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"An Empirical Study of Dividend Behaviour: Evidence from Manufacturing and Oil & Gas Firms of India"

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ABSTRACT:

The present paper study the behaviour of Indian firms with reference to the dividend policies being adopted by them. The present study examined the firms of BSE Manufacturing Index and Oil & Gas Index, with 5 years data ranging from 2015-16 to 2019-2020. The secondary data of the sample firms is analyzed using regression models to identify the influencing determinants. The stability in the dividend policies of sample firms have been also examined using well known Lintner's Model (1956). The results of the Lintner's model in manufacturing sector show that firms prefer the stability in their dividend policies. While in oil & gas sector, firms are framing their dividend policies as per their lagged or past year dividend payments. Lastly, the influence of firm characteristics on the dividend policies of both sectored firms is studied by employing the multiple regression model on the firms' financial data. The results of multiple regression provides that in the Manufacturing firms, past dividend is showing the significant relationship with the dividend policies of the firms, whereas in the Oil & Gas Sector, profitability and past dividend are significant variables to the dividend policies.

Keywords: *dividend policy, eps, profitability, current ratio, past dividends, leverage, growth.*

1.0 Introduction

The decision to pay the dividend has always been the debated topic in corporate finance. Dividend basically, refers to that portion of net income that firm decides to distribute to its shareholders. The distribution may be in cash termed as 'cash dividend' or it may be in the form of stocks termed as 'stock dividend'. The dividend decision is generally the trade -off between retained earnings and distributed profits to the shareholders. There have been various theories that explain the dividend distribution behaviour of the firms. Dividend irrelevance theory given by Miller & Modigliani (1961) postulates that the value of the firm is not affected by dividend policy adopted, rather affected by its earning capacity and investment decisions taken. Thus, the dividend irrelevance theory clearly refutes the relation between dividend policy and value of the firm. As opposite to the above, Gordan (1959) and Walter (1963) assert that dividend policy and value of the firm are not independent and value of the firm to a great extent is affected by the dividends distribution policy of the firms. Later, Life cycle theory, information asymmetry and signaling theory and free cash flow theory supports the role of firm level factors in determining the dividend policy. Firm level factors such as profitability, size, growth, leverage, earnings, risk, and cash-flow were among major explanatory variables to validate these theories.

The present paper is focused on comparative analysis of dividend policies adopted in manufacturing sector and oil &gas sector of India. Analysis of dividend policies adopted by the sample firms is undertaken with respect to their stability and influencing power of firm's characteristics like profits, liquidity, size, leverage, growth opportunities and past dividends.

1.1 Objectives of the study

i. To explore the determinants of dividend policies of sample firms.

ii. To examine the applicability of Lintner's model in context of sampled firms.

iii. To examine firm's characteristics and their influence on the dividend policies of sample firms.

2.0 Literature Review

Anil and Kapoor (2008) investigated the IT Sector firms of India and concluded that profitability was the principal determinant of the dividend policy and firms of IT sector have unstable dividend

policy. Kumar & Warne (2009) examined the various parametric determinants of price-earnings ratio in Indian capital markets and revealed that the 'variability in market price' and 'size of the firm' were the most important determinants industry-wise as well as in aggregate analysis.

Gupta & Banga (2010) analyzed the determinants of corporate dividend policies of Indian firms and found that leverage, liquidity, profitability, growth and ownership structure were the major factors. Regression on these factors showed that the leverage and liquidity were the influencing determinants of the dividend policy for Indian firms. Warne and Pinki (2013) conducted their study on the dividend behaviour of automobile firms of India found that firms even belonging to the same industry followed the dissimilar dividend policies. Labhane and Das (2015) analyzed the trends and determinants of dividend payout ratio of NSE listed firms and findings of their study revealed that firms with higher free cash flows, larger in size, more profitable and mature firms were paying more dividends while the firms with higher risk, leverage and investment opportunities were paying lesser dividends. Yusof and Ismail (2016) in their study investigate the influencing determinants of dividend policy of listed firms in Malaysia and concluded that earnings, size, investment opportunities had positive significant influence on the dividend policy of the firms while debt and largest shareholders had a negative significant influence over the dividend policy of the firms. Tahir and Mushtaq (2016) conducted study regarding the various factors influencing the dividend payouts of listed Oil and Gas firms of Pakistan and concluded that the profitability, size, risk, leverage and sales growth were significant factors influencing the dividend payouts of the firms. Also, the factors like investment opportunities, liquidity and managerial ownership had insignificant association with the dividend payout of firms.

Khan and Ahmad (2017) examined the dividend payout of pharmaceutical firms and results of their study provided that liquidity, growth opportunities and profitability were the significant influencing factors to dividend payout considerations whereas taxation, risk, size and leverage were insignificant factors to the dividend payouts of the pharma firms. Kumar and Ranjani (2018) investigated the dividend behaviour of Indian manufacturing and service sector firms and after employing panel data analysis, results of the study revealed that in the manufacturing sector, profitability and firm size had positive and significant relation with dividend decision while working capital was negatively significant. On the other hand, in the service sector, firm size and cash holdings were positively and firm age and net working capital were negatively significant on the dividend decisions.

Dewasiri et al (2019) studied the determinants of dividend policy in an emerging and developing market of Sri-Lanka and after employing the panel data regression, the results provide that corporate governance, earnings, industry influence, ownership structure, past dividend decision, FCF and firm size

had a significant positive influence on the propensity to pay dividends and Past dividends, profitability, investment opportunities and investor preferences were identified as determinants of the dividend payout.

3.0 Research Methodology

3.1 Data Collection

The sample includes firms from manufacturing sector and oil & gas sector of India. BSE Indian Manufacturing Index and Oil & Gas Index have been used for the final selection of sample firms. Data of selected firms have been taken from their annual reports as well as from various websites like moneycontrol.com, bseindia.com etc. The study is conducted on 5 years data of firms ranging from 2015-2016 to 2019-2020.

3.2 Determinants of the dividend policy of firms

- **Profitability**

  Profits are the primary source of dividend payment; hence it is considered that higher the profitability of the firm, higher will be dividend payouts (Anil &Kapoor, 2008) and vice-versa. Profitability of the firms has been measured from the profits after tax (PAT).

  H1: There is a positive influence of profitability on the dividend policy of the firms.

- **Leverage**

  The leverage of a firm is normally measured by Debt-Equity Ratio which is equal to total debt divided by total equity of the firm. Firms, normally preferred to take funds from external finance sources for funding their investment opportunities due to tax benefits rather than issuing risky equity shares. Leverage is an important determinant of dividend policy as highly levered firm will prefer to pay back the principal debt instead of dividends.

  H2: There is a negative influence of leverage on the dividend policy of the firms.

- **Growth opportunities**

  The firms with better growth opportunities will tend to retain funds so as to take advantage out of them but these growth opportunities at same time left firms with lower funds to be distributed as dividends. Thus, growth is an important determinant of dividend decision of the firms. Growth of the firm is calculated through market price to book value ratio (P/B).

  H3: There is negative influence of growth opportunities on the dividend policy of the firms.

- **Past Dividends**

The dividend policies of firms are affected by their past year dividend payments as they appeared as targeted income before the shareholders. The shareholders are assuming that firm distributes dividends more or equal to the last year's payments. Also, on firm's part, they preferred to follow the stable dividend policies in order to maintain their goodwill in the market.

H4: There is a positive influence of past dividends on the dividend policy of the firms.

- **Liquidity**

  The liquidity of the firms is calculated through the current ratio (CR) i.e., current assets over current liabilities. Higher liquidity indicates the higher financial security to the firm thereby current ratio is expected to have positive relation with the dividend decisions.

  H5: There is a positive influence of liquidity on the dividend policy of the firms.

3.4 Specification of models

3.4.1. Lintner's Dividend Model

Lintner surveyed the managers of the US firms and found out that firms prefer the stability in their dividend payments. They set the long run target payout ratios and make adjustments in their dividend payments on the basis of this target. His study concluded that for dividend decisions, the earnings and lag year dividends were the important determinants. The net current earnings represent the dividend paying capacity of the firms and lag year dividends represents the reluctance on the part of management to change or reduce the dividend payments.

On the basis of his study, dividend policy of the firms can be expressed by the following mathematical model:

$$\mathbf{Div_t = a + b1E_t + b2Div_{t-1} + \mu_t}$$

Where,

Div_t is the equity dividend during the period t, E_t is current earnings during period t, b1 is regression coefficient of current earnings after tax, Div_{t-1} is equity dividend during period t-1, b2 is regression coefficient of dividend paid during period t-1, a is Constant and μ_t is the error term. For the current empirical study, dividend per share (DPS) and earnings per share (EPS) are used as proxies for dividends and earnings respectively.

3.4.2. Regression Model

To study the determinants of dividend payout policies of the firms, a multiple regression model was used. The dependent variable is dividend per share distributed, while the independent variables are profitability, leverage, growth, past dividend and liquidity.

$$Y_{it} = \alpha + \beta_1 PAT_{it} + \beta_2 LEV_{it} + \beta_3 GROWTH_{it} + \beta_4 PD_{it} + \beta_5 CR_{it} + e_{it}$$

Where, Y_{it} = dependent variable, DPS for firm i in the period t, PAT_{it} is profit after tax for the firm i in the period t, LEV_{it} is debt-equity ratio for the firm i in the period t, PD_{it} is past year dividend (lagged tear dividend) for the firm i in the period t, CR_{it} is current ratio for the firm i in the period t, α is a constant, βs are the slope coefficients, e_{it} is the error term for firm i in period t.

4.0 Results and discussion

4.1 Descriptive Analysis

Table1: Descriptive statistics of Manufacturing Sector

	Mean	Median	Std. Dev.	Skewness	Kurtosis	Maximum	Minimum	Observations
DPS	29.3528	10	53.68875	3.29422	12.28999	342	0	150
PAT	3702.62	1785.19	6217.162	3.076739	12.68245	35163	-11906.23	150
LEV	0.219307	0.07	0.315846	1.942642	3.939851	1.55	0	150
GROWTH	7.7804	4.27	9.38805	3.256155	14.98833	63.95	0.34	150
PD	26.18387	10	45.13586	3.195478	11.41687	255.62	0	150
CR	1.730733	1.43	1.197412	1.955068	4.602142	7.11	0.43	150

Source: compiled by author

Table2: Descriptive statistics of Oil &Gas Sector

	Mean	Median	Std. Dev.	Skewness	Kurtosis	Maximum	Minimum	Observations
DPS	10.18160	7.345000	8.332970	1.437912	4.467363	34.50	1.50	50
PAT	48.00100	32.00500	41.47711	1.720016	5.755303	188.31	10.83	50
LEV	0.327200	0.185000	0.371396	1.133512	3.443277	1.33	0.00	50
GROWTH	4.177400	1.920000	7.073574	3.634161	15.97869	37.97	0.44	50
PD	10.67360	8.025000	8.656151	1.255310	3.769558	34.50	1.20	50
CR	1.176600	0.980000	0.675995	1.312173	4.191633	3.33	0.39	50

Source: compiled by author

The descriptive statistics of variables taken from manufacturing and oil &gas sector has been shown in Table 1 and 2 respectively. Mean value of dependent variable (DPS) in manufacturing sector firms is 29.35 whereas in Oil & Gas sector it is 10.18. With regard to the volatility as shown from standard deviation, manufacturing firms have higher volatility than the oil &gas firms in dividend payments.

4.2 Lintner's model application

Table 3: Regression Results

Sector	Oil and gas sector		Manufacturing sector	
	Regression coefficient	p-value	Regression coefficient	p-value
Intercept	1.19	0.36	0.12	0.96
E	0.00	0.88	0.04	0.04**
Div_{t-1}	0.83	0.00**	1.01	0.00**
Adjusted R Square	0.73		0.83	
Significance F		0.00**		0.00**

**indicates values significant at 10% and 5% respectively.

Table 3 indicates the regression results of Lintner's model. The results indicate that both the oil &gas sector and manufacturing sector have high adjusted R square as it is 73% in oil & gas sector and 83% in manufacturing sector. From the table, it is evident that in both the sectors, the dividend payout decisions are strongly influenced by their lagged or past year dividend. Firms in order to avoid extra burden of dividend policies, consider last year dividend payment majorly. However, in the oil & gas sector, firms decide their dividend payments solely on the basis of lagged year dividend and do not bring any changes in dividend policies in accordance to the changed level of earnings as evident from the table, current earnings have insignificant influence over the dividend payments while in the manufacturing sector, earnings are significantly influencing the dividend policies along with the lagged year dividend. Thus, the results presented that the Indian manufacturing firms have higher tendency in adopting the Lintner's model and maintaining the stability in their dividend payments as compared to the Oil & gas sectored firms.

4.3 Multiple Regression Results

Table 4: Multiple Regression Results of Manufacturing Sector

	Coefficients	P-value
Intercept	-9.91	0.06
PAT	0.00	0.52
LEV	6.68	0.32
GROWTH	1.10	0.00*
PD	1.06	0.00*

CR	0.50	0.76
Adjusted R Square	0.85	
F statistics	172.48	0.00

* Indicates values significant at 5%.

Table 4 provides regression results of manufacturing firms. It is clearly seen that independent variables explain 85% of the dependent variable as seen from the value of Adjusted R- square. The growth variable, opposite to the hypothesis proposed (H3) shows positive significant relation with the dividend policies of the manufacturing firms. Likewise, leverage also shows the positive relation with the dividend policies but in insignificant manner. With regard to the profitability (PAT) and liquidity (CR) variables, it can be said that both the variables are showing the proposed direction in their relationship with dividend policies but are not significant enough to influence the dividend policies. Therefore, in manufacturing sector, only hypothesis H4, with regard to the past year dividend, is acceptable.

Table 5: Multiple Regression Results of Oil & Gas Sector

	Coefficients	P-value
Intercept	-2.41	0.12
PAT	0.08	0.00*
LEV	-0.76	0.68
GROWTH	0.08	0.30
PD	0.67	0.00*
CR	1.19	0.15
Adjusted R Square	0.84	
F statistics	52.76	0.00

* Indicates values significant at 5%.

Table 5 shows the regression results of multiple regression model applied on the financial data of Oil & Gas sector firms. From the table, it can be seen that independent variables in multiple regression model have higher explanatory power with respect to dividend per share of firms as shown by the value of Adjusted R-square i.e., 84%. The results of regression model revealed that among the five independent variables, only profitability (PAT) and past dividend (PD) have significant influence over the dividend policies of the firms. Hence, with regard to Oil & Gas sector, as remaining variables leverage, growth and liquidity have insignificant relationship with dividend per share (dps), thereby results are rejecting

the H2, H3 and H5 respectively along with accepting H1 and H4 concerning the profitability and Past dividend respectively.

5.0 Conclusion

In this paper, firm characteristics namely profitability, leverage, growth, past dividends, and liquidity have been studied accompanied by their proposed relation with dividend policies of firms listed on BSE Indian Manufacturing Index and BSE Oil & Gas Index. The stability in the dividend policies of sample firms have been also examined using well known Lintner's Model (1956). The results of the Lintner's model in oil & gas sector firms, showing that firms in this sector are framing their dividend policies considering the lagged year dividend majorly. While in case of manufacturing sector, firms are, along with the past year dividends, also pay importance to the current earnings, thereby firms in manufacturing sector are following the Lintner's model in their dividend distributions. Lastly, the influence of firm characteristics on the dividend policies of both sectored firms is studied by employing the multiple regression model on the firms' financial data. The results of multiple regression provides that in the Manufacturing firms, past dividend is showing the significant relationship with the dividend policies of the firms while in case of Oil & Gas sector, profitability and past dividend are significant variables in dividend distributions.

The present study contributes in increasing the understanding of managers, investors and other stakeholders regarding the dividend policies adopted by the firms particularly in Manufacturing and Oil & gas sector. It helps to understand whether firms are considering the stability factor or not, while framing the dividend policies. Apart from it, this study adds to the knowledge of investors about the specific firm characteristics, which drives the dividend policies of the firms in the both the selected sectors. Since, the study is based on the secondary data, it carries all limitations associated with the secondary data. Overall, this study is an extension to the existing literature of dividend policies of the firms and their respective behaviour.

Bibliography

- Anil, K., & Kapoor, S. (2008). Relevance of Signaling and Smoothing Approaches to Dividend: A Study of Indian IT Sector. *Asia Pacific Business Review*, *4(4)*, 104–123. https://doi.org/10.1177/097324700800400410
- Bhadu, Sushil Kumar and Warne, D. P. (2009). Parametric Determinants of Price-Earnings Ratio in Indian Capital Markets. *The Journal of Applied Finance, 15(9),* 63-82.

- Dewasiri, N.J., Koralalage, W.B.Y., Azeez, A.A., Jayarathne, P.G.S.A., Kuruppuarachchi, D., Weerasinghe, V.A. (2019). Determinants of dividend policy: evidence from an emerging and developing market. *Managerial Finance,* https://doi.org/10.1108/MF-09-2017-0331.
- Farman Ali Khan and Nawaz Ahmad (2017). Determinants of Dividend Payout: An Empirical Study of Pharmaceutical Firms of Pakistan Stock Exchange (PSX). *Journal of Financial Studies & Research, DOI: 10.5171/2017.538214.*
- Gupta, A., & Banga, C. (2010). The Determinants of Corporate Dividend Policy. *Decision, 37(2),* 63-77.
- Kumar, S., & Ranjani, K. (2018). Dividend Behaviour of Indian Listed Manufacturing and Service Sector Firms. *Global Business Review, 20* (1), 1-15.
- Labhane, N. B., & Das, R. C. (2015). Determinants of dividend payout ratio: Evidence from Indian firms. *Business and Economic Research, 5(2),* 217-241.
- Lintner, J. (1956). Distribution of incomes of corporations among dividends, retained earnings, and taxes. *The American Economic Review, 46*(2), 97–113.
- Muhammad Tahir, Muhammad Mushtaq (2016). Determinants of Dividend Payout: Evidence from listed Oil and Gas Firms of Pakistan**.** *Journal of Asian Finance, Economics and Business, 3 (4*), 25-37.
- Pinto, G., &Rastogi, S. (2019). Sectoral Analysis of Factors Influencing Dividend Policy: Case of an Emerging Financial Market. *Journal of Risk and Financial Management*, 1-18.
- Rasoolpur, G. S., & Warne, D. P. (2013). Leverage Decisions: A Case of Textile and Readymade Garments Industry of the Indian Corporate Sector. *International Journal of Research in Business and Technology*, *2*(2), 27-32.
- Santanu Das (2017). Firm characteristics and dividend policy in India, *Transnational Corporations Review*, DOI: 10.1080/19186444.2017.1362862
- Saravanakumar, S. (2011). Determinants of Corporate Dividend Policy. *Asia Pacific Business Review, 7* (25), 25-36.
- Warne, D.P. and Insan, P. (2013). Dividend Behaviour of Automobile firms in India: An Empirical study. *ZENITH International Journal of Business Economics & Management Research, 3(1),* 25-33.
- Yusof, Y. and Ismail, S. (2016), Determinants of dividend policy of public listed firms in Malaysia. *Review of International Business and Strategy*, *26(1)*, 88-99.

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