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Board Gender Diversity and Firm Financial Performance Dispersion: Evidence from the Middle East

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Abstract

This study examines the relationship between board gender diversity and financial performance. The annual data of Palestinian non-financial listed enterprises from 2015 to 2019 was analyzed using a longitudinal panel analysis for the study's purposes. When conditional mean regression methodologies were used in the study, the results indicate that there is an insignificant relation between board gender diversity and firm financial performance. However, when analyzing women directors' effect on a firm's financial performance, endogeneity is always a concern, therefore, we test for endogeneity by employing the Darbin-Wu Housman test and then by using 2SLS. Nevertheless, when looking at the dispersion of a firm's performance using quantile regression, the results show that having women on the board improves financial performance slightly, especially for high-financial-performing firms. The findings indicate that there is a legal significant gap hindering the protection of gender diversity in boardrooms, and limiting the existence and representation of women in leadership positions, specifically, board of directors. The results of this study contribute to corporate governance and business culture literature by shedding the light on the importance of board gender diversity, to improve the firm financial performance, and hence, protect the interests of all shareholders' categories.

Keywords: Middle East, Women on Board, Financial Performance, Quantile Regression, Palestinian Listed Firms

JEL Classification Code: G32, G34, J16, L25

1. Introduction

Women continue to face tremendous challenges in achieving gender equality. Women do the great majority of unpaid work in most sectors around the world, and office cultures mainly in the merging countries are frequently outdated and not geared to accommodate the needs of women. Furthermore, women are not given the same level of assistance and opportunity as their male counterparts, which often leads to their success. However, notable cases

demonstrate the good impact of women at work, particularly when they are executives or members of boards of directors. (McKinsey & Company, 2020).

Although many studies on board gender diversity have been undertaken in rising nations, there is a scarcity of research efforts in the Middle East and North Africa (MENA) area, notably in Palestine, on the influence of board gender diversity on firm financial performance. (Zaid et al., 2020). This study aims to investigate the impact of board gender diversity on the performance of Palestinian non-financial listed firms. It also adds new evidence from an emerging Middle Eastern country to the existing literature (Abdel Zaher & Abdel Zaher, 2019; Issa et al., 2019; Kanakriyah, 2021) by allowing for heterogeneity in the impact of board gender diversity while taking into account the distribution of the firms' performance.

Countries in the Middle East and North Africa (MENA) have inherited certain cultural and ethical practices, traditions, and beliefs that have harmed women's growth and secured men's supremacy (Salloum et al., 2019). The bulk of Palestinian listed firms, like those in other MENA nations, have highly concentrated shareholding structures.

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In Palestine, powerful families often actively design the board of directors, electing one of their inner circle to serve on the board, allowing the family to continue to influence and control the decision-making process. Unlike other MENA countries, Palestine, however, has the lowest illiteracy rate for both men and women. In 2017, the literacy rate for women was 95 percent, compared to 98.3 percent for men, although women make up 49.1 percent of the Palestinian population (PCBS, 2018). The Palestinian Corporate Governance Code (CG Code) was published in 2009 and was silent on female board diversity, although it did not impose any standards.

This study aims to investigate the influence of board gender diversity on a firm's financial performance by accounting for variability in the effects of board gender diversity and taking into account the firm's performance distribution.

2. Literature Review and Hypothesis Development

Despite a large number of women in organizations, their presence at top positions is practically numerically unusual, since the numerical distribution has traditionally favored males, leaving women with token status and being alone or nearly alone in peer groups of men, a phenomenon known as tokenism. Kanter (1977) was one of the first to demonstrate this conundrum, finding that persons of various social and gender kinds differed substantially in dynamics and processes when they found themselves in unusual situations. Women in such positions, according to Kanter, are frequently reluctant to speak up to men and are afraid to perform well since they are in the spotlight. They risk being publicly humiliated by dominants if they work differently than what males expect of them and do not demonstrate complete commitment to masculine activities (men). That explains why women accept men's roles, even if they are lesser roles with little power and performance.

As a result, the appointment of one or two women in high-ranking roles, primarily in boardrooms, is less likely to allow them to fully utilize their strengths because they may not be trusted or supported by men (Kirsch, 2018). Nonetheless, such an issue can be overcome by expanding women's presence in the boardroom, as evidenced by Joecks et al.'s (2013) findings that a nearly balanced composition of both men and women in boardrooms can favorably contribute to such firms' success. Pasaribu (2017) observed the same thing when they looked at non-financial listed firms on the Indonesian stock exchange and discovered that appointing more than one woman to the board of directors has a beneficial influence on firm performance because the boardroom is dominated by men.

Previous studies on the influence of board gender diversity on firm financial performance yielded mixed results. Many

researchers (Salloum et al., 2019; Garanina & Muravyev, 2021; Sánchez-Teba et al., 2021) identified a positive link between women directors and firm performance, while others (Wu et al., 2021; Elgadi & Ghardallou, 2021) found no link or even a negative link between gender diversity on boards and business performance. The conflicting results can be attributed to a variety of factors, including the country's degree of development, because country-level factors may lessen the impact of women's influence on financial and non-financial success (Nguyen et al., 2020). As a result, some researchers focused on gender diversity research in developing countries (Sarhan et al., 2019; Issa et al., 2019; Shin et al., 2020), while others focused on developed countries (Canyon & He, 2017; Abou-El-Sood, 2021). Each location has its unique approach to gender integration and leadership in terms of business, culture, and ethics.

Pasaribu (2017), on the other hand, linked gender diversity to firm size, whilst Pasaribu et al. (2019) and Zhang (2020) looked at the relationship with industry type. Others looked at gender quotas (Slama et al., 2019; Magnanelli et al., 2020; Green et al., 2020), as well as gender-related corporate social responsibility practices and corporate environmental responsibilities (De Masi et al., 2021; Wang et al., 2021).

Several studies in the Asian countries were conducted in this field, for instance, a study on 101 HOSE-listed Vietnam firms by Phan and Duong (2021) shows that gender diversity on board is one of the variables that effects positively firms performance. Similarly, Herli et al. (2021) suggest that the participation of women on Indonesian boards of directors has a favorable impact on firm performance, mainly in large profitable firms. Pasaribu et al. (2019) suggest that the number of women on the board is what matters is having such influence, as they discovered that Indonesian listed firms with two or more women on the board have a greater impact on firm performance than firms with a single woman on the board. These findings are similar to those of Dupatta et al. (2019) on both the Indian and Singapore markets, as well as Brahma et al. (2020) and Chijoke-Mgbame and Boateng (2020) on the UK and Nigerian markets and Gong et al. (2021) on Chinese listed businesses. In Taiwan, however, Wang (2020) claimed that the amount of women on a board has no impact on financial or governance success. Instead, the ratio of female independent directors has been found to have a significant positive relationship with a firm's performance. This is supported by Ararat and Yurtoglu (2020) claiming that the more active women are in boardrooms of Turkish listed firms, the greater their impact on the firms' value.

Women directors have a beneficial effect on business performance in Kenya (Mohamed & Atheru, 2017), as well as in Indian and Singapore markets (Dupatta et al., 2019). Garanina and Muravyev (2021) have discovered that gender diversity has a considerable impact on Russian-listed

enterprises, particularly during recessions. El-Khatib and Joy (2020) found that for females to have a positive influence on the board, they must be self-sufficient, graduate, and have strong networking skills.

Some evidence came from Middle East countries; for example, Sarhan et al. (2019) looked at 100 individual enterprises from five Middle Eastern countries: Egypt, Jordan, Oman, Saudi Arabia, and the United Arab Emirates, from 2009 to 2014. Gender diversity onboard has a good impact on corporate financial performance, according to the researchers. Women on boards have a beneficial impact on the performance of Egyptian publicly traded firms, according to Abdel Zaher and Abdel Zaher (2019). The same results were found from Kuwaiti firms listed on the stock exchange (Issa et al., 2019) and Jordanian list firms (Kanakriyah, 2021). Iren (2016), Abdel Zaher and Abdel Zaher (2019), and Chebri and Basoussa (2020), who researched UAE, Egyptian, and Moroccan listed firms, respectively, obtained the same results. In contrast, Al-Matari et al. (2014) discovered that board diversity has a moderating but not significant influence on Omani firm performance.

The previous literature on the impact of gender diversity on a company's performance did not provide a clear picture and yielded contradictory and inconsistent results. This study intends to bring new evidence on this relationship from a growing market in the MENA area to the existing literature. As a result, our initial hypothesis will be:

H1: Board gender diversity has a positive impact on the financial performance of the Palestinian non-financial listed firms.

Furthermore, we estimate that the impact of gender diversity on business performance is not uniform across different levels of financial success. As a result, this study is the first in the MENA region to examine the distribution of the gender effect on business performance and to account for variation in the effect among firms. On this basis, we make the following prediction:

H2: Board gender diversity has a significantly larger positive effect on the financial performance of the Palestinian listed firms for high-performing firms than low-performing ones.

3. Data and Methodology

We used panel data from 2015 to 2019 to examine the association between boardroom gender diversity and the financial success of Palestinian publicly traded firms. The data includes all non-financial listed firms on the Palestine Exchange (PEX), however, financial firms were left out because they are heavily regulated when it comes to making

strategic decisions or forming boards (Fama & French, 1992; Pasaribu et al., 2019).

Because board gender diversity statistics and other qualitative data for listed corporations are not widely available, board gender diversity data is collected by hand from the firms' annual reports and official websites. Firms whose annual reports aren't available, are missing, or don't provide the needed information aren't included in the final sample. As a result, our sample's final dataset comprises 30 listed enterprises with 150 observations and balanced annual panel data for the years 2015–2019.

3.1. Variables Measurement

3.1.1. Dependent Variables, Financial Performance

Following previous literature (Slama et al., 2019; Pasaribu et al., 2019), this study has used market-based and accounting-based measures for financial performance. Tobin's Q is used as a market-based performance indicator, as it measures the market expectations of future earning and is a good proxy for a firm competitive advantage (Montgomery & Wernerfelt, 1988). Tobin's Q accounts also for risk and, unlike accounting measures such as ROE, is not liable to reporting distortions due to tax laws and accounting conventions (Lindenberg & Ross, 1981). In particular, accounting results are based on events that have already occurred and thus offer a view of past performance, while Tobin's Q focuses on expectations of future performance (Slama et al., 2019). Return on Assets (ROA) is an accounting measure of a firm's performance. It is one of the most commonly used ratios in previous studies to proxy for a firms' financial performance (Pasaribu et al., 2019). Return on assets is an indicator of how efficient management is in using its assets to generate earnings.

3.1.2. Main Explanatory Variables – Gender Diversity

To obtain more insight and reliable results, this study adopted four proxies for board gender diversity. Namely, the percentage proxy, since we use the percentage of women directors (P_WOB) compared to total directors in the boardrooms. The second measure for gender diversity in boardrooms is the dummy variable (WOB_D) which takes the value of 1 when at least one woman is presented on the board and 0 otherwise. As complementary evidence, we employ the Blau index of diversity as a third proxy for gender diversity. Finally, the Shannon index of diversity is a fourth explanatory variable for gender diversity.

3.1.3. Control Variables

Our regression models have used several control variables to avoid model misspecification and diminish the probability of bias in our results, as represented in Table 1 below.

Table 1: Variables Definitions

Variables	Definition
Dependent Variables	
Tobin's Q	Sum of total assets and market value of equity, less common equity divided by total assets
ROA	Return on Assets, the ratio between net income and book value of assets
Gender Diversity	
P_WOP	The percentage of women on board is the proportion of women members on boards
WOB_D	The dummy variable equals 1 if the firm has at least 1 woman on its board and 0 otherwise
Shann.	Shannon index of diversity with a value that is bound between 0 and 0.69
Blau	Blau index of diversity with a value that is bound between 0 and 0.50
Control Variables	
FIRM_AGE	Natural logarithm of differences between year t and firm establishment year
FIRM_SIZE	Natural logarithm of total assets
BOD_SIZE	Natural logarithm of total board members
LEVER	Leverage is calculated by dividing total debt by total assets
Industry dummy	Dummy variables for industries to control for fixed effect

This table provides the definitions and measurements of variables in OLS, FEM, 2SLS Models, and Quantile regression. The number of P_WOP & WOB_D are collected manually from firms' annual reports. All financial data is collected from the PEX database.

3.2. Empirical Model

3.2.1. Ordinary Least square OLS and Fixed Effect Models FEM

This paper uses regression analysis based on longitudinal panel data set, which is consistent with previous studies (Ciftci et al., 2019) to test the relationship between board gender diversity and firm performance. To obtain more robust, reliable, and insight results, we first estimate the conditional mean regression (Green, 2012; Canyon & He, 2017); panel OLS regressions are run for each of the dependent variables, namely Tobin's Q and ROA, using the following equation:

$$E(Y_{it} | X_{it}) = y_{it} = \alpha + \beta G_{it} + \gamma X_{it} + \epsilon_{it} \quad (1)$$

Where is the i^{th} firm performance in year t . Our main firm's performance variables are Tobin's Q and ROA; the term G is a vector of four independent variables representing proxies for gender diversity. While X is a vector of the several control variables, as presented in Table 1 above, α is a constant term and stands for disturbance term for the i^{th} firm on year t . Housman test is used to justify the use of the Fixed Effect over the Random effect estimator. The Housman test outcomes support the use of the Fixed Effect, and the null hypothesis of the Housman test was rejected based on the test statistics and its P -value.

3.2.2. Endogeneity Testing

Endogeneity problem usually occurs between firm performance and gender diversity variables (Pasaribu et al., 2019). When analyzing the women directors' effect on financial performance, endogeneity is always a concern. While it might be true that firms that have women on their boards have better financial performance, it might also be true that firms that perform better and have better governance practices choose to include women in their boardrooms (Vafaei et al., 2015). In this paper, we test for endogeneity in two stages: Firstly, we employed the Darbin-Wu Housman test to test whether gender diversity variables are endogenous. Secondly, we employed the following system of equations which are estimated using 2SLS:

$$\text{Firm performance } (Y) = \alpha_c + \alpha_1 \text{ Gender diversity} + \sum \alpha X_{it} + \epsilon_{it} \quad (2)$$

$$\text{Gender diversity} = \beta_0 + \beta_1 \text{ Firm performance} + \sum \beta Z_{it} + \epsilon_{it} \quad (3)$$

Where X_{it} , Z_{it} and are vectors of control variables used in the original model.

3.2.3. Quantile Regression

Quantile regression is a method to estimate conditional quantile functions (Koenker & Gilbert, 1978; Koenker & Hallock, 2001; Koenker, 2005; Powell, 2020; Canyon & He, 2017). The conditional mean regression model predicts the average value of outcome variables conditional on the independent variables. In the context of the interaction and relation between gender diversity in the boardroom and firm performance, quantile regression yields a comprehensive characterization of the relationship between an outcome variable Y (Financial performance variable) and an input variable X (Gender diversity variable). In addition, quantile

regression estimates are robust to the presence of outliers in one’s data set. In consequence, quantile estimates are less prone to the influence of extreme data points. The most important rationale for using quantile regression is that a complete picture of the relation between a dependent and independent variable can be quantified.

OLS, on the other hand, is a conditional mean regression model that forecasts the average of the outcome variable based on the independent variables. At all points in the conditional distribution, estimates of the correlation between the dependent variable and the model covariates are assumed to be constant. There are two issues to consider: First, the assumption of homogeneity may not be correct; an asymmetric influence exists and must be tested. Second, alternative outcomes besides the conditional mean may pique the investigator’s curiosity. The following quantile regression will be estimated for this study (Koenker & Hallock, 2001).

$$Q_{\tau}(Y_{it} | X_{it}) = \alpha_{\tau} + \beta_{\tau}G_{it} + Y_{\tau,1}X_{1,it} + \dots + Y_{\tau,k}X_{k,it} + \epsilon_{it} \quad (4)$$

Where $(Y_{it} | X_{it})$ is the τ^{th} quantile regression function. This study estimates quantile functions at the median of the performance distribution (50th percentile) and the interquartile regression (25th and 75th percentile). That is, we estimate quantile regression functions: Q (0.25), Q (0.50), and Q (0.75).

4. Results and Discussion

Table 2 provides descriptive statistics for the variables used in this study. It shows that the return on assets ratio ROA is, on average, positive and displays a level of 0.03. Tobin’s Q has a mean value of 0.71, which is below 1. Regarding gender variables, the average percentage of women on board (P_WOP) is 0.074, and this average was found to be lower than MENA countries average, which is 0.095 (Deloitte, 2019) and lower than Egypt and Lebanon 0.1, 0.14 respectively (IFC, 2019). At the same time, the percentage of women on board of Palestinian non-financial listed firms was found to be higher than its equivalent in Jordan, which was 0.04 (IFC, 2015). Woman on board (WOB) ranges from a maximum of 3 to 0 women on board. Shannon (Shann.) and Blau (BLAU) indices were found to be on average 0.166 and 0.107, respectively, indicating low levels of gender diversity in the non-financial listed firms in Palestine. The average board size is 8.54 members and ranges from a minimum of 4 to a maximum of 15 members. A typical firm age in our sample is approximately 28.36 years old, with the median being 24 years, and the average market leverage ratio (LEVER.) is 0.33.

Table 2: Descriptive Statistics

	BOD_SIZE	P_WOB	WOB	SHANN	BLAU	COMP_AGE	FIRM_SIZE	LEVER	ROA	TOBINS_Q
Mean	8.547	0.074	0.567	0.166	0.107	28.367	1.22E+08	0.329	0.030	0.708
Median	8.000	0.000	0.000	0.000	0.000	24.000	31,831,023	0.314	0.024	0.633
Maximum	15.000	0.500	3.000	0.693	0.500	75.000	1.44E+09	0.751	0.317	1.961
Minimum	4.000	0.000	0.000	0.000	0.000	7.000	1,258,394	0.012	-0.622	0.168
Std. Dev.	2.218	0.124	0.886	0.242	0.163	15.173	2.65E+08	0.189	0.087	0.397
Skewness	0.678	1.689	1.368	0.976	1.181	1.505	3.355	0.161	-2.498	1.000
Kurtosis	2.819	4.900	3.699	2.333	2.948	4.535	13.869	2.010	23.845	3.700
Jarque-Bera	11.699	93.877	49.864	26.587	34.901	71.366	1,020	6.773	2,871.763	28.075
Probability	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.034	0.000	0.000
Sum	1.282	11.152	85.000	24.922	16.052	4,255	1.83E+10	49.411	4.546	106.186
Sum Sq.Dev.	733.173	2.297	116.833	8.757	3.938	34,305	1.05E+19	5.307	1.117	23.527
Observations	150	150	150	150	150	150	150	150	150	150

This table reports the descriptive statistics of all variables.

4.1. Ordinary Least Square (OLS) and Fixed Effect Results

Table 3 presents the results for the Fixed Effect model, while for the sake of space, we did not tabulate the OLS results and they are available by the authors upon request. In the OLS model, the relationship between gender diversity variables and firm performance represented by Tobin's Q, found to be statistically not significant at a 5 percent level, while when ROA was used as a proxy for firm performance, the results reveal that there is a significant positive relationship between all gender variables and firms return on assets (ROA) at 5 percent significant level.

However, the OLS model may not control the unobserved but fixed firm heterogeneity. Table 3 presents the Fixed Effect Model results, which have been chosen based on the Hausman test. When we include fixed effect, it is noticeable that the estimated magnitude of all board gender diversity variables weakened and made them statistically not significant for both financial performance variables. These results reveal that the board gender diversity does not significantly affect the financial performance (Tobin's Q and

ROA) of the Palestinian non-financial listed firms. Hence, the Fixed Effect Model results cannot support our first hypothesis H1 that there is a positive impact of board gender diversity on the financial performance of the Palestinian non-financial listed firms.

Regarding control variables in the Fixed Effect Model, results in Table 3 indicate that firm size (FIRM_SIZE) was negative and statistically significant for both Tobin's Q and ROA models, board size (BOD_SIZE) was found to be negative and statistically significant at 5 percent level only in the ROA model. At the same time, the leverage ratio (LEVER) was negative and statistically significant at a 1 percent level only for Tobin's Q model.

4.2. Endogeneity Test Results

To assure the robustness of the results, we test for the endogeneity problem, which usually occurs when testing the relation between firm performance and gender diversity in the boardroom. The results of both 2SLS and Darbin-Wu Housman tests confirm that the endogeneity problem does not exist in our models (Results for endogeneity test are available by authors upon request).

Table 3: Panel Data Fixed Effect Model Regression of Gender Diversity on Boards and Firm Performance

	Tobin's Q				ROA			
P_WOB	-0.290 (0.211)				-0.102 (0.109)			
WOB_D		-0.044 (0.043)				-0.0185 (0.022)		
Shann			-0.111 (0.095)				-0.052 (0.049)	
Blau				-0.167 (0.145)				-0.081 (0.075)
FIRM_AGE	0.014* (0.007)	0.013* (0.007)	0.0136* (0.007)	0.014* (0.007)	0.004 (0.004)	0.004 (0.004)	0.004 (0.004)	0.004 (0.004)
FIRM_SIZE	-0.349*** (0.077)	-0.333*** (0.076)	-0.342*** (0.076)	-0.345*** (0.077)	-0.086** (0.039)	-0.080** (0.039)	-0.085** (0.039)	-0.086** (0.039)
BOD_SIZE	0.016 (0.125)	0.016 (0.127)	0.015 (0.126)	0.019 (0.126)	-0.143** (0.065)	-0.146** (0.066)	-0.148** (0.066)	-0.146** (0.065)
LEVER.	-0.621*** (0.182)	-0.680*** (0.180)	-0.648*** (0.007)	-0.639*** (0.007)	0.084 (0.095)	0.062 (0.093)	0.077 (0.093)	0.082 (0.094)
Constant	6.552*** (1.229)	6.317*** (1.218)	6.459*** (1.225)	6.492*** (1.230)	1.685*** (0.640)	1.604** (0.632)	1.674*** (0.635)	1.692*** (0.638)
Observations	150	150	150	150	150	150	150	150
Number of firms	30	30	30	30	30	30	30	30
Adjusted R ²	0.926	0.926	0.926	0.926	0.579	0.579	0.580	0.580

Note: * p -value < 0.1; ** p -value < 0.05; *** p -value < 0.01. Standard errors are reported in parentheses. This table reports the regression results for Fixed Effect Model. Four measures are used for women directors.

4.3. Quantile Regression Result

To have a more insightful picture of the effect of board gender diversity on firm performance, we consider the dispersion of firm performance by using the quantile regression technique. Table 4 presents quantile regression results for inter quantile 25th, median, and 75th inter quantile. We first discuss the relation between Tobin's Q and board gender diversity variables at the 25th, median and 75th percentile. The results indicate an absence of any significant relation between Tobin's Q and board gender diversity except for the percentage of women on board variable (P_WOB) at the median percentile. These results are consistent with those obtained from Fixed Effect Model based on the conditional mean. However, the picture is different when considering the relation between the firm's ROA and gender diversity variables, as shown in columns 5 to 8 in Table 4. We found a positive and statistically significant relation between ROA and gender diversity variables for both percentage of women on board (P_WOB) and Blau index (Bau), columns 5 and 8 in Table 4, meaning that the more women on board, the more the positive effect on firm financial performance.

More importantly, the estimated magnitude for these two variables is more prominent for the 75th percentile than the median. The median effect is also larger and more significant than the effect at the 25th percentile which is insignificant. The results for return on assets (ROA) thus suggest that there is heterogeneity in the impact of board gender diversity on firm performance. Specifically, board gender diversity significantly influences a firm's performance, represented by ROA, in high-performing firms relative to low-performing ones. Therefore, hypothesis 2 (H2) cannot be rejected based on the obtained results presented in Table 4.

The control variables in the quantile regression are of interest, too; for each performance measure, the signs and significance for the leverage variable (LEVER.) are primarily similar, which was found to be negative. Tobin's Q was significantly negatively related to board size (BOD_SIZE) for median and 75th percentile, columns 1 to 4. While, ROA has a positive and significant relation to firm size and all percentiles, columns 5 to 8.

The results obtained from the Fixed Effect Model indicates that there is no significant impact of woman's existence on board of Palestinian listed firms. These results are consistent with those of Iren (2016) for Abu Dhabi and Dubai markets, Ataūnal and Aybars (2018) for the Turkish market, and of Marinova et al. (2016) on the Denmark and Netherlands firms.

However, the findings of this research contradict previous results, which support the hypothesis that board gender diversity does have a significant impact on firm performance in the MENA region. Sarhan et al. (2019) confirmed the positive effect of board gender diversity on

corporate financial performance in five Middle Eastern countries. Abdel Zaher and Abdel Zaher (2019) and Issa et al. (2019) found the more positive effect for both Egyptian and Kuwaiti-listed firms, respectively.

When the dispersion of firm performance is taken into account, however, the picture changes. The results show a favorable relationship between board gender diversity and firm performance for high-performing organizations, as the quantile regression model exhibited a mixed effect when the ROA was utilized as a performance variable. These findings are similar to those found by Canyon and He (2017) for the US market when using quantile regression to account for variation in board gender diversity on firm performance.

4.4. Discussion

The lack of a gender diversity influence on the boardroom on the financial performance of non-financial listed firms at PEX is revealed in this study. When considering the heterogeneity of financial performance distribution effect, however, results differ slightly, with gender diversity appearing to positively affect financial performance for high-performing listed firms, primarily when an accounting-based proxy (ROA) is used as a performance indicator. When Tobin's Q is used to reflect company performance, however, this positive effect is not supported. This is because PEX, like many other MENA marketplaces, was inefficient when it came to pricing (Abuzarour, 2007, 2006). As a result, public firms' stock prices do not properly reflect and include historical data and fundamentals such as corporate governance information, including board gender diversity.

To fully comprehend the consequences of these findings, they must be interpreted in the context of the Palestinian market. Specifically, the current legal and regulatory framework, as well as the barriers it creates for women in boardrooms. By the conclusion of the first half of 2020, there were 64,240 shareholders in PEX-listed firms, with 42.6 percent of them being women. However, the role and participation of women in top executive positions of publicly traded firms, particularly on boards of directors, does not fully reflect this percentage. Such findings may reflect the features of Palestinian listed firms on the PEX, where the vast majority of listed firms have a high concentration of ownership, with a few shareholders holding the majority of the firm's shares (PCMA, 2020).

The legal framework, the Companies Act, mandates a direct voting mechanism in the form of one vote per share to be nominated as a director on the board. Furthermore, the applicable firms' statute states that a shareholder must own a minimum number of shares specified by the company's internal constitution to be nominated to the board of directors. In practice, listed businesses use a large number of shares as a criterion for nomination. Perhaps this is one

Table 4: Quantile Regression Estimations

Quantile	Control Variables	Dependent Variable: Tobin's Q				Dependent Variable: ROA			
		Main Explanatory Variables				Main Explanatory Variables			
		1	2	3	4	5	6	7	8
		P_WOB	WOB_D	Shann	Blau	P_WOB	WOB_D	Shann	Blau
Q25		0.120 (0.541)	-0.059 (0.076)	-0.042 (0.189)	-0.055 (0.310)	0.99* (0.052)	0.015 (0.012)	0.041 (0.026)	0.064* (0.051)
	FIRM_AGE	-0.003 (0.007)	-0.003 (0.007)	-0.003 (.007)	-0.003 (0.007)	0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
	FIRM_SIZE	0.024 (0.029)	0.025 (0.028)	0.023 (0.023)	0.026 (0.028)	0.023*** (0.004)	0.024*** (0.005)	0.023*** (0.004)	0.023*** (0.004)
	BOD_SIZE	0.017 (0.190)	0.030 (0.183)	0.021 (0.188)	0.007 (0.189)	-0.024 (0.024)	-0.027 (0.024)	-0.027 (0.024)	-0.024 (0.024)
	LEVER.	-0.629*** (0.224)	-0.496** (0.207)	-0.559** (0.215)	-0.567** (0.217)	-0.159*** (0.029)	-0.177*** (0.031)	-0.169*** (0.030)	-0.169*** (0.030)
	Constant	0.274 (0.415)	0.220 (0.408)	0.253 (0.418)	0.234 (0.413)	-0.282*** (0.050)	-0.266*** (0.056)	-0.272*** (0.052)	-0.266*** (0.051)
	Adjusted R ²	0.1038	0.1086	0.1044	0.1033	0.1866	0.1746	0.1791	0.1807
Q50 Median		0.943*** (0.352)	-0.088 (0.095)	0.035 (0.231)	0.352 (0.331)	0.157** (0.061)	0.015 (0.011)	0.044* (0.025)	0.078** (0.052)
	FIRM_AGE	-0.004* (0.002)	-0.003 (0.003)	-0.005* (0.002)	-0.004* (0.002)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
	FIRM_SIZE	0.062** (0.026)	0.032 (0.034)	0.046 (0.028)	0.056** (0.027)	0.019*** (0.003)	0.017*** (0.004)	0.019*** (0.004)	0.019*** (0.004)
	BOD_SIZE	-0.521** (0.209)	-0.374 (0.282)	-0.519** (0.247)	-0.545** (0.215)	-0.008 (0.021)	-0.006 (0.024)	-0.015 (0.023)	-0.013 (0.022)
	LEVER.	-1.138*** (0.229)	-0.831** (0.368)	-1.003*** (0.273)	-1.004*** (0.254)	-0.158*** (0.028)	-0.159*** (0.029)	-0.155*** (0.029)	-0.157*** (0.029)
	Constant	1.214*** (0.424)	1.478** (0.578)	1.585*** (0.525)	1.378*** (0.453)	-0.209*** (0.052)	-0.180*** (0.056)	-0.211*** (0.053)	-0.211*** (0.052)
	Adjusted R ²	0.1371	0.1191	0.1147	0.1171	0.1792	0.1591	0.1688	0.1712
Q75		0.273 (0.374)	-0.137 (0.095)	-0.004 (0.199)	0.028 (0.301)	0.180*** (0.067)	0.009 (0.016)	0.073* (0.043)	0.135** (0.053)
	FIRM_AGE	-0.005** (0.002)	-0.004* (0.002)	-0.004* (0.002)	-0.004* (0.002)	-0.000 (0.000)	0.000 (0.000)	0.000 (0.001)	-0.001** (0.000)
	FIRM_SIZE	0.018 (0.034)	-0.015 (0.038)	0.015 (0.034)	0.013 (0.034)	0.023*** (0.007)	0.024** (0.010)	0.021** (0.009)	0.022*** (0.006)
	BOD_SIZE	-0.623*** (0.196)	-0.579*** (0.216)	-0.658*** (0.195)	-0.641*** (0.195)	-0.032 (0.052)	-0.076 (0.055)	-0.052 (0.062)	-0.043 (0.048)
	LEVER.	-0.765** (0.330)	-0.272 (0.371)	-0.709** (0.336)	-0.719** (0.333)	-0.136*** (0.056)	-0.114** (0.044)	-0.155*** (0.056)	-0.155*** (0.045)
	Constant	2.445*** (0.531)	2.868*** (0.440)	2.559*** (0.469)	2.538*** (0.488)	-0.217*** (0.076)	-0.149 (0.106)	-0.139 (0.095)	-0.165** (0.074)
	Adjusted R ²	0.2131	0.2194	0.2094	0.2096	0.1965	0.1629	0.1791	0.1864
	Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Observations	150	150	150	150	150	150	150	150
	Number of firms	30	30	30	30	30	30	30	30

Note: *p-value < 0.1; **p-value < 0.05; ***p-value < 0.01. Standard errors are reported in parentheses. This table reports the regression results for quantile regression. Four measures are used for women directors.

of the primary causes for women's underrepresentation on corporate boards of directors. As a result, the results of this study could be explained by the absence of their role and impact in influencing critical decisions, particularly those related to financial performance. The presence of women on the board of directors could be justified by the firm's aim to boost its image for prestigious reasons. Alternatively, because a woman is a substantial shareholder in this firm, she could be a family member who owns a large number of shares.

The findings of this study add new evidence from the MENA region to the existing literature on board gender diversity and its effect on firms' financial performance, given the greatest similarity among MENA countries, which have inherited specific cultural, traditions, and ethical practices, primarily the Arab countries. Using the Palestinian market as a proxy for the marketplaces in the Middle East and North Africa.

5. Implications

5.1. Theoretical Implication: Tokenism Theory

The findings of this study strengthen the validity of the tokenism theory in the Palestinian situation, taking into account the Palestinian cultural image of women and the predominance of masculinity, as well as other Middle Eastern countries. The fact that women have a limited and limited impact on the board of directors puts women directors in a vulnerable position, preventing them from expressing their opinions or influencing the board's decision-making process. As a result, the board of directors (which is controlled by men) treats women's views and suggestions with deference or suppresses them. Such explanations are crucial in understanding the findings of this study, which show that having a woman on the board of directors does not affect a firm's financial performance. Specifically, in terms of influencing investors' financial market decisions. When ROA was utilized as a measure of financial success, few influences were observed at the internal level of the firm, particularly among high-performing firms.

5.2. Practical Implications and Conclusion

There are two significant findings to report from this study. To begin with, the presence of women on boards of directors is unlikely to have a major impact on the performance of Palestinian publicly traded firms. Second, it is critical to evaluate the distribution of business financial performance while undertaking gender diversity research. Because the presence of women on boards is not required to have an unbalanced influence on the financial performance of high-performing firms.

The findings of this study have several ramifications and appear to be important for policymakers in MENA countries. They make critical recommendations on how to maximize gender diversity benefits, promote equality, and eliminate gender discrimination in favor of males in senior roles and on the boards of directors of publicly traded firms. At the governmental level, it is critical to update and strengthen the existing legal framework to achieve greater gender equality and increase the number of women on corporate boards.

In the short and medium-term, it may be more beneficial for market authorities to enforce a quota mechanism and set a minimum number of seats reserved for women on the boards of directors of publicly traded firms, taking into account ownership and family concentration. Despite the contradictory findings found from quota-based countries, such as several European countries (Pasaribu, 2017; Slama et al., 2019; Magnanelli et al., 2020). Under the current male culture of the Middle East, the quota mechanism is expected to be the most effective approach. Because they are a minority group, it is supposed to overcome the tokenism problem (Tokenism theory). It is suggested that the number of women on boards of directors be increased, as well as their contribution and influence in the decision-making process of corporations. Furthermore, by utilizing women as a valuable resource, the quota system is intended to lower agency costs and strengthen supervisory board duties.

6. Limitations

One of the study's limitations is that it only looked at quantitative features of women on boards of directors. Simultaneously, future research should focus on the qualitative components of corporate governance, as well as their impact on financial performance and other corporate governance-related pillars such as risks, environmental, and social governance ESG. Another weakness of the study is that it only looked at the participation of women on the boards of directors of Palestinian listed firms, but not at the senior management level, and their impact on their financial success.

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