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AN EMPIRICAL STUDY OF TREND AND DETERMINANTS OF DIVIDEND IN INDIA AFTER ECONOMIC REFORMS

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Abstract:
In the present study, we use aggregate data compiled by Reserve Bank of India on corporate public limited firms for the period 1991-2012. After confirming unit root test of each variable, we run OLS regression. Lot of volatility in the dividend payout ratio of the Indian firms is seen for the period under study. Leverage, interest and tax provisions are the major determinants of dividend payout in India. Besides this, sales growth and profit to net worth are not the significant determinants of dividend but their coefficient signs are correct in the present model. Results appeared from OLS regression are acceptable and are matching with earlier studies on Indian corporate sector firms and firms in other counties.

JEL: G3; G35; G38

Keywords: dividend, India, OLS, unit root, leverage

1. Introduction

Dividend is declared by firms, if they earn profits from their activities. Sometimes stocks may be given to existing shareholders and employees in lieu of cash dividend. Divided is distributed to owners for increasing value of their wealth, confidence they had shown in the firms, parting liquidity and most important reason is risks they shouldered in the firm. Dividend paying companies are generally understood as well managed and sound companies having diversified product line, continuous growth in sales. While declaring dividend by management of the firms, they do consider several factors. This area of corporate finance is well studied by experts and economists. Dividend policy of corporate firms can be understood as a policy of making decisions regarding distribution of profits

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in terms of percentage or offering stocks time to time. Decision of dividend declaration has several implications. If dividend is not declared for a particular year or for many years, that gives bad signal of inefficiency about the professional managers to the stakeholder of the firms such as shareholders, suppliers, creditors, potential investors and stock market in general.

Stakeholders of the firms treated dividend differently. Shareholders understand it is appropriation of profits and reward for parting with their liquidity, where as managers treated it as outcome of their efforts and innovations. The creditors treat it as wealth generation from the credit. The suppliers attached to firms also understand that it as their indirect efforts. Dividend determination issues have been studied by various experts since 1950. Seminal work done by John Lintner (1956) concluded that dividend is declared by matured, old companies having long term earning record and it is sticky and smoothened over a period of time. Subsequently, Miller and Modigaliani (1961) concluded in the Dividend Irrelevance Theory that dividend declaration does not affect the value of the firms provided; there is perfect capital market and zero taxes. Shareholders and paid managers of the firms do not bother about profits and dividend. However, contrary view was taken by Gordon (1962) and Walter (1963) during the same period and concluded that dividend is relevant to valuation of the firms; hence the shareholders are not different.

Aharony and Swary (1980), Asquith and Mullins (1983) forwarded the Signaling Theory in which they concluded that dividend paying companies give signal to outsiders about stability and growth prospectus of the firms. In the Incumbency Rent Theory, Fudenberg and Tirole (1995) opined that if managers have control over the firms, they smooth dividends, however, during the good time, they pay fewer dividends. On the contrary, in the bad times of the firms, they pay good dividends for lengthening their service. Jensen and Meckling (1976), Esterbrrok (1984) is the proponent of Agency Theory of dividend payments. They concluded that agency problem arises between mangers and outsiders such as shareholders and creditors. Mangers may divert the funds in the unprofitable projects or use profit for drawing high salary and perks; in that case, shareholders have preference for dividend over the retained earnings.

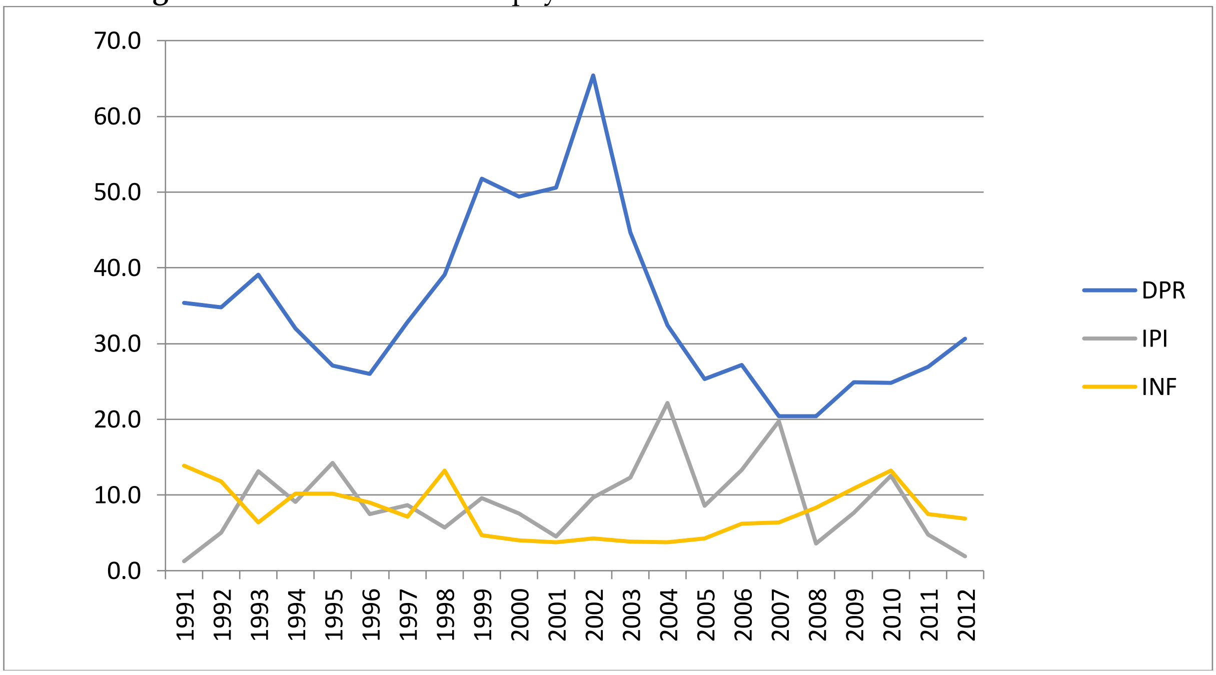
Brennan (1970) and De Angelo (1991) forwarded the Tax Clientele Theory of dividend. They argued that tax on dividend and future capital gains made by shareholders are the consideration while evolving dividend policy of the firms. Tax rate on dividend will be greater than or equal to tax on future income (Capital gains). In this case, an optimal dividend policy of the firms would be very low dividend. Determination of dividend is unresolved puzzle worldwide. There are many consideration and events which affects directly or indirectly on the decisions of dividend. Theories and studies made by several experts shown that dividend decisions are indifferent country wise. However, they are some unique factors that decide the dividend. The macroeconomic environment also affects on dividend decisions.

With this backdrop, present paper attempt to look into the trends and determinants of dividend paid by Indian firms. India went for deregulation and liberalization of the economy from 1991. That resulted into lifting of control over the capital raising mechanism, reservation of industries and sectors and given boost to attract foreign direct investment. This revised policy and efforts have some impact of Indian corporate setup and dividend decision. Hence, this paper investigates the impact of new policy on dividend determination.

2. Trends in Dividend Payout and Other Macro Economic Variables in India

We focus on the trends in dividend paid by corporate firms since 1991. The following figure 1 gives an idea about trends in dividend. It can be observed that dividend payout ratio (DPR) has been increased from 35% in the year 1991 and subsequently went down to 27% in 1995 due to Hrashad Mehata scam and again it picked up and went on 65% in 2002. However, from year 2002, declining trend has been set until the American crises emerged in 2008.

Figure 1: Trends in Dividend payout and other Macro Economic Variables



Source: Based Data Compiled from Reserve Bank of India (RBI) Monthly Bulletin and Handbook of Statistics on Indian Economy (Annual Report). **Note:** DPR- Dividend payout ratio, IPI- Industrial production index, INF- Inflation rate. All are in percentage.

From the year 2009 dividend payout ratio has been increased from 20% and went on 30.6% in 2012. There is lot of volatility in the dividend payout ratio of the Indian firms. In the present diagram the trends in Dividend payout ratio and Industrial Production Index (IPI) has more or less same trend. An interesting part is that from 2010, though the Industrial production index and Inflation (INF) rate has been declining but dividend payout ratio has been showing rising trends. The probable reason could be that firms might be distributing profits earned earlier to please their owners. In a nutshell, we concluded that dividend payout ratio has increased during the new economic policy regime in India.

3. Literature review

Mehta A. (2012) concluded that dividend determination decisions of United Arab Emirates (UAE) firms are significantly determined by profitability and size of the firms. He used data of Abu Dhabi firms for the period 2005-2009.Study conducted by (Mishra and Narender, 1996) found that State Owned Enterprises (SOEs) have paid dividend in between 20-35 percent except hydrocarbon sector for the period 1984-1994. However, service sector enterprises paid dividend in between 15-25 percent for the same period under the study. High dividend payer firms' equity is being sold at high price or not is the debate among the researchers. Many empirical studies made by Zabir and Khanna (1982), Malhotra (1987), Sharma (2011), and Shrinivasan (2012) shown that high dividend and equity prices are negatively related in India.

Dividend determining factors of Indian paper industry were analyzed by (John and Muthusami, 2010). Findings of their study reveal that earning per share, liquidity and leverage are negatively related to dividend payout ratio and positively related with cash flow. Study undertaken by (Kapoor, 2009) for the period 2000-2008 on selective Indian industries reveals that dividend payout determinants are differ from industry to industry. Dividend paid by Indian IT industry is significantly determined by dividend paid earlier year. Dividend percentage is negatively related with liquidity and profitability of IT firms. Indian service industry such as banking pays dividend according to history of their dividend. Fast moving consumer goods industry pays dividend considering lagged dividend and size of profit after tax where as future growth and expansion if the firms is found to be negatively related to dividend payout ratio.

Whether the size of profit or liquidity or both factors decide the dividend payout ratio is investigated by (Mohamed and others, 2006) for Malaysian 200 listed firms 2003-2005, they concluded that size of profit or liquidity are the important determinants of dividend in Malaysia. Study conducted by (Pandey and Bhat, 2004) on Indian firms' behavior of dividend policy for the period 1989-1997 reveals that current earnings, past dividend, lagged dividend are statistically significant factors that decides the dividend payout ratio in India. Along with these factors restricted monetary policy also affects on dividend.

Gupta and Banga (2010) explored the determinant of dividend policy in India using factor analysis and regression method for the period 2001-2007. They found that leverage and liquidity are the major determinant of divided policy for the Indian firms. Anand (2004) conducted the survey of 81 CFO of Indian companies in 2001 and collected information on the divided policy of their firms, results of survey reveals that investors preference for dividend and clientele effect are the major factors of dividend policy decisions. Malik and others (2013) explained the factors influencing dividend decisions of Pakistani financial and non-financial firms for the period 2007-2009, they found that liquidity, leverage, earning per share and size are the significant determinants of dividend and Probit model results also shown that profitability, earning per share and size increase the chances of paying higher dividend.

Paruva and Gupta (2009) used data of BSE listed 607 companies for the period 1994-2005 and concluded that average past three years dividend, current profit, past profit, expected future profit are the significant determinant of dividend of the Indian companies covered in the sample. Cash flow and cash position are significantly negatively related with dividend. Kamat and Kamat (2009) analyzed the dividend behavior of Indian firms for the period 1971-2007, results of static panel data and pooled data as well as GMM model shows that past year dividend payout, size of the firms, lagged value of earning are the major determinants of the dividend policy. Al-Shubiri (2011) attempts to study determinants of dividend for 60 firms listed at Amman stock exchange at Jordan for the period of 2005-2009 using Tobit and Logit models, results appeared shown that size of the firms, large financial opportunities, growth opportunities are the major determinants of the dividend however business risk and tangibility have negative relationship with dividend.

Das and Ghosh (2009) studied dividend distribution decisions of fifty Indian firms listed at BSE and NSE to reveal the impact of Agency Cost Theory on dividend payout. They found that cash flows, dispersions of ownership and leverage are the major determinants of dividend. Kumah (2013) took an extensive survey dividend determination literature, after he reveals that firm related factors such as financial flexibility and macroeconomic factors have not been considered in the major studies. Kumar (2003) examined the association between ownership structures, governance with dividend payout decisions for the period 1994-2000 of Indian firms. He concluded that corporate and director ownership has positive effect of dividend payout where as institutional ownership has negative association. No relation is found between foreign ownership and dividend decisions.

4. Data and Methodology

Data is compiled from Reserve Bank of India (RBI) Monthly Bulletin and Handbook of Statistics on Indian Economy (Annual Report). This data is available online at RBI web site. RBI collects aggregate corporate data year wise. In the present study, we used data for the period 1991-2012. It includes 1700 firms in the year 1991 and then number of firms increased over the years, finally it reached to 3014 firms in the year 2012. Selective variables of these firms are also in the aggregate form. Obviously, firm level aggregate data has some limitations that cannot be overlooked. Firm level data is not complied. Firms included in the RBI corporate data base are of various categories. In order to establish relationship between Dividend payout ratio and its determinants, we used the following linear regression. Dividend paid by the firms is determined by firm factors (Internal) and as well as external factors. In this present study, we have not considered external factors (Macro Economic).

$$dprY= \alpha + \beta igp + \gamma dte + \delta tpt+ \lambda pnw + \theta sgr + \mu_t \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(1)$$

Where dprY (Dividend payout ratio) is dependant variable and right-hand side variables are independent firm level factors. μ_t is error term. Independent variables are in ratio forms except sales growth rate. Hence, they are stationary at base. We used ADF test for checking stationary character of the data series. It is essential to check stationary quality of time series data for accepting the OLS regression results, data should be free from non-stationary. The following Table 1 gives results of ADF test. Hypothesis of non-stationary is rejected in the case of each variable at 1 percent critical values.

Table 1: Unit Root Tests for Variables

Sr. No.	Variables	Observations	ADF test	1% critical values
1	Sales growth rate(sgr)	21	-3.750	-3.011
2	Debt to equity ratio(dte)	21	-3.750	-1.577
3	Interest to gross profit(igp)	21	-3.750	-1.218
4	Tax provision to PAT(tpt)	21	-3.750	-1.973
5	Profit after tax to net worth(pnw)	21	-3.750	-1.678
6	Retained profit to net worth(rpp)	21	-3.750	-1.340
7	Dividend payout ratio(dpr)	21	-3.750	-1.540

Note: calculated by author.

5. Empirical Analysis and Discussions

After confirming unit root test of each variable, we run OLS regression shown as equation 1 in the present paper. We have not used time series techniques because the data period is for 21 years. Results of OLS regression are reported in the Table 2.

As it can be seen that R squared value is 90 percent. It means 90% variation is explained by dependent variable. Durbin Watson D test statistics is 1.82 which shows that there is no problem of Autocorrelation. The sign of coefficients reported in the model are as per our expectation. Since the DW statistics is higher than 0.511. Hence, we conclude that data series used in the present model is cointegrated as per CRDW rule. Results appeared from the model are not spurious, but they are acceptable. F statistics is significant which points out robustness of the results. The Multicollinearity test has been conducted, which is not a serious problem. Variable Retained Profit to Net worth (rpp) is omitted from the model due to multicollinearity problem. Other relevant tests are also reported in the Table 2.

Jayesh Kumar (2003) observed about Indian firms for the period 1994-2000 using panel data that there is negative relationship between dividend payout ratio and debt-equity ratio. In line with study conducted by Jayesh Kumar (2003), our estimation also shows same kind of conclusion. As it can be seen in Table 2, debt equity ratio (Leverage) has negative and significant relationship shows that highly leverage firms were unable to pay dividend. External finance takes way the profit in the form of interest liability. It is proved in the earlier study that Indian firms are largely bank financed. Higher tax means higher income and after making the provision for tax, remaining income can be shared with owners in the form of dividend. Hence the relationship in the present model is significant, which shows that residual income is shared according to Pecking Order Hypothesis.

Table 2: Determinants of Dividend in India

Independent variables	**Coef.**	**Std. Err.**	**t**
IGP	0.824086	0.25528	**3.23***
TPT	1.293006	0.39180	**3.30***
PNW	0.085225	0.67542	0.13
DTE	-0.556073	0.21722	**-2.56****
SGR	0.044102	0.06345	0.70
Constant	-0.401959	9.71055	-0.04
		Number of observations	22
		F(5,16)	36.5
		Prob > F	0
		R-squared	0.9065
		Ramsey RESET test	F(3, 13) = 3.17 Prob > F =0.0602
		Durbin-Watson D statistics	(6,22)=1.827403

Note: 1) Dependent variable is dividend pay out to profit after tax. 2) Sign *, ** shows significant at 1% and 5% level respectively.

Interest to gross profit ratio (IGP) signifies the interest liability paid by the firms in the proportion of gross profit. Similarly, the positive and significant relationship is found between interest and dividend payout. Tax (TPT) paid by the Indian firms is also a significant determinant of dividend payout ratio. Results we got on these two variables such as interest and tax provisions are matching with earlier study did by Parua and Gupta (2009) on Indian firms. Remaining two variables such as profit after tax to net worth and sales growth rate are positive in direction but not significant. Generally, more sales and high net accumulated profits of the firms allow for paying higher dividends. This argument is not correct in the case of present data of Indian firms.

6. Conclusions

It can be observed that dividend payout ratio of Indian corporate firms has been increased from 35% in the year 1991 and subsequently went down to 27% in 1995 due to Hrashad Mehata scam and again it picked up and went on 65% in 2002. However, from year 2002 declining trend has been set until the American crises emerged in 2008. There is lot of volatility in the dividend payout ratio of the Indian firms is seen for the period under study. Leverage, interest and tax provisions to profits are the major determinants of dividend payout in India. Besides this, sales growth and profit to net worth are not the significant determinants of dividend but their coefficients sign are correct in the present model. In the present study we have not used firm level data and cross section data of the firms. Hence a sophisticated technique such as panel data is not used. However, results appeared from OLS regression are acceptable and matching with earlier studies in Indian firms and in other counties.

References

Aharony, J. and Swary, I. (1980). Quarterly Dividends and Earnings Announcement of Stakeholders’ Returns: An Empirical Analysis. *Journal of Finance*, 35, 1-12.

Al- Shubiri F. N. (2011). Determinants of Changes Dividend Policy: Evidence from the Amman Stock Exchange, *Far East Journal of Psychology and Business*, 4 (2), 1-15.

Anand M. (2004). Factors Influencing Divided Decisions of Corporate India, *The IFCAI Journal of Applied Finance*, 10 (2), 5-14.

Asquith, P. and Mullins, D. W. (1986). Signaling With Dividends and Stock Repurchases and Equity Issues, *Financial Management*, 15, 27-44.

Brennan, M. J. (1970). Taxes, Market Valuation and Corporate Financial Policy, *National Tax Journal*, 23, 417-427.

Das J. K. and Ghosh, S. (2009). Dividend Payout and Agency Cost Factors: A Study of Selected Indian Companies, *Journal of Business and Economic Issues*, 1(2), 1-20.

De Angelo, H. (1991). Payout Policy and Tax Deferral, *The Journal of Finance*, 76(1), 357-368.

Esterbrrok, F. H. (1984). Two Agency Costs Explanation of Dividends, *American Economic Review*,74, 650-659.

Fudenberg, D. and Tirole, J. (1995). Game Theory, Massachusetts Institute of Technology, USA.

Gordon, M. J. (1962). Optimal Investment and Financing Policy, *Review of Economics and Statistics*, 37-51.

Gupta A. and Banga C. (2010). Determinant of Corporate Dividend Policy, *Decision*, 37(2), 63-77.

Jensen, M. C. and William, H. M. (1976). Theory of Firms: Managerial Behavior and Agency Costs and Ownership Structure, *Journal of Financial Economics*, 3, 305-360.

John S., F. and Muthusami K. (2010). Leverage Growth and Profitability as Determinants of Payout Ratio: Evidences from India Paper Industry, *Asian Journal of Business Studies*, 1(1), 26-30.

Kamat M. S. and Kamat M. M. (2009). Determinants and Stability of Dividend in India: Application of Dynamic Partial Adjustment Equation and Using Extended Instrument Variable Approach, NSE Research Initiative, and Project Report 229/2009.

Kapoor S. (2009). Impact of Divided Policy on Shareholder Value: Study of Indian Firms, unpolished thesis submitted to Jaypee Institute of Information Technology University, Noida, India.

Kumah S. P. (2013). Corporate Capital Structure Determinants of Listed Firms in West African Monetary Zone: A Review of Related Literature, *Research Journal of Finance and Accounting*, 4 (9), 19-28.

Kumar J. (2003). Ownership Structure and Dividend Payout Ratios, working paper, Indira Gandhi Institute of Development and Research, Mumbai

Lintner, J. (1956). Distribution of Incomes of Corporations, *American Economic Review*, 46, 97-133.

Malik, F., Gil S. (2013). Factors Influencing Corporate Dividend Payout Decisions of Financial and Non-Financial Firms, *Research Journal of Finance and Accounting,* 4 (1), 35-46.

Mehta A. (2012). An Empirical Determinants of Dividend Policy: Evidences from UAE Companies, *Global Review of Accounting and Finance*, 3 (1), 18-31.

Mishra C., S. and Narender U. (1996). Dividend Policy of SOE in India-An Analysis, *Finance India,* 10 (3), 633-645.

Modigliani, F. and Miller, M. H. (1961). Dividend Policy Growth and Valuation of Shares, *The Journal of Business*, 24, 411-433.

Pandey I., M. and Bhat R. (2004). Dividend Behavior of Indian Companies under the Monetary Policy Restriction, Indian Institute of Management, Ahmadabad, India.

Parua A. and Gupta A. (2009). Dividend History and Determinants in Selected Indian Companies: A Study during 1993-094 to 2004-05, *Australian Accounting Business and Finance Journal*, 3 (4), 3-41.

RBI 2013, RBI Bulletin, Dept of Publication, Reserve Bank of India, Mumbai

RBI 2015, Handbook of Statistics on Indian Economy, Dept of Publication, Reserve Bank of India, Mumbai

Shrinivasan, P. (2012). Determinants of Equity Share Prices in India, *The Romanian Economic Journal,* 25(46), 205-228.