

Perception of the Glass Ceiling within the Auditing Industry in Malaysia

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ABSTRACT

Official statistics suggest that while more than 50% of chartered accountants in Malaysia are women, only a few hold partnership positions. This indicates the existence of barriers to women's career progression, known as the 'glass ceiling'. This study aims to investigate the factors influencing career advancement or the hindrances faced by women in the auditing profession in Malaysia. A survey was distributed among audit staff working at auditing firms (both Big 4 and non-Big 4). Our results suggest that women accountants in Malaysia are indifferent about the glass ceiling compared to men, possibly due to increased gender diversity in the profession, government initiatives, policies, and cultural and social norms toward education. Instead, the study finds that structural bias and organizational culture bias are associated with a higher perception of the glass ceiling. Furthermore, employment at a Big 4 accounting firm is associated with a lower level of perceived glass ceiling, although this finding is only statistically significant at $p < 0.10$. This study offers valuable insights for policy-making, organizational practices, and diversity initiatives aimed at promoting gender equity in leadership roles.

Keywords: Glass Ceiling, Women, Accountant, Big 4.

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1. INTRODUCTION

The 'glass ceiling' is a metaphor that describes the invisible barrier preventing certain groups of people from ascending to higher managerial levels of job positions, despite their qualifications and experience (Babic & Hansez, 2021). The term was originally introduced by Marilyn Loden in 1978 to explain the lack of women in corporate leadership roles, and it is generally reported that the glass ceiling particularly affects women and minorities. Loden argued that cultural (not personal) barriers are doing the 'bulk' of the damage to women's career aspirations and opportunities (BBC, 2017).

The glass ceiling is an issue that affects all countries and regions, including Malaysia. For instance, in the year 2020, statistics provided by the official authority suggest that the current ratio of female students enrolling in higher education studies is six women to four men (Kementerian Pengajian Tinggi, 2021). However, out of the total working men and

women, it is reported that there were only 200,900 women in managerial positions compared to 607,500 men in the same positions. The present gender inequality is not expected since it is acknowledged that women's ability is now comparable to men and sometimes superior, particularly in the field of education, skills, and intelligence (Tyagi, Chaudhary, and Batar, 2021).

Gender inequalities in the workplace negatively impact not only individuals but also the entire organizational ecosystem, affecting structures, processes, practices, and decision-making. Gender inequality and the glass ceiling issue are closely related because both refer to barriers that disproportionately affect women in the workplace, particularly in terms of career advancement and leadership positions.

The purpose of the present study is to examine the glass ceiling issues within the auditing sector in Malaysia. It is an interesting avenue for research because traditionally, auditing has been perceived as a male-dominated occupation, with fewer women represented in leadership and partner roles. However, in Malaysia, it is reported that the number of female chartered accountants registered with the Malaysian Institute of Accountants (MIA) already surpasses the male counterpart. As of November 30, 2023, out of a total of 39,390 members, 21,570 were reported to be female, constituting 55% of membership (Malaysian Institute of Accountants, 2023). While the increasing number of women chartered accountants is in line with the number of women entering higher education, the number of them reaching the partnership level is somehow not in proportion with the MIA's membership ratio. For example, Al-Dhamari and Chandren (2017) reported that only 14% of signing audit partners are women. In addition, the same study also suggests that there were only 10% women audit partners within the top four (i.e., the Big 4) audit firms in Malaysia. Other studies, such as Haron et al. (2014) and Hassan (2018), report the range of 19% to 22% of women as signing audit partners. The lack of women at the partnership or highest managerial level suggests that the glass ceiling is still thicker in the context of the auditing profession in Malaysia.

However, it is also interesting to note that while the term "glass ceiling" is commonly associated with barriers that impede the career advancement of women, there is a growing recognition of similar challenges that some men may face. This could be especially true during the period where efforts are made by government and institutions to increase gender equity and promote more women's participation at managerial or leadership levels. For example, men might feel that their qualifications and achievements could be overlooked in favor of achieving gender diversity goals. As such, it is the specific objective of the present study to examine the gender effect on the perception of the glass ceiling at public accounting firms in Malaysia.

Prior studies (e.g., Morrison & Von Glinow, 1990; Hull & Umansky, 1997; Cohen et al., 2020) have explored the underlying reasons for the lack of women at the highest rank. Morrison & Van Glinow (1990) and Cohen et al. (2020) classify those factors into three general groups: bias-centered, structural-centered, and cultural-centered. First, in a biased argument, the "glass ceiling" refers to the unfair treatment of women (and minorities) that keeps them from rising to higher positions of power and leadership in a company. The bias-centered argument shows how unconscious biases, stereotypes, and unfair treatment create and maintain barriers that make it hard for people to move up in their careers because of their gender, race, ethnicity, or other protected traits. The second type of argument about the glass ceiling is structural-centered. It focuses on the systems and organizational factors that make it hard for women and minorities to move up in their careers. In contrast to the bias-centered argument, which focuses on personal biases and unfair behavior, the structural-centered viewpoint looks at bigger problems with

organizations and society as a whole, such as problems with their structures and institutions. This reasoning says that the glass ceiling is caused by unfair systems that are built into the way organizations work and how they do things. Third, the cultural-centered argument includes the idea that male organizational leaders don't provide enough social support. This argument is about how cultural norms, values, and expectations within an organization can make it harder for some groups, especially women, to move up in their careers. Therefore, it is also the specific objective of the present study to examine how bias-centered factors, structural-centered factors, and cultural-centered factors influence the perception of the glass ceiling.

Understanding how people see the "glass ceiling" is naturally important from the point of view of workplace equality. One main reason is that people who think there is a "glass ceiling," which means that men and women don't have equal access to benefits, are less likely to try to get promoted. This resistance makes the problem even worse by creating a behavioral confirmation effect (Foley et al., 2002; Cohen et al., 2020). Perceptions of inequality can also have bad effects on important job attitudes and outcomes, such as job satisfaction, organizational commitment, and plans to leave the job (Dalton et al., 2014; Cohen et al., 2020). When women feel like there is a glass ceiling in the workplace, they are less committed and less likely to fully develop their professional skills. This causes needless and unwanted employee turnover (Cohen et al., 2020).

A study of the glass ceiling phenomenon in the auditing sector can provide insights into gender inequality that can be generalized to other industries or nations by examining related contributing elements. Industries such as engineering, technology, and finance, which are predominantly male, could gain insights by recognizing the impact of unconscious biases, organizational structures, and cultural norms on hindering women's career advancement. As the glass ceiling issue is influenced by distinct socio-cultural dynamics and legal frameworks in various countries, comparative studies can be undertaken to investigate how these elements manifest themselves in various geographical and cultural contexts.

The remainder of this paper is organized as follows. The following section discusses related literature and outlines relevant studies of the glass ceiling in the accounting sector. Section three presents the theoretical models and describes the development of the questionnaire and outlines the research design. Then, the following section reports and discusses the results of the analysis. The final section concludes the paper and offers some recommendations.

2. BACKGROUND AND HYPOTHESES DEVELOPMENT

2.1. Background studies

The glass ceiling refers to an invisible barrier that prevents individuals from advancing within their organization due to their gender, race, or other factors unrelated to their abilities or qualifications. This barrier is often seen in the form of limited opportunities for promotions, unequal pay, and a lack of representation in senior leadership positions. The concept of the glass ceiling is widely recognized as a form of systemic discrimination and inequality within the workforce (Johns, 2013). In the accounting and auditing sector, the glass ceiling is a significant issue faced by many professionals worldwide. For example, despite the increasing number of women entering the field, they continue to face a lack of representation in top leadership positions (Cohen et al., 2020).

In a study by the American Institute of Certified Public Accountants (AICPA), the professional body found that while there is a significant number of women entering the

accounting profession, their representation in leadership positions, especially at the partner level in accounting firms, is relatively low (AICPA, 2019). It is interesting to note that as of 2023, only one of the Big 4 accounting firms (i.e., PwC) has a female CEO globally. The remaining three (Deloitte, EY, and KPMG) are currently led by men (Bloomberg.com, 2023).

To date, the current ratio of female students enrolling in higher education studies in Malaysia is at the ratio of 7:3 (women to men), and the number of women in the professional job market is equal to men. In the professional accounting sector, there are more women than men. However, despite the high number of women in the accounting sector, only a few of them are known to successfully reach the partnership status (i.e., the highest management level at an audit firm) or management positions (Al-Dhamari and Chandren, 2017). The number of women in top management is still low because they are leaving the profession earlier (Al-Dhamari and Chandren, 2017). AICPA (2019) asserts that many women are choosing to leave because they have no other choice possibly due to discrimination, biological roles, and a general lack of advancement.

Shambaugh (2007) identifies seven factors that prevent women from ascending to higher positions, which are: (1) Challenges with work/life balance, (2) Letting perfectionism get in the way, (3) Waiting for hard work to be recognized (rather than taking control of your own destiny), (4) Not speaking up in the moment; waiting for the right words at the right time, (5) Not leveraging mentors and creating a support network, (6) Lack of political savvy, and (7) Not asking for what they want.

2.2. Hypotheses development

Gender

Statistics suggest that women are likely to attain university degrees, and this also applies to those enrolling in accounting courses at universities in Malaysia. It is also reported that more than half of the chartered accountants in Malaysia are women. Unfortunately, while more women are now entering the professions, the evidence suggests that only a handful of them can climb up to leadership roles. Gender inequality in the workplace continues to be one of the most challenging issues to deal with. A considerable number of studies suggest that women are perceived as less competent than males in managerial jobs (Quadlin, 2018; Hentschel et al., 2019). A study by Zarei, et al., (2021) found that both male and female accountants suggest that the scarcity of women in partnership positions was due to women's poor performance in non-traditional jobs. In addition, the study finds that gender inequality does exist in the workplace, especially among men and women who hold the same occupation but work in different establishments or have different job titles within the same organization.

Zarei et al., (2021) also highlights that significantly fewer females are concerned about managerial positions. Such concerns arise because of the belief that women exhibit feminist behavior in the workplace. This circumstance can become a skeptical obstacle and restrain women from serving in higher upper-stage control and obtaining more advanced managerial positions. Following that, we hypothesized that female accounting professionals are more likely to report experiencing the glass ceiling than men.

H₁: Female audit staff are more likely to report encountering the glass ceiling compared to male accounting professional.

Bias-centered factor

Bias-centered theories argue that the glass ceiling exists because male organizational leaders are biased against promoting female employees to the highest levels of the organizational hierarchy, leading to gender discrimination (Hull & Umansky, 1997). Upon entering the workforce, females encounter various barriers that hinder them from advancing in their professions and attaining leadership roles (Dalton et al., 2014). Among the formidable barriers that females face in the workplace are biases and stereotypes (Hull & Umansky, 1997). Females often occupy lower positions in the corporate hierarchy and are frequently excluded from decision-making and top management roles (Struckmann, 2018). One reason for hindering females' career advancement is that male leaders tend to prefer individuals with similar cultural preferences. Additionally, research has shown that managers prefer to hire individuals who resemble those already employed by the organization, indicating bias and prejudice in the work environment.

Furthermore, another significant stereotype within the workplace is the perception that maternity-related topics and females' roles in the family sphere indicate a lack of commitment. Senior management may assume that females are less committed during critical times, hindering their chances of achieving success at the top level (Ahmad & Naseer, 2015). Such situations contribute to the unfair treatment of females in the profession.

Based on this, we propose that female accounting professionals who believe that female employees are not treated will be more likely to report encountering a glass ceiling within their organizations.

H₂: Female accounting professionals who believe that female employees are not treated equally will be more likely to report encountering a glass ceiling within their organizations.

Structural-biased factor

Structural-centered theories propose that the existence of the glass ceiling is attributable to entrenched, systematic organizational practices that inherently favor males over females. These practices include preferential treatment in terms of access to mentoring programs and the allocation of high-profile job assignments (Hull & Umansky, 1997). Essentially, these theories suggest that organizational structures and processes perpetuate gender disparities, hindering the advancement of female professionals into top leadership positions.

Within this framework, female accounting professionals who perceive disparities in opportunities for professional development between genders are more inclined to report encountering a glass ceiling within their organizations. This perception encompasses various aspects of professional growth, such as access to high-profile assignments, mentoring opportunities, and networking initiatives. When women believe that their male counterparts have preferential access to these opportunities, it reinforces the notion of a barrier preventing their career progression.

Therefore, we suggest that female accounting professionals who perceive discrepancies in professional development opportunities for female employees, relative to their male counterparts, are more likely to report facing a glass ceiling within their organizations. This structural factor highlights how organizational practices contribute to the perpetuation of gender-based inequalities in the workplace, ultimately impeding women's advancement into leadership roles.

H₃: Female accounting professionals who perceive that female employees do not have the same opportunities for professional development as male accounting professionals will be more likely to report encountering a glass ceiling within their organizations.

Cultural-biased factor

The working culture and values within each organization and profession reflect inclusiveness. Culture encompasses the continuous environment in which human beings exist, shaping beliefs, values, attitudes, and various aspects of personal and social lifestyles. The cultural context of the workplace significantly influences strategic leadership and management within an organization. A positive culture within a company enhances productivity, efficiency, morale, and employee performance in the long run (Agarwal, 2018).

Cultural-centered theories posit that male organizational leaders are less inclined to establish bonds and socialize with female employees. Studies by Kundu & Lata (2017) suggest that female workers often lack social support in their working environments compared to their male counterparts. This lack of social support from male leaders, according to Kokot (2014), results in fewer promotions of female accounting professionals to top levels of the organizational hierarchy. Female accounting professionals who perceive disparities in the level of support received by female employees from male senior leaders, such as exclusion from male-dominated social networks, are more likely to report encountering a glass ceiling within their organizations. Based on this, we hypothesize the following:

H₄: Female accounting professionals who perceive that employees do not receive the same level of support from senior leaders will be more likely to report encountering a glass ceiling within their organizations.

Marital status

When female workers are married, they often face additional and significant commitments that take precedence over their careers. This is primarily due to the lack of flexible working hours and the obligation to fulfill family responsibilities. In countries like Malaysia and other Asian nations, married females are more inclined than unmarried females to leave their jobs after getting married or having children (Subramaniam et al., 2015).

Zhao and Lord (2016) have highlighted that marital status can negatively impact females' career advancement. Married females are less likely to attain senior positions or receive promotions due to societal structures and the imbalance between work and family responsibilities, which hinder their career aspirations. Additionally, changes in marital status often coincide with increased responsibilities related to childbirth and childcare, further interrupting their career progression.

Given these family commitments, we predict that married female accounting professionals are more likely to encounter the glass ceiling compared to their single counterparts. Therefore, we propose the following hypothesis.:

H₅: Female accounting professionals who are married will be more likely to report encountering a glass ceiling within their organizations than female accounting professionals who are single.

Dependents

Female accounting professionals are more likely to encounter the glass ceiling when they have dependents, as their caregiving responsibilities can impede their ability to invest additional time and effort in professional development and career advancement (Banerjee et al., 2023; Tresna et al., 2024). This hypothesis posits that female audit staff with dependents might confront hurdles in shattering the glass ceiling, given the additional responsibilities and time constraints associated with caregiving. Consequently, their prospects for promotions, elevated assignments, and access to networking and mentorship could be constrained compared to their female colleagues without dependents.

This theory suggests that female audit staff juggling caregiving responsibilities may confront challenges in surmounting the glass ceiling, leading to potential hindrances in their career progression. This could manifest as overlooked promotion opportunities or exclusion from consideration for high-profile clients or projects. The glass ceiling hypothesis contends that female audit professionals with dependents may encounter restricted upward mobility due to the demands of managing caregiving responsibilities. Consequently, their career growth and advancement prospects within the audit firm may be hampered, contributing to the perpetuation of the glass ceiling phenomenon.

Therefore, we hypothesize that female accounting professionals with dependents will be more likely to report a glass ceiling within their organizations than female accounting professionals without dependents.

H₆: Female accounting professionals with dependents are more likely to report encountering a glass ceiling within their organizations than female accounting professionals without dependents.

Rank Post

Female professional accountants, holding higher positions such as partners and top executives, are less likely to report the presence of a glass ceiling within their organizations compared to female audit staff in lower positions. This phenomenon is influenced by various factors such as the individuals in higher positions may attribute their success to personal qualities rather than systemic barriers. Additionally, individuals in higher positions may feel more connected to the organization and perceive fewer gender-based issues. Factors such as assimilation into the organization's culture, limited visibility of challenges faced by lower-level employees, selective mobility, and the utilization of coping strategies or maintaining a positive outlook may also contribute to the reduced likelihood of reporting a glass ceiling. Therefore, we hypothesize that female accounting professionals in higher-ranking positions (i.e., partners and senior managers) will be less likely to report encountering a glass ceiling within their organizations than female accounting professionals in lower-ranking positions.

H₇: Female accounting professionals in high-ranking positions will be less likely to report encountering a glass ceiling within their organizations compared to female accounting professionals in lower-ranking positions.

Big 4

Earlier studies suggest that women working in Big 4 accounting firms may face challenges related to gender inequality and glass ceilings. Previous studies such as of (Loft, 1992) reports that those females working at Big 4 firms were refrained from openly acknowledging barriers to career advancement. It can be attributed to the hierarchical structure and corporate culture prevalent in these organizations. The Big 4 firms,

comprising PricewaterhouseCoopers (PwC), KPMG, E&Y and Deloitte, typically feature a well-defined chain of command and levels of authority. In such hierarchical structures, employees may feel hesitant or inhibited in openly discussing challenges to their career progression. This reluctance may stem from a fear of being perceived as vulnerable or less capable and concerns about how such acknowledgment might impact their standing within the organization (Loft, 1992)

However, a more present study (e.g. Cohen et al., 2020) suggests that female accounting professionals working at Big 4 accounting firms will be less likely to report the existence of a glass ceiling compared to their counterparts at smaller accounting firms. One possible reason is that Big 4 accounting firms have been more proactive in addressing gender inequality and promoting diversity within their organizations. These firms have implemented various initiatives and programs aimed at increasing representation and advancement opportunities for women, such as mentorship programs, diversity training, and flexible work arrangements. For example, according to the Volpe (2022), firms like Deloitte have implemented family-friendly policies to support employees with caring responsibilities, and PwC has established mentoring programs aimed at providing access to role models and supporting women in their skill development. Additionally, KPMG has set gender targets for senior positions to address gender stereotypes and biases.

Given current developments in gender equality within the accounting profession, it's hypothesized that female accounting professionals employed at Big 4 accounting firms are more likely to report encountering a glass ceiling within their firms compared to accounting professionals at smaller accounting firms (non-Big 4).

H₈: Female accounting professionals working at Big 4 accounting firms will less likely report the existence of a glass ceiling within their firms than accounting professionals at smaller accounting firms (non-Big 4).

Ethnic

Malaysia is a multi-ethnic and multi-religious nation with three major ethnic and linguistic groups. Bumiputeras, which include Malay ethnic people and the indigenous people of Borneo, make up 69.9% of Malaysia's population. They are followed by Chinese and Indian ethnic groups, who constitute 22.8% and 6.6% of the population, respectively (Statista Research Department, 2022). However, the corporate scene in Malaysia presents a different picture. According to Asmuni et al. (2015), the Chinese are more involved in business compared to other ethnic groups. In fact, Chinese ownership constitutes many family-controlled businesses listed on Malaysia's stock exchange. Consequently, these companies often choose Chinese auditors and prefer audit teams composed of Chinese personnel. One main reason for this preference is the mutual understanding that comes from shared values, including cultural and linguistic commonalities. Given their dominance in the industry, it is expected that female accounting professionals of Chinese ethnicity are less likely to encounter obstacles in their career advancement at audit firms. Therefore, we propose the following hypothesis.:

H₉: Female accounting professionals of Chinese ethnicity will be less likely to report encountering a glass ceiling within their organizations compared to female accounting professionals of non-Chinese ethnicity.

3. RESEARCH DESIGN

The present study adapted the research framework as developed by Cohen et al. (2020) to examine the glass ceiling issue in the context of Malaysian audit firms. We then include 'gender' to the main model and use the Big 4 (vs. Non-Big 4) to measure the respondent's workplace. Additionally, instead of using a single item to measure the perception of glass ceiling, the present study utilized multi-items measure.

3.1 Questionnaire development

In alignment with our research focus, we utilized the research framework developed by Cohen et al. (2020) to evaluate perceptions of the glass ceiling. Our adaptation involved the formulation of variable measures, drawing from pertinent prior studies. The initial draft questionnaire underwent scrutiny and validation by two expert auditors. Prior to making any modifications, their recommendations were thoroughly deliberated. Subsequently, the validated questionnaire underwent a pilot test, with final-year accounting students responding and providing feedback on unclear or misleading items. Incorporating this feedback, we made further refinements to the questionnaire.

Comprising two sections, the questionnaire's first part addresses glass ceiling perception, encompassing bias, structural, cultural factors, and additional information beyond the scope of this study. The second part solicits respondents' demographic and work-related information. The items of the questionnaire are presented in the Appendix. Respondents are required to respond to the five-point Likert scale range. The lowest range, i.e., 1, represents 'strongly disagree' and the highest range, i.e., 5, represents 'strongly agree'.

3.2 Population and data collection

A survey was conducted among individuals employed in the audit industry in Malaysia, with both men and women included in the sample. Due to the COVID 19 pandemic, we utilized the online survey and then hand administered the questionnaire whenever possible. First, we contacted the audit firms and asked for their favor to distribute the online questionnaire's website link among their audit staff. However, the online response was less than encouraging. In fact, we only received a total of 45 responses through the online method. We then seek help from an accounting association to distribute the questionnaire among attendees at a national conference held in Kuala Lumpur. The conference was attended by the audit staff from the Big 4 and non-Big 4 firms throughout Malaysia. We distributed a number of 300 questionnaires at the beginning of the conference and by the end of day two, a total of 169 responses were collected, however 27 of the questionnaires were incomplete and need to be excluded from analysis. Thus, together with the online survey, we have 160 responses for analysis. The table below displays the distribution and collection of the questionnaires.

Table 1. Sample selection

Description	#
Online distributed and returned	45
Hand distributed and returned	142
Incomplete and discarded	27
Useable responses	160

3.3 Research model

The study is set to identify the contributory factors of the glass ceiling perception among audit staff working at audit firms. The following Ordered Logistic Regression (OLR) regression models test our hypotheses:

$$\text{av_glass} = \beta_1 \text{gender} + \beta_2 \text{av_bias} + \beta_3 \text{av_struc} + \beta_4 \text{av_org} + \beta_5 \text{marital} + \beta_6 \text{depend} + \beta_7 \text{rank_post} + \beta_8 \text{big4} + \beta_9 \text{ethnic} \quad (\text{Model 1})$$

$$\text{av_glass} = \beta_1 \text{av_bias} + \beta_2 \text{av_struc} + \beta_3 \text{av_org_cul} + \beta_4 \text{marital} + \beta_5 \text{depend} + \beta_6 \text{rank_post} + \beta_7 \text{big4} + \beta_8 \text{ethnic} \quad (\text{Model 2})$$

In which;

av_glass	=	Perception of glass ceiling, an average score of the glass ceiling.
gender	=	Coded '1' = if the respondent is a woman, and '0' = is a man.
av_bias	=	An average score of bias-centered factor.
av_struc	=	An average score of structural-centered factor.
av_org	=	An average score of organizational cultural-centered factor.
marital	=	Marital status, coded '1' = if the respondent is married and '0' if not.
depend	=	Coded '1' if the respondent has dependents (spouse, children and parents)
rank_post	=	Assigned '1' if the respondent is an audit partner or senior manager, and '0' if the respondent is junior manager or below.
big4	=	Assigned '1' if the respondent's firm is the Big 4 firms (i.e. PricewaterhouseCoopers, KPMG, E&Y and Deloitte), and '0' if otherwise.
ethnic	=	Assigned '1' if the respondent belongs to Chinese ethnicity and '0' otherwise.

Model 1 estimates the determinants of the glass ceiling of all participants, regardless of gender (n=160) and model 2, estimates the glass ceiling of women only (n=96). Alternatively, we also estimate the glass ceiling using the Ordinal Logistic Regression (OLR). OLR is also known as ordinal logit or proportional odds model. This regression model is specifically designed for ordinal dependent variables (McCullagh, 1980). It considers the ordinal nature of the categories and doesn't assume a continuous distribution.

4.0 EMPIRICAL RESULTS

4.1 Descriptive statistics and Multicollinearity

Descriptive statistics

Table 2 gives demographic details of the respondents. The data includes information on years of experience, gender, race, marital status, number of dependents, rank position, and kind of audit firm. As shown in the table, the audit staff is generally experienced, as seen by the mean length of involvement for the ongoing working environment, which is 6.31 years. The mode and mean characteristics for a long duration of involvement with

the ongoing work environment are, however, 1 and 4 years, respectively, suggesting that there is a sizable portion of workers with typically lower experience levels.

Table 2. Descriptive statistics

	MEAN	MODE	MEDIAN	# (160)	%
YEARS OF EXPERIENCE:					
Current workplace	6.31	1	4		
Prior workplace	1.88	0	0		
GENDER:					
Men				64	40.00%
Women				96	60.00%
RACE:					
Malay				135	84.38%
Chinese				19	11.88%
Indian				4	2.50%
Others				2	1.25%
MARITAL STATUS:					
Married				83	51.88%
Otherwise				77	48.13%
DEPENDENTS:					
Children				63	39.38%
Spouse				52	32.50%
Parent				73	45.63%
RANK POS:					
Partner or Senior Manager				40	25.00%
Junior Manager and below				120	75.00%
AUDIT FIRM SIZE:					
Big 4				30	18.75%
Non-Big 4				130	81.25%

The data also reveals that there are 96 women (60%) and 64 males (40%) responded to the study. Higher proportion of female members somehow consistent with the statistics issued by the Malaysian Institute of Accountants, which suggests there are more women than male chartered accountants in the country.

Malaysia is a multiracial country, and the distribution of the participants' ethnicity is reflected in the table. According to the data on racial makeup, 84.38% of the group's members identify as Malay. Chinese make up 11.88% while Indians and people of other races make up minor portions of the group.

According to the data, 25% of the respondents have partner or senior manager roles, while 75% occupy junior manager positions or lower. This information points to a hierarchical organizational structure at this audit firm, with a smaller percentage of employees occupying top roles. A major portion of the group (i.e., 81.25%), works in non-Big 4 firms, while only 18.75% works at Big 4 audit firms. The Big 4 in the context of Malaysian audit market refers to Deloitte, KPMG, PricewaterhouseCoopers, and Ernst & Young. The firms are also among the biggest firms in the world.

Most of the respondents (51%) are married, and a sizable percentage of them have family obligations (i.e., 135 respondents or 84%) which could affect their ability to

manage their work and personal lives. The data reveals that among the group, children (39.38%) are the most prevalent form of dependent, followed by parents (45.63%) and spouses (32.50%).

Multicollinearity

Multicollinearity among the contributory factors was examined by the calculation of Spearman's rank correlation. Table 3 displays pair-wise correlation coefficients for nine variables (1 to 9), indicating the magnitude and direction of their associations. The coefficients in question span from -1 to 1. A value of 1 denotes a perfect positive linear relationship, while -1 means a flawless negative linear relationship. A value of 0 shows the absence of a linear relationship. For example, the correlation of 1.00 between av_glass and itself (variable 1) is anticipated, indicating a perfect correlation.

Table 3. Spearman's rank correlation

Variables	1	2	3	4	5	6	7	8	9	10
1. av_glass	1.000									
2. gender	-0.060	1.000								
3. av_bias	0.595 *	-0.002	1.000							
4. av_struc	0.673 *	-0.017	0.722	1.000						
5. av_org	0.657 *	-0.089	0.548 *	0.632 *	1.000					
6. marital	0.094	-0.276 *	-0.068	0.000	0.119	1.000				
7. depend	0.134	-0.141	0.081	0.087	0.153	0.343 *	1.000			
8. rank_pos	-0.041	-0.236 *	-0.076	-0.028	0.085	0.267 *	-0.030	1.000		
9. big4	-0.218 *	0.033	-0.059	-0.057	-0.078	-0.242 *	-0.102	-0.019	1.000	
10. ethnic	-0.070	0.024	0.041	0.128	-0.013	-0.226 *	-0.161 *	0.056	0.715 *	1.000

Note: Values with asterisks (*) indicate significance at the 5% level or below.

The table shows correlations between different pairs of variables, revealing the varying strengths and directions of their linkages and providing insights into their interconnections within the dataset. Significantly, larger positive correlations indicate a more substantial positive linear link, whereas stronger negative correlations indicate a more pronounced negative linear relationship between the variables in question. High correlation, as indicated by the Spearman's rank correlation between independent variables in a regression analysis can pose a problem known as multicollinearity. More commonly, the issue of multicollinearity arises when there is a high degree of correlation between two or more explanatory. The general rule of thumb is that if simple correlation coefficient between two regressors is greater than 0.8 or 0.9, multicollinearity is a serious problem (Midi et al., 2010). Since there is no correlation is higher than 0.8, then multicollinearity is not an issue.

4.2 Multivariate analysis

Table 4 presents the results of multivariate analysis using the Ordered Logistic Regression (OLR). OLR was used for the analysis of Likert scale data due to several critical reasons. First, Likert scales represent ordered categorical data with non-equal intervals between response categories, thus violating the assumptions of linearity and equal intervals inherent in Ordinary Least Squares (OLS). Secondly, Likert data often exhibits non-normal distributions, skewness, and a bounded range, contravening OLS assumptions. The OLS method does not account for the ordered nature of Likert scale categories, leading to potentially misleading interpretations of coefficients. On the other hand, OLR

is specifically designed for analyzing ordinal outcomes, acknowledging the ordered structure of Likert scale data. OLR accommodates the proportional odds assumption, capturing the cumulative probabilities of moving into or above specific categories. As a non-linear model, OLR provides more appropriate inference for Likert scale data, yielding interpretable odds ratios and facilitating a more accurate understanding of the relationships between independent variables and ordered response categories. Therefore, OLR is a more suitable choice for modeling and interpreting Likert scale data in regression analyses.

As shown in Table 7, the OLR test results find that structural factor (av_struc), organizational cultural factor (av_org) and Big 4 firm (big4) are significantly associated with the perception of glass ceiling. The analysis reveals several key findings regarding the factors influencing the perception of glass ceilings among accounting professionals. These results provide valuable information from a social science perspective.

Table 4 . Ordered Logistic Regression, all sample (n=160)

AV_GLASS	Coef.	Std. err.	z	P>z
gender	0.210	0.329	0.640	0.522
av_bias	0.299	0.385	0.780	0.438
av_struc	2.393	0.424	5.640	0.000
av_org	1.189	0.283	4.200	0.000
marital	0.221	0.360	0.610	0.539
depend	-0.033	0.428	-0.080	0.938
rank_pos	-0.121	0.371	-0.320	0.745
big4	-1.207	0.632	-1.910	<i>0.056</i>
ethnic	-0.237	0.732	-0.320	0.746
LR chi2(9)	170.000			
Prob > chi2	0.000			
Pseudo R2	0.246			

Note: **Bold** = Significance at 0.05 or less, *italic*= Significance at 0.10 or less.

Gender, as a variable, had no statistically significant impact on perception of glass ceilings (coefficient = 0.210, $p = 0.522$). This suggests that there is no significant difference in the perception of glass ceilings between men and women in the sample. This finding provides additional insight into the conventional idea that gender is the main determining factor in perceptions of glass ceilings. Perceived unequal (av__bias) does not significantly affect perception of glass ceilings (coefficient = 0.299, $p = 0.438$). On the other hand, the perception of inequality in career development opportunities (av_struc) turned out to be very significant (coefficient = 2.393, $p = 0.000$). This finding suggests that accounting professionals who are aware of the disparity in career development opportunities between colleagues of the opposite gender are more likely to notice a glass ceiling in their organization. This highlights the importance of equal access to career advancement opportunities in reducing the perception of glass ceilings. The lack of inclusiveness, indicated by perceived disparities in work support and a suboptimal organizational culture (av_org), significantly influences the perception of glass ceilings (coefficient = 0.189, $p < 0.001$). This indicates that professional accountants who perceive a lack of support, such as being excluded from a single gender-dominated social networks, are more likely to perceive glass ceilings. This highlights the importance of promoting a

supportive environment and ensuring equal support from senior leaders to combat the perception of glass ceilings.

Finally, those who work at the Big 4 accounting firms also report significant (albeit weak) negative association with the perception of glass ceilings (coefficient = -1.207, $p = 0.056$). Those who are working in non-Big 4 firms are more likely to be aware of the existence of glass ceilings than those working in Big 4 firms. This finding highlights the potential influence of organizational culture, policies and practices on reducing the perception of glass ceilings.

Table 5. Ordered Logistic Regression, female only sample (n=96)

AV_GLASS	Coef.	Std. err.	z	P>z
gender				
av_bias	0.644	0.527	1.220	0.222
av_struc	2.942	0.523	5.620	0.000
av_org	0.708	0.337	2.100	0.036
marital	0.305	0.441	0.690	0.490
depend	-0.387	0.525	-0.740	0.462
rank_pos	-0.238	0.569	-0.420	0.675
big4	-0.377	0.808	-0.470	0.641
ethnic	-1.072	1.035	-1.040	0.300
LR chi2(9)	75.940			
Prob > chi2	0.000			
Pseudo R2	0.195			

Note: **Bold** = Significance at 0.05 or less, *italic* = Significance at 0.10 or less.

In order to provide further understanding on the issue glass ceilings specifically among women accountant, we run the analysis on women only sample (n=96). The results, as shown in Table 5, are identical to the full sample regression analysis. As for structural bias and organizational structure bias, the correlations are much stronger. Indicating the main source of glass ceiling do comes from these two factors. Interestingly, in the all-women sample, the Big 4 variable no longer shows a significant negative correlation, suggesting that women working at Big 4 firms do not differ from those working at non-Big 4 firms in their perception of the glass ceiling.

The analyses provide insight into the factors influencing the perception of glass ceilings among female accounting professionals. These findings highlight the importance of promoting equal opportunities and supportive environments in organizations to combat the perception of glass ceilings among female accounting professionals.

Additional analysis

To provide deeper insights into the original model, we have included new interaction variables: gender and av_bias, gender and av_struc, and gender and av_org. These interaction terms examine how the relationship between the perception of the glass ceiling and bias, structural issues, and organizational culture may differ by gender. Incorporating these interactions enhances the model's ability to capture the detailed ways in which gender may influence the perception of the glass ceiling in conjunction with these key factors.

Table 6. Ordered logistic regression, all sample (n=160) & female only (n=96).

AV_GLASS	Coef.	Std. err.	z	P>z
gender	0.437	1.240	0.350	0.725
av_bias	-0.134	0.662	-0.200	0.840
av_struc	2.933	0.669	4.390	0.000
av_org	1.197	0.436	2.750	0.006
gender*av_bias	0.616	0.852	0.720	0.470
gender*av_struc	-0.844	0.809	-1.040	0.297
gender*av_org	0.094	0.606	0.150	0.877
marital	0.221	0.363	0.610	0.542
depend	-0.094	0.459	-0.200	0.838
rank_pos	-0.127	0.383	-0.330	0.741
big4	-1.148	0.634	-1.810	<i>0.070</i>
ethnic	-0.295	0.736	-0.400	0.689
LR chi2(9)	171.170			
Prob > chi2	0.000			
Pseudo R2	0.248			

Note: **Bold** = Significance at 0.05 or less, *italic* = Significance at 0.10 or less.

As shown in Table 6, the results indicate that none of these interaction terms are statistically significant. Specifically, the interaction between gender and av_bias (coefficient = 0.616, p = 0.470), gender and av_struc (coefficient = -0.844, p = 0.297), and gender and av_org (coefficient = 0.094, p = 0.877) does not significantly affect the perception of the glass ceiling. This suggests that the relationship between these factors and the perception of the glass ceiling does not significantly differ by gender.

In addition, the Big 4 variable has a coefficient of -1.148 with a p-value of 0.070, indicating a marginal level of statistical significance (p < 0.10). Similar to the main model results, this suggests that respondents working at Big 4 firms are less likely to perceive a glass ceiling compared to those working at non-Big 4 firms. The negative coefficient implies that employment at a Big 4 firm may be associated with a reduced perception of barriers to advancement, potentially due to different organizational practices or cultures that better support career progression within these firms.

5. CONCLUSION

In this study, we investigate the factors that influence audit staff perceptions of the glass ceiling from a social science perspective. The results show that gender alone does not have a significant impact on perceptions of the glass ceiling among female accountants. Rather, perceptions of unequal professional development opportunities and inadequate support from leaders turned out to be important factors in the perception of the glass ceiling. Female accountants who perceive gaps in career advancement opportunities between male and female colleagues were more likely to perceive a glass ceiling within their organizations. This underscores the importance of an organization that ensures equal access to career advancement opportunities for all employees, regardless of gender. Creating comprehensive policies and practices that promote a level playing field will help alleviate the glass ceiling and promote gender equality in the auditing profession. In

addition, perceptions of inadequate support also significantly influenced perceptions of the glass ceiling. This highlights the need for organizations to create a supportive environment that provides female professionals with equal opportunities for support and guidance.

The findings have significant policy. Organizations should make it a priority to provide equal professional development opportunities for male and female accounting professionals. Making sure there are mentoring programs in place, having access to high-profile work, and having a fair distribution of networking opportunities will help achieve this. In addition, organizations should encourage collaborative leadership practices so that male and female accounting professionals are equally supported. Cultivating diverse and inclusive networks can help overcome perceptions of exclusion and foster collaboration and support within an organization. Organizations should strive to foster an inclusive culture that values diversity and gender equality which can be achieved through policies and initiatives that promote work-life balance, family-friendly practices, and flexible working arrangements. Overall, this study adds to the body of knowledge by emphasizing the varied character of the glass ceiling phenomenon and providing insights into the specific elements that influence its perception among female accounting professionals in the context of the Malaysian audit market.

The present study can serve as a model for studying gender inequality and obstacles to professional progression in other industries or nations. This is particularly relevant in fields such as engineering, technology, and finance, where male dominance is prevalent. Furthermore, comparative research across different nations might provide insights into how these elements are expressed in various social-cultural and legal contexts. Countries that have implemented progressive gender legislation may have distinct structural obstacles in contrast to nations that adhere to traditional gender norms. Further research can look into additional variables and interventions to extend our understanding and improve efforts to establish inclusive workplaces that allow all employees, regardless of gender, to reach their full potential.

APPENDIX

QUESTIONNAIRE ITEMS (SELECTED), FIVE-LIKERT SCALE, 1=STRONGLY DISAGREE, 5=STRONGLY AGREE.

PERCEPTION OF GLASS CEILING

- [1] Employees of my gender face more immense barriers to advancement at my workplace than employees of the opposite gender.
 - [2] Employees of my gender in my workplace are more impacted by barriers to career progression than employees of the opposite gender.
 - [3] Employees of my gender are given less job responsibility at my workplace, despite holding the same rank as their opposite gender colleagues.
 - [4] In my workplace, married employees of my gender are more impacted by the career progression barrier than non-married employees.
 - [5] In my workplace, employees of my gender are less likely to report any career progression barriers than employees of the opposite gender.
-

BIAS CENTERED

- [1] Employees of my gender are frequently excluded from decision-making at work
- [2] My gender is underrepresented in the top management team at my workplace
- [3] Women with maternity leave records at my workplace are assigned less important tasks
- [4] Talent of my gender is less accepted as new employees at my workplace

SRUCTURAL CENTERED

- [1] My gender is overrepresented in low-wage positions at my workplace.
- [2] Employees of my gender continue to be valued less than those of the opposite gender at my workplace.
- [3] Employees of my gender in my workplace require more career development resources than employees of the opposite gender.
- [4] Employees of my gender at my workplace have much less career knowledge than employees of the opposite gender.
- [5] Employees of my gender are not treated equally in terms of career progression at my workplace.

CULTURAL CENTERED

- [1] Employees of my gender in my workplace receive less social support from their coworkers than employees of the opposite gender.
- [2] My workplace's working culture prevents staff of my gender from being promoted equally with staff of the opposite gender.
- [3] At my workplace, personal and social lifestyle are affected by the organization working culture.
- [4] A good working culture is created by good management and strategic leadership in my workplace. *
- [5] A good working culture fosters a positive operating style in my workplace. *

Note: * Reverse coding

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