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Enigmatic Role of Female Directors on Boards towards Corporate Performance. An Empirical Study

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ARTICLE DETAILS	ABSTRACT
<p>History Revised format: May 2021 Available Online: Jun 2021</p>	<p>Purpose: The presence of female members on boards is quite enigmatic. Almost every academic author argues that female directors' contribution in the board room is positive and significant, and their presence, improves organizational performance. This study purpose is to figure out the link between female members and organizational performance.</p> <p>Design/Methodology/Approach: For the purpose, Partial least square method of regression is used to develop the relationship. The measurement and structural model and theories are used to codevelop the formative constructs. Secondary data is used and collected from Pakistan stock exchange. Those KSE-100 companies are used in which female directors were there in any year from 2005 till 2012. Findings: The results reveal that there was a negative relationship, empirically, which strengthened the notion that female directors in Pakistan are just the cosmetic face of board of directors and more female directors on board hinder the firm performance. Female members on the board had negative impact on the financial measures of return on equity and assets turnover. Implications/Originality/Value: This study is helpful for the businesses in Pakistan to rely and utilize the knowledge, innovative skills and experience of female directors rather than to fill the seat as a regulatory requirement.</p>
<p>Keywords Corporate performance, female directors, enigmatic role, Pakistan</p>	
<p>JEL Classification M0, M1</p>

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Introduction

Directors on board have to make strategic decisions, comprising of finance, capital structure and investment (Liu et al., 2015). Therefore, it is important to apply different governance structures because it is argued that varying governance structures yield better firm performance (Low et al.,

2015).

Board diversity means directors having demographic characteristics in terms of age, experience, qualification, personality, values, colour, race and gender (Williams, 2000). Among them, the most important are the race and gender that have the attention of researchers and organizations (Daily et al., 1999). Gender diversity of the board is an important issue in the contemporary research on corporate governance and researchers intend to find out the impact of female directors on enhancing corporate performance, attaining access to a large talent pool and consolidating the corporate governance (Low et al., 2015). The distinguishing abilities and knowledge of female directors also contributed to the boards. Women have different experiences of the workplace, public services and community. Boards with women are significantly more active in boosting customer satisfaction, employee satisfaction, and gender representation, along with considering innovation and company communal responsibility (Low et al., 2015).

Similarly, there are number of studies proponents to the notion that female directors must be present on boards because they may enhance firm performance as shown in the studies of Abdullah et al. (2012) and Low et al. (2015). However, on the other side, some studies remained unable to develop any link between female directors' performance on board and overall firm performance. Female directors had no relationship with the firm performance when Shukeri et al. (2012) tested the female role with firm performance. Adams and Ferreira (2009) concluded that the female presence on board had negative impact on firm performance. Therefore, due to the mixed results of previous studies, it is decided to conduct this research in the context of Pakistan. Hence, the objective of the study is to find out an association between women directors and company performance. This study posits the hypothesis as:

Hypothesis: There is a significant positive relationship between female board directors and firm performance.

Literature Review

There are good reasons in favour of women directors. It is argued that Women have unique innovative abilities to bring in the board for long term decision making (Dezs and Ross, 2012). Moreover, Bilimoria (2006) claimed that female members of the board are more likely to generate mentoring role, especially for the female employees and became a powerful source of hiring and retaining female employees. In the same way, Williams (2003) stated that female directors are more concerned for charity work and community welfare. They are more open and good communicator, have better understanding of effective monitoring and implementing organization strategy.

In addition, some pragmatic studies showed that firm performance can be enhanced and improved by adding female directors on board. Nguyen et al. (2015) found a marginal robust relationship of gender diversity on corporate performance of 120 firms in Vietnam for the years 2008 to 2011. They concluded that as the number of female directors' increase on board, the firm performance also increases, however, when female size crosses the 20% of the total board size, then the firm performance started to decline. Low et al. (2015) studied four countries of East Asia, Singapore, Hong Kong, Malaysia and South Korea and found that female presence on the board results in the higher corporate performance of return on equity. However, they also concluded that board diversity benefits could be eliminated in those countries where female have more economic empowerment. They also warned that mandatory gender quota in the boards may reduce corporate performance if female directors are appointed based on tokenism and familial relationship. Terjesen et al. (2015) studied 3876 firms of 47 countries and found that firms with more female directors have a higher firm performance by Tobin's q and return on assets. Liu et al. (2014), using data from China, also concluded that firms with more female directors performed well as compared

to the firms with less female directors. Lückerath-Rovers (2013) examined firms from the Netherlands and declared that firms with female directors performed better than those firms that did not have female directors. After having conducted analysis of 841 firms in Malaysia, Abdullah et al. (2012) showed that female directors had positive impact on ROA of firms, however, they did find a negative relationship with Tobin's q. Similarly, Julizaerma and Sori (2012) found a positive association of gender diversified board and firm performance in Malaysia.

Nevertheless, studies can be found in literature that were unable to find any relationship between the females' presence on boards and corporate performance or even if they found it to be negative. Haslam and Ryan (2008) found that female directors' presence on board did not have any impact on firm performance. Carter et al. (2010) failed to identify any link between female boards and corporate performance when studied S&P 500-index firms. Bøhren and Staubo (2014) mentioned that the law, forcing firms to have 40% females on their boards, may result in board inefficiency. Ahern and Dittmar (2012) stated that presence of compulsory 40% female directors in Norway yields a negative value for the firms, which is a result of incompetent and younger females. Darmadi (2011) showed that female presence has a negative impact on return on assets and Tobin's q in Indonesia. He concluded that female presence was a result of operating family business instead of female knowledge and skills, hence declining corporate performance. Adams and Ferreira (2009) concluded that the female presence on board had negative impact on firm performance when they investigated US firms. According to the findings of Catalyst (2011), of a sample of 4,200 private firms from 45 countries, women hold only the ten percent of board positions which is not in accordance with women's education, accomplishments and performance in the labor market (Haveman and Baresford, 2012).

Theoretically, resource dependence theory suggests that large and diversified board can help the firms to improve its link with external networks and communication channels to secure and acquire its critical resources (Hillman and Dalziel, 2003). In other words, diversified boards might have benefits in gaining important resources; human capital, i.e., knowledge and skills of directors, guidance and advice, networks of communication; and legitimacy (Liu et al., 2014). Supportive to this theory, Hillman et al. (2007) found that female directors gained legitimacy as female equality and empowerment was recognized as a social value and the norm in the society. Moreover, board gender diversity helps to increase board reputation and is helpful to the firm performance as described by the resource dependence theory that provides substantial arguments in favour of board diversity (Carter et al., 2010). In Pakistan, Yasser (2012) declared that no significant link is found between board gender and corporate performance when he examined the KSE-100 indexed firms for the years 2008-2010. However, Mirza et al. (2012) showed a negative relationship between female on board and firm performance.

Therefore, this is a good opportunity to study this link in the context of Pakistan, thus, keeping in view all the above factors and varied literature, this study goes with the notion that women on board positively affect the company's performance.

Method

The sample for this study is the Pakistan Stock Exchange 100 index (KSE-100) firms. These firms are main firms of Pakistan and account for a wide range of business activities and economic output. The KSE-100 index comprises of 1 firm each (highest market capitalization firm) from all sectors in stock exchange and remaining firms picked on highest market capitalization ranking, without any consideration for the sector, to make a sample of 100 common stocks. Furthermore, only those companies are selected which have female board members in any year from 2005 to 2012. Hence, 186 firms are selected which had female board members (total number of female directors were 287) during this time period. The following table 1 shows the definitions and measurement of variables in study.

Table 1

Variables	Measurement
Female directors on board (B-FEM)	The number of female directors on board measures the board of directors' female directorship (Liu et al., 2014).
Return on total assets (ROA)	Operating profit divided by a total number of assets measures the return on total assets (Gaur et al., 2015). This ratio measures the efficiency and utilization of total assets to generate profit.
Return on equity (ROE)	Pretax profit divided by the total book value of equity measures the return on equity. It measures the ability of a firm to generate profits from its shareholders' investments in the company
Total assets turnover (ATO)	Total net sales divided by total book value of assets measures the total asset turnover.

In this study, Partial Least Square approach (PLS) is used for analysis of data and it is a statistical path modeling technique. The PLS path model consists of two elements, namely Structural model and Measurement model. The structural model represents the constructs (blue circle or oval above) and the path between them. The measurement model represents the relationship between constructs and their indicators. Path models are developed based on the theory. Two types of theory are required to develop a path model: measurement theory and structural theory (Hair et al., 2014). Measurement theory specifies how the latent variables are measured. If the latent constructs are responsible to make changes in the indicators, it is called a reflective measurement model. However, if indicators make changes in the latent variable or they form that latent variable, it is called a formative measurement (Hair et al., 2014).

Analysis and Discussion

In this study, the formative measurement model approach is used as for corporate performance studies. Hair et al. (2010) and Tan et al. (2007) were of the opinion to practice the measures of financial performance, e.g., sales, revenue, expenses and profit as formative indicators. The mathematical equations for this study are shown in following table 2.

Table 2

Measurement model equations
$\xi_1 = \gamma_{B-FEM} B-FEM + \zeta$
$\eta_1 = \gamma_{ATO} ATO + \gamma_{ROA} ROA + \gamma_{ROE} ROE + \zeta$
Structural model equation
$\eta_1 = \beta_1 \xi_1 + \zeta$

Descriptive Statistics

The descriptive statistics shows that Female board members are a negligible part of the board that forms, for example, only 6.4% in 2012, 5.5% in 2011 and 5.3% in 2005, of the total board size. Females are 52% of the total population of Pakistan and their academic performance in all fields is better than the males so the firms must consider hiring more females in order to get benefits from their knowledge and innovative skills (Terjesen et al., 2015). The table 3 also shows that 61.5% firms had only 1 female director on board and only 1 firm had 5 female directors on board.

Table: 3

				B-FEM			
		Frequency	Percent	Valid Percent	Cumulative Percent	Mean	Std. Deviation
Valid	1	115	61.5	61.8	61.8	1.543	0.8258
	2	50	26.7	26.9	88.7		
	3	13	7	7	95.7		

	4	7	3.7	3.8	99.5		
	5	1	0.5	0.5	100		
	Total	186	99.5	100			
Missing	System	1	0.5				
Total		187	100				

Partial Least Square analysis

This analysis starts with the evaluation of measurement model, which depends upon the nature of indicators either reflective or formative. The formative measurement model requires collinearity among indicators and significance of outer weights (Ringle et al., 2010). In measurement model, the validity of indicators is tested by calculating the significance of weights of each formative indicator to its construct with the bootstrapping option (Hair et al., 2014). Hence, Bias-Corrected and accelerated (BCa) bootstrapping approach with 5000 resamples in SmartPLS 3.2.2, is used to determine the significance of each indicator weight to its related constructs to measure the validity in the measurement model. The result of measurement model is shown in table 4.

Table 4

Latent variables	Indicator	Outer weight	t-Statistics	P-Value
B-FEM	B-FEM	1.00	-	-
Corporate Performance	ROA	0.553	1.521	0.128
	ROE	0.876	2.538**	0.011
	ATO	-0.628	1.766*	0.078
B-FEM = number of female directors on board, ROA = operating profit divided by total assets, ROE = pre-tax profit divided by total assets, ATO = net sales divided by total assets,				

*Significance at 10% (1.645) ** Significance at 5% (1.96) *** Significance at 1% (2.576)

The indicators of corporate performance ROA, ROE and ATO have been used in the prior business studies (Gaur et al., 2015; Haider et al., 2015; Liu et al., 2015). The outer weight of ROE remains significant at $\alpha = 0.05$ level, and the outer weight of ATO is significant at $\alpha = 0.10$ level, however the outer weight of ROA is insignificant at $\alpha = 0.128$ level.

The next step is the structural model analysis which consists of collinearity check, the significance of path coefficients, the level of R^2 , the f effect size (Hair et al., 2014). The structural model is shown in figure 1.

Figure 1

In above diagram, the relationship between B-FEM and CP constructs is negative. The significance of path coefficient (β) is determined through running, Bias Corrected and accelerated (BCa) bootstrap approach of 5000 resamples and the results along with R^2 , adjusted R^2 and f^2 values are shown in table 5.

Table 5: Significance of Path Coefficient

Path coefficient	T value	P value	R^2	Adjusted R^2	F^2
-0.229	2.880	0.004	0.053	0.047	0.055

The table 5 shows that the negative relationship between female directors on board and firm

performance is significant at $\alpha = 0.01$ level. However, the small value of R^2 depicts that the negative impact of adding more and more women directors on company performance is just minimal i.e., 5.3%.

Conclusion

It is important to understand the role of female directors in productivity and profitability aspect of the firm performance. Female directors are positively related to the productivity i.e., ATO (though significant at 10%), however, they are negatively related to the profitability of the firms i.e., ROE and ROA. It may mean that female directors who have exposure and experience contribute, somehow, in the board meetings and are helpful in operational activities to enhance productivity but unable to have a positive impact on the profitability of the firms. Female negative contribution ($\alpha=0.05$) towards corporate performance (profitability) is as the same as shared by previous studies of Shukeri *et al.* (2012); Adams and Ferreira (2009), who concluded that the female presence on board had negative impact on firm performance.

The possible reason of the negative contribution of female directors may be the fact that female directors in Pakistani firms are appointed based on 'tokenism' and the familial relationships, and not based on their expertise, knowledge and skills (Low et al., 2015). However, different countries like Norway, Denmark, France and Brazil have legislation for the firms to include female directors (30% to 40%) on the board which shows the promising role of females in developed countries to improve governance structure in the organizations. For future researchers, it is recommended to investigate the impact of female directors on other variables like intellectual capital performance and the mediating role of female directors' characteristics or attributes on improving their relationship with firm performance. Another way is to use any other statistical method except regression to understand the limitations of the regression model.

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