VALIDITY OF DIVIDEND POLICY MODELS IN THE INDIAN HOTEL INDUSTRY- A PANEL DATA APPROACH

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Dividend decisions are an important aspect of corporate financial policy. There is an extensive literature devoted to corporate dividend policy, very few dividend Studies focus on Indian Hotel Industry. In this paper, we study the dividend policy of Hotel Industry in Indian service sector. The sample consists of 28 dividend paying listed firms of this sector covering a period of 15 years from 1997 to 2011. The data has been obtained from Prowess database. Many studies in India make an attempt in empirically testing the factors that shape the current year's dividend but none of these studies have tested the time trusted dividend models in their pure form in post liberalized era for the corporate India. So, the well-known regression models such as the Linter's (1956) model, the Britain's (1966) model, the Darling's (1957) model and Dobrovolskys (1951) model has been studied in their pure form to test their validity in Indian conditions. The results disclosed that Lintner's model and Britain's First model has best fit in the present scenario in case of Indian Hotel Industry. Current year earnings, previous year dividend payment and cash flow are important determinants for deciding the current year dividend payment.

Keywords: *Dividend policy, Indian Economy, Models, Validity.*

I. INTRODUCTION

There is a strong relationship showed by dividend policy and earnings of the company. The researchers like (Brickley, 1983; Healy & Palepu, 1988; Aharony & Dotan, 1994) have provided empirical evidences that earnings are directly related to dividends. Any increase in the current dividends will lead to an increase in future earnings of the company. This idea has been redundant by many researchers (Garret & Priestley, 2000). The literature suggests that dividends and earnings are interrelated.

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As dividends are paid out of the net earnings of a firm, there could be ways to look at this matter. One view is that dividends can be used as a predictor of earnings whereas another view is that earnings can also be used as a predictor of dividends. Thus both of these concepts are interrelated as both determine each other's value. This helps to understand why managers of a firm are more interested in maximizing the firm's earnings. Earnings are the most important item to signal how much firm is involved in value adding services.

Lintner (1956) argues that dividend policy is the primary decision criterion in determining how earnings are distributed between current dividends and retained earnings. Dividend policies include setting the existing dividend as the central benchmark, targeting a relatively fixed payout ratio, determining whether and how much to change dividend payments based on changes in earnings, and making partial adjustment to what is suggested by changes in earnings

The dividend policy and earnings management have the subject of many studies for many years from past to present. Since dividends have an effect on stock prices and company's future growth so corporate management should have a suitable dividend strategy. There are several dividend approaches such as stable dividends, payout ratio and cash availability. Corporate management needs to take different variables into account before taking the decision regarding payment of dividend and retention of earnings for future investment. The Main objective of this study is to empirically test validity of Lintner's (1956) model, the Britain's (1966) model, the Darling's (1957) model and Dobrovolsky's (1951) in their pure form to test its validity in case of Indian Hotel Industry. The remainder of the paper is organized as follows: section II briefly reviews the existing literature. Objectives and relevance of study is presented in section III while section IV presents the description of the data and the empirical models used. Section V contains the results. Finally, some concluding remarks are presented in Section VI.

II. REVIEW OF LITERATURE

With a view to recognize the basis for undertaking the present study, a concise appraisal has been carried out on the dividend policy. Following are the few well-known studies:

Lintner (1956) studied the behavior of 28 US firms for a period of seven years i.e. from 1947-53. Results indicated that the firms should follow a fixed target payout ratio. The rate of dividends was adjusted along with the increase in the level of earnings. Current year's earnings and previous year's dividend were found to be associated with current

year's dividend. It was also ascertained that the financial decisions of the firms were predominantly dividend oriented.

Brittain (1964) examined the dividend behavior of all major industries for a period of 1919-1960. The results have in favour of the inclusion of cash flows have been that depreciation does not reveal capital consumption but is an accounting change and as such need to be added back.

Pettit (1977) in this paper focused on studying the clientele effect regarding dividends and made a conclusion that retired persons wanted dividend in cash at high percentage of firm's earnings while who are earning at high rate prefer the reinvestment of cash and demand low dividend payments.

Khurana (1985) studied dividend policy of 68 private companies belonging to five industries namely, sugar, cotton textiles, general engineering, electrical goods and chemical industries for the period of 1962-63 to 1976-77. Lintners model of dividend behaviour was better than all other models i.e. Darling, Brittains and Dobrovolskys model. Dividend decision was primarily governed by net current earnings after tax and lagged dividend.

Gupta, Sharma (1991): emphasized on finding out the dividend behavior of firms in the tea industry for a period of 1982-1988. Out of 112 companies, this study includes five firms having collaboration with foreign companies and equal five such firms having no collaboration with foreign company by taking into consideration best statistical models i.e. Lintner, Brittan, Darling and Dobrovolsky.The results of the study disclosed the application of Lintner's model and Dobrovolsky's model on both type of firms while Brittain's model is not fully applied on both type of firms.

Coates, Davis and Golder (1998) analyzed the dividend behavior of 46 large U.K and 44 large German quoted companies over the period of 1980-95. Results showed that positive difference has been found out between these two countries with regard to payment of dividend per share in current year as well as in the preceding year. The results predicted that between these two countries there were some similarities or dissimilarities regarding payment behavior of dividend.

Ahmed, Javid (2009) studied the determinants of dividend of payout policies of 320 non financial firms listed on Karachi Stock Exchange for the period of 2001-2006. Lintners,

Fama and Babiak's Model, Results stated that Pakistani firms relied more on current earnings for deciding the payment of dividend as compared to past dividends. Growth of firms as well as the size of the firms has negative relationship with dividend payment while market liquidity has a positive relationship with payment of dividend.

Pal and Goyal (2009) made an attempt to bring out the real face of dividend decision of information technology industry in competitive global economy to know about the cause and effect association between dividend decision and its determinants in Indian information technology industry. The sample has consisted of 40 information technology companies listed on NSE for the period ranging between 1996-97 to 2005-2006. The results verified that all the determinants under study were important more or less while determining the dividend policy of an organization which ultimately effect on the value of firm.

Bose and Hussain (2011) studied the dividend behaviour of five industrial sectors covering a period of 2005-06 to 2008-09. Dividend policy has showed a positive relationship between dividend payout and profit. This study suggest for modification of Lintner's model in order to cope up with asymmetric behaviour.

III. NEED & OBJECTIVE OF THE STUDY

In India, mainly studies relating to dividend focus on large industrial sector. Only a few studies focus on Hotel Industry in India. So, this paper tries to fill this research gap and focuses on studying the behavior of dividend payment of Hotel Industry in India. Main objective of this study is to empirically test validity of Lintner's (1956) model, the Britain's (1966) model, the Darling's (1957) model and Dobrovolsky's (1951) model in their pure form in explaining the dividend behavior of Indian Hotel Industry in Indian Service sector by using the panel data regression techniques.

IV. DATABASE AND RESEARCH METHODOLOGY

In order to achieve the above set objective, sample consisting of all listed companies of Hotel Industries in India has been selected. The study has been covering a period of fifteen years i.e. 1997 to 2011. Out of total 78 listed companies, those companies that are paying dividend over a period of 1997-2011 have been included under study. The sample consisting of 28 dividend paying companies has been finally selected. The data has been obtained from Prowess database.

Panel data regression technique has been applied in order to draw the meaningful

inferences from the study. In panel data regression, time-series and cross-sectional observations are combined and estimated. The main advantage of pooling is that it is possible increase the number of observations, which is important when each individual cross-section sample is so small that sample size effects affect the degrees of freedom adversely. The panel data methodology is also important to eliminate heterogeneity, namely the unobservable characteristics of the contracting environment. In the research we use the three common techniques for estimating models with panel data, which are: pooled ordinary least squares, the fixed effects model and random effects model. The Chow test has been applied for choosing between simple OLS regression and fixed effects and the LM test has been applied to decide between random effects regression and simple OLS regression. Subsequently, we use the Hausman test to choose the most appropriate model for the particular sample. The Hausman statistic tests the null hypothesis that random effects model is appropriated for the particular sample compared to the fixed effects model. The well known models of Lintner's (1956) model, the Britain's (1966) model, the Darling's (1957) model and Dobrovolsky's (1951) model has been tested in order to find out the relevance of these models in the selected sector. The brief introduction of these models is given below:

The Lintner's (1956) model

This model describes about two main parameters for deciding the firm's dividend policy:

(1) The target payout ratio (2) The speed at which current dividends adjust to the target.

Dividend payout is a function of net current earnings after tax and dividend paid in the previous year (lagged dividend). This can be expressed as:

$$D_t = a + b1P_t + b2\,D_{t-1} + u_t \ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Where,

D_t = total equity dividend in period't'

D_{t-1} = total equity dividend in period't-1'

P_t = net current earnings after tax in period't'

u_t = error term

This model explains that net current earnings described the capacity of the firm to pay dividends and previous year dividend paid is the second explanatory variable indicates a possible reluctance on the part of the management to reduce the dividends already

declared. The rate of dividend is thus stabilized with reference to the target level of dividends. The absolute amount of dividend in a given year is changed by a function known as speed-of-adjustment coefficient. It is the difference between the target amount and actual dividend payment. Thus, the Model suggests that the dividend policy is related to a target level of dividends and to the speed of adjustment of change in dividends.

The Britain's (1966) Model

An alternate hypothesis by John Britain (1966) suggests that cash flow (net current earnings after tax plus depreciation) is a better measure of a company's capacity to pay dividends. Dividend payment is considered a charge prior to depreciation and, hence should be related to earnings gross of depreciation. The regulation and accounting practices with respect to depreciation allowance keep on changing, thus net current earnings would fail to reflect the movement of true earnings that is the ultimate basis of ability to pay dividends. Cash flow is considered to be a better substitute of true earnings.

Britain uses the cash flow version of Lintner's model in his study entitled "Corporate Dividend Policy". This hypothesis can be algebraically expressed as:

$D_t = a + b1 C_t + b2 D_{t-1} + u_t$ (Britain's First Model)..... (2)

Where,

D_t = total equity dividend in period't'.

C_t = cash flow in period't'

D_{t-1} = total equity dividend in period't-1'

u_t = error term.

Britain also uses depreciation, (A_t) as separate explanatory variable along with net current earnings after tax and lagged dividends. Thus, one of his regression equations is of the form:

$D_t = a + b1 P_t + b2 D_{t-1} + b3 A_t + u_t$ (Britain's Second Model)..... (3)

Where,

D_t = total equity dividend in period't'.

P_t = net current earnings after tax in period't'

D_{t-1} = total equity dividend in period't-1'

C_t = cash flow in period't'

A_t = depreciation charged in period't'

u_t = error term.

Darling's (1957) model

Darling (1957) is of the view that previous year profit better explains the current year's dividend than the previous year dividend and thus substitutes previous year profits in place of previous year dividend in Lintner's model. His hypothesis is that, for the universe of large industrial corporations, aggregate dividend will tend to vary directly with current profits, past profits, depreciation and amortization recoveries and will tend to vary inversely with persistent changes in the level of sales. This dividend function can be expressed as follows.

$$D_t = a + b1P_t + b2P_{t-1} + b3A_t + b4DS_{t-2} + u_t \quad \ldots\ldots (4)$$

Where,

D_t = total equity dividend in period't'

P_t and P_{t-1} = net profits after tax in period't' and't-1' respectively

A_t = depreciation charged in period't'

DS_{t-2} = change in sales in period't' over the preceding two years.

u_t = error term

Dobrovolsky's (1951) model

Dobrovolsky (1951) in order to analyze the dividend policy examined the retention policy to capture dividend behavior and is of the view that amount of retained income of the firms depends, to a large extent, not only on current profitability, but also on continuity of dividend policy, and rate of operating asset expansion. With a given level of net income, an increase (decline) in retained income means a decline (increased) in dividend by exactly the same amount. Therefore, dividend decision would also be governed by the same factor that influence retained earnings. Since firms are reluctant to change their dividend policy rapidly, the last year's dividend payment may be taken as rough measures of the requirements for the current year. Dividend is negatively and significantly associated with the operating asset expansion as measured by growth of operating assets, including net current earnings after tax and lagged dividends as other explanatory variables. Thus, dividend function can be expressed as:

$$D'_t = a + b1Y'_t + b2D'_{t-1} + b3E'_t + u_t \quad \ldots\ldots (5)$$

Where,

D_t' = total amount of equity dividend in period 't' as percentage of average net worth in period 't'.

Y'_t = net current earnings after tax in period 't' as percentage of average net worth in period 't'.

D'_{t-1} = total amount of equity dividend in period 't-1' as percentage of average net worth in period 't';

E'_t = operating asset expansion in period't' as percentage of operating asset in the beginning of the year.

The Dobrovolsky model is different from the others as it uses all the variables expressed as ratios rather than as absolute amounts. This can very well take care of the size difference of various Firms.

V. DATA ANALYSIS AND INTERPRETATION

The results of Lintner's (1956) model, the Britain's (1966) model, the Darling's (1957) model and Dobrovolsky's (1951) model in their pure form in explaining the dividend behavior of Indian Hotel Industry in Service sector has been explained in the following tables:

Table 1
Results of the Lintner Model
(Dt = a + b1Pt + b2 Dt-1 + ut)

	Pooled data Model		Fixed effect firm model		Fixed effect firm and time model	
Regressors	Regression Coefficient	P value	Regression Coefficient	P value	Regression Coefficient	P value
PAT (₹ Crore)	.1202757	.000***	.1202757	.000***	.1173069	.000***
$Div_{(t-1)}$	.5070777	.000***	.5070777	.000***	.541627	.000***
T1	-	-	-	-	-19.94337	0.131
T2	-	-	-	-	-21.31021	0.106
T3	-	-	-	-	-27.78295	0.037**
T4	-	-	-	-	-18.25678	0.201
T5	-	-	-	-	-.261588	0.986
T6	-	-	-	-	-21.88866	0.174
T7	-	-	-	-	-31.6376	0.051
T8	-	-	-	-	-9.455085	0.561
T9	-	-	-	-	5.020792	0.741
T10	-	-	-	-	18.17572	0.207
T11	-	-	-	-	-13.17356	0.338

T12	-	-	-	-	-21.9569	0.096
T13	-	-	-	-	-45.09255	0.000***
T14	-	-	-	-	-10.43034	0.421
Constant	4.078534	0.793	13.30474	.001***	21.34324	0.219
Adjusted R^2	.9446		0.9366		0.9496	
F statistics	144.55	0.000***	358.07	.000***	107.90	.000***
Hausman Statistics	-	-	200.42	.000***	200.42	.000***
LM Test			$\chi2$=3.11	0.0777*	$\chi2$=3.11	0.0777*
F Test	-	-	2.11	0.0018***	2.39	0.000***
Durbin Watson	1.808	-	-	-	-	-
Target Payout ratio	.1202757/0.4929223= 0.2440053=24.40%		.1202757/0.4929223= 0.2440053=24.40%		.1173069/0.458373= .2559201=25.59%	
Adjustment Factor	1-.5070777=0.4929223		1-.5070777=0.4929223		1-.541627=0.458373	

Note: *** Significant at 1% level, ** Significant at 5% level and * Significant at 10% level

Table 1 discloses the pooled data results of Lintner's Model which depicts that regression coefficient PAT during the current year is significant at 1% level of significance while regression coefficient of dividend paid during the previous year is also significant at 1%.The F statistics tests the validity of the Lintner model in the Hotel Industry. The Durbin Watson test has been applied to examine the existence of autocorrelation. The DW statistics is 1.808.The test results indicate that there is no problem of serial autocorrelation in the data. The adjusted R square for pooled data analysis is 94.46%.Table 1 also presents the regression results of one-way Fixed effect model showing that regression coefficient of dividend paid during previous year and PAT is significant at 1% level of significance. The Adjusted R square is 93.66%. F statistics is significant at 1% level of significance demonstrating overall validity of the model.

The results highlight that there is Low dividend smoothing in this sector as it is characterized by low target payout ratio and high speed of adjustment coefficient. The results fixed effect firm and time model shows that both the independent variables PAT and dividend paid during previous year are statistically significant at 1% level of significance. The value of adjusted R square is 94.96%. Some of the time Dummies are found to be significant at 1% and 5% level of significance portraying that there are time effects present. LM test results reported above are statistically significant at 10% level of significance implies that fixed effects and random effect models model should be preferred to classical linear regression. Hausman statistics is significant at 5% level in

both the cases indicating that fixed effect models can be used over panel data models. F test results are significant at 1% depicting that both firm and time effects are present.

Table 2
Results of the Brittain's Model (First Model)
($Dt = a + b1Ct + b2\ Dt\text{-}1 + ut$)

	Pooled data Model		Fixed effect firm model		Fixed effect firm and time model	
Regressors	Regression Coefficient	P value	Regression Coefficient	P value	Regression Coefficient	P value
PAT (₹ Crore)	.1202757	.000***	.1202757	.000***	.1173069	.000***
$Div_{(t-1)}$	.5070777	.000***	.5070777	.000***	.541627	.000***
T1	-	-	-	-	-19.94337	0.131
T2	-	-	-	-	-21.31021	0.106
T3	-	-	-	-	-27.78295	0.037**
T4	-	-	-	-	-18.25678	0.201
T5	-	-	-	-	-.261588	0.986
T6	-	-	-	-	-21.88866	0.174
T7	-	-	-	-	-31.6376	0.051
T8	-	-	-	-	-9.455085	0.561
T9	-	-	-	-	5.020792	0.741
T10	-	-	-	-	18.17572	0.207
T11	-	-	-	-	-13.17356	0.338
T12	-	-	-	-	-21.9569	0.096
T13	-	-	-	-	-45.09255	0.000***
T14	-	-	-	-	-10.43034	0.421
Constant	4.078534	0.793	13.30474	.001***	21.34324	0.219
Adjusted R^2	.9446		0.9366		0.9496	
F statistics	144.55	0.000***	358.07	.000***	107.90	.000***
Hausman Statistics	-	-	200.42	.000***	200.42	.000***
LM Test			$\chi 2$=3.11	0.0777*	$\chi 2$=3.11	0.0777*
F Test	-	-	2.11	0.0018***	2.39	0.000***
Durbin Watson	1.808	-	-	-	-	-
Target Payout ratio	.1202757/0.4929223= 0.2440053=24.40%		.1202757/0.4929223= 0.2440053=24.40%		.1173069/0.458373= .2559201=25.59%	
Adjustment Factor	1-.5070777=0.4929223		1-.5070777=0.4929223		1-.541627=0.458373	

Note: *** Significant at 1% level, ** Significant at 5% level and * Significant at 10% level

Table 2 depicts the pooled data results of Britain's first model shows that regression coefficient Cash flow and dividend paid during the previous year is also significant at 1% level of significance. The F statistics tests the validity of the Britain model in the Hotel Industry. The Durbin Watson test has been applied to examine the existence of autocorrelation. The DW statistics is 1.796.The test results indicate that there is no problem of serial autocorrelation in the data. The adjusted R square for pooled data analysis is 94.44%. This Table also presents the regression results of one-way fixed effect model showing that regression coefficient of dividend paid during previous year and PAT are significant at 1% level of significance. The Adjusted R square is 93.56%. F statistics is significant at 1% level of significance demonstrating overall validity of the model.

The results highlight that there is Low dividend smoothing in this sector as it is characterized by low target payout ratio and high speed of adjustment coefficient. The target payout ratio is 25% (approx).The results of fixed effect firm and time model shows that both the independent variables Cash flow and dividend paid during previous year are statistically significant at 1% level of significance. The value of adjusted R square is 94.93%. Some of the time Dummies are found to be significant at 1% and 5% level of significance portraying that there are time effects present. LM test results reported above are statistically significant at 5% level of significance. Hausman statistics is significant at 5% level in both the cases indicating that fixed effect models can be used over panel data models. F test results are significant at 1% depicting that both firm and time effects are present.

Table 3
Results of the Brittain's Model (Second Model)
(Dt = a + b1, Pt + b2 Dt-1 + b3 at + ut)

	Pooled data Model		Fixed effect firm model		Fixed effect firm and time model	
Regressors	Regression Coefficient	P value	Regression Coefficient	P value	Regression Coefficient	P value
PAT (₹ Crore)	.1203846	.000***	.1203846	.000***	.0536564	.173
$Div_{(t-1)}$	.3189752	.024***	.3189752	.024***	.1440715	.391
Dep	-.178013	0.809	-.178013	0.809	-.5277829	0.420
T1	-	-	-	-	-187.121	.008***
T2	-	-	-	-	-146.3431	.065
T3	-	-	-	-	-192.12	.019**
T4	-	-	-	-	-205.4194	.012**

T5	-	-	-	-	-46.3046	0.400
T6	-	-	-	-	-148.3131	0.053
T7	-	-	-	-	-287.1792	0.001***
T8	-	-	-	-	83.62746	0.005***
T9	-	-	-	-	83.26776	0.016***
T10	-	-	-	-	9.314274	0.887
T11	-	-	-	-	6.224311	.890
T12	-	-	-	-	1.752243	0.970
T13	-	-	-	-	-42.94108	0.283
T14	-	-	-	-	-12.35268	0.699
Constant	-12.02305	0.862	46.07262	0.116	105.0009	0.156
Adjusted R^2	0.8622	-	0.7707	-	0.9162	-
F statistics	24.79	0.000***	15.89	.000***	20.78	.000***
Hausman Statistics	-	-	17.21	.0006***	-	-
LM Test			$\chi2$=1.51	0.2189	$\chi2$=1.51	0.2189
F Test	-	-	2.92	0.00018*	3.48	.0067***
Durbin Watson	1.867	-	-	-	-	-
Target Payout ratio	.1203846/0.6810248= 0.176769=17.679%		.1203846/0.6810248= 0.176769=17.679%		.0536564/0.8559285= .062687=6.268%	
Adjustment Factor	1-.3189752=0.6810248		1-.3189752=0.6810248		1-.1440715=0.8559285	

Note: *** Significant at 1% level, ** Significant at 5% level and * Significant at 10% level

Table 3 discloses the results of Britain's second model which shows that regression coefficient Pat and dividend paid during the previous year is significant at 1% and 5% level of significance respectively as per pooled data results. Whereas depreciation shows the negative and insignificant relationship with dividend payout. The F statistics tests the validity of the Britain model in the Hotel Industry. Results depict that model is statistically fit in this sector. The Durbin Watson test has been applied to examine the existence of autocorrelation. The DW statistics is 1.867.The test results indicate that there is no problem of serial autocorrelation in the data. The adjusted R square for pooled data analysis is 86.22%.Table 3 also presents the regression results of one-way Fixed effect model showing that regression coefficient of dividend paid during previous year and PAT is significant at 1%and 5% level of significance respectively. The Adjusted R square is 77.07%. F statistics is significant at 5% level of significance demonstrating overall validity of the model. The results highlight that there is Low dividend smoothing in this sector as it is characterized by low target payout ratio and high speed of

adjustment coefficient. The results of fixed effect firm and time model shows that both the independent variables Pat and dividend paid during previous year are statistically insignificant at 5% level of significance. The value of adjusted R square is 91.62%. Some of the time Dummies are found to be significant at 1% and 5% level of significance portraying that there are time effects present.

LM test results reported above are statistically insignificant; the results of pooled data should be preferred for interpretation. Hausman statistics is significant at 1% level in both the cases indicating that fixed effect models can be used over panel data models. F test results are significant at 5% depicting that both firm and time effects are present.

Table 4
Results of the Darling's Model
(Dt = a + b1Pt + b2 Pt-1+ b3 At + b4 D St-2 + ut)

	Pooled data Model		Fixed effect firm model		Fixed effect firm and time model	
Regressors	Regression Coefficient	P value	Regression Coefficient	P value	Regression Coefficient	P value
PAT (₹ Crore)	.1772197	.001***	.1772197	.001***	.0999153	0.064*
prevpat	.0157087	.662***	.0157087	.662***	.0194651	0.624
dep	-.0747876	0.919	-.0747876	0.919	-.6410441	0.368
dst2	-.0136793	0.244	-.0136793	0.244	-.0033165	.779
T1	-	-	-	-	-57.9876	.147
T2	-	-	-	-	-187.98	.013**
T3	-	-	-	-	-256.99	0.003***
T4	-	-	-	-	-207.1922	0.007***
T5	-	-	-	-	-65.65559	0.232
T6	-	-	-	-	-108.1112	0.174
T7	-	-	-	-	-243.8378	0.004***
T8	-	-	-	-	-249.0542	0.005***
T9	-	-	-	-	-107.4985	0.054*
T10	-	-	-	-	-29.79192	0.563
T11	-	-	-	-	-17.99798	.696
T12	-	-	-	-	-31.29375	0.485
T13	-	-	-	-	-69.30703	0.114
T14	-	-	-	-	-24.91755	0.477
Constant	10.27526	0.837	50.04755	0.050	25.86303	0.576
Adjusted R^2	0.8588	-	0.5916	-	0.8634	-
F statistics	24.78	0.000***	11.89	.000***	22.07	.000***

Hausman Statistics	-	-	15.21	.00020**	15.21	.0020**
LM Test			$\chi2$=103.29	0.000***	$\chi2$=103.29	0.000***
F Test	-	-	4.50	0.004***	8.15	0.000***
Durbin Watson	1.756	-	-	-	-	-

Note: *** Significant at 1% level, ** Significant at 5% level and * Significant at 10% level

The pooled data results of Darling's model show that regression coefficient Pat is significant at 1% level of significance as disclose by Table 4. While dividend paid during the previous year, depreciation and change in sales shows the negative and also insignificant relationship with dividend payout. The F statistics tests the validity of the Darling's model in the Hotel Industry. Results depict that model is statistically fit in this sector. The Durbin Watson test has been applied to examine the existence of autocorrelation. The DW statistics is 1.756.The test results indicate that there is no problem of serial autocorrelation in the data. The adjusted R square for pooled data analysis is 85.88%.Table 4 also presents the regression results of one-way Fixed effect model showing that regression coefficient of PAT is significant at 1% level of significant. The Adjusted R square is 59.16%. F statistics is significant at 1% level of significance demonstrating overall validity of the model.

The results highlight that there is Low dividend smoothing in this sector as it is characterized by low target payout ratio and high speed of adjustment coefficient. The results of fixed effect firm and time model shows that out of the independent variables Pat is statistically significant at 10% level of significance. The value of adjusted R square is 86.34%. Some of the time Dummies are found to be significant at 1% and 5% level of significance portraying that there are time effects present. LM test is statistically significant at 1% level of significance indicating fixed effect models and Random effect models are to be preferred as compared to classical linear regression model. Hausman statistics is significant at 1% level in both the cases indicating that fixed effect models can be used over panel data models. F test results are significant at 1% depicting that both firm and time effects are present.

Table 5
Results of the Dobrovolsky's Model
(d't = a + b1y't + b2 d't-1 + b3 e't + ut)

	Pooled data Model		Fixed effect firm model		Fixed effect firm and time model	
Regressors	Regression Coefficient	P value	Regression Coefficient	P value	Regression Coefficient	P value
yt	.0001329	.326	.0001329	.326	-.0001333	0.291
dt1	.8207362	.000***	.8207362	.000***	.7926455	0.000***
et1	.00274	0.015	.00274	0.015	.0021412	0.048
T1	-	-	-	-	1.209128	0.020*
T2	-	-	-	-	.0652352	0.900
T3	-	-	-	-	-1.196694	0.021
T4	-	-	-	-	-.502078	0.327
T5	-	-	-	-	-.5294517	0.304
T6	-	-	-	-	-.8995614	0.081*
T7	-	-	-	-	-.9843149	0.056*
T8	-	-	-	-	-.218958	0.683
T9	-	-	-	-	.3462742	0.501
T10	-	-	-	-	1.042881	0.044**
T11	-	-	-	-	1.322196	0.011***
T12	-	-	-	-	1.201218	0.021**
T13	-	-	-	-	-1.451344	0.006***
T14	-	-	-	-	-.0157323	0.976
Constant	.470275	0.407	.6319357	0.002***	.6634161	0.285
Adjusted R^2	0.6589	-	0.6529	-	0.7138	-
F statistics	27.98	0.000***	140.24	.000***	24.75	.000***
Hausman Statistics	-	-	27.17	.000***	27.17	.000**
LM Test			$\chi 2$=0.07	0.7860	$\chi 2$=0.07	0.7860
F Test	-	-	5.97	0.000***	3.21	0.000***
Durbin Watson	1.863	-	-	-	-	-

Note: *** Significant at 1% level, ** Significant at 5% level and * Significant at 10% level

The pooled data results of Dobrovolskys model show that regression coefficient **dt1** and **et** is significant at 1% and 5%level of significance respectively as shown by Table 5. While **yt** is insignificant relationship with dividend payout. The F statistics tests the validity of the Dobrovolsky's model in the Hotel Industry. Results depict that model is

statistically fit in this sector. The Durbin Watson test has been applied to examine the existence of autocorrelation. The DW statistics is 1.863.The test results indicate that there is no problem of serial autocorrelation in the data. The adjusted R square for pooled data analysis is 65.89%.

Table 4 also presents the regression results of one-way Fixed effect model showing that regression coefficient of **dt1** is significant at 1% level of significant. The Adjusted R square is 65.29%. F statistics is significant at 1% level of significance demonstrating overall validity of the model.The results highlight that there is Low dividend smoothing in this sector as it is characterized by low target payout ratio and high speed of adjustment coefficient. The results of fixed effect firm and time model shows that the independent variables **dt1** is statistically significant at 1% level of significance. The value of adjusted R square is 71.38%. Some of the time Dummies are found to be significant at 1% and 5% level of significance portraying that there are time effects present. LM test shows the statistically insignificant results, so Classical linear regression results are used for interpretation as compared to fixed effect models and Random Effect Models. Hausman statistics is significant at 1% level in both the cases indicating that fixed effect models can be used over panel data models. F test results are significant at 1% depicting that both firm and time effects are present.

VI. CONCLUSION

The main purpose of this paper is to shed some light on testing the empirically validity of Lintner's (1956) model, the Britain's (1966) model, the Darling's (1957) model and Dobrovolskys (1951) model in their pure form in explaining the dividend behavior of Indian Hotel Industry. Dividend policy refers to decisions involving distribution or retention of profits. It is most important decision not only from the prospective of the company but also that of other stakeholders, creditors, Government etc. Dividend policy also helps the firm in making choice of distribution of its profits to its shareholders as a cash dividend and, if so, how much to pay and with what frequency. Lintner's model has been found to be most appropriate in explaining the dividend behaviour in case of Hotel Industry in India. The current year profits and lagged dividends have been the most important variables that affect the current dividend policy of the company. Britain's first Model uses current year cash flows instead of current year earnings after tax is a good fit as its results are significant in majority of the year taken in our study. Current year cash flows and last year dividends have a significant impact of the dividend policy of a company. Britain's second model also gives the significant results. Thus it has not a good

fit as the independent variables i.e. current year profits, past year dividends and current year depreciation have not much impact on the current year dividend payments of the company. Darling's model which replaces the lagged dividend with the lagged profits and includes third independent variable amortization and depreciation. This model has not a good fit as per indicated by results. Dobrovolsky'model which takes into consideration that dividend is negatively associated with operating asset expansion and positively with net current earnings after tax and lagged dividend. This model also has not a very good fit in case Hotel Industry in India. The preceding analysis of all the models show that the Linter's model as well as Britain's first model hold well in present scenario in explaining the dividend behaviour of the companies. On the basis of panel data regression results it can be stated that current year earnings, previous year dividend payment and cash flow are important determinants for deciding the current year dividend payment.

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