

EFFECT OF DIVIDEND PAYING BEHAVIOR AND BOARD SIZE AND BOARD COMPOSITION ON FIRM'S PERFORMANCE: EVIDENCE FROM PAKISTAN

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ABSTRACT

*This study examines the impact of corporate governance (board size and board composition), dividend-paying behavior on financial performances. We used panel data including a sample of 5 major sectors (cement, textile, board & paper, power, oil & gas) of Pakistan. The data of study covers from 2006 to 2016. We used board size and board composition as corporate governance, dividend-covering ratio used for measuring dividend-paying behavior, return on assets and return on equity is used for performance, which is dependent variable. For the data normality test, we measure descriptive statistics and correlation and for analyzing the main results, we used **Estimated Generalized Least Square (EGLS) model**. The findings suggest that there is significant positive relationship between dividend coverage and firm performance. The general reserve are also positive relationship with profitability which enhance the overall performance of non-financial sectors of Pakistan.*

Keywords: Dividend Coverage Ratio, Corporate Governance, Firm Performance, Non-financial Sector.

INTRODUCTION

Corporate performance plays an important factor that links with available financial resources of an organization are utilize for achieving corporate goals. It creates major future opportunities with greater vision (Yasser et al., 2011). The scholarly and expert literatures have inferred that the dividend payment patterns have been diminishing altogether for over two decades. In this manner, vital to take note of that in spite of the fact that companies have a tendency to disseminate dividend among investors frequently as conflicting or infrequent pattern. Brealey and Myers found that the dividend was one of the main ten key uncertain issues of corporate finance. Numerous researchers attempt to reveal the issue in regards to the dividend paying behavior. However, despite everything we don't have a satisfactory clarification for the observed dividend behavior of firms (Black, 1976; Allen & Michaely, 2003 and Brealey and Myers 2005). In the finance's discipline, the choice of dividend payment is considered as one of the financial management decisions (Brealey et al., 2012) which for the most part reflects corporate dividend policy that impacts the valuation of the company. In fact, companies change their dividend policies as per the measure of earning they hold (Al-Ajmi & Hussain, 2011). The regular payouts of dividends are by and large important to the investors who have irregular illogical behavior (Shefrin & Statman, 1984).

In Pakistan, in any case, companies are hesitant to pay the dividend. The amount of dividend paid by the companies is as pitifully low as Rs 0-2.5 for each share (Naeem & Nasr, 2007). Regularly, the business switch over to pay the dividend after accomplishing a specific level of development (Mehar, 2002). The payment of dividends relies upon company strategy and its financial position. There are no particular rules in Pakistan that make dividend payments obligatory. Pakistan is an emerging and developing country and Corporate governance isn't prospering here (Mehar, 2002). Although, corporate governance shields a company from susceptibility to future financial distress. Most ventures are possessed and controlled by families who additionally hold the administrative positions in them. Family-possessed listed companies are the foundation of Pakistan's economy. Nevertheless, these listed companies are customarily either uninformed of the general standards of good corporate governance or work in a moderately less open condition.

The aim of the study is to understand the impact of designated corporate governance variables in particular Board size (BS) and Board composition (BC), dividend paying behavior variables namely (Dividend cover ratio) have on performance i.e. ROA and ROE. Giving due recognition to some control variables such as the size of the firm (SZE), the age of the firm (AGE), and the Debt structure (LEV) which have used as for measurement of performance of industries. By using the sample of Pakistani 5 major sectors (cement, textile, board & paper, power, oil & gas) collected from Pakistan Stock Exchange. These variables are used in this because of data accessibility and estimation. Our primary research question is as follows:

1. Is there any relationship between the dividends paying behavior, formation of board structure (corporate governance) with controlled variables on the company's financial performance?
2. To examine effect of dividend paying behavior and corporate governance on firm financial performance in the five major industries of Pakistan.
3. To view the true picture of dividend paying behavior and corporate governance of the 5 major industries in Pakistan.

We added five different major sectors of Pakistan like cement, textile, board & paper, power, oil & gas, collected from Pakistan stock exchange covering the period of 2006 to 2016. This study found a positive and statistically significant relationship between the dividend paying behavior and corporate governance and performance of the companies of Pakistan. All control variables i.e. leverage, size, and firm age is positively significant with firm performance. Advantage, firm size and age has significant impact on performance measures (ROA, ROE) in overall five industries of Pakistan. To the best author's knowledge, this one is first study, which is conducted on five different sectors of Pakistan. This is an evidence of Pakistan studies in which we used panel dataset of 2006 to 2016 as well as we used Unappropriated profit/reserve as an predictor of performance for major sectors of Pakistan. We first used dividend coverage ratio as measure of dividend paying behavior, which have significant impact on performance and it, is new evidence if company paid dividend from profit then it creates positive signal for investor to invest in a company. Only listed companies are taken for sample from Pakistan stock exchange.

The introduction arrangement of this study is as per the following. Firstly, the theoretical framework on the Impact of Dividend paying behavior and corporate governance with control variables on company performance is contemplated in the literature review section. The research methodology is then clarified by the findings and discussion. At last, the findings are outlined followed by restrictions and suggestions for future study.

LITERATURE REVIEW

Many researchers has been fascinated by corporate dividend paying behavior due to numerous marketplace imperfections which existed for example agency cost, asymmetric information, agency problem, bankruptcy among firms and cliental effect. Moreover, they have suggested about the issues of dividend decisions by a firm. The puzzle of these policies is still unclear in this period that is the reason we conducted this study for exploring dividend paying behavior with firm performance in the existence of corporate governance indicators. A few research studies have led to investigate the effect of dividend paying behavior and corporate governance system on firm developing and developed nations. The after effects of these research studies (Shahwan, 2015; Bhatt & Bhatt, 2017; Aslam & Haron, 2020) explicitly proposed that an effective and powerful corporate governance structure can guide the management to work in a way that enhances company's performance by protecting the privileges of investors.

Much similar people creating mindfulness and dynamic capacities related to decision-making abilities, organizations can likewise go to a condition of mindfulness, accepting accountability for their activities. The literature that clarifies the relationship between corporate governance and sustainability performance in dependent on two predominant hypotheses: agency theory (Jensen & Mechling, 1976) and stakeholder theory (Freeman, 1984). Agency theory depicts the presence of significant issues in the principal-agent relationships. A contention relationship can emerge when the agent's goals contrast from those of the principal. This is because of the presence of information asymmetry, opportunistic behavior, and a conflict of interests among managers and shareholders (Ortas et al., 2015). In this way, to align the principal-agent goals, agency theory proposes a partition of decision-making between them, and a decrease in the manager's discretion (Fama & Jensen, 1983). Stakeholder theory recognizes towards the individuals who in solid terms organizations must be dependable, and responsible, and is the beginning stage for reflection on the mechanisms through which the organization gets and loses its social authenticity and legitimacy (Naciti, 2019).

Variable Characteristic in the Expectant of Observed Literature

Dependent Variable

Firm performance

Dependent variables in this research analysis are the company's performance under various performance measures, for example, return on Assets (ROA) and return on equity (ROE). In addition, Liu & Hung (2006) contended that ROA and ROE could quantify both profitability and earnings quality of companies. Tobin-Q has contended to have the benefit of emulating the company's present value and future profitability potential.

1. **Return on Equity (ROE):** It is the proportion of net profit and investors' equity. It utilized as the proxy of profitability in the vast majority of the situations. ROE is additionally used to gauge benefit of companies (Athanasoglou et al., 2008; Capon et al., 1990; Chathoth & Olsen, 2007; Kesner, 1987).
2. **Return on asset (ROA):** ROA emulates the capacity of a company's management to produce benefits/profits from the company's assets (Athanasoglou et al., 2008). Kang & Stulz (1997) expressed that investors incline toward firms with high ROA in light of the fact that it means the management efficiency. ROA is normally used as quantify corporate performance (Capon et al., 1990; Gonzalez-Hermosillo et al., 1997; Hall & Weiss, 1967; Kesner, 1987; Persons, 1999; Thomson, 1991).

Corporate governance variable

In spite of the fact that by far most of studies propose, that there is a positive relationship between corporate governance and firm performance but a few studies did not affirm that outcome. Rather, they propose that the association between corporate governance and firm performance is negative or impartial, i.e. it does not exist by any means. A few studies question the causality of this relationship and along these lines; they recommend that a firm performance that positively influence the corporate governance, not the other way scenario. Drobetz (2003) found that as corporate governance index expands and has positive impact on the firm performance demonstrating an expanded estimation of the Tobins Q. The following are the corporate governance variables (board composition and board size) which have used in this research.

Board composition

The job of independent directors in the corporate board is the focal point of the greater part of the corporate governance research. However, a huge group of researchers contended that independent directors are the better to monitors the board since they are independent in dynamic decision making. Fama & Jensen (1983) contended that outside directors are the better in monitoring the managers as they have motivating forces to create notoriety as master in decision control. The independence directors assume a focal job in standing up for severe consistence with the law and maintaining minority partners' inclinations (Fama & Jensen, 1983). In addition, independent executives show more consistence in the recognition of the law and are progressively worried about corporate social duty (Zahra & Stanton, 1988). Baysinger & Butler (1985) report that organizations with higher extent of independent executives had prevalent performance. Hermalin & Weisbach (1989) contended that outside directors are bound to join the board after a firm perform inadequately, deducing extra direction will improve the firm. The presence of independent executives have demonstrated to be significant corporate governance mechanism that can prompt a superior oversight of board viability (Said et al., 2009; Naciti, 2019).

Yasser et al. (2011) found that board ought to have an ideal combination of executive directors and non-executive directors. Javed & Iqbal (2007) found that the formation of board individuals/members and ownership concentration was related with expanded firm performance.

Notwithstanding, Klein et al. (2005) found no proof that board composition influences firm performance. Chin et al. (2004) likewise assert that the level of non-executive directors has little effect on general firm performance. In view of the contentions on the structure of independent non-executives, directors melded to be appear. Different studies including (Baysinger & Butler, 1985; Chaganti et al., 1985; Rechner & Dalton, 1986; Zahra & Stanton, 1988; Davidson III & Rowe, 2004; Fernandes, 2005; Cho & Kim, 2007) could not discover any connection between board composition as portrayal of outside independent directors and firm performance. The study contended that simple regulatory compliance by appointing progressively independent executives would not upgrade the firm performance. However, (Hermalin & Weisbach, 1991; Adams & Mehran, 1995; Yermack, 1996; Hermalin & Weisbach, 2003; Francis et al., 2012) locate no noteworthy effect between the independent executives and firm performance.

Muniandy & Hillier (2015) inspect the effect of board autonomy on firm performance using a sample of 151 South African firms and report positive connection between firm performance and the independent directorship. Liu et al. (2015) utilizing a sample of Chinese recorded firm during 1999 -2012 period locate that the independent executives have a general positive effect on firm operating performance in China. Fuzi et al. (2016) utilizing test from various nations reports a blended relationship between extents of independent

executives and firm performance. Yermack (1996) contends that having a high extent of non-executive directors is probably going to build the independence of the company's board. High extent of outside executives gives a superior discussion to settling on quality corporate choices (Fama & Jensen, 1983; Jensen, 1993; Kyereboah-Coleman & Amidu, 2008; Naciti, 2019).

Agency Theory affirms the possibility that the independent executives should hold a dominant part of board seats since they can screen the agents' decisions successfully. Independent executives inside the directorate assists with lessening agency costs. Their capacity is in truth accurately to manage the conduct of the executive directors, to maintain a strategic distance from potential practices that stray from the social premium, and seek personal enrichment objectives. They have a lower potential for an irreconcilable circumstance, and they have seen as an apparatus that connects the external stakeholders with firms (Akpan & Amran, 2014). Board independence may be essential in observing and administering manageable improvement issue. Independence is relied to furnish new bits of knowledge with respect to natural and social partners, as opposed to the exemplary models that concentration only on financial performance (Galbreath, 2010).

In addition, in view of the Stakeholders Theory, the independence of the board required to be connected with supportability execution, since these are less dependent upon shareholder pressures. A board with a significant segment of independent executives can give oversight to the executives and secure investors and partners' inclinations (Abor & Fiador, 2013). In light of the above detailed discussion, our primary hypothesis is as follows:

H₁: Board composition significantly promotes the firm's performance.

Board size

The prevailing literature on board size depends on various philosophies of corporate governance. The effect of board size on firm performance gives melded outcomes. One of the significant issues finance and economic literature is with respect to the board size in solving the agency issue (Abor & Fiador, 2013). However, the financial press or scholarly research, don't give any decisive proof on board size and firm performance. Utilizing meta-investigation of 131 firms, Dalton et al. (1999) reports that large board add to the firm performance. Guest (2009) analyzed the effect of board size on the performance of firms utilizing a huge example of 2746 listed companies from the year 1981 to 2002. Board size was estimated by the totality of directors on the board. The study found that board size has robust negative effect on the company performance variables. Garg (2007) found a converse connection between board size and firm performance. Dissimilar to the past researches, Topak (2011) proven that there is no connection between the board size and Turkish firm performance.

Studies contend that consideration of more executives on the board advantage the checking and prompting capacity and improve the governance and returns. Malik et al. (2014) utilized an example of 14 listed firms of Pakistan during the period 2008-2012, reports critical positive connection between board size and firm performance. Aside, (Lipton & Lorch, 1992; Jensen, 1993; Yermack, 1996; Barnhart & Rosenstein, 1998; Hermalin & Weisbach, 2003; Liang et al., 2013) report negative relationship between board size and firm performance (Gafoor et al., 2018).

Agency problems could be confined through internal (the role of board of directors and executive compensation agreements) and external corporate governance system (markets for corporate control and direct activity/shareholder activism) (John & Senbet, 1998). Internal governance happens as the directorate effectively tries to secure the interests of investors.

Later, the studies focus on the BoD as the principle decision-making structure in a business (Zahra, 1993; Abor & Fiador, 2013).

As per the stakeholder theory, corporate managers ought to think about the interests of partners to diminish the opportunity of an irreconcilable circumstance (Haniffa & Cooke, 2002). Board of Directors have as often as possible been concentrated as a gathering of partners inside an organization that have comparable perspectives in strategic policies (Useem, 1984). In the most recent decade, researchers have concentrated on the job of the boards of directors and specifically their proficiency. Numerous authors have discovered that the decent variety on boards of directors, as far as nationality, sex, and position, can give hierarchical advantages and competitive advantages such as the ability to strategically attract human resources (Cox, 2001), and improve performance (Bhagat & Black., 2002; Naciti, 2019). In the light of above detailed discussion, our primary hypothesis is as follows:

H₂: Board size significantly promotes the firm's performance.

Dividend paying ability variable

The dividend coverage ratio is great measure to assess dividend payment behavior of the companies.

Dividend cover ratio

The dividend cover ratio shows that a company could pay dividends to its ordinary shareholders/ investors utilizing its net income over a predetermined financial period. For the most part, a higher dividend coverage ratio is more advantageous. In spite of the fact that dividend payments are typically optional and companies ordinarily look to keep up a reasonable level of dividend payout in accordance with the market anticipation. A higher or lower dividend cover might be fit relying upon the level of strength in earnings of the companies (Barclay et al., 1995).

The quintessence of the agency problem is the division of management (control) and finance (ownership) (Shleifer & Vishny, 1997). This is basically because of the way that management has a motivating force to pursue the policies for their potential advantage and to the hindrance of shareholder value. Fama & Jensen (1983) contended that agency conflicts can be dodged by large dividend payments to shareholders. Easterbrook (1984) avows this view by showing that that dividend payments control the agency problems by encouraging the capital market monitoring of the firms' activities and performance. One more contention, progressed by Myers (2000), proposes that the managers may really be eager to pay dividends so as to abstain from disciplining action by shareholders. Abor & Fiador, (2013), also suggest it.

Institutional block holders may likewise go about as a monitoring device on the firm's managers. This is because agency problems are supposed to be negligible in firms with large block shareholders that can monitor the management activities (Shleifer & Vishny, 1986), accordingly hosing on a fundamental level the requirement for high-dividend payouts. It is likely for institutional shareholders to influence the higher dividend payouts by a company to upgrade the managerial monitoring by outside capital markets; in particular, on the off chance that they accept their own direct monitoring endeavors to be lacking or excessively exorbitant. Then again, Jensen & Meckling (1976) contended that when are too scattered to even think about taking activity against non-value maximization conduct. Insiders may utilize the firm's assets for their very own advantage, for example, avoiding duties and expending perquisites. In the light of above detailed discussion, our primary hypothesis is as follows:

H₃: Dividend cover ratio significantly promotes the firm's performance.

Reserve

A reserve is benefits/profit that have appropriated for a specific reason. At the point when a company out of its benefit/profits for future motive sets any sum of amount aside then that called general reserve. The general reserve are the retained earnings of a company, which are set aside out of company's benefits/profits to meet future (known or obscure) commitments. The current economic crisis put emphasizes that investors feel certain confident when companies have sufficient reserves. They find that companies having strong development avenues and less secure cash flow generally hold high cash reserves (Lopes & Walker, 2012). These reserve accounts are sufficiently vast to influence the financial statements. In spite of the reasonable significance of reserve accounts in financial statements, there is no earlier investigation has reviewed.

Harford (1999) measures the anomalous cash holding of firms out general. He finds that abnormal holding of cash reserves is related with more prominent spending on acquisitions that decrease firm value and damage the firm's performance. Nevertheless, Opler et al. (1999) and Mikkelson & Partch (2002) did not detect that firm performance endures in firms with large holdings of cash and equivalents. We know about no study that reports benefits of cash reserves. To put it plainly, cash reserves tend to profit firms in times of industry downturns and tend to detriment firms in different periods. The reason is that the impact of cash reserves on performance contrasts between an industry downturn and different circumstances. In the light of the above discussion, our primary hypothesis is as follows:

H₄: Reserve significantly promotes the firm's performance.

Control Variables

The control variables in this study are the debt, firm age and firm size.

1. **Firm size:** Trow (1961) contends that bigger companies have more assets, making it simple to pull in, prepare, and create potential successors and to connect with outside consultants who may support coherence arranging.
2. **Leverage (LEV):** An analysis by Welch (2003) finds that there is a negative connection between firm's debt levels and corporate performance. There are numerous investigations accessible that recognize a negative connection between dividend payout and leverage (Ahmed & Javid, 2009; John & Muthusamy, 2010; Ramachandran & Packkirisamy, 2010). At the point when firms need to pay fixed amount of cost, it is seen that dividend payout decays because of interest cost payment.
3. **Firm age:** It is a vital determinant of firm performance, the changeability of firm performance and the likelihood of firm dissolution (Evans, 1987). An analysis identifying with firm age directed by Dunne & Hughes (1994) finds that smaller companies were becoming speedier than the bigger ones. The small companies likewise shared a generally low demise rate from takeover when contrasted with the large companies and medium sized companies were most powerless against takeover. The findings likewise uncovered that younger companies for a given size became quicker than old companies. However, corporate governance is to be considered to include an arrangement of complex pointers, which confront vital estimation error because of the complex notion of the collaboration between governance variables, dividend paying behavior variables and performance indicators.

RESEARCH METHODOLOGY

The researcher gathered data from a sample of Pakistani companies listed on Pakistan Stock exchange over the period of 2005 to 2016. The years 2005 to 2016 were selected because this study seeks to examine the post effect of the implementation of Code of Corporate Governance issued in 2012. The sample size for this study is 19 companies and the

total sample for twelve years' observations were 228. This study adopted panel regression model to determine the coefficient correlation between independent and dependent variables (Gorriiz & Fumas, 2005; Anderson & Reeb, 2003). We selected five major sectors of Pakistan which are mostly investigating in previous literature. The basis for this study is to compare the different sectors like cement, textile, board & paper, power, oil& gas with others that what is major factors influencing regarding performance under the umbrella of corporate governance factors like Board Size and Board Composition. Board play an important role to make dividend payout policy in Pakistan. The purpose of this time period is to evaluate the performance of firms due to implementation of code of corporate governance 2012 with its amendments with the passage of time till 2016.

DATA ANALYSIS AND RESULTS

Descriptive Statistics

The final panel data set used in this study includes a total of 814 using the five major sectors of Pakistan (cement, textile, board & paper, power, oil& gas). The structure of the sample used in the panel is shown in Table 1 and Table 2 shows the classification of the sample by sector wise. The unbalanced panel data of five major sector from Pakistan is tabulated below in Table 3.

Mean value of firm's performance

This section provides the mean analysis of the firm's performance using ROA and ROE between cement, textile, board & paper, power, oil& gas sector. This study employs two different measurements of the firm's performance that takes into account differences in the denominator and numerator of the performance calculation. The two measurements used in determining the firm's performance of the five major sector for this study are:

Research model and measurement: In this study, the research model is as follows:

Model for total sample

$$ROA = \beta_1 + \beta_2 RES_{it} + \beta_3 BCOMPO_{it} + \beta_4 BSi + \beta_5 DCR_{it} + \beta_6 LEV_{it} + \beta_7 FAGE_{it} + \beta_8 FSIZE_{it} + u_{it}$$

$$ROE = \beta_1 + \beta_2 RES_{it} + \beta_3 BCOMPO_{it} + \beta_4 BSi + \beta_5 DCR_{it} + \beta_6 LEV_{it} + \beta_7 FAGE_{it} + \beta_8 FSIZE_{it} + u_{it}$$

In the above equations, ROA and ROE is performance measure as dependent variables, β_1 is constant and other are coefficients like Board size, board composition, dividend coverage ratio as independent variables, leverage, firm age and firm size as control variables. u_{it} is error term and i indicate cross sections and t explained time series so this is panel data study.

Table 1 VARIABLE MEASUREMENT		
Independent Variable	Description/Measurement	Reference
Board size	No's of executive & non- executive directors on the board of the firm.	Cheema & Din, (2013).
Board composition (BCOMPO)	% of independent non-executive director/ total directors.	Yasser, (2011).
Reserve	General reserve and unappropriated profit is Included in it.	CN Ozuomba, (2016)
Dividend Coverage Ratio (DCR)	PAT is divided by dividend paid to ordinary shares.	Boonlert Jitmaneeoj, (2017), MN Khan, (2017)
Dependent Variable		
ROE	The ratio of net profit after tax to total shareholders' equity.	Olawale & Lawal, (2017).
ROA	Net income divided by book value of total assets.	Yasser (2011).
Control Variable		
Leverage(LEV)	Total debt is divided by total asset	Yasser (2011).
Firm Age (FAGE)	The number of years since incorporated.	Yasser (2011).
Firm Size (FSIZE)	The natural log of the book value of total assets.	Griffin et al. (2014).

1. ROE using Net income divided by book value of total assets.
2. ROA using The ratio of net profit after tax to total shareholders' equity
3. The reason for using two different measurements of the firm's performance ratio is to determine whether the return on equity and return on assets play a role in determining the impact of dividend paying behavior and corporate governance on these five major sector behavior.

Overall description for all variables

The overall description of variables used in this study is presented in Table 1. Table 1 presents the descriptive statistics for both ROE and ROA ratios of fine major sector (cement, textile, board & paper, power, oil& gas). Return on equity is higher than return on asset for overall sector. However, in column2 of Table 1, ROE is higher than ROA. There are similar findings with regard to the highly ROE in column 10 and 11 of Table 1. Both oil & gas and power sector in the tables below show higher return on equity than that of return on asset. It can be interpreted that oil & gas and power sector are providing more equity growth as compared to other sector. Another interesting point from the tables is that equity growth for textile sector is negative than that other sector column 4, row 3 of Tables 1. This table can be explained that the textile sector is having not dividend paying behavior as compared to other sectors.

Table 2
Descriptive data for variable used in all sectors (using both firm's performance, corporate governance)

Sectors	Overall Population		Textile Sector		Cement Sector		Board Paper Sector		Oil & Gas Sector		Power Sector	
Variable	Mean (Std. Dev.)	Min (Max)	Mean (Std. Dev.)	Min (Max)	Mean (Std. Dev.)	Min (Max)	Mean (Std. Dev.)	Min (Max)	Mean (Std. Dev.)	Min (Max)	Mean (Std. Dev.)	Min (Max)
ROA	0.07 (-0.18)	-0.96 (0.83)	0.01 0.16	-0.84 0.98	0.14 0.20	-0.64 0.87	0.12 0.61	-0.82 5.76	0.13 0.23	-0.43 0.98	0.05 0.23	-0.96 0.98
ROE	0.09 -0.24	-0.97 0.96	-0.01 0.23	-0.88 0.51	0.09 0.15	-0.50 0.55	0.05 0.15	-0.56 0.45	0.21 0.33	-0.97 0.89	0.38 3.57	-0.94 50.06
RES	6.95E+06 2.93E+07	- 8.28E+07	3.16E+05 2.03E+06	- 8.39E+06	4.13E+06 6.96E+06	- 6.26E+06	3.82E+06 4.85E+07	- 6.22E+04	2.16E+07 3.36E+07	- 1.74E+08	1.09E+07 5.12E+07	- 8.28E+07
DCR	1.24 3.57	-16.27 37.55	1.30 4.48	-16.27 26.91	0.94 1.94	-0.88 10.21	0.88 2.92	-12.39 14.82	2.53 5.50	-7.81 37.55	1.04 2.85	-6.76 21.50
BS	17.07 36.23	0.00 383.00	9.75 2.26	7.00 15.00	40.51 64.00	0.00 383.00	8.89 1.94	7.00 13.00	6.06 4.36	2.00 15.00	7.92 1.09	7.00 10.00
BC	0.25 0.29	0.00 2.00	0.14 0.14	0.00 0.48	0.36 0.45	0.00 2.00	0.22 0.16	0.00 1.00	0.33 0.25	0.00 1.50	0.21 0.16	0.00 1.00
AGE	34.30 23.10	-1.00 130.00	35.94 25.16	6.00 130.00	33.39 13.47	10.00 62.00	34.78 14.47	16.00 65.00	53.78 30.80	8.00 118.00	23.70 22.01	-1.00 103.00
LEV	0.05 13.74	-304.47 196.09	-1.38 28.03	-304.47 196.09	0.53 1.22	-2.92 3.24	0.43 0.44	-0.11 1.90	0.36 6.13	-34.88 31.54	0.70 2.04	-10.54 10.20
SIZE	11.49 9.08	-17.46 175.80	14.10 1.45	9.70 18.01	16.09 0.99	14.00 18.29	14.38 2.29	9.15 17.97	17.36 1.96	0.00 19.73	15.98 2.00	12.08 19.72

Notes: ROA, ROE, RES, DCR, BS, BC, AGE, LEV and SIZE refer to the measure of firm's profitability (return on asset and return on equity), reserve is the unappropriated profit/loss. Dividend cover ratio calculated as PAT is divided by dividend paid to ordinary shares. Corporate governance is measured by board size is the number of executive & non- executive directors on the board of the firm and board composition is the percentage of independent non-executive director to total directors. Three control variables including firm age is the number of years since incorporated, Leverage is the total debt to total asset, and firm size is the natural log of the book value of total assets.

Table 3
PAIRED WISE CORRELATION COMPARISON

Sectors	Overall Population		Textile Sector		Cement Sector		Board & Paper Sector		Oil & Gas Sector		Power Sector	
Variable	ROA	ROE	ROA	ROE	ROA	ROE	ROA	ROE	ROA	ROE	ROA	ROE
RES	0.2037*	0.2284*	0.2643*	0.4289*	0.057	0.1808*	-	0.0413	0.2730*	0.2710*	0.2224*	0.3734*
DCR	0.1227*	0.2465*	0.1681*	0.3243*	0.2131*	0.3737*	0.018	0.3737*	0.0446	0.2123*	0.1178	0.0961
BS	0.1304*	-0.0301	0.1253	0.1267	0.1763*	0.0853	0.0811	0.1253	0.1128	0.1636	0.1488*	-0.072
BC	0.1054*	0.0542	0.113	0.0736	-0.0479	-0.0231	0.1006	-0.1911	0.2402*	-0.1701	0.1418*	0.0966
AGE	0.0239	-0.059	-0.13	0.2007*	0.0034	0.2010*	0.0193	0.2000*	-0.0386	-0.1457	0.0378	0.0851
LEV	0.0076	0.023	0.078	0.0554	-0.092	-0.0509	0.1809	0.0565	0.1992*	-0.1619	0.1101	-0.0218
SIZE	0.1824*	-0.0674	0.0337	0.0764	0.1791*	-0.0291	0.0008	0.2425*	-0.0278	-0.1049	0.1451*	-0.0435

The Table 3 shows pairwise correlation matrix of all the sample companies from 2005-2016. This table shows descriptive statistics of all sample of companies from 2005-2016. ROA, ROE, TQ is the measure of profitability. DCR is the dividend cover ratio calculated as PAT is divided by dividend paid to ordinary shares. RES is the unappropriated profit/loss taken from the annual reports of the companies. BS is the number of executive & non- executive directors on the board of the firm. BC is the percentage of independent non-executive director to total directors. LEV is the total debt to total asset. FAGE is the number of years since incorporated. (FSIZE) is the natural log of the book value of total assets. Standard errors in parentheses

* Significance at 10%.

** Significance at 5%.

*** Significance at 1%.

Regression Analysis

In order to determine whether a pooled or panel data regression model is most appropriate, a Breusch–Pagan test is conducted. The p-value rejects the null hypothesis of a pooled regression; thus, the estimation is conducted using a panel data model.

Estimated Generalized Least Square (EGLS) model

To check the robustness of the results in Table 3, Estimated Generalized Least Square (EGLS) regression model is estimated using the sample data. Table 3 reports the results obtained from EGLS regression. Table 3 shows the regression results for all sectors after accounting for all control variables. The table presents the results using both return on equity and return on asset as the dependent variables. The two different methods of computing the firm's performance are also employed. The coefficient of determination, R^2 for two models explained that 9% of all variables explains the model ROA, 12% of all variables explains the model ROE. The intercept/constant value of ROA and ROE are significant at 1%.

VARIABLES	Overall Population	
	ROA	ROE
RES	1.19e-09***	1.83e-09***
	-2.08E-10	-2.80E-10
DCR	0.00534***	0.0155***
	-0.00169	-0.00228
BS	0.000263	-0.000669***
	-0.000176	-0.000237
BC	0.03	0.0333
	-0.0214	-0.0287
AGE	0.000144	-0.000780**
	-0.000263	-0.000353
LEV	7.64E-05	0.000416
	-0.000436	-0.000586
SIZE	-0.00348***	-0.00305***
	-0.000703	-0.000944
Constant	0.0798***	0.126***
	-0.0152	-0.0204
Observations	814	814
R-Squared	0.098	0.124

Number in parentheses shows the t value.

For above analysis, we used return on assets and return on equity as performance measure. Dividend coverage ratio is measure of dividend paying behaviors and other independent variable are capital reserve and board size (measure as number of board of directors. Board composition is used as control variable, measured as total non-executive independent directors to total directors. Other control variables are firm age measured as total numbers of year of company established, financial leverage is calculated by total debt to total assets and firm size is the natural log of total assets.

* Significance at 10%.

** Significance at 5%.

*** Significance at 1%.

In order to get a clearer picture of the impact of higher or lower firm's performance and their dividend paying behavior, it is better to segregate the sample into sector wise

comparison. Table 4 provides the results for the firm's performance for all major five sectors. A test for the impact of dividend paying behavior and corporate governance on the performance of the major sectors conducted using the same EGLS Fixed Effect Model used in previous regression, and the results are presented in Table 4.

Textile sector

The results show a positive and statistically significant relationship between the RES and ROA, ROE at 1% level of significance in textile sectors. It indicates the reserve will increase the ROA and ROE. There are statistically insignificant positive relationship between DCR, BC, BS, LEV, SIZE and ROA. It indicates that these variables may increase the capacity of ROA. These results are in line with the results of (Johannisson & Huse, 2000), Hartvigsen (2007), Hendry (2002), Heenetigala & Armstrong (2007) There is statistically insignificant negative relationship between AGE and ROA. These results are in line with the results of Welch (2003), (Myers & Majluf, 1984).

DCR, AGE are statistically significant relationship with ROE at 1% level of significance but leverage having statistically significant relationship with ROE at 10% level of significance. These results are in line with the results of Fama & French (2002); Naceur et al. (2005); Amidu & Abor (2006); Naeem & Nasr (2007); Okpara (2010). BS and SIZE having statistically insignificant positive relationship with ROE but BC having statistically insignificant negative relationship with ROE. It indicates that BS and SIZE may increase the capacity of ROE. These results are in line with the results of (Klein, 1998; Dalton & ctg, 1999; Rouf, 2011, Coles & ctg, 2008). But BC may decrease the capacity of ROE. These results are in line with the results of (Elloumi & Gueyié, 2001). On the basis of the result, the dividend paying variable and corporate governance variables have an effects on the firm's performance especially in the textile sector.

Cement sector

The results show a positive and statistically significant relationship between RES, DCR, BS, SIZE and ROA at 1% level of significance in cement sector. It indicates these variables will increase the ROA. These results are in line with the results of (Cheema & Din, 2013; Bravo et al., 2006). There are statistically insignificant positive relationship between BC, AGE and ROA. It indicates that these variables may increase the capacity of ROA. These results are in line with the results of (Jenkinson & Mayer, 2012), (Drobotz et al., 2003) and (Evans, 1987a) There is statistically insignificant negative relationship between LEV and ROA. These results are in line with the results of (Ross, 1977; Graham, 1996).

DCR is statistically significant positive relationship with ROE at 1% but SIZE and AGE having 5% and 10% level of significance and negative relationship with ROE. These results are in line with the results of (Marsh, 1982). RES, BS, BC and LEV having statistically insignificant positive relationship with ROE. It indicates that these variables may increase the capacity of ROE. Based on the outcome, the dividend coverage ratio and corporate governance factors effectsly affect the firm's performance particularly in the cement sector.

Board & Paper Sector

The results show a negative and statistically significant relationship between LEV and ROA at 10% level of significance in board and paper sectors. It indicates LEV will decrease the ROA. These results are in line with the results of (Salawu, 2007; Kalu, 2009; Abdeljawad et al., 2013; Haron, 2014). There are statistically insignificant negative relationship between

RES, DCR, BC, AGE and ROA. It indicates that these variables may decrease the capacity of ROA. These results are in line with the results of (Onyinlola et al., 2014; Zakaria et al., 2012; Nazir et al., 2010). There is statistically insignificant positive relationship between BS and ROA. These results are in line with the results of (McConaughy et al., 2001).

DCR and SIZE are statistically significant positive relationship with ROE at 1% and 5% level of significance but BC is statistically significant at 10% and negative relationship with ROE. These results are in line with the results of (Brickley & James, 1987) RES and BS having statistically insignificant negative relationship with ROE. It indicates that these variables may decrease the capacity of ROE. AGE is statistically insignificant positive relationship with ROE. It indicates that AGE may increase the capacity of ROE. These results are in line with the results of (Dunne & Hughes, 1994).

The results show a positive statistically significant relationship between RES and ROA at 1% level of significance in OG sector. It indicates RES will increase the ROA. These results are shown a new evidence to policy maker that are predictor for performance in this study. There are statistically insignificant negative relationship between LEV, BC and ROA. It indicates that these variables may decrease the capacity of ROA. There are statistically insignificant positive relationship between DCR, BS, SIZE and ROA. These results are in line with the results of Agyei & Marfo-Yiadom (2011), Onyinlola et al. (2014), there is statistically insignificant negative relationship between AGE and ROA. These results are in line with the results of (Dunne & Hughes, 1994).

RES and DCR are statistically significant positive relationship with ROE at 1% and 10% level of significance. BS having statistically insignificant positive relationship with ROE. It indicates that these variables may increase the capacity of ROE. These results are in line with the results of (Yasser et al., 2011). BS, AGE, LEV, SIZE having statistically insignificant negative relationship with ROE. It indicates that these variables may decrease the capacity of ROE. These results are in line with the results of (Kajola et al., 2015). In light of the result, the dividend coverage ratio and corporate governance factors effectively impact the company's performance especially in the Board & Paper Sector.

D. Oil & Gas Sector

The results show a positive statistically significant relationship between RES and ROA at 1% level of significance. It indicates RES will increase the ROA. These results are shown a new evidence to policy maker that are predictor for performance in this study. There are statistically insignificant negative relationship between LEV, BC and ROA. It indicates that these variables may decrease the capacity of ROA. There are statistically insignificant positive relationship between DCR, BS, SIZE and ROA. These results are in line with the results of Agyei & Marfo-Yiadom (2011), Onyinlola, et al. (2014), there is statistically insignificant negative relationship between AGE and ROA. These results are in line with the results of (Dunne & Hughes, 1994).

RES and DCR are statistically significant positive relationship with ROE at 1% and 10% level of significance. BS having statistically insignificant positive relationship with ROE. It indicates that these variables may increase the capacity of ROE. These results are in line with the results of (Yasser et al., 2011). BS, AGE, LEV, SIZE having statistically insignificant negative relationship with ROE. It indicates that these variables may decrease the capacity of ROE. These results are in line with the results of (Kajola et al., 2015). As per the outcomes, there is solid connection between the dividend paying behavior (DCR) and corporate governance factors and these the two factors affecting company's performance particularly in Oil and Gas sector.

E. Power Sector

The results show a positive statistically significant relationship between RES, BS, BC and ROA at 1% and 5% level of significance in power sector of Pakistan. It indicates these variables will increase the ROA. These results are in line with the results of (Daily et al., 2003), there are statistically insignificant positive relationship between DCR, AGE, LEV and ROA. It indicates that these variables may increase the capacity of ROA. These results are in line with the results of (Miller & Modigliani, 1961). There are statistically insignificant positive relationship between DCR, BS, SIZE and ROA. These results are in line with the results of (Miller & Modigliani, 1961; Aggarwal et al., 2007).

RES is statistically significant positive relationship with ROE at 1% level of significance. DCR, BC having statistically insignificant positive relationship with ROE. It indicates that these variables may increase the capacity of ROE. These results are in line with the results of (Daily et al., 2003), BS, LEV having statistically insignificant negative relationship with ROE. It indicates that these variables may decrease the capacity of ROE. These results are in line with the results of (Kim et al., 2004; Liang & Li, 1999; Yuanto, 2003; Sanda et al., 2005; Bokpin et al., 2006).

In Table 5, we used return on assets and return on equity as performance measure. Dividend coverage ratio is measure of dividend paying behaviors and other independent variable are capital reserve and board size (measure as number of board of directors. Board composition is used as control variable, measured as total non-executive independent directors to total directors. Other control variables are firm age measured as total numbers of year of company established, financial leverage is calculated by total debt to total assets and firm size is the natural log of total assets. Considering the outcome, the dividend coverage ratio and corporate governance factors having impact on the firm's performance particularly in the Power Sector.

Sectors	Textile Sector		Cement Sector		BOARD & PAPER SECTOR		OIL & GAS SECTOR		POWER SECTOR-	
VARIABLES	ROA	ROE	ROA	ROE	ROA	ROE	ROA	ROE	ROA	ROE
RES	2.03e-08***	4.62e-08***	4.29e-09**	1.65E-09	-3.09E-09	-2.12E-09	2.29e-09***	3.20e-09***	8.72e-10***	2.50e-08***
	-5.74E-09	-7.46E-09	-1.66E-09	-1.22E-09	-9.08E-09	-2.04E-09	-6.75E-10	-9.61E-10	-3.12E-10	-4.79E-09
DCR	0.00207	0.00895**	0.0254***	0.0249***	-0.00041	0.0169***	0.000243	0.00962*	0.00815	0.0638
	-0.0027	-0.00351	-0.00744	-0.00545	-0.0223	-0.00501	-0.00397	-0.00565	-0.00556	-0.0854
BS	0.00489	0.00325	-	3.79E-05	0.0192	-0.00069	0.00373	0.00793	0.0348**	-0.0946
	-0.00505	-0.00657	-0.00026	-0.00019	-0.0438	-0.00984	-0.00658	-0.00937	-0.0155	-0.238
BC	0.0763	-0.0261	0.0011	0.0053	-0.211	-0.159*	-0.215**	-0.172	0.226**	0.396
	-0.0838	-0.109	-0.0308	-0.0226	-0.409	-0.0919	-0.1	-0.143	-0.101	-1.548
AGE	-	0.000747	0.000538	-0.00141*	-0.00454	0.00191	-0.00014	-0.00148	0.00024	0.00976
	-	0.000517	-0.00067	-0.00104	-0.00076	-0.00659	-0.00148	-0.00078	-0.0011	-0.00072
LEV	0.000629	0.000846*	-0.0145	0.0109	-0.262*	0.0525	-	-0.00785	0.0102	-0.0322
	-	0.000392	-0.0106	-0.00777	-0.155	-0.0349	-0.00356	-0.00507	-0.00765	-0.118
SIZE	0.00116	0.00162	-0.0442***	-0.0288**	0.0151	0.0167**	0.00671	-0.00668	0.0131	-0.0399
	-0.00886	-0.0115	-0.0155	-0.0114	-0.0322	-0.00724	-0.012	-0.017	-0.00825	-0.127
Constant	-0.0479	-0.0212	0.829***	0.565***	0.0568	-0.249**	0.0243	0.326	-0.517***	1.136
	-0.126	-0.164	-0.25	-0.183	-0.553	-0.124	-0.246	-0.35	-0.159	-2.443
Observations	198	198	220	220	99	99	99	99	198	198
R-Squared	0.119	0.282	0.155	0.182	0.049	0.248	0.199	0.211	0.13	0.149

CONCLUSION AND FUTURE RECOMMENDATIONS

The main objective of the study is to test the effect of dividend paying behavior and corporate governance on firm performance of five major sectors (cement, textile, board & paper, power, oil& gas) of Pakistan. The role of corporate governance and dividend paying behavior of the firm play very important role in the performance. There are positively significant relationship of corporate governance and dividend paying behavior with

performance of five sectors of Pakistan. In addition, the evolving business and economic environment have always brought about consistent conclusions. Thus, the period of study gives a new evidence to investors and policy makers of the companies who follow the trend of dividend paying behavior and make policies for the organizations.

The analysis undertaken in this paper address the literature gaps for the different dividend paying behavior of the different sectors in Pakistan. The results of the study can play an instrumental role to the researchers and regulators regarding corporate governance rules and dividend payments. This paper identifies the literature gaps of dividend paying behavior and corporate governance in five major (cement, textile, board & paper, power, oil& gas) industries of Pakistan with the panel data analysis. In the light of result outcomes, the dividend paying behavior and corporate governance factors (board size and board composition) having impact on the firm's performance including textile sector, cement sector, paper and board sector, power sector and oil & gas sector. Unappropriated profit/reserve as an IV and analyses the most applicable existing studies that can be useful for the regulators and policy makers for enhancing the dividend paying behavior and corporate governance improvement particularly in the above industries of Pakistan. This paper also will create opportunities for the future researchers by considering the factors of dividend paying behavior that how can it be derived in decision making of investors.

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