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RESEARCH PAPER

Role of Directors Skills Diversity in Firm Performance: A Comparative Study

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ABSTRACT

This study investigates the impact of director skills diversity on firm performance in both Shariah-compliant and conventional firms within emerging Islamic markets, covering Pakistan, Malaysia, Indonesia, and Bangladesh from 2009 to 2018. It explores various director skill sets, including industry experience, expert skills, management proficiency, and economic acumen, and their associations with performance metrics such as Return on Assets (ROA), Return on Equity (ROE), and Tobin's Q. The results reveal a significant positive association between board skills and firm performance, particularly in Shariah-compliant firms. Directors with expertise in Islamic finance and ethics play a crucial role in aligning decisions with Shariah principles, contributing to long-term value creation. This research offers insights for regulators, strategists, and stakeholders in shaping corporate governance practices and decision-making in diverse market contexts.

KEYWORDS Directors Skills, Firm Performance, Shariah Complaint

Introduction

In today's dynamic corporate landscape, boards of directors wield substantial influence over an organization's strategic direction and, consequently, its overall performance. Yet, the true complexity of a corporate board often remains veiled behind its facade as a single entity. In reality, boards are multi-dimensional constructs, composed of directors who bring diverse skills and expertise to the decision-making table. This diversity has given rise to a critical inquiry: How do the varied skills of individual directors add to a firm's success?

The significance of director diversity and the implications of their diverse skill sets have become central issues in both academia and corporate practice. Within this context, research efforts such as that of Garlapp, Giammorino, and Lazrak (2017) have sought to unravel the intricate roles directors play, highlighting the profound influence of diversity within the boardroom on the decision-making process. An essential question arises: Does the heterogeneity of director skills truly translate into improved firm performance?

This inquiry unveils a complex narrative, with studies presenting differing perspectives. Some researchers question whether diversity in director skills genuinely adds value to an organization's success (Dass et al., 2013; Faleye, Hoitash, & Hoitash, 2018), while others, exemplified by Kang, Kim & Lu (2017), provide nuanced and occasionally conflicting findings, underscoring the intricate nature of director skill diversity.

The challenge emerges when we delve into the concept of industry experience as a pivotal factor in enhancing performance. The expectation is that firms boasting an abundance of industry experts on their boards would consistently outperform their competitors. However, the practical complexity arises when organizations grapple with the multi-dimensional challenge of identifying directors with this array of skills.

The inherent difficulties organizations face in reconciling the criteria of governance-related regulations with the singular focus on characteristics such as gender, independence, or diversity underscore the complexity of director selection and its effect on firm performance. A single dimension does not necessarily guarantee improved outcomes, prompting the question of how various aspects of director skills influence firm success.

Given the vital roles of directors on boards and their potential to influence firm performance, it is paramount to explore the connections between directors' expertise, skills, and compensation (Milliken and Martins, 1996). Particularly, the concept of board diversity, which emphasizes the variety in the composition of a board of directors (Kang et al., 2007), stands as a pivotal issue, impacting the effectiveness of the board and, subsequently, firm performance.

The current research study endeavors to shed light on the profound impact of director skill diversity on firm performance in organizations listed on the conventional and Shariah indices within emerging Islamic markets. This holds significance for regulatory bodies, strategy formulators, stakeholders, researchers, advisors, and academic personnel, as it presents an opportunity to reshape the strategies and decision-making processes of firms across the spectrum.

The study seeks to understand the intricate web of director skills within the context of a multi-dimensional board, focusing on industry experience, expert skills, management proficiency, and economic acumen. In doing so, we aim to discern the specific director skill sets that drive firm success.

In summary, this paper embarks on a comprehensive exploration of the nuanced relationship between director skill diversity and firm performance. It seeks to provide valuable insights to guide organizations and stakeholders toward more informed decision-making and a deeper understanding of the multifaceted world of corporate governance.

Literature Review

The correlation between board diversity and company performance has been extensively examined in contemporary studies on corporate governance. This topic is frequently considered a debatable matter within the realm of modern corporations, as highlighted by Mahadeo et al. (2012). The current pool of research presents two opposing viewpoints regarding the link between board diversity and firm performance. On one side, the resource dependence theory and the human capital theory advocate the advantages of board diversity, as articulated by Carter et al. (2003) and Hillman and Dalziel (2003).

Resource dependence theorists assert that the presence of diverse board members serves a critical function in facilitating a company's access to essential resources necessary for risk management and improved operational performance, as evidenced by the work of Taljaard et al. (2015). A company's business operations are closely interconnected with external conditions, and the capacity to procure the necessary

resources from these external sources is of paramount importance in gaining a competitive edge, as suggested by Pfeffer (2019). Hillman and Dalziel (2003) argue that a board of directors characterized by diversity brings a wide range of valuable resources to the organization, offering a variety of services including guidance, counsel, and validation. According to human capital theorists, the aggregation of human capital, which comprises skills, knowledge, and various individual attributes, obtained through a diverse board, enriches the decision-making process by incorporating distinctive insights and perspectives from each board member with unique backgrounds, as suggested by Carter et al. (2010).

Board oversight becomes particularly crucial in cases where there is a potential conflict of interest between management and shareholders. This situation, as described by Berle and Means (1932), gives rise to what they termed "agency" costs. These "agency" costs result from the inherent separation of ownership and control often seen in modern corporations, where managers may prioritize their personal interests over profit maximization, leading to the emergence of such costs. Effective monitoring by boards of directors can serve to alleviate these agency costs that stem from the division of ownership and control. This, in turn, enhances the company's performance, a viewpoint acknowledged by scholars such as Fama (1980), Mizruchi (1983), and Zahra & Pearce (1989).

The link between board ownership and firm performance follows a nonlinear pattern, wherein a lower level of board ownership has a favorable impact on firm performance. Research by Piesse et al. (2005) has established a positive connection between directors' ownership and corporate performance. In contrast, Hermalin and Weisbach (1988) propose that corporate performance initially improves and then declines as board ownership levels increase, indicating a non-linear association. Bhabra (2007) has similarly observed that the impact on performance is not linearly correlated with board ownership, while Kim and Chung (2017) have identified an adverse relationship between board ownership and corporate performance.

The corporate board also plays a pivotal role in risk management, given its varying composition and the diversity of skills at play. The dynamic nature of today's business environment necessitates a diverse skill set to effectively manage risks. Scholars have examined this area from various angles, focusing on board attributes such as gender, race, independence, composition, and the role of the chief executive officer (Adjaoud et al., 2007; Faleye et al., 2018; Martine & Herrero, 2018; Guner et al., 2008). These studies highlight the strategic importance of balancing value addition with risk management, particularly in complex business transactions. In large organizations with multifaceted operations, the demand for diverse board opinions increases, especially when a need arises for outside experts whose skills complement those of existing directors (Klein, 1998). To capture expanding opportunities, complex firms rely on onboard assistance and guidance (Fahlenbrach et al., 2010). Consequently, the demand for industry experts on the board intensifies with the firm's size, diversification of activities, and growth prospects. Notably, relevant industry experience is deemed the most desirable director skill (Faleye, Hoitash, and Hoitash, 2018).

In the realm of Islamic finance, Shariah-compliant institutions often have a panel of religious scholars known as the Shariah board or Shariah committee, and some banks engage Shariah advisors to ensure the operation and development of Shariah-compliant products (Usmani, 1998; Ghayad, 2008). Furthermore, a growing number of global investors have aligned their capital investments with their religious beliefs, leading to an

increasing demand for portfolios that conform to Shariah principles (Derigs & Marzban, 2008).

Hence, the formulated hypothesis posits a significant association between firm performance and directors' skills, particularly within the context of firm religiosity. This relationship is multifaceted, influenced by theories related to resource dependence, human capital, board ownership, and the strategic role of boards in risk management. The contemporary corporate governance landscape offers a rich tapestry of perspectives and dynamics that impact firm performance.

Material and Methods

Sample and Data

The sample for the current study includes the firms listed in the stock market of Pakistan, Malaysia, Indonesia, and Bangladesh. The period of the study is from 2009-2018. Data for sample firms is gathered from the annual reports of the respective companies. Data includes Financial data and Non-financial data. Non-financial data includes the board skills of individual members of the board. Data for the construction of the board skills scoring index is picked from the individual director's resume provided in annual reports. It is not the sole source of data for board profiles. Board profiles are also available on the websites of the companies, and sometimes directors' resumes are downloaded from LinkedIn.

Variables Measurement and Model Specification

The dependent variables in this study are firm performance (measured by ROA ROE and Tobin's Q). The independent variables are the Director Skills Set (Measured through an index developed by Adams et al., (2018) firm size, firm age, firm leverage, ownership concentration, GDP, board size, and board independence. The definitions and measurements can be found in the accompanying table. Given that this research focuses on discerning variances in the skills of directors in Shariah-compliant and conventional firms and their impact on firm performance, we calculate the subsequent models individually for each type of firm.

Firm Performance= $\beta 0+ \beta_1(\text{Firm.Rlg}_{\text{dummy}}) + \beta_2(\text{BS}) + \beta_3(\text{F.size}) + \beta_4(\text{F.AGE}) + \beta_5(\text{F.LEAV}) + \beta_6(\text{Board.siz}) + \beta_7(\text{Board.ind}) + \beta_8(\text{Own.concrn}) + \beta_9(\text{GDP})$

where Firm performance (refer to ROA, ROE, Tobin's Q) and Board skills (BS), Firm Size, Firm Age, Firm Leverage, board size, board independence, ownership concentration, and GDP are the explanatory variables.

Table 1
Measurement of Variables

Variable	Symbol	Measurement
Return on Assets	ROA	$\frac{EBIT}{Total\ Asset}$
Return of Equity	*ROE*	$\frac{EBIT}{Total\ Shareholders\ Equity}$
Tobin's Q	Tobin's Q	$\frac{Equity\ Market\ Value + Debt\ Market\ value}{Equity\ Book\ Value + \ Debt\ Book\ value}$
Board Skills	BS	through a scoring index (Appendix I)
Firm Size	FS	$Ln(Total\ Assets)$
Firm Age	FA	Ln(No. of years since inception)

Firm Leverage	FL	$\frac{Debt}{Shareholders\ Equity}$
Board Size	B.Size	Ln(No. of Directors on the board)
Board Independence	B.Ind	Ln(No. of independent Directors on the board)
Ownership Concentration	OC	$\frac{Shareholding\ of\ 5\ largest\ Shareholders}{Total\ Outstanding\ Shares}$
Gross Domestic Product	GDP	GDP growth reported by the World Bank

This table shows the variables and proxies that measure the variables for the current study. **Source**: Own Created

Generalized method of moments

We utilize a dynamic model where prior capital structure decisions have an impact on current decisions. Dynamic models often face the issue of endogeneity, which arises when there is a bidirectional causation link between exogenous and dependent variables. In cases where endogeneity is a concern, conventional models like ordinary least squares are unable to produce precise estimates. Therefore, we opt for the generalized method of moments (GMM), a method introduced by Arellano and Bond in 1991. This selection is based on the fact that GMM effectively addresses concerns related to reverse causality, as well as issues like simultaneous and omitted variable biases, as emphasized by Kebewar in 2013. Additionally, the GMM estimator is well-suited for scenarios involving short panels, a large number of observations (N), and a limited number of time periods (T), as pointed out by Roodman in 2006, which aligns with our specific situation. Furthermore, this estimator exhibits resilience in the presence of heteroscedasticity and serial correlation, a characteristic highlighted by Hansen in 1982.

Empirical Results

Descriptive Statistics

Descriptive statistics of the variables used in the study are presented in Table for all sample firms. Panel A represents the summary statistics of Shariah firms while Panel B portrays the summary statistics of Non-Shariah (Conventional Firms). The last column represents the difference in means of both panels. For each variable, the study has 2400 firm-year observations.

The statistics illustrate very captivating results. The ROA of Shariah Compliant firms has a greater mean than Non-Shariah firms. This shows that Shariah Complaint firms better manage their assets as compared to Non-Shariah Complaint firms. The value for the mean difference of ROE depicts a positive value, which portrays that the Shariah firms firm of sample countries are earning more on the capital employed in comparison to their matched counterparts. The results are in line with the results of Saba, Arif & Rasid (2021).

Table 2
Descriptive Statistics

	Panel A (Shariah Firms)				Panel B (Non Shariah Firms)				(A-B)
Variable	**Mean**	**SD**	**Min**	**Max**	**Mean**	**SD**	**Min**	**Max**	**Mean Diff**
ROA	.13640	0.0619	0.0247	0.2216	.11469	0.0644	0.0247	0.2216	0.0217
ROE	.36250	0.1042	0.0502	0.3736	.11469	0.1057	0.0502	0.3736	0.2478
Tobin's Q	2.6920	2.2136	0.1280	6.8278	3.7590	2.3211	0.1280	6.8278	-1.0669
Firm Size	9.401	2.1630	3.4429	10.028	9.242	2.2627	3.4429	10.028	.158
Firm Age	3.778	0.3486	3.1780	4.2904	3.831	0.3508	3.1780	4.2904	-.053

Firm Lev	.445	0.3220	0.0050	0.9240	0.485	0.3220	0.0050	0.9240	-.041
Own Con	.25704	0.3753	3.2538	4.4366	3.9488	0.3843	3.2538	4.4366	-3.6919
B Skills	4.1040	1.0355	2.2	5.7142	3.8137	1.1878	2.2	5.7142	.2903
Board Size	1.605	0.6428	0.9240	2.3025	1.528	0.6317	0.9240	2.3025	.078
Board Ind	.257	0.1591	0	0.5	0.240	0.1673	0	0.5	.018

This table depicts the descriptive statistics of all the variables for SC and NC firms. The descriptive statistics include mean, standard deviation, minimum and maximum. The dependent variables are ROA, ROE and Tobin's Q. The independent variables are B skills, F.S, F.A, FL, OC, B.Size and B.Ind.
Source: *Own Created*

The negative value of Tobin's Q (mean Difference) depicts that the asset of conventional firms has greater market value than their recorded value as compared to the Shariah Complaint firms. The positive difference in the mean value of Firm size shows that Shariah Complaint firms have more growth opportunities than their matched counterparts. Further, Non-Shariah Complaint firms have greater means difference of age as compared to the Shariah Complaint firms. This shows that the assets base of Non-Shariah Complaint firms is substantially greater than Shariah Complaint firms. The higher mean of leverage indicates that Shariah Complaint firms have higher debts than conventional firms.

Concerning the variables concerned with governance, Shariah firms have lower institutional ownership, higher board size, higher board independence, and higher board skills.

Univariate Analysis

Univariate analysis is used to analyze the difference in the mean of dependent variables based on dichotomous variables or categorical variables. The current study employed the firms' religiosity (Shariah-compliant or Conventional) as the variable for analyzing the firms' performance.

The mean difference of performance variables (ROA & ROA) reveals that Sharia-compliant firms experience high financial performance as compared to conventional firms and is statistically significant. Furthermore, the conventional enterprises have greater growth prospects than Shariah Complaints counterparts, which is highlighted by a negative and insignificant different mean value of Tobin's Q, which signals growth opportunities. The statistically significant and positive mean difference in Board skills indicates that the boards of Shariah Complaint firms are rich in skills as compared to their matched counterparts.

Table 3
Univariate Analysis

Variable	Sharia-Mean	Conventional-Mean	Mean Diff	P-value	Obs.
ROA	0.1365	0.1147	0.0218	0.0025	1200
ROE	0.3626	0.1147	0.2479	0.0000	1200
TOBIN Q	2.6921	3.7591	-1.067	0.9998	1200
F SIZE	9.401	9.2420	0.159	.175	1200
F AGE	3.778	3.8310	-0.053	.003	1200
F LEVE	0.4450	0.4850	-0.04	.49	1200
OWEN Con	0.2571	3.9489	-3.6918	1.0000	1200
BS	4.1041	3.8138	0.2903	0.0000	1200
B. Size	1.6050	1.5280	0.077	.002	1200
B. Ind	0.2570	0.240	0.017	.001	1200

This table depicts the results of the univariate analysis for mean comparison for all the variables of SC and NC firms. ***Source:*** *Own Created*

Correlation Matrix

The correlation matrix aims to determine the relationship between dependent and independent variables. Besides this, the correlation is used to determine multicollinearity between independent and other independent variables.

The correlation coefficients between the variables Board Skills, ROA, ROE, and Tobin's Q reveal several connections between them. According to the slender negative association between BS and ROA, businesses with greater BS values have a slender tendency to have lower ROA values, and vice versa. This shows that a higher degree of financial leverage (represented by higher BS) could perhaps lead to a decrease in the company's profitability (ROA). The relatively low positive correlation between BS and ROE shows that there is little to no linear link between them, demonstrating that changes in BS are not significantly correlated with variations in ROE. Finally, there is little to no evidence of a linear link between BS and Tobin's Q, based on their extremely weak negative correlation. Overall, these relationships suggest that the company's operational and financial success (ROA, ROE), as well as its market valuation (Tobin's Q), may be relatively unaffected by financial leverage, as represented by BS. It is crucial to remember that correlation does not imply causation, and other factors that are not accounted for by these variables may also have an impact on the associations found

Table 4
Correlation Matrix

Variables	ROA	ROE	Tobin's Q	F S	FA	FL	B.Size	B.Ind	OC	GDP	BS
ROA	1.000										
ROE	0.486*	1.000									
TOBINS'Q	0.095*	0.268*	1.000								
FS	0.256*	-0.005	-0.078*	1.000							
FA	0.036	0.018	-0.143*	0.166*	1.000						
FL	-0.080*	0.158*	0.038	-0.131*	-0.165*	1.000					
B. SIZE	-0.074*	-0.030	-0.088*	-0.151*	0.123*	-0.077*	1.000				
B. Ind	0.051*	-0.004	0.072*	0.178*	0.036	0.026	-0.097*	1.000			
OC	0.182*	0.123*	0.093*	0.254*	0.197*	-0.053*	0.107*	-0.079*	1.000		
GDP	0.025	0.022	0.078*	0.019	-0.048*	-0.065*	-0.100*	0.124*	-0.155*	1.000	
BS	-0.097*	0.026	-0.008	-0.219*	0.019	0.083*	-0.115*	-0.190*	-0.055*	-0.077*	1.000

This Table provides the results of Correlation Matrix for all the firms. The dependent variables are ROA, ROE and Tobins Q. The independent variables are B. Skills, FS, FA, FL, OC, B.Size and B. Ind. The Symbols ***, **, * indicate statistical significance at 1 %, 5 % and 10 % respectively. **Source:** Own Created

Model Diagnostics

The basic assumption of a regression model is that there should be no multicollinearity, among the explanatory variables. In addition, the presence of heteroscedasticity is a violation of the basic assumption of the linear regression model. Similarly, the presence of autocorrelation or endogeneity in the data could not be addressed through an ordinary regression model.

The table presents the results of diagnostic tests for both the samples i.e. Shariah complaint firms and non-Shariah complaint firms. Firm performance is measured through three different proxies i.e. ROA, ROE, and Tobin's Q. Separate results of diagnostic tests are presented below;

Table 5
Diagnostic Test Outcomes

Test	ROA		ROE		Tobin's Q	
	SC Firms	**NS Firms**	**SC Firms**	**NS Firms**	**SC Firms**	**NS Firms**
Mean VIF	1.06	1.07	1.06	1.42	1.06	1.42
Conditional Number	31.136	30.130	32.564	30.245	31.115	30.113
Breusch Pagan Test (p-value)	0.000	0.000	0.0150	0.4461	0.000	0.000
White General Test (p-value)	0.000	0.000	0.0000	0.000	0.000	0.000
Durbin	0.0001	0.0068	0.0317	0.000	0.0068	0.0334
Wu Hausman	0.0001	0.0070	0.0325	0.000	0.0070	0.0342

This table displays diagnostic test outcomes including mean VIF, Conditional Number, Breusch Pagan Test, White General Test and Durbin-Wu-Hausman test to assess the regression model assumption and outcomes. **Source:** Own Created

The mean VIF for the sample of Sharia Complaint firms is 1.06 in all three samples, which shows a low degree of multicollinearity. Heteroscedasticity is present, as indicated by the Breusch Pagan test's p-value of 0.000 and 0.001 for the sample in ROE. The residuals show autocorrelation, as indicated by the Durbin test's p-values of 0.0001, 0.0317, and 0.0068. With a p-value of 0.0001, 0.0325, and 0.007 the Wu-Hausman test indicates endogeneity.

While the mean VIF for Non-Shariah Complaints firms is 1.07, 1.42 indicates a low level of multicollinearity. Heteroscedasticity is present, as indicated by the Breusch Pagan test's p-values of 0.000 and 0.4461. The residuals show autocorrelation, as indicated by the Durbin test's p-values of 0.0068, 0.000, and 0.0334. With a p-value of 0.0070, 0.000, and 0.0342 the Wu-Hausman test indicates endogeneity.

In conclusion, the mean VIF values show that modest multicollinearity is present in both samples. However, based on the findings of the individual tests, they all demonstrate indications of heteroscedasticity, autocorrelation, and endogeneity.

Multivariate Analysis

This section elaborates on the relationship between board skills and, the financial performance of firms (sharia-compliant & conventional). The financial performance is measured through ROA, ROE, and Tobin's Q and examined the impact of Board skills on these proxies. The section further discusses and compares the results of Sharia-compliant firms' conventional firms.

Impact of Board Skills on Firm Performance

The table displays the results of the two-step system GMM. Certain diagnostic requirements must be satisfied in order to guarantee the objectivity and validity of models that use GMM for estimation. The coefficients of the lag dependent variable and other explanatory factors may be biased when the models suffer from second-order serial correlation and the instrumental variables show a connection with the error term. First and foremost, the AR(2) value must be statistically negligible in order to rule out second-order serial correlation. Furthermore, the number of instruments should not exceed the total number of groups. Thirdly, the null hypothesis—that there is no link between the instrument and the error term—must be supported. The Hansen test should produce an

inconsequential result in this respect. According to Arellano and Bond's (1991) recommendation, the Hansen test should produce an unremarkable result at the 5% significance level in this case. The table shows that the results of all three diagnostic tests are positive.

The findings indicate that Board Skills have a strong beneficial impact on ROA. For businesses that adhere to Shariah, the coefficient on BS is favorable and large. This implies that for Sharia-compliant enterprises, board competencies have a favorable effect on ROA. The board skills coefficient for the Non-Shariah Complaint group is positive but not statistically significant (coef. = 0.016, $p > 0.05$). This implies that board abilities have no bearing on company ROA in traditional enterprises. The coefficients for GDP, firm leverage, and ownership structure are all significant at the 5% level, indicating that this variable plays a substantial role in determining ROA. A possible explanation for this finding is that the impact of board skills on ROA is greater for Sharia-compliant firms than for non-Sharia-compliant firms. This could be because Shariah- Compliant firms have more skilled boards than non-Shariah-compliant firms, and their boards meet the required challenges with high levels of skills Shariah compliance adds to the value of firms as firms perform transactions according to Shariah while avoiding non-permissible activities (Saba et al., 2020). Further, the results are in line with the previous study of (Hillman et al., 2000). Results of non-Shariah-compliant firms are in line with the previous study of El-Faitouri (2014) where it is concluded that board structure is partly determined by past corporate performance.

Instead, we discovered a slight but positive correlation between Return on Equity and Board Kills in both Shariah-compliant and conventional enterprises. The results agree with those of (Fariha et al. 2022). They discovered a weak but favorable correlation between board characteristics and ROE.

In both Shariah and conventional enterprises, we discovered a positive and very significant link between board abilities and Tobin's Q, supporting our hypothesis. The findings suggest that companies with more experienced boards typically have market valuations that are greater than their book values. This link suggests that having board members with a range of skills, industry knowledge, strategic insight, and governance insight benefits the company's overall performance and investor appeal. Professional boards can aid in making decisions that are effective, improving financial performance and market perception through risk management, strategic direction, and strategic planning. The findings are consistent with earlier research by Ahmed and Ghazli (2013) and Amer (2016).

Table 6
Two-Step System GMM

Variables	ROA (SC)	ROA (NS)	ROE (SC)	ROE (NS)	Tobin's Q (SC)	Tobin's Q (NS)
L	0.668***	0748***	0.229***	0.255***	0.37***	0.3***
	(0.006)	(0.03)	(0.004)	(0.017)	(0.044)	(0.006)
BS	0.001*	.016	0.145	0.977	0.102***	0.386***
	(0.007)	(0.007)	(0.008)	(0.003)	(0.036)	(0.067)
FIRM SIZE	.002*	0.004	0.003***	0.059*	0.004	0.536***
	(0.001)	(0.001)	(0.094)	(0.043)	(0.849)	(0.914)
FIRM AGE	0.001***	0.004	0.039***	0.017**	0.073	.375**
	(0.023)	(0.026)	(0.008)	(0.023)	(0.309)	(0.327)
FIRM LEVERAGE	0.006***	.001*	0105***	0***	0.69***	1.662***
	(0.007)	(0.003)	(0.079)	(0.058)	(0.83)	(1.216)
OC	.0.007***	0.006***	0.621	0.189	14.701	6.299
	(0.018)	(.024)	(1.605)	(0.867)	(22.346)	(26.086)

GDP	0.104 (0.501)	.138* (0.372)	0.011*** (0.019)	0.012** (0.016)	0.1 (0.107)	-0.937 (0.316)
Board Size	.001 (0.001)	0.000 (-0.001)	0.002 (0.970)	0.000 (0.039)	1.423 (0.458)	-0.927 (1.622)
Board Ind	0.051 (0.052)	0.005 (0.005)	0.29*** (.0245)	0.005 (.001)	0.066* (0.385)	.259* (.249)
_Cons	.748 (0.163)	.004** (0.104)	0.616*** (0.482)	.003*** (0.238)	0.726 (6.29)	0*** (6.964)
Observations	1080	1078	1080	1078	1080	1078
AR(2) p Value	0.811	0.223	0.124	0.59	0.859	0.489
Hansen p-value	0.227	0.521	0.593	0.79	0.191	0.260
No. of groups	120	120	120	120	120	120
No. of Instruments	49	49	49	49	49	49

The table present the results of the Two-Step System GMM for the overall, SC and NC sample from four countries and for the period 2009-2018. The dependent variables are ROA, ROE amd ROE. The independent variables are, B skills, F.S, F.A,FL,OC, B.Size, B.I. The AR (2) test denotes the presence of second-order serial correlation, whereas Hansen's test pertains to the assessment of over-identifying restrictions. The final rows of the table display the No. of groups and the No. of instruments. The symbols *, **, and *** denote the levels of statistical significance at 10%, 5%, and 1%, respectively. The robust standard errors are enclosed in brackets.

The results of the two-step system GMM are shown in this table. The independent variables in this analysis are Board Skills, Company Size, Company Age, Board Size, Board Independence, Firm Leverage, Ownership Concentration, and GDP Growth. The dependent variables in this analysis are ROA, ROE, and Tobin's Q. The Hansen test is used to look at over-identifying limitations. The AR (2) stands for the second-order serial correlation. The number of groups and the various instruments used are shown in the table's lowermost rows. The significance levels are denoted by the symbols *, **, and ***, which are 10%, 5%, and 1%, respectively. Parentheses are used to illustrate robust standard errors.

Conclusion

The paper examined the association of board skills and firm performance in Shariah and conventional firms in emerging Islamic markets. The data used in the study comprised 240 non-financial firms listed on Shariah and conventional stock exchanges of Pakistan, Bangladesh, Malaysia, and Indonesia. The sample period was from 2008 to 2018. The results of the study suggest that board skills are significantly positively linked with firm performance (ROA & Tobin's Q). No significant association was found between board skills and ROE for both samples.

From a theoretical perspective, this study is the first to look at the consequences of board skills on firm performance. The results of the study imply that the directors in Shariah-compliant firms are accountable for confirming defiance with Shariah principles, which requires particular skills and knowledge in Islamic finance and ethics. A board of directors with such knowledge can make conversant decisions that align with Shariah principles and add to the overall performance of the firm. Shariah-compliant firms often prefer long-term defensible growth and value creation over short-term profits. Board members with diverse skills, including strategic planning, risk management, and industry expertise, can contribute to the formulation and execution of effective strategies aligned with this focus. By leveraging their skills and experience, the board can enhance

the firm's competitive advantage and financial performance, as reflected in higher ROA and Tobin's Q.

Board members with specialized skills in Islamic finance and legal frameworks can facilitate effective communication and collaboration with supervisory bodies, ensuring the firm's compliance and mitigating potential risks. This enhanced governance structure, driven by board skills, may positively impact the performance of Shariah-compliant firms.

In contrast, conventional firms may have different priorities, regulatory frameworks, and governance structures that do not emphasize the specific skill set associated with Sharia-compliant firms. Consequently, the association between board skills and ROA is not significant in conventional firms.

This paper has several recommendations for future research. First, this paper examined the direct relationship between board skills and firm performance. However, there is a lack of research investigating which particular skill of a director adds more to the firm performance. Further, this paper only analyzes the association of board skills on ROE, ROE, and Tobin's Q. Future research could be conducted on the association of board skills on stock market return and economic value added to ensure the robustness of the result.

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