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Determinants of Value Creation in Emerging Market Firms — An Empirical Examination

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***A*bstract:** This study examines the determinants of value creation in Indian firms using Partial Least Square Structural Equation Modeling (PLS-SEM) methodology based on approximately 43,000 firms representing 15 different sectors. Enterprise value multiples are used as proxies for market value effects**.** The study finds that the important determinants of value creation are leverage, profitability, cash flow, agency costs, dividend payout, size, discretionary expenditures and intangibility. The disciplinary role of debt in controlling agency costs is documented by the study. Highly leveraged firms tend to create lower value for firms. Firms with high intangible assets tend to have higher agency costs and higher valuation effects. Firms with high growth rate in earnings and cash flow will have higher valuation and profitability. Greater the size of the firm, higher is the value creation potential. Some evidence suggests that higher the discretionary expenditure intensity of firms, lower the value creation and profitability for firms. The study finds negative relationship between tax shields and cash flow. Agency costs are negatively related to cash flow and value creation. Liquid firms tend to have higher cash flows and higher valuation effects. Increased dividend payout signal to the market about the increased valuation effects for firms.

Keywords: Valuation effects; Enterprise value multiples; Leverage; Agency costs; Intangibles; Discretionary expenditures; Firm size

JEL Classification: G20, G31, G32

1. Introduction

A value driver is basically a performance variable which impacts the results of a business such as production effectiveness or customer satisfaction. Key performance indicators are metrics associated with value drivers. Value drivers are often classified as growth drivers, efficiency drivers and financial drivers. The three commonly cited financial value drivers of value creation are sales, costs and investments. Earnings and cash flow growth, return on invested capital are specific

financial drivers. Profitability, growth and capital intensity are important drivers for value creation of firms (Miller *et al*., 2004). The determination of value drivers is a critical step in business process valuation. Measuring and managing value is of paramount significance due to the increasing relevance of capital markets and corporate governance. Value drivers include both external and internal value drivers (Jennergren, 2013). Stock price maximization is one of the significant component for the concept of value maximization. The main value drivers for shareholder wealth creation are intangibles, operating, investment and financial factors. Many companies evaluate business units in terms of return on investment and pretax margin on sales (Arzac,1986).

This paper aims to fill the gap with respect to examination of determinants of value drivers of firms in an emerging market like India. The impact of major decisions undertaken by firms on firm valuation is of much relevance in the context of corporate governance and wealth creation in stock market. The study explores the significance of investment, financing and dividend decisions on firm valuation. The study examines the linkage between financial performance and value creation of firms in an emerging market.

2. Review of Literature

Black (1972) finds positive relation between average stock returns and beta of firms. Increased dividend payout signal to the market about the future cash flow generation ability of firms (Ross, 1977). Degos (1988) discuss the linkage between strategic position of a firm and its financial performance. The important determinants of value creation are profitability, industry patterns, size and nature of property (Samy *et al*., 2002). The determinants of value creation are growth rate, operating profit margin, working capital investment, fixed capital investment and cost of capital (Rappaport, 1987). Profitability, financial policy, investment policy and dividend policy are major determinants of value creation (Caby *et al*.,1996). Return on equity, market to book ratio, and Tobin-q are measures of value creation (Varaiya *et al*.,1987). Dividend payments signal the market about the higher cash flow generation potential of firms (Hakansson, 1982). There exists a positive relationship between leverage and average returns (Bhandari, 1988). Size proxied by market capitalization is a major determinant of average returns (Banz, 1981). Several studies indicate a positive relationship between book to market and return (Chan *et al*., 1991; Rosenberg *et al*.,1985). The average return on stock is positively related to the ratio of book value to market value of equity (Rosenberg *et al*., 1985; Chan *et al*., 1991). Studies document negative relationship between size and return (Banz,1981; Reinganum,1981).

Enterprise Value multiple of EV/EBITDA is a strong determinant of stock returns (Loughran *et al*., 2011). Price to earnings, Price to sales and enterprise multiple are the most commonly used relative valuation multiples. Leverage has a negative effect on firm value and that the marginal effect of leverage is lower for information asymmetric firms (Fosu *et al*., 2016). Serra *et al*. (2014) finds that industry level determinants of returns are unlevered beta, sales growth and regulated tariff and firm level determinants are size, illiquidity and book to market ratio. Hahn *et al*. (2009) finds that debt capacity is a significant determinant of stock returns for financially constrained firms after controlling for beta, size, book to market, leverage and momentum. Yang, *et al*. (2010) using structural equation model finds that the primary determinants of stock returns are leverage, expected growth, profitability, value and liquidity. Dividend policy and cost efficiency are important determinants of valuation of oil companies (Bhaskaran & Sujit, 2016). Chi & Su (2017) documents a positive cash flow volatility and valuation which varies with firm size, investment opportunities and the correlation across market segments.

3. Hypotheses

Value creation is a function of the investment, financing and dividend policy decisions of firms:

I) Higher the cash flow, growth rate of earning and cash flow, greater is the value creation for firm.

II) Higher the intangibles for the firm, greater will be the potential for value creation.

III) Leverage will be positively related to value creation. The level of debt is a signal of firm quality. Increased leverage leads to higher interest tax shield which results in tax saving for firm and increased valuation effect for firm.

IV) Higher dividend payout signal about the future cash flow generation. Increased dividend payout signal to the market about the increased valuation effect for the firm.

V) Higher the size of the firm, greater will be the value creation for firm.

VI) Higher the investment potential of firm, greater is the scope for value creation.

VII) Higher agency costs lead to lower value creation. Higher debt lowers agency costs and hence improve valuation effect for firm.

VIII) Higher investment in discretionary expenditure lead to higher intangibles and valuation for firm.

IX) Investments in capital expenditure increases the valuation effect for a firm.

X) Firms with higher liquidity position tend to have more valuation effects.

4. Data and Methodology

The study is based on a large sample of approximately 43,000 Indian firms which represented 15 different industry sectors. We took the data for the latest financial year for each firm. The source of data was CMIE Prowess database. The research paper uses the PLS-SEM methodology to understand the determinations of valuation of Indian firms. (Titman & Wessels, 1988) did seminal research on the determinants of capital structure by using the structural equation modeling. Our focus on PLS-SEM methodology is based on the assumption that in management research, most variables are often latent and cannot be observed directly. Hence in such cases, a single proxy variable to represent the target variable would fail to capture all the meaningful real effect of the construct on the dependent variable. The structural equation modeling (SEM) procedure is often useful to address this issue by including all the reflective indicators to represent a meaningful construct. There are two types of SEMs popularly used in management research, namely, covariance-based structural equation modeling (CB-SEM) and partial least squares structural equations modeling (PLS-SEM). Recently, there has been an increased use of PLS-SEM rather than CB-SEM due to both theoretical and methodological reasons (Hair *et al*., 2012). PLS-SEM explains the variance, which is the prediction of construct relationship. This method works with component weights, which maximize variance. This study applies PLS-SEM using *WrapPLS Software*, which can handle nonlinear relationships effectively.

PLS-SEM estimates latent variables through composites, which are exact linear combinations of the indicators assigned to the latent variables. PLS method focuses on maximizing the explained variance of the endogenous latent variables instead of reproducing the theoretical covariance

matrix. The major goal of variance-based method is to predict the relationships among constructs and to explore underlying theoretical concepts. This method is useful if the objective is to conduct predictive analysis with highly complex data. Through PLS-SEM methodology, we propose to examine the determinants of valuation effects of Indian firms.

4.1 Value measures

The dependent latent construct value was composed of different variables of operating and market performance. The operating performance variables included in the dependent construct of value are earnings per share, net profit margin, return on net worth, return on capital employed, return on total assets and book value per share. The variable representing the combination of operating and market performance are enterprise value multiples. The enterprise value multiples used are enterprise value to sales, enterprise value to profit before depreciation, interest and taxes, enterprise value to profit before tax.

The other latent constructs included are leverage, tangibility, intangibility, dividends, cash flow, growth, size, tax, non-debt tax shield, discretionary expenditures, agency cost and liquidity. The latent construct tangibility consists of variables of capital investment intensity. Discretionary expenditure construct represents variables of research and advertisement intensity.

4.2 Descriptive statistics

The mean statistics of value measures of 15 different industrial sectors are given in Table 1. The study is based on 43,697 firms representing 15 sectors. The data are taken for the latest available year.

Table 1. Mean characteristics for value variables

SL No.	Industry	NPM	RONW	ROCE	ROA	EVSA	EVPBDIT	BV / share	EVPBT	No. of firms
1	Food	-1.50	3.47	0.40	0.01	0.05	0.15	0.27	0.03	2444
2	Textiles	-2.58	2.45	-1.03	-1.28	0.14	0.49	0.84	0.42	1833
3	Chemicals	-0.10	6.07	2.40	1.37	2.06	7.58	28.89	10.22	2704
4	Consumer Goods	0.00	4.79	1.45	0.78	2.29	8.20	26.70	8.63	888
5	Construction materials	-2.13	2.42	-0.02	-0.44	2.47	8.68	27.30	3.51	656
6	Metal Products	-1.78	2.27	-0.09	-0.36	1.57	6.91	18.70	5.48	1955
7	Machinery	-1.00	4.72	1.43	0.50	2.25	7.69	28.14	7.74	1709
8	Transport equipment	-0.25	5.52	2.35	1.14	1.98	10.71	70.44	18.70	912
9	Miscellaneous Manufacturing	0.11	0.10	-0.31	-0.54	2.31	5.13	14.45	4.48	2601
10	Diversified	-7.50	3.38	0.63	0.20	7.40	9.22	32.68	10.23	438
11	Mining	0.23	3.98	1.75	0.89	3.97	6.06	23.79	7.87	254
12	Electricity	-0.68	0.30	-0.21	-0.28	6.74	5.80	82.69	8.30	924
13	Non-financial Services	-1.30	3.21	1.26	0.29	8.22	14.91	16.88	18.03	13012
14	Construction & real estate	0.81	1.94	0.83	0.39	4.96	12.47	35.97	17.29	3586
15	Financial Services	5.43	1.36	0.68	0.46	361.58	12.02	19.17	16.68	9781

Table 1 gives the mean characteristics of variables representing profitability and relative valuation measures. The financial services sector representing 9781 firms had the highest average net profit margin (NPM) of 5.43. The construction and real sector, mining, miscellaneous manufacturing, consumer goods had average net profit margin of 0.81, 0.23 and 0.11, respectively. All other sectors had registered negative profit margin. Chemicals, transport equipment, consumer goods, machinery and mining sectors had the highest average return on net worth (RONW), return on capital employed (ROCE) and return on assets (ROA). The average return on net worth of chemical industries was 6.07 and return on assets was 1.37. The average return on net worth of transport equipment sector was 5.52 and return on capital employed was 2.35. The average return on assets was 1.14 for the transport equipment sector.

The descriptive statistics for valuation multiples are also given in Table 2. Financial services, non-financial services, diversified, electricity, construction and real estate sector had the highest enterprise value multiple in terms of sales (EV/Sales) and enterprise value to profit before depreciation interest and taxes. (EVPBDIT). The financial service sector had the highest EV/SA value (361.58). The non-financial service sector had the highest EVPBDIT value (14.91). Transport equipment, non-financial services, construction and real estate, financial services and diversified sectors had the highest enterprise value multiple to profit before tax (EVPBT). The average book value per share was highest for the electricity sector (Rs 82.69). The other sectors with highest book value per share were transport equipment, construction and real estate sector, diversified, chemicals and machinery sector.

Table 2. Standard deviation of value variables

SL No.	Industry	NPM	RONW	ROCE	ROA	EVSA	EVPBDIT	BV / Share	EBPBT
1	Food	2723.18	187.27	247.18	37.41	19.52	112.53	52.3	136.23
2	Textiles	2883.11	254.4	89.38	52.06	212.82	156.1	227.48	258.72
3	Chemicals	2022.64	258.51	151.46	30.96	334.81	81.04	499.92	660.1
4	Consumer Goods	1323.24	242.32	1182.77	1180.79	183.27	193.59	89.33	276.61
5	Construction materials	3336.38	841.34	820.93	136.2	175.82	33.19	181.11	512.37
6	Metal Products	3859.39	250.92	98.7	371.84	143.18	102.71	107.47	390.47
7	Machinery	5111.12	302.13	200.74	337.03	178.32	528.17	365.49	949.32
8	Transport equipment	2102.52	899.76	33.29	22.82	122.97	50.27	1430.94	164.86
9	Miscellaneous Manufacturing	1454.73	260.66	264.7	256.3	133.72	87.8	80.43	13763.92
10	Diversified	8318.19	83.93	41.31	24.75	1420.47	64.76	208.4	492.11
11	Mining	539.49	80.51	53.76	19.97	109.43	12.75	91.66	251.68
12	Electricity	3788.67	295.95	138.25	111.99	110.29	152.02	198.95	439.81
13	Non-financial Services	21602.23	1575.58	337.98	100.85	1339.07	3170.38	387.93	2739.06
14	Construction & real estate	1011.76	130.98	420.15	29.57	206.71	1083.01	927.85	551.92
15	Financial Services	38897.81	777.49	147.05	75.43	74818.06	650.61	313.85	95375.02

The standard deviation of net profit margin is highest for the financial services, non-financial services, diversified and machinery sectors. The standard deviation of return on net worth is highest for non-financial services, transport equipment, construction materials and financial services. Consumer goods and construction materials had the highest standard deviation for return on capital employed. Consumer goods and metal sectors had the highest variation in return on assets.

5. Empirical Results

5.1 Initial model for PLS-SEM

The initial model was developed to reflect the path and linkage between variables according to hypothesis developed and prior studies. The initial PLS-SEM model is given in figure 1. A process of scale purification is carried out to determine the final revised model with acceptable reliability and validity.

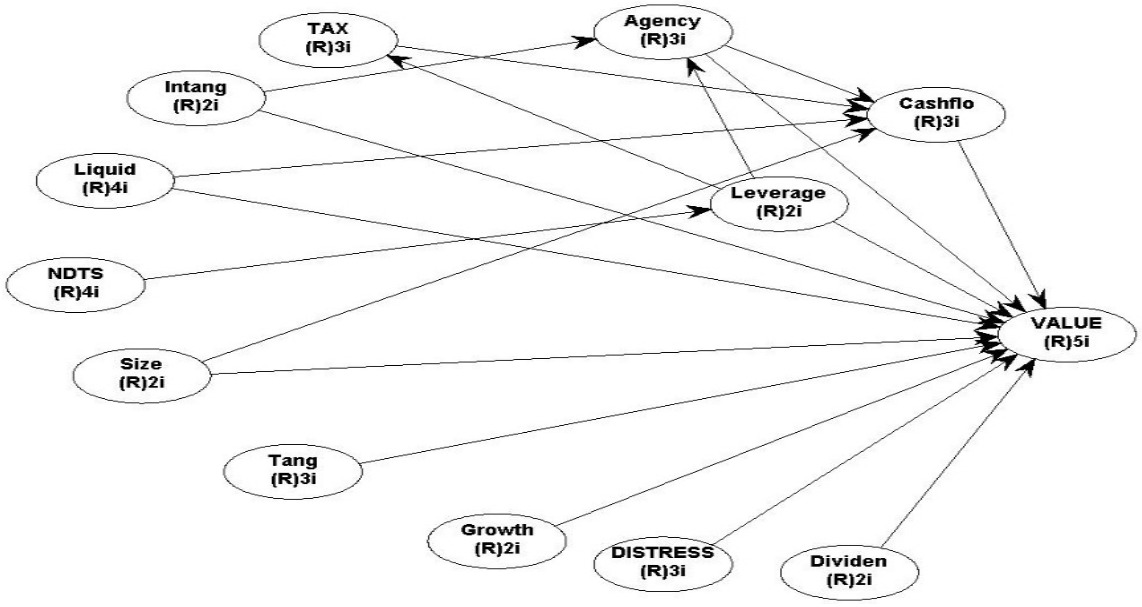

Figure 1. Partial Least Square Structural Equation Modeling (PLS-SEM), the initial model used in this study

The first step of performing PLS-SEM is to take care of missing data using appropriate technique. For this study, missing data imputation is carried out by standard Stochastic Multiple Regression Imputation algorithm. The initial assessment of the model is done with the inclusion of all the latent constructs designed according to the model formulation. The loadings of all the variable indicators in the constructs is used for scale purification. Any indicator which has less than 0.5 loading is dropped from the model. The following indicators shown in Table 3 were dropped from the latent construct due to poor loadings.

This exercise of scale purification is essential as the indicators representing latent variable construct must be highly correlated. In other words, these dropped variables are not fitting to be indicators representing latent variables.

After scale purification, the model is re-estimated for reliability and validity of the construct used in the measurement model as it employs the reflective measurement scale. The indicators in

reflective measurement scales are highly correlated and interchangeable. Hence, measurement model must be assessed for its reliability and validity in order to achieve consistency.

Table 3. Indicator loadings which are below 0.50

	Intang	Cashflow	NDTS	TAX	Discretionary	VALUE	Agency	Liquid
INTANGT	0.131							
CASHCA		-0.101						
GFASA			-0.426					
TAXPBT				-0.113				
RDTA					0.126			
ADVTTA					0.051			
EVSA						0.322		
EVPBDIT						0.468		
EVPBT						-0.063		
TSETA							-0.429	
SEPBDIT							-0.188	
PCACA								0.356

Table 4. Reliability and validity of the latent construct

Coefficient / Latent Construct	Composite reliability coefficients	Cronbach's alpha coefficients	Average variances extracted	Full collinearity VIFs
Leverage	0.797	0.658	0.500	1.096
Intangibility	0.947	0.888	0.900	1.071
Tangibility	0.113	-0.256	0.419	2.600
Dividend	0.663	-0.018	0.500	1.684
Cashflow	0.865	0.808	0.527	2.968
Growth	0.641	0.320	0.592	1.237
Size	0.921	0.828	0.854	1.536
NDTS	0.784	0.584	0.552	1.906
TAX	0.763	0.380	0.617	1.637
Discretionary Expenditures	0.926	0.839	0.861	4.351
VALUE	0.868	0.814	0.541	2.399
Agency Costs	0.833	0.585	0.694	3.759
Liquidity	0.953	0.925	0.870	1.076

The results of reliability and validity is presented in Table 4. The initial testing of the reliability and validity of latent variables indicated that latent constructs like Tangibility (TANG), didn't qualify the criteria and hence dropped from the model. Rest of the values for all the constructs are either meeting all the qualifying criteria or at least two of them and hence retained in the model.

5.2 Reliability assessment

The internal consistency reliability of reflective measures is analyzed through composite reliability and Cronbach's alpha. Composite reliability is applied as an estimate of the internal consistency and of the construct. The satisfactory range for composite reliability values are 0.60 to 0.70 in exploratory research and 0.70 to 0.90 in more advanced stages of research. As shown in Table 4, the composite reliability score of all the latent construct are in the range 0.64-0.95 indicating that latent variables are reliable.

Reliability of measurement model in measuring intended latent constructs is checked using Cronbach alpha score. Cronbach alpha values greater than 0.7 indicate that the measurement model is reliable. As seen in the above Table 4, there are seven latent construct variables where Cronbach alpha value is less than 0.70. Since their composite reliability and/or average variance extracted (AVE) values are equal or greater than 0.5, these latent variables are retained in the model.

5.3 Construct validity

The estimated strength of these relationships in the model between the latent variables can only be meaningfully interpreted if construct validity is established. In order to test construct validity, the convergent and discriminant validity is used. Convergent validity is measured using the average variance extracted (AVE) which is the grand mean value of the squared loadings of all indicators associated with the construct. Each construct should account for at least 50 per cent of the assigned indicators' variance. As can be seen from the Table 4 all latent constructs except Tangibility (TANG) have AVE values above or equal to the threshold limit of 0.5. Based on the reliability and validity tests all other latent constructs except tangibility (TANG) are retained for further analysis.

5.4 Discriminant validity

Discriminant validity ensures that a construct measure is empirically unique and represents phenomena of interest that other measures in a structural equation model do not capture. Discriminant Validity is established if a latent variable accounts for more variance in its associated indicator variables than it shares with other constructs in the same model. The Fornell Larcker criterion suggests that the square root of AVE must be greater than the correlation of the construct with all other constructs in the structural model. Table 5 shows the correlations among latent variables with square root of average variance extracted (AVE) by each latent variable. It can be seen that each latent variable AVEs is higher than the correlation of the latent variables indicating discriminant validity of the latent variables.

Table 5. Correlation among 12 latent variables with square root of AVEs

	Leverage	Intang	Dividend	Cashflow	Growth	Size	NDTS	TAX	Discre	VALUE	Agency	Liquidity
Leverage	**0.707**											
Intang	0.018	**0.948**										
Dividend	-0.071	0.076	**0.704**									
Cashflow	-0.143	-0.039	-0.017	**0.726**								
Growth	-0.030	0.092	-0.022	-0.184	**0.769**							
Size	0.120	-0.050	0.013	0.326	-0.406	**0.924**						
NDTS	0.003	-0.068	-0.242	0.329	-0.161	0.247	**0.743**					
TAX	0.016	0.116	0.438	-0.227	0.026	-0.064	-0.244	**0.786**				
Discre	0.033	0.147	0.556	-0.388	0.137	-0.167	-0.356	0.596	**0.928**			
VALUE	-0.175	0.118	0.213	0.688	-0.045	0.204	0.063	0.030	-0.027	**0.736**		
Agency	0.015	0.174	0.481	-0.403	0.146	-0.274	-0.316	0.540	0.836	-0.109	**0.833**	
Liquidity	-0.168	0.060	0.117	0.010	0.072	-0.106	-0.109	0.098	0.126	0.089	0.137	**0.933**

Note: Square roots of average variances extracted (AVEs) shown on diagonal

Another popular approach for establishing discriminant validity at the item level is by the assessment of cross loadings[1]. Discriminant validity is established if each measurement item correlates weakly with all other constructs except for the one to which it is theoretically associated. In cross loading, each measurement items correlates weakly with all other constructs and hence, establishes discriminant validity. Once the reliability and validity of the indicators and latent constructs, the study concentrates on the path coefficients and assessment of the model fit and quality indices.

5.5 Results of the measurement model (Outer model) of PLS-SEM

Path coefficient of the measurement model is estimated using various schemes to ensure robustness of the relationship. Stable method relies directly on the application of exponential smoothing formulas and yields estimates of the actual standard errors that are consistent with those obtained via bootstrapping, in many cases yielding more precise estimates of the actual standard errors. For this study, linear and non-linear models are tested using robust path analysis. The results of bootstrapping using both the schemes are presented in Table 6. Bootstrapping creates number of resamples. In this case 50 replacements were carried out where each resample contains a random arrangement of the rows of the original dataset, where some rows may be repeated.

Table 6. Robust path analysis using non-linear models and linear models

	Model-1					**Model-2**				
	Bootstrapping Non Linear Robust Path Analysis					Bootstrapping Linear Robust Path Analysis				
Latent Variables	Leverage	Cashflow	TAX	Agency	VALUE	Leverage	Cashflow	TAX	Agency	VALUE
Leverage			0.144	-0.085*	-0.083*			0.019*	-0.025*	-0.072*
Intang				0.118*	0.198*				0.122*	0.188*
Dividend					0.166*					0.138*
Cashflow					0.603*					0.666*
Growth					-0.009					0.044*
Size		0.209*			0.050*		0.295*			0.046*
NDTS	0.045**					0.009				
TAX		-0.289*					-0.119*			
Dicre					-0.047*					0.133*
VALUE										
Agency		-0.073*			-0.023**		-0.187*			0.010
Liquid		0.151*			0.056*		0.071*			0.028*

Note: * Indicates significance at 1% level, i.e. $p < 0.01$; and ** represents significance at 5% level.

Model fit and quality indices of the measurement model is reported in Table 7. It indicates that all the indicators are within the acceptance range and significant. Tenenhaus goodness of fit is 0.257, which indicates that 25.7% of the variation is explained by the measurement model and considered to be reliable based on linear model. On the assumption of non-linearity 27.1% of the

[1] For details of variables and cross loadings, the authors may be contacted.

variation is explained by the measurement model. This ensures that the results are reliable and can be used for model building.

Table 7. PLS regression model fit and quality indices for linear and nonlinear models

Model fit and quality indices	Linear	Non-Linear	Acceptance
Average path coefficient (APC)	0.128	0.138	p<0.001
Average R-squared (ARS)	0.139	0.161	p<0.001
Average adjusted R-squared (AARS)	0.139	0.161	p<0.001
Average block VIF (AVIF)	1.363	1.300	Acceptable
Average full collinearity VIF (AFVIF)	1.715	1.715	Acceptable
Tenenhaus GoF (GoF)	0.299	0.322	Medium
Sympson's paradox ratio (SPR)	0.882	0.941	Acceptable
R-squared contribution ratio (RSCR)	0.998	0.997	Acceptable
Statistical suppression ratio (SSR)	0.765	1.00	Acceptable
Nonlinear bivariate causality direction ratio (NLBCDR)	0.882	0.882	Acceptable

Notes to Table 7:
Tenenhaus GoF (GoF) value >=0.25 but less than 0.36 is considered as medium goodness of fit. Sympson's paradox ratio (SPR) acceptable if >= 0.70, R-squared contribution ratio (RSCR) >= 0.90 is acceptable, Statistical suppression ratio (SSR) should be acceptable if the value is greater than 0.70. Nonlinear bivariate causality direction ratio (NLBCDR) value should be greater than 0.70.

Table 8 reports the model-wise dependent latent variables' R^2 and Q^2. The values indicate that both the models i.e. linear and nonlinear model could explain around 50 percent variations in value and 17 to 25 percent variations in cash flow. Out of the two, non-linear model is performing slightly better than linear model in terms of overall significance and explanatory power. This conclusion is drawn as R^2 and Q^2 values are slightly higher in nonlinear models.

Table 8. R^2, adjusted $R^2$and Q^2 of linear and non-linear path models

Latent variable	Linear			Non-Linear		
	R^2	Adj. R^2	Q^2	R^2	Adj. R^2	Q^2
Leverage	0	0	0.001	0.002	0.002	0.004
Cashflow	0.175	0.175	0.175	0.255	0.255	0.054
TAX	0	0	0.002	0.021	0.021	0.019
Agency	0.150	0.150	0.016	0.023	0.023	0.022
VALUE	0.506	0.506	0.506	0.504	0.504	0.498

5.6 Interpretation of results

The results of linear and nonlinear models are more or less similar except few cases. Figure 2 shows the final path for nonlinear model. On account of higher R-square and Q-Square values, nonlinear model is assumed to be better model. Leverage is positively related though not significant to the latent construct tax with path coefficient value of 0.144. Leverage is significantly negatively related to the latent construct agency and value with path coefficient value of -0.085 and -0.083

respectively. Increased leverage lowers the agency costs. This results signify the disciplinary role of debt in reducing the agency costs of firms. Statistically significant negative relationship is established between leverage and value. Highly leveraged firms tend to create lower value for firms. As leverage increases, the firms become riskier and the stock market are skeptical about value creation by highly leveraged firms. Higher the leverage, lower the profitability position of the firm. The latent construct of Intangibility is positively related to agency and value construct; both the relationships are significant at 1% level. Firms with high intangible assets and earning potential have higher agency costs and tend to create more value for the firms. Thus the study documents the positive relationship between intangibility and agency costs. The study also establishes the positive relationship between intangibility and value creation for firms in Indian context.

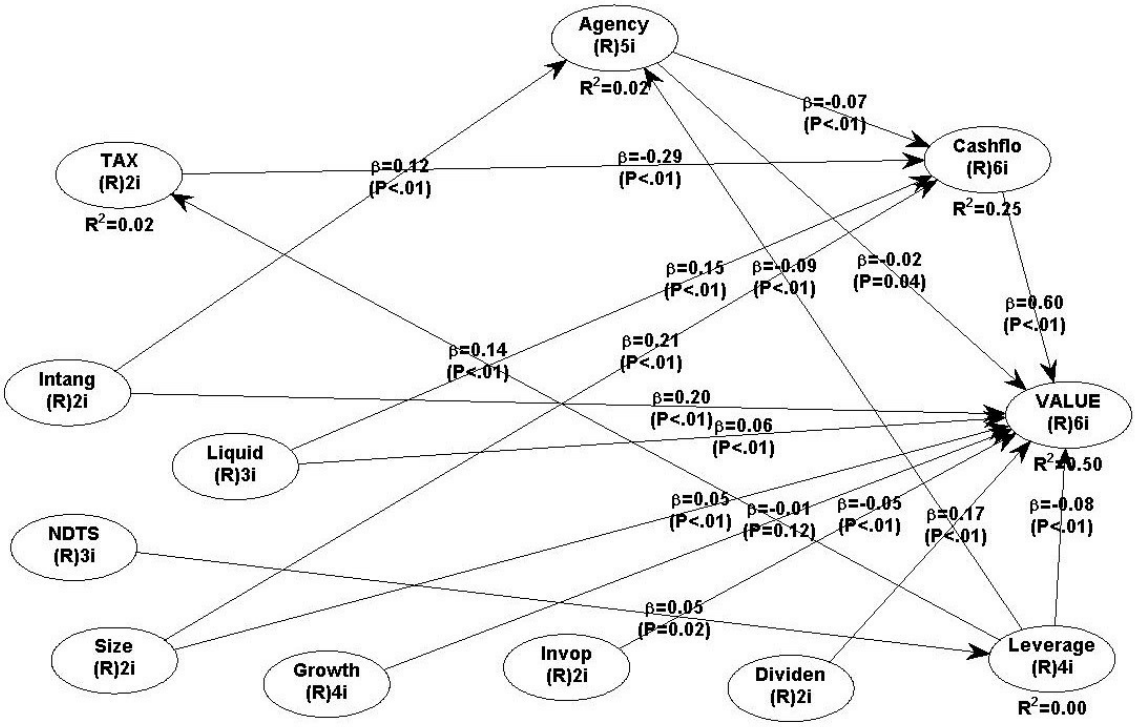

Figure 2. Final path model (Non-linear)

Dividend paying companies tend to create more value. The latent construct dividend is positively related to construct value with path coefficient value of 0.166 for nonlinear models and path coefficient value of 0.138 for linear model. Both the results are statistically significant. Higher cash flows lead to higher value creation for firms. The results were statistically significant for both linear and nonlinear models. The path coefficient value for nonlinear model and linear model was 0.603 and 0.666 respectively. The linear model results suggest that growth is positively related to value creation with path coefficient value of 0.044 at 1% statistical significance. The result suggests that firms with high growth rate in earnings and cash flow will have higher valuation and profitability. However, this relationship is not significant in nonlinear model. Large firms generate more cash flows and have greater value. Size is positively related to cash flow. Higher the size of the firm, greater will be the cash flow generation.

The above result is statistically significant. In nonlinear model, the path coefficient value was 0.209 and in linear model the path coefficient value was 0.295. Large firms tend to create more value. Size is positively related to value with statistical significance in both models. In other words, bigger the size of the firm, greater is the potential for value creation in stock market and profitability. The study finds negative relationship between tax shields and cash flow with statistical significance in both models. This result is quite puzzling. The construct discretionary expenditure intensity is negatively related to value construct in nonlinear model and positively related to value in the linear model. Under the assumptions of non-linearity, it can be stated that firms that invests more in discretionary expenditures like R&D and advertisement tends to create less value for the firms. Higher the discretionary expenditures like R&D and advertisement, lower is the value creation for firms under non-linearity assumptions. The results are opposite under assumptions of linearity. Agency costs are negatively related to cash flow and value creation. Firms with higher agency costs tend to create lesser cash flows and less value. Conflicts of interest in the form of agency costs leads to less cash flows and lower value for firms. Higher agency costs will lead to lower cash flow and hence lower will be the profitability and value creation in the market. Statistically significant positive relation is documented between liquidity, cash flow and value creation. Liquid firms tend to have higher cash flows and higher valuation effects. The latent construct liquidity is positively related to cash flow and value in both linear and nonlinear models with statistical significance.

6. Conclusion and Implications

This study examines the determinants of value creation in Indian firms using a large sample of approximately 43,000 firms representing 15 different sectors. The study uses the PLS-SEM methodology to understand the determination of valuation of Indian firms. All known studies use stock returns as proxies for value creation. In this study we use latent construct representing both operating and market performance variables as proxies for value creation. Enterprise value multiples are used as proxies for market value effects. Firms with high intangible assets tend to have higher valuation effects. The disciplinary role of debt in controlling agency costs is established by this empirical study. Leverage and agency costs are negatively related. Highly levered firms tend to create less value for the firms. Firms with high leverage are viewed risky by markets and hence the valuation effects are lower. High leverage leads to greater tax benefits. Firms with high intangible assets tend to have higher agency costs and higher valuation effects. Paying higher dividends is a source of value creation for Indian firms. Positive relation between dividends and valuation of firms is established in the study. Higher the growth rate of earnings and cash flow, higher would be the value creation for firms. Size of the firm is also a determinant of value creation among Indian firms. Large firms tend to have more cash flows. Negative relationship between tax benefits and cash flow is documented. Some evidence suggests that higher the discretionary expenditure intensity of firms, lower the value creation and profitability for firms**.** Agency costs is negatively related to cash flow and value creation. Firms with high agency costs will have lower cash flows and valuation effects. Liquid firms tend to have higher cash flows and value creation.

The study confirms the hypothesis that higher cash flow and growth rate of earnings, higher will be the value creation for firms (Hypothesis I). The study also proves the hypothesis that higher the intangibles for the firms, greater would the potential for value creation. (Hypothesis II). The study establishes the positive role of size, and dividends as determinants of value creation

(Hypotheses IV & V). Negative relationship between agency costs and value creation is established (Hypothesis VII). Firms with higher liquidity tends to have higher valuation effects (Hypothesis X).

The study finds evidence for rejection of hypothesis III and VIII. Statistically significant negative relationship is established between leverage and value. The implication is that higher leverage is viewed skeptically by market as it increases the risk of the firm. Debt intensive firms have lower valuation effects. Higher discretionary expenditures lead to lower valuation effects for firms. The stock market is skeptical about firm's investment in discretionary expenditures like R&D as there is uncertainty regarding the success of R&D investments.

The results suggest that debt has a disciplinary role in reducing agency costs. High debt intensity firms create less value for firms. Firms with high leverage are viewed risky by markets and hence the valuation effects are lower. Investments in intangible assets will be a source for value creation for firms. Size of firm is a significant determinant for value creation. Dividend decision have a critical role in valuation effect for firms. Firms with higher liquidity have higher valuation effects.

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