# NEW EVIDENCES ON DETERMINANTS OF CAPITAL STRUCTURE FROM THE INDIAN MANUFACTURING INDUSTRY

Pradeepta Sethi*, Ranjit Tiwari**

* Fellow of National Institute of Financial Management, India, Assistant Professor, T. A. Pai Management Institute (TAPMI) Manipal, India
** Fellow of National Institute of Financial Management, India, Assistant Professor, Chandragupt Institute of Management (CIMP) Patna, India

## Abstract

In the backdrop of Make in India push by Indian government the purpose of this study is to examine the determinants of capital structure towards a better understanding of financing decisions to be undertaken by the Indian manufacturing firms. The data for the analysis is drawn from COSPI manufacturing index of Centre for Monitoring Indian Economy (CMIE). Our sample is an unbalanced panel of 1077 firms over the period 2000-01 to 2012-13. We apply system-GMM to study different factors that affect the leverage decision of firms in India. The findings of the study reveals that the choice of optimal capital structure can be influenced by factors such as profitability, size, growth, tangibility, non-debt tax shields, uniqueness and signal. We also find the existence of both pecking order theory and static trade-off theory in the case of Indian manufacturing firms. The results thus obtained are robust across the different proxies of leverage.

**Keywords:** Capital Structure, System-GMM, Manufacturing, India

## 1. INTRODUCTION

Capital structure decision is one of the most important and continual decision in the life cycle of any firm. Even after many decades since the much revered Modigliani and Miller (1958) theory, the burgeoning literature on capital structure is yet to solve the riddle for the firms and financial managers. Though the theoretical models identify a large number of potential determinants of capital structure, the empirical work so far has not, sorted out which of these are important in various contexts (Harris and Raviv, 1991). Moreover the empirical work lags behind the theoretical research perhaps because of the use of proxies that are fairly abstract and unobservable (Titman and Wessels, 1988). The empirical evidence is largely consistent with the theory, although there are few instances where the empirical evidence seems to contradict with the theoretical models. For example, the static trade-off theory postulates a positive relationship between profitability and leverage. However, empirical models by Kester (1986), Friend and Lang (1988), Baskin (1989), Rajan and Zingales (1995), Griner and Gordon (1995), Shyam-Sunder and Myers (1999), Michaelas *et al.* (1999), Booth *et al.* (2001) and Chen (2004) have shown negative relationship between profitability and leverage which is contrary to the static trade-off theory. Similarly the direction and magnitude of relationship between leverage and other determinants like size, growth, tangibility and signal as suggested by the theoretical literature seem to be in disagreement with the empirical findings. In view of the countervailing perspective between theory and empirics, we propose to examine the determinants of capital structure in Indian manufacturing industry and the relevance of different capital structure theories in the Indian context. More specifically, we examine the factors and theories that play a vital role in deciding the capital structure for the manufacturing industry.

Majority of the empirical work on capital structure focused on understanding the heterogeneity in capital structure of large U.S firms and firms of other developed economies (e.g. Rajan and Zingales (1995), Titman and Wessels (1988) Wald (1999), Fama and French (2002), Frank and Goyal (2009) among others. Firms from the emerging economy have got trivial attention on this issue until the work of Booth *et al.* (2001). Later Abor (2005), Huang and Song (2004) and Delcoure (2007) further extended the focus of the capital structure issue on developing economies. Lack of well-developed financial system in the emerging economies is attributed as one of the reasons for the limited attention. The corporate financing pattern changed from state-run development finance institutions to a more market-based model with the onset of liberalization during the early nineteenth century in almost all the emerging economies. India is one such emerging economy which has witnessed significant structural transformations and this has allowed Indian firms to explore different avenues for their source of finance and change their capital structure. Few empirical studies Singh and Hamid (1992),Singh (1994), Cobham and Subramaniam (1998) have attempted to shed light on the capital structure in

India. However, majority of these literatures highlight the pre-liberalization era when the industry was highly regulated and license-raj was prevalent in India. Hence, the empirical findings are less illuminating given the constraints faced by firms. In the post liberalization era Bhaduri (2002), Chakraborty (2010), Ganguli (2013), Handoo and Sharma (2014) provide empirical support on the capital structure issue in Indian context. Using factor analytic model Bhaduri (2002) examine the issue of capital structure across nine broad industry categories over the years 1990-95 and concluded that the optimal capital structure choice can be influenced by factors such as growth, cash flow, size, uniqueness and industry characteristics. However, Bhaduri (2002) has not accounted for the phenomenal growth of the stock market as a preferred source of finance for firms in India post 1995. Chakraborty (2010) used panel cointegration technique on a balanced panel of 1169 firms to capture the determinants of capital structure in India. Our study differs from Chakraborty (2010) as we exploit different periods of growth in the Indian economy i.e. high growth (2005-2007) and moderate growth (2009-2013) and subsequent finance requirements of our exhaustive sample of the manufacturing industry. This will help in better assessment of determinants of capital structure. Handoo and Sharma (2014) examine the determinants of capital structure of a cross section of 870 Indian companies listed on NSE from 2001-2010. They average 10 year data for each variable per company and apply multiple regression to derive conclusions. The underlying property of data is lost by taking average of the data. We differ from Handoo and Sharma (2014) on two counts. First, we take the sample from COSPI index of CMIE which includes listed companies not only from NSE but also from BSE, hence a better representative sample. Second, we apply dynamic panel data techniques to get robust inferences from the underlying data.

Rest of the paper is organised as follows. In Section 2, we discuss the theoretical underpinning of determinants of capital structure. Data and methodology are provided in Section 3. Section 4 deals with empirical analysis and we conclude in Section 5.

## 2. MEASURES OF LEVERAGE AND DETERMINANTS OF CAPITAL STRUCTURE

### 2.1. Leverage

This study uses three measures of leverage to examine the issue of capital structure. Total outside liabilities to total asset (**lev 1**) is used as our main measure of leverage. While long term borrowing to total assets (**lev 2**) and short term borrowing to total assets (**lev 3**) are used as robustness checks. We have used short term borrowing as one of our measures of leverage following Huang and Song (2006) who argue that "when a firm wants to obtain more debt, the creditor will consider not only how much a firm's long term debt is, but also how much a firm's current debt and total liability are". Moreover, current debt is quite a steady part in Indian manufacturing companies; hence we use it as a robustness check. We would have liked to use market values of debt instead of book values, but due to data limitations we are forced to use book value.

### 2.2. Profitability

Pecking order theory states that firms' prefer internal sources of financing to debt, hence profitable firms with access to retained profits can rely on them, thus the relationship between profitability and leverage is negative. Whereas static trade-off theory postulates that profitable firms' prefer debt to other sources of financing in order to avail the benefit of tax shield implying a positive relationship between profitability and leverage. Empirical studies on this issue have confirmed this ambiguity. Friend and Lang (1988), Titman and Wessels (1988), Barton *et al.* (1989), Rajan and Zingales (1995), Griner and Gordon (1995), Shyam-Sunder and Myers (1999), Michaelas *et al.* (1999), Booth *et al.* (2001), Chen (2004), and Murinde *et al.* (2004) have shown negative relationship between profitability and leverage in confirmation with the pecking order theory. On the other hand Bowen *et al.* (1982), Dammon and Senbet (1988), Givoly *et al.* (1992) and Petersen and Rajan (1994) have concluded that the relationship between profitability and leverage is positive confirming the static trade-off theory. This study considers two different proxies to measure profitability (**Prof**) (i) ratio of profit before interest, tax and depreciation to total assets and (ii) ratio of net operating cash flow to total assets.

### 2.3. Size

The relation between firm size and leverage is unclear. Kester (1986), Titman and Wessels (1988), Rajan and Zingales (1995) find a negative relationship between size and leverage by arguing that larger firms with less asymmetric information problems tend to have more equity than debt, hence have lower financial slack (following the pecking order theory). On the other hand, Marsh (1982), Chittenden *et al.* (1996), Kim *et al.* (1998), Al-Sakran (2001), Booth *et al.* (2001), Hovakimian *et al.* (2004) and Huang and Song (2004) show positive relationship between firm size and leverage. They argue, larger firms tend to be more diversified and thus less prone to bankruptcy (following the trade-off theory). While, Bevan and Danbolt (2002) observe that firm size is negatively related to short-term debt and positively related to long-term debt. This study considers two different proxies to measure of **size**: (i) natural logarithm of sales and (ii) natural logarithm of total assets.

### 2.4. Growth

Growth is quintessential activity of every economic agent. Hence it is imperative to understand the effect of growth on leverage. Empirical studies provide ambiguous results confirming the possibilities of both negative and positive relationship. Firms with high growth opportunities would require more funds. Therefore studies that advocate for pecking order, prefer debt financing. Hence, expect a positive relationship between growth and leverage. The counter argument is that firms with growth opportunities may invest sub-optimally, therefore creditors will avoid long term financing resulting in a negative relationship. But at

the same time the issue can be resolved by short term financing and we can expect positive relationship Myers (1977), Titman and Wessels (1988), Rajan and Zingales (1995) and Booth *et al.* (2001). On the other hand, studies that vouch for trade-off theory expect lower debt financing because growth opportunities are a form of intangible assets and cannot be collateralised (Long and Malitz (1985) among others). Hence, expect a negative relationship between growth and leverage. We have used percentage change in sales (**growth**) and **tobinQ** as our measures of growth.

### 2.5. Tangibility

The relationship between tangibility and leverage is positive both in case of trade-off theory (in terms of financial distress and bankruptcy costs) and pecking order theory (in terms of information asymmetry), see (Scott, 1977), Titman and Wessels (1988), Harris and Raviv (1990), Rajan and Zingales (1995), Ozkan (2001) among others. However, the findings from developing economies are mixed. Wiwattanakantang (1999) find positive relationship for Thailand but Booth *et al.* (2001) for ten developing countries and Huang and Song (2004)for China show negative relationship. Our measure for tangibility is the ratio between net fixed assets and total assets (**tangy**).

### 2.6. Non-debt tax shield

Theoretically firms are expected to have positive relationship between non-debt tax shield and leverage because of tax deductibility (Bradley *et al.*, 1984). However, DeAngelo and Masulis (1980) argue that non-debt tax shields are substitutes for the tax benefits of debt financing and firms with larger non-debt tax shields are expected to use lower debt that may result in negative relationship. The same has been corroborated by Wald (1999), Chaplinsky and Niehaus (1993) Huang and Song (2004). We use the ratio of depreciation and amortization to total assets as the measure of non-debt tax shields (**ndts**).

### 2.7. Uniqueness

Theoretically and empirically, firms with unique products and services are likely to be less leveraged (Titman (1984), Bradley *et al.* (1984), Long and Malitz (1985), Williamson (1988) and Harris and Raviv (1991)). To cater unique product and services a firm has to make huge investments in research & development (R&D) activities and at the same time it has to prop up the selling & distributions (S&D) expenses. The intangible nature of these investments render them unsuitable as collaterals. This increases the chance of bankruptcy, hence we expect a negative relationship between firms' uniqueness and leverage. R&D and S&D scaled by sales is our measure for firms' uniqueness (**uniq)**.

### 2.8. Signal

If a firm can efficiently signal its quality to the external world it can easily source external funds. We have used standard deviation of earnings before interest tax depreciation, and dividend payment by net income as a measure of **signal** Booth *et al.* (2001) and Bhaduri (2002). High standard deviation in firm's earnings may lead to financial distress that may cause inverse relationship with leverage because financial institutions will be reluctant to give away loans. On the other hand if dividend payment represents better financial health, it may enhance their debt taking capacity. On the contrary firms with good dividend payment reputation face less asymmetric information in accessing the stock markets. John and Williams (1985) and Miller and Rock (1985) envisage inverse relationship with leverage.

## 3. DATA AND METHODOLOGY

The data for the analysis is drawn from COSPI manufacturing index of Centre for Monitoring Indian Economy (CMIE). Balance sheet and cash flow statement data for the manufacturing industry is used in the study from 2000-01 to 2012-13. COSPI manufacturing index serves our purpose quite well as it constitutes of companies that are listed and whose trading frequency is greater than 90 percent in the last thirty trading days. Our sample is an unbalanced panel of 1077 firms over the sample period. In aggregate, we have 13378 observations.

Drawing from the discussions in Section 2, the functional form of our model is as follows:

$$leverage = f(prof_{it}, tangy_{it}, size_{it}, growth_{it}, ndts_{it}, unique_{it}, signal_{it}) + u_i \qquad (1)$$

Our objective is to test the variation of leverage in the manufacturing industry over time, hence dynamic panel techniques serves our purpose quite well. It has been proved that OLS estimates are biased in the presence of firm-specific effects. Two-step system GMM provides better estimation with a relative long time period and large sample data. System GMM estimator of Arellano and Bover (1995) and Blundell and Bond (1998) combines the regression expressed in first differences (lagged values of the variables in levels are used as instruments) with the original equation expressed in levels (this equation is instrumented with lagged differences of the variables) provides a better alternative. It corrects for the endogeneity of the lagged dependent variable, and also the potential endogeneity of the other regressors. Keeping this in view we apply the system GMM by modifying the equation 1 as follows:

$$leverage = f(lev_{it-1}, prof_{it}, tangy_{it}, size_{it}, growth_{it}, ndts_{it}, unique_{it}, signal_{it}) + n_i + n_t + \varepsilon_{it} \qquad (2)$$

Where $\eta_i$ captures the firm specific heterogeneity and $\eta_t$ is for the time-specific dynamics of the series and $\varepsilon_{it}$ is the error term.

## 4. EMPIRICAL ANALYSIS

Table 1 reports the summary statistics of the variables used in the base line model. As we can

observe from the table the average growth in the manufacturing firms is 0.140. The average size of the firm is 7.604. There not much dispersion among the variables except for ndts.

**Table 1.** Summary Statistics

| *Variables* | *Obs* | *Mean* | *Std. Dev.* | *Min* | *Max* |
|---|---|---|---|---|---|
| lev1 | 13372 | -0.722 | 0.581 | -7.786 | 2.920 |
| lev2 | 13329 | -1.408 | 1.240 | -14.340 | 2.874 |
| lev3 | 13357 | -1.889 | 0.791 | -11.261 | 1.589 |
| prof | 12739 | -2.108 | 0.717 | -10.200 | 2.713 |
| size | 13225 | 7.604 | 1.796 | -2.302 | 15.322 |
| growth | 12009 | 0.140 | 0.411 | -7.400 | 8.089 |
| tangy | 13335 | -1.224 | 0.722 | -7.533 | 0 |
| ndts | 13263 | -0.155 | 15.366 | -1308 | 0.384 |
| unique | 6046 | 0.008 | 0.019 | -0.070 | 0.471 |
| signal | 8170 | 0.363 | 7.030 | -30.666 | 632 |

Table 2 presents the correlation coefficient between the variables. Among the explanatory variables profit is negatively correlated with leverage, which supplements the pecking order theory. Both ndts and tangy are positively correlated with leverage. The correlation between ndts and tangy is higher which may bias our results. Hence, we test for the multicollinearity among variables using variance inflation factor (VIF). VIF test results in Table 3 indicate that the value corresponding to each explanatory variable is much less than 10, hence we conclude that multicollinearity is not a serious problem among the variables.

**Table 2.** VIF Table

| *Variable* | *VIF* | *1/VIF* |
|---|---|---|
| prof | 1.24 | 0.807 |
| size | 1.06 | 0.941 |
| growth | 1.03 | 0.973 |
| tangy | 1.57 | 0.636 |
| ndts | 1.60 | 0.625 |
| unique | 1.07 | 0.938 |
| signal | 1.00 | 0.999 |

**Table 3.** Correlation Matrix

| | **lev1** | **lev2** | **lev3** | **prof** | **size** | **growth** | **tangy** | **ndts** | **unique** | **signal** |
|---|---|---|---|---|---|---|---|---|---|---|
| lev1 | 1 | | | | | | | | | |
| lev2 | 0.758 | 1 | | | | | | | | |
| lev3 | 0.363 | -0.333 | 1 | | | | | | | |
| prof | -0.356 | -0.371 | 0.016 | 1 | | | | | | |
| size | 0.012 | 0.009 | 0.006 | -0.011 | 1 | | | | | |
| growth | 0.139 | 0.077 | 0.092 | 0.104 | 0.012 | 1 | | | | |
| tangy | 0.121 | 0.360 | -0.339 | -0.054 | -0.032 | 0.017 | 1 | | | |
| ndts | 0.050 | 0.173 | -0.175 | 0.166 | -0.088 | -0.015 | 0.533 | 1 | | |
| unique | -0.108 | -0.100 | -0.013 | 0.148 | 0.039 | -0.042 | 0.005 | 0.027 | 1 | |
| signal | -0.001 | -0.021 | 0.028 | 0.096 | -0.038 | 0.175 | -0.054 | -0.078 | -0.030 | 1 |

In our baseline model we use total borrowings (lev1) as our primary dependent variable. The robustness of the base line model is checked using two different measures of leverage i.e. long term borrowings (lev2) and short term borrowings (lev3). For each independent variable we have two proxy measures e.g. for profitability we have prof1 & prof2, for size we have size1 & size2. Similar is the case for remaining other determinants. To derive our final set of independent variables, we adopt a general-to–specific framework. From the general-to-specific framework we derive profit before interest tax and depreciation to total assets (prof), natural logarithm of sales (size), change in sales (growth), tangy, ndts, selling & distribution to sales (unique), and standard deviation of profit before interest tax and depreciation (signal) as our independent variables. The results of our base line model as well as the robustness check using these independent variables is discussed in Table 4.

The empirical evidence suggests that the coefficients of all the determining factors of leverage are significant at 1% level in our base-line model. Profitability has negative relationship with total leverage and long term leverage which is in conformity with pecking order theory. It suggests that firms prefer internal sources to external sources of finance when profits are high. On the other hand, low profit firms use more debt because their internal funds are not sufficient. Our result is in line with some earlier studies such as (Kester, 1986, Friend and Lang, 1988, Baskin, 1989, Griner and Gordon, 1995, Shyam-Sunder and Myers, 1999, Ozkan, 2001). But when we use short term leverage as our dependent variable we find a positive relation between profitability and short term leverage. The use of short term leverage supports the static trade-off theory. The ambiguous relationship between profitability and leverage is again highlighted in the Indian context.

Size has negative relationship with total leverage and short term leverage while no relationship with long term leverage; hence leverage decision is influenced by short term borrowings. Our finding is in line with the pecking order theory which suggests that larger firms with less asymmetric information problem tend to have more equity than debt. Our results are consistent with the findings of Kester (1986) and Titman and Wessels (1988).

**Table 4.** Determinants of capital structure

| | ***lev1*** | | | | ***lev2*** | | | | ***lev3*** | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| prof | -0.452*** | -0.449*** | -0.452*** | -0.442*** | -0.479*** | -0.478*** | -0.479*** | -0.479*** | 0.026*** | 0.029*** | 0.027*** | 0.037*** |
| | (27.47) | (27.23) | (27.23) | (34.44) | (30.96) | (30.82) | (30.65) | (39.84) | (5.33) | (5.75) | (5.47) | (7.01) |
| size | -0.033*** | -0.016*** | -0.015*** | -0.01*** | -0.019*** | -0.002 | -0.002 | 0.002 | -0.015*** | -0.013*** | -0.013*** | -0.012*** |
| | (8.37) | (3.87) | (3.75) | (3.48) | (5.02) | (-0.59) | (-0.59) | (-0.86) | (12.43) | (10.88) | (10.66) | (10.52) |
| growth | 0.007 | 0.02*** | 0.026*** | 0.042*** | -0.008 | 0.004 | 0.006 | 0.02*** | 0.015*** | 0.016*** | 0.02*** | 0.022*** |
| | (-0.99) | (2.84) | (3.42) | (6.31) | (-1.15) | (-0.63) | (-0.82) | (3.21) | (6.93) | (7.34) | (8.85) | (8.13) |
| tangy | 0.28*** | 0.102*** | 0.096*** | 0.149*** | 0.363*** | 0.2*** | 0.19*** | 0.234*** | -0.083*** | -0.098*** | -0.094*** | -0.084*** |
| | (9.31) | (3.26) | (3.01) | (6.52) | (12.85) | (6.79) | (6.33) | (10.89) | (9.25) | (10.25) | (9.86) | (9.04) |
| ndts | | 3.58*** | 3.36*** | 2.112*** | | 3.296*** | 3.101*** | 2.214*** | | 0*** | 0.259*** | -0.102 |
| | | (17.30) | (15.66) | (12.36) | | (16.94) | (15.35) | (13.84) | | (4.45) | (4.03) | (-1.47) |
| uniqu | | | 0.2* | 0.286*** | | | 0.147 | 0.235*** | | | 0.053 | 0.051 |
| | | | (-1.7) | (3.26) | | | (-1.32) | (2.86) | | | (-1.5) | (-1.43) |
| signal | | | | 0.013*** | | | | 0.005 | | | | 0.008*** |
| | | | | (3.00) | | | | (-1.15) | | | | (4.73) |
| cons | 0.789*** | 0.594*** | 0.59*** | 0.533*** | 0.454*** | 0.272*** | 0.274*** | 0.227*** | 0.338*** | 0.322*** | 0.316*** | 0.306*** |
| | (22.38) | (16.18) | (15.42) | (19.89) | (13.72) | (7.89) | (7.60) | (9.04) | (31.80) | (28.83) | (27.58) | (28.03) |
| R2 | 0.08 | 0.11 | 0.1 | 0.14 | 0.1 | 0.12 | 0.12 | 0.17 | 0.03 | 0.03 | 0.03 | 0.04 |
| N | 12,001 | 11,987 | 11,811 | 11,142 | 12,001 | 11,987 | 11,811 | 11,142 | 11,998 | 11,985 | 11,810 | 11,142 |

*Note: t-statistics in parenthesis. *, **, *** denotes level of significance at 10%, 5% and 1% respectively.*

Growth has a positive relationship with all the components of leverage i.e. total leverage, long term leverage and short term leverage. The positive relationship supports the view that there is stronger preference for external financing by high growth firms and the preference is for debt financing. The finding is not surprising given the fact that India being one of the fastest growing economies, the firms have a high growth potential, hence require more funds in accordance with the pecking order theory. The positive relationship between the two variables is consistent with the findings of Rajan and Zingales (1995), Booth *et al.* (2001), Pandey (2001) and Chen (2004).

The positive relationship between tangibility and leverage (total leverage and long term leverage) is in conformity with static trade-off theory which implies that the firms with more fixed assets have huge collateral to support their big loans, therefore, have a higher leverage ratio. Similar findings were reported by Rajan and Zingales (1995), Wiwattanakantang (1999), Frank and Goyal (2003), Chen (2004), Gaud *et al.* (2005). However, we find a negative relationship of tangibility with short term leverage that brings forth the theory of substitution of long term for short term debt which support the studies of Booth *et al.* (2001) and Huang and Song (2004).

We find a positive relationship of non-debt tax shield with total leverage and long term leverage. The findings are on the expected line because the firms can benefit from the tax shield due to interest deductibility. However, we don't find any relationship between non-debt tax shield and short term leverage most probably because of no tax benefit on short term borrowing.

The study finds a positive relationship between uniqueness and leverage. The positive relation is most probably because most of the firms are in their early phase of life cycle with huge investments in selling and distribution to become more competitive. Hence it will take some time before it has substantial impact on leverage decision of manufacturing firms. Our result is in contrast with Chakraborty (2010) who report no significant relationship of uniqueness with leverage. This is probably because Chakraborty (2010) used investments in research & development as measures of uniqueness, whereas we use selling & distribution expenses as a proxy of uniqueness. Indian companies invest minuscule amount in research & development hence inferences drawn from these sporadic data points cannot be generalized.

While measuring the impact of signal on leverage we notice an unconventional positive relationship. This is most probably because to enhance economic activities in the country financial institutions are mandated to provide support to firms. Secondly, earnings in emerging economies are high because of huge potential that comes at the cost of high dispersion. Our results contradicts the findings of Bradley *et al.* (1984), Friend and Lang (1988), Walsh and Ryan (1997).

## 5. CONCLUSION

In this study, we examine the determinants of capital structure for an exhaustive sample of Indian manufacturing industry for the period 2000-01 to 2012-13. In the backdrop of *Make in India* push by Indian government the findings of the study contribute towards a better understanding of financing decisions to be undertaken by the Indian manufacturing firms. The study confirms the findings of previous studies that reveal that the determinants of capital structure largely remain the same for both developed and developing economies (Booth, 2001). We differ from earlier studies by using different measures for uniqueness and signal. R&D as a measure of uniqueness is not significant for our sample of manufacturing firms probably because of minuscule investments in research and development by Indian firms. Hence, we use selling and distribution as our measure of uniqueness while making capital structure decisions (significant at 1% level). The traditional measure of signal i.e. dividend payment is not significant for our sample hence; we use volatility of PBITD as a new measure of signal which has not been explored by previous capital structure studies in India (significant at 1% level).

The study finds that the choice of optimal capital structure can be influenced by factors such as profitability, size, growth, tangibility, non-debt tax shields, uniqueness and signal. We also find the existence of both pecking order theory and static trade-off theory in the case of Indian manufacturing firms. We conclude that decision on capital structure is complex and depends on several factors. Hence, firms need to give due consideration to these factors before deciding on their financing decision.

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