Determinants of Dividend Payout Policy: A Case of Pakistan Engineering Sector

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The return on investment can be divided in capital gain and dividend payouts. It is a difficult task for management to allocate a sufficient amount in both segments, especially to prevent from agency problems. The firms pay dividends only when enough amounts have after meeting their requirements and short term needs. The purpose of the present study is to empirically investigate the factors determine the dividend payout decisions in the case of Pakistan's engineering sector by using the data of thirty-six firms listed on Karachi Stock Exchange from the period 1996 to 2008. By employing various panel data techniques like fixed and random effects, the results suggest that the previous dividend per share, earnings per share, profitability, cash flow, sales growth, and size of the firm are the most critical factors determining dividend policy in the engineering sector of Pakistan.

Key words: *dividend payouts, agency problem, engineering sector*

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1. Introduction

Dividend policy is a one of the most debated topics and a core theory of corporate finance which still keeps its prominent place. Many researchers presented various theories and uncountable empirical evidences, but the issue is still unresolved and open for further discussion. It is among top ten unresolved problems in the finance literature and we have not an adequate explanation for the observed dividend behavior of the firms [Black (1976), Allen and Michaely (2003) and Brealey and Myers (2005)]. In developed economies, the decision whether paying dividends or keep as retained earnings has been taken very carefully by both investors and the management of the firm (Glen et al. 1995).

Black (1976) wrote that "the harder we look at the dividend picture, the more it seems like a puzzle, with pieces that just do not fit together". There are several reasons whether firms should pay dividends or not. The "dividend puzzle"; why firms pay dividends and stock holders pay attention to dividends and still unresolved. Many hypotheses have been drawn to shed some light on this puzzle but the problem still exists. Normally a firm faces the problem of allocation of earnings, whether to distribute among shareholders or retaining for reinvestment and promote the firm growth. Retained earning is a main internal source of financing, but higher retained earning mean fewer dividends and vice versa.

According to the pecking order theory, firms prefer to use internal sources of finance first, later debt and finally equity finance obtained from stock issues. The more profitable the firms are, the more internal finance they will have, hence, larger dividends. Consequently, some researchers consider dividends less important as compared to capital gains. If business grows, an earnings stream of shareholders also grows; hence it is difficult for management to adopt an optimal policy. Practically every firm adopts a dividend policy, which retains a portion of the net earnings in such a manner that it will not comprise a threat to dividend payments. Bernstein (1996) and Aivazian et al. (2003)

investigated this puzzle and concluded that some important questions are remained unanswered. So in the literature there is no single explanation of dividends and researchers do not agree on a single point. The managers can prevent from agency problems to pay the desired amount of cash dividends.

The issue of dividend policy is important for several reasons. Firstly, the firm can use dividends as an instrument for financial signaling to the outsider vis-a-vis the stability and growth prospects of the firm. Secondly, dividend plays a significant role in a firm's capital structure. According to the "residual dividend" theory, a firm pay dividend only if does not have any opportunity of profitable investment. However, many researchers have established a relationship between firm dividend and investment decisions. Firms normally do not like to reduce the dividend payments; firm's stock price also affected by dividend patterns, more dividends can also increase the stock price of the firm.

During the last fifty years, a lot of empirical and theoretical work has been done, summarizing all these studies; we can conclude three dominating views. i) Dividend payouts can positively change the market value of the firm. [Lintner (1962), Gordon (1963)] ii) A positive change in the dividend decreases the firm's value. [Litzenberger and Ramaswamy (1979)] iii) Dividend policy does not affect the market value of the firm. [Miller and Modigiliani (1961)]. However, it can be conclude that the factors determining the dividend policy are mixed.

The engineering sector is a prominent sector of Pakistan and works as an engine of economic growth in the economy. Its contribution to GDP is more than $2000 million in 2008 and it provides employment to a large number of people (directly & indirectly). The total worth of capital employed by this sector was more than $1050 million in 2008. It produces a lot of valuable goods (especially capital goods) which play a significant role in the development of the country. So, it is

important to find the factors that determine and affecting the dividend payout policy of this sector.

The objective of the present study is to identify the role of various factors determining the firms' dividend paying behavior by using the sample of thirty-six Pakistani engineering firms listed on Karachi Stock Exchange (KSE), for the period of 1996 to 2008. According to our knowledge, to date, not a single study has been conducted using data from the engineering sector of Pakistan. The dividend payout pattern of Pakistani engineering firms is not smooth and consistent, even some firms did not pay dividends in a single year in the whole study period, so we tried to find the answer to the questions why the engineering firms are not able to smooth their dividends and which factors influencing the dividend policy in the case of Pakistan.

The remaining paper is organized as follows. Section 2 provides a literature review. Section 3 develops the empirical model and econometric methodology. The section 4 consists of the empirical results, and the last section concludes.

2. Literature Review

Over the past 50 years a great attention was given to determine the factors influencing dividend payout policy. A vast literature is available in this regard, however, the puzzle is still unresolved and open for further discussion. As Black (1976) raises the question, "Why do firms pay dividends?" further he raises a second question, "Why do investors pay attention to dividends?" although, the answers may appear clear, but Black concludes that they are not. As we try to explain the fact, the more it seems like a puzzle, with pieces that just do not fit together. Various factors can be considered as the determinants of dividend payout policy and a number of logics for dividend payout policy have been declared in the literature, however, the researchers are not agreed on a single point.

Miller and Modigliani (1961) considered as the pioneer in this field. Their irrelevance theorem claimed that the firm's dividend policy is unrelated to its current market value. A number of researchers however do not agree with them due to their assumption of perfect capital market.

By paying a sufficient amount of dividend firms can prevent from the agency problem. The dividend payouts are helpful to keep firms in the market, where monitoring of managers is available at low cost. The managers make financial policy trade-offs to control agency cost in an effective way [Easterbrook (1984); Crutchley and Hansen (1989); Naceur et al. (2005); Al-Malkawi (2007)]. A free cash flow is helpful for a firm to share it with stockholders as dividends and pay the debt in order to reduce the possibility of these funds being wasted on unprofitable projects [Jensen (1986); Amidu and Abor (2006)]

Firms' investment policies have a significant impact on its dividend payout policy; the firms with less investment plans has greater amount to distribute as dividends. Due to the higher investment opportunities firms deprive from higher dividends to lower. So the investment opportunities has a negative relationship to the dividend payouts [Smith and Watts (1992); Glen et al. (1995); Fama and French (2002); Naceur et al. (2005); Naeem and Nasr (2007)]. Another factor affecting the dividend policy is the ownership of firm; state owned firms follow a smooth dividend pattern as compare to family owned firms. The family owned firms are uneager to pay dividends, whereas the state owned firms are more reluctant to diminish the dividend amount. The insider ownership also play a significant role in dividend policy [Nishat and Bilgrami (1994); Gugler (2003); Al-Malkawi (2007); Chen and Dhiensiri (2009)].

The dividend policy is quite different in emerging markets as compare to developed economies, and seems to be affected by a number of factors [Al-Kuwari (2009); Glen et al. (1995)].Due to several reasons like taxes pay procedure, stock market volatility and certain asymmetry

information the dividend payout pattern is different in emerging markets as compare to developed nations. Another reason is that in emerging markets the firms focus on dividend payout ratios as compare to the level of dividends paid (Glen et al. (1995)). Contrary to Al-Kuwari (2009) and Glen et al. (1995) the Aivazian et al. (2003) found dividend pattern of firms in emerging market same as U.S firms. Higher the earnings of a firm, greater the size and firms with foreign ownership prefer to distribute a higher and constant amount in dividend payouts according to their earnings and size [Nishat and Bilgrami (1994); Eriotis (2005); Al-Malkawi (2007)].

The liquidity of the firm leaves a negative impact on the firms' dividend payout decision. The stock market liquidity and dividend are substitutes in the sight of investors, so the firm's dividend policy is associated to the liquidity of its common stock. As a result firms with more liquid common stock, distribute less cash dividend [Naeem and Nasr (2007); Banerjee et al. (2007)]. The more profitable firms are willing to distribute a higher amount of dividend payouts. The greater profitability not only positively affects the firms' current dividend but dividend yield also. Whereas, the riskier firms distribute lower dividends and hence lower dividend yields. The firms which can easily fulfill their short term needs and want to improve their current payouts than last year are more willing to pay dividend [Fama and French (2002); Naceur et al. (2005); Amidu and Abor (2006); Naeem and Nasr (2007); Okpara (2010)].

Moreover, by the dividend pattern of the firm its stock price is also affected. The major goal of a manager is to maximize the value of the company or wealth of the shareholders, and the share price indicate that how a manager is successful in achieving these goals; higher a dividend payment larger its share price. Higher and consistent dividend payments leads a greater demand of its shares, as a result its share price also move upward [Pettit (1972); Watts (1973); Nishat and Saghir (1991); Glen et al. (1995)]. So, to keep this success firms normally are unwilling to cut or diminish the dividend payouts

[Woolridge and Ghosh, (1985); Sexana(1999)]. The dividend policy not only affects the stock price volatility but also support the arbitrage realization effect, duration effect and the information effect (Nishat and Irfan 2004).

3. Data and Methodology

The present study investigates the factors determine the dividend payout policy of Pakistani engineering firms listed on KSE. The data employed is derived from Balance Sheet Analysis of KSE listed firms published by State Bank of Pakistan, covered the thirteen year period; 1996 to 2008 of thirty-six firms. Due to unavailability of all engineering firms' data listed on KSE to construct a balance panel and for selected time period, the study used data for thirty-six firms which represent more than 90 % of total engineering industry. Without differentiation this study includes both types of firms (e.g. dividend paying and non paying firms). The exclusion of non paying firms may cause the selection bias problem (see Kim and Maddala 1992).

The nature of the data allows us the use of panel techniques. The panel regression model differs from a normal time-series or cross section model by attaching the double subscript to each variable. The general form of the panel data model can be written in bi-variate model as:

$$Yit = \alpha it + \beta Xit + \varepsilon it$$

where Yit represents the dependent variable and Xit contains the set of explanatory variables in the model whereas the subscripts i and t denote the cross-sectional and time-series dimension respectively. In the light of the above model and on the base of selected variables the current study used econometric model as shown below

$$DPSit=\beta 1+\beta 2DPSit-1+\beta 3EPSit+\beta 4PROFit+\beta 5CFit+\beta 6SGit+\beta 7SIZEit+\beta 8LIQit+\mu it$$

$i = 1,\ldots,N$ and $t = 1,\ldots,T$

The explanatory variables used for the determination of dividend policy are explained with expected signs in Table: 1, whereas the dependent variable is dividend per share.

Table 1

Description and Expected Sign of Variables

Variables	Description	Expected Sign
DPS_{it-1}	Last year's dividend per share	+
EPS	Earnings per share	+
PROF	Profitability; measured by net income	+/-
CF	Natural logarithm of firm's cash flow	+/-
SG	Sales growth	+/-
SIZE	Firm's size; measured by natural logarithm of total assets	+
LIQ	Liquidity; measured by current ratio	+

To estimate the mentioned model, the present study used three techniques e.g. fixed effects approach (FEM), random effects approach (REM) and pooled estimation etc. The results can be seen in Table: 2

Table 2

Results Based on OLS, FEM and REM

	OLS	FEM	REM
DPS_{it-1}	0.172* (6.734)	0.132* (5.112)	0.163* (6.687)
EPS	0.375* (19.477)	0.393* (16.55)	0.374* (19.366)
PROF	1.208* (2.903)	1.457* (3.072)	1.276* (3.141)
CF	-4.056* (-6.81)	-5.998* (-8.325)	-4.49* (-7.57)
SG	3.049* (4.717)	2.607* (2.626)	3.286* (4.876)
SIZE	0.815**	2.227*	1.026*

	(2.163)	(3.387)	(2.574)
LIQ	-0.351 (-1.033)	-0.276 (-0.661)	-0.348 (-1.025)

4. Results

The regression results for engineering firms are presented in Table 2. The results by all three techniques used in the study indicate that the dividend per share has a positive relationship with last year's dividend per share, earnings per share, profitability, sales growth and size of the firm, and negative relationship with cash flow of the firm. These results provoke us to make some conclusions. First, management of engineering firms is more careful about the level of last year's dividend payouts. The firms normally want to increase their dividend amount than the previous level, so dividend per share is a positive function of its lag in our model. So, their dividend pattern seems smooth. As their earning grow up the share holders also benefited before ever. Moreover, greater profitability enabled the firms to easily afford a higher amount for dividend payouts, which does not disturb its financial needs. Dividend per share is also a positive function of profitability in the case of Pakistani engineering firms; it implies that firms announce more cash dividend as their net income boost up. Additionally, larger a firm in size have more chances to distribute cash dividend. The dividend per share is a negative function of cash flow, it can be interpreted as that firm has more cash flow they have several options to invest it and plough back instead of distribute among shareholders as dividend, and thus cash flow has a negative relationship with dividend payouts. The higher sales of the firms' products tend to increase its profitability and hence more cash for its needs and operations, so firms have enough amounts to distribute among shareholders as dividends. In current study liquidity measured by current ratio and it refers easily to converting the assets into cash, in the case of Pakistani engineering firms it has not significant impact

on the dividend payouts. The current study's results follow the Amidu and Abor (2006) and Al-Kuwari (2009).

5. Conclusion

The present study investigates the factors determine the dividend policy of Pakistani engineering firms listed on Karachi Stock Exchange by using the panel techniques like OLS, fixed effects and random effects approach of thirty-six firms during a thirteen year period from 1996 to 2008.

The results show that dividend per share is a positive function of last year's dividend, earning per share, profitability, sales growth and the size of the firm, whereas has a negative association with cash flow. So in the light of our results we can say that the firms with higher sales and profitability have enough cash and other sources, to distribute more cash dividend among share holders. The larger firms have more access to different sources of finance are more willing to increase the cash dividend. Firms do not willing to cut their dividends from the previous level rather the management perform every task to meet or increase the payout ratio from its previous level. The results indicate a negative association between dividend payouts and cash flow, which suggest that firms plough back their extra cash. The liquidity of the firm has found unrelated to dividend payouts in the case of Pakistani engineering firms.

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