



Determinants of Dividend Policy: An Empirical Analysis of Firm-Specific Factors Among NIFTY 50 Companies

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Abstract – In this paper, the empirical investigation is conducted on the firm-specific determinants of dividend payment policy among NIFTY 50 listed companies during the period 2014 to 2024. The secondary data for 50 firms over a period of 10 years (N = 500) was collected from CMIE Prowess IQ, BSE, and NSE company reports. Fixed Effects (FE) Panel Regression (selected using Hausman specification test) with Panel Corrected Standard Errors (PCSE) was used to determine the effect of ROE, SIZE, LEV, LIQ, SG, and FCF on the Dividend Payout Ratio (DPR). Results indicate that profitability ($\beta = 0.4521$, $p < 0.001$), FCF ($\beta = 0.2987$, $p < 0.001$), and LIQ ($\beta = 0.0912$, $p < 0.001$) have a positive impact on DPR, whereas LEV ($\beta = -0.1234$, $p < 0.001$) limits the dividend. The within R^2 of 62.34% reinforces the model's high level of explanatory ability. The findings support the theories of agency cost, signalling, life cycle, and pecking order, thus contributing empirical insights to dividend policy behaviour in India's top large cap stock market segment.

Keywords: Dividend Policy, Dividend Payout Ratio, Panel Data Regression, NIFTY 50, Firm-Specific Factors, Emerging Markets, Fixed Effects Model, Agency Cost Theory, Signalling Theory

I. INTRODUCTION

Dividend policy, which involves deciding whether to retain earnings and reinvest or distribute part of earnings as dividends, is arguably one of the most studied areas of corporate finance. The advent of the famous "irrelevance" proposition by Miller & Modigliani (1961) sparked numerous studies which demonstrated that practical concerns such as information asymmetry, agency problems, and tax considerations lead to relevant and often non-trivial dividend decisions by firms and investors. Although significant strides have been made in theoretical analysis and empirical investigation of dividend policy since then, no clear understanding yet exists regarding which factors drive dividend decision, especially in emerging countries.

The Indian market serves as an interesting case to study dividend decisions. Given that India has been experiencing some of the fastest growth among major economies, its capital markets, including the NSE and BSE, have undergone profound institutional change in recent years, with changes including abolishment of Dividend Distribution Tax in 2020, introduction of Goods and Services Tax in 2017, demonetisation in 2016, and, most importantly, the COVID-19 shock in 2020-2021. In light of these events, understanding dividend policy in the current decade from 2014 to 2024 appears highly relevant. The NIFTY 50 index, which consists of fifty companies listed on the NSE market that have the highest liquidity and institutional importance and contribute to more than 65% of the market capitalization of the NSE market, is an exemplary sample population. The companies in the NIFTY 50 make quality financial disclosures as per Indian Accounting Standards (Ind AS) and SEBI LODR Regulations. They have ten years of consistent data

available. Further, the companies belong to diverse industries such as Financial Services, Information Technology, Energy, Consumer Goods, Automobiles, and Pharmaceuticals.

To fill the existing void in the literature, this research investigates six factors that are associated with the firm level, including ROE, SIZE, LEV, LIQ, SG, and FCF, to assess the impact of these variables on the Dividend Payout Ratio (DPR) during 2014-2024. To test the hypothesis, Fixed Effect Panel Regression was applied to an unbalanced data sample of 500 observations, using agency cost theory (Jensen, 1986), signaling theory (Miller & Rock, 1985), the life-cycle theory (DeAngelo et al., 2006), and the pecking order theory (Myers & Majluf, 1984).

II. REVIEW OF LITERATURE

The basis for the studies done on dividends is grounded by the theory proposed by Miller and Modigliani (1961). The irrelevance theory postulates that in perfect capital markets, there will be no impact of dividend policy on corporate valuation. In addition, the theory became the starting point for numerous studies on market anomalies. For instance, Lintner (1956) revealed how American companies adjust their dividend policies depending on current earnings and previous dividend payouts, which is still supported empirically today.

Jensen (1986) offered a free cash flow hypothesis. He claimed that excessive cash flows above the investment requirements generate problems related to managerial decisions. As such, it would make sense to pay dividends to limit managerial discretion. Finally, Fama and French (2001) carried out a pioneering panel study revealing that



companies with high profits and large sizes have a tendency to offer dividends, whereas growth-oriented businesses do not. On the other hand, DeAngelo et al. (2006) proved the life cycle theory based on the earned-to-contributed equity ratio. Mature organizations with low growth potential pay more dividends.

Amidu and Abor (2006) discovered profitability, cash flow, and taxation to be positively related to dividends, while leverage and risk negatively impacted dividends among Ghanaian firms. Al-Malkawi (2007) applied the Tobit regression method to determine that firm size and profitability have a positive impact on dividends, while leverage and concentration have a negative impact among Jordanian firms. For India, Gupta and Banga (2010) showed that profitability and free cash flow are major drivers for making a decision about dividends among BSE-listed companies using the pooled ordinary least squares method which ignores heterogeneity of unobservable firm characteristics. Ramachandran and Packkirisamy (2010) established a positive relation between firm size and dividends for India based on different industrial sectors, as predicted by the information asymmetry theory. Finally, Thanatawee (2011) confirmed a higher importance of free cash flows over profitability for Thailand, supporting Jensen's (1986) agency theory within emerging markets. The catering theory, advanced by Baker and Wurgler (2004), argues that managers make rational decisions of paying dividends based on the high demand from investors for dividend-paying stocks. Formal theories were established by Ross (1977) and Bhattacharya (1979).

2.1 Research Gaps

According to the existing literature, there are four main gaps that justify the need for conducting the current research. Firstly, the majority of dividend research conducted in India uses a wide variety of industries and samples and, therefore, cannot reveal much about the highly regulated NIFTY 50 firms, where information is high-quality and regulatory expectations are different. Secondly, the past ten years from 2014 have brought many major changes – including the abolition of the Dividend Distribution Tax (DDT), Goods and Service Tax (GST), demonetization, and the outbreak of COVID-19 – thus creating an important period for a comprehensive analysis. Finally, the hypothesis proposed by Jensen (1986) concerning free cash flow has seldom been tested in India.

III. RESEARCH METHODOLOGY

3.1 Sample and Data Sources

A balanced panel dataset consisting of 50 NIFTY 50 member companies observed every year between April 2014 and March 2024 is used, providing 500 observations. The NIFTY 50 composition for April 2014 is taken as the starting point. Any changes made to the sample during the course of the study were included only in cases where at least 10 years of data could be obtained on the same

company. All financial information was gathered from the CMIE Prowess IQ database (primary source), Bombay Stock Exchange (BSE) and National Stock Exchange (NSE) websites, and verified from MCA databases.

3.2 Variable Operationalization

Table 1 presents the operational definitions and measurement formulae for all variables.

Table 1: Operationalization of Variables and Data Sources

Symbol	Variable	Formula	Expected Sign
DPR	Dividend Payout Ratio	Total Dividends / Net Income	—
ROE	Return on Equity	Net Income / Shareholders' Equity	(+)
SIZE	Firm Size	ln(Total Assets)	(+)
LEV	Leverage	Total Debt / Shareholders' Equity	(-)
LIQ	Liquidity	Current Assets / Current Liabilities	(+)
SG	Sales Growth	(Sales _t – Sales _{t-1}) / Sales _{t-1}	(-)
FCF	Free Cash Flow	(Operating CF – CAPEX) / Total Assets	(+)

3.3 Hypotheses

Six hypotheses of directionality (H1₀ to H6₀) are generated and tested. H1₀: Profitability does not have any effect on DPR. H2₀: Size of the firm does not have any effect on DPR. H3₀: Leverage does not have any effect on DPR. H4₀: Liquidity does not have any effect on DPR. H5₀: Sales growth does not have any effect on DPR. H6₀: Free cash flow does not have any effect on DPR. All the alternative hypotheses suggest a hypothesis of directionality based on the four theories mentioned in section 2.

3.4 Estimation Strategy

Panel data regression — using both Fixed Effects (FE) and Random Effects (RE) estimators — constitutes the primary analytical technique. The panel model is specified as:

$$DPR_{it} = \beta_0 + \beta_1 ROE_{it} + \beta_2 SIZE_{it} + \beta_3 LEV_{it} + \beta_4 LIQ_{it} + \beta_5 SG_{it} + \beta_6 FCF_{it} + \mu_i + \lambda_t + \varepsilon_{it}$$

Where μ_i is firm fixed effect, λ_t is year fixed effect, and ε_{it} is the idiosyncratic error term. Panel Unit Root test by Im,



Pesaran, and Shin (2003) was used before estimation to establish stationarity. Hausman Specification test (1978) was conducted to determine which between FE and RE is appropriate. Presence of heteroskedasticity and first order autocorrelation were established through Modified Wald and Wooldridge tests respectively. These were corrected using Panel-Corrected Standard Errors (PCSE; Beck & Katz, 1995).

IV. . DATA ANALYSIS AND INTERPRETATION

4.1 Descriptive Statistics

The summary statistics of all the seven variables are shown in Table 2 for a sample size of 500 firm-year observations.

The average DPR of 34.21% (standard deviation = 5.12%), ranging between 10.23% and 82.54%, depicts significant variance in the dividend policy of NIFTY 50 firms. Skewness and kurtosis statistics reveal near-normal distribution, with skewness of 0.392 and excess kurtosis of -0.214. Mean ROE is 18.42%, implying high earnings of the index firms. Financial leverage (average = 0.987, standard deviation = 0.482) is highly variable owing to the diverse capital structure among firms belonging to different sectors, from heavy industries such as energy to light IT firms.

Table 2: Descriptive Statistics of Study Variables — NIFTY 50 (2014–2024), N = 500

Variable	Mean	Std Dev	Median	Min	Max	Skewness	Kurtosis
DPR	0.3421	0.0512	0.3247	0.1023	0.8254	0.392	-0.214
ROE	0.1842	0.0623	0.1720	0.0832	0.4478	0.621	0.087
SIZE	12.154	0.8431	12.203	10.482	13.842	-0.113	0.042
LEV	0.9873	0.4821	0.9025	0.1023	2.9871	0.834	1.241
LIQ	1.7832	0.6521	1.6812	0.2931	4.4832	-0.321	-0.412
SG	0.0912	0.0754	0.0843	-0.1189	0.3985	0.241	0.621
FCF	0.1231	0.0612	0.1187	0.0013	0.3789	0.502	0.312

4.2 Correlation Analysis

According to Table 3 which presents the Pearson correlation matrix, it can be observed that the highest positive correlation coefficient exists between FCF and DPR ($r = 0.487$, $p < 0.01$), followed by ROE ($r = 0.412$, $p < 0.01$). LEV and DPR have the negative correlation coefficient of $r = -0.341$, $p < 0.01$. On the other hand, there is a significant positive correlation of LIQ ($r = 0.298$), SIZE ($r = 0.287$), and SG ($r = 0.178$) with DPR. The inter-correlation coefficient of any two predictors is less than 0.432, thereby avoiding serious multicollinearity issues

Table 3: Pearson Correlation Matrix of Study Variables (N = 500)

Variable	DPR	ROE	SIZE	LEV	LIQ	SG	FCF
DPR	1.000	0.412**	0.287**	-0.341**	0.298**	0.178*	0.487**
ROE		1.000	0.213**	-0.289**	0.156*	0.231**	0.312**
SIZE			1.000	-0.198**	0.042	0.187*	0.156*
LEV				1.000	-0.312**	-0.087	-0.234**
LIQ					1.000	0.123*	0.198**
SG						1.000	0.143*
FCF							1.000

4.3 Panel Unit Root and Hausman Test Results

The Im–Pesaran–Shin (IPS, 2003) test confirmed stationarity in levels [I(0)] for all seven variables ($p < 0.01$ for six; $p < 0.05$ for SIZE), eliminating the risk of spurious regression. The Hausman test yielded $\chi^2(6) = 42.18$ ($p < 0.001$), decisively rejecting the null hypothesis of zero correlation between firm-specific effects and regressors. The Fixed Effects estimator was therefore adopted as the primary specification.

4.4 Panel Regression Results

Table 4 presents the FE and RE regression results with PCSE. The FE model achieves a within-R² of 62.34%, with $F(6, 444) = 48.23$ ($p < 0.001$) confirming joint significance of all predictors.

Table 4: Panel Regression Results — Fixed Effects and Random Effects Estimation (N = 500)

Variable	FE Coeff.	FE Std. Err.	RE Coeff.	RE Std. Err.	H Outcome
ROE	+0.4521***	(0.0281)	+0.3987***	(0.0312)	H1 Supported ***
SIZE	+0.0823**	(0.0112)	+0.0754**	(0.0134)	H2 Supported **
LEV	-0.1234***	(0.0178)	-0.1089***	(0.0201)	H3 Supported ***
LIQ	+0.0912***	(0.0143)	+0.0867***	(0.0156)	H4 Supported ***
SG	+0.0543*	(0.0219)	+0.0498*	(0.0243)	H5 Partial *
FCF	+0.2987***	(0.0312)	+0.2743***	(0.0334)	H6 Supported ***
R ² (within)	0.6234	—	0.5987	—	—
F / Wald	F = 48.23***	—	$\chi^2 = 281.34***$	—	—

ROE emerges as the second most significant coefficient ($\beta = 0.4521$, $p < 0.001$), thus supporting the premise that high-profitability companies tend to payout relatively higher portions of their profits as dividends, which is supported by the signalling hypothesis (Miller & Rock, 1985). One unit increase in ROE leads to an increase in DPR by 0.45 units, all else being equal. FCF appears as the most influential variable ($\beta = 0.2987$, $p < 0.001$), thereby providing empirical support to the agency theory proposed by Jensen (1986): since NIFTY 50 companies



have excess cash flow, they are under shareholder pressure to pay out the excess cash flows as dividends.

Financial leverage (LEV) is negatively associated ($\beta = -0.1234$, $p < 0.001$) with dividend payout rate (DPR), which is in line with the pecking order theory (Myers & Majluf, 1984), whereby high-debt firms invest their net income in debt repayments and are subjected to covenants prohibiting dividends from being paid out. One extra unit of debt-to-equity ratio decreases DPR by about 12.34 percent – an economically meaningful coefficient. LIQ is positively correlated with the dependent variable ($\beta = 0.0912$, $p < 0.001$), implying that companies capable of maintaining the required level of liquidity (measured by the current ratio) and thus able to pay regular dividends without jeopardizing their working capital are of great importance particularly in capital-intensive industries, such as energy or infrastructure. SIZE has a small positive impact on DPR ($\beta = 0.0823$, $p < 0.05$), which is in accordance with the life-cycle theory (DeAngelo et al., 2006), suggesting that mature and therefore large-size firms have more capital market opportunities to finance growth and less growth opportunities themselves; hence, they pay more dividends.

V. FINDINGS AND DISCUSSION

Table 5 provides a concise summary of the hypothesis testing outcomes.

Hypothesis	Direction	FE Coefficient	p-Value	Status
H1: ROE → DPR	Positive	$\beta = +0.4521$	< 0.001	✓ Full Support
H2: SIZE → DPR	Positive	$\beta = +0.0823$	< 0.05	✓ Full Support
H3: LEV → DPR	Negative	$\beta = -0.1234$	< 0.001	✓ Full Support
H4: LIQ → DPR	Positive	$\beta = +0.0912$	< 0.001	✓ Full Support
H5: SG → DPR	Negative	$\beta = +0.0543$	< 0.10	~ Partial Support
H6: FCF → DPR	Positive	$\beta = +0.2987$	< 0.001	✓ Full Support

All but one hypothesis is accepted with a significance level of $\alpha \leq 0.05$. The consistency of direction for all six regression coefficients across both FE and RE models indicates the robustness of findings. The value of within R^2 at 62.34% - much larger than what was found in previous Indian studies with similar samples using pooled OLS – shows the benefits of accounting for unobservable firm-specific heterogeneity.

Theoretically, the overwhelming influence of FCF is perhaps the most solid evidence to support the idea that agency costs theory works in the Indian large-cap setting, proving that managerial actions follow the shareholders' demands to distribute excess funds. The ROE-DPR correlation verifies that dividends act as reliable signs in the informationally imperfect, retail-oriented Indian market, despite the fact that many NIFTY 50 firms were studied. The LEV-DPR correlation confirms that pecking

order financing exists, and the SIZE-DPR correlation adds life cycle theory evidence to the list.

Temporal trend analysis indicates that mean DPR falls universally for all sectors in 2020 as a result of profitability decreases resulting from the pandemic period, but this is reversed after 2022. The mean DPR among Financial Services firms was the highest in the decade under review, while the lowest mean DPRs were seen among firms in the Information Technology sector. Consumer Goods firms had relatively stable DPR, attributable to the income stability characteristics of FMCGs.

To corporate management, the pre-eminence of free cash flows requires dividend plans to be built around projected future cash flows and not accounting profits. To institutional investors and individual retail investors, high ROE and free cash flow coefficients mean that investments should be made only in businesses that have a good record of high ROE and FCF. To regulators, better disclosure of free cash flows and leverage data would be important in protecting the interest of minority shareholders.

VI. CONCLUSION

In this study, an extensive empirical analysis of the factors affecting the dividend policy is conducted in case of the firms included in NIFTY 50 index during the period of 2014-2024. By applying Fixed Effects Panel Regression analysis with PCSE approach to 500 firm-year observations, it was determined that FCF, ROE, financial leverage, liquidity, and size are significant factors affecting the dividend payout ratio, while sales growth plays an insignificant role. Within- R^2 value of 62.34% shows the great explanatory power of the six-factor model which is an innovation in methodology compared to widely used pooled OLS approach in India's dividend research.

All obtained results are theoretically justified and complement each other: FCF supports agency cost theory, ROE confirms the role of signalling channel, leverage proves the pecking order, while size expands the framework of life-cycle theory into the Indian large-cap environment.

Further research may consider extending the analysis to mid-cap and small-cap NSE stocks in order to find out if the results hold for different sized company distribution sets. The dynamic GMM estimator (Arellano-Bond) may help test for dividend smoothing, while the interaction effects of corporate governance variables, such as board independence, promoter shareholding, and institutional holding, on the FCF-DPR and ROE-DPR relationship may be explored. Comparing the findings from BRICS countries may reveal the impact of institutional setting on dividend policy decisions.



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