

Determinants of Firm's Dividend Policy "A Quantitative Decision Making Approach".

Faheem ul Hussain^{1*}

^{1*}Institute of Business Administration, Shaheed Benazir Bhutto University, NoshahroFeroze Campus -Pakistan at- faheem.dehraj_nf@sbbusba.edu.pk

Dr. Irfan Ali Merani²

²Institute of Business Administration, Shah Abdu Latif University, Khairpur, Pakistan at- irfan.mirani@salu.edu.pk

Dr. Rehman Gul Gilal³

³Institute of Business Administration, Shah Abdu Latif University, Khairpur, Pakistan at- rehman.gilal@salu.edu.pk

Abstract:

The issue of dividend policy, despite availability of extensive literature is still inconclusive. Therefore determining the different financial characteristics of firms' dividend policy is the objective of this research. For this study, the sample data of 82 firms of non-financial sector from 2014 to 2024 was compiled from the annual published reports available on the official website of state bank of Pakistan. Therefore different statistical analyses were performed based on correlation, Panel unit root test, Pooled OLS, Fixed and Random effect Models of regression through Eviews 12. The result of fixed effect model provided an important insight of market free float and stock trading volume those addressing a gap in existing literature. The findings indicate that market free float positively influences the firm dividend policy at a 1% significance level. This is because the higher liquidity and stable payout attract investors. Conversely, the stock trading volume negatively affects dividend policy because the shareholders may prefer lower-taxed capital gains over dividends.

Key words: Dividend policy, market free float, stock trading volume, signaling and birds in hands theory.

Introduction

The dividend policy refers to the set of decisions made by the company's management and board of directors to determine how much of the company's earnings should be distributed to its shareholders in the form of dividends. It involves determining whether the company should retain earnings for reinvestment or distribute them to shareholders (V. Barros, Verga Matos et al., 2021). Several factors can influence a company's dividend policy. These factors can vary depending on the company's financial solvency, industry, growth prospects, and the preferences of its shareholders

(Jafari-Sadeghi, 2022). Here are some common factors that can affect dividend policy such as profitability, growth opportunities, financial stability, tax considerations, shareholders' preferences, and economic conditions (Alzamora-Ruiz, 2021).

The theory of relevance or irrelevance of dividend policy has been debated among researchers and practitioners for many years about whether the dividend policy is relevant or irrelevant to the firm and investors' value (Jacob, 2023). Researchers such as (L. Almeida, Tavares, F., & Pereira, E, 2022) supported the view of dividend relevance that if the firm pays the dividend this gives a signal to the investors that the firm is confident to earn its stable and growing future profits and has more growth opportunities thus attract investors and increase the company stock price. A company's dividend policy can attract a certain clientele effects of investors, if a company consistently pays high dividends, it may attract income-oriented investors. On the other hand, if it retains most of its earnings, it may appeal more to growth-oriented investors (Chang, 2022; Jacob, 2023; Kumar, 2016).

The dividend irrelevance theory was proposed by economists such as (J Lintner, 1956) and (Miller, 1961) who argued that dividend policy is irrelevant and has no significant effect on stock price and overall firm value. According to this view, investors don't care if they receive dividends or capital gains because the investors can create their desired cash flows by selling shares if they require cash. Dividend policy is closely tied to the capital structure of the company because when a company pays out a significant portion of its earnings as dividends, it reduces the equity and funds available for reinvestment in the business. This might lead the firm to rely more on debt financing to fund its growth and investment opportunities, potentially increasing its leverage and altering its capital structure (N. Lee, Lee, J, 2019).

In addition, the dividend policy can influence a company's investment or capital budgeting decisions. Because when a company decides to retain earnings in place of paying them out as dividends, it increases the funds available for internal investments, capital expenditures, research and development, and other growth initiatives, conversely, a company with a more dividend payout ratio may have less retained earnings for investments, thus need funds for capital budgeting can shape the dividend policy (V. Barros, Matos, P.V., Sarmiento, J.M., Vieira, P.R 2021).

Furthermore, the dividend policy can also affect a company's financing decisions. If more dividends are paid by organizations consistently, the firm might then raise external funds through debt and equity issuance, because when a company

pays out a significant portion of its earnings as dividends, it reduces the funds available for internal financing. This may lead the company to rely more on external sources of financing. On the other hand, a lower dividend payout ratio can indicate that the company is retaining earnings to fund the future growth, which may make it more attractive to potential investors (Khan, 2020).

However, Share repurchase by the company is often considered with the dividend policy because the firms use surplus cash to buy back the company shares from the open market, to return cash to shareholders instead of increasing dividend payments and thus reducing their free cash flows (Ammar Hussain 2022). This happens when the firms with strong cash flows and cash reserves but the smaller companies with limited financial resources may need to be more cautious about using their available capital for buybacks due to their chances of growth and investment opportunities (Schepens, 2018).

Whereas the decision to pay regular or irregular dividends depends on several factors, including the company's financial performance, cash flow position, capital requirements, growth prospects, and shareholder expectations (Dongmin Kong, 2023). Companies with stable and consistent earnings may be more inclined to pay regular dividends to maintain investor confidence and attract income-oriented shareholders (Sindhu, 2020).

However, companies having a significant growth or on investment phases may opt for irregular dividend payments (Zia, 2017) therefore retain earnings for reinvestment or to manage cash flow fluctuations. But the firm may decide to pay a growing dividend when it has a strong financial position, consistent profitability, and positive cash flow trends (Sindhu, 2020). In this situation, the corporations aim to signal their financial health, future prospects, and show commitment for the rewarding shareholders, whereas the firm may opt for a constant dividend when it wants to maintain a stable payout to shareholders, regardless of fluctuations in earnings or cash flow (Zarah J, 2019). This approach is commonly observed in companies that prioritize stability, reinvestment opportunities, or a consistent dividend yield.

However the dividend policy issue got attention through different theories such as the bird in hand theory, (J. Lintner, 1962) and (Gordon, 1963) the dividend relevance or irrelevance model (Miller, 1961), and the residual theory of dividend policy. Literature regarding dividend policy is concentrated on the financial aspect of

the companies in which the decision of dividend payout is related to the role of taxation. Another aspect of the literature about dividend policy is concerned with the stock prices. But, the debate of dividend policy, literature relative to the types of shareholders and stock trading volume is much inconclusive and inadequate (Victor Barros, 2021). Therefore this research has filled this gap also. Further, to evaluate the company's dividend payout policy through the stock market ownership, taxation and the firm's own determinants of financial characteristics is the primary objective of this research through.

Problem Statement

An effective dividend policy can help firms to maximize the wealth of shareholders. Dividend policy can be a driving force to attract potential shareholders to buy the stocks. This has triggered the stream of studies struggling to identify the factors that determine the dividend policy. However, the evidences of these studies are inconclusive and their validity in Pakistan is not confirmed. Therefore this study is intended to investigate what determinants explain the dividend policy of firms operating in Pakistan.

Research Gap

Despite the sufficient literature available regarding the dividend policy. But yet there is a sufficient gap using the novel variables. Those so far have not been brought into consideration (Maqsudi, Rachmawati et al., 2022)..

Use of Novel Variables

The literature around the globe also got less attention regarding the stability of dividend policy which is affected by stock trading volume. The work for suppose (Al- Yahyaee, Pham et al., 2020) and (Chazi, Boubakri et al., 2021) their research was done on the dividend policy during the tax-free environment in South Korea without keeping in view of the stock trading volume. Specifically, the dividend income is made from venture capital firms, investment funds, and transmission line projects or businesses located in certain economic zones in Pakistan. Those that were established on or after July 1, 2015, are not taxed for ten years (BOI, 2020-21). On the other side, the studies regarding the types of firms' stockholders about dividend policy is much limited (Victor Barros, 2021). Therefore the emphasis on the proportion of the shares outstanding in free float in our study is another value addition in the literature. Keeping in view the ownership determinants, mainly

owned by individual investors. That is expected in our analysis to be the factor that most significantly determinesthe dividend policy.

Literature Review

The literature will also address the issues regarding the firm dividend policy keepingin view the financial characteristics of firms such as the size, growth and investment opportunities, profitability, and so on. Finally, this research also covers the discussion regarding some novel variables. Such as market free float, stock trading volume.

Dividend Policy and Taxation

The majority of literature regarding different researchers such as (Brav, 2020; Elton, 2018; Michaely, 2017; J. Poterba, & Summers, L, 2019) advocating the case that the dividend policy of the organization is affected by the choice of whether companies should restore worth to the stockholders via dividends or stock buybacks(Simshauser, 2023),(Chetty, 2020). Taxes, however, are a major factor in this choice (Pérez-González, 2018). Due to the disparities in the dividends and stock buyback are taxed, the investors usually prefer to benefit from the buyback option at the fair market value (J. Poterba, 2019). This option is offered by the firms to the investors at the time of companies having more reserve (Black, 2019). And thus addresses the issues relative to the taxes and dividends.

This decision is also influenced by the company's having sort of stockholders and in terms of liquidity. Therefore the different owners will have different priorities (Neugebauer, Shachat et al., 2023). When taxes on dividends and capital gains (the taxation over repurchase) are equal, the investor typically favors dividends (Dahlquist, 2018). Investors, who like capital gains, typically favor buybacks when tax rates are high (Elton, 2018). This is due to the limited exemptions and benefits associated with capital gain. Similarly to this, investors prefer to favor bigger dividends. If either their taxes or tax brackets are decreased. This happens when (J. Poterba, & Summers, L, 2019), firms frequently vary their dividend payouts according totaxation changes.

Dividend Policy and Market

The stock price of a corporation is affected by the declaration of the dividends (Seida, 2020). Those firms pay the dividend have higher abnormal stock return than companies that don't pay it (Anderson, 2020; Dewenter, 1988). The tax-induced clientele effect also exists in the share market. This refers to a phenomenon where investors' behavior in the stock market is influenced by changes in tax policies (Lewellen, 1978). Similarly, it is claimed by both (KyungLee, 2022) and (Kasozi, 2023) that the dividend clientele effect has a major impact on the selection of investors' investment in a newly established firm (Akbar, 2022). However, some investors view stock repurchases by firms to be more flexible than dividend

(WenyunYao, 2020).

Dividend Policy and Firm Determinants

A firm dividend policy is influenced by its unique characteristics. Like that the business with higher growth opportunities frequently cut the dividend (La Porta, 2000). Due to maintaining its growth which needs more capital inputs (L. Almeida, Tavares, F., & Pereira, E, 2022). As a result, managers and investors who support a strategy for greater progress in a company would typically be somewhat sensitive towards dividend.

Farinha (2020) discovered a conflict between dividend and firm size. Because the smaller, high-growth companies often reinvest their earnings back into the business. These companies typically prioritize reinvestment for future growth opportunities over distributing dividends. Therefore, smaller firms hardly pay dividend compared the larger, big established firms. In many cases, larger, well- established companies tend to pay regular dividends (Akbar, 2022). Because these companies often generate stable cash flows and have a history of consistent profitability, allowing them to allocate a portion of their income as dividends. Therefore larger the firm, the more likely it is to have the financial capacity to pay dividends.

Dividend Policy and Firm Investment

The nexus between dividend policy and investment is greatly explored in the literature. The study of (Deng, 2023) and (Wang, 2019) proposed that the company investment and dividend policy in big-IT firms is much more complicated in terms of the different opinions. Their result found that the big IT product companies in China support the dividend policy besides Taiwan. Because these high-tech firms need enough fund to finance their innovation and R&D activities. Which reduces the cash holdings of such companies and has an impact on dividend payments (Brown & Peterson, 2011).

Market Free Float and Dividend Policy.

According to dividend signaling theory, firms opt for dividend distribution policy to show their financial health and future prospects to investors. This attract the higher free float thus can enhance the credibility and signaling effect of dividend payments

(KyungLee, 2022). Simultaneously this can lead to a positive stock price reaction from the market (Harakeh, 2020). However, firms with a smaller free float may face liquidity constraints, particularly if a significant portion of shares is held by controlling shareholders or strategic investors. In such cases, the firm's ability to pay dividends may be limited due to the concentration of ownership. Conversely, firms with higher free float may have a good approach to the capital market, allowing them to meet their dividend demand more easily (Denes, 2023).

Research Methodology

This research is innovative regarding previous literature by value adding the use of novel variables using quantitative methodology through Eviews software.

Quantitative Analysis

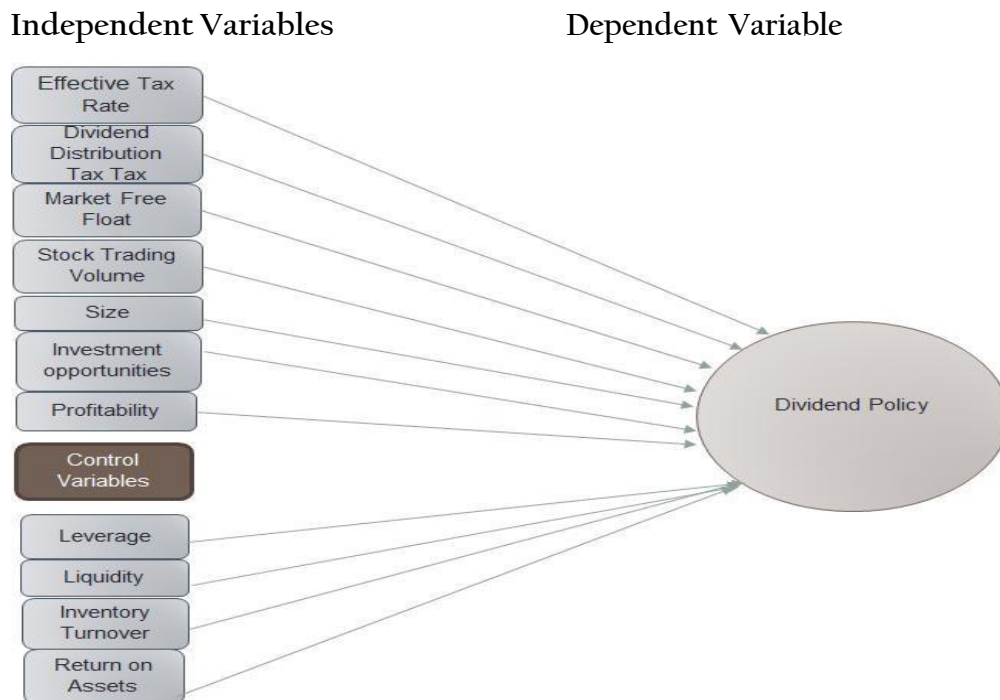
However, the data analysis for the quantitative has been conducted using software such as Eviews. Further for loading the graphs, the MS-Visio software was used. Hence all the data was compiled through the MS Excel of the manufacturing companies. Those listed on the Pakistan stock exchange (PSX) keeping in view the non-probability convenience sampling of the panel secondary data from (2014 to 2023). This has been collected from the annually published reports from the official website of the State Bank of Pakistan (SBP), and this research is exploratory in research design.

Analyses of Techniques

However, the initial analysis has also considered the problems related to the normality of data such as missing data, outliers, and multicollinearity. Further analysis has gone with the pooled, fixed, or random effect models to consider the appropriateness of models through the both Breusch Pagan and Hausman tests.

Proposed Research Model

Figure 3.1 Proposed Research Model



Variables and Hypothesis

The selection of variables for this research is primarily influenced by existing literature on dividend policy. Consequently, this study aims to examine whether the variables commonly employed to analyze dividend policy are applicable in assessing the payout policy of non-financial sector firms. The study has identified the following independent and dependent variables for its investigation.

Dividend & Taxation

According to the birds in the hands and tax clientele theories, the way dividends are taxed might impact payout policy. If the dividend income is taxed > capital gains or interest income then the firms perhaps be less inclined to distribute dividends, and investors may prefer capital gains or interest-bearing investments (Livoreka, 2020) because capital gain is often taxed at < dividends.

H₁ The effective tax rate has an impact on the firm dividend policy.

H₂ The firm's dividend policy might be influenced by Dividend distribution tax

Shares in free float

The "free float" refers to the portion of a company's shares that are available to the general public including institutional and retail investors for trading in the open market, excluding closely held shares available with firm inside management and large institutions with a longer time lockup agreement such as a restricted shares

because when a company's ownership is largely inclined by majority of shareholders whether these are general public or insiders, dividend policy may be influenced by their preferences (Al-Najjar, 2021). Therefore the shareholders who rely on dividend income may push for higher dividend payouts. Conversely, firms with a diverse and widely distributed free float meaning that the shares are owned by a small group of owners may face less pressure to pay dividends to meet their income needs (Firth, 2016).

H₃ The Payout policy is align with the firm's shares on the free float.

Stock Trading Volume

Trading volume can indirectly affect dividend policy due to tax considerations. For example, if a significant portion of a company's shareholders prefers capital gain that is taxed differently than dividends, the firm may not consider to disburse dividends and more inclined to keep earnings or repurchase shares (Zagonel and Terra, 2018).

H₄ Stock trading volume has an impact on the dividend policy.

Size

According to the birds in hand theory and the clientele effect the larger firms usually pay the more stable regular dividend thus attracting the income-focused investors. The mature firms have more retained earnings available according the packing order theory, making it easier to distribute dividends while still retaining sufficient funds for investments (Yemi, 2018).

H₅ Firm size has an impact on the dividend policy.

Investment opportunities

The residual dividend model and the packing order theory suggest that the firms prefer to use the retained earnings for such projects having a positive NPV and finally distribute the remaining earnings as a dividend (Andaswari, 2022).

H₆ The Firm's investment opportunities affect the dividend policy.

Profitability

According to the dividend smoothing theory and the residual dividend model when a firm's profitability is high and stable, it is more likely to pay regular and increasing dividends to its shareholders (Amadi, 2022) thus allowing firms to use the additional funds for the investment.

H₇ Firms profitability is significantly aligned with the dividend policy.

Control variables

Leverage

If the higher proportion of debt/leverage the firm uses can limit the firm capacity to issue dividend because the service debt often requires to pay regular interest (Tayachi, Hunjra et al., 2023) which can consume a significant proportion of the internally available funds.

Liquidity

Companies having more sufficient cash reserves and current assets can maintain a stable dividend policy because the firm has the resources to meet the dividend obligation (KANAKRIYAH, 2020). Conversely, firms with low liquid assets may need to be more cautious with their dividend payouts. Therefore such firms may choose to prioritize liquidity and retain earnings to ensure they can meet their obligations (Sikveland, 2020).

Inventory Turnover

Inventory turnover measures, how quickly a firm generates its profits by the number of times sells and replaces its inventory, therefore firms with a high turnover ratio typically have more funds available to distribute as dividends and making it easier for a firm to pay dividends (Affandi, Sunarko et al., 2019).

Return on Equity

According to the signaling theory, high ROE can signal the firm's stability of future financial performance. Firms with consistently high ROE might use dividends to signal stability and confidence to sustain profits (Muchtar, Alias et al., 2023). Whereas the residual, firms should pay as dividends from earnings that remain latter on meeting with positive (NPV) projects. High ROE signifies profitability, potentially leaving more earnings for dividends after reinvestment profitability (Yusup, Widyarini et al., 2022).

H₈ There may be association among the control variables and the firms' dividendpolicy.

Table 1 Measurement of Research Variables

Variables	Description	Source
Dependents Variables		
Dividend per share	Total Dividend / Share out:	(Yusup, Widyarini et al., 2022).
Independent Variables		

Effective tax rate	Income Tax/EBT	(Livoreka, 2020)
Dividend distribution tax	Tax rate on the distributed profit	(Livoreka, 2020)
Market free float	Total shares available in open market	(Al-Najjar, 2021).
Stock trading volume	Number of shares traded	(Zagonel and Terra, 2018).
Size	Total assets (log)	(Yemi, 2018).
Investment opportunities	Total investment amount	(Andaswari, 2022)
Profitability	EBT/Sales	(Amadi, 2022)
Control Variables		
Leverage	Debt to Equity = Total Liabilities / Total Equity	(Tayachi, Hunjra et al., 2023)
Liquidity	Current Ratio = Current Assets / Liabilities	(KANAKRIYAH, 2020)
Inventory Turnover	Sales/Inventory	(Affandi, Sunarko et al., 2019)
Return on Equity	Net income/ Total Equity	(Yusup, Widyarini et al., 2022).

Table 2 Distributions of companies by sectors

The companies are listed according to their respective industries in the first column. The years are represented in columns 2 to 10, relative to the different companies present annually. The aggregate firms are shown at the last column after excluding those with missing data. While the last row presents aggregates firms yearly. Trimming and winsorizing at 5 percent were applied, where necessary, to exclude outliers using Eviews 10.

Economic Group:	2014	2015	2016	2017	2018	2019	2020	2021	2022	2014 to 2022
Textile	5	7	4	5	6	9	10	6	7	32
Cement	4	3	3	9	5	7	7	11	4	15
Food	5	4	6	8	9	13	11	12	13	14
Sugar	6	4	3	5	6	6	15	19	10	21
Total	20	18	16	27	26	35	43	48	34	82

Table 3 Descriptive statistics

Descriptive statistics of the sample data is considered. As the row one indicates the mean, median, minimum, maximum std. deviation and Jarque-Bera statistic is also reported showing the data is normal for further analysis.

Mean	Median	Maximum	Minimum	Std. Dev.	Skewness	Kurtosis
2.20e-14	-0.000216	0.564944	-0.749927	0.28011	-0.744338	4.329922
Jarque- Bera Probability	3.320707	0.190072				

Table 4 Correlation Matrix

Correlation Probability	Dividend Per Share	Dividend Distribution Tax	Market Free Float	Stock Trading Volume	Size	Profitability	Leverage	Liquidity	ROE
DividendPer Share	1								
Dividend Distribution Tax	-0.023	1							
Market Free Float	0.211**	-0.011	1						
Stock Trading Volume	-0.165**	-0.021	0.657***	1					
Size	0.091	-0.121*	0.765***	0.654***	1				
Profitability	0.131	-0.061	0.667***	0.561***	0.052	1			
Leverage	-0.091	0.053	0.561***	0.351***	0.025	0.12*	1		
Liquidity	0.031	-0.045	0.345***	0.673***	0.352***	0.065	-0.16**	1	
ROE	0.051	-0.134*	0.431***	0.392***	0.034	0.753***	0.16**	0.15**	1

*** Significance at 1 percent, ** Significance at 5 percent; * significance at 10 percent.

The market free float and stock trading volume are the main determinants of dividend policy. It can be shown after analyzing the significant correlation result in Table 4. While there is no issue regarding the multi-collinearity is observed.

Table 5 MODLE SUITABILITY: AUGMENTED DICKEY-FULLER - Fisher Chi-square

The suitability of regression model is ensured through the panel unit root test. As Column 1 lists the variable name, while Columns 2 to 4 present the t-statistic, p-value, and integration order.

Variables	At a Levels		
	t-statistics	p-value	Integration order
Dividend per share	287.989	0.002	1-0
Effective tax rate	324.024	0.000	1-0
Dividend distribution tax	326.486	0.000	1-0
Market free float	336.240	0.000	1-0
Stock trading volume	220.465	0.000	1-0
Size	259.872	0.000	1-0
Investment opportunities	282.123	0.000	1-0
Leverage	223.312	0.000	1-0
Inventory Turnover	313.684	0.000	1-0
Liquidity	217.564	0.000	1-0
Return on Equity	218.278	0.000	1-0

A panel unit root test is necessary to determine if the data is stationary, ensuring the suitability of the regression models. The results of the Augmented Dickey-Fuller (ADF) Fisher Chi-square confirm data stationarity for all variables, with p-values below 5% at the level of 1(0) integration order, indicating no unit root in the series. Therefore, pooled regression, random effects, and fixed effects models are the appropriate tests for analyzing the panel data.

The statistical model used for data analysis is as follows:

$$DPS = \beta_0 + \beta_1(ETR) + \beta_2(DDT) + \beta_3(MFF) + \beta_4(STV) + \beta_5(SIZE) + \beta_6(IO) + \beta_7(Lvg) + \beta_8(Inv_TO) + \beta_9(LQd) + \beta_{10}(ROA) + \epsilon_i$$

Where

DPS = The Measure of Dividend Per Share of the firm at time t ETR

= Effective Tax Rate

DDT = Dividend Distribution Tax MFF =

Market Free Float

STV = Stock Trading Volume

SIZE = Size

IO = Investment opportunities O_i = the intercept of the equation for firm
 Inv_TO = Inventory Turnover 1 to 7 = coefficients of variables
 LQd = Liquidity = the error term
 ROA = Return on Assets = th firm in time

4. Results & Discussions

We employ three panel data regression models based on: Pooled OLS regression, Random Effect, and Fixed Effect models. The results of these models are presented in Table 6. To determine the appropriate model among these, the Breusch-Pagan and Hausman tests were performed. Based on the Hausman test results shown in Table 7, if the p-value is less than 5 percent, the null hypothesis (indicating that the Random Effect model is appropriate) is rejected. Consequently, this section provides a detailed analysis of the Pooled Regression, Random Effect, and Fixed Effect models.

Table 6 Results of Regression Analysis

This table shows the outcomes of different regression models. The intercept C is placed to the top of variables in first column. Whereas the columns 2 to 7 are showing the coefficients and p-value results of Pooled, Random and fixed effects models respectively.

Variables	Pooled Regression		Random Effect Model		Fixed Effect Model	
	Coefficients	Prob.	Coefficients	Prob.	Coefficients	Prob.
C	0.825	0.000	0.697	0.016	-0.678	0.140
Effective Tax rate	-0.013	0.883	-0.017	0.891	-0.017	0.050
Dividend Distrb. Tax	0.058	0.118	0.809	0.276	0.023	0.048
Markt. Fre Float	0.612	0.001	0.311	0.044	0.541	0.044
Stk. Trading Volume	-0.665	0.000	-0.292	0.678	-0.292	0.027
Size	-0.514	0.010	0.391	0.030	0.391	0.040
Invst: Opt	-1.494	0.003	-0.331	0.003	-0.333	0.183
Profitability	0.442	0.004	0.637	0.020	0.637	0.003
Leverage	-0.519	0.000	0.085	0.001	0.085	0.063
Liquidity	-0.031	0.917	0.106	0.301	0.106	0.032
Invntry TO	0.001	0.978	-0.003	0.903	0.063	0.041
ROE	0.237	0.000	0.546	0.008	2.546	0.048
R-squared	0.263		0.059		0.799	
Adjusted R-	0.249		0.041		0.771	

squared

Durbin-Watson

0.536

1.336

1.701

stat

Table 7. Hausman Test

This table concludes that the result of fixed effect model is better to be considered than the random effects. This is because the P – value is less than 5% and rejects the null hypothesis that the random effect model is better. Before that we also run the Breusch Pagan test which rejected the Pooled ordinary least square regression model at the p value of less than 5% confident interval.

	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross Sections Random	39.366549	14	.0003

Since the result of fixed effects model has given most important facts regarding market free float and stock trading volume. Those results have been remained gap so far in the existing literature. However findings can prove the market free float has a positive strong significant at 1% impact on firm dividend policy. It is due the majority of individual and institutional investors prefer regular dividend or because companies with larger free floats tend to have higher liquidity, more stable stock prices, and a diverse investor base that prefers regular dividends. This finding is consistent with signaling theory.

Another key finding is that stock trading volume has a significant negative effect on a firm's dividend policy. This is because shareholders may prefer capital gains, which are taxed lower than dividends; the firms in this case withhold dividend distributions.

Conclusion & Future Research

This study includes a sample of data from 82 non-financial firms, covering the period from 2014 to 2023, obtained from the annual published reports available on the official website of the State Bank of Pakistan. Various statistical procedures were employed. First, trimming and winsorizing were performed to remove outliers. To address multi-collinearity issue, the correlation matrix was considered. Finally, the Jarque-Bera test was applied to check the normality of the data. Further the panel unit root test was considered to confirm the suitability of regression models. To determine the different characteristics of dividend policy, pooled OLS regression, as well as fixed and random effects models was used.

The Result of fixed effects model revealed key insights on market free float and stock trading volume, filling a gap in existing literature. The findings show that market free float has a strong, significant positive impact (at 1%) on firm dividend policy, because higher liquidity and stable stock prices attract investors who prefer regular dividends. This aligns with signaling theory. Another key finding is that stock trading volume significantly negatively impacts a firm's dividend policy, as shareholders may prefer lower-taxed capital gains over dividends. The relationship between market free float, stock liquidity, and corporate governance mechanisms could be

explored to understand how governance practices affect dividend distributions in firms with higher market free float. Also this study did not examine the payout policies of the sample firms before and during the COVID-19 pandemic. Therefore, we strongly encourage future researcher to investigate how this significant event influenced changes in firms' dividend policies.

Reference

- Abdullah, H., Isiksal, A. Z., et al. (2023). Dividend policy and firm value: Evidence of financial firms from Borsa Istanbul under the IFRS adoption. *Journal of Financial Reporting Accounting*.
- Affandi, F., Sunarko, B., et al. (2019). The impact of cash ratio, debt to equity ratio, receivables turnover, net profit margin, return on equity, and institutional ownership to dividend payout ratio. *A Journal of Research in Management*, 1(4), 1-11.
- Ahmad, N. G., Barros, V., & Sarmento, J. M. (2018). The determinants of dividend policy in Euronext 100. *Corporate Ownership & Control*, 15(4), 8-17.
- Akbar, A. H. M. (2022). Dividend policy and earnings management: Do agency problem and financing constraints matter? *Borsa Istanbul Review*, Volume 22(Issue 5), Pages 839-853.
- Al-Najjar, B. K. E. (2021). The effect of ownership structure on dividend policy: evidence from Turkey. *The international journal of business in society*, 16(1), 135-161.
- Al-Yahyaee, K. H., Pham, T. M., et al. (2020). The information content of cash dividend announcements in a unique environment. 35(3), 606-612.
- Almeida, L., Tavares, F., & Pereira, E. (2022). Efeito subprime na distribuição de dividendos em Portugal. *FUMEC/FACE Journal Belo Horizonte*, 14, 19-25.
- Almeida, L. A. G., Pereira, E. T., & Tavares, F. O. (2021). Determinantes da política de dividendos em Portugal. *Revista Universo Contábil*, 10(4), 162-181.
- Alzamora-Ruiz, J., Fuentes-Fuentes, M.D., Martinez-Fiestas M. (2021). Together or separately? Direct and synergistic effects of effectuation and causation on innovation in technology-based SMEs., *Int. Entrep. Manag. J.*, 17(4), 1917-1943.
- Amadi, B. B. (2022). *Factors Affecting Dividend Smoothing Among Listed Firms at the Nairobi Securities Exchange*. University of Nairobi,
- Ammar Hussain, A. H. M. A. (2022). Dividend policy and earnings management: Do agency problem and financing constraints matter? *Borsa Istanbul Review*, Volume 22(Issue 5), Pages 839-853.
- Andaswari, S. P., Hadi, Iskandar, Rusdiah. (2022). *Analysis the Effect of Investment Opportunity Set (IOS) on the Dividend Policy of Constructions Companies Listed on the Indonesia Stock Exchange*. Paper presented at the Mulawarman International Conference on Economics and Business (MICEB 2017).
- Anderson, R. C., & Reeb, D. M. (2020). Founding-family ownership and firm performance: Evidence from the S&P 500 *The Journal of Finance*, 58(3), 1301-1328.

- Arsyad, M. (2021). The effect of activity ratios, liquidity, and profitability on the dividend payout ratio. *Indonesia Accounting Journal*, 3(1), 36-44.
- Auerbach, A. (1979). Wealth maximization and the cost of capital. *The Quarterly Journal of Economics*, 93(3), 433-446.
- Baker, H. K., Nofsinger, J. R., et al. (2020). The Stock Market: Owning a Piece of Companies. In *The Savvy Investor's Guide to Building Wealth Through Traditional Investments* (pp. 27-58): Emerald Publishing Limited.
- Barros, V., Matos, P.V., Sarmiento, J.M., Vieira, P.R (2021). Do activist shareholders influence a manager's decisions on a firm's dividend policy: a mixed-method study. *J. Bus.Res.* 122, 387-397.
- Barros, V., Verga Matos, P., et al. (2021). Do activist shareholders influence a manager's decisions on a firm's dividend policy: A mixed-method study. *Journal of Business Research*, 122, 387-397. doi:<https://doi.org/10.1016/j.jbusres.2020.08.048>
- Barros, V. M., P. V. & Sarmiento (2020). What firm's characteristics drive the dividend policy? A mixed-method study on the euronext stock exchange. *Journal of Business Research*, 115, 365-377.
- Black, F. (2019). The dividend puzzle. *The Journal of Portfolio Management*, 2(2) 5-8. BOI, B. o. I. (2020-21). Income Tax Ordinance Amended upto 30.06.2021. <https://invest.gov.pk/node/1596>.
- Bradford, D. (2018). The incidence and allocation effects of a tax on corporate distributions *Journal of Public Economics*, 15(1), 1-22.
- Brady, M. K. K. (2018). The role of dividend policy in cross-border mergers and acquisitions. *Journal of Multinational Financial Management*, Volumes 47-48, Pages 14-30. Brav, A., Graham, J., Harvey, C., & Michaely, R. (2020). Payout policy in the 21st century. *Journal of Financial Economics*, 77(3), 483-527.
- Brown & Peterson, B. C. (2011). Cash holdings and R&D smoothing. *J. Corp. Finan.* 17(3), 694-709.
- Chang, K., Kang, E., & Li, Y. (2022). Effect of institutional ownership on dividends: An agency-theory-based analysis. *Journal of Business Research*, 69(7), 2551-2559.
- Chazi, A., Boubakri, N., et al. (2021). Corporate dividend policy in practice: Evidence from an emerging market with a tax-free environment. *19(2)*, 245-259.
- Chetty, R., & Saez, E. (2020). Dividend taxes and corporate behavior: Evidence from the 2003 dividend tax cut. *Quarterly Journal of Economics* (120(3)), 791-833.
- Dahlquist, M., Rydqvist, K., & Robertsson, G. (2018). Direct evidence of tax clienteles. *Journal of Empirical Finance*, 28, 1-12.
- Denes, M. R., Karpoff, J. M., & McWilliams, V. B. (2023). Thirty years of shareholder activism: A survey of empirical research. *Journal of Corporate Finance*, 44, 405-424.
- Deng, L., Li, S., Liao, M., Wu, W (2023). Dividends, investment and cash flow uncertainty: evidence from China. *Int. Rev. Econ. Financ*, 24,, 112-124.
- Dewenter, K., & Warther, V. (1988). Dividends, asymmetric information, and agency conflicts: evidence from a comparison of the dividend policies of Japanese and U.S. firms. *Journal of Finance*, 53(3), 879-904.
- Dongmin Kong, M. J. L. L. (2023). Mandatory dividend policy and investment efficiency within state-owned business groups. *Pacific-Basin Finance Journal*, Volume 77. Elton, E., & Gruber, M. (2018). Marginal stockholder tax rates and the clientele effect. *Review of Economics and Statistics*, 52, 68-74

- Emmenegger, P., Schraff, D. & Walter, A. (2018). QCA, the truth table analysis and large N survey data: The benefits of calibration and the importance of robustness tests. *St.Gallen: Compass Working Paper 2014-79*.
- Farinha, J. (2020). Dividend policy, corporate governance, and the managerial entrenchment hypothesis: An empirical analysis. *Journal of Business Finance & Accounting*(30(9–10)), 1173–1209.
- Firth, M., Gao, Jin, Shen, Jianghua, Zhang, Yuanyuan (2016). Institutional stock ownership and firms' cash dividend policies: Evidence from China. *Journal of Banking Finance*, 65, 91-107.
- Gordon, M. J. (1963). Optimal Investment and Financing Policy. *Journal of Finance*(18(2)), 264-272.
- Graham, J., & Kumar, A. (2006). Do dividend clienteles exist? Dividend preferences of retail investors. *Journal of Finance*(61(3)), 1305–1336.
- Harakeh, M. (2020). Dividend policy and corporate investment under information shocks. *Journal of International Financial Markets, Institutions and Money*, Volume 65.
- Henry, D. (2011). Ownership structure and tax-friendly dividends. *Journal of Banking & Finance*, 35(10), 2747–2760.
- Jacob, M., & Michaely, R. (2023). Taxation and dividend policy: The muting effect of agency issues and shareholder conflicts. *The Review of Financial Studies*, 30(9), 3176–3222.
- Jafari-Sadeghi, V., Mahdiraji, H.A., Busso, D., Yahiaoui, D. (2022). Towards agility in international high-tech SMEs: exploring key drivers and main outcomes of dynamic capabilities. *Technol. Forecast. Soc. Chang.*(174, 121272).
- KANAKRIYAH. (2020). Dividend policy and companies' financial performance. *The Journal of Asian Finance, Economics Business*, 7(10), 531-541.
- Karasek III, R., & Bryant, P. A. o. S. M. J. (2020). Signaling theory: Past, present, and future. *II*(1), 91.
- Kasozi, J., & Ngwenya, A. (2023). Determinants of corporate dividend payment policies: A case of the banking industry in South Africa *Journal of Governance and Regulation*, 4(4–3), 380–390.
- Khan, M. N., Sherwani, F. A. K., Afshan, F. I., & Kabbir, G. . (2020). Impact of Capital Structure and Dividend Payout Policy on Firm's Financial Performance: Evidence from Manufacturing Sector of Pakistan. *American Journal of Business and Society*, 2(1), 2935.
- Kilincarslan, E. J. F. R. L. (2021). Smoothed or not smoothed: The impact of the 2008 global financial crisis on dividend stability in the UK. 38, 101423.
- Kumar, B. R., & Sujit, K. S. (2016). Determinants of dividend policy in GCC firms: An application of partial least square method. *Corporate Ownership & Control*, 13(3–3), 455–466.
- KyungLee, Y. (2022). The effect of ownership structure on corporate payout policy and performance: Evidence from Korea's exogenous dividends tax shock. *Pacific-Basin Finance Journal*, Volume 73.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Florencio, R. (2000). Agency problems and dividend policies around the world. *The Journal of Finance*, 55(1), 1–33.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Florencio, R. (2002). Agency problems and dividend policies around the world. *The Journal of Finance*(55(1)).
- Lee, N., Lee, J. (2019). R & D intensity and dividend policy: evidence from South Korea's biotech firms. *Sustainability*, 11(18), 4837.

- Lee, Y. T., Liu, Y. J., Roll, R., & Subrahmanyam, A. (2006). Taxes and dividend clientele: Evidence from trading and ownership structure. *Journal of Banking & Finance*, 30(1), 229–246.
- Legewie, N. (2020). An introduction to applied data analysis with qualitative comparative analysis (QCA). . *Forum Qualitative Social Research*, 14(3).
- Lewellen, W., Stanley, K., Lease, R., & Schlarbaum, G. (1978). Some direct evidence on the dividend clientele phenomenon. *The Journal of Finance*, 33(5).
- Lintner, J. (1956). Distribution of income of corporation among dividends, retained earnings, and taxes. *American Economic Review*, 46, 97–113.
- Lintner, J. (1962). Dividends, Earnings, Leverages, Stock Prices and the Supply of Capital to Corporations. *Review of Economic and Statistics*(44 (3): 243-269).
- Livoreka, B. H., Alban Shala, Albulena Hoti, Arta, Asllanaj & Rrustem (2020). Theories on dividend policy empirical research in joint stock companies in Kosovo. *Procedia Economics Finance*, 14, 387-396.
- Maqsudi, A., Rachmawati, T., et al. (2022). Influencing Factors Dividend Policy: Empirical Evidence From Different Parts Of The World. *Eduvest-Journal of Universal Studies*, 2(7), 1.363-361.375.
- Michaely, R., & Murgia, M. (2017). The effect of tax heterogeneity on prices and volume around the ex-dividend day: Evidence from the Milan Stock Exchange. *The Review of Financial Studies*, 8(2), 369–399.
- Miller, M. H., & Modigliani, Franco. (1961). Dividend policy, growth and the valuation of shares. *Journal of Business*, 34, 411–433.
- Muchtar, D., Alias, N., et al. (2023). THE MARKET VALUE OF NON-FAMILY FIRMS: A STUDY ON OWNERSHIP CONCENTRATION, FINANCIAL POLICY, AND PROFITABILITY. *Jurnal Ekonomi Bisnis dan Kewirausahaan*, 12(1), 19-35.
- Neugebauer, T., Shachat, J., et al. (2023). A test of the Modigliani-Miller theorem, dividend policy and algorithmic arbitrage in experimental asset markets. *Journal of Banking & Finance*, 106814. doi:<https://doi.org/10.1016/j.jbankfin.2023.106814>
- Nguyen, T.-G. (2020). Stock liquidity and dividend policy: Evidence from an imputation tax environment. *International Review of Financial Analysis*, Volume 72.
- Pérez-González, F. (2018). Large shareholders and dividends: Evidence from U.S. tax reforms Working paper. *Columbia University*.
- Poterba, J. (2019). Taxation and corporate payout policy. *American Economic Review*, 94(2), 171–175.
- Poterba, J., & Summers, L. (2019). New evidence that taxes affect the valuation of dividends. *The Journal of Finance*, 39(5), 1397–1415.
- Pulido, M., & Barros, V. (2017). Corporate tax avoidance and Ex ante equity cost of capital in Europe. *European Journal of Management Studies*, 22(1), 51–74.
- Ragin, C. (1987). *The comparative method: Moving beyond qualitative and quantitative strategies*. Berkeley: . *University of California Press*.
- Ragin, C. (2010). *Redesigning social inquiry: Fuzzy sets and beyond*. Chicago and London: . *University of Chicago Press*.
- Restrepo, N., & Uribe, J. M. (2023). Cash flow investment, external funding and the energy transition: . *Evidence from large US energy firms*, 181, 113720.
- Sáez, M., & Gutiérrez, M. (2015). Dividend policy with controlling shareholders. . *Theoretical Inquiries in Law*(16(1)), 107–130.
- Schepens, G. (2018). Taxes and bank capital structure. *Journal of Financial Economics*, 120(3), 585–600.

- Schneider, C., & Wagemann, C. (2012). Set-theoretic methods for the social sciences: A guide to qualitative comparative analysis. *Cambridge: Cambridge University Press*.
- Seida, J. (2020). Evidence of tax-clientele-related trading following dividend increases. *The Journal of the American Taxation Association: Supplement 200, 23(1)*, 1-21.
- Sikveland, M., Zhang, Dengjun. (2020). Determinants of capital structure in the Norwegian salmon aquaculture industry. *Marine Policy, 119*, 104061.
- Simshauser, P. (2023). On dividend policy and market valuations of Australia's listed electricity utilities: Regulated vs. merchant. *Economic Analysis and Policy, Volume 77*, Pages 696-715.
- Sindhu, M. I., Hashmi, S. H., & Ul Haq, E. (2020). Impact of ownership structure on dividend payout in Pakistani non-financial sector. *Cogent Business & Management(3(1)*, 1272815).
- Tayachi, T., Hunjra, A. I., et al. (2023). How does ownership structure affect the financing and dividend decisions of firm? *Journal of Financial Reporting, 21(3)*, 729-746.
- Victor Barros, P. V. M., Joaquim Miranda Sarmiento. (2021). What firm's characteristics drive the dividend policy? A mixed-method study on the Euronext stock exchange. *Journal of Business Research, Volume 115*, 365-377.
- Wang, D., 2010. (2019). Corporate investment, financing, and dividend policies in the high-tech industry. *J. Bus. Journal of Finance, Res. 63*, 486-489.
- Wenyun Yao, L. Z. J. H. (2020). Does having a semimandatory dividend policy enhance investor confidence? Research on dividend-financing behavior. *Volume 44(Issue 4)*.
- Yemi, A. E. S., Akinadewo Israel. (2018). Retained earnings and firms' market value: Nigeria experience. *he Business Management Review 9(3)*, 482-496.
- Yusup, A. K., Widyarini, L. A., et al. (2022). Does internal fund create trouble for firms? the effect of investment and dividend policy toward firm value. *Petra International Journal of Business Studies, 5(1)*, 1-9.
- Zagonel, T., & Terra, P. R. S., Pasuch, Diogo Favero. (2018). Taxation, corporate governance and dividend policy in Brazil. *RAUSP Management Journal, 53*, 304-323.
- Zarah J, P. (2019). Empirical evidence of market reactions based on signaling theory in Indonesia Stock Exchange. *Financial Innovations, 16(2)*, 66-77.
- Zhu, B. (2022). Carbon risk and dividend policy: Evidence from China. *International Review of Financial Analysis, Volume 84*.
- Zia, L., Ilyas Sindhu, M., & Haider Hashmi, S. (2017). Testing overconfidence bias in Pakistani stock market. *Cogent Economics & Finance(5(1)*, 1289656).