

Does board gender diversity affect financial performance? Evidence from Palestinian listed firms

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Abstract

Purpose – This paper aims to examine the effect of board gender diversity and other board of directors' characteristics on financial performance in a developing economy.

Design/methodology/approach – The paper uses panel data from 41 firms listed in Palestine during 2017–2023. Panel regression analysis was conducted using a random effects model, justified by the Hausman test. Board gender diversity was measured by the percentage of women on the board, a critical mass dummy and the Blau diversity index. The study also used board size and board meeting frequency as independent variables. Firm size, firm age, corporate leverage, industry, COVID-19 and the 2023 Israeli war in the Gaza Strip were used as control variables. The dependent variable was financial performance, measured by market-to-book value (MBV).

Findings – The results revealed a direct relationship between board gender diversity and firm valuation, only when measured using the Blau diversity index. Conversely, board size and board meeting frequency had an insignificant effect on market-to-book value.

Research limitations/implications – This study contributes to the existing literature on corporate governance by offering novel evidence from an emerging market.

Practical implications – The main implication of this study is that the existence of females having views in leadership could increase strategies and market outreach, eventually increasing firm's market value.

Social implications – The main implication of this study is that there is a necessity to increase the presence of women on the boards of listed firms in Palestine. The results of this study support the stakeholder and resource dependence theories, which argue that increasing diverse leadership can improve firm value.

Originality/value – This study contributes to the existing literature regarding corporate governance by offering novel evidence from an emerging market. It also provides practical implications for decision-makers, boards of directors and policymakers to improve corporate governance in developing countries.

Keywords Board gender diversity, Corporate governance, Financial performance, Market-to-book value, Emerging markets

Paper type Research article



1. Introduction

Corporate governance (CG) plays an essential role in financial performance (FP), as the board of directors (BOD) is in charge of controlling and monitoring executive management and setting the strategic direction of the firm (Dwekat *et al.*, 2025). Recently, there has been increasing interest in recognizing how BOD composition, particularly board gender diversity (BGD), affects FP, especially in developing markets like Palestine, where CG practices are still developing and the representation of women on boards remains low (Dwekat *et al.*, 2025). Empirical studies have found a positive correlation between BGD and the effectiveness of decision-making, as well as an increased ability of the firm to adapt to dynamic changes and developments in the business environment (Dwekat *et al.*, 2025). On the other hand, most previous studies were conducted in developed markets and economies. Furthermore, there is an inconsistency in the results of previous studies, as some empirical studies found a positive effect of BGD on firm value (Safiullah *et al.*, 2022). However, other studies have found little or no effect (Hübler and Sigmund, 2025). This gap is prominent in the Middle East, where cultural and firm context influences may affect the relationship between women directors and the efficiency of the BOD (Dwekat *et al.*, 2025).

In the Palestinian context, women constitute approximately 10% of board members. Furthermore, almost 57% of listed firms in Palestine lack female directors. Nonetheless, new policy considerations and stakeholder pressures have highlighted the necessity for more comprehensive governance. Determining whether higher BGD is associated with improved FP in this context holds significant implications. If BGD plays a significant role in increasing market valuation, it would support recommendations for encouraging inclusivity without fear of reducing firm value or shareholder wealth. If not, businesses and regulators must look for other justifications (for instance, ethical or stakeholder considerations) for pursuing diversity.

This study addresses the research gap by examining the effect of BGD on FP in listed firms in Palestine using multiple measures of gender diversity. The importance of this investigation lies in its ability to distinguish between token representation and effective diversity, while also providing evidence from a challenging socio-economic environment that remains underexplored in the corporate governance literature. Furthermore, the study considers the effect of board characteristics, such as board size and board meeting frequency (BMF), that may moderate the effect of BGD on FP. This study covers the period 2017–2023, a period that has witnessed unstable and turbulent conditions such as COVID-19 and the Israeli war against Palestinians, particularly in the Gaza Strip. By controlling for these events and other firm attributes, this study aims to examine the relationship between governance and performance using panel data.

2. Theoretical framework

2.1 Agency theory

Several theories contribute to explaining the relationship between BGD and FP. The first theory is agency theory, which postulates that CG serves as a mechanism to align the actions of managers with the interests of shareholders (García-López *et al.*, 2024). In businesses with fragmented ownership, agents (managers) may prioritize their personal interests at the expense of principals (shareholders), leading to agency problems or costs (García-López *et al.*, 2024). A well-structured and diligent BOD mitigates this issue by monitoring and supervising senior executive management, thereby reducing opportunism (García-López *et al.*, 2024).

BGD plays an essential role in enhancing monitoring efficiency, as women on the board may bring independent perspectives, reduce groupthink and “challenge the status quo,” thereby improving the effectiveness of oversight (García-López *et al.*, 2024). Empirical studies reveal that the presence of women on the board increases board effectiveness and corporate governance outcomes (García-López *et al.*, 2024). For instance, Schwartz-Ziv (2017) found that firms with at least three women on the board demonstrate more efficient monitoring (García-López *et al.*, 2024).

2.2 Stakeholder theory

Stakeholder theory provides a broader perspective, arguing that firms have responsibilities to a wide array of stakeholders rather than just investors and shareholders. [Freeman \(1984\)](#) defined a stakeholder as “any group or person that can influence or be influenced by the realization of the objectives and strategies of the organization”, emphasizing that businesses must consider the interests of diverse stakeholders in decision-making ([García-López et al., 2024](#)).

BGD is considered a valuable tool for improving stakeholder management and corporate reputation ([Marquez-Cardenas et al., 2022](#)). Women on the board may have greater awareness of the interests and needs of different stakeholders, such as employees, customers and communities, given that women constitute a significant portion of consumer markets and the workforce ([García-López et al., 2024](#)).

The presence of women on the board may signal a firm’s commitment to ethical behavior and practices, enhancing legitimacy and fostering trust among investors and stakeholders. Thus, this theory suggests that BGD can improve FP by aligning corporate policies with social expectations and reducing conflicts among stakeholders. Firms with gender-diverse boards may enhance their public image, boost investor confidence and ultimately improve FP ([Kahloul et al., 2022](#)).

2.3 Resource dependence theory

Another relevant theory is resource dependence theory, which views board members as valuable providers of resources, such as expertise, access to external capital and information ([García-lópez et al., 2024](#)).

Since firms depend on their environments for resources ([Pfeffer and Salancik, 1978](#)), directors with diverse backgrounds can help secure necessary resources and reduce uncertainty ([García-López et al., 2024](#)). Women on the board often come from different societal and professional networks compared to men, potentially expanding the firm’s connections to customers, legislators and regulators, suppliers and other stakeholders ([García-López et al., 2024](#)). Previous studies indicate that female board members have been strongly associated with valuable innovative ideas and stakeholder insights that enhance FP.

[Post and Byron \(2015\)](#) found a positive effect of BGD on FP, arguing that women bring unique knowledge and perspectives that can enhance the quality of decisions and improve FP. Furthermore, resource dependence theory assumes that greater BGD provides a richer pool of human and social capital that can be translated into superior performance and competitive advantages ([García-López et al., 2024](#)).

3. Literature review

There has been increasing interest among researchers and scholars in examining the relationship between BGD and FP in recent years, yielding varied results. Previous studies in developed economies often reveal a positive relationship between BGD and FP. [Aqel \(2024\)](#) found a positive correlation between BGD and firm value among listed firms in Palestine during 2016–2023. Likewise, [Zagorchev \(2024\)](#) found a positive effect of BGD on firm value in a sample of 95 listed firms around the world. A study by [Mansour et al. \(2024\)](#) found a positive correlation between BGD and Tobin’s Q in listed banks in Jordan during 2010–2022. Also, [Ben Fatma and Chouaibi \(2023\)](#) found a positive effect of BGD on firm value. Furthermore, [Yu and Madison \(2021\)](#) revealed a positive correlation between BGD and firm value, as firms benefit from integrating men and women on the board due to behavioral differences between them. [Badwan et al. \(2025\)](#) revealed a positive correlation between BGD and the market performance of banking institutions listed in Palestine during 2013–2023.

[Habash and Abuzarour \(2022\)](#) explored the effect of BGD on performance dispersion and underlined that BGD did not decrease performance in the MENA region. Likewise, [Mansour et al. \(2024\)](#) revealed a positive correlation between BGD and MBV in listed firms in Jordan.

This indicates that investors highly value the presence of women on the board, as it increases investor confidence. Likewise, [Atari et al. \(2025\)](#) argue that board characteristics, including gender diversity, influence corporate social responsibility practices.

However, other empirical studies have revealed a negative correlation between BGD and firm value and performance. [Unite et al. \(2019\)](#) found a negative correlation between BGD and firm value, as well as greater borrowing expenses due to a lack of communication and inefficient coordination among board members. [Loulou-Baklouti \(2024\)](#) found a negative correlation between BGD, measured by the percentage of women on the board and MBV in a sample consisting of 28 firms in Tunisia during 2019–2024. These conflicting results indicate that several variables moderate the effect of BGD on FP, such as the regulatory environment and the existence of gender quotas.

According to [Adams and Ferreira \(2009\)](#), even though listed firms in the USA that have women on the board enjoy better attendance and monitoring, businesses with strong shareholder rights witnessed a slight decrease in performance with more women, presumably as a result of “over-monitoring” in already well-governed businesses. This suggests that the effect of BGD depends on context – in economies with poor CG, monitoring by women may add value. Conversely, in developed and well-governed markets, further control and monitoring might decrease FP. Likewise, a comprehensive meta-analysis performed by [Post and Byron \(2015\)](#) revealed that, on average, having more women on the board is linked with better ROA and ROE, particularly in markets with robust shareholder protections, but it revealed an insignificant correlation between BGD and MBV. This finding demonstrates that, whereas diverse boards tend to increase internal efficiency and financial performance, investor perception measured by market valuations does not usually immediately recognize these benefits, or may be influenced by predominant biases and expectations.

Empirical studies have demonstrated differences between emerging markets and developed markets concerning the effect of BGD on firm value. [Abdullah et al. \(2016\)](#) investigated several developing economies and revealed that societal attitudes and CG standards moderate the relationship between BGD and FP ([García-López et al., 2024](#)).

[Sierra-Morán et al. \(2024\)](#) confirmed a positive correlation between board size and financial performance, as larger boards of directors can bring diverse perspectives, expertise and resources that increase the quality of decision-making, as well as enhance the effectiveness of monitoring senior management. Also, [Pocharla and Amirishetty \(2021\)](#) found a positive correlation between board size and financial performance. In contrast, [Trivedi et al. \(2024\)](#) found a negative correlation between board size and financial performance, as smaller boards improve communication, efficient monitoring and coordination and have greater potential for better decision-making.

In developing markets, several studies have found that smaller boards are associated with better financial performance or MBV, whereas other studies have confirmed an insignificant effect of board size on FP and firm value after controlling for other variables. For instance, a recent study conducted by [Dwekat et al. \(2025\)](#) found an insignificant effect of board size on ROA.

Board meetings may reflect effective monitoring and timely strategic guidance that can enhance FP. A number of studies have confirmed a positive relationship between BMF and FP. For example, some studies report a positive correlation between BMF and both FP and MBV in listed firms in the UK. Also, [Al-Daoud et al. \(2016\)](#) found a positive correlation between BMF and FP in listed firms in Jordan. The explanation for the existence of this positive relationship between BMF and FP lies in the increased opportunity to discuss and find solutions to risks and ensure effective accountability while adapting to dynamic changes in the business environment. However, other studies have found a negative relationship between BMF and FP, suggesting that an increase in board meetings indicates underlying problems in the firm rather than improved FP ([Bettinelli et al., 2025](#)).

3.1 Hypotheses development

Based on the foregoing discussion and critical review of empirical studies, the following hypotheses are developed:

- H1. There is a positive effect of BGD on FP, as firms with high diversity are expected to demonstrate better FP and higher MBV. The presence of women on the board increases the effectiveness and efficiency of the BOD, improving control and monitoring based on the principles of agency theory, as well as promoting better alignment with the interests of stakeholders (stakeholder theory). In addition, it provides additional resources and perspectives based on resource-dependence theory. The study measures BGD through three metrics: the percentage of women on the board, the presence of at least two women on the board and the Blau Index. Thus, this study hypothesizes that increasing the number of women on the board will lead to a higher market value as measured by MBV.
- H2. Board Size and FP. This study hypothesizes a negative relationship between board size and FP, as smaller boards are linked with better FP and greater MBV. That indicates more effective and efficient communication and better decision-making. This is in line with previous studies suggesting that excessively large boards can be ineffective (Dwekat *et al.*, 2025). Thus, a larger board size is expected to have an adverse effect on FP.
- H3. BMF and FP. This study hypothesizes a positive effect of BMF on FP, as increasing board meeting frequency will lead to higher MBV. The rationale for this positive relationship between BMF and MBV is attributed to more efficient board control and greater agility to react promptly to issues that may affect firm FP and sustainability (Al-Daoud *et al.*, 2016). Thus, this study expects a positive relationship between BMF and MBV.

4. Methodology

4.1 Data and sample

The researcher used panel data from 41 firms listed in Palestine during 2017–2023. These firms operate in five economic sectors: banking, insurance, industrial, investment and services. These firms constitute most listed firms in Palestine. The data were extracted from the annual reports of listed firms in Palestine and stock exchange disclosures. After excluding any firm-year observations with missing data, the final sample consists of a **balanced panel** comprising 287 observations (41 firms $\times$ 7 years), which is beneficial for panel regression techniques.

4.2 Variables and measures

4.2.1 FP (dependent variable). MBV is used as a proxy for FP. MBV represents the ratio of the market value of equity to the book value of equity. This is measured as the firm's stock price at the end of the year multiplied by the number of shares outstanding, divided by the book value per share multiplied by the number of shares outstanding (Oliveira and Zhang, 2022).

4.2.2 Independent variables. There are three distinct measures of gender diversity: the percentage of women on the board, calculated as the number of women serving on the board divided by the total number of directors serving on the board; the presence of women on the board measured as a dummy variable coded 1 if there are at least two female directors on the board and 0 if there are no women on the board. However, the researcher uses the threshold of at least two women on the board rather than one. In the sample, approximately 18.8% of firm-year observations have at least two women on the board. The Blau Index of gender diversity refers to a heterogeneity index. This index ranges from 0 (no diversity), indicating that all

directors are either all male or female, to a maximum of 0.50, indicating that the board of directors consists of an equal number of males and females.

The researcher primarily includes the proportion of women in the main regression model (Model 1), then examines robustness using the dummy variable (Model 2) and the Blau Index (Model 3). All three are not used together in one model due to multicollinearity (as they are highly correlated). However, by alternating them, the study can assess whether the results are consistent.

- (1) **Board size** refers to the number of directors serving on the board of the firm in a specific year. The number of directors in Palestinian firms ranges from 5 to 14 directors, with a mean and median of 8 directors.
- (2) **Board Meetings:** This variable captures the number of board meetings held during a year. This data is obtained from the annual reports of listed firms in Palestine.

4.2.3 Control variables. The researcher integrated several control variables that might affect FP, based on corporate finance and governance literature:

Firm Size: This refers to the natural logarithm of total assets. Large firms usually have more diversified activities and operations and more stable earnings, which could affect firm valuation. However, empirical studies occasionally reveal a negative correlation between firm size and MBV or growth opportunities. Using the natural logarithm helps normalize the scale and linearize the relationship.

Firm Age: This represents the number of years that have passed since the establishment of the firm. Older firms may be more stable but could also be past their high-growth phase, potentially leading to lower MBV. Conversely, older firms might have established reputations that increase market value.

Leverage: Corporate leverage refers to the ratio of total debt to total assets. The capital structure of the firm can affect firm market valuation; for instance, a modest level of leverage might increase MBV because of tax shields and more disciplined senior executive management. However, excessive corporate leverage could decrease MBV due to bankruptcy risk.

Industry Dummy: The researcher created a dummy variable for the industry sector to capture any systematic valuation differences among different economic sectors. Specifically, the *Industrial Sector* is introduced as a dummy variable coded 1 if a firm operates in the industrial sector and 0 otherwise. The rationale is that industrial firms might have different asset structures and investor perceptions compared to service or financial firms, thereby affecting MBV.

COVID-19 Dummy: To control for the effect of the COVID-19 pandemic, the researcher included a dummy variable coded 1 for the years 2020 and 2021 (and 0 for other years). COVID-19 had widespread economic effects worldwide and in Palestine, likely disrupting stock prices and book values.

Gaza War 2023 Dummy: In 2023, a significant conflict affected the political, social and economic stability in Palestine. The researcher included a dummy variable for 2023 to capture any market valuation effects specific to that year's turmoil. The study hypothesizes that the uncertainty and economic disruption from the conflict might have adversely affected investor sentiment, possibly depressing MBV for 2023 relative to fundamentals.

Table 1 below provides summary statistics for the main variables.

Table 1 demonstrates that approximately 43% of firm-year observations have at least one woman on the board. However, only approximately 19% have two or more, underscoring the scarcity of substantial female representation. The average board size is 8, which is typical and boards meet approximately six times per year on average, consistent with quarterly meetings plus several extra sessions. The firms are moderately leveraged on average and about one-third are industrial firms. The MBV average of 1.25 suggests that, on balance, these firms are valued

Table 1. Descriptive statistics of key variables (2017–2023)

Variable	Mean	Std. dev.	Min	Max
Market-to-Book Value (MBV)	1.249	0.895	0.20	5.72
Percentage of Women on Board (%)	10.43	15.21	0	40.00
Female ≥2 Dummy	0.188	0.392	0	1
Blau Index (Gender Diversity)	0.104	0.173	0	0.480
Board Size (Number of directors)	8.12	2.39	5	14
Board Meetings (per year)	5.64	1.85	0	12
Firm Size (Log Assets)	7.89	0.83	6.0	9.6
Firm Age (years)	22.8	14.1	2	65
Leverage (Debt/Assets)	0.30	0.25	0.00	0.92

somewhat above book value; nevertheless, the wide standard deviation indicates substantial cross-firm variation.

4.3 Empirical models

The researcher used panel data regression analysis to examine the hypotheses of the study. Taking into consideration the structure of the data, a decision had to be made between using a fixed effects (FE) model and a random effects (RE) model. A fixed effects model controls for all time-invariant firm characteristics (by demeaning each firm’s data), whereas a random effects model assumes that firm-specific effects are random and uncorrelated with the independent variables, permitting efficient estimation of time-invariant factors as well.

The researcher first ran both FE and RE models. The **Hausman test** was then used to compare them. The Hausman test did not reveal a statistically significant difference in coefficients (Chi-square statistic was small with a p -value >0.1), suggesting that the RE model is the appropriate model to use and that any firm-specific effects are not systematically associated with the regressors. Thus, the study selected the random effects GLS regression as the main specification (Hassan, 2025).

The random effects model has the advantage of using both within-firm and between-firm variation, which is appropriate here since some important regressors (such as industry type or having any female director at all) have limited within-firm variation.

The simple form of the regression model is:

$$\begin{aligned} MBV_{it} = & \beta_0 + \beta_1 \text{GenderDiversity}_{it} + \beta_2 \text{BoardSize}_{it} + \beta_3 \text{BoardMeetings}_{it} + \beta_4 \log(\text{Assets}_{it}) \\ & + \beta_5 \text{FirmAge}_{it} + \beta_6 \text{Leverage}_{it} + \beta_7 \text{IndustryDummy}_i + \beta_8 \text{COVID}_t \\ & + \beta_9 \text{War2023}_t + u_i + \epsilon_{it}, \end{aligned}$$

where i represents firms and t indexes years. Here, u_i is the firm-specific random intercept (random effect) and ϵ_{it} is the idiosyncratic error. The term Gender diversity_{it} is instantiated in three different ways (percentage of women, female ≥2 dummy, Blau index) in separate regression runs. All other variables are as defined above. The researcher also utilized robust standard errors clustered at the firm level to account for any heteroskedasticity or within-firm autocorrelation in errors.

5. Empirical results

5.1 The random effects GLS estimation

Prior to running the regressions, the study investigated the correlation matrix of the independent variables to check for multicollinearity issues. The maximum correlation among

regressors was between board size and firm size (around 0.46), as large firms tend to have more directors. Also, board size had a slight positive relationship with the percentage of women (~ 0.25), indicating that larger boards include somewhat more women, which is plausible. Variance Inflation Factors (VIFs) for the main model were all below 2 (well under common thresholds such as 5 or 10), confirming that multicollinearity is not a serious concern in the analysis.

With the methodology established, the analysis proceeds to the results, which are summarized in Table 2 (random-effects regression results). Table 2 shows the regression findings regarding the effects of BGD, board size and board meetings on MBV. Three models are presented: Model 1 utilizes the percentage of female board members; Model 2 uses the dummy for having two or more female directors; Model 3 uses the Blau index of gender diversity. All models employ a random-effects specification with cluster-robust standard errors. Significance at the 10%, 5% and 1% levels is indicated by *, ** and ***, respectively.

In Model 1 (Percentage of Women), the analysis shows a positive effect of BGD, measured by the percentage of women on the board, on MBV, as the coefficient is 0.046. However, this coefficient is very small, and the p -value is very high ($p \approx 0.884$), indicating an insignificant effect of the percentage of women on the board on MBV. This result indicates a weak direct relationship between the percentage of women on the board and MBV when controlling for other factors. Thus, the study rejects the first hypothesis, which predicted a positive and significant effect.

In Model 2 (Female ≥ 2 Dummy), the researcher used the presence of at least two women on the board as a dummy variable, coded 1 if the board has two or more women and 0 otherwise. The analysis shows that the coefficient is 0.027, which represents a weak effect. Furthermore, the p -value is approximately 0.77, indicating an insignificant effect of BGD on MBV under this model. This means that there are no differences in MBV attributable to the presence of two or more women versus the absence of women. These results do not support the second hypothesis. Thus, the study rejects the first hypothesis, which stated that there is a positive and significant effect of BGD on MBV in listed firms in Palestine. However, it is worth noting that only 19% of firms have two women or more on the board, which restricts the statistical power to detect effects.

Table 2. Random-effects GLS regression of MBV on board characteristics and controls

	Model 1: % women	Model 2: ≥ 2 women dummy	Model 3: Blau index
Intercept	3.081*** (1.053)	3.109*** (1.056)	3.091*** (1.068)
Percentage of Women on Board	0.046 (0.315)		
Female ≥ 2 on Board (Dummy)		0.027 (0.094)	
Blau Index of Gender Diversity			0.725** (0.286)
Board Size (no. of directors)	0.011 (0.019)	0.010 (0.019)	0.009 (0.019)
Board Meetings (per year)	-0.029 (0.029)	-0.028 (0.029)	-0.018 (0.029)
Firm Size (Log Assets)	-0.312** (0.129)	-0.315** (0.130)	-0.334** (0.131)
Firm Age (years)	0.000 (0.009)	0.000 (0.009)	-0.000 (0.009)
Leverage (Debt/Assets)	1.365*** (0.312)	1.368*** (0.312)	1.447*** (0.314)
Industrial Sector (Dummy)	0.076 (0.087)	0.076 (0.087)	0.086 (0.085)
COVID-19 Period (2020–21)	-0.057 (0.050)	-0.056 (0.050)	-0.064 (0.049)
2023 War (Dummy)	0.035 (0.071)	0.035 (0.070)	0.002 (0.071)
Observations (Firm-Years)	287	287	287
Number of Firms	41	41	41
Wald χ^2 (df)	45.17*** (10)	45.63*** (10)	51.82*** (10)
Hausman Test (χ^2 , p -value)	8.72 ($p = 0.37$)	–	–

Note(s): Coefficients are GLS estimates from random-effects models; standard errors (in parentheses) are robust to clustering by firm

In Model 3 (Blau Index), when the researcher used the Blau index to measure BGD, the results revealed a positive and significant effect of BGD on MBV, as the coefficient is 0.725 and p is 0.011. This means that an increase in BGD increases MBV. This indicates an economically meaningful effect, given that the mean of MBV is ~ 1.25 .

It is noteworthy that among the three measures of BGD, only the most nuanced measure (Blau index) yielded significance. This suggests that the issue is not merely the presence of women on the board, but the necessity to reach a level at which they contribute effectively to shaping board outcomes and decisions. This result is consistent with critical mass theory and stakeholder/resource-based theory, which suggest that only when BGD is substantial do stakeholders and investors react positively. In practice, shareholders might perceive a board with, for instance, 30–40% women as an indicator of a forward-looking, well-governed firm. Conversely, a firm or board with just one woman might not have the required influence to affect the board substantially.

Moving to H2 (Board Size), the results of the three models demonstrate a positive but insignificant effect of board size on MBV. Most of the examined firms have 5–12 directors. Thus, there is no significant relationship between board size and MBV. Consequently, there is no clear relationship indicating that board size substantially affects MBV as a measure of the market value of the firm. One explanation of this result is that the usual board sizes in listed firms in Palestine are within an optimum range, or that any variant in that range doesn't significantly disturb performance. This result is consistent with [Dwekat et al. \(2025\)](#), who found an insignificant effect of board size on performance.

As for H3 (Board Meetings), all the models of the study show a negative but insignificant effect of BMF on MBV. This means that the frequency of board meetings does not have a substantial effect on the performance and market value of the firm when other variables are controlled. The insignificant effect of board meetings on MBV suggests that firms with more meetings tend to show a slight decrease in MBV. This result contrasts with most previous empirical studies that revealed a positive relationship between the frequency of board meetings and performance. Thus, increasing the frequency of board meetings does not ensure increasing MBV and firm performance. Meeting frequency is therefore not a guarantee of greater BOD effectiveness and efficiency.

As for control variables, firm size was measured by the natural logarithm of total assets. The results of the three models confirmed that there is a negative and significant effect of firm size on the MBV. This result demonstrates that larger firms tend to have lower MBV after controlling for other variables. This negative effect of firm size on the MBV is a commonly observed phenomenon: larger, more mature firms usually have limited development and expansion prospects compared to smaller, high-growth firms ([Loulou-Baklouti, 2024](#)). This study's results are consistent with Tunisian evidence that revealed a negative effect of firm size on the firm's MBV. In general, in developing countries, SMEs usually command valuation premiums because of their agility or scarcity.

The three models demonstrated that the value of firm age is approximately (0.00) and there is an insignificant effect of firm age on the MBV of listed firms in Palestine. Thus, firm age does not have an evident linear effect on MBV. Therefore, firm age is not a good predictor of the market value of the firm.

Remarkably, there is a positive and significant effect of corporate leverage on MBV under the three models. This indicates that businesses with greater leverage tend to have greater MBV. This positive effect might seem counterintuitive from a risk perspective, as debt typically increases risk that might decrease value. However, it can be explained that corporate leverage may reflect that Palestinian firms use further debt for growth (because of expectedly limited equity market funding). Thus, greater corporate leverage is an indication of growth opportunities that the market rewards with a greater MBV. Also, as we control for firm size and other variables, corporate leverage might capture some sectoral differences (banks certainly have high leverage and frequently have MBV >1 , even though we included an industry dummy). This finding is in line with the results of previous empirical studies in developing

countries that have revealed a positive relationship between corporate leverage and firm performance.

The results revealed a positive but insignificant effect of the industrial sector dummy on the market value of the firm measured by MBV. Thus, we can say that the economic sector is not a good and valid predictor of firm market value in listed firms in Palestine.

Expectedly, the results demonstrated a negative effect of COVID-19 on firm market value. Approximately, the value of the coefficient under the three models is -0.06 . However, this effect is insignificant. This suggests a mild decrease in MBV during the COVID-19 pandemic years, as the market value of stocks decreased in 2020, whereas book values may not have dropped as much, thereby compressing MBV.

As for the Israeli War on the Gaza Strip after October 7, 2023, the results of the first and second models confirmed that the value of the coefficient was approximately $+0.04$, and it was close to 0.00 in the third model, with an insignificant effect of the Israeli war on the Gaza Strip on the market value of the stocks in Palestine. The explanation of this result could be that the full economic effect had not yet been fully reflected in firms' financials, or that shareholders may have remained cautious rather than reacting sharply (the conflict escalated in the last quarter of 2023).

The results also demonstrated that the value of the Wald χ^2 statistic is significant for each model ($p < 0.001$), confirming the models have explanatory power (principally driven by controls such as firm size and corporate leverage).

5.1.1 Robustness checks. The researcher utilized several further analyses to test the robustness of the study results and to identify potential issues, such as measurement choices and model specification.

5.2 Alternative gender diversity measures (comparing models)

The study employed three measures of BGD. The Blau index is the only measure that has revealed a positive and significant effect of BGD on firm performance, whereas others have found an insignificant effect of BGD on MBV. To validate this result, the researcher ran a specification using both a dummy (for any female presence) and the percentage of women *conditional on having at least one*. The notion was to see if merely having a woman vs. none matters, and then if more women add incremental value beyond that. In that exploratory test, the coefficient on the “any female dummy” was basically zero, and the proportion (among firms with ≥ 1 woman) was positive; nevertheless, it was still not substantial. This supports the idea that mere presence does not change MBV – it is the greater levels of diversity that appear impactful. As another robustness test, the researcher utilized a dummy for **at least one woman** (instead of ≥ 2), which also revealed an insignificant effect that supports the main results of this current study. Thus, we conclude that only a fairly high level of BGD is associated with better performance, and this conclusion is robust to alternative diversity measures.

6. Discussion

The results of this study provide a number of theoretical and practical implications, chiefly for corporate governance (CG) in developing markets such as Palestine. The study revealed that there is a positive effect of BGD on the market value of the firm when that diversity is more than tokenistic, supporting the argument that meaningful inclusivity can yield tangible benefits. In contrast, BOD characteristics, such as board size and BMF, did not demonstrate a substantial effect on firm performance, suggesting that the mere existence of more directors or meeting more frequently does not guarantee better results. These findings can be explained and contextualized through the theoretical views explored previously, giving clear insight into the way that the agency, stakeholder and resource dependence theories operate in listed firms in Palestine.

6.1 BGD and FP – theoretical reflections

The study's findings indicate that a more balanced gender composition, as captured by the Blau index, is associated with higher firm value, supporting both stakeholder and resource dependence theories (García-López *et al.*, 2024). From a stakeholder perspective, gender-diverse boards signal stronger alignment with stakeholder expectations and enhance firm legitimacy, which can translate into greater investor confidence and improved market valuation (Kahloul *et al.*, 2022). This is particularly relevant in the Palestinian context, where awareness of inclusive governance practices is gradually increasing. From a resource dependence perspective, gender diversity expands the range of skills, experiences and networks available to the firm, improving decision-making and strategic adaptability (García-López *et al.*, 2024). In uncertain environments such as Palestine, these diverse perspectives become especially valuable.

Importantly, the results indicate that the benefits of gender diversity emerge only when it reaches a meaningful level, supporting the critical mass theory. This suggests that balanced representation—rather than token presence—enables women to effectively influence board decisions and improve firm outcomes (García-López *et al.*, 2024).

These findings are consistent with prior research suggesting that gender diversity can enhance corporate governance by improving monitoring and reducing agency costs (García-López *et al.*, 2024). However, the results indicate that this effect becomes meaningful only when women represent a substantial proportion of the board.

In the Palestinian context, where ownership is often concentrated or family-based, boards may sometimes play a limited monitoring role. Nevertheless, the inclusion of qualified female directors can strengthen board independence and effectiveness. The positive association between BGD and firm value may therefore reflect investor perceptions that such firms are better governed and more aligned with broader shareholder interests. Overall, the governance benefits of gender diversity appear to outweigh any potential coordination costs.

6.2 Board size and meetings

The absence of a substantial association for board size suggests that, for Palestinian firms, the concept that “One size fits all” does not apply to board size; what matters is the environment and composition, not the absolute number (Dwekat *et al.*, 2025).

Regarding BMF, the absence of a positive effect (and the minor negative coefficient) suggests that meeting more frequently did not translate into greater market valuation. This might indicate that boards in this context meet frequently enough to accomplish their responsibilities (the average being about six times a year), and further meetings could be superficial or triggered by complications. Previous studies propose a dedicated balance: operational boards meet as required, yet beyond a specific point, too many meetings may reflect inefficiency or reactive behavior rather than proactive governance (Al-Daoud *et al.*, 2016).

6.3 Contextual and practical insights

It is essential to reflect on why, in Palestine, we notice these patterns. Listed firms in Palestine operate in an uncertain and unstable environment, as these firms suffer from a lack of political stability, a small economy and most BODs and senior executive management that are dominated by men. Also, there is limited participation of women in the workforce and senior management. On the other hand, there has been a progressive transformation, with more women taking on professional roles and a few of them rising to board positions.

6.4 Policy and governance implications

The findings of this study have important implications for policymakers, regulators and firms in Palestine. The results show that gender diversity is not merely about representation, but

about achieving meaningful participation. Balanced diversity rather than symbolic inclusion is what contributes to firm value.

Based on these findings, several practical recommendations can be proposed. Regulatory bodies such as the Palestine Capital Market Authority (PCMA) could adopt guidelines to encourage female representation on boards. In addition, firms should enhance transparency by disclosing board diversity indicators in their annual reports. There is also a need for targeted training and leadership programs to prepare qualified women for board positions, alongside more structured nomination processes that incorporate diversity as a key criterion.

Finally, policymakers should focus on achieving a critical mass of female representation (around 30%), as the results indicate that meaningful diversity rather than token presence is what drives firm value.

6.5 Comparison with other markets

The results of this study generally support the previous empirical studies that demonstrated either insignificant or positive effects of BGD on FP, and interestingly, few if any studies have revealed a robust inverse impact (Hübler and Sigmund, 2025). This study adds to the existing literature by confirming that either BGD is positive or, at least, that increasing BGD does not harm FP and MBV. Also, it is important to compare the Palestinian experience with the Tunisian result, where a negative effect was revealed. This could be because of different time periods, different methodologies, or investor biases in that market at that time. Likewise, it might also be noted that in Tunisia, female directors were still very restricted and perhaps appointed for various reasons. For Palestine, this study's results are more encouraging and consistent with empirical studies from markets such as Jordan, which found that there is a positive correlation between BGD and MBV (Mansour *et al.*, 2024).

7. Conclusion

This study's purpose was to examine the effect of BGD and select BOD attributes on MBV, a proxy for firm market performance, using data from listed Palestinian firms over the 2017–2023 period, with random-effects regression models. It tested the impact of women's presence on the board, board size and BMF on firm MBV. The study yields several key findings and implications:

First, the study identifies a positive association between BGD and firm market value. While token representation of women on the BOD (small, non-substantive female presence) had no statistically significant effect, firms with a more balanced gender mix on their boards reported significantly higher MBV. This suggests that the quality and balance of gender diversity, rather than mere female inclusion, drive market value. These findings align with the theoretical framework outlined earlier—agency theory, stakeholder theory and resource dependence theory—which posit that BGD improves board supervision and monitoring, improves access to critical resources and better aligns board decisions with diverse stakeholder interests, ultimately translating to stronger market positioning and performance.

Second, this study contributes to existing corporate governance literature on developing markets by providing novel empirical evidence from Palestine, a context under-examined in this field. The results of the current study echo findings from prior emerging market studies that find neutral or positive associations between BGD and firm performance, supporting the external validity of the “business case” for BGD beyond developed economies. This study extends prior work by demonstrating that even in a small, conflict-affected economy, the mechanisms linking BGD to performance operate similarly to those in more stable economies. This underlines that core governance principles, including the benefits of BGD, remain valid across various institutional contexts.

Third, regarding board structure characteristics, results show that board size has no significant effect on FP. This aligns with evidence from multiple developing markets,

suggesting that what matters is not merely the number of women on the BOD, but the effectiveness and efficiency with which the board operates as a team. For Palestinian listed firms, where the average board size is approximately 8 directors, no universal optimal board size was identified: neither very small nor moderately larger boards showed performance improvements, indicating that firms should tailor board size to their specific needs and operating contexts, as no standard size has a consistent effect on market value.

Fourth, BMF was not a strong predictor of MBV. The lack of a significant relationship, along with a weak negative trend, suggests that simply increasing the number of board meetings does not necessarily enhance investor trust and confidence or FP. This implied that emphasis should be placed on the quality and effectiveness of meetings rather than their frequency. It also prompts scholars and researchers to develop more nuanced board activity metrics, such as director attendance rates or the number of critical issues discussed, to better capture efficient and effective governance. This study further contributes to this literature by highlighting that a commonly assumed proxy for board diligence (meeting frequency) is not a direct driver of firm performance in the Palestinian context.

Fifth, the study controls for several exogenous shocks, including the COVID-19 pandemic and the Israeli war in the Gaza Strip following October 7, 2023, by incorporating dummy variables. Although these events undoubtedly affected the economy and firms, the regression results did not show statistically significant effects on MBV after controlling for firm characteristics.

8. Policy and practical implications

The findings carry several practical implications. For regulators and firm leaders in Palestine and similar emerging markets, the study provides evidence that improving BGD can be achieved without harming FP; indeed, it may enhance market value. This supports policies that encourage greater BGD, such as mandatory disclosure of diversity metrics, voluntary targets, or even quota-based approaches if progress remains low. Firms can also view BGD as a value-enhancing factor: when recruiting board directors, expanding the candidate pool to include more women goes beyond compliance or reputation management; it can significantly strengthen the firm's strategic positioning and market valuation. Furthermore, the findings caution against overemphasizing structural factors such as board size or meeting frequency; these should be adopted contextually rather than applied uniformly.

Based on this study, future studies could explore several promising directions. First, research could investigate the causal mechanisms through which BGD influences firm outcomes such as enhanced decision quality, risk management, innovation, or stakeholder engagement. Qualitative methods (e.g. interviews with board directors) or analysis of detailed board minutes could complement the quantitative results of this study. Second, while this study focuses on BGD, other dimensions of board diversity, including nationality, age, professional expertise and tenure, are also relevant. For Palestinian firms, diversity in international experience or educational background may be particularly impactful. Future research could incorporate these variables to test for independent or synergistic effects with gender diversity.

References

- Abdullah, S.N., Ismail, K.N.I.K. and Nachum, L. (2016), "Does having women on boards create value? The impact of societal perceptions and corporate governance in emerging markets", *Strategic Management Journal*, Vol. 37 No. 3, pp. 466-476, doi: [10.1002/smj.2352](https://doi.org/10.1002/smj.2352).
- Adams, R.B. and Ferreira, D. (2009), "Women in the boardroom and their impact on governance and performance", *Journal of Financial Economics*, Vol. 94 No. 2, pp. 291-309, doi: [10.1016/j.jfineco.2008.10.007](https://doi.org/10.1016/j.jfineco.2008.10.007).
- Al-Daoud, K.I., Saidin, S.Z. and Abidin, S. (2016), "Board meeting and firm performance: evidence from the Amman stock exchange", *Corporate Board: Role, Duties and Composition*, Vol. 12 No. 2, pp. 6-11, doi: [10.22495/cbv12i2art1](https://doi.org/10.22495/cbv12i2art1).

- Aqel, S. (2024), "Does gender diversity in the boardrooms affect firm value? The moderating effect of firm size", *International Conference on Business and Technology*, Springer Nature Switzerland, Cham, pp. 12-22.
- Atari, S., Sadeq, T. and Hassan, Y. (2025), "Does firm age moderate the relationship between board attributes and corporate social responsibility? Evidence from Palestine", *Journal of Financial Reporting and Accounting*, Vol. ahead-of-print No. ahead-of-print, doi: [10.1108/JFRA-08-2024-0538](https://doi.org/10.1108/JFRA-08-2024-0538).
- Badwan, N., Al-Khazaleh, S., Bani Ahmad, A. and AlKhazaleh, A. (2025), "Impact of board gender diversity on the banking performance sector: empirical evidence from Palestine", *Management and Sustainability: An Arab Review*. doi: [10.1108/MSAR-12-2024-0245](https://doi.org/10.1108/MSAR-12-2024-0245).
- Ben Fatma, H. and Chouaibi, J. (2023), "Gender diversity, financial performance, and the moderating effect of CSR: empirical evidence from UK financial institutions", *Corporate Governance: The International Journal of Business in Society*, Vol. 23 No. 7, pp. 1506-1525, doi: [10.1108/cg-11-2022-0445](https://doi.org/10.1108/cg-11-2022-0445).
- Bettinelli, C., Sangermano, A., Bergamaschi, M. and Bennedsen, M. (2025), "Family firms' boards: a systematic review and research agenda", *Corporate Governance: An International Review*, Vol. 33 No. 5, pp. 926-945, doi: [10.1111/corg.12631](https://doi.org/10.1111/corg.12631).
- Dwekat, A., Taweel, A. and Salameh, A. (2025), "Boardroom diversity and financial performance in Palestinian banks and insurers", *Discover Sustainability*, Vol. 6 No. 1, p. 40, doi: [10.1007/s43621-025-00836-3](https://doi.org/10.1007/s43621-025-00836-3).
- Freeman, R.E. (1984), *Strategic Management: A Stakeholder Approach*, Pitman, Boston.
- García-López, M.J., Pacheco-Olivares, M.R. and Hamoudi, H. (2024), "Board gender diversity and firm performance: an analysis of the causal relationship in Spanish listed companies", *Administrative Sciences*, Vol. 14 No. 1, p. 12, doi: [10.3390/admsci14010012](https://doi.org/10.3390/admsci14010012).
- Habash, N. and Abuzarour, B. (2022), "Board gender diversity and firm financial performance dispersion: evidence from The Middle East", *The Journal of Asian Finance, Economics and Business*, Vol. 9 No. 3, pp. 365-375.
- Hassan, D.K.A.S.A. (2025), "Does firm size moderate the relationship between board characteristics and financial performance? Insights from Egypt", *Alexandria Journal of Accounting Research*, Vol. 9 No. 2, pp. 65-118, doi: [10.21608/aljalexu.2025.427155](https://doi.org/10.21608/aljalexu.2025.427155).
- Hübler, M. and Sigmund, M. (2025), "Breaking the glass ceiling: do female directors boost firm performance?", Working Paper, Oesterreichische Nationalbank (OeNB), Vienna, available at: <https://ssrn.com/abstract=5970334>
- Kahloul, I., Sbair, H. and Grira, J. (2022), "Does corporate social responsibility reporting improve financial performance? The moderating role of board diversity and gender composition", *The Quarterly Review of Economics and Finance*, Vol. 84, pp. 305-314, doi: [10.1016/j.qref.2022.03.001](https://doi.org/10.1016/j.qref.2022.03.001).
- Loulou-Baklouti, S. (2024), "Does board gender diversity affect intellectual capital voluntary disclosure? Evidence from Tunisia", *International Journal of Disclosure and Governance*, Vol. 21 No. 2, pp. 193-210, doi: [10.1057/s41310-023-00189-1](https://doi.org/10.1057/s41310-023-00189-1).
- Mansour, M., Saleh, M.W., Marashdeh, Z., Marei, A., Alkhodary, D., Al-Nohood, S., Lutfi, A. and Lutfi, A. (2024), "Eco-innovation and financial performance Nexus: does company size matter?", *Journal of Open Innovation: Technology, Market, and Complexity*, Vol. 10 No. 1, 100244, doi: [10.1016/j.joitmc.2024.100244](https://doi.org/10.1016/j.joitmc.2024.100244).
- Marquez-Cardenas, V., Gonzalez-Ruiz, J.D. and Duque-Grisales, E. (2022), "Board gender diversity and firm performance: evidence from Latin America", *Journal of Sustainable Finance and Investment*, Vol. 12 No. 3, pp. 785-808, doi: [10.1080/20430795.2021.2017256](https://doi.org/10.1080/20430795.2021.2017256).
- Oliveira, M. and Zhang, S. (2022), "The trends and determinants of board gender and age diversities", *Finance Research Letters*, Vol. 46, 102798, doi: [10.1016/j.frl.2022.102798](https://doi.org/10.1016/j.frl.2022.102798).
- Pfeffer, J. and Salancik, G.R. (1978), *The External Control of Organizations: A Resource Dependence Perspective*, Harper & Row, New York.

- Post, C. and Byron, K. (2015), "Women on boards and firm financial performance: a meta-analysis", *Academy of Management Journal*, Vol. 58 No. 5, pp. 1546-1571, doi: [10.5465/amj.2013.0319](https://doi.org/10.5465/amj.2013.0319).
- Potharla, S. and Amirishetty, B. (2021), "Non-linear relationship of board size and board independence with firm performance – evidence from India", *Journal of Indian Business Research*, Vol. 13 No. 4, pp. 503-532, doi: [10.1108/jibr-06-2020-0180](https://doi.org/10.1108/jibr-06-2020-0180).
- Safiullah, M., Akhter, T., Saona, P. and Azad, M.A.K. (2022), "Gender diversity on corporate boards, firm performance, and risk-taking: new evidence from Spain", *Journal of Behavioral and Experimental Finance*, Vol. 35, 100721, doi: [10.1016/j.jbef.2022.100721](https://doi.org/10.1016/j.jbef.2022.100721).
- Schwartz-Ziv, M. (2017), "Gender and board activeness: the role of a critical mass", *Journal of Financial and Quantitative Analysis*, Vol. 52 No. 2, pp. 751-780, doi: [10.1017/s0022109017000059](https://doi.org/10.1017/s0022109017000059).
- Sierra-Morán, J., Cabeza-García, L., González-Álvarez, N. and Botella, J. (2024), "The board of directors and firm innovation: a meta-analytical review", *Journal of General Management*, Vol. 49 No. 1, pp. 3-16.
- Trivedi, G., Bhagat, M. and Sharma, K. (2024), "Corporate governance and financial performance: the role of management practices in enhancing shareholders' value", *Educational Administration: Theory and Practice*, Vol. 30 No. 4, pp. 8699-8704.
- Unite, A.A., Sullivan, M.J. and Shi, A.A. (2019), "Board diversity and performance of Philippine firms: do women matter?", *International Advances in Economic Research*, Vol. 25 No. 1, pp. 65-78, doi: [10.1007/s11294-018-09718-z](https://doi.org/10.1007/s11294-018-09718-z).
- Yu, J.J. and Madison, G. (2021), "Gender quotas and company financial performance: a systematic review", *Economic Affairs*, Vol. 41 No. 3, pp. 377-390, doi: [10.1111/ecaf.12487](https://doi.org/10.1111/ecaf.12487).
- Zagorchev, A. (2024), "Board gender diversity, governance, and firm value: an international evidence", *Review of Pacific Basin Financial Markets and Policies*, Vol. 27 No. 01, 2450006, doi: [10.1142/s0219091524500061](https://doi.org/10.1142/s0219091524500061).

Further reading

- Jensen, M.C. and Meckling, W.H. (1976), "Theory of the firm: managerial behavior, agency costs, and ownership structure", *Journal of Financial Economics*, Vol. 3 No. 4, pp. 305-360, doi: [10.1016/0304-405x\(76\)90026-x](https://doi.org/10.1016/0304-405x(76)90026-x).
- Loy, T.R. and Rupertus, H. (2022), "How does the stock market value female directors? International evidence", *Business and Society*, Vol. 61 No. 1, pp. 117-154, doi: [10.1177/0007650320949839](https://doi.org/10.1177/0007650320949839).

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