

Do multi-nationality and board attributes matter for firm value: evidence ...

Do multi-nationality and board attributes matter for firm value: evidence from non-financial listed firms of Pakistan

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Abstract

This study used the panel data of 189 firms listed on the Karachi Stock Exchange of Pakistan from 2010 to 2019. This study employed the ordinary least square method for estimation. The findings of this study suggest that multinational firm is positive whereas non-multinational firm is negatively related to firm value. This may be due to multinational firms being more advanced in technology and management expertise. Among board attributes (i.e. CEO duality, the board size, and board independence) only board size has a significant impact on firm value of the multinational and non-multinational firms. Board size is positively related to the firm value of a multinational firm and negatively related to the value of a non-multinational firm. This finding suggests that number of directors on the board depends on the management expertise required of the firm. Board independence is negatively related to the firm value of the multinational firm. Among control variables, return on assets, dividend payment, and the debt ratio are positively related to the firm value whereas interest payment is negatively related to the firm value.

Keywords: Multinational firm, CEO duality, Board size, Board independence, Firm value

1. Introduction

The multinational firm invests abroad if it has more expertise & advanced technology in producing goods compare with domestic competitors (Errunza and Senbet, 1981). The

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theory of industrial organization says that firms are interested to finance in abroad because they have peculiar advantages and therefore can earn profit more than their local competitors. The success of multinational firms over domestic firms depends on market imperfection. If the market is imperfect and multinational firms have the advantages of capital, technology, and entrepreneurial skills over domestic firms, multinational firms would capture the market share of the domestic firms. But, if market perfection exists, domestic firms can buy the technology and other skills that multinationals firm have. In this case, domestic firms are not on disadvantages compared with domestic firms.

Choi et al (2014) have found that multinational firm provides statistically significant value premium compared with domestic Japanese firms. Generally, the goal of a multinational firm is to maximize the wealth of shareholders. Management of the multinational firm adopts strategy and takes a decision that will enhance the share price of the firm. There is the possibility of an agency problem between the management of a multinational firm and its shareholders. Managers of the multinational firm decide for satisfying their agendas, not for the value maximization of the shareholders.

International theory relative to the multinational firm says that foreign direct investment will be the higher stock price if the firm holds intangible assets such as more research and development ability, the skill of production, management skill, marketing, and consumer goodwill. In Pakistan, multinational firms are affiliated with high-tech and high-growth industries such as automobile, chemical, construction & cement industries, engineering, etc. These industries are requiring heavy investment in technologies and research & development.

Some studies on board attributes (i.e. CEO duality, the board size, and board independence) suggest that board attributes (i.e. CEO duality, the board size, and board independence) have a positive impact on firm value and other studies suggest that board attributes (i.e. CEO duality, the board size, and board independence) negatively related to the value of the firm. No one study, in the context of Pakistan, suggests board attributes are the function of firm characteristics (i.e. sectors, technology, and management expertise requirement).

In this study, we intend to investigate the impact of multinational & non-multinational firms on firm value and the impact of board attributes (i.e. CEO duality, the board size, and board independence) on the firm value of multinational & non-multinational firms. There is a research gap in the literature in that no significant study has been published using the data of Pakistani firms in the context of multinational & non-multinational firms to the extent of the researcher's knowledge. So, there is too much need for this empirical study. Further, this study will help regulatory authorities for the development of corporate governance codes according to firm characteristics.

A reminder of the paper plan as follows: section 2 describes the review of literature, section 3 discuss about data variables and methodology, section 4 shows the empirical findings, section 5 debate the finding of the study and section 6 presents the conclusion of the study, references are quoted at the end.

2. Review of literature

2.1 Multinational firms

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Doukas and Travlous(1988) has found that investors of multinational firm value more when MNCs invest in a less developed country because a multinational firm has more advantages of technologies and expertise than a domestic firm. Grant (1987) found that the performance of the multinational firm depends on company-related competencies rather than country and industry-related factors.

2.2 CEO duality

Fama and Jensen (1983) suggested that CEO and chairman or managing director should be different people; because in the case of CEO duality (i.e. same person holds both positions), one leader will control the board and may make the board ineffective. Moreover, Pfeffer and Salanick (1978) suggested that leaders with more powers can implement their planning to overcome organizational inertia. Brickley et al. (1997) suggested that both CEO duality and single leadership have benefits and costs. They further argued that CEO duality will be beneficial for some firms and single leadership will be beneficial for other firms. Boyd (1995) found that CEO duality should affect positively firm performance under some industry circumstances and should be effect negatively under other circumstances. Jackling and Johl (2009) found an insignificant association between CEO duality and firm performance. Mashayekhi and Bazaz (2008) found that CEO duality is insignificantly related to the performance of Iranian firms.

2.3 Board size

Lipton and Lorsch (1992) suggested that a large board is less effective than a small board. They further argued that some directors on the board get benefit from others' efforts. Hence, a small board may enhance the performance of the firm. Jensen (1993) argued that there is a possibility in the presence of large boards; the effectiveness of the board should decrease. Yermack (1996) found a negative relationship between board size and the value of a firm. Mashayekhi and Bazaz (2008) empirically found a negative relationship between board size and the performance of the firm. Further; they suggest that a large board reflects weak control. On the other side, resource dependence theory suggests that large boards should enhance the performance of the firm because a large board can build links with the external environment for improving the access of the company to various resources. Pfeffer and Salanick (1978) suggested that a large board is effective when a company needs external linkage. Van den Berghe and Levrau (2004) suggested that more numbers of directors on the board should provide more expertise because large boards are likely to have more knowledge and skills than small boards. Kiel and Nicholson (2003) found a positive relationship between board size and firm value.

2.4 Board independence

Weisbach (1988) suggested that independent directors on the board may serve as a monitor of management performance. Further, he suggested that an independent board from an insider could replace incompetent CEO. Mashayekhi and Bazaz (2008) found that board independence is positively related to firm performance. Agrawal and Knoeber (1996) found a negative relationship between firm value and board independence. They further argued that the board should include too many independent directors on the boards. Sheikh *et al.*

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(2013) found that Outside directors (i.e. board independence) negatively related to the performance of the firm.

3. Data, variable, and methodology

3.1 Data

This study aims to investigate the impact of board attributes (i.e. CEO duality, board size, and board independence) on the firm value of a multinational and non-multinational firm. Data were obtained from the annual reports of non-financial companies listed firms on the Karachi Stock Exchange (KSE) Pakistan. Data related to the stock price was collected from the publications of KSE. This study used data from 2010-2019. This study also excluded firms with incomplete data. The final data set of the study has 189 firms for 10 years and a total of 1890 firm year-wise observations. Thus, the final sample set consists of 189 firms over 10 years i.e. 1890 firm-year observations. The final selected firms in the study belonged to the following industrial sectors such as chemical, automobile & parts, construction & materials, engineering, electricity, food producers & beverages, general industries, pharmaceutical & biotech, household goods, and textile.

3.2 Variables

Table I presents the variables and their definition which are investigated in this study. The dependent variable is firm value. Explanatory variables are CEO duality, board size, board independence, multinational firm, and non-multinational firm. Control variables are dividend payment, interest payment, return on assets, and total debt ratio.

Variable	Definition
<i>Dependent variable</i>	
Firm value (FV)	The ratio of the sum of the average market value of equity, short-term debt, and long-term debt to total assets.
<i>Explanatory variables</i>	
Multinational firm (MNC)	Dummy variable: 1 if the firm belongs to a multinational group zero otherwise or foreign direct investment (FDI).
Non-Multinational firm (MNC)	Dummy variable: 1 if the firm belongs to a non-multinational group.
CEO duality (CD)	1 if the chairperson of the board is also the CEO or managing director of the company, 0 otherwise.
Board size(BS)	Natural logarithm of the number of directors on the board.
Board Independence (IND)	The ratio of independent non-executive directors on the board to the total number of directors on the board.
<i>Control variables</i>	

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Dividend ratio (DIV)	The ratio of dividend payment to total assets.
Interest ratio (INT)	The ratio of interest payment to total assets.
Return on assets (ROA)	The ratio of earnings before tax to total assets.
Debt ratio (DTR)	Total debt (short + long) to total assets.

3.3 Methodology

This study used the method of panel data because the sample contains data from different firms’ cross-sectional observations. This study used the method of pooled ordinary least squares to estimate the relationship between board attributes (i.e. CEO duality, the board size, and board independence) and institutional ownership on the firm value of the multinational and non-multinational firm. The following equation is a basic equation:

$$y_{it} = \beta_0 + X_{it}'\beta + \mu_{it}$$

where the subscript *i* denotes the cross-sectional unit, *t* represents the time, *y_{it}* denotes the dependent variable, β_0 denotes the *y*-intercept. *X_{it}* represents explanatory variables for the *i*th firm at *t* time, β denotes the parameter of the explanatory variable, μ_{it} is a disturbance term.

For estimating the relationship between firm value and multinational firm this study uses the following equation:

$$FV_{it} = \alpha_0 + \beta_1 MN_{it} + \beta_2 DIV_{it} + INT_{it} + ROA_{it} + DTR_{it} + \mu_{it} \dots \dots \dots 1$$

For estimating the relationship between firm value and non-multinational firm this study use the following equation:

$$FV_{it} = \alpha_0 + \beta_1 NMN_{it} + \beta_2 DIV_{it} + INT_{it} + ROA_{it} + DTR_{it} + \mu_{it} \dots \dots \dots 2$$

Further, this study uses the interaction dummy of the multinational firm and board attributes (i.e. CEO duality, the board size, and board independence) for estimating the impact of board attributes on the firm value of the multinational firm.

$$FV_{it} = \alpha_0 + \beta_1 MN \times CD_{it} + \beta_2 MN \times BS_{it} + \beta_3 MN \times BI_{it} + \beta_4 DIV_{it} + \beta_5 INT_{it} + \beta_6 ROA_{it} + \beta_7 DTR_{it} + \mu_{it} \dots 3$$

Further, this study uses the interaction dummy of a non-multinational firm and board attributes (i.e. CEO duality, the board size, and board independence) for estimating the impact of board attributes on the firm value of a non-multinational firm.

$$FV_{it} = \alpha_0 + \beta_1 NMN \times CD_{it} + \beta_2 NMN \times BS_{it} + \beta_3 NMN \times BI_{it} + \beta_4 DIV_{it} + \beta_5 INT_{it} + \beta_6 ROA_{it} + \beta_7 DTR_{it} + \mu_{it} \dots 4$$

4. Empirical findings

4.1 Descriptive statistics

Table II shows the descriptive statistics of the study. The Mean of the concern variable indicates the average value. The Mean firm value of the multinational and non-multinational firms are 2.0271 and 0.9484 respectively. The Mean of CEO duality shows that fraction firms of the sample in which the CEO is also chairman or managing director of the firm. The Mean of board size shows the average natural log of board size. The Mean of board independence indicates the ratio of independent non-executive directors to total directors on the board. The

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mean of the dividend ratio shows the average dividend payment to total assets. On average multinational firms' interest payment to total assets, ratio is 0.0205 and for non-multinational firms' the interest payment to total asset ratio is 0.0463. The average return on assets of multinational firms is 0.1597 and for the non-multinational firm is 0.0593. The average of total debt to total assets ratio shows that parts of assets are financed through debt.

Table: II Descriptive statistics

Variable	MNC N=130				NMNC N=130			
	Min.	Max.	Mean	Std. Dev	Min.	Max.	Mean	Std. Dev
FV	0.39	10.55	2.0271	1.82828	0.24	6.09	0.9484	0.46864
CD	0.00	1.00	0.2154	0.41268	0.00	1.00	0.1939	0.39557
BS	1.95	2.40	2.0802	0.15019	1.79	2.77	2.0555	0.16393
IND	0.00	0.88	0.1994	0.22898	0.00	0.93	0.1794	0.27106
DIV	0.00	0.31	0.0586	0.06960	0.00	0.29	0.0152	0.03541
INT	0.00	0.09	0.0205	0.02117	0.00	0.15	0.0463	0.04375
ROA	-0.21	0.59	0.1597	0.14048	-0.52	0.60	0.0593	0.10810
DTR	0.17	0.88	0.4960	0.19162	0.00	1.00	0.5756	0.19244

4.2 Correlation analysis

Table III presents the correlation analysis of the study. Correlation analysis is used to check the possibility of the multi-collinearity among variables. If a value between - 0.70 to -0.70 among two variables is found these two variables would not estimate together in the same regression equation. Firm value is positively and significantly related to the multinational firm and board size. Firm value is negatively related to the non-multinational firm, CEO duality, and board independence however non-multinational firm is statistically significant. The multinational firm is significantly and negatively related to the non-multinational firm¹. The multinational firm is positively related to CEO duality, the board size, and board independence but the relationship is insignificant. The non-multinational firm is negatively associated with CEO duality, board size, and board independence but the relationship is insignificant. CEO duality is positively related to board independence and negatively related to board size at a significant level. Board size is significantly and positively related to board independence.

Table III Correlation matrix

variable	FV	MNC	NMNC	CD	BS	IND
FV	1	0.420***	-0.420***	-0.048	0.186***	-0.039
MNC		1	-1.000***	0.019	0.053	0.026
NMNC			1	-0.019	-0.053	-0.026

¹ Multinational and non-multinational firm has perfect negative correlation of 1 because multinational and non-multinational firm are opposite to each other, but in regression analysis multinational and non-multinational firm are not included together in the same equation. So, no violation of rule of multi-collinearity.

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CD				1	-0.189***	0.076**
BS					1	0.054*
IND						1

*, **, *** indicates significance level at 0.10, 0.05 and 0.01 respectively.

4.3 Regression analysis

Table IV presents the regression results of the study. In equation 1 multinational firm is significantly and positively related to firm value. The result of equation 2 shows that a non-multinational firm is negatively and significantly related to firm value. The result of regression equation 3 shows that CEO duality and board independence are negatively related to the firm value of a multinational firm, but only board independence has a significant impact. Board size is positively and significantly related to the firm value of a multinational firm. The regression result of equation 4 indicates that CEO duality and board size are negatively related to the firm value of a non-multinational firm, but board size is statistically significant. The control variable shows approximately similar behavior in all 4 equations. Dividend payment, return on assets and total debt ratio is positively and significantly related to the firm value. The interest payment is negatively and significantly related to the firm value.

Table: IV Regression results

Independent variable	Eq.1	Eq.2	Eq.3	Eq.4
Dependent variable: FV				
C	0.16463** (2.0790)	0.7509*** (7.6318)	0.1838** (2.3547)	0.7091*** (7.3174)
MNC	0.5862*** (8.9643)			
NMNC		-0.5862*** (-8.9643)		
CD × MNC			-0.0043 (-0.0321)	
BS × MNC			0.4411*** (10.5579)	
IND × MNC			-1.5564*** (-6.2924)	
INS × MNC				
CD × NMNC				-0.0476 (-0.8237)
BS × NMNC				-0.2702*** (-8.6616)
IND × NMNC				0.0978 (1.1659)

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INS × NMNC				
DIV	9.2310*** (14.5316)	9.2310*** (14.5316)	9.2675*** (14.8010)	9.5208*** (15.0572)
INT	-1.5121*** (-2.7866)	-1.5121*** (-2.7866)	-1.4584*** (-2.7415)	-1.6100*** (-2.9636)
ROA	1.3966*** (5.5069)	1.3966*** (5.5069)	1.2339*** (4.9256)	1.4109*** (5.5331)
DTR	1.0955*** (8.5927)	1.0955*** (8.5927)	1.0723*** (8.5246)	1.1044*** (8.6406)
R ²	0.4764	0.4764	0.4980	0.4750
Adj R ²	0.4736	0.4736	0.4942	0.4710
F-statistics	170.8722	170.8722	132.8131	121.1162
Prob.(F – Statistics)	0.0000	0.0000	0.0000	0.0000
observations	1890	1890	1890	1890

*, **, *** indicates significance level at 0.10, 0.05 and 0.01 respectively.

5. Discussion on findings

The regression result of equation 1 suggests that multinational firm is positively and significantly related to firm value. This finding shows that as the numbers of multinational firms increase the data value of the firm increase. Doukas and Travlous(1988) have suggested that shareholders value more to the multinational firm more when MNCs invest in a less developed economy due to more technological advantages. Pakistan is a developing country, where multinational firms with competitive advantages are performing well compared with domestic firms. Grant (1987) found that the performance of the multinational firm depends on company-related competencies rather than country and industry-related factors. The regression result of equation 2 suggests that non-multinational firm is negatively and significantly related to the firm value. This finding suggests that the management of non-multinational firms is not performing well compared with multinational firms in Pakistan. This may be possibly due to the lack of expertise and technological advancement in domestic firms compared with multinational firms.

The regression result of equation 3 shows that board size is positively and significantly related to the value of the multinational firm. This finding suggests that a larger board is good for the performance of a multinational firm. Multinational firms are advanced in technology and require more expertise for their operation, large board sizes with more expertise may increase the performance of the firm and value. This finding is consistent with the findings of Pfeffer and Salanick (1978), Van den Berghe & Levrau (2004), and Kiel and Nicholson (2003) found a positive relationship between board size and firm value. The regression result of equation 3 shows that board independence is negatively and significantly related to the value of a multinational firm. The multinational firm has its strategies and plans for operating the firm, but independent non-executive directors are working on the agenda of their institutions. This conflict of interest may lead to a delay in decision-making and impact

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negatively firm value. This finding is congruent with the findings of Agrawal and Knoeber (1996) and Sheikh et al. (2013)

The result of regression equation 4 suggests that board size is significantly and negatively related to the firm value of a non-multinational firm. This finding indicates that large board size has a negative impact on the firm value in the non-multinational firm. Non-multinational firms in Pakistan are small in size compared with multinational firms and require fast decision-making, so a small board size is beneficial for non-multinational firms in Pakistan. This finding is consistent with the findings of Lipton and Lorsch (1992), Jensen (1993), Yermack (1996), and Mashayekhi and Bazaz (2008).

A dividend is positively and significantly related to the firm value. This finding supports the bird in hand theory. Investors value more to those firms that pay more dividends. The interest payment is negatively related to the firm value. This finding suggests if a firm pays more from its income to the creditors for costly debt, investor discount more to those firms. Return on assets is positively and significantly related to the firm value. This finding suggests that investor value more to those firms which are performing well. A positive and significant relationship between debt and firm value suggests that when a firm uses more debt it reduces the agency cost between investors and management of the firm. This finding is consistent with Jensen (1986).

6. Conclusion

In this study, we intend to investigate the impact of multinational and non-multinational firms on value. Multinational firms are affiliated with high-tech industries and require special management skills. The theory of industrial organization suggests that multinational firms invest only in those countries where it has more technological advantages. The findings of this study show that multinational firm is positively and significantly related to firm value, on the other side, non-multinational firm is negatively and significantly related to firm value. These findings suggest that the management of multinational firms operating efficiently compared with non-multinational (i.e. domestic firm) firms. This finding may be possibly due to the technological advantages of a multinational firm.

Further, this study investigates the impact of board attributes (i.e. CEO duality, the board size, and board attributes) on the firm value of multinational and non-multinational firms. Only board size has a significant impact on the value of multinational and non-multinational firms. Board size is positively related to the multinational firm value and negatively related to the non-multinational firm value. These findings suggest that board size depends on the firm characteristics (i.e. industry affiliation, management skills, and technology). Multinational firms are affiliated with more advanced technology industries and thus require more expertise and skills of management compared with non-multinational firms. Board independence is negatively and significantly related to the firm value of a multinational firm. This finding suggests maybe the inclusion of more independent non-executive directors on the board may lead to a conflict between the policy of the multinational firm and non-executive directors' suggestions. This may lead to the negative impact of board independence on the firm value of multinational firms.

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Limitation

This study only used the data from 2010-2019 for 189 firms listed on the Karachi Stock Exchange of Pakistan. Maybe this limited data set does not possibly reflect the true behavior of investigated variables. Further, recently Security Exchange Commission of Pakistan implemented a new code of corporate governance in 2017. The effectiveness of the code of corporate governance 2017 requires some time.

Recommendation

Recent development in the code of corporate governance of Pakistan requires listed companies to adopt a board structure according to the code of corporate governance 2012. Here, this study recommends to regulatory authorities must take into consideration of company characteristics for the improvement of firm performance and investor wealth.

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