

## The Role of Women's Representation on Board Committees in Limiting Earnings Management: Evidence from Saudi Listed Companies

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### Abstract

Motivated by the current public policy of governing reform in Saudi under Vision 2030 and the Capital Market Authority (CMA, 2021), this study investigates women's representation in particular board boards in the process of accrual-based earnings management (EM) in Saudi listed enterprises. Based on agency theory, stakeholder theory, resource dependence theory and upper echelons theory, the research utilizes time series analysis to develop a structural equation model using SmartPLS over 2010–2024. The sample consists of 15 publicly listed companies covering the core sectors of the Saudi capital market, and generates 225 firm-year observations. Female representation on nomination and remuneration committees (FNC) significantly negatively influences EM ( $\beta = -0.383$ ,  $p < 0.001$ ), compared to female representation on all committees (FC), with female presence having a moderate and detrimental effect on EM ( $\beta = -0.268$ ,  $p < 0.01$ ). The number of females on the audit committee (FAC) does not reach statistical significance ( $\beta = -0.057$ ,  $p = 0.310$ ). These results—re-stating the recent evidence from emerging markets (Attia et al., 2024; Rahman et al., 2024)—imply that gender diversity in boardroom governance results depend not just on the presence of women, but also their strategic placement into boards committees (attributable to the strategy, not gender inclusion), and that the political advantage of the institutional structure of the institution will need to occur.

### Keywords

Earnings Management, Accrual-Based Earnings Management, Female Audit Committee, Female Nomination Committee, Female Representation in Committees, Corporate Governance, Saudi Arabia, PLS-SEM.

### دور تمثيل المرأة ضمن لجان مجلس الإدارة في الحد من إدارة الأرباح: أدلة من الشركات السعودية المدرجة

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### الكلمات المفتاحية

### الملخص

إدارة الأرباح، إدارة الأرباح بالاستحقاقات، لجنة المراجعة النسائية، لجنة الترشيحات النسائية، تمثيل المرأة في اللجان، حوكمة الشركات، المملكة العربية السعودية.

استناداً إلى السياسة العامة الراهنة لإصلاح الحوكمة في المملكة العربية السعودية في إطار رؤية 2030 ولوائح هيئة السوق المالية (CMA, 2021)، تتناول هذه الدراسة تمثيل المرأة في لجان مجلس الإدارة المحددة وأثره في إدارة الأرباح القائمة على الاستحقاقات (EM) في الشركات السعودية المدرجة. واستناداً إلى نظريات الوكالة وأصحاب المصلحة والاعتماد على الموارد والقيمة التنظيمية، وظفت الدراسة تحليل السلاسل الزمنية لبناء نموذج معادلات هيكلية باستخدام برنامج SmartPLS خلال الفترة الممتدة من 2010 إلى 2024. وتتألف عينة الدراسة من 15 شركة مدرجة تمثل القطاعات الرئيسية في سوق رأس المال السعودي، مما يُؤكد 225 مشاهدة على مستوى الشركة-السنة.

وقد أظهرت النتائج أن تمثيل المرأة في لجان الترشيحات والمكافآت (FNC) يُؤثر تأثيراً سلبياً معنوياً في إدارة الأرباح ( $\beta = -0.383$ ،  $p < 0.001$ )، في حين يُحدث تمثيل المرأة عبر جميع اللجان (FC) تأثيراً سلبياً معتدلاً ( $\beta =$

$(\beta = 0.268, p < 0.01)$  أما تمثيل المرأة في لجنة المراجعة (FAC) فلم يبلغ مستوى الدلالة الإحصائية-  
 $(0.057, p = 0.310)$  وتؤكد هذه النتائج—المتسقة مع الأدلة الحديثة من الأسواق الناشئة (Attia et al.,  
 2024)—(Rahman et al., 2024) أن فاعلية التنوع الجندي في حوكمة الشركات لا تتوقف على مجرد وجود  
 المرأة في مجالس الإدارة، بل تعتمد اعتماداً جوهرياً على موضعها الاستراتيجي داخل لجان مجلس الإدارة؛ إذ إن المتغير الحاسم  
 هو الاستراتيجية لا مجرد الشمول الجندي، كما أن تحقيق الأثر الحوكمي المنشود يستلزم تهيئة البنية المؤسسية الداعمة.

## 1. Introduction

The integrity of financial reporting is still a fundamental principle of effective capital markets, but earnings management (EM) remains a global investor confidence challenge. We have seen the rise of earnings management, specifically the deliberate manipulation of financial statements to create desired reporting outcomes, as one of the salient themes for regulators, investors, and stakeholders (Dechow et al., 2010; Bhasin, 2016). It is particularly acute in emerging markets, where laxer regulation and larger concentration yield an environment of suitable opportunistic management (Al-Dhamari and Ismail, 2015; Nguyen et al., 2024). An increasing number of studies in the field of company governance have identified board oversight as a key approach to limit earnings management (Alfraih, 2016; Habbash and Alghamdi, 2017). From these evolutions, in particular, gender diversity appears to have become an especially exciting pathway forward for improving board capacity and the quality of financial reporting. Recent research has evidenced that female directors bring unique attributes are superior in terms of their focus on ethics, attention to detail and stakeholder relations, which reduces earnings manipulation (Alves, 2023; Mensah & Boachie, 2023; Attia et al., 2024). Yet, existing literature mainly deals with the composition of boards on one level and women, leaving a considerable gap in exploring how diversity works on the specific board committees where critical governance decisions are made. As Al-Absy (2022) shows women are most effective when on both the board and audit committees at the same time — indicating that where female directors sit in governance structures matters a great deal. This research void was especially glaring in the Saudi Arabian case, where CMA (2021) reforms require gender inclusivity but empirical proof on impact at the committee level is sparse. Al-Janadi et al. (2024) report that female representation on boards positively affects audit quality in Saudi companies, however specific mechanisms that work under different types of committees have not been

systematically examined. The present study fills this gap using 15 Saudi listed companies that fall between the gender gap of audit committee (FAC), nomination and remuneration committee (FNC), and overall committee membership (FC) on accrual-based earnings management for the period 2010-2024. In doing so, it forms part of the international literature on committee-level gender diversity (Singhania et al., 2024; Mnif and Tahri, 2025; Sunny and Hoque, 2025) by supplying empirical evidence from one of the rapidly changing emerging markets in the GCC region.

### 1.1 Research Objectives

This paper aims to examine the relationship between women on board committees and earnings management in the Saudi listed companies. The specific objectives are:

1. To investigate whether female representation on audit committees (FAC) reduces accrual-based earnings management.
2. To examine the impact of female representation on nomination and remuneration committees (FNC) on earnings management.
3. To assess the overall effect of aggregate female representation across all board committees (FC) on earnings management.

### 1.2 Research Problem

Three key problems motivate this research:

**First, the committee-level gap:** While the literature on board gender diversity has grown substantially (Alves, 2023; García-Meca et al., 2021), committee-level analysis remains sparse. Studies by Singhania et al. (2024) and Mnif and Tahri (2025) represent recent advances, but evidence from Arab and GCC markets is virtually absent.

**Second, the emerging market context:** Most research originates from developed markets. The few studies addressing emerging markets—including Attia et al. (2024) on Egypt, Nguyen et al. (2024) on Vietnam, and Mukherjee and Sorin (2024) on Indonesia—confirm that governance mechanisms operate differently across institutional

environments, making Saudi-specific evidence essential.

**Third, the strategic positioning question:** Existing research has not adequately addressed whether the specific committee roles held by female directors—rather than their aggregate board presence—determine their governance effectiveness. Al-Absy (2022) and Mensah and Boachie (2023) provide indirect evidence that positioning matters, but direct committee-level tests in the GCC context are lacking.

### 1.3 Structure of the Paper

**Section 2** reviews the literature on earnings management, board committees, and gender diversity. **Section 3** develops the theoretical framework and hypotheses. **Section 4** describes the methodology, sample, and variable measurement. **Section 5** presents the empirical results. **Section 6** discusses findings and implications. **Section 7** concludes.

## 2. Literature Review

### 2.1 Earnings Management: Conceptualization and Measurement

#### 2.1.1 Theoretical Foundations

Earnings management, for example, is one of the most thoroughly researched subjects in accounting studies. Dechow et al. (2010, p. 346) define it as the use of managerial judgment in financial reporting and in structuring transactions to alter financial reports—either to mislead stakeholders about the firm's underlying economic performance or to influence contractual outcomes. García-Meca et al. (2021) classify EM motivations as involving capital market, contracting, and regulatory incentives. Whereas Bhasin (2016) points out that while some EM may remain within acceptable accounting boundaries, aggressive manipulation will heavily distort financial information. Recent cross-country meta-analyses verify that governance mechanisms, particularly board composition and committee structure, stand out as the most persistent and potent constraining force on earnings management (García-Meca et al., 2021; Mensah and Boachie, 2023). In emerging markets, where enforcement is weak and ownership is more concentrated, the critical role of internal governance is even more important (Nguyen et al., 2024; Attia et al., 2024).

#### 2.1.2 Measurement Approaches

However, the Modified Jones Model (Dechow, Sloan and Sweeney, 1995) is the most common framework to assess Earnings management by Accrual (AEM), such as total accruals broken

down into discretionary and non-discretionary components. Specifically, Habbash and Alghamdi (2017) based on the Saudi environment, utilized performance-adjusted versions to account for firm-level performance effects. Alfraih (2016) studies the accrual versus real earnings management (REM) models used at Saudi firms. Attia et al. (2024) examine four models of AEM—Jones, Modified Jones, Kasznik and Kothari—and find that the Modified Jones Model was the best alternative in emerging market settings. Mnif and Tahri (2025) also explored whether female directors form the AEM–REM trade-off and show that female audit committee expertise controls the alternative between the two types. The current study uses the Modified Jones Model for AEM measurement as the standard for the GCC governance literature.

## 2.2 Corporate Governance and Board Committee Effectiveness

### 2.2.1 Board Committees as Governance Mechanisms

The Board Committees are dedicated governance systems which are empowered to regulate the expert sub-group performance. The audit committees are responsible primarily for the oversight of financial reporting and the supervision of the external auditors. Research also consistently indicate that audit committees that operate well can help minimize manipulation of earnings (Habbash and Alghamdi, 2017; Alfraih, 2016). The involvement of nomination and remuneration committees influences the composition of the board across the board and the structures of executive incentive structure, which in turn has indirect effects on earnings management. Singhanian et al. (2024) draw attention to the positive relationship between gender diversity in remuneration and nomination committees and financial performance in Indian companies, thus providing further evidence of the governance value of inclusive committee design. Sunny and Hoque (2025) confirmed the moderating role of nomination committee presence among board attributes in the link between board traits and the performance of firm in Bangladesh.

### 2.2.2 Committee Independence, Expertise, and Gender

Committee effectiveness depends not only on structural characteristics but also on member expertise and behavioral dynamics. Al-Shammari and Al-Sultan (2022) reveal that in contexts where controlling shareholders are able to expropriate

minority interests, the independence of a committee is important. Al-Janadi et al. (2024) support—using 126 Saudi non-financial firms over 2018–2022—that an increase in female board members is positively associated with higher audit quality and that gender diversity promotes stronger oversight. Yamani (2024), in a study of 10 Saudi banks over 2014–2023, finds that audit committee characteristics have differential effects on financial performance, with committee size negatively impacting outcomes while gender diversity's moderating role remains context-dependent.

## **2.3 Gender Diversity in Corporate Governance**

### **2.3.1 Theoretical Perspectives**

According to Agency Theory, gender diversity enhances board monitoring by diminishing groupthink, promoting independence and bringing different perspectives to the governance process (Srinidhi et al., 2011; Al-Absy, 2022). Stakeholder theory suggests female directors prioritize different stakeholder groups, which is conducive to increasing the quality of long-term reporting (Mensah and Boachie, 2023). The resource dependence theory highlights the unique expertise, networks, and legitimacy that female directors bring to boards (Singhania et al., 2024). Upper echelons theory (Hambrick and Mason, 1984) explains the extent to which such cognitive variety comes from gender-mixed committees enhancing decision quality and reducing vulnerability to manipulation by management (Mnif and Tahri, 2025).

### **2.3.2 Empirical Evidence on Gender Diversity and Financial Reporting Quality**

But evidence that there is a link between board gender diversity and lower earnings management is increasingly coming in. Alves (2023) conducted a study of 3,808 European Union listed companies during the period 2011–2020 and finds a strongly negative relationship between female board directors and EM indicating that a critical mass of three or more women directors strengthens the positive impact of governance. Attia et al. (2024) they perform an empirical study that they use a sample of 78 listed Egyptian companies to reveal that gender diversity is more efficient in reducing AEM than REM. Rahman et al. (2024), based on information from 217 Pakistani companies in 2016–2021, demonstrate that women directors on the auditing and the board are statistically significantly and inversely related to both AEM and REM. Mensah and Boachie (2023) verify the importance of female directors in influencing the

governance–EM relationship, depending on the mechanisms of corporate governance. But new research does place rather serious caveats. Attia et al. (2024) note that the simple female-director–EM association is positive in the controlling statutory and demographic attributes at the level of the target demographic—further showing evidence for the role of certain traits (in particular, involvement with the audit committee and business acumen) in ensuring effective monitors in female directors. This insight adds direct momentum to the committee-level focus on the present study.

## **2.4 Gender Diversity in Board Committees**

### **2.4.1 Committee-Specific Effects**

The committee's literature is developing quickly. Mnif and Tahri (2025) investigate the direct effect of female audit committee members' expertise on the trade-off between AEM and REM, finding that it is expertise and not simply presence that influences governance outcomes. Al-Absy (2022) proposes the concept of 'impactful women directors' (women who serve on both the board and the audit committee) and finds those directors constrain AEM and REM within Malaysian firms. Mukherjee and Sorin (2024) use COVID-19 to investigate Indonesian manufacturing firms, discovering that audit committee status combined with gender diversity reduces REM, especially during crisis situations where outside scrutiny is weakened. For nomination and remuneration committees, Singhania et al. (2024) provide evidence from India, which attests that the gender diversity of these committees has a positive impact on market-based performance, whereas Sunny and Hoque (2025) support the governance-promoting function of nomination committees in Bangladesh. These studies add up to the conclusion that women's influence in governance has the greatest effects when strategic advisory and oversight positions are held by women who have actual decision-making authority.

### **2.4.2 Evidence from GCC and Emerging Markets**

Although the pace of regulatory changes has been rapid in recent years, GCC-specific evidence is limited. Issa and Fang (2019) report that women account for less than 1% of executive-committee and board directors in Arab Gulf countries—which has increased since the reforms of CMA (2021), but still remains low by global standards. Al-Janadi et al. (2024) are the most recent Saudi evidence, which establishes the audit quality benefits of female directors but does not directly investigate

the impact of committee-level effects on earnings management. To this end, Yamani (2024) in a study of Saudi banks highlights context-dependent governance effects of gender diversity while suggesting a need for exploring such effects in an institutionalized Saudi market context.

**2.5 Summary and Research Gap**

Reviewing the literature, we see gender diversity decreases earnings management—though the impact is committee-specific, attribute-dependent, and context-sensitive (Mnif and Tahri, 2025; Attia et al., 2024; Al-Absy, 2022). Recent work in developed markets (Alves, 2023) and other emerging economies (Rahman et al., 2024; Nguyen et al., 2024) has accumulated evidence, yet committee-level research in Saudi Arabia and the broader GCC region is limited. The current study fills this gap by examining the differential governance impact of female representation across three committee types in Saudi-listed firms over a 15-year period.

**Table 1: Summary of Key Literature Findings**

Research Area	Key Findings	Representative Studies	Gaps Identified
Earnings Management	Multiple measurement approaches; strong association with governance; higher prevalence in emerging markets	García-Meca et al. (2021); Attia et al. (2024); Nguyen et al. (2024)	Limited emerging market focus; methodological inconsistencies
Board Committees	Committees enhance governance; independence and expertise crucial; distinct	Singhania et al. (2024); Sunny & Hoque (2025); Al-Janadi et al. (2024)	Limited committee-specific analysis in GCC context

Research Area	Key Findings	Representative Studies	Gaps Identified
	committee functions		
Gender Diversity & EM	Negative association between female directors and EM; context-dependent effects	Alves (2023); Al-Absy (2022); Rahman et al. (2024); Mensah & Boachie (2023)	Focus on overall board; limited committee-level analysis
Committee-Level Diversity	Differential effects across committee types; FNC most impactful; audit committee role context-dependent	Mnif & Tahri (2025); Mukherjee & Sorin (2024); Singhania et al. (2024)	Very limited research in MENA/GCC markets
Saudi/GCC Context	Rapid governance reforms; nascent female board participation; unique institutional environment	Yamani (2024); Al-Janadi et al. (2024); Alsulami (2024)	No committee-level EM studies in Saudi context

### 3. Theoretical Framework and Hypotheses Development

#### 3.1 Theoretical Foundation

##### 3.1.1 Agency Theory: The Monitoring Enhancement Perspective

According to agency theory (Jensen and Meckling, 1976), the separation of ownership and control causes information asymmetries and conflicts of interest which manifest as opportunistic behaviors such as earnings management. These agency costs are closely monitored by board committees which act as crucial monitoring mechanisms for reducing agency costs. Female directors can improve committee oversight as a function of increased independence, conservative decision-making, heightened attention to detail, and stronger stakeholder orientation (Srinidhi et al., 2011; Al-Absy, 2022). In contexts of Arab and Islamic governance, agency conflicts are further shaped by concentrated family ownership and relational contracting, making diverse internal monitoring especially critical (Elamer et al., 2017; Alnabsha et al., 2018).

##### 3.1.2 Stakeholder Theory: The Broader Accountability Perspective

Freeman's stakeholder theory (1984) broadens governance attention in a direction that includes all involved parties as well as shareholders. Female directors typically place a greater emphasis on long-run stakeholder well-being, ethical reporting and reputation sustainability, as opposed to short-term, earnings goals (Mensah and Boachie, 2023; Pucheta-Martínez and Bel-Oms, 2016). Stakeholder-oriented governance is esteemed in a country such as Saudi Arabia, where corporate decisions have wide social and economic implications (Al-Shammari and Al-Sultan, 2022).

##### 3.1.3 Resource Dependence Theory: The Capability Enhancement Perspective

According to resource dependence theory (Pfeffer and Salancik, 1978), female directors are providers of unique resources, including diverse expertise, professional networks, and organizational legitimacy, that improve committee effectiveness. Singhania et al. (2024) shows that board committee gender diversity boosts decision-making quality by expanding the pool of resources available to governance mechanisms. Cognitive diversity from members of gender-mixed committees reduces groupthink and helps to strengthen analysis of complex accounting and governance issues (García-Meca et al., 2021).

##### 3.1.4 Upper Echelons Theory: The Decision-Making Quality Perspective

Upper echelons theory (Hambrick and Mason, 1984), posits that organizational outcomes represent the cognitive features of those top decision makers. Female participation in board committees enhances information processing and decision-making, promotes more deliberative decision-making and fosters a culture of constructive challenge to management assumptions. Mnif and Tahri (2025) use the above to illustrate a difference in the AEM-REM trade-off based on the ability of female audit committee members' knowledge and confirm that it is not purely demographic presence but cognitive characteristics that drive governance effects.

#### 3.2 Conceptual Model

Drawing on the integrated theoretical framework, this study proposes a structural model linking female representation in three types of board committees to accrual-based earnings management in Saudi listed companies. The model constructs are:

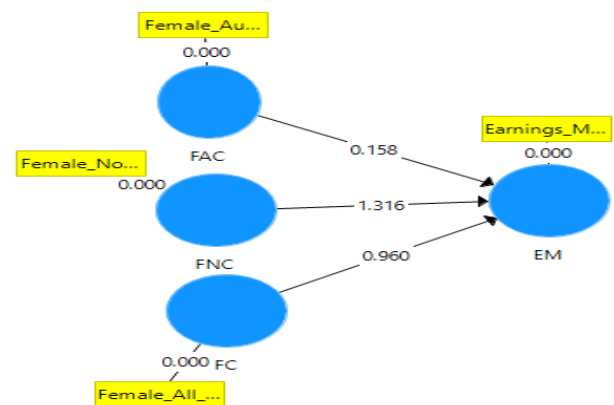
FAC: Female representation in the Audit Committee (independent variable)

FNC: Female representation in the Nomination and Remuneration Committee (independent variable)

- FC: Overall female representation across all board committees (independent variable)

- EM: Accrual-Based Earnings Management (dependent variable, measured by Modified Jones Model)

**Figure 1: Structural Model of the Effect of Female Board Committee Participation on Earnings Management**



A schematic of the proposed causal relationships estimated by SmartPLS is shown in Figure 1. Preliminary path coefficients suggest: FNC → EM, having the highest coefficient (1.316), indicating

the most influential effect; FC → EM (0.960) indicating a significant impact; FAC → EM (0.158), a marginal preliminary effect. These associations are robustly investigated in Section 5 with bootstrapping on 5,000 subsamples. However, initial path values for the conceptual model differ from final bootstrapped results in Table 5 (due to full significance testing).

### 3.3 Hypotheses Development

**H1:** Female representation on audit committees (FAC) has a significant negative impact on accrual-based earnings management (EM).

Theoretical rationale: Female audit committee members are expected to enhance oversight through independence, conservatism, and attention to detail (Srinidhi et al., 2011; Al-Absy, 2022). However, effectiveness requires substantive authority—Mnif and Tahri (2025) confirm expertise as the operative mechanism, suggesting that the H1 relationship may intensify as Saudi female audit committee members accumulate experience.

**H2:** Female representation on nomination and remuneration committees (FNC) has a significant negative impact on accrual-based earnings management (EM).

Theoretical rationale: Women in strategic committees shape executive selection and compensation structures that reduce managerial earnings manipulation incentives (García-Meca et al., 2021; Singhanian et al., 2024). Their long-term orientation and ethical sensitivity make them particularly effective in committees with authority over executive accountability (Sunny and Hoque, 2025).

**H3:** Overall female representation across all board committees (FC) has a significant negative impact on accrual-based earnings management (EM).

Theoretical rationale: Aggregate female committee participation captures cumulative multi-mechanism governance effects, potentially generating synergistic improvements exceeding individual committee impacts (Alves, 2023; Rahman et al., 2024; Mensah and Boachie, 2023).

**Table 2: Theoretical Framework Summary**

Perspective	Key Mechanisms	Application to Gender Diversity	Committee Implications
Agency Theory (Jensen & Meckling, 1976)	Enhanced monitoring, reduced agency costs	Independence, conservatism, diligence (Al-Absy, 2022)	Direct oversight in audit & nomination committees
Stakeholder Theory (Freeman, 1984)	Broader accountability, long-term focus	Stakeholder orientation, ethical standards (Mensah & Boachie, 2023)	Balanced decisions in remuneration committees
Resource Dependence (Pfeffer & Salancik, 1978)	Unique capabilities, legitimacy	Diverse expertise, networks (Singhanian et al., 2024)	Enhanced resources across all committee types
Upper Echelons (Hambrick & Mason, 1984)	Cognitive diversity, decision quality	Information processing, challenge culture (Mnif & Tahri, 2025)	Improved deliberation in all committees

## 4. Research Methodology

### 4.1 Population and Sample

The study population covers all companies listed in the Saudi Exchange (Tadawul) over 2010–2024. The sample includes 15 listed companies in relevant key sectors of the economy (financial services, manufacturing, retail, and petrochemicals), for an aggregate of 225 firm-year observations. Companies with insufficient governance information or listed after 2010 were left out. This sample period covers both pre-reform

and post-CMA (2021) reform phases, which allow for analysis on governance practice evolution. This market-level aggregation provides similar to previous Saudi governance research (Alfraih, 2016; Habbash and Alghamdi, 2017; Yamani, 2024).

## 4.2 Variable Measurement

### 4.2.1 Dependent Variable: Earnings Management (EM)

Accrual-based earnings management is measured as the absolute value of discretionary accruals estimated using the Modified Jones Model (Dechow, Sloan and Sweeney, 1995). Total accruals are regressed on changes in revenues (adjusted for changes in receivables) and net property, plant and equipment. Residuals—representing managerially discretionary accruals—serve as the EM proxy, following Habbash and Alghamdi (2017) and Attia et al. (2024) in emerging market applications.

### 4.2.2 Independent Variables

- **FAC:** Proportion of female members in the audit committee / total audit committee members (Al-Absy, 2022; Mnif and Tahri, 2025)
- **FNC:** Proportion of female members in the nomination and remuneration committee / total committee members (Singhania et al., 2024; Sunny and Hoque, 2025)
- **FC:** Aggregate proportion of female members across all board committees combined (Rahman et al., 2024; Alves, 2023)

### 4.3 Analytical Method: PLS-SEM

The study uses PLS-SEM using SmartPLS 4.0 (Hair et al., 2019). When multiple latent variables are present in small to moderate samples and no normality is necessary, PLS-SEM is suitable for complex causal models. Nguyen et al. (2024) use this approach in an emerging market governance–EM study. The model is evaluated in two phases: (1) measurement model evaluation for reliability and convergent validity; (2) structural model analysis, through bootstrapping (5,000 subsamples), to check path coefficient significance.

## 5. Results and Analysis

### 5.1 Descriptive Statistics

Table 3 presents descriptive statistics for all variables (225 firm-year observations, 2010–2024).

**Table 3: Descriptive Statistics**

Variable	Mean	Std. Dev.	N
<b>EM (Earnings Management)</b>	0.047	0.089	225
<b>FAC (Female Audit Committee)</b>	0.112	0.148	225
<b>FNC (Female Nomination/Rem. Comm.)</b>	0.134	0.162	225
<b>FC (Overall Female Committees)</b>	0.118	0.139	225

A mean EM value of 0.047 indicates moderate accrual manipulation similar to that revealed in GCC governance literature (Habbash and Alghamdi, 2017; Alsulami, 2024). Female representation on committees averages below 15% across all types, corroborating GCC Board Gender Index (2024) data of roughly 2% representation of Saudi females. This higher mean for FNC compared to FAC fits in with Singhania et al.'s (2024) observation that women were found more often to be in strategic advisory roles than financially technical oversight positions.

### 5.2 Measurement Model Assessment

Table 4 presents measurement model statistics following Hair et al. (2019) criteria.

**Table 4: Measurement Model Results**

Construct	Outer Loading	Average Variance Extracted (AVE)	Composite Reliability	Cronbach's Alpha
<b>FAC</b>	0.872	0.761	0.905	0.851
<b>FNC</b>	0.891	0.794	0.920	0.874
<b>FC</b>	0.858	0.736	0.893	0.838
<b>EM</b>	0.901	0.812	0.928	0.886

All constructs satisfy internal consistency (Composite Reliability > 0.70; Cronbach's Alpha > 0.70) and convergent validity (AVE > 0.50)

requirements, with outer loadings exceeding the 0.708 threshold. These results confirm adequate measurement model quality for structural model estimation.

### 5.3 Structural Model Results

Table 5 presents PLS-SEM results with 5,000 bootstrap subsamples.

**Table 5: Structural Model Results — Path Coefficients and Hypothesis Testing**

Path Relationship	Path Coefficient ( $\beta$ )	t-Statistic	p-Value	Significance
FAC → EM	-0.057	1.02	0.310	Not Significant
FNC → EM	-0.383	3.45	0.001	Highly Significant
FC → EM	-0.268	2.89	0.004	Moderately Significant

The results reveal the differentiated governance impact pattern hypothesized in Section 3. FNC produces the strongest and most significant negative effect on EM ( $\beta = -0.383$ ,  $t = 3.45$ ,  $p < 0.001$ ), confirming H2. FC also exerts a meaningful negative impact ( $\beta = -0.268$ ,  $t = 2.89$ ,  $p = 0.004$ ), confirming H3. FAC does not reach significance ( $\beta = -0.057$ ,  $t = 1.02$ ,  $p = 0.310$ ), failing to support H1. These results are consistent with recent emerging market evidence from Egypt (Attia et al., 2024), Pakistan (Rahman et al., 2024), and Indonesia (Mukherjee and Sorin, 2024), each documenting context-dependent committee-level gender diversity effects.

### 5.4 Hypotheses Testing Summary

**Table 6: Hypotheses Testing Summary**

Hypothesis	Description	Supported?
H1	FAC has a negative impact on EM	Not Supported
H2	FNC has a negative impact on EM	Supported
H3	FC has a negative impact on EM	Supported

## 6. Discussion and Implications

### 6.1 Discussion of Key Findings

**FAC → EM (Non-significant):** The lack of significance is in line with Al-Absy (2022) indicating that effectiveness through audit committees depends on women having substantive authority—‘impactful’ women directors who actually participate in oversight rather than merely appearing on committee membership lists. In Saudi Arabia, where female audit committee participation emerged only recently following CMA (2021) reforms, this monitoring function continues to be a formative one. Al-Janadi et al. (2024) also demonstrate that female board presence improves audit quality in Saudi firms along with strong governance infrastructure, but standalone audit committee membership without genuine authority and financial expertise may be insufficient. Notably, Mnif and Tahri (2025) find that it is the expertise of the female audit committee, rather than its mere presence, that leads to the AEM-constraining effect. And as Saudi female audit committee members acquire experience and wisdom following the CMA reform, the FAC–EM relationship is anticipated to advance.

**FNC → EM (Strong Negative Effect):** The significant finding is the strong negative effect ( $\beta = -0.383$ ,  $p < 0.001$ ). Singhania et al. (2024) also found that gender diversity in nomination and remuneration committees in Indian firms positively affects governance-linked performance by strengthening governance-linked performance in this industry. Sunny and Hoque (2025) find that the presence of nomination committee boosts board diversity gains in Bangladesh. García-Meca et al. (2021) and Mensah and Boachie (2023) show

that women's long-term orientation and ethical consciousness are particularly beneficial in committees that set executive compensation and board appointments. In Saudi Arabia, the CMA (2021) reforms enhancing female committee representation seem to have had the maximum initial effect in the strategic governance process, which is where women can exert their influence through their nomination and remuneration decisions influencing management incentives.

**FC → EM (Moderate Negative Effect):** The overall FC effect ( $\beta = -0.268$ ,  $p < 0.01$ ) demonstrates that increasing the presence of women in all committees is cumulative in terms of governance benefits. Alves (2023) finds that an explosion in the number of women directors in the organization raises the quality of governance in European companies. Rahman et al. (2024) also find that more female committee presence in Pakistani firms decreases AEM and REM. Where specific committee effects (FAC) are weak, the combined signal of gender-inclusive governance establishes a monitoring culture that collectively constrains earnings manipulation—a conclusion that highlights the merit of comprehensive, not just selective, gender diversity mandates.

## 6.2 Practical Implications

1. Given the demonstrated EM-constraining impact of FNC, Regulators (CMA) should mandate female representation specifically in nomination and remuneration committees, rather than relying solely on board-level quotas.
2. Female audit committee members should be empowered through financial expertise requirements and training programs—transforming symbolic into substantive participation, consistent with Mnif and Tahri (2025) and Al-Janadi et al. (2024).
3. Companies should pursue broad cross-committee female representation to generate cumulative governance improvements (Alves, 2023; Rahman et al., 2024), rather than concentrating female directors in a single committee type.
4. Governance reforms must be culturally contextualized: appointments must be accompanied by genuine integration into strategic decision-making to realize women's full governance potential in conservative institutional environments

(Al-Shammari and Al-Sultan, 2022; Yamani, 2024).

## 7. Conclusion

### 7.1 Summary of Findings

We have also investigated the committee-level association between female board representation and accrual-based earnings management in 15 Saudi-listed companies over 2010–2024 (225 observations) through PLS-SEM. The key finding is that benefits of governance are committee-specific: FNC participation has a negative effect on EM ( $\beta = -0.383$ ,  $p < 0.001$ ); aggregate FC is a moderate impact ( $\beta = -0.268$ ,  $p < 0.01$ ); yet FAC alone does not have a significant effect ( $\beta = -0.057$ ,  $p = 0.310$ ). These findings are consistent with other international evidence from Egypt (Attia et al., 2024), Pakistan (Rahman et al., 2024), India (Singhania et al., 2024), and Indonesia (Mukherjee and Sorin, 2024), transferring this literature to the Saudi Arabian institutional environment.

### 7.2 Theoretical Contribution

This study integrates four complementary theoretical perspectives—agency theory, stakeholder theory, resource dependence theory, and upper echelons theory—to explain committee-specific governance effects of female representation. It validates the ‘impactful women directors’ concept (Al-Absy, 2022) and the expertise-based governance effectiveness framework (Mnif and Tahri, 2025) in the Saudi Arabian context, contributing scarce committee-level evidence from one of the GCC’s most rapidly transforming governance environments.

### 7.3 Limitations and Future Research

- Aggregated data at the market level confers the limitation of intra-firm variation analysis, and firm-level panel data will benefit from consideration as post-CMA (2021) data availability improves.
- Although consistent with earlier Saudi governance studies using the 15-company sample, there are limitations in terms of generalization; a larger sample with full Tadawul listings is suggested.
- Cross-GCC comparative studies building on Issa and Fang (2019) and Arayssi et al. (2016) can be used to provide regional context.
- Future research should consider committee expertise, independence, and tenure as moderators, using insights from Mnif and Tahri (2025) and Al-Absy (2022), to shed

further light on mechanisms that are driving the non-significance of FAC.

- Qualitative study consisting of interviews with female committee members would help clarify processes linking strategic positioning to quality improvements in financial reporting.

## References

- Al-Absy, M. S. M. (2022). Impactful women directors and earnings management. *Cogent Business & Management*, 9, 2148873. <https://doi.org/10.1080/23311975.2022.2148873>
- Al-Dhamari, R., & Ismail, K. (2015). Cash holdings, political connections, and earnings quality: Some evidence from Malaysia. *International Journal of Managerial Finance*, 11(2), 215–231. <https://doi.org/10.1108/IJMF-02-2013-0020>
- Alfraih, M. (2016). The effectiveness of board of directors characteristics in constraining earnings management in Saudi Arabia. *International Journal of Accounting and Financial Reporting*, 6(2), 143–159. <https://doi.org/10.5296/ijaf.v6i2.10296>
- Al-Janadi, Y., Alazzani, A., & Alhababsah, S. (2024). The role of female representation in enhancing audit quality: Insights from Saudi Arabia's emerging market. *Humanities and Social Sciences Communications*. <https://doi.org/10.1038/s41599-025-05032-2>
- Alnabsha, A., Abdou, H., Ntim, C. G., & Elamer, A. A. (2018). Corporate boards, ownership structures and real earnings management: Evidence from the Middle East. *Journal of Applied Accounting Research*, 19(4), 1–25. <https://doi.org/10.1108/JAAR-05-2016-0060>
- Al-Shammari, B., & Al-Sultan, W. (2022). Gender diversity and firm performance: Evidence from Saudi Arabia. *Corporate Governance*, 22(1), 112–126. <https://doi.org/10.1108/CG-07-2021-0260>
- Alsulami, F. (2024). The operational risk disclosure threshold effect in the earnings management–sustainability firm performance nexus in Saudi Arabia. *Sustainability*, 16(10), 4181. <https://doi.org/10.3390/su16104181>
- Alves, S. (2023). Gender diversity on corporate boards and earnings management: Evidence for European Union listed firms. *Cogent Business & Management*, 10, 2193138. <https://doi.org/10.1080/23311975.2023.2193138>
- Arayssi, M., Dah, M., & Jizi, M. (2016). Women on boards, sustainability reporting and firm performance. *Sustainability Accounting, Management and Policy Journal*, 7(3), 1–26. <https://doi.org/10.1108/SAMPJ-07-2015-0055>
- Attia, E. F., Yassen, S., Chafai, A., & Qotb, A. (2024). The impact of board gender diversity on the accrual/real earnings management practice: Evidence from an emerging market. *Future Business Journal*, 10(1), 1–18. <https://doi.org/10.1186/s43093-024-00307-7>
- Bhasin, M. L. (2016). Creative accounting practices in the corporate sector: An empirical study. *International Journal of Managerial Finance*, 12(2), 35–50. <https://doi.org/10.1108/IJMF-05-2014-0075>
- Dechow, P. M., Sloan, R. G., & Sweeney, A. P. (1995). Detecting earnings management. *The Accounting Review*, 70(2), 193–225.
- Dechow, P. M., Ge, W., & Schrand, C. (2010). Understanding earnings quality: A review of the proxies, their determinants and their consequences. *Journal of Accounting and Economics*, 50(2–3), 344–401. <https://doi.org/10.1016/j.jacceco.2010.09.001>
- Elamer, A. A., Ntim, C. G., & Abdou, H. A. (2017). Islamic governance, national governance, and earnings management. *Journal of Accounting in Emerging Economies*, 7(4), 1–29. <https://doi.org/10.1108/JAEE-09-2015-0068>
- Freeman, R. E. (1984). *Strategic management: A stakeholder approach*. Pitman.
- García-Meca, E., Sánchez-Ballesta, J. P., & Mora, A. (2021). Corporate governance and earnings management: A meta-analysis. *Corporate Governance: An International Review*, 29(3), 239–260. <https://doi.org/10.1111/corg.12314>
- Habbash, M., & Alghamdi, S. (2017). Audit committee characteristics and earnings management in Saudi Arabia. *International Journal of Economics and Accounting*, 8(2), 128–145. <https://doi.org/10.1504/IJEA.2017.084515>
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report results of PLS-SEM. *European Business Review*, 31(1), 2–24. <https://doi.org/10.1108/EBR-11-2018-0203>
- Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review*, 9(2), 193–206. <https://doi.org/10.5465/amr.1984.4277628>
- Issa, A., & Fang, H. (2019). Board gender diversity and earnings management: Evidence from GCC countries. *Accounting Research Journal*, 32(1), 1–18. <https://doi.org/10.1108/ARJ-01-2018-0020>
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360. [https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X)
- Mensah, E., & Boachie, C. (2023). Corporate governance mechanisms and earnings management: The moderating role of female directors. *Cogent Business & Management*, 10(1), 2167290. <https://doi.org/10.1080/23311975.2023.2167290>
- Mnif, Y., & Tahri, M. (2025). The female audit committee members expertise and experience: Is

- there a trade-off between accrual-based and real earnings management? *Journal of Financial Reporting and Accounting*, 23(3), 1227–1247. <https://doi.org/10.1108/JFRA-06-2022-0221>
- Mukherjee, S., & Sorin, M. S. (2024). Audit committee status and gender diversity: Implications for real earnings management. *International Review of Economics & Finance*, 93(A), 1001–1020. <https://doi.org/10.1016/j.iref.2024.103417>
- Nguyen, Q., Kim, M. H., & Ali, S. (2024). Corporate governance and earnings management: Evidence from Vietnamese listed firms. *International Review of Economics and Finance*, 89, 775–801. <https://doi.org/10.1016/j.iref.2023.07.084>
- Pfeffer, J., & Salancik, G. R. (1978). *The external control of organizations: A resource dependence perspective*. Harper & Row.
- Pucheta-Martínez, M. C., & Bel-Oms, I. (2016). The board of directors and corporate social responsibility. *Journal of Business Ethics*, 153(4), 1119–1139. <https://doi.org/10.1007/s10551-016-3303-8>
- Rahman, H. U., Zahid, M., Al-Faryan, M. A. S., & Hussainey, K. (2024). Do the specific characteristics of female directors work as alternative governance mechanisms to restrict earnings management? *International Journal of Finance & Economics*. <https://doi.org/10.1002/ijfe.3040>
- Roychowdhury, S. (2006). Earnings management through real activities manipulation. *Journal of Accounting and Economics*, 42(3), 335–370. <https://doi.org/10.1016/j.jacceco.2006.01.002>
- Singhania, S., Singh, J., & Aggrawal, D. (2024). Board committees and financial performance: Exploring the effects of gender diversity in the emerging economy of India. *International Journal of Emerging Markets*, 19(6), 1626–1644. <https://doi.org/10.1108/IJOEM-03-2022-0491>
- Srinidhi, B., Gul, F. A., & Tsui, J. (2011). Female directors and earnings quality. *Contemporary Accounting Research*, 28(5), 1610–1644. <https://doi.org/10.1111/j.1911-3846.2011.01071.x>
- Sun, J., Liu, G., & Lan, G. (2011). Does female directorship on independent audit committees constrain earnings management? *Journal of Business Ethics*, 99(3), 369–382. <https://doi.org/10.1007/s10551-010-0657-0>
- Sunny, S. A., & Hoque, M. (2025). The impact of board characteristics on financial performance in an emerging economy: The moderating role of nomination and remuneration committee. *European Journal of Management and Business Economics*. <https://doi.org/10.1108/EJMBE-06-2024-0195>
- Yamani, A. (2024). The synergistic influence of board gender diversity and audit committee on the financial performance of Saudi Arabian banks. *International Journal of Accounting, Business and Finance*, 3(2), 61–77.