



A study on factors driving the capital structure decisions of small and medium enterprises (SMEs) in India

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Abstract The prime focus of the study is to empirically examine the factors affecting the capital structure decisions of small and medium enterprises (SMEs) in India. The sample consists of 174 non-financial firms. Generalised method of moments (GMM) has been applied to find out the firm specific factors affecting financing decisions of SMEs in India. The study specifically examines the effect of firm's profitability, tangibility, size, age, growth, liquidity, non-debt tax shield, cash flow ratio, and return on equity on the leverage of the firm. It confirms the applicability of the pecking order theory for SMEs in India.

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Introduction

Small and medium enterprises (SMEs) constitute a large proportion of economic activity and are among the major growth drivers for any economy in the world (Boocock & Shariff, 2005). The last decade has shown an exponential growth of SMEs in India and in the last five years these firms have grown at a stable rate of 4.5%¹ According to the economic survey of 2014, there are about 48 million SMEs and they constitute 90% of the Indian industrial ecosystem. The

contribution of SMEs² is highly significant in boosting the output of the country, generating employment, enhancing the income and savings, channelising investments and therefore, in leading the nation towards the path of progress and prosperity. Currently the SME sector contributes 17% to the Indian GDP and is likely to increase its contribution by 5% in the next three years i.e. to 22%, approximately. Moreover, the Indian economy is expected to grow at 8%³ per annum by 2020, and is slated to become the second largest economy in the world by 2050. But this target is difficult to achieve

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¹ The Indian SME Survey Analysing Indian SME Perceptions Around Union Budget 2014-15

² According to the MSME chamber of India -SMEs contribute 40% to industrial output and 45% to the export of India

³ Vision 2020: Implications for MSMEs 2011 (FICCI)

without the involvement of SMEs in the growth trajectory of the Indian economy.

The present scenario reveals that Indian SMEs operate in a highly exigent atmosphere. The SMEs are struggling on multiple fronts and among all these challenges, financing and credit are the major issues as reported by industry experts as well as researchers. The question of how to finance new investments or start-ups depends on the availability and accessibility of funds. Moreover, the role of finance has been cited as a major decisive aspect for the development of SMEs anywhere in the world (Cook, 2001). Adequacy and appropriateness of financial resources is one of the major challenges faced by the SMEs in India as well as in the world (Beck, 2007; Beck & Demirguc-Kunt, 2006; Petersen & Rajan, 2002; Ayyagari et al., 2008; Zaidi, 2013; Allen et al., 2012; Thampy, 2010; Dogra & Gupta, 2009; Seshasayee, 2006; Srinivas, 2005). Developed nations have many options to finance SMEs, and information diffusion is also very quick in these countries as compared to developing nations like India which are still in the nascent stage of SME financing. The paucity of research on financing of SMEs in India can be attributed to the unavailability of published and authenticated data. This is because SMEs are not obliged to publish their data publicly, and thus the information asymmetry hinders prospective research in this area. Hence, the present study has made an effort to identify the major forces that drive the financing decisions of our growth engines. It will help us in identifying the theoretical background behind the capital structure of SMEs. It will also test the theoretical underpinnings of the financing theories. Further, the study compares the empirical findings of manufacturing and service SMEs. It is imperative to distinguish between financing decisions of manufacturing and service SMEs because external financing of these firms is highly influenced by their asset composition (Myers, 1984). Therefore, manufacturing firms with tangible assets have a greater chance of obtaining external finance from creditors as compared to service SMEs with intangible assets. Cressy and Olofsson (1997) also confirm that service SMEs face higher credit constraints as compared to manufacturing SMEs. This may be due to the difficulty in the evaluation of intangible assets as compared to tangible assets, for lenders. It implies that the level of information asymmetry in the relationship of SMEs and lenders has different relative importance for manufacturing and service SMEs (Serrasqueiro, 2011). Hence, it is essential to examine the capital structure decisions of manufacturing and service SMEs independently. Moreover, the service sector has a special significance in the Indian economy and it also contributes significantly to the growth of the country.

Capital structure is the outcome of the financing decisions taken by firms. The determination of the capital structure of a firm has been a much debated issue in the literature on finance. Empirical studies on the identification of major factors responsible for the financing decisions of a firm reveal that assessment of the capital structure of a firm is inconclusive in nature (Hariss and Raviv, 1991). Furthermore, financing decisions of SMEs principally differ from those of the large firms due to the fact that large firms have easy access to financial resources as compared to small firms, due to information transparency and high credibility in the market (Bas et al., 2009). Moreover, the empirical research on the determinants of capital structure is dominated

by studies of large firms (Rajan and Zingales, 1995; Booth et al., 2001; Chakraborty, 2010; Honda & Sharma, 2014), and one cannot generalise the results obtained from previous studies conducted on large firms for SMEs. Further, larger firms are not solely governed by the decision of major shareholders whereas for SMEs, the owner's decision decides the financing. Furthermore, small firms rely heavily on short term debt as compared to large firms which visibly makes the financing of SMEs different from large firms (Allen et al. 2012). Hence, the present study fulfils the need to examine the factors governing the financing decisions of SMEs in India. This study also bridges the gap of the limited research on the determinants of capital structure of SMEs in India and thereby justifies the necessity of an extensive research study in this field.

The paper consists of six sections: the second section elaborates the theoretical and empirical literature of capital structure theories, while the third section describes the procedures of selecting data and the variables used in the study. The fourth section provides the description of research methodology employed in the study, and the fifth presents the empirical findings. The sixth section interprets the results and concludes the study.

Review of theoretical and empirical literature

The literature on the determinants of capital structure dates to the seminal paper of Modigliani and Miller (1958). The paper highlights the significance of the "irrelevancy theorem" and documents the fact that firm value remains unaffected with the change in the financing decisions of a firm. However, their conclusions were based on idealistic and unrealistic assumptions of perfect market which forced them to revise their conclusion in 1963. With the inclusion of taxes and interest deductibility factor, it was found that return on equity improved with the inclusion of debt financing. This finding opened the way for the emergence of new studies in the area of capital structure, following which several theories on the determination of capital structure have been put forward by taking realistic assumptions into consideration. The prime theories of capital structure are trade-off theory (TOT), pecking order theory (POT), agency cost theory (ACT), and market timing theory (MTT). The TOT put forward by Kraus and Litzberger (1973) documents the presence of optimal capital structure as there is always a trade-off between the cost and benefits associated with debt. Myer (1984) also pointed out that debt is suggested up to a certain point where cost of debt financing offsets the advantage of the interest tax shield. The TOT assumes a positive relationship of earnings with leverage. On the contrary, many empirical studies have supported an inverse relationship of leverage with profitability. This contradiction has also been supported by the survey conducted in the UK by Beattie et al. (2006), where respondents do not agree between the balancing nature of tax shield benefits and cost of financial distress. It gives support to another school of thought propounded by Myers (1984) known as the pecking order theory (POT) and it indicates towards financial hierarchy and thereby follows the law of least effort. It is based on information asymmetry and rules of adverse selection. The POT advocates the choice of internal financing, followed by debt financing and equity financing. Information asymmetry

in the market allows investors to charge a premium and in lieu of receiving high return, the investor prefers adverse selection which is a costly affair for a firm. Therefore, equity financing is the least preferred source of financing as per the POT. Another theory closely affecting the POT was put forward by [Jensen and Meckling \(1976\)](#) and is known as the agency cost theory. It is based on the conflicts between managers and shareholders, and shareholders and bond holders. It is referred to as the agency problem and gives rise to the issues of free cash flow, debt overhang and asset substitution. The problem of free cash flow can be resolved by introducing debt in the capital structure of the firm which ultimately pushes managers for the optimum utilisation of free cash available with the firm. Debt overhang and asset substitution relate with the fact that lenders charge high premium for an anticipated risky project and equity holders enjoy the extra benefits of a successful project, respectively. This theory also provides support in favour of the existence of a relationship between investing and financing decisions. The recent theory that has been developed in the field of capital structure is market timing theory. It was proposed by [Baker and Wurgler \(2002\)](#) and supports the effect of market timing in the issuance of equity and debt.

Based on theoretical predictions, many empirical studies have been conducted on the determinants of capital structure. These studies have been mainly performed on large firms in developed countries ([Titman & Wessels, 1988](#); [Harris and Raviv, 1991](#); [Rajan & Zingales, 1995](#); [Shyam-Sunder & Myers, 1999](#); [Graham and Harvey, 2001](#); [Bevan and Danbolt, 2002](#); [Bancel & Mittoo 2004](#)). Therefore, there is scope for the present study that aims to determine the factors affecting capital structure decisions of SMEs in India. An extensive review of literature has also brought out that the majority of the empirical studies on SMEs have been conducted in developed countries like the USA and UK ([Mac an Bhaire & Lucey, 2010](#); [Hall et al., 2004](#); [Lopez-Gracia & Sogorb-Mira, 2008](#); [Michaelas et al., 1999](#)). Most of the studies have been pointed towards the support of the POT ([Beck et al., 2008](#); [Daskalakis & Psillaki, 2008](#); [Degryse et al., 2012](#); [Hall et al., 2004](#); [Mateeva et al., 2013](#); [Serrasqueiro, 2011](#); [Watson & Wilson, 2002](#)), and therefore, it is relevant and interesting to see whether these theoretical underpinnings are applicable to Indian SMEs or not. A firm can finance its operation either through debt or through equity. But in the case of SMEs, equity is limited to the owner's capital and the major source of financing is debt.

Capital structure theories form the foundation of empirical research on the financing decisions of firms. Literature on empirical research on financing decisions of SMEs is relatively sparse as compared to the larger counterparts of SMEs. However, the last decade witnessed a growing interest by researchers in this particular field. Financing decisions of SMEs are noticeably different from that of large firms because small firms tend to focus more on short term debt finance, and the debt financing is largely governed by asset structure and growth of SMEs ([Odit and Gobardhun, 2011](#)). [Odit and Gobardhun \(2011\)](#) also studied the impact of firm specific variables on short and long term debt, and conclude that SMEs in Mauritius follow asset matching principle because these firms finance their fixed assets with long term debt and current assets with short term debt. It suggests the modified pecking order theory (MPOT) for SME financing.

However, the arguments of the POT are favourable for SMEs because SMEs generally face credit constraint in the market and are bound to use internal funds for their funding as compared to other financial resources ([Mateeva et al., 2013](#)). Small and medium enterprises use profit to lower the burden of debt ([Degryse et al., 2012](#)) and thereby prefer internal funds over external funds. [Forte et al. \(2013\)](#) also support the notion of the POT, and showed that profitability exhibits negative relationship with leverage for Brazilian SMEs. Contrary to the aforementioned studies, [Amo Yartey \(2011\)](#) supports the importance of external debt for Ghanaian SMEs. Short term debt is preferred over internal funds for financing the growth of firm. But the usage of short term debt also makes SMEs more susceptible to turbulent economic conditions. [Benkraiem and Gurau \(2011\)](#) also lay stress on the increased usage of short term debt by SMEs, and it is mainly the control averse attitude of SME owners which stops them from selecting other financial resources that could possibly dilute control or increase the risk of financial distress. Further, [Serrasqueiro and Nunes \(2012\)](#) interpret that POT and TOT are not mutually exclusive, and that in fact these theories must be studied independently in the context of SMEs so as to have a more elaborate understanding of the capital structure of SMEs throughout their survival. The study emphasised the age of the SMEs and put forward the essentiality of retained earnings over borrowings for young SMEs. Recent empirical literature on determinants of SMEs also focusses on industry effects. Studies such as [Abor \(2007\)](#), [Dergye et al. \(2010\)](#) and [Serrasqueiro \(2011\)](#) have documented the heterogeneity in leverage levels across industries. [Abor \(2007\)](#) has demonstrated that information and communication, and wholesale and retail industries of the service sector are more likely to use short term debt than manufacturing SMEs. It clearly marks the difference in the leverage decisions of manufacturing and service SMEs.

The present study attempts to find out the most important firm-specific factors that affect the financing of SMEs. With this, the study wishes to establish the importance of firm-specific factors and how their relationship with leverage affects the financing decisions of SMEs. The previously studied variables affecting the leverage of the firm are profitability, tangibility, size, age, growth, liquidity, return on equity, operating cash flow, and non debt tax shield. Moreover, the various capital structure theories discussed earlier, have also made their justifications in the context of these variables. The determinants of financing decisions are studied to ascertain the possible reasons behind the current capital structure of the firm. In other words, the analysis explores the important and significant firm specific factors responsible for the financing decisions of a firm.

Description of data and variables

The data for the variables has been taken from the electronic database PROWESS of Centre for Monitoring Indian Economy (CMIE) for the period 2006-2013. The sample has been chosen as per the Micro, Small and Medium Enterprises Development (MSMED) Act 2006, which states that manufacturing firms with an investment up to Rs. 100 million are considered as SMEs and an investment up to Rs. 50 million for service sector SMEs. The SMEs belonging to the financial

industry are excluded from the sample as financial statements of financial firms are different from non-financial firms, and the leverage of financial firms is firmly dominated by distinct investor schemes (Noulas & Genimakis, 2014). The firms chosen for the study must have investment in the plant and machinery as per the guidelines of the MSMED Act 2006 for the selected period, and they should have consistent financial data for the chosen period of eight (2006-2013) years. Accordingly, a number of firms have been discarded for which data was not available for the whole period. It may be noted that certain firms in the original sample were eliminated not because such firms failed to survive for eight full years, but because the requisite data was unavailable for any of the eight years, or if the firm's characteristics were inconsistent with the definition of an SME as enunciated in the MSMED Act of 2006. For instance, notwithstanding a firm's plant and machinery investments, or meeting the threshold criteria put forth in the MSMED Act in the initial years of the eight-year timeline, should such a firm undertake higher investments, it fails to qualify as an SME owing to an investment level that is above and beyond the threshold set by the MSME Act in the later years. Consequently, such firms that qualify as SMEs in certain years of the eight-year timeline as per the MSMED Act but have exhibited a larger investment appetite in certain years of the eight-year timeline that were above and beyond the threshold level set forth in the MSMED Act, have not been considered in our sample. This is because, the current study is anchored in SMEs in general and the determinants of SME financing (capital structure) decisions in particular. If the current study had included firms that qualified as SMEs in some but not all of the eight years in the timeline, then the generalisation of the study's findings to all firms that continue to qualify as SMEs and only as SMEs for the entire timeline considered (eight years) would be questionable. Hence, we have taken a conscious decision not to include such firms whose investment appetite over the eight-year timeline paved way for investments that surpass the threshold set by the MSMED Act in one or more years. Further, the usage of balanced panel data prohibits the consideration of any firm with even a single missing data in any of the chosen eight years. The above-stated action undertaken by the authors yielded a sample consisting of 174 non-financial firms, out of which 109 firms belong to the manufacturing industry and 65 firms to the service industry. A snapshot of the detailed sample selection procedure is presented in Table 1. Since the present study is based on secondary data, its availability and consistency have been a matter of concern to the researchers. This study has also faced limitations owing to lack of availability of data about SMEs on an ongoing basis due to non-reporting pattern of SMEs unlike large firms. Secondly, there are instances wherein firm-level data is available for the initial few years, but is not available for the subsequent years. Consistency of data is also an important factor in empirical research. While processing data, we have found data points wherein the value was larger than empirically plausible levels (e.g., firms having debt/assets ratio >1), and consequently we have not considered such data points with extreme values that are not empirically plausible. Due to

Table 1 Sample selection procedure.

| | |
|--|------------|
| Total number of firms after applying the limit of investment in plant ^a and machinery and equipment ^b (Rs 100 million) | 2734 |
| Less: Firms operating in financial industry | 504 |
| Remaining non-financial firms | 2230 |
| Less: Service firms having investment in equipment above Rs 50 million | 234 |
| Remaining non-financial firms | 1996 |
| Less: Firms which are not consistent with the definition of SMEs during the whole period of analysis^c | 1376 |
| Remaining firms | 620 |
| Less: Firms with incomplete data for the parameters under study | 446 |
| Total number of firms | 174 |

a For Manufacturing SMEs the investment should be made in plant and machinery and the limit is up to Rs 100 million as per MSME Act 2006.

b For Service SMEs the investment should be made in equipment and the limit is up to Rs 50 million as per MSME Act 2006. During the process of the initial selection of sample, service firms with investment of more than Rs 50 million in equipment were also included. Therefore, as per the definition of SMEs, it is necessary to exclude these firms from the final sample.

c There are many firms in the PROWESS database whose investment exceeds the limit of SME after a period or so, therefore these firms are also excluded from the analysis to maintain the specificity of the study.

these challenges, the final data is restricted to 174 sample firms with full information of all variables for eight years.

The dependent variable for the present study is "leverage" and it is defined in five different ways to test the robustness of the results. Leverage 1 (Lev1) is defined as total borrowings / total assets; Leverage 2 (Lev2) is measured by total liabilities /total equity + total liabilities. The other two measures of leverage are the sub-components of total debt used by the firms to finance their assets. Leverage 3 (Lev3) is calculated as long term debt / total assets, and Leverage 4 (Lev4) is defined as short term debt /total assets. Finally, Leverage 5 (Lev5) is measured by total debt/ total assets. The detailed definition of all the variables is presented in Table 2. Small and medium enterprises mainly utilise short term debt for financing, and employ personal assets for the funding of business (Allen et al., 2012). Therefore, it is essential to examine leverage through different components. The present study addresses this issue by examining the factors affecting different forms of leverage independently. It helps in developing a better understanding of the impact of predictor variables on criterion variables. The present study has chosen all the possible firm-specific factors that have been used in the literature related to determinants of capital structure of SMEs. The firm-specific variables, chosen on the basis of literature and theoretical underpinnings, are profitability (PROF), size, tangibility (TANG), growth (GR), non-debt tax shield (NDTS), age,

Table 2 Description of predictor and criterion variables.

| Nature of variables | Symbol of variables | Measures of variables | Definition of variables | Previous studies that have used these measures |
|---------------------|---------------------|---|---|--|
| Dependent | Lev1 | Total borrowing /Total assets | Bank borrowings, borrowings from financial institutions, borrowings from central and state government, borrowings syndicated across banks and institutions, debentures and bonds, foreign currency borrowings, loans from promoters, directors and shareholders, deferred credit, sub ordinate debt, other borrowings | Bhaduri (2002); Chakraborty (2010) |
| Dependent | Lev2 | Total liabilities/ Total equity + Total liabilities | Total capital, reserves and funds, deposits accepted by commercial banks, borrowings, current liabilities, provisions and deferred tax liability | Huang & Song (2006); Chakraborty (2010) |
| Dependent | Lev3 | Long term debt (LTD)/Total assets | LTD includes borrowings from banks (secured and unsecured), financial institutions, central and state government, borrowings through debentures and bonds, fixed deposits and hire purchase loan; Total assets include both fixed and current assets | Cassar & Holmes (2003); Mateeva et al. (2013) |
| Dependent | Lev4 | Short term debt (STD)/Total assets | STD includes borrowings from banks (secured and unsecured), inter-corporate loans, account payables and funds through commercial papers; Total assets include both fixed and current assets | Cassar & Holmes (2003); Mateeva et al. (2013) |
| Dependent | Lev5 | Total debt /Total assets | Includes both short term and long term debt components and total assets of a firm | Cassar & Holmes (2003); Mateeva et al. (2013) |
| Independent | LIQ | Current assets/ Current liabilities | Current assets include debtors, inventories, cash, all other marketable securities; Current liabilities includes creditors, short term bank loan and other debt for a period of less than 1 year | Kaur & Rao (2009); Mossa et al. (2011) |
| Independent | NDTS | Depreciation/Total assets | Taken from PROWESS database per se | Huang & Song (2006); Chakraborty (2010) |
| Independent | PROF | PBDITA/Total assets | Taken from PROWESS database per se | Chakraborty (2010); Bhaduri (2002) |
| Independent | ROE | Profit margin*Asset turnover* Equity multiplier | Taken from PROWESS database per se | Madan (2007) |
| Independent | SIZE | Log of sales | Taken from PROWESS database per se | Chakraborty (2010); Daskalkis & Psillaki (2008) |
| Independent | TANG | Fixed assets/Total assets | Taken from PROWESS database per se | Huang & Song (2006); Mateeva et al. (2013) |
| Independent | AGE | From the year of incorporation | Log of the years | Bhaird & Lucey (2010) |
| Independent | CF | Profit after tax + Depreciation/Total Assets | Taken from PROWESS database per se | Mateeva et al. (2013) |
| Independent | GR | % change in sales on YOY basis | Value of sales is taken from PROWESS database per se | Chakraborty (2010); Nguyen & Ramachandran (2007) |

liquidity (LIQ), cash flow (CF) and return on equity (ROE). In this study, leverage has been used as a proxy for financing, and the independent variables are firm specific factors that are supposed to influence the leverage on the basis of arguments provided by capital structure theories and the results are further validated by previous empirical studies. Therefore, the study has been developed on the grounds of capital structure theories and assumptions are tested to identify the prime firm-specific factors influencing the capital

structure decisions. The detailed description of various predictor variables used in the study and the hypothesis related with each variable follow:

Liquidity is measured as ratio of current assets over current liabilities. Small and medium enterprises have higher proportion of current liabilities in their capital structure as compared to large firms (Mateeva et al., 2013). Further, SMEs which maintain short term liquidity are supposed to be positively related with growth. Therefore, due to high

growth levels, firms maintain higher liquidity levels and face fewer financing constraints. Liquidity is supposed to be negatively associated with leverage (Moosa et al., 2011). So, the hypothesis is:

H1. Liquidity is negatively related to leverage.

Non debt tax shield (NDTS) is measured as a ratio of depreciation to total assets. It involves tax deductions for depreciation and investment tax credits (Chakraborty, 2010). It is assumed to be negatively associated with leverage because it is supposed to be a substitute for the tax shield obtained by the firm from debt financing. Therefore, the next hypothesis of the study is:

H2. NDTS is inversely related to leverage.

Profitability is one of the most common independent variables used in empirical studies. It is defined as profit before depreciation interest tax and amortisation/total assets (PBDITA). It is assumed to be negatively related to leverage. This in fact is true in case of small firms as these firms have less access to external funds and rely more on internally generated funds. Cressy and Olofsson (1997) suggested that SMEs show evidence of control aversion. This is demonstrated by a preference to sell the firm rather than relinquish equity (Bayraktaroglu et al., 2013). Further, owners prefer internal resources to finance further investment; otherwise they would be likely to go for debt financing. This clearly indicates the evidence in the support of the POT. The previous studies of SMEs also predict the negative relationship between leverage and profitability (Michaelas et al., 1999; Cassar and Holmes, 2003; Sogorb-Mira, 2005). It leads to the formation of another important hypothesis of the present empirical study:

H3. Profitability is negatively associated with leverage.

Return on equity (ROE) is calculated by Dupont analysis (profit margin*asset turnover*leverage). Although ROE is little studied in case of SMEs, the impact of ROE is certain to have an influence over the financial structure of the firm. The majority of SMEs are governed only by owners and hence it can be said that high leverage might have a major impact on the overall return. This forms the basis of our next hypothesis:

H4. ROE is negatively related to leverage.

Firm size is another important variable used to explain the capital structure of the firms. It is assumed to be positively associated with leverage and calculated as a log of annual sales. Larger firms have more access to external funds, and the cost of acquiring external financial resources is less for larger firms as compared to small firms. Both TOT and POT assume direct relationship between size and leverage which is also supported by the empirical literature (Michaelas et al., 1999; Cassar and Holmes, 2003; Hall et al., 2004; Sogorb-Mira, 2005). The next hypothesis of the study is:

H5. Size is positively related to leverage.

Tangibility is defined as the proportion of fixed assets to total assets of the firm. It is an important factor in determining the external financing of the firm because generally banks and financial institutions demand collateral in lieu of loans obtained from them by the firms. Therefore, it is also

supposed to be positively related to leverage. Moreover, SMEs suffer from the problem of information asymmetry and often do not have audited financial statements which makes collateralised lending even more imperative for them. Michaelas et al. (1999), Hall et al. (2004) and Sogorb-Mira (2005) find a positive effect of tangible assets on leverage for SMEs. Therefore, the next hypothesis regarding asset structure is:

H6. Tangibility is positively related to leverage.

Age of the firm is a standard measure of firm's reputation in the market (Diamond, 1989). It is measured as a log of number of years from the year of incorporation of a firm. Older firms have higher capacity to attract loans as compared to new firms because these firms have established themselves as a continuing business and have high credit-worthiness (Abor, 2007), whereas young firms mainly rely on their own funds and retained earnings, as these firms refrain from external finance due to low credibility in the market Serrasqueiro and Nunes, (2012), Hall et al. (2004) and Abor (2007) have also reported positive relationship of age with debt. Based on this reasoning, the following hypothesis has been formulated:

H7. Age is positively related to leverage.

Cash flow is calculated as profit after tax plus depreciation divided by total assets. Free cash flows often allow managers to invest sub-optimally (Jensen & Meckling, 1976) which leads to agency conflicts between owners and managers, and therefore to reduce these types of conflicts and to put pressure on managers, debt is employed in the capital structure of the firm. However, this is true for large firms only because small firms are generally governed by owners and the possibility of agency conflicts is very rare. Therefore, excessive cash flows generally reduce the problem of financing in SMEs (Mateeva et al., 2013). This forms the basis of our next hypothesis:

H8. Cash flows are negatively related to leverage.

Growth is another significant determinant of the capital structure. It is calculated as the percentage change in sales on a year on year basis. The relationship of growth with leverage is not clearly defined by any of the capital structure theories. It can have a positive as well as a negative relation with leverage. Small and medium enterprises are often over-zealous in their growth aspirations with obvious moral hazard consequences (Myers, 1977). Thus, growth may have uncertain effects on firms' financing. On the one hand, growth causes variations in the value of a firm, and larger deviations in the value of the firm are often associated with greater risk. As a result, these firms will be expected to employ less debt in their financial structure. Myers (1977) argues that firms with high growth potential will tend to have lower leverage. On the other hand, growth will push firms into seeking external financing because firms with high growth opportunities are more likely to exhaust internal funds and require additional capital. From this point of view, growth is expected to have a positive relationship with leverage (Michaelas et al., 1999, Derygese et al., 2010, Forte et al., 2013). This leads to the formation of last hypothesis of the study:

Table 4 Descriptive statistics for service SMEs.

| | Lev1 | Lev2 | Lev3 | Lev4 | Lev5 | LIQ | NDTS | PROF | ROE | Size | TANG | Age | CF | GR |
|--------------|-------|-------|-------|-------|-------|--------|-------|--------|--------|-------|-------|-------|--------|--------|
| Mean | 0.332 | 0.688 | 0.173 | 0.312 | 0.486 | 4.623 | 0.039 | 0.124 | 0.021 | 6.089 | 0.370 | 2.979 | 0.050 | 0.211 |
| Median | 0.300 | 0.697 | 0.115 | 0.231 | 0.430 | 2.419 | 0.027 | 0.116 | 0.047 | 5.955 | 0.324 | 2.944 | 0.055 | 0.127 |
| Maximum | 2.736 | 0.988 | 1.316 | 3.951 | 4.143 | 78.667 | 0.311 | 0.764 | 3.52 | 9.891 | 1.051 | 4.564 | 0.500 | 10.701 |
| Minimum | 0.005 | 0.089 | 0.000 | 0.001 | 0.062 | 0.030 | 0.000 | -0.631 | -2.824 | 1.163 | 0.002 | 1.609 | -0.562 | -0.989 |
| Std. dev. | 0.255 | 0.139 | 0.176 | 0.410 | 0.426 | 7.779 | 0.044 | 0.117 | 0.411 | 1.523 | 0.263 | 0.543 | 0.104 | 0.785 |
| Observations | 520 | 520 | 520 | 520 | 520 | 520 | 520 | 520 | 520 | 520 | 520 | 520 | 520 | 520 |

Leverage 1 (Lev1) is total borrowings by total assets; Leverage 2 (Lev2) is total liabilities/total equity +total liabilities; Leverage 3 (Lev3) is long term debt by total assets; Leverage 4 (Lev4) is short term debt /total assets and Leverage 5 (Lev5) is total debt/total assets. Liquidity (LIQ) is current assets by current liabilities; non-debt tax shield (NDTS) is depreciation divided by total assets; profitability (PROF) is profit before depreciation, interest and tax by total assets; return on equity (ROE) is profit margin multiply by asset turnover multiply by leverage; size is log of total assets; tangibility (TANG) is fixed asset / total assets; age is log of number of years from the year of incorporation; cash flow (CF) is profit after tax +depreciation / total assets; growth (GR) percentage change in sales

also. Moving towards the descriptive statistics of independent variables it is found that mean and median liquidity ratio for the manufacturing SMEs is 2.29 and 2.11 respectively, whereas the firms have very low profitability and return on equity (mean PROF=10%; mean ROE=-60%). It has been found that mean growth rate is 16% for manufacturing SMEs and mean ratio for tangibility is 32% which indicates the proportion of fixed assets to total assets of the firm. The NDTS ratio is 3% and mean cash-flow ratio is -2.6%. Service SMEs also have low profitability and ROE but the mean ratios are higher than for manufacturing SMEs. Furthermore, the cash-flow and growth of service SMEs are also higher than in manufacturing SMEs (cash-flow-5% and growth - 21%). Mean ratio of NDTS is 4% for service SMEs in India.

Tables 5 and 6 present the correlation analysis of criterion and predictor variables for manufacturing and service SMEs in India. The dependent variables Lev 1, 3, 4, and 5 are related to each other, and Lev2 is not correlated with the other alternative measures of leverage. The correlation coefficients between various independent and dependent variables lie in the range of 0.844 to -0.281. The main concern with the multivariate analysis is the problem of multi-co-linearity. It is seen from Table 5 that there is high correlation between CF and ROE (0.844); CF and PROF (.513); TANG and NDTS (0.639); ROE and PROF (0.450). To resolve the issue of multi-co-linearity the test for variance inflation factor (VIF) is conducted. It reveals that value corresponding to each explanatory variable is less than 10; therefore, the

Table 5 Correlation analysis of manufacturing SMEs.

| | Lev1 | Lev2 | Lev3 | Lev4 | Lev5 | LIQ | NDTS | PROF | ROE | Size | TANG | Age | CF | GR | VIF |
|------|--------|--------|--------|--------|--------|--------|--------|-------|-------|--------|--------|--------|-------|-------|-------|
| Lev1 | 1.000 | | | | | | | | | | | | | | |
| Lev2 | -0.011 | 1.000 | | | | | | | | | | | | | |
| Lev3 | 0.811 | -0.042 | 1.000 | | | | | | | | | | | | |
| Lev4 | 0.797 | 0.061 | 0.364 | 1.000 | | | | | | | | | | | |
| Lev5 | 0.966 | 0.021 | 0.759 | 0.883 | 1.000 | | | | | | | | | | |
| LIQ | -0.255 | -0.128 | -0.233 | -0.219 | -0.271 | 1.000 | | | | | | | | | 1.164 |
| NDTS | -0.021 | -0.308 | 0.039 | -0.084 | -0.039 | -0.008 | 1.000 | | | | | | | | 1.790 |
| PROF | -0.297 | -0.145 | -0.330 | -0.183 | -0.294 | 0.113 | 0.145 | 1.000 | | | | | | | 1.377 |
| ROE | -0.631 | -0.228 | -0.660 | -0.346 | -0.575 | 0.174 | 0.107 | 0.450 | 1.000 | | | | | | 3.684 |
| Size | -0.352 | 0.148 | -0.394 | 0.160 | -0.311 | 0.233 | -0.129 | 0.178 | 0.282 | 1.000 | | | | | 1.386 |
| TANG | -0.068 | -0.153 | 0.004 | -0.147 | -0.100 | -0.089 | 0.639 | 0.122 | 0.151 | -0.281 | 1.000 | | | | 1.951 |
| Age | -0.049 | 0.085 | -0.106 | 0.038 | -0.027 | -0.147 | -0.100 | 0.090 | 0.226 | 0.053 | 0.043 | 1.000 | | | 1.147 |
| CF | -0.814 | -0.101 | -0.776 | -0.517 | -0.753 | 0.273 | 0.122 | 0.513 | 0.844 | 0.365 | 0.143 | 0.129 | 1.000 | | 4.242 |
| GR | -0.031 | 0.020 | -0.032 | -0.038 | -0.043 | -0.004 | -0.092 | 0.069 | 0.045 | 0.168 | -0.042 | -0.038 | 0.076 | 1.000 | 1.051 |

Leverage 1 (Lev1) is total borrowings by total assets; Leverage 2 (Lev2) is total liabilities/total equity +total liabilities; Leverage 3 (Lev3) is long term debt by total assets; Leverage 4 (Lev4) is short term debt /total assets and Leverage 5 (Lev5) is total debt/total assets. Liquidity (LIQ) is current assets by current liabilities; non-debt tax shield (NDTS) is depreciation divided by total assets; profitability (PROF) is profit before depreciation, interest and tax by total assets; return on equity (ROE) is profit margin multiply by asset turnover multiply by leverage; size is log of total assets; tangibility (TANG) is fixed asset divided by total assets; age is log of number of years from the year of incorporation; cash flow (CF) is profit after tax +depreciation / total assets; growth (GR) percentage change in sales

Table 8 Panel unit root test of the variables - at level (service SMEs).

| Tests | LEV1 | LEV2 | LEV3 | LEV4 | LEV5 | PROF | TANG | SIZE | AGE | LIQ | CF | ROE | NDTS | GR |
|--|--------|---------|---------|---------|---------|---------|---------|---------|----------|----------|---------|---------|---------|---------|
| LLC (with individual intercept) | | | | | | | | | | | | | | |
| Statistics | -4.051 | -9.712 | -9.468 | -26.395 | -16.402 | -16.211 | -18.608 | -12.448 | -39.904 | -111.479 | -7.676 | -7.794 | -28.187 | -21.800 |
| p value | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| IPS (with individual intercept) | | | | | | | | | | | | | | |
| Statistics | -0.961 | -1.454 | -2.454 | -4.420 | -1.676 | -5.133 | -5.340 | -1.195 | -180.104 | -16.643 | -1.980 | -1.271 | -5.533 | -8.323 |
| p value | 0.168 | 0.07 | 0.000 | 0.000 | 0.05 | 0.000 | 0.000 | 0.11 | 0.000 | 0.000 | 0.02 | 0.10 | 0.000 | 0.000 |
| Fisher ADF (with individual intercept) | | | | | | | | | | | | | | |
| Statistics | 166.71 | 174.494 | 200.921 | 200.759 | 185.167 | 255.571 | 263.563 | 167.059 | 1082.43 | 275.431 | 207.364 | 180.559 | 221.159 | 306.335 |
| p value | 0.02 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.01 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Fisher PP (with individual intercept) | | | | | | | | | | | | | | |
| Statistics | 162.15 | 238.971 | 190.89 | 230.448 | 188.855 | 256.286 | 314.143 | 201.323 | 1068.92 | 273.434 | 242.909 | 211.501 | 233.052 | 318.771 |
| p value | 0.03 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

measures of leverage for manufacturing and service SMEs in India. The problem of endogeneity in panel data is addressed by Sargan test. It is a test of over identifying the restrictions. Null hypothesis of Sargan test assumes the over identification of restrictions, and accepting the null hypothesis implies that

assumption is valid and there is no need to reconsider the model or the instruments used in the model. Moreover, the test statistics of first and second order serial correlation disclose the fact that models are not mis-specified as they report the absence of any significant unobserved firm-specific factor.

$$\text{Model 1} - \text{Lev}_1 = \alpha_0 + f(\text{Lev}_{it-1}, \text{Liq}_{it}, \text{Ndt}_{it}, \text{Prof}_{it}, \text{ROE}_{it}, \text{Size}_{it}, \text{Tang}_{it}, \text{Age}_{it}, \text{CF}_{it}, \text{GR}_{it}) + n_i + n_t + \varepsilon_{it} \quad (2)$$

$$\text{Model 2} - \text{Lev}_2 = \alpha_0 + f(\text{Lev}_{it-1}, \text{Liq}_{it}, \text{Ndt}_{it}, \text{Prof}_{it}, \text{ROE}_{it}, \text{Size}_{it}, \text{Tang}_{it}, \text{Age}_{it}, \text{CF}_{it}, \text{GR}_{it}) + n_i + n_t + \varepsilon_{it} \quad (3)$$

$$\text{Model 3} - \text{Lev}_3 = \alpha_0 + f(\text{Lev}_{it-1}, \text{Liq}_{it}, \text{Ndt}_{it}, \text{Prof}_{it}, \text{ROE}_{it}, \text{Size}_{it}, \text{Tang}_{it}, \text{Age}_{it}, \text{CF}_{it}, \text{GR}_{it}) + n_i + n_t + \varepsilon_{it} \quad (4)$$

$$\text{Model 4} - \text{Lev}_4 = \alpha_0 + f(\text{Lev}_{it-1}, \text{Liq}_{it}, \text{Ndt}_{it}, \text{Prof}_{it}, \text{ROE}_{it}, \text{Size}_{it}, \text{Tang}_{it}, \text{Age}_{it}, \text{CF}_{it}, \text{GR}_{it}) + n_i + n_t + \varepsilon_{it} \quad (5)$$

$$\text{Model 5} - \text{Lev}_5 = \alpha_0 + f(\text{Lev}_{it-1}, \text{Liq}_{it}, \text{Ndt}_{it}, \text{Prof}_{it}, \text{ROE}_{it}, \text{Size}_{it}, \text{Tang}_{it}, \text{Age}_{it}, \text{CF}_{it}, \text{GR}_{it}) + n_i + n_t + \varepsilon_{it} \quad (6)$$

Table 9 Two step GMM estimation of the models for manufacturing SMEs in India.

| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
|----------------------------|---------|---------|---------|---------|---------|
| Predictor variables | | | | | |
| LEV1(-1) | 0.500 | 0.000* | | | |
| LEV2(-1) | | 0.136 | 0.03** | | |
| LEV3(-1) | | | 0.168 | 0.000* | |
| LEV4(-1) | | | | 0.579 | 0.000* |
| LEV5(-1) | | | | | 0.362 |
| LIQ | 0.262 | 0.08*** | -0.036 | 0.02** | -0.174 |
| NDTS | -45.263 | 0.006* | -7.723 | 0.002* | 10.755 |
| PROF | -0.980 | 0.000* | 0.138 | 0.133 | -0.466 |
| ROE | 0.410 | 0.000* | -0.003 | 0.876 | 0.173 |
| Size | -1.33 | 0.000* | 0.089 | 0.05** | -0.785 |
| TANG | 16.022 | 0.000* | 0.465 | 0.010** | 1.205 |
| Age | 8.252 | 0.000* | -0.128 | 0.223 | 1.748 |
| CF | -3.229 | 0.000* | 0.020 | 0.844 | -2.007 |
| GR | 1.454 | 0.000* | -0.05 | 0.001* | 0.581 |
| J Statistics | 16.642 | 0.479 | 13.137 | 0.727 | 11.664 |
| AR 1 | -1.559 | 0.119 | -1.425 | 0.154 | -0.838 |
| AR2 | -1.077 | 0.282 | 0.453 | 0.651 | -0.950 |

(First column of each model indicates B coefficients and second column represents the corresponding p value (*, **, *** indicates significance at 99%, 95% and 90% confidence level)

Table 10 Two step GMM estimation of the models for service SMEs.

| | Model 1 | | Model 2 | | Model 3 | | Model 4 | | Model 5 | |
|----------------------------|---------|---------|---------|---------|---------|---------|---------|--------|---------|--------|
| Predictor variables | | | | | | | | | | |
| LEV1(-1) | 0.186 | 0.001* | | | | | | | | |
| LEV2(-1) | | | -0.195 | 0.002* | | | | | | |
| LEV3(-1) | | | | | 0.056 | 0.416 | | | | |
| LEV4(-1) | | | | | | | 0.053 | 0.531 | | |
| LEV5(-1) | | | | | | | | | 0.119 | 0.002* |
| LIQ | 0.006 | 0.302 | -0.003 | 0.190 | -0.008 | 0.198 | -0.010 | 0.182 | 0.009 | 0.307 |
| NDTS | -4.562 | 0.013** | -0.167 | 0.854 | 2.251 | 0.276 | -7.707 | 0.004* | -7.834 | 0.001* |
| PROF | 0.137 | 0.598 | 0.063 | 0.540 | 0.848 | 0.014** | 0.113 | 0.796 | -0.135 | 0.718 |
| ROE | -0.096 | 0.328 | -0.002 | 0.936 | 0.192 | 0.037** | -0.038 | 0.133 | -0.013 | 0.630 |
| Size | -0.035 | 0.680 | 0.069 | 0.000* | 0.120 | 0.002* | 0.040 | 0.650 | -0.024 | 0.820 |
| TANG | 0.292 | 0.343 | -0.157 | 0.102 | -0.654 | 0.040** | 0.707 | 0.139 | -0.512 | 0.278 |
| Age | -0.492 | 0.000* | -0.115 | 0.032** | -0.648 | 0.000* | -0.269 | 0.126 | -0.528 | 0.003* |
| CF | 0.032 | 0.916 | -0.048 | 0.670 | 1.310 | 0.027** | -1.368 | 0.000* | -1.398 | 0.000* |
| GR | 0.019 | 0.637 | -0.019 | 0.044** | -0.050 | 0.162 | 0.030 | 0.600 | -0.034 | 0.632 |
| J Statistics | 19.624 | 0.294 | 19.233 | 0.315 | 22.685 | 0.160 | 12.041 | 0.798 | 12.273 | 0.783 |
| AR 1 | NA | NA | -1.296 | 0.195 | -1.411 | 0.158 | -2.908 | 0.004* | -0.772 | 0.440 |
| AR2 | -0.227 | 0.821 | -1.201 | 0.230 | -0.888 | 0.375 | -0.051 | 0.695 | -0.702 | 0.483 |

First column of each model indicates B coefficients and second column represents the corresponding p value (*, ** indicates significance at 99% & 95% confidence level)

Moving towards the interpretation of coefficient of predictor variables (Table 9) it is found that for manufacturing SMEs, lagged leverage ratio lies between 0.14 and 0.58 and it is significant at 1% level for all the five models. It visibly shows the importance of previous leverage in determining present capital structure of the firm. Furthermore, it also speaks about the adjustment coefficients (1- Lev_{it-1}) towards the target leverage ratio (Ozkan, 2001). As indicated by the results the magnitude of adjustment is moderate or relatively towards higher side, therefore SMEs adjust towards their target ratio and it is possibly due to the fact that cost of adjustment is relatively lower for SMEs as compared to the cost of remaining off target (Ozkan, 2001).

Liquidity is not significant in case of Lev1, 4 and 5, but statistically negatively significant for the other two measures of leverage. Manufacturing firms with high leverage have low liquidity. NDTS is negatively related with Lev 1, 2, 4 & 5 while it is positively related with Lev3 at 1% signifi-

cance level. Profitability is found to be negatively associated with Lev 1, 3, 4 and 5 at 1% significance level. For Lev2 PROF is not significant whereas ROE is statistically positively related with Lev 1, 3, 4 and 5 at 1% significance level and for Lev2 ROE is not significantly related to firm's capital structure. In case of size, the negative association has been established for Lev 1, 3, 4 and 5, while for Lev 2 size exhibits positive relationship. TANG has shown positive relationship with all the measures of leverage. The study also reports positive association of age with Lev 1, 3, 4 and 5. Lev 1, 3, 4 and 5 are statistically negatively related with the cash flow while Lev2 is positively associated with the cash flow. Growth exhibits positive relationship with different measures of leverage at 1% significant level but negatively significant for Lev2.

From the foregoing discussion, it has been shown that four models out of five exhibit similar relationship among dependent and independent variables, thereby establishing the robustness of the findings of the study.

$$\text{Model 1} - Lev_1 = \alpha_0 + f(Lev_{it-1}, Liq_{it}, Ndts_{it}, Prof_{it}, ROE_{it}, Size_{it}, Tang_{it}, Age_{it}, CF_{it}, GR_{it}) + n_i + n_t + \varepsilon_{it} \quad (7)$$

$$\text{Model 2} - Lev_2 = \alpha_0 + f(Lev_{it-1}, Liq_{it}, Ndts_{it}, Prof_{it}, ROE_{it}, Size_{it}, Tang_{it}, Age_{it}, CF_{it}, GR_{it}) + n_i + n_t + \varepsilon_{it} \quad (8)$$

$$\text{Model 3} - Lev_3 = \alpha_0 + f(Lev_{it-1}, Liq_{it}, Ndts_{it}, Prof_{it}, ROE_{it}, Size_{it}, Tang_{it}, Age_{it}, CF_{it}, GR_{it}) + n_i + n_t + \varepsilon_{it} \quad (9)$$

$$\text{Model 4} - Lev_4 = \alpha_0 + f(Lev_{it-1}, Liq_{it}, Ndts_{it}, Prof_{it}, ROE_{it}, Size_{it}, Tang_{it}, Age_{it}, CF_{it}, GR_{it}) + n_i + n_t + \varepsilon_{it} \quad (10)$$

$$\text{Model 5} - Lev_5 = \alpha_0 + f(Lev_{it-1}, Liq_{it}, Ndts_{it}, Prof_{it}, ROE_{it}, Size_{it}, Tang_{it}, Age_{it}, CF_{it}, GR_{it}) + n_i + n_t + \varepsilon_{it} \quad (11)$$

Table 11 Summary of relationship - empirical evidences v/s theoretic predictions.

| Predictor variables | Model 1 | | Model 2 | | Model 3 | | Model 4 | | Model 5 | | POT | TOT |
|---------------------|---------|----|---------|----|---------|----|---------|----|---------|----|-----|-----|
| | MF | SF | MF | SF | MF | SF | MF | SF | MF | SF | AF | AF |
| LEV1(-1) | + | + | | | | | | | | | | + |
| LEV2(-1) | | | + | - | | | | | | | | + |
| LEV3(-1) | | | | | + | NS | | | | | | + |
| LEV4(-1) | | | | | | | + | NS | | | | + |
| LEV5(-1) | | | | | | | | | + | + | | + |
| LIQ | + | NS | - | NS | - | NS | NS | NS | NS | NS | - | - |
| NDTS | - | - | - | NS | + | NS | NS | - | NS | - | - | - |
| PROF | - | NS | NS | NS | - | + | - | NS | - | NS | - | + |
| ROE | + | NS | NS | NS | + | + | + | NS | + | NS | - | + |
| Size | - | NS | + | + | - | + | - | NS | - | NS | + | + |
| TANG | + | NS | + | NS | NS | - | + | NS | + | NS | + | + |
| Age | + | - | NS | - | + | - | + | NS | + | - | - | + |
| CF | - | NS | NS | NS | - | - | - | - | - | - | - | + |
| GR | + | NS | - | - | + | NS | + | NS | + | NS | + | - |

MF=manufacturing firms, SF=service Firms, AF= all firms, NS=non-significant.

Table 10 represents the explanatory variables affecting the capital structure of service SMEs. In case of Model 1 lagged leverage, NDTs and age are statistically significant while other variables have not shown a statistically significant relationship. Lagged leverage displays positive relationship which is consistent with manufacturing SMEs, while NDTs and age are negatively related with each other. In Model 2, lagged leverage, age and growth are negatively associated with the criterion variable; whereas size exhibits positive relationship. In Model 3, relationships between dependent and independent variables have different relationships as compared to manufacturing firms. PROF, ROE and size are positively related with long term debt for service SMEs while TANG, age and cash flow are negatively related with long term debt. In Model 4, only NDTs and cash flow are statistically negatively significant at 1% significance level while all other variables have shown insignificant relationship with the criterion variable. Model 5 shows that lagged leverage is positively related with leverage, and NDTs, age and cash flow have shown statistically significant negative relationship at 99% confidence level. Table 11 summarises the relationship between dependent and explanatory variables for all the models applied to manufacturing and service SMEs in India.

Discussion and conclusion

The study deals with the determinants of capital structure of Indian SMEs. It has made an attempt to touch all the relevant aspects related to the capital structure of SMEs. The financing of SMEs in India has been not studied in detail. The various reports and studies on SMEs in India showcase the problem of financing but these have not discussed the related factors or how they can be resolved. This study reveals the major forces driving the financing decisions of SMEs, and thereby it can assist managers/owners to focus on these factors while making a decision about the capital structure of the firm. In fact, it is a two way process, on the one hand it examines the factors affecting the financing of

SMEs and on the other, it can help in developing an understanding related to future planning of the financial structure of the firm. For the robustness of results, the study has chosen five different measures of the leverage. Lev1 deals with the borrowings of the firm and in case of manufacturing SMEs, profitability is negatively associated with the leverage, hence supporting the possibility that Indian SMEs follow a financial hierarchy in their financing decisions. It also brings out the fact that cost of access to funds is higher for SMEs in India and this might be the reason for SME owners preferring internal funds over external funds. Moreover, positive association of return on equity with debt clarifies the point that cost of debt financing is relatively cheaper and thereby increases the ROE of a firm. It is known that NDTs reduces the firm's operating income and as a result it reduces the firm's ability to utilise future interest deductions, and a negative relationship determined through empirical analysis attests the discussion. Asset structure is significant in borrowing as it indicates the proportion of tangible fixed assets that can be utilised for collateralised lending. In India, SMEs are mainly dependent on bank finance for their long term debt and thus require collateral for the same. Empirical analysis also reveals that mature SMEs have high creditworthiness in the market and thus have a good reputation which helps them obtain loans for their operations, and moreover, age factor helps in resolving the information asymmetry to an extent with the creditors and thus has a positive relationship with leverage. Size of the firm is negatively related to debt and it indicates the fact that larger firms have stable earnings, and thus these firms consider debt financing as a less lucrative option. Moreover, it also supports the pecking order theory. Inclusion of debt in the financing reduces agency conflicts, though these are fewer in SMEs as compared to large firms. Growing firms have various opportunities and for investment, these firms require finance. So, investment options force firms to have more debt.

For service sector SMEs, the equation determining the factors driving financing decisions varies as compared to

manufacturing SMEs. For manufacturing SMEs, profitability is the main variable, whereas profitability has no statistical significance for service SMEs. Similarly, lagged leverage is statistically significant for service SMEs only for models 1, 2 and 5. It implies that services firms do not pay much attention to previous leverage and hence it does not influence their financing decision. Size also exhibits a contrasting relationship as compared to manufacturing SMEs. It is positively related to Lev2 and Lev3 highlighting the fact that larger service SMEs have more stable earnings and can easily seek external funds. It further points towards the trade-off theory of capital structure. Tangibility is found to be negatively related to leverage, as compared to the positive relationship in manufacturing SMEs. The plausible explanation for this could be that SMEs operating in the service industry do not have many tangible assets as compared to manufacturing SMEs, and as far as short term debt is concerned, there is no requirement of collateral for short term loans (Kumar & Rao, 2015). Growth also shows a contrasting relationship in service SMEs. Moving towards the other variables like cash flow, ROE and NDTs, these factors exhibit an almost similar relationship with leverage in service SMEs as in manufacturing SMEs.

It is evident from the foregoing analysis that the factors driving the capital structure decisions exhibit varied relationships. As the nature of debt changes, the association also changes accordingly; but for some factors, association remains the same through all models. It is a clear indication of the presence of both the robust and fragile nature of capital structure determinants of SMEs in India. As a result of this, application of a particular theory is not pertinent for SMEs. Moreover, results are more biased towards POT, but the presence of TOT cannot be neglected either. Applicability of POT to SMEs is also confirmed by Allen et al. (2012). Industry effects are noticeably visible from the analysis. The prime implication of the study is to understand the role of firm-specific factors in financing decisions, and the study also helps in describing the position of SMEs in terms of their leverage. The study also analyses leverage in different forms, thereby establishing the importance of short term debt for SMEs as compared to other forms of finance. Further, the study also provides an insight into the factors affecting the financing decisions of manufacturing and service SMEs independently. In this way, the study adds to the knowledge of new as well as established SMEs in India. Therefore, this research will help new firms in understanding the impact of short term lending in the financing decisions of SMEs. The scope of the research is limited to small businesses only, and due to the relatively smaller sample size, it is suggested that generalisations be drawn cautiously. Moreover, the study is completely governed by secondary data and hence it limits the scope of analysis only to those firms whose complete data is available on PROWESS. The exclusivity and specificity of the study lies in the fact that it is among the very few studies on the capital structure of SMEs in India. Moreover, the application of dynamic panel data techniques in the analysis of determinants of capital structure of SMEs is also a unique feature of the study. Future research can be based along the lines of the influence of managers' / owners' characteristics on financial structure of the SMEs in India. Future research would also call for the study of factors that motivate or compel SME owners to choose a particular form of financing. More research is necessary to find new

avenues of financing for SMEs, thereby building a conducive financial atmosphere for one of the important and fundamental pillars of the Indian economy.

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