significant obstacle (Mean = 3.84), and gender discrimination in hiring was strongly acknowledged (Mean = 3.79) (Table 3).

Table 3. Career Advancement Challenges

Statement	Mean	Remark
Limited access to leadership roles	3.55	Agreement
Difficulty balancing work and family responsibilities	3.84	Strong agreement
Underpayment compared to male colleagues	3.78	Agreement
Limited opportunities on high-profile projects	3.75	Agreement
Gender discrimination in hiring	3.79	Strong agreement

4.4 Gender Stereotypes and Biases

Findings show strong agreement that stereotypes and biases undermine women's opportunities. Women were often perceived as less capable than men in project delivery

(Mean = 3.86) and were excluded from challenging tasks (Mean = 3.90). Stereotypes were also seen as limiting women's leadership opportunities (Mean = 3.80) (Table 4).

Table 4. Gender Stereotypes and Biases

Statement	Mean	Remark
Stereotypes limit women's leadership opportunities	3.80	Strong agreement
Biases undermine women's technical skills	3.77	Agreement
Perception that women are less capable than men	3.86	Strong agreement
Exclusion from challenging or high-risk tasks	3.90	Strong agreement

4.5 Cultural and Social Norms

Cultural and social factors also restricted women's participation. Respondents strongly agreed that social pressures prioritise family responsibilities over careers (Mean = 3.95).

Cultural norms discouraged women from entering construction (Mean = 3.88), and many reported facing criticism for working in the sector (Mean = 3.80) (Table 5).

Table 5. Cultural and Social Norms Affecting Women

Statement	Mean	Remark
Cultural norms discourage women in construction	3.88	Strong agreement
Social pressures prioritise family over careers	3.95	Strong agreement
Criticism for working in construction	3.80	Strong agreement
Societal expectations discourage physically demanding roles	3.84	Strong agreement

4.6 Strategies for Improving Women's Participation

There was strong support for interventions to enhance women's representation in construction. Respondents favoured mentorship programs (Mean = 4.10), gender

quotas (Mean = 4.03), and leadership training (Mean = 4.05). They also highlighted the importance of female-focused networks (Mean = 4.00) and targeted initiatives to attract more women (Mean = 4.15) (Table 6).

Table 6. Recommended Strategies for Female Inclusion

Strategy	Mean	Remark
Mentorship programs	4.10	Strong agreement
Gender quotas	4.03	Strong agreement
Leadership training	4.05	Strong agreement
Targeted initiatives to attract women	4.15	Strong agreement
Female-focused professional networks	4.00	Strong agreement

4.7 Education and Training Support

Respondents strongly emphasised the role of education in improving women's participation. Suggested measures included

female-specific training opportunities (Mean = 4.05), scholarships (Mean = 4.15), and career guidance programs in schools (Mean = 4.20) (Table 7).

Table 7. Education and Training Initiatives

Initiative	Mean	Remark
Female-specific training opportunities	4.05	Strong agreement
Women-centered scholarships	4.15	Strong agreement
Specialised programs for construction skills	4.10	Strong agreement
Training in project management skills	4.05	Strong agreement
Career guidance for girls in schools	4.20	Strong agreement

5. DISCUSSION

This study investigated the challenges faced by female professionals in Bauchi State's building industry, focusing on career advancement, gender stereotypes, cultural norms, and strategies for improvement. The findings highlight persistent gender inequalities despite women's growing educational attainment and professional presence.

5.1 Career Advancement Barriers

The results show that women encounter limited access to leadership roles, underpayment, and exclusion from high-profile projects (Table 3). These findings align with Navarro-Astor et al. (2017), who reported that women in construction globally face systemic barriers in promotion and wage equity. The difficulty of balancing professional and family responsibilities (Mean = 3.84) echoes the findings of Akanji et al. (2020), who reported that female professionals frequently experience work-life conflict arising from competing domestic and occupational responsibilities.

5.2 Gender Stereotypes and Biases

The study confirms that stereotypes significantly undermine women's opportunities. Women were widely perceived as less capable than men in managing construction projects and often excluded from challenging tasks (Table 4). These results support Bridges et al. (2020), who found that women are frequently judged by gendered expectations rather than competence. Eagly and Karau's (2002) role congruity theory also explains how stereotypes limit women's acceptance in leadership, particularly in technical fields.

5.3 Cultural and Social Norms

Cultural norms in Bauchi strongly discourage women from construction careers and prioritise domestic roles (Table 5). This finding reinforces earlier studies by Jwasshaka and Amin (2020), who noted that conservative northern Nigerian norms significantly restrict women's professional participation. Similar cultural barriers have been documented within the construction industry, where women often encounter stereotypes, exclusion, and criticism for entering traditionally male occupations (Navarro-Astor et al., 2017).

5.4 Strategies for Inclusion

Respondents strongly endorsed mentorship programs, gender quotas, leadership training, and women-focused networks as key strategies (Table 6). These align with best practices recommended by the International Labour Organisation and UN Women (2020) and Tunji-Olayeni et al. (2024), who emphasised mentorship and policy interventions as critical to improving female representation. The support for gender quotas highlights the need for structural reforms to address systemic imbalances.

5.5 Role of Education and Training

Education and targeted training were seen as crucial to long-term inclusion (Table 7). Respondents emphasised scholarships, career guidance for girls, and technical training. This finding is consistent with Anakor et al. (2025), who argued that women's participation improves significantly when educational barriers are addressed. APWEN's initiatives in Nigeria similarly demonstrate that targeted programs can increase women's interest in construction careers (Tunji-Olayeni et al., 2024).

5.6 Comparison with International Evidence

The findings of this study are consistent with international evidence regarding the underrepresentation of women in the construction industry. Studies conducted in the United Kingdom, Australia, Canada, and South Africa similarly report that women face barriers, including workplace discrimination, unequal access to leadership opportunities, and exclusion from critical decision-making roles (Navarro-Astor et al., 2017). The prevalence of gender stereotypes identified in this study also aligns with global research demonstrating that women in construction are frequently required to prove their competence more rigorously than their male counterparts.

However, the findings suggest that cultural and religious expectations may exert a stronger influence in Bauchi State than in many developed economies. While work-life balance challenges are commonly reported worldwide, respondents in this study identified socio-cultural pressures and community perceptions as significant constraints on professional advancement. This indicates that interventions designed for developed countries may require adaptation to reflect local socio-cultural realities. Consequently, policies aimed at improving female participation in northern Nigeria should combine workplace reforms with broader community-based awareness programmes.

5.7 Contribution to Knowledge

This study contributes to the growing body of literature on gender inequality within the construction industry by providing empirical evidence from Bauchi State, a region that has received limited scholarly attention despite its distinctive socio-cultural environment. Unlike previous studies that examined gender challenges at a national level, this research demonstrates how local cultural norms, workplace practices, and societal expectations collectively shape the experiences of female professionals in northern Nigeria.

The study further contributes by identifying context-specific interventions that can improve female participation and career progression. The findings provide evidence-based recommendations for policymakers, professional bodies, educational institutions, and construction firms seeking to promote gender inclusivity. The integration of organisational and socio-cultural dimensions offers a more comprehensive understanding of gender inequality within the construction sector. It extends the application of Role Congruity Theory within the Nigerian construction context.

5.8 Practical Implications

The findings of this study have important implications for policymakers, construction firms, professional associations, and educational institutions. Government agencies and regulatory bodies can utilise the results to strengthen the implementation of gender-inclusive employment policies and establish monitoring mechanisms for equitable recruitment, remuneration, and promotion practices. Construction organisations can develop mentorship programmes, leadership development initiatives, and flexible work arrangements that support female professionals throughout their careers. Professional bodies such as the Nigerian Institute of Building (NIOB), the Nigerian Society of Engineers (NSE), and the Association of Professional Women Engineers of Nigeria (APWEN) can leverage the findings to expand networking opportunities and advocacy efforts to increase women's representation in leadership positions. Educational institutions can use the evidence to design targeted scholarship schemes, career awareness programmes, and technical training initiatives that encourage more young women to pursue careers in the built environment. Collectively, these interventions can contribute to a more inclusive construction industry, improved workforce diversity, enhanced innovation, and sustainable sectoral growth.

5.9 Limitations and Future Research

This study is subject to certain limitations. First, the research focused exclusively on female professionals within Bauchi State, which may limit the generalisability of the findings to other regions of Nigeria. Second, the use of a cross-sectional survey design captures perceptions at a single point in time and does not account for changes that may occur over time. Third, the study relied primarily on self-reported data, which may be influenced by respondent bias.

Future studies should consider comparative investigations across multiple states or geopolitical zones to identify regional variations in gender-related challenges. Longitudinal research may also provide deeper insights into career progression patterns among female professionals. Furthermore, qualitative approaches such as interviews and focus group discussions could offer richer understanding of the lived experiences underlying the statistical findings reported in this study.

6. CONCLUSION AND RECOMMENDATIONS

This study examined the challenges faced by female professionals in Bauchi State's building industry, highlighting barriers to career advancement, the impact of gender stereotypes, and the influence of cultural norms. Despite their education and professional experience, women continue to face limited access to leadership roles, wage disparities, and exclusion from high-profile projects. Societal expectations that prioritise domestic responsibilities further constrain women's participation.

The findings confirm that gender inequality in construction is both structural and cultural. Women are constrained not only by discriminatory workplace practices but also by cultural norms that discourage their involvement in male-dominated professions. However, respondents strongly supported interventions such as mentorship programs, gender quotas, leadership training, and targeted educational initiatives.

Recommendations:

1. **Policy Action** – Government and professional bodies should enforce gender equity policies, including affirmative action and transparent recruitment processes.
2. **Mentorship and Networking** – Establish formal mentorship programs and female-focused professional

networks to support women's career growth.

3. **Leadership Training** – Provide capacity-building programs to prepare women for managerial and leadership roles.
4. **Educational Initiatives** – Introduce scholarships, technical training, and career guidance programs to encourage young women to pursue construction careers.
5. **Cultural Reorientation** – Community sensitisation programs should challenge stereotypes and promote the value of women's contributions to the building industry. By implementing these measures, Bauchi's construction sector can become more inclusive and equitable. Empowering women will not only enhance gender equality but also strengthen innovation, productivity, and sustainability within the industry.

REFERENCES

Adeyemi, A.Y., Ojo, S.O., Aina, O.O. and Olanipekun, E.A., 2006. Empirical evidence of women under-representation in the construction industry in Nigeria. *Women in Management Review*, 21(7), pp.567–577. Available at: <https://doi.org/10.1108/09649420610692516>.

Ajemba, M.N., 2023. Women in leadership, gender inequality in Nigeria, diversity and new trend of women in leadership positions in industries around the world. *GSC Advanced Research and Reviews*, 14(1), pp.78–87. Available at: <https://doi.org/10.30574/gscarr.2023.14.1.0013>.

Akanji, B., Mordi, C. and Ajonbadi, H.A., 2020. The experiences of work-life balance, stress and coping lifestyles of female professionals: Insights from a developing

country. *Employee Relations*, 42(4), pp.999–1015.

Akanji, B., Mordi, C. and Ajonbadi, H.A., 2024. Confronting social dominance ideology: How professional women manage career stereotypes in male-dominated occupations. *Employee Relations*, 46(4), pp.913–933. Available at: <https://doi.org/10.1108/ER-04-2022-0161>.

Anakor, C.A., Harper, C.M. and Taylor, T.R.B., 2025. Training and job search preferences among male and female craft workers in US construction. *Journal of Construction Engineering and Management*, 152(3), Article 04025267. Available at: <https://doi.org/10.1061/JCEMD4.COENG-17121>.

Asadian, E., Azeez, S., Leicht, R.M. and Asadi, S., 2024. Exploring the barriers to women in construction and the opportunities presented through lean. *Journal of Construction Engineering and Management*, 150(5), Article 04024029. Available at: <https://doi.org/10.1061/JCEMD4.COENG-13895>.

Bauchi State Government, 2022. 2022 Bauchi State Q1 Budget Performance Report. Bauchi: Bauchi State Government. Available at <https://www.bauchistate.gov.ng/wp-content/uploads/2022/04/Final-Bauchi-State-Q1-BPR-Publication-CR.pdf> (Accessed on 21 June 2026)

Bridges, D., Wulff, E., Bamberry, L., Krivokapic-Skoko, B. and Jenkins, S., 2020. Negotiating gender in the male-dominated skilled trades: A systematic literature review. *Construction Management and Economics*, 38(10), pp.894–916. Available at: <https://doi.org/10.1080/01446193.2020.1762906>.

Eagly, A.H. and Karau, S.J., 2002. Role congruity theory of prejudice toward female leaders. *Psychological Review*, 109(3), pp.573–598. Available at: <https://doi.org/10.1037/0033-295X.109.3.573>.

Federal Ministry of Women Affairs, 2006. *National Gender Policy*. Abuja: Federal Republic of Nigeria.

Francis, V. and Prosser, A., 2014. Exploring vocational guidance and gender in construction. *International Journal of Construction Education and Research*, 10(1), pp.39–57. Available at: <https://doi.org/10.1080/15578771.2012.744371>.

Hair, J.F., Black, W.C., Babin, B.J. and Anderson, R.E., 2019. *Multivariate Data Analysis*. 8th ed. Andover, Hampshire: Cengage Learning.

Haruna, A.C., Keftin, N.A. and Abdullahi, U., 2016. An overview of challenges of women's participation in the practice of building profession in Nigeria. *International Journal of Education and Research*, 4(6), pp.61–72. Available at: <https://ijern.com/journal/2016/June-2016/06>.

International Labour Organization (ILO), 2020. *Women in Construction: Breaking Gender Barriers*. Geneva: ILO.

International Labour Organization and UN Women, 2020. *Empowering Women at Work: Trade Union Policies and Practices for Gender Equality*. Geneva: International Labour Organization. Available at: <https://researchrepository.ilo.org/esploro/outputs/book/Empowering-women-at-work-trade-union/995219560102676>.

Jimoh, R.A., Oyewobi, L.O., Adamu, A.N. and Bajere, P.A., 2016. Women professionals' participation in the Nigerian construction industry: Finding voice for the voiceless. *Organisation, Technology and Management in Construction: An International Journal*, 8(1), pp.1429–1436. Available at: <https://doi.org/10.1515/otmcj-2016-0005>.

Jwasshaka, S.K. and Amin, N.F., 2020. Gender discrimination in building construction industry in Nigeria: Threat to achieving Goal-5 of Vision 2030. *World Journal of Engineering and Technology*, 8(1), pp.33–41. Available at: <https://doi.org/10.4236/wjet.2020.81004>.

National Bureau of Statistics, 2023. Nigerian Gross Domestic Product Report (Q3 2023). Abuja: National Bureau of Statistics. Available at: <https://nigerianstat.gov.ng> (Accessed on 21 June 2026)

Navarro-Astor, E., Román-Onsalo, M. and Infante-Perea, M., 2017. Women's career development in the construction industry across 15 years: Main barriers. *Journal of Engineering, Design and Technology*, 15(2), pp.199–221. Available at: <https://doi.org/10.1108/JEDT-07-2016-0046>.

Nunnally, J.C. and Bernstein, I.H., 1994. *Psychometric Theory*. 3rd ed. New York: McGraw-Hill.

Okeke, O.J.-P., 2017. Nigerian culture: A barrier to the career progress of women in Nigeria. *Global Journal of Human Resource Management*, 5(5), pp.1–11.

Oyewole, B.F., 2021. *An Assessment of Discrimination Against Women in the Nigerian Construction Industry*. Master's thesis. University of Johannesburg. Available at: <https://hdl.handle.net/10210/490086>.

Oyiana, B.I., 2021. *Gender Mainstreaming in Male-Dominated Nigerian Industries*. Doctoral dissertation. Walden University. Available at: <https://scholarworks.waldenu.edu/dissertations/10530/>.

Para-Mallam, O.J., 2006. *The National Policy on Women and the Challenges of Mainstreaming Gender Issues in Nigeria, 1985–2005*. Doctoral dissertation. University of Leeds.

Tunji-Olayeni, P., Aigbavboa, C., Windapo, A. and Oke, A., 2024. *Women in Construction: Towards a More Equal Diverse, and Inclusive Built Environment Sector*. Boca Raton, FL: CRC Press. Available at: <https://doi.org/10.1201/9781003474630>.

Yamane, T., 1967. *Statistics: An Introductory Analysis*. 2nd ed. New York: Harper and Row