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Impact of Political Risk and Capital Market Development on Dividend Policy: Evidence from Pakistan Stock Exchange

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Abstract

Dividend policy decision is a puzzling phenomenon in finance literature. This study intends to examine the considerable factors of dividend policy among the non-financial listed companies in Pakistan. The research study intends to explore the influence of firm and country level determinants on the dividend in Pakistan. To achieve the objective, this study collected 134 Pakistani non-financial firms' data from 2000 to 2017 using POLS and FE approach. The results found that profitability and corporate tax have influencing and positive effect, while size of the firm and investment opportunities shows significantly adverse influence on dividend policy at firm level factors. Under country level factors, inflation, stock market development, and debt market development have negative impact, however political risk has positive influence on dividend policy. This study is beneficial for the board of directors and management of organizations to establish adequate dividend policy for the organization. It will also be useful for stakeholders of the organization regarding investment decision.

Keywords: Dividend Policy, Capital Market Development, Political Risk, Non-Financial Firms

1. Introduction

Dividend policy is one of the important areas in corporate finance literature. Dividend refers as a shareholders benefit in return on the investment. It can also be defined as the sharing of income with the shareholders based on proportion of ownership. Dividend policy determine outflow of the fund to the investor and amount of the fund to be retained and invest in future. The pioneer study of Black (1976) documented that dividend is as a puzzle. Likewise, Brealey et al (2005) discussed ten major issues of the corporate finance that are debatable, dividend policy decision is one of them. Hence, it constitutes portion of the profit which is earned by the organization and seen as one of the core decisions in finance (Tahir et al., 2021).

A large amount of literature has examined the numerous determinants that influence the dividend policy of an organizations (Setiawan & Vivien, 2021; Gul et al., 2020; Al-Najjar & Kilincarslan, 2018). By and large, there is an emerging consensus of literature that offers contradictory findings concerning dividend policy. Past studies mainly focused on developed economies, however limited studies have been found to uncover the significant factors of dividend policy in emerging economies (Labhane, 2017; Fatemi& Bildik, 2012). Thus,

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the controversial findings of past studies on dividend policy warrant the need to assess the significant determinants of dividend policy in emerging economies, particularly in Pakistan. Therefore, this paper identifies the considerable factors that affect the decision of dividend policy among non-financial Pakistani firms listed on PSX and explore the significance of those determinants on the decision of dividend policy.

Over the last few decades, Pakistan's capital market has been undergone a major restructuring program (Khan & Rashid, 2020; Arif, 2007). A certain number of measures have been taken to liberalize the investment procedures in Pakistan Stock Exchange (PSX). For instance, capital formation is encouraged by stock exchanges, enlarge size and capital markets depth. Moreover, there are several features in the capital market and Pakistan's economy that are important to examine the dynamics of dividend policy. Specifically, companies listed on the PSX have full discretion in deciding their dividend policy, excluding section 241 of the companies act 2017, which obliges them to disburse dividends from the company's profits. In addition, the Securities and Exchange Commission of Pakistan (SECP) or the corporate sector has not established any specific policies governing the legal dividend payment policy. As well, there are no concrete regulatory body to make it binding for the firms to pay dividend. Pakistan Stock Exchange has made significant progress in its history, with a market capitalization of Rs. 37 million with 5 listed small companies. In 1960, it was expanded to 81 companies with a total paid-up capital of Rs 1.8 billion, while at present, 546 companies are listed with a market capitalization of Rs 7.7 trillion as on December 31, 2018. All listed companies are divided into different sectors. As an emerging economy PSX have 10 sectors by volume, whereby commercial banks sector is the largest sectors by volume (21%) followed by chemical sector (19%) and cement sector (10%) The remaining seven sectors have less than 10% portion by volume. Figure 1 shows top economic groups of Pakistan as per Pakistan's Stock Exchange (PSX).

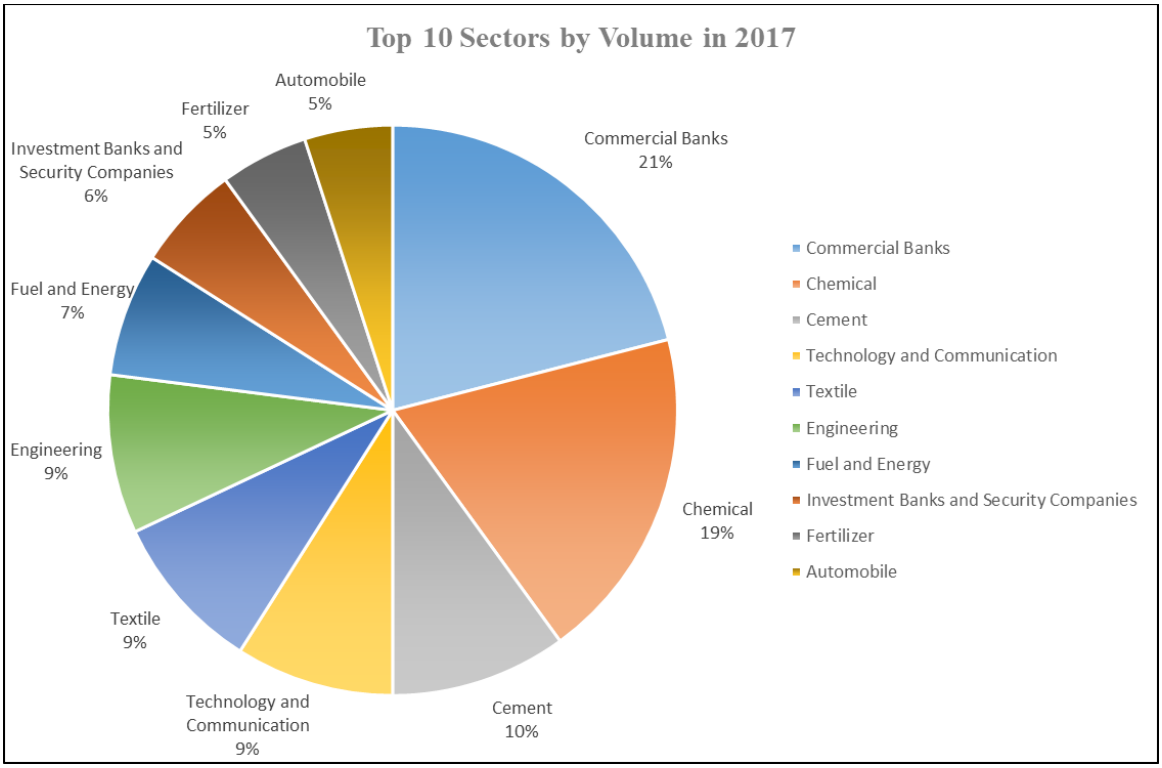

Figure 1 Top Economic Groups
Source: Pakistan Stock Exchange (2017)

The current study extend the literature by adding new evidence that enlightens, country level variables play a major role to influence the dividend policy in an emerging economy. Particularly, stock market development and debt market development may have directly affect the share market and return, ultimately impact on expected dividends. In addition, political risk is an underlying factor due to war on terror and its unintended consequences for Pakistan. In such situation, this study diverted the attention to recognize the importance of political risk that might affect dividend policy. The findings of this research study might offers valuable policy implications. If the results supports that current guidelines articulated by the SECP are strict to protect the interests of investors and economic, political and legal changes that inevitably effect on dividend policy, then policy makers should suggest measures that strengthen the political system to improve the stock market stability, eventually hamper the country level-dividend policy nexus. These policies also help the government, financial managers, and investors in planning for future political environment and investments. This paper shed light on the important factors through which managers can control the relative information asymmetry in Pakistan to reduce the agency problem. The remainder of the paper is arranged as follows. The review of literature and development of hypothesis discussed in Section 2. Section 3 discuss the data sources and methodology, followed by the findings and discussion in Section 4. Section 5 summarizes the paper.

2. Literature Review

Previous studies have provided the concrete evidence considering dividend payments on the basis of dividend policy determinanats (Dewasiri & Yatiwella, 2016; Baker et al., 2015; Bhattacharyya, 2007). Although not an individual theory or element is likely to describe a dividend policy decision, there are some general theories of dividend policy such as bird in the hand theory, tax preference theory, signaling theory, agency cost theory, free cash flow theory, and life cycle theory. Lintner (1956) discuss the Bird-in-the-hand theory which postulates the investor prefer dividends over capital gains as risk averse. Tax preference theory argues that investors opt for capital gain over dividend if it is taxed at a lower rate than dividends. Signaling theory explains that managers use dividends as a tool to predict the company's future growth and profitability. In addition, agency cost theory demonstrates that managers utilize the enterprise resources for their interest rather than for shareholders interest. Agency disputes arise over the separation of ownership and control of a publicly traded company. The theory of free cash flow indicates that the manager has extra cash flow in hand (Fama and French, 2002). Life cycle theory defines that when a firm matures, its ability to generate cash overcome its ability to find profitable investment opportunities. Ultimately, the best strategy is for the firm to distribute its free cash flow to shareholders so that they can use the dividend.

At firm level variables, the linkages between profitability and dividend policy provide the evidence based on signaling hypothesis (Fama & French, 2002; Yarram & Dollery, 2015). Few studies shows a negative association of profitability with dividend policy. Harada and Nguyen (2011) and Kuzucu (2015) demonstrate profitability has significantly negative impact on dividend policy. Numerous past studies outlines positive association between profitability and dividend policy. Amidu and Abor (2006), Al-Malkawi (2007), Bokpin (2011), and Botoc and Pirtea (2014) identifies a positive and significant connection between profitability and dividend policy. This leads to our first hypothesis as follows;

Hypothesis 1. *Profitability has a positive influence on dividend yield*

Free Cash Flow (FCF) is a cash flow accessible for distribution to all shareholders of a business. FCF Theory defines the disbursement of dividend at the cost of investment in adverse net present value projects as a way to lessen agency disputes and decrease agency costs (Fama & French, 2002). Kadioglu & Yilmaz (2017) investigate the positive linkage between FCF and dividend policy. The relevance of FCF theory is supported by Jensen (1986) hypothesis. Therefore, a positive cash flow-dividend policy nexus bring us to our second hypothesis as follows;

Hypothesis 2. *Free cash flow has a positive influence on dividend yield*

The extensive ownership structure in large firms reduces the ability of investors to monitor their financing activities which results into greater asymmetric information and agency costs. Al-Malkai (2007), therefore, determine the size of the firm as a key determining element of dividend policy. Al-Najjar (2011) and Bokpin (2011) show insignificant influence of firm size on dividend policy. Whereas, Harada & Ngyen (2011) illustrate the firm size as an adverse factor of dividend policy. A large number of studies elucidates a positive firm size-dividend policy nexus. Acording to Yusof & Ismail (2016), Kuzucu (2015), and Patra et al. (2012) reveals that the firm size has a positive influence on dividend policy. Consequently, it is hypothesized that size of the firm show a positive influence on dividend policy. This tends to result in our third hypothesis as follows;

Hypothesis 3. *Firm size has a positive influence on dividend yield*

Liquidity is considered as one of the crucial factors of dividend policy. Lintner (1956) argues liquidity as a lesser known determinant for dividend policy. An opposing argument introduced by the study of Baker et al. (1985), which found that liquidity is an important contributing factor of dividend policy. While Banerjee et al. (2007) documents the negative and significant impact of liquidity on dividend policy. Ahmed and Javed (2008) found that liquidity is a positive and critical determinant of dividend policy in Pakistan. As a result, we expect a positive relationship between liquidity and dividend policy. As a result, the fourth hypothesis is as follows;

Hypothesis 4. *Liquidity has a positive impact on dividend yield*

Previous studies have shown conflicting evidence regarding the relationship between leverage and dividend policy. According to Lintner (1956), financial leverage is a less effective predictor of dividend policy. Similar results from Abor and Bokpin (2010) show that there is no significant linkage between dividend policy and financial leverage. Bokpin (2011), Patra et al., (2012), and Arko et al. (2014) ascertain financial leverage as one of the key factors of dividend policy. Rozeff (1982) shows that the dividend payments of highly leveraged firms are lower in order to reduce the transaction costs related with external financing. Similarly, Al-Malkawi (2007) illustrate that highly profitable companies bring down the dividend. Yusof and Ismail (2016) examine an adverse relationship among the financial leverage and dividend policy. Therefore, the arguments leads to our fifth hypothesis as follows;

Hypothesis 5. *Financial leverage has an adverse influence on dividend yield*

Investment opportunity is also an important determinant of dividend policy at firm level. Al-Malkawi (2007) elaborated that investment opportunity has a positively significant effect on dividend policy. Siilarly, Patra et al., (2012) and Basiddiq and Hussainey (2012) document the positive linkage between investment opportunity and dividend policy. However, recent studies emphasized that there is negative relationship between these variable. Al-Kayed (2017), Yusof and Ismail (2016), and Arko et al. (2014) confirms that one percent increase in investment opportunities would decrease the dividend yield. Hence, it is interesting to highlight the negative association between investment opportunities and dividend policy. This leads to our sixth hypothesis as follows;

Hypothesis 6. *Investment opportunities have an adverse relationship with dividend yield*

Seminal study of Lintner (1956) reveals that the firms are reducing their dividend payout due to increase the tax liability. In addition, Miller and Modigliani (1961) demonstrate that corporate tax is one of the important factors that creates flaws, appealing a customer who supports a particular dividend policy. Furthermore, Elton and Gruber (1970) shows the effects of corporate taxes on dividend policy. Amedo and Abur (2006) found a positive corporate tax-dividend policy nexus, while Arco et al. (2014) argue the negative influence of corporate tax on dividend. Thus, we propose our seventh hypothesis as follows;

Hypothesis 7. *Corporate tax has an adverse influence on dividend yield*

At country level variables, gross domestic product (GDP) refers as a sum of all final goods and services produced over a particular period of time. Past studies demonstrated that the GDP and dividend policy have positive relationship, implying as the economy grows then dividends grows as well (Dragota, 2006; Jong et al. (2008). However, Sasu et al (2017), Montalvan et al. (2017), and Nazir et al. (2012) documented the negative association between GDP and dividend payout. Therefore, we anticipate a negative relationship of GDP with dividend yield. This leads to our eighth hypothesis as follows;

Hypothesis 8. *GDP has a negative relationship with dividend yield*

Inflation refer as an increase in the overall price level of the goods and services in a country over a period of time. Sasu et al (2017) found negative relationship of inflation with the dividend policy. Additionally, Brahmaiah et al. (2018) also shows that inflation negatively affects the dividend policy. Conversely, Basse (2009) examined the positive relationship between dividend policy and inflation and finds out inflation as an important factor in the dividend growth. He argues that when the price level goes up, the earning magnitude increase, resulting a higher payments of the dividend to the stockholders. Batool and Javid (2014) also documented positive association between Inflation and dividend policy of the firm. Thus, we propose our ninth hypothesis as follows;

Hypothesis 9. *Inflation has a positive association with dividend yield*

The stock market development shows an improvement in stock markets ability to fulfil the needs of an economy (El Wassal, 2013).Generally, firms are willing to pay more dividend with better access to the capital market (Aivazian et al., 2003). On the other hand, Abor & Bopin (2010) reveals a significant negative association between stock market development and dividend policy. This implies a development of stock market eventually reduces the dividend payment of a firm.

Hypothesis 10. *Stock market development has negative association with dividend yield*

Debt market is a monetary marketplace where investors deal with the government and corporate for the issuance of debt instruments. In highly developed bond market economies, the issuance and trading of bonds are easier and simpler. As a result, the opportunities of borrowings increased for firm and willingness of lenders to provide more debts also increased that influence financial leverage of the firm. Past studies show that debt market development influence the financial leverage of the firm which ultimately affect the dividend policy of the firm (Rehman, 2015). On the other hand, the country's weak financial growth induce firms to raise more internal funds, which can be discouraged firms from reducing dividend payments (Brockman & Unlu, 2009). Consequently, this leads to our eleventh hypothesis as follows;

Hypothesis 11. *Debt market development is negative related to dividend yield*

Political risk is defined as the risk to investors and governments that political decisions, events or circumstances significantly impact the companies. Uncertainty is an important channel through which political risks directly impact on the financial markets. During periods of political instability, uncertainty associated with possible changes in government policies and the macro environment can greatly increase the perception of risk from capital market participants (Bekaert et al., 2014; Paster & Veronesi, 2012, 2013). Batool and Javid (2014) stated that overall governance environment may affect dividend policy. Hence, we anticipate our last hypothesis which is as follows;

Hypothesis 12. *Political risk is positive related to dividend yield*

3. Data and Methodology

This study used annual data from 2000 to 2017 across non-financial Pakistan's listed firms during the period from 2000 to 2017. The study employs unbalanced panel datasets, comprising a group of 134 companies which are observed over 18 years' dataset. This research study employs dividend yield as proxy to find out the significant determinants of dividend policy as it is one of the most common measures of a firm's dividend

policy. Besides, this study used 12 explanatory variables to investigate the contributing factors of dividend policy at firm and country-level. The firm-level variables are profitability of the firm, the free cash flows, size of the firm, firm liquidity, financial leverage of the firm, corporate tax, and investment opportunities. The firm-level variables are measured from the data obtained from firm's prospectuses and annual reports. Moreover, the country level variables such as GDP is measured from annual GDP growth rate, inflation is measured from annual inflation rate, stock market development was measured from stock traded, total value as percentage of GDP, debt market development was measured from liquid liabilities as percentage of GDP. Whereas, political risk index is measured and provided by the International Country Risk Guide (ICRG) of Political Risk Reserve (PRS) group. The current study collected secondary data from various sources such as, State Bank of Pakistan, Pakistan Stock Exchange, Federal Bureau of Statistics, Federal Reserve Bank of St. Louis, World Bank National Accounts Data, OECD National Accounts, and Political Risk Services. Table 1 shows the variable description and supporting empirical evidence.

Table 1 Variables Description and Empirical Evidence

Variable	**Description**	**Empirical Evidence**
Dividend yield	Ratio of dividend per share and market value per share	Baker et al. (2019), Dewasiri et al. (2019), Brahmaiah et al. (2018), Al-Kayed (2017)
Profitability	Return on equity	Khan and Shamim (2017), Khan and Ahmad (2017), Al-Kayed (2017), Wang et al. (2016), Khan et al. (2016)
Free Cash Flow	Operating cash flow divided by total asset	Dewasiri et al (2019), Guizani (2018), Khan and Shamim (2017)
Firm Size	Log of total assets	Khan and Ahmad (2017), Khan et al. (2017), Mui and Mustapha (2016)
Liquidity	Dividing current assets by current liabilities	Khan and Ahmad (2017), Sadik (2017), Khan et al., (2017), Mui and Mustapha (2016), Patra et al. (2012)
Financial Leverage	Dividing total debt by total equity	Sadik (2017), Khan and Ahmad (2017), Labhane (2017), Al-Kayed (2017), Mui and Mustapha (2016)
Investment opportunities	It is the ratio of market value per share and book value per share	Singla and Samanta (2019), Al-Kayed (2017), Labhane, (2017), Mui and Mustapha (2016), Patra et al. (2012)
Corporate tax	Corporate tax divided by profit before tax	Khan and Ahmad (2017), Ofori-Sasu et al. (2017), Arko et al. (2014), Rehman (2012), Amidu and Abor (2006)
Gross domestic product	Annual GDP growth rate	Ramakrishnan (2012), Deesomsak et al. (2004)
Inflation rate	Consumer Price-annual percentage	Ramakrishnan (2012), Basse (2009), Hasan and Javed (2009), Ariff et al. (2008), Kandir (2008)
Stock Market Development	SMD is measured by stock traded total value (Percentage of GDP)	Ramakrishnan (2012), Deesomsak et al. (2004), Booth et al. (2001)
Debt Market Development	DDM is measured as Liquid liabilities (Percentage of GDP)	Ramakrishnan (2012), Booth et al. (2001)
Political Risk	Political risk index	Dimic et al. (2015), Bilson et al. (2002)

This study used panel data technique which offers a degree of maximum variability that minimizes the multicollinearity problems between independent variables. Panel data also makes it possible to control for individual heterogeneity, thus enable to decrease the risk of obtaining

biased results (Klevmarken, 1989). Furthermore, panel data can better measure undetectable effects in cross-sectional or time series data (Baltagi, 2008). To achieve the desired outcome, Lagrange multiplier (LM) test is used to find out the significance of pooled OLS model for the selection of most suitable model. Additionally, the study also employs the Hausman test for the selection of the cross-section either random or fixed effect model. Based on the findings, the current study decided to continue with the fixed effect model. The study conducted data analysis in three stages. Firstly, we present descriptive statistics of data and present relevant diagnostics such as, multicollinearity, heteroscedasticity, and normality. Secondly, pooled OLS is applied to estimate the panel regression. Thirdly, the fixed effect model is estimated to investigate the significant determinants (at firm-level and country-level) impact on dividend yield.

The study regressed fixed effect model for the firms that are paying dividend to shareholders. The following Eq. 3.1 provides the firm-level determinants -dividend yield nexus based on fixed effect model.

$$DY_{it} = \alpha + \beta_1(PROF)_{it} + \beta_2(FCF)_{it} + \beta_3(SIZE)_{it} + \beta_4(LIQR)_{it} + \beta_5(LEVR)_{it} + \beta_6(MTBR)_{it} + \beta_7(TAX)_{it} + \mu_i + \varepsilon_{it} \quad (3.1)$$

Where, DY_{it} describes the dividend yield at firm i in time t, α presents the intercept, PROF denotes profitability, FCF represent the free cash flows, SIZE refers to size of the firm, LIQR denotes firm liquidity, LEVR shows financial leverage, MTBR represent investment opportunities, and TAX shows corporate tax, μ_i refers to control the firm's fixed effect for cross sectional differences of firm characteristics, and ε_{it} denote he error term. Moreover, Eq. 3.2 provides the relationship between firm and country-level determinants and dividend yield based on fixed effect model.

$$DY_{it} = \alpha + \beta_1(PROF)_{it} + \beta_2(FCF)_{it} + \beta_3(SIZE)_{it} + \beta_4(LIQR)_{it} + \beta_5(LEVR)_{it} + \beta_6(MTBR)_{it} + \beta_7(TAX)_{it} + \beta_8(GDP)_{it} + \beta_9(INF)_{it} + \beta_{10}(SMD)_{it} + \beta_{11}(DMD)_{it} + \beta_{12}(PR)_{it} + \varepsilon_{it} \quad (3.2)$$

All the parameters are explained above. GDP denotes gross domestic product, INF shows Inflation rate, SMD represent stock market development, DMD shows debt market development, and PR is the political risk.

4. Results and Discussion

Table 2 shows the descriptive statistics of variables. The standard deviation (SD) depict the variability of variables. The highest standard deviation is observed in stock market development (24.28) followed by corporate tax (8.22), and divided yield of the firms (7.81) during the period from 2000 to 2017. In addition, each variable is found to be deviated from its average value which implying that the financial condition and strategies of all firms are different. Table 3 shows the findings of variance inflation factor (VIF) and discovered that the data set are free from the multicollinearity. In addition, robust estimates are used to overcome the issue of autocorrelation and heteroskedasticity in the panel data setting followed by Singla and Samant (2019). This study used natural logarithm of all variables to reduce the abnormality of the data.

Table 2 Descriptive Statistics

Variable	Mean	SD	Minimum	Maximum
DY	6.64	7.81	0.00	114.70
PROF	0.09	1.57	-47.51	9.88
FCF	0.18	0.27	-1.52	1.88

SIZE	15.22	1.56	9.83	19.73
LIQR	1.88	4.74	0.10	138.50
LEVR	0.45	1.04	-8.50	33.28
MTBR	2.17	6.77	-38.49	198.50
TAX	0.40	8.22	-50.94	333.90
GDP	4.33	1.71	1.61	7.67
INFL	8.07	4.65	2.53	20.29
SMD	127.80	24.28	82.56	176.10
DMD	39.96	2.71	34.68	44.04
PR	74.04	3.52	64.00	80.00

Table 3 Variance Inflation Factors

PROF	FCF	SIZE	LIQR	LEVR	MTBR	TAX	GDP	INFL	SMD	DMD	PR
1.523	1.123	1.1	1.733	1.793	1.556	1.088	1.788	1.472	1.151	1.625	1.103

The study employs the Hausman test and null hypothesis of RE is rejected. Hence, the study proceeds with FE model. Table 4 highlight the findings of pooled OLS and fixed effect models. At firm-level, profitability, firm size, investment opportunities, and corporate tax are significant determinants of dividend policy. Whereas, at country-level, inflation, stock market development, debt market development, and political risk are significant determinants of dividend policy. The rest of other variables found insignificance. Hence, H_1, H_3, H_6, H_7, H_9, H_{10}, H_{11}, and H_{12} are accepted, and H_2, H_4, H_5, and H_8 are rejected. Table 4 also highlight the f-value of all models which show the strength and significance of the model.

Table 4 Factors of Dividend Policy

Variables	**Firm-Level**		**Firm and Country-Level**	
	Pooled OLS	**Fixed Effect**	**Pooled OLS**	**Fixed Effect**
Const	2.063(0.000) ***	4.031(0.000)***	5.001(0.026)**	2.800(0.171)
PROF	0.150(0.013)**	0.137(0.000)***	0.099(0.096)*	0.102(0.007)***
FCF	0.004(0.886)	−0.011(0.670)	0.007(0.806)	−0.010(0.677)
SIZE	−0.015(0.653)	−0.134(0.001)***	−0.011(0.723)	−0.130(0.677)***
LIQR	0.089(0.442)	0.053(0.593)	0.112(0.351)	0.038(0.712)
LEVR	0.007(0.841)	0.009(0.756)	0.007(0.848)	0.002(0.956)
MTBR	−0.252(0.000)***	−0.404(0.000)***	−0.198(0.000)***	−0.325(0.000)***
TAX	−0.021(0.696)	0.078(0.051)*	−0.025(0.639)	0.081(0.038)**
GDP			−0.094(0.114)	−0.023(0.678)
INFL			−0.099(0.073)*	−0.111(0.020)**
SMD			−0.616(0.000)***	−0.452(0.000)***
DMD			−1.392(0.002)***	−0.916(0.029)**
PR			1.235(0.006)***	1.603(0.000)***
F-Stat	5.475	15.954	13.057	13.969
P-value	0.000***	0.000***	0.000***	0.000***

*The table highlight the estimates of equation using annual data from 2000 to 2017 based on POLS and FE. The dependent variable is dividend yield (DY) and independent variables are profitability (PROF), free cash flow (FCF), firm size (SIZE), liquidity (LIQR), financial leverage (LEVR), investment opportunities (MTBR), corporate tax (TAX), gross domestic product (GDP), inflation (INF), stock market development (SMD), debt market development (DMD), and political risk (PR). The table depicts the dividend yield-independent variables nexus. ***, **, and * shows 1 %, 5%, and 10% level of significance, respectively.*

Consistent with results, profitability, investment opportunities, firm size, and corporate tax are contributing factors of dividend policy at firm level variables across non-financial Pakistan's listed firms. The findings shows that there is positive relationship between profitability and dividend policy in Pakistan. The results are in line with the expected hypothesis and earlier studies of Baker et al (2019), Dewasiri et al (2019), and Singla and Samant (2019). The findings is consistent with signaling theory that a more profitable firms payout more dividend to shareholders of the firm (Akerlof, 1970; Bhattacharya, 1979). Whereas, firm size show a significantly negative impact on dividend policy which is inconsistent with the expected hypothesis. The result reveal that larger firms prefer to pay less dividend which is consistent with the findings of Ahmed and Javid (2008).The negative association between investment opportunity and dividend policy is supported by life cycle theory which shows that when firms tend to have more investment opportunities, they need more funds for projects therefore pay less dividend to shareholders. The negative relationship reveal that the larger firms are more mature and tend to have greater investment opportunities therefore pay less dividend to shareholders of the firm (Ahmed and Javid, 2008; Brahmaiah et al., 2018). The results show that companies with higher investment opportunities pay fewer dividends in Pakistan, as companies with more investment opportunities are more likely to keep dividend and invest in such projects, instead paying dividends to shareholders. The results are in favor of agency cost theory and free cash flow argument related to dividend policy. While, positive corporate tax results are opposite from developed hypothesis, indicating that firms with higher corporate tax rates pay higher dividend. The results corroborates the findings of Amidu and Abor (2006) and Gill et al. (2010), which shows positive influence of corporate tax on dividend policy.

At country-level, the significant determinants of dividend policy are; inflation, stock market development, debt market development, and political risk in Pakistan. The current study finds negative relationship between inflation rate and dividend policy. Findings of the study are in compliance with the past study of Brahmaiah et al. (2018). This signifies that in Pakistan, firms operating in high inflationary conditions tend to increase the firm leverage and consequently lower dividend pay-out. The results discover that with the development of stock market, firms reduce dividend payment. Thus, the significant negative relationship between stock market development and dividend policy strongly supports the agency theory. The empirical results also reveals that debt market development is negatively related to dividend policy. It implies that with the development of debt market, firms reduce dividend payout. This is in line with agency cost theory (Jensen, 1986), indicating that a manager may utilize cash for paying back debt in place of dividends. Moreover, the results demonstrate a positive and significant impact of political risk on dividend policy in Pakistan which is consistent with the developed hypothesis. During the period of high political risk, the uncertainty surrounding by possible changes in government policies greatly increases the perception of risk from capital market participants. The perceived risk associated with high political risk positively affects dividend policy. Therefore, this study reveals that in order to attract market participants, firms operating in high political risk country may deliberately pay more dividends which is consistent with the signaling theory. Consequently, the findings of the study reveals that signaling, life cycle, free cash flow, and agency theories provides the most

prominent justifications related to dividend policy across Pakistani listed firms.

5. Conclusion and policy implications

The main aim of the current study is to investigate the impact of firm-level determinants (profitability, firm size, liquidity, free cash flow, financial leverage, investment opportunities, and corporate tax) and country-level determinants (gross domestic product, inflation rate, stock market development, debt market development, and political risk) on dividend policy across non-financial Pakistani firms. The study has taken unbalanced panel datasets, consisting a group of 134 companies during the period from 2000 to 2017 in the context of Pakistan. This paper fills the research gap discovered in the literature by adding country-level leading predictors of stock market development, debt market development, and political risk in case of Pakistan. Past studies mainly focused on the firm-level variables in relation with the traditional country-level variables. However, this paper examines the relationship among stock market development, debt market development, and political risk on dividend policy, over and above the traditional firm-level and country-level variables. The findings shows that Pakistani dividend policy is influenced by determinants at firm level and country level. The findings highlight the significant determinants which influence the dividend policy such as; profitability, firm size, investment opportunities, corporate tax, inflation, stock market development, debt market development, and political risk. The results also revealed that signaling theory and agency theory provides the considerable explanations for dividend policy in Pakistan.

The study has several worthy implications for the investors, managers and future researchers. If the shareholders are concerned to pay higher dividends, they should consider profitability and corporate taxes of firms, noting that larger sizes and more investment opportunities will reduce profit margins as dividend payments. Investor should consider country level factors i.e. inflation, stock market development, debt market development, and political risk before investing in stock market. Management should also take into account all determinants influencing dividend policy before developing firm's dividend policy. Future investigators should use the consent to pay dividends when contributing to a consensus on dividend puzzle while looking for dividend determinants in other countries.

References

Abor, J., & Bokpin, G. A. (2010). Investment opportunities , corporate finance , and dividend payout policy: Evidence from emerging markets. *Studies in Economics and Finance, 27*(3), 180–194.

Ahmed, H., & Javid, A. Y. (2008). *The determinants of dividend policy in Pakistan.* International Research Journal of Finance and Economic. MPRA Paper No. 37339, 110-125.

Aivazian, V., Booth, L., & Cleary, S. (2003). Dividend policy and the organization of capital markets. *Journal of Multinational Financial Management, 13*(2), 101–121.

Akerlof, G. A. (1970). The Market for" Lemons": Quality Uncertainty and the Market Mechanism. *Q. J. ECON*, *488*, 489-90.

Al-Kayed, L. T. (2017). Dividend payout policy of Islamic vs conventional banks: case of Saudi Arabia. *International Journal of Islamic and Middle Eastern Finance and Management, 10*(1), 117-128.

Al-Najjar, B. (2011). The inter-relationship between capital structure and dividend policy: empirical evidence from Jordanian data. *International Review of Applied Economics, 25*(2), 209-224.

Al-Najjar, B., & Kilincarslan, E. (2018). Revisiting firm-specific determinants of dividend policy: evidence from Turkey. *Economic Issues, 23*(1). ISSN 1363-7029

Amidu, M., & Abor, J. (2006). Determinants of dividend payout ratios in Ghana. *The Journal of Risk Finance, 7*(2), 136–145.

Arif, M. (2007). Developing bond market in Pakistan. *State Bank of Pakistan Research Bulletin*, *3*(1), 129-157.

Ariff, M., Hassan, T., & Shamsher, M. (2008). How capital structure adjusts dynamically during financial crises.

Corporate Finance Review, 13(3), 11–24.

Arko, A. C., Abor, J., Adjasi, C. K., & Amidu, M. (2014). What influence dividend decisions of firms in Sub-Saharan African?. *Journal of Accounting in Emerging Economies*. *4*(1), 57-78.

Baker, H. K., Dewasiri, N. J., Koralalage, W. B. Y., & Azeez, A. A. (2019). Dividend policy determinants of Sri Lankan firms a triangulation approach. *Managerial Finance, 45*(1), 2-20.

Baker, H. K., Farrelly, G. E., & Edelman, R. B. (1985). A Survey of Management Views on Dividend Policy. *Financial Management, 14*(3), 78-84.

Baker, H. K., H. Kent Baker, P., Rob Weigand, D., & Weigand, R. (2015). Corporate dividend policy revisited. *Managerial Finance, 41*(2), 126-144.

Baltagi, B. (2008). *Econometric analysis of panel data* (Vol.4).Chichester: John wiley & sons

Banerjee, S., Gatchev, V. A., & Spindt, P. A. (2007). Stock market liquidity and firm dividend policy. *Journal of Financial and Quantitative Analysis, 42*(2), 369-397.

Basiddiq, H., & Hussainey, K. (2012). Does asymmetric information drive UK dividends propensity? *Journal of Applied Accounting Research, 13*(3), 284-297.

Basse, T. (2009). Dividend policy and inflation in Australia : Results from cointegration tests. *International Journal of Business and Management, 4*(6), 13–16.

Batool, Z., & Javid, A. (2014). *Dividend policy and role of corporate governance in manufacturing sector of Pakistan*. PIDE Working Papers, (July).

Bekaert, G., Harvey, C. R., Lundblad, C. T., & Siegel, S. (2014). Political risk spreads. *Journal of International Business Studies, 45*(4), 471-493.

Bhattacharya. (1979). Imperfect Information, Dividend Policy, and "The Bird in the Hand" Fallacy. *The Bell Journal of Economics, 10*(1), 259–270.

Bhattacharyya, N. (2007). Dividend policy: a review. *Managerial Finance, 33*(1), 4-13.

Bilson, C. M., Brailsford, T. J., & Hooper, V. C. (2002). The explanatory power of political risk in emerging markets. *International Review of Financial Analysis, 11*(1), 1–27.

Black, F. (1976). The dividend puzzle. *The Journal of Portfolio Management, 2*(2), 5–8.

Bokpin, G. A. (2011). Ownership structure, corporate governance and dividend performance on the Ghana Stock Exchange. *Journal of Applied Accounting Research, 12*(1), 61-73.

Booth, L., Aivazian, V., Demirguc-Kunt, A., & Maksimovic, V. (2001). Capital structures in developing countries. *The Journal of Finance, 56*(1), 87–130.

Botoc, C., and Pirtea, M. (2014). Dividend payout-policy drivers: evidence from emerging countries. *Emerging Markets Finance and Trade, 50*(sup4), 95-112.

Brahmaiah, B., Srinivasan, P., & Sangeetha, R. (2018). Determinants of corporate dividend policy in India: A dynamic panel data analysis. *Academy of Accounting and Financial Studies Journal, 22*(2). 1-13.

Brealey, R. A., Myers, S. C., & Allen, F. (2005). *Principles of Corporate Finance*. McGraw-Hill: New York.

Deesomsak, R., Paudyal, K., & Pescetto, G. (2004). The determinants of capital structure: evidence from the Asia Pacific region. *Journal of Multinational Financial Management, 14*(4-5), 387-405.

Dewasiri, N. J., & Yatiwella, W. B. (2016). Why do companies pay dividends?: a comment. *Dewasiri, NJ, Weerakoon Banda. YK, Why Do Companies Pay Dividends*, 443-453.

Dewasiri, N. J., Koralalage, W. B. Y., Azeez, A. A., Jayarathne, P. G. S. A., & Weerasinghe, D. K., V.A. . (2019). Determinants of dividend policy evidence from an emerging and developing market. *Managerial Finance, 45*(3), 413-429.

Dimic, N., Orlov, V., & Piljak, V. (2015). The political risk factor in emerging, frontier,

and developed stock markets. *Finance Research Letters*, 15, 239-245.

Dragota, V. (2006). Minority shareholders ‟ protection in Romanian capital markets : Evidence on dividends. *Euro-Mediterranean Economics and Finance Review, 1*(1), 76–89.

El Wassal, K. A. (2013). The development of stock markets: In search of a theory. *International Journal of Economics and Financial Issues, 3*(3), 606-624.

Fama, E. F., & French, K. R. (2002). Testing Trade-Off and Pecking Order Predictions About Dividends and Debt. *The Review of Financial Studies, 15*(1), 1–33.

Fatemi, A., & Bildik, R. (2012). Yes, dividends are disappearing: Worldwide evidence. *Journal of Banking & Finance, 36*(3), 662-677.

Gill, A., Biger, N., & Tibrewala, R. (2010). Determinants of dividend payout ratios: Evidence from United States. *The Open Business Journal, 3*, 8–14.

Guizani, M. (2018). The mediating effect of dividend payout on the relationship between internal governance and free cash flow. *Corporate Governance: The International Journal of Business in Society.18* (4), 748-770.

Gul, S., Ullah, I., Gul, H., & Rasheed, S. (2020). The Factors Affecting Dividend Policy: Empirical Study from Pharmaceutical's Companies in Pakistan (PSX). *European Journal of Business and management research, 5*(5). doi.org/10.24018/ejbmr

Harada, K., & Nguyen, P. (2011). Ownership concentration and dividend policy in Japan. *Managerial Finance, 37*(4), 362-379.

Hasan, A., & Javed, M. T. (2009). An empirical investigation of the causal relationship among monetary variables and equity market returns. *The Lahore Journal of Economics, 14*(1), 115-134.

Jensen, M. C. (1986). Agency costs of free cash flow, corporate finance, and takeovers. *The American economic review, 76*(2), 323-329.

Jong, A., Kabir, R., & Nguyen, T. T. (2008). Capital structure around the world: The roles of firm- and country-specific determinants. *Journal of Banking and Finance, 32*(9), 1954–1969.

Kadioglu, E., & Yilmaz, E. A. (2017). Is the free cash flow hypothesis valid in Turkey? *Borsa Istanbul Review, 17*(2), 111-116.

Kandir, S. (2008). Macroeconomic variables, firm characteristics and stock returns: evidence from Turkey. *International Research Journal of Finance and economics, 16(*1), 35-45.

Khan, A., Ain, Q., & Rashid, H. A. (2020). The Drivers of Stock Market Growth in Pakistan: How Relevant is Irrelevant?. *Journal of Accounting and Finance in Emerging Economies, 6*(4), 1189-1197.

Khan, F. A., & Ahmad, N. (2017). Determinants of dividend payout : An empirical study of pharmaceutical companies of Pakistan Stock Exchange (PSX). *Journal of Financial Studies & Research, 2017*, 1-16.

Khan, M. N., Naeem, M. U., Rizwan, M., & Salman, M. (2016). Factors affecting the firm dividend policy : An empirical evidence from textile sector of Pakistan. *International Journal of Advanced Scientific Research and Management, 1*(5), 144–149.

Khan, M. Y., Al Bassam, W. M. H., Khan, W., & Javeed, A. (2017). Dividend policy and share price volatility: evidence from karachi stock exchange. ELK Asia Pacific *Journal of Finance and Risk Management*, *8*(1). doi: 10.16962/EAPJFRM.

Klevmarken, N. A. (1989). Panel studies: What can we learn from them? *European Economic Review, 33*, 523–529.

Kuzucu, N. (2015). Determinants of Dividend Policy A Panel Data Analysis for Turkish Listed Firms. *International Journal of Business and Management, 10*(11).

Labhane, N. B. (2017). Disappearing and reappearing dividends in emerging markets: Evidence from Indian companies. *Journal of Asia-Pacific Business, 18*(1), 46–80.

Lintner, J. (1956). Distribution of incomes of corporations among dividends, retained

earnings, and taxes. *The American economic review, 46*(2), 97-113.

Miller & Modigliani. (1961). Dividend policy, growth, and the valuation of shares. *The University of Chicago Press, 34*(4), 411–433.

Montalvan, S. M., Barilla, C. D., Ruiz, G. D., & Figueroa, D. L. (2017). Corporate governance and dividend policy in Peru : Is there any link ? *Journal of Economics and Finance, 12*(2), 103–116.

Moortgat, L., Annaert, J., & Deloof, M. (2017). Investor protection , taxation and dividend policy : Long-run evidence ,. *Journal of Banking and Finance, 85*, 113–131.

Nazir, M. S., Rakha, A., & Nawaz, M. M. (2012). Corporate payout policy and market capitalization: Evidence from Pakistan. *Journal of Economics and Behavioral Studies*, 4(6), 331–343.

Ofori-Sasu, D., Abor, J. Y., & Osei, A. K. (2017). Dividend policy and shareholders' value: evidence from listed companies in Ghana. *African Development Review, 29*(2), 293-304.

Pakistan Stock Exhange. (2017). *Pakistan Stock Exchange Limited.* https://www.psx.com.pk/.

Pastor, L., & Veronesi, P. (2012). Uncertainty about government policy and stock prices appendix. *The Journal of Finance, 67*(4), 1219–1264.

Pástor, L., & Veronesi, P. (2013). Political uncertainty and risk premia. *Journal of Financial Economics, 110*(3), 520–545.

Ramakrishnan, S. (2012). *Sectoral Analysis on Capital Structure Determinants among the Malaysian Listed Firms* (Thesis Dissertation). Deakin University: Australia.

Rehman, M. W. (2015). Impact of Dividend Policy on Stockholders' Wealth: Empirical Evidences from KSE 100-Index. *International knowledge sharing platform, 5* (15), 124-129.

Rozeff, M. S. (1982). Growth, beta and agency costs as determinants of dividend payput ratios. *Journal of Financial Research, 5*(3), 249–259.

Sadik, F. (2017). *Factors affecting dividend payout in Pakistan textile industry*. (March), 1–11.

Sasu, D. O., Abor, J. Y., & Osei, A. K. (2017). Dividend Policy and Shareholders' Value Evidence from Listed Companies in Ghana. *African Development Review, 29*(2), 293–304.

Setiawan, C., & Vivien, V. (2021). Determinants of Dividend Policy: An Empirical Study of Consumer Goods Firms in Indonesia. *The Journal of Asian Finance, Economics and Business, 8*(6), 71-77.

Singla, H. K. & P. K. Samanta (2019). Determinants of dividend payout of construction companies a panel data analysis. *Journal of Financial Management of Property and Construction. 24*(1), 19-38.

Tahir, M., Ibrahim, H., Zulkafli, A. H., Mushtaq, M., & Ullah, S. (2021). Linking investment opportunities, credit market development and dividend repatriation policy. *Transnational Corporations Review,* 1-14. doi.org/10.1080/19186444.2021.1885971

Wang, M. H., Ke, M. C., Lin, F. Y., & Huang, Y. S. (2016). Dividend policy and the catering theory: evidence from the Taiwan Stock Exchange. *Managerial Finance, 42*(10), 999-1016.

Yarram, S. R., & Dollery, B. (2015). Corporate governance and financial policies. *Managerial Finance, 41*(3), 267-285.

Yusof, Y., & Ismail, S. (2016). Determinants of dividend policy of public listed companies in Malaysia. *Review of International Business and Strategy, 26*(1), 88–99.