Research Paper　　　　**Commerce**

Empirical Study-Impact of Various Related Variable on Dividend Pay-Out Ratio

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ABSTRACT

Dividend policy decision has a significant effect on the credit standing of the firm, its share prices and its future growth. Various variables affect while taking decision regarding dividend decision, this paper attempted to study the effect of least related variable on dividend payout. For study purpose top three listed companies from Information and Technology sector has been taken. The study has been made for five years during 2009 to 2014. Variables like liquidity, size and growth, leverage and provision for taxation have been considered for study purpose. Correlation matrix is used to know the relationship of various variables with dividend payout and simple regression model has been used to know the effect of least related variables on dividend payout. The study found that there is no much influence of least related variable on dividend payout.

KEYWORDS　　Dividend policy, least related variable, Liquidity, Dividend payout

1.0 INTRODUCTION
To frame dividend policy or how to take decision regarding dividend declaration is an important issue for any management of company. Dividend policy decision has a significant effect on the credit standing of the firm, its share prices and its future growth. The valuation of any company is depending on its earnings. There are some factors like liquidity, profitability, past bonus trends, leverage etc. affecting dividend decision.

Here for study purpose some variables like liquidity, size and growth, leverage and provision for taxation are considered to know their relationship with dividend payout. The study also focuses on least related variable and wants to know its effect on dividend payout.

2.0 OBJESTIVES OF THE STUDY
- Relationship of various variables with dividend payout of selected companies.
- Effect of least related variable on dividend payout of selected companies

3.0 HYPOTHESIS
Null

- There is no significant effect of least related variable on dividend payout of selected companies.
- Alternate
- There is significant effect of least related variable on dividend payout of selected companies.

4.0 SOURCES AND SCOPE OF THE STUDY
The whole study intends to know the relationship of different variables on dividend payout and effect of least related variables on dividend payout. For study purpose top three listed companies from Information and Technology sector (e.g. Infosys, Tata consultancy service and Wipro) has been taken. This study is based on secondary data which has been collected from Annual published reports of selected companies. The data has been taken from the website of particular companies. The study has been conducted for five years (i.e.2009 to 2014)

5.0RESEARCH METHODOLOGY
For study purpose some variables are selected. (For explanation see Table-1) Wherever necessary some financial ratios have been worked out. To know the relationship of various

variables on dividend payout, correlation matrix is used and to know the significant effect of least related variables on dividend payout simple regression analysis by using SPSS has been attempted.

Dividend payout ratio is to be calculated by,

$$DP\ Ratio = \frac{Dividend\ per\ share}{Earnings\ per\ share} *100$$

6.0 ANALYSIS OF LEAST RELATED VARIABLES
- H_0 = There is no significant effect of least related variable on dividend payout of selected companies.
- H_1 = There is significant effect of least related variable on dividend payout of selected companies.

6.1)INFOSYS LTD (For data see Table 6.1)

POSITIVE CORRELATION:
The correlation Matrix shows that dividend payout ratio is partially correlated with liquidity. It is nearer to strong positively

correlated with size and growth. It also shows weak correlation with provision for taxation. Liquidity and growth are partially correlated and it is weakly correlated with provision for taxation. Growth and provision for taxation are weakly correlated. Leverage and provision for taxation are also weakly correlated.

NEGATIVE CORRELATION:
Dividend payout is negatively correlated with leverage. Leverage is negatively correlated with liquidity and growth. Considering above correlation matrix, least correlated value is -0.545 which indicates that there is low correlation between dividend payout and leverage. Simple regression technique is used in order to know the effect of leverage on dividend payout which can be extracted from below table.

YEAR	DIVIDEND PAYOUT	LEVERAGE(DEBT-EQUITY RATIO)
2009-10	24.91	.00
2010-11	41.87	.00
2011-12	43.14	.00
2012-13	17.00	.33
2013-14	24.22	.86

TABLE 6.1.1: SIMPLE REGRESSION ANALYSIS FOR INFOSYS

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.545a	.297	.062	11.26799

The above table indicates that the value of R for INFOSYS is 54.5% that refers there is a partial correlation between explanatory variables such as leverage and the dependent variable i.e. Dividend payout of the company. Value of adjusted R- Square for Infosys 0.062. It indicates that there is 6.2% change in dividend payout due to the changes in leverage.

ANOVAa						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	160.627	1	160.627	1.265	.343b
	Residual	380.903	3	126.968		
	Total	541.530	4			
Dependent Variable: DP						
Predictors: (Constant), LV						

The above table shows that the independent variables statistically significantly predict the dependent variable, F (1, 3) = 1.265, p >0.05 (i.e., the regression model is unfit for the data). It means that there is no significant effect of leverage on the dividend payout of the INFOSYS.

6.2) TATA CONSULTANCY SERVICE LTD.   (For data see Table 6.2)

Correlations					
	DP	LQ	SZ	LV	TX

		DP	LQ	SZ	LV	TX
DP	Pearson Correlation	1	-.854*	.288	-.953**	-.651
	Sig. (1-tailed)		.033	.319	.006	.117
	N	5	5	5	5	5
LQ	Pearson Correlation	-.854*	1	-.059	.968**	.924*
	Sig. (1-tailed)	.033		.463	.003	.012
	N	5	5	5	5	5
SZ	Pearson Correlation	.288	-.059	1	-.179	-.129
	Sig. (1-tailed)	.319	.463		.387	.418
	N	5	5	5	5	5
LV	Pearson Correlation	-.953**	.968**	-.179	1	.821*
	Sig. (1-tailed)	.006	.003	.387		.044
	N	5	5	5	5	5
TX	Pearson Correlation	-.651	.924*	-.129	.821*	1
	Sig. (1-tailed)	.117	.012	.418	.044	
	N	5	5	5	5	5

*. Correlation is significant at the 0.05 level (1-tailed).

**. Correlation is significant at the 0.01 level (1-tailed).

POSITIVE CORRELATION:
The above correlation matrix shows that dividend payout is weakly correlated with size and growth. Liquidity, leverage and provision for taxation are significant and strong positively correlated.

NEGATIVE CORRELATION:
Dividend payout is negatively correlated with liquidity, leverage and provision for taxation. Growth is negatively correlated with liquidity, leverage and provision for taxation. Growth and

leverage are negatively correlated. Considering above correlation matrix, least correlated value is -0.953 which indicates that there is low correlation between dividend payout and leverage. Simple regression technique is used in order to know the effect of leverage on dividend payout which can be extracted from below table.

YEAR	DIVIDEND PAYOUT	LEVERAGE(DEBT-EQUITY RATIO)
2009-10	32.7	0.002381
2010-11	35.2	0.015935
2011-12	37.2	0.022811
2012-13	19.9	1.856413
2013-14	21.4	2.405664

TABLE 6.2.1: SIMPLE REGRESSION ANALYSIS FOR TCS

Output of Simple regression:

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.953[a]	.908	.877	2.82421
a. Predictors: (Constant), LV				

The above table indicates that the value of R for TATA CONSULTANCY LTD.is 95.3% that refers there is a significant and strong positive correlation between explanatory variables such as leverage and the dependent variable i.e. Dividend payout of the company. Value of adjusted R- Square for TATA CONSULTANCY LTD is 0.877. It indicates that there is 87.7% change in dividend payout due to the changes in leverage.

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	236.300	1	236.300	29.626	.012[b]
	Residual	23.928	3	7.976		
	Total	260.229	4			
a. Dependent Variable: DP						
b. Predictors: (Constant), LV						

The above table shows that the independent variables statistically significantly predict the dependent variable, F (1, 3) = 29.626, p <0.05 (i.e., the regression model is fit for the data). It means that there is significant effect of leverage on the dividend payout of the TATA CONSULTANCY LTD.

Coefficients								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig. Lower Bound	95.0% Confidence Interval for B	
	B	Std. Error	Beta				Upper Bound	
1	(Constant)	34.897	1.632		21.383	.000	29.703	40.091
	LV	-6.536	1.201	-.953	-5.443	.012	-10.358	-2.715
a. Dependent Variable: DP								

From the above table, the general form of the equation to predict dividend payout from leverage can be obtained as under:

Predicted dividend pay out

= 34.897 - (6.536*leverage)

Unstandardized coefficients indicate how much the dependent variable varies with an

Independent variable when all other independent variables are held constant. In the above table, the unstandardized coefficient for leverage is equal to -6.536. This means that for every additional decrease in leverage, dividend payout decreases by 6.536.

6.3)WIPRO LTD (For data see Table 6.3)

Correlations		DP	LQ	SZ	LV	TX
DP	Pearson Correlation	1	-.553	-.140	-.150	.413
	Sig. (1-tailed)		.167	.411	.405	.245
	N	5	5	5	5	5
LQ	Pearson Correlation	-.553	1	.464	-.035	-.490
	Sig. (1-tailed)	.167		.216	.478	.201
	N	5	5	5	5	5
SZ	Pearson Correlation	-.140	.464	1	-.459	-.880[*]
	Sig. (1-tailed)	.411	.216		.219	.024
	N	5	5	5	5	5
LV	Pearson Correlation	-.150	-.035	-.459	1	.660
	Sig. (1-tailed)	.405	.478	.219		.113
	N	5	5	5	5	5
TX	Pearson Correlation	.413	-.490	-.880[*]	.660	1
	Sig. (1-tailed)	.245	.201	.024	.113	
	N	5	5	5	5	5
*. Correlation is significant at the 0.05 level (1-tailed).						

POSITIVE CORRELATION:
The above correlation matrix shows that dividend payout is weakly correlated with provision for taxation. Liquidity and growth are weakly correlated. Provision for taxation and leverage are partially correlated.

NEGATIVE CORRELATION:
Dividend payout is negatively correlated with leverage, liquidity and growth. Liquidity is negatively correlated with leverage and provision for taxation. Size and growth is negatively correlated with leverage and provision for taxation. Considering above correlation matrix, least correlated value is -0.553 which indicates that there is low correlation between dividend pay-

out and liquidity. Simple regression technique is used in order to know the effect of liquidity on dividend payout which can be extracted from below table.

YEAR	DIVIDEND PAYOUT	LIQUIDITY(CURRENT RATIO)
2009-10	17.98	2.380132
2010-11	30.33	2.102958
2011-12	31.43	2.16839
2012-13	28.06	1.760341
2013-14	25.27	2.185913

TABLE 6.3.1: SIMPLE REGRESSION ANALYSIS FOR WIPRO

Output of Simple Regression:

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.553[a]	.306	.075	5.16747
a. Predictors: (Constant), LQ				

The above table indicates that the value of R for WIPRO LTD. is 55.3% that refers there is a partial positive correlation between explanatory variables such as liquidity and the dependent variable i.e. Dividend payout of the company. Value of adjusted R- Square for WIPRO LTD is 0.075. It indicates that there are 7.5 changes in dividend payout due to the changes in leverage.

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	35.337	1	35.337	1.323	.333[b]
	Residual	80.108	3	26.703		
	Total	115.446	4			
a. Dependent Variable: DP						
b. Predictors: (Constant), LQ						

The above table shows that the independent variables statistically significantly predict the dependent variable, F (1, 3) = 1.323, p >0.05 (i.e., the regression model is unfit for the data). It means that there is no significant effect of leverage on the dividend payout of the WIPRO LTD.

Coefficients								
Model	B	Unstandardized Coefficients Std. Error	Beta	Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B Lower Bound	Upper Bound
1	(Constant)	54.510	24.360		2.238	.111	-23.013	132.034
	LQ	-13.161	11.441	-.553	-1.150	.333	-49.572	23.249
a. Dependent Variable: DP								

From the above table, the general form of the equation to predict dividend payout from leverage can be obtained as under:

Predicted dividend pay out

= 54.510 - (13.161*leverage)

Unstandardized coefficients indicate how much the dependent variable varies with an

Independent variable when all other independent variables are held constant.

In the above table, the unstandardized coefficient for leverage is equal to -13.161. This means that for every additional decrease in leverage, dividend payout decreases by 13.161.

7.0 FINDINGS
The empirical study reveals that

1. Dividend payout policy of Wipro ltd. Shows that it is weakly correlated with provision for taxation. It is negatively correlated with leverage, liquidity and growth.
2. Dividend payout policy of Infosys shows that it is having strong positive correlation with growth and partially correlation with liquidity. It is weakly correlated with provision for taxation and negatively correlated with leverage.
3. Dividend payout policy of Tata consultancy ltd. shows that it is weakly correlated with size and growth and it is negatively correlated with liquidity, leverage and provision for taxation.
4. The study reveals that out of four variables (Liquidity, Leverage, and Provision for taxation and Growth) Leverage has least influence on dividend payout in Infosys and Tata consultancy ltd. and liquidity has least influence in Wipro ltd.

8.0 CONCLUSION
A study of least related variable has focused on some interesting insight regarding dividend payout policy. It is observed from the data that the selected companies have continuous trend of giving dividends with increasing, decreasing or constant trends. However, while knowing the effect of least related variable on dividend payout of selected companies, it is observed that in many cases the result are consistent with theoretical aspect where as in some of the cases it is inconsistent with theoretical aspect. The study observed that each firm belonging to same industry and from same environment has its own unique dividend policy and in most of the cases leverage is the single factor which is least affecting to dividend payout and in one of the case liquidity has least influence. The study shows, in case of Infosys, leverage has no effect on dividend payout where as in case of Tata consultancy ltd. leverage has influence on dividend payout policy. It is also observed that in case of Wipro ltd. liquidity has no influence. Finally, the study observes that in most of the companies least related variables have no influence on dividend payout.

TABLE-1

Explanatory Variable	Measure	
Size (SZ) and Growth	Growth Rate of Total Assets	This ratio indicates the rate of growth of the total assets in the business and is expressed in percentage.
Liquidity (LQ)	Current Ratio	The current ratio is one of the best known measures of financial strength and liquidity. It is calculated as shown below: **Current Ratio: Total Current Assets/Total Current Liability**

Leverage (LV)	Total Debt/ Equity	The Leverage ratio indicates the extent to which the business is reliant on debt financing (creditor money versus owner's equity): **Debt/ Equity ratio= [Total Debt/ Equity]=[Long Term Debt/ Shareholders fund]**
Provision for Taxation (TX)		This ratio is calculated as below **=[Amount provided for Tax/Net Profit]**

TABLE 6.1INFOSYS

YEAR	DIVIDEND PAYOUT	LIQUIDITY(CURRENT RATIO)	SIZE & GROWTH(TOTAL ASSETS)	LEVERAGE(DEBT-EQUITY RATIO)	PROVISION FOR TAXATION
2009-10	24.91	4.457346	24.77866	NA	22.97912
2010-11	41.87	5.282334	29.57607	0.00102	26.95839
2011-12	43.14	4.880819	24.1249	0.000706	28.02812
2012-13	17.00307	4.819373	20.13961	0.332788	26.22805
2013-14	24.22013	3.825761	22.50627	0.864772	27.19611

TABLE 6.2TATA CONSULTANCY LTD.

YEAR	DIVIDEND PAYOUT	LIQUIDITY(CURRENT RATIO)	SIZE & GROWTH(TOTAL ASSETS)	LEVERAGE(DEBT-EQUITY RATIO)	PROVISION FOR TAXATION
2009-10	32.7	1.489709	11.78808	0.002381	11.78964
2010-11	35.2	1.71814	71.42575	0.015935	12.98851
2011-12	37.2	1.871647	31.54782	0.022811	17.88119
2012-13	19.89772	2.456154	25.03004	1.856413	18.57484
2013-14	21.35961	2.840018	34.48227	2.405664	21.53181

TABLE 6.3WIPRO LTD.

YEAR	DIVIDEND PAYOUT	LIQUIDITY(CURRENT RATIO)	SIZE & GROWTH(TOTAL ASSETS)	LEVERAGE(DEBT-EQUITY RATIO)	PROVISION FOR TAXATION
2009-10	17.98	2.380132	32.4814	0.31261	13.901
2010-11	30.33	2.102958	46.92624	0.116087	15.10472
2011-12	31.43	2.16839	13.11878	0.102774	20.84108
2012-13	28.06	1.760341	5.468716	1.236922	21.58055
2013-14	25.27	2.185913	12.35746	4.522089	23.11359

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