

Capital Structure And Profitability Of Foreign Direct Investment Companies In The Indian Manufacturing Sector

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Abstract: This study investigates the relationship between Capital Structure and Profitability of Foreign Direct Investment Companies in the Indian Manufacturing Sector India by employing firm level data (a sample of 54 Foreign Direct Investment companies from S&P BSE 500 Index) for a study period of 9 years from 2010 to 2018. Multiple Regression model has been employed for studying the impact of Capital Structure on Profitability. Three profitability measures are employed as indicators of profitability- ROA, ROE and ROTI. Four debt measures are employed to study the impact of capital structure on profitability- TOL/TNA, LTD/TNA, STD/TNA and Debt/Equity ratio. The control variables included in the study are Size, Growth, Liquidity, Tangibility and Age. Empirical results indicate that debt ratios have significant negative impact on profitability and confirm the prediction of Pecking-Order Theory. It is found out that that the sample companies have low debt levels in their capital structure. Short term debt funds are an important mode of financing adopted by sample Foreign Direct Investment companies. Liquidity has a positive and significant impact on ROTI but significant and negative impact on ROE. Tangibility has significant negative impact on ROE. Growth, Size and Age indicators has no significant impact on profitability. The study concludes that Capital structure does have a significant impact on profitability and the right choice of financing the assets may have an effect on the performance of Foreign Direct Investment companies in the Indian Manufacturing sector.

Keywords: Capital Structure, Profitability, Foreign Direct Investment, India, Debt-Equity, Return on Assets, Return on Equity, Manufacturing Sector

1 INTRODUCTION

The Indian manufacturing sector has witnessed major reforms since the phase of liberalization initiated in 1991. Recently, to increase global competitiveness of Indian Manufacturing sector and with the objective of making India a global manufacturing hub, Government of India has undertaken major policy reforms. Many important FDI policy amendments have been carried out to encourage inward FDI flows. 'Make in India' initiative was launched on September 25, 2014 with the objective of facilitating investment, fostering innovation, building best in class manufacturing infrastructure, making it easy to do business and enhancing skill development. The goal of 'Make in India' initiative was to promote India as an investment destination and global hub for manufacturing, design and innovation. According to (Press Information Bureau, Government of India, 10th January,2018), "Foreign Direct Investment (FDI) is a major driver of economic growth and a source of non-debt finance for the economic development of the country. Government has put in place an investor friendly policy on FDI, under which FDI up to 100%, is permitted on the automatic route in most sectors/ activities". The Government of India is taking administrative and regulatory measures like simplifying and rationalizing the processes and the procedures for boosting investor sentiment, simplifying the Foreign Direct Investment (FDI) policy and correcting the inverted duty structure to accelerate the growth of Indian manufacturing sector.

"Measures undertaken by the Government have resulted in increased FDI inflows in to the country. During the year 2014-15, total FDI inflows received were US \$ 45.15 billion as against US \$ 36.05 billion in 2013-14. During 2015-16, country received total FDI of US \$ 55.46 billion. In the financial year 2016-17, total FDI of US \$ 60.08 billion has been received, which is an all-time high", (Press Information Bureau, Government of India, 10th January,2018).

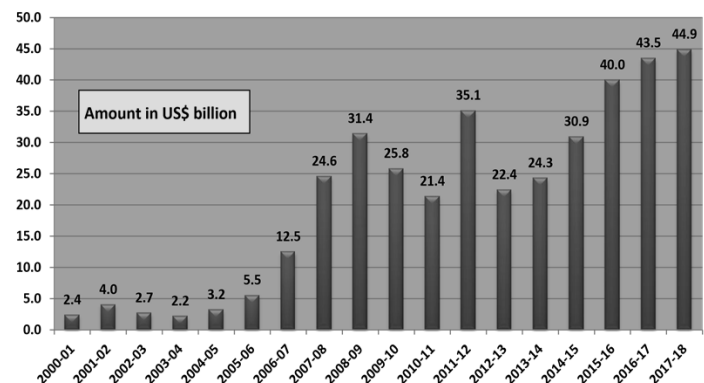


Figure 1. Financial year-wise FDI Annual Inflows (Equity capital components)

Source: FDI in India – Annual Issue,2017. <https://dipp.gov.in/>

All countries are placing very high emphasis on attracting FDI as it is perceived as major vehicle for growth of an economy. The Figure 1.1 shows that India is an attractive destination for Foreign Direct Investment. "India climbed another 23 points in the World Bank's ease of doing business index to 77th place, becoming the top ranked country in South Asia for the first time and third among the BRICS", (Suneja, November 01, 2018). These projections show that India is an attractive destination for FDI the world over and internationally researchers are exploring ways through which companies can utilize these opportunities to expand into new markets. The presence of Foreign Direct Investment companies in the Indian manufacturing sector plays a very important role in

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development and growth of the sector as well as the economy. Researchers, the world over are interested to know the effect of firms capital structure on profitability and the relationship between capital structure and firm value has been the subject of considerable debate. The term 'Capital Structure', refers to financing strategy adopted by a firm- how a firm makes a choice among different sources of funds to finance its assets and overall operations. The capital structure decisions assume vital significance in corporate financial management due to their influence on return and risk to the shareholders. Incorrect capital structure decisions can result in a high cost of capital thereby lowering the net present value of proposals and making them less or even non profitable. The improvement in the profitability is necessary for the long-term survivability of the firm. The choice of financing strategy adopted by a firm may impact the value, growth and survival of a firm. An effective financing strategy can lower the cost of capital, resulting in higher Net present values and more acceptable projects and thereby increasing the value of the firm. Hence an attempt has been made in this study to analyze the capital structure and its impact, if any on the profitability of Foreign Direct Investment Companies of Indian Manufacturing sector.

2 REVIEW OF RESEARCH AND DEVELOPMENT IN THE SUBJECT:

2.1 International Status

The literature on Capital Structure has been extended by several studies following the study by (Modigliani & Miller, 1958), who introduced the Capital Structure irrelevancy propositions in their seminal work on the "Cost of Capital, Corporation Finance and the Theory of Investment". According to this theory, Capital Structure of a firm does not determine its market value implying that the Capital Structure decision is irrelevant. The cost of capital and value of firm are constant for all degrees of leverage. This theory is based on assumptions of a perfect capital market, no transaction costs, homogeneous risk class which means all investors have homogeneous expectations, firms can be grouped into equivalent risk classes on the basis of risk in term of expected earnings, no corporate taxes and dividend payout ratio expected to be hundred percent. (Modigliani & Miller, 1963) revised their earlier theory by considering the implication of corporate taxes on the capital structure. It was stated that, on account of the tax savings caused due to debt, the value of a levered firm will be higher than unlevered firm. As debt levels increase in the composition of debt-equity mix, the cost of equity will rise but at a lesser rate than what it have been in absence of taxes. Firm can achieve optimal capital structure, where the firm's value is maximum and the overall cost of capital is minimum with hundred percent debt financing. Modigliani and Miller theories are considered as pioneering studies which resulted into continuing theoretical debate over the issue of relevance of Capital Structure decision for valuation of a firm. Since then, a number of studies have been undertaken on various aspects of Capital Structure. (Donaldson, 1961) had first pointed out about a certain pecking order followed by management when they needed funds. According to their study, management strongly favored internal generation as a source of new funds. If the firm has insufficient cash flow from internal sources, it resorts to debt financing and as a last option a firm will use externally generated funds, i.e. equity funds. (Myers, 1984) proposed

modified pecking order theory. According to (Myers, 1984), "Firms avoid financing real investments by issuing common stock or other risky securities. They set target dividend payout ratios so that normal rates of equity investment can be met by internally generated funds. The firm may also plan to cover part of normal investment outlays with new borrowing, but it tries to restrain itself enough to keep the debt safe-that is, reasonably close to default-risk free. Since target dividend payout ratios are sticky, and investment opportunities fluctuate relative to internal cash flow, the firm will from time to time exhaust its ability to issue safe debt. When this happens, the firm turns to less risky securities first-for example, risky debt or convertibles before common stock". Several significant studies were conducted world over studying the determinants of capital structure. (Titman & Wessels, 1988) assessed the impact of determinants- collateral value of assets, non-debt tax shields, growth, uniqueness, industry classification, size, volatility and profitability on various measures of leverage. It was found out that firms with unique or specialized products had relatively low debt ratios. Smaller firms tend to use significantly more short-term debt than larger firms. Debt Ratios were not related to firm's expected growth, non-debt tax shields, volatility, or the collateral value of its assets. The study could find some support for the proposition that profitable firms have relatively less debt relative to the market value of their equity. (Rajan & Zingales, 1995) investigated the determinants of capital structure choice by analyzing the financing decisions of public firms in the major industrialized countries. They found that at an aggregate level, firm leverage is fairly similar across the G-7 countries and that the factors identified by previous studies as important in determining the cross-section of capital structure in the U.S., affect firm leverage in other countries as well. (Doukas & Lang, 2003) investigated whether firms that launch new plants in foreign countries realize similar gains from core-related and non-core-related investment transactions. They found out that that firms achieve higher gains from international diversification when they engage in core-related greenfield investment transactions. Significant positive abnormal returns and post-investment profit margin gains in the performance of firms that expand their core business across national markets was found out. Foreign investments outside the core business of the firm were found to be associated with significant negative announcement effects and profit margin losses in years following the investment. (Pandey, 2004) established a saucer-shaped relation between capital structure and profitability because of the interplay of agency costs, costs of external financing and the interest/tax shield. According to the author, capital structure and market power, as measured by Tobin's Q, have a cubic relationship, due to the complex interaction of market conditions, agency problems and bankruptcy costs. It was found out that size and tangibility had positive relationship and systematic risk and ownership have a negative relationship with Capital Structure. The study used a sample size of 208 Malaysian companies listed on the Kuala Lumpur Stock Exchange for the period from 1994 to 2000. The estimation method used was the Generalized Method of Moments (GMM) on panel data. (Abor, 2005) investigated the relationship between capital structure and profitability of 22 listed firms on the Ghana Stock Exchange during a five-year period from 1998 to 2002. The results revealed significant positive relation between the ratio of short-term debt ratio and ROE, negative relationship between the ratio of long-term debt ratio and ROE

and a significant positive association between the ratio of total debt ratio and ROE. The study concluded that short-term debt is an important component or source of financing for Ghanaian firms, representing 85 percent of total debt financing. (Salawu, 2009) investigated the influence of the capital structure on profitability of 50 quoted companies in Nigeria for a study period from 1990 to 2004. They found that profitability had positive correlation with short-term debt and equity and negative correlation with long-term debt. A negative association between the ratio of total debt to total assets and profitability was found out. (Liow, 2010) explored the key financial performance characteristics of 336 real estate companies that were continuously listed from 2000–2006 and had an equity capitalization of at least USD 1 million from 24 securitized real estate markets across Asia, Europe and North America. The study included 11 financial indicators to assess and identify financial successful real estate companies. The indicators selected were market to book ratio, size, sustainable growth rate, return on equity, debt ratio, cost of equity, spread, earnings retention ratio, actual growth rate and profitability. Financial success was measured using two different measures, the Sharpe ratio and Jensen's alpha. The study concluded that determinants of firm value for real estate companies were growth, profitability and leverage and that successful real estate companies were generally of larger size and commanded attractive market valuation relative to their underlying book value. The firms were usually profitable and more likely to take advantage of positive financial leverage effects, contributing to higher sustainable growth rates as well as profitable growth in the longer term. The financial variables that influenced successful performance were almost similar for all countries but differed in degree and in some cases the influence had opposite direction. (Gill, et al., 2011) studied the relationship between capital structure and profitability using a sample of 272 American firms listed on New York Stock Exchange for a period of 3 years from 2005 to 2007. Their results indicated a positive relationship between short-term debt ratio and profitability and total debt ratio and profitability in the service industry. The results also indicated a positive relationship between short-term debt ratio and profitability, long-term debt ratio and profitability and total debt ratio and profitability in case of the manufacturing industry. (Gill, et al., 2011) studied the relationship between capital structure and profitability using a sample of 272 American firms listed on New York Stock Exchange for a period of 3 years from 2005 to 2007. Their results indicated a positive relationship between short-term debt ratio and profitability and total debt ratio and profitability in the service industry. The results also indicated a positive relationship between short-term debt ratio and profitability, long-term debt ratio and profitability and total debt ratio and profitability in case of the manufacturing industry. (Mohammad & Jaafer, 2012) examined the effect of capital structure on profitability by selecting a sample of 39 industrial companies listed on Amman Stock Exchange during a six-year period from 2004 to 2009. Their results revealed significantly negative relationship between debt and profitability. (Tsuji, 2013) examined the relationship between corporate profitability and capital structures of 73 machinery industry firms listed on the Tokyo Stock Exchange for the period from 1981 to 2011 employing panel data analysis. They found that in the Japanese machinery industry, the relations between firm profitability and leverage ratio are mostly negative. They also found that about 60% of the total debt to total asset ratio could

be explained by firm profitability. Other implications of the study were that distress cost and the tax shield effect perspectives were not empirically supported; the agency cost theory was not empirically supported; the pecking order theory was empirically supported and the prediction from a dynamic trade-off model was supported. The study concluded that Japanese machinery industry firms used more liquid liabilities than fixed liabilities in their pecking order after profitability. (Nirajini & Priya, 2013) analyzed the capital structure and financial performance of 11 companies listed on Colombo stock exchange for a period from 2006 to 2010. Correlation and multiple regression analysis are used for analysis. The results revealed there is positive relationship between capital structure and financial performance. (Martis, 2013) examined the impact of capital structure on firm performance of the S&P 500, largest 474 firms in the United States. The research was based on panel estimation covering the periods 2003-2008 and 2003- 2011. The study first analyzed several factors determining firms' capital structure, such as performance, total assets, asset tangibility, sales growth, capital intensity and tax rates. Strong evidence was found for the majority of these factors to affect capital structure. In the second stage, the study tested the impact of leverage on performance. Return on Assets, Return on Equity and firm's Tobin's Q were employed as proxies to measure firm's performance. The study could find evidence suggesting a negative link between leverage ratios and Return on Assets, providing support to pecking order theory, while no statistical evidence suggesting a relationship with regards to leverage and Return on Equity was found. Short-term debt and Total debt had a significant negative impact when analyzing the impact of leverage on firm's Tobin's Q. (Abeywardhana, 2015) examined the relationship between capital structure and the profitability of nonfinancial SMEs in the UK for the period of 1998-2008 by employing panel data regression. The results show a significant negative relationship between capital structure and profitability. Consistent evidence for positive size- profitability relationship was found. (Vätavua, 2015) studied the relationship between capital structure and financial performance of 196 Romanian manufacturing companies listed on the Bucharest Stock Exchange for a study period of eight-years from 2003-2010 employing cross sectional regressions. The study concluded that the most profitable manufacturing companies were those, who were maintaining a high proportion of equity in their capital mix and avoiding borrowed funds. Total debt and short-term debt had negative relationships with ROA and ROE. The performance in Romanian companies was higher when they avoid debt and operated based on equity. Companies having large proportion of fixed assets had lower profits and companies barely employed debt with longer maturities. The Romanian companies did not use their assets effectively and did not have sufficient internal funding to undertake profitable investments. There seemed to be preference for debt during times of financial difficulties. (Cyril, 2016) investigated the effect of Nigerian banks' capital structure on the performance of conglomerates quoted on the floor of the Nigerian stock exchange from 2011 to 2015. The study concluded that capital structure has effect on both return on assets and asset turnover of the conglomerates but no effect on return on equity and earnings per share. The author recommended undertaking an in-depth analysis of business factors that affect a particular industry is necessary in order to obtain the benefits

of debt-equity mix. (Arifin, 2017) examined the relationship between capital structure and profitability of companies all non-financial companies listed on the Indonesian Stock Exchange during the year 2012-13 in Indonesia. The purpose of the study was to examine whether the relationship between capital structure and profitability is unidirectional or bidirectional. Granger causality test was employed to determine the actual direction of the relationship between capital structure and profitability. The results showed that there is unidirectional causality that runs from profitability to capital structure in the case of the selected study sample and any changes in profitability levels of companies will precede further changes in their capital structure and debt and equity performances. In the next step, regression model was employed to examine if profitability also exerts significant effects on capital structure. It was found that profitability exerts negative effects on the level of capital. The study concluded that Pecking order theory explains the nature of the relationship between profitability and Capital Structure. The studies conducted internationally indicate that there is still lack of consensus about what would qualify as the right financing mix which should be adopted by the firms and whether this financing mix has an impact on a firm's profitability.

2.2 National Status

(Gaur, 2010) focused on the financial performance measures of business group companies of Indian non-metallic mineral products industries. They found that capital structure, working capital ratio and size of company have significant impact on financial performance measures- Operating Profit and Return on Net worth. (Majumdar & Sen, 2010) examined the effects of different types of corporate borrowing on firm profitability in India using firm-level data for 1026 Indian firms listed on the Bombay Stock Exchange for the period 1988-1993. Firms' performance was measured using return on sales. The study introduced several variables impacting firm performance- foreign ownership, state ownership, blockholder's ownership, corporate ownership, director's ownership, diversity, firm size, group affiliation, liberalization year, firm scope, age, and export to sales ratio. Debt measures employed were bank borrowings, institutional borrowings, debentures, fixed deposits and leverage. Ordinary least squares regression method was used as estimation method. The study concluded that there is a reverse causality issue with the positive relationship between corporate borrowing in the form of fixed deposits and firm profitability. They argued that the strategic implications of fixed deposits can be mainly attributed to the fact that they are both unsecured and privately held, which make the creditors associated with this type of debt the most likely to monitor firms' performance. The study pointed out that it is important to take into account institutional differences and firm heterogeneity in the analysis of capital structure on the firm performance. (Chisti, et al., 2013) ascertained the impact of capital structure on the profitability of a 10 companies from automobile industry listed in various stock exchanges in India for a study period of five years from 2007 to 2012 with the help of ratio analysis. They found that capital structure have statistically significant impact on the profitability of firms. (Goyal, 2013) conducted a study to provide empirical evidence on influence of capital structure on profitability of public sector banks in India listed on national stock exchange during 2008 to 2012. The findings of study indicated a strong positive dependence of short term debt to capital on all profitability

measures. Long term debt to capital and Total debt to capital had a negative relationship with profitability measures. (Pal & Guha, 2013) examined the impact of capital structure on profitability of three large scale cement companies of India. It was found that financial leverage and assets leverage are the major determinants which affect the return on equity and the study thus established statistically tested relationship between capital structure decisions and profitability of sample companies in Indian cement sector. (Hiran & Sojatia, 2014) measured, evaluated and empirically studied the relationship between capital structure and financial performance of automotive companies in India. They observed that there is negative and low degree of relationship between the variables under study and there are many other elements and factors apart from capital structure which determine and affect the financial performance of the companies under study. (Dawar, 2014) investigated the impact of capital structure choice on firm performance in India using a sample of 78 companies from S&P BSE 100 index companies. Fixed effect panel regression model was employed to analyze ten years of data (2003-2012) on the sample companies to find the relation between leverage and firm performance after controlling for factors such as size, age, tangibility, growth, liquidity and advertising. ROA and ROE were used to measure firm profitability. To assess the impact that leverage has on corporate profitability, explanatory variables short-term debt to total assets and long-term debt to total assets were employed. The study established that that leverage had a negative influence on financial performance of Indian firms. Firm size was positively and significantly related to profitability. Firm age exhibited negative and significant association with profitability. Tangibility was found to be positively and significantly related to firm profitability. The study concluded that the postulates of agency theory have to be seen with different perspective in India given the underdeveloped nature of bond markets and dominance of state-owned banks in lending to corporate sector. (Chadha & Sharma, 2015) analyzed the impact of capital structure on firm financial performance for a sample size of 422 Indian manufacturing companies listed on BSE for a study period of 10 years from 2003-2004 to 2012-2013. ROA, ROE and Tobin's Q were used as the proxies for determining a firm's financial performance parameters. The results indicated that, financial leverage has no impact on the firm's financial performance parameters of ROA and Tobin's Q. However negative and significantly correlated with ROE. It was found that other independent variables like size, age, tangibility, sales growth, asset turnover and ownership structure were significant determinants of a firm's financial performance in the Indian manufacturing sector. (Vijayalakshmi & Manoharan, 2015) with the help of panel data approach, analyzed the profitability position and impact of leverage on profitability of 19 firms from miscellaneous manufacturing sector listed on BSE and NSE for a study period of 15 years from 1995-96 to 2009-10. The study reveals that the leverage has a significant influence on profitability. No mentionable effect was found on EPS and P/E due to its leverage policy. The LTD ratio and Operating leverage had played an insignificant role for the improvement of ROTA, RONW and ROCE. It was found that interest coverage ratio played a dominant role in influencing the profitability. (Singh & Bansal, 2016) investigated the impact of financial leverage on firm's financial performance and on firm's valuation employing panel data regression on a sample of 58 Fast Moving Consumer

Goods (FMCG) companies listed on National Stock Exchange (NSE) and Bombay Stock Exchange (BSE) for a study period of 10 years from 2007 to 2016. Return on Total Assets and Economic Value Added were selected as indicators of firm's profitability and Enterprise Value and Tobin's Q were taken as indicators of firm's valuation. The results indicated that financial leverage had significant negative impact on performance and valuation when firm's financial performance indicators are ROA and EVA and valuation indicator is Tobin's Q. Out of the control variables, R&D spending, size, growth in sales and WACC had significantly impacted the firm's performance and valuation. Control variables like tangibility and profitability had insignificant impact on firm's financial performance and valuation. (Pandey & Sahu, 2017) examined the effect of capital structure and ownership structure on the accounting performance of Indian manufacturing firms listed on Bombay Stock Exchange (BSE) of India during the period of 2009-16 employing panel data analysis. The capital structure was represented by the debt to equity ratio whereas the various forms of ownership structure were represented by percentage of domestic promoters' ownership, percentage of foreign promoters' ownership and percentage of institutional ownership. Return on assets and Return on net worth measured firms' accounting performance. The study found a significantly negative effect of capital structure on accounting performance of sample firms whereas a significant and positive impact was found of almost all forms of ownership structure on firms' accounting performance. The study suggested that the firms' accounting performance is the function of almost all the variables of capital and ownership structure employed in the study. (Nanda & Panda, 2018) examined the firm-specific and macroeconomic determinants of profitability of 173 Indian manufacturing firms listed in S&P BSE Industrials Index in the pre-crisis and post-crisis period from 2000 to 2015 employing panel generalized least square and panel vector auto-regression model. Firm profitability was measured by ROA and NPM. It was found that the firm-specific determinants are dominant players in determining the corporate profitability of firms. Firm size and liquidity enhanced whereas leverage discouraged the profitability. The external involvement parameter could not explain the profitability in both the pre-crisis and post-crisis periods. Index of industrial production of capital goods (IIPCG) and interest rate significantly contributed towards explaining profitability in the pre-crisis period, but in the post-crisis period, only interest rate was effective. Nominal exchange rate was more informative in the explaining the firm profitability rather than the real exchange rate. The study suggested that the firm managers and policy makers should give utmost importance to the firm-specific determinants after the crisis period to make any change in policy for a profitable business. Relatively less research has been done to study whether Capital Structure policies of Foreign Direct Investment Companies in India have an impact on their profitability and therefore, the purpose of this study is to fill this research gap by analyzing the relationship between Capital Structure and Profitability of Foreign Direct Investment Companies in Indian Manufacturing sector.

3 OBJECTIVES OF THE STUDY

The main objectives of the study are:

- To evaluate the Capital Structure and Profitability of Foreign Direct Investment companies of the Indian manufacturing sector.
- To examine the impact of Capital Structure on Profitability of Foreign Direct Investment companies of the Indian manufacturing sector and to find out whether management can increase profitability of the firm by changing the capital structure.

4 DATA AND METHODOLOGY

4.1 Meaning of FDI Companies

The definition of a Foreign Direct Investment Company as per the OECD Benchmark Definition of Foreign Direct Investment FOURTH EDITION, 2008 is employed as the base for sample selection criterion in this study. As per OECD Benchmark Definition of Foreign Direct Investment, "A foreign direct investment enterprise is an enterprise resident in one economy and in which an investor resident in another economy owns, either directly or indirectly, 10% or more of its voting power if it is incorporated or the equivalent for an unincorporated enterprise. The numerical threshold of ownership of 10% of the voting power determines the existence of a direct investment relationship between the direct investor and the direct investment enterprise. An ownership of at least 10% of the voting power of the enterprise is regarded as the necessary evidence that the investor has sufficient influence to have an effective voice in its management". The (Balance of Payments & International Investment Position Manual 6th Edition (BPM6) para 6.12, page 101, 2009) also states that immediate direct investment relationships arise when a direct investor directly owns equity that entitles it to 10 percent or more of the voting power in the direct investment enterprise.

4.2 Data Collection and Sample

The data for the research is obtained from PROWESS Database maintained by Center for Monitoring Indian Economy (CMIE). As a first step in sample selection, companies listed in S&P BSE 500 Index were selected as base sample. Out of these 500 companies, 257 companies represented manufacturing sector. From these, only those companies having 10% or more of foreign promoters share in their equity holdings are selected. This resulted in 59 Foreign Direct Investment companies (FDI companies). Out of these companies, only those companies having audited financial information available throughout the period starting from – 31st March, 2010 to 31st March, 2018 (9 years) were selected. The final sample set consisted of 54 sample FDI companies having audited financial information available during the study period from 2009-2010 to 2017-2018 (9 years).

4.3 Measures of Profitability

This study has employed three measures of profitability (Dependent variable). They are:

- i. Return on Assets (ROA)
- ii. Return on Equity (ROE)
- iii. Return on Total income (ROTI)

The dependent variable can be expressed in several ways. Return on Assets ratio has been employed to by several

previous researchers to measure profitability, hence has been selected as a measure of profitability. Following (Dawar, 2014); (Yazdanfar & Öhman, 2014); (Chadha & Sharma, 2015); (Vätavua, 2015); (Singh & Bansal, 2016); (Pandey & Sahu, 2017); the ratio employed to measure Return on Assets (ROA) is Profit after Tax to Total Net Assets (PAT/TNA). As Profit after tax is net of depreciation and denotes profit after charging all expenditure and provisions, in the denominator, to calculate Total Net Assets, Net Fixed Assets net of depreciation have been taken. The Return on Assets (ROA) measures the overall efficiency of the management in generating profits given a level of assets at its disposal (Rustagi, 2018). Following (Mohammad & Jaafer, 2012); (Dawar, 2014); (Vätavua, 2015); (Chadha & Sharma, 2015); the next measure of profitability employed is Return on Equity. The ratio employed to measure Return on Equity (ROE) is Profit after Tax to Net worth (PAT/NW). ROE indicates how well the firm has used the resources of owners (Pandey, 2015). The ratio employed to measure Return on Total Income (ROTI) is Profit after Tax to Total Income (PAT/Total Income). This ratio gives the percentage of net profit that a company has made from the total income it has earned during a period, after meeting all expenses. The ratio indicates how much after-tax profit the company makes for every rupee of income generated.

4.4 Measures of Capital Structure

Based on previous empirical studies, four measures of Capital Structure (Independent variables) were selected. They are:

- (i) Total Outside Liabilities /Total Net Assets (TOL/TNA)
- (ii) Long Term Debt /Total Net Assets (LTD/TNA)
- (iii) Short Term Debt /Total Net Assets (STD/TNA)
- (iv) Debt /Equity (D/E)

According to (Rajan & Zingales, 1995), the ratio of Total Liabilities to Total Assets is the broadest definition of stock leverage. Following (Rajan & Zingales, 1995), Total outside Liabilities to Total Net Assets) as represented by TOL/TNA is selected as the first measure of leverage or capital structure. Following (Salawu, 2009); (Gill, et al., 2011); (Yazdanfar & Öhman, 2014); (Dawar, 2014); (Vätavua, 2015); the next measure to represent capital structure selected is the Long Term Debt ratio as represented by Long Term Debt/Total Net Assets (LTD/TNA) which includes all borrowings except current liabilities. Following (Salawu, 2009); (Gill, et al., 2011); (Mohammad & Jaafer, 2012); (Dawar, 2014) (Yazdanfar & Öhman, 2014); (Vätavua, 2015) Short Term Debt ratio is selected as the third measure of capital structure represented by Short Term Debt / Total Net Assets (STD/TNA). Here Short Term Debt refers to Current Liabilities. Following previous researchers (Singh & Bansal, 2016); (Pandey & Sahu, 2017) (Nanda & Panda, 2018); the fourth measure selected to represent capital structure is the Debt-Equity ratio as represented by Long Term Debt to Net worth (Equity).

4.5 Control Variables

Five control variables were also included as Determinants of Profitability of FDI companies in India. They are:

- i. Liquidity
- ii. Growth
- iii. Size
- iv. Tangibility
- v. Age

Liquidity is measured by the ratio of Current Assets to Current Liabilities (Vätavua, 2015); (Nanda & Panda, 2018). Firm Growth was employed as control variable by (Abor, 2005); (Gill, et al., 2011); (Chadha & Sharma, 2015) (Singh & Bansal, 2016). In this study, Growth is measured in terms of compound annual growth rate of Sales. Firm Size has been included as control variable by several previous researchers (Abor, 2005); (Majumdar & Sen, 2010); (Gill, et al., 2011); (Dawar, 2014); (Yazdanfar & Öhman, 2014); (Chadha & Sharma, 2015); (Singh & Bansal, 2016). Researchers have employed either Natural logarithm of sales or Natural logarithm of Total Assets as a proxy to measure firm size. In this study, Natural logarithm of Total Net Assets is employed as a measure to represent Size. Prior researchers (Dawar, 2014); (Chadha & Sharma, 2015); (Vätavua, 2015); (Singh & Bansal, 2016) employed Tangibility as a control variable in their studies. In this study, Tangibility is measured as Net fixed assets to Total Net Assets. To represent Age of a company as control variable, (Majumdar & Sen, 2010); (Dawar, 2014); (Yazdanfar & Öhman, 2014) used proxy variable for firm age as the number of years since firm inception, dating back from the year that the data were collected. Following (Yazdanfar & Öhman, 2014); Age of a company up to the year 2018 is calculated from the year of incorporation and natural logarithm of age in years so calculated is used as proxy for age in this study.

4.6 Hypotheses

The study aims to test the following null hypotheses:

H₀₁: There is no significant impact of Total Outside Liabilities / Total Net Assets ratio of a company on its Profitability.

H₀₂: There is no significant impact of Long Term Debt / Total Net assets ratio of a company on its Profitability.

H₀₃: There is no significant impact of Short Term Debt / Total Net Assets ratio of a company on its Profitability.

H₀₄: There is no significant impact of Debt / Equity ratio of a company on its Profitability.

4.7 Specification of the Model

- To evaluate the Capital Structure and Profitability of firms, Ratio analysis is selected as a tool. The computed ratios are analyzed with the help of statistical tools such as Mean, Standard Deviation and Coefficient of Variation.
- To identify the impact of Capital Structure on Profitability of firms, Multiple Regression technique is applied.

In this study, the impact of Capital Structure on Profitability of FDI Companies in India has been analyzed by using Multiple Regression technique. The Multiple Regression model used to estimate the impact of each of the indicators of explanatory variables on the dependent variable is:

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \dots + \beta_n X_n + e$$

Where,

Y = The value of the Dependent variable (Y), what is being predicted or explained.

a = Constant term of the model.

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_n$ are the coefficients of the independent variables.

$X_1, X_2, X_3,$ and X_n are the independent variables (Determinants) which are predicting or explaining the value of Y .

$e = e$ is the error term; the error in predicting the value of Y , given the value of X

In the first stage of analysis, a Correlation Matrix is examined to find the relationship among various indicators of Dependent variable and Independent variables. The Correlation Matrix is also employed to observe multicollinearity problem among the selected indicators of independent variables in the study. The correlation matrix depicts significant (two tailed) correlations, significant at 5% ($p < .05$) and 1% ($p < .01$) levels. A suggested rule of thumb by (Gujarati, 2003) is that, if the pair-wise or zero-order correlation coefficient between two regressors is high, say, in excess of 0.8, then multicollinearity is a serious problem. If significant correlations exist among the indicators of selected determinants, one of the collinear indicators may be dropped. Variance Inflationary Factor (VIF): Another method of measuring collinearity is examining the Variance Inflationary Factor (VIF) of each explanatory variable. "The variance inflationary factor shows how the variance of an estimator is inflated by the presence of multicollinearity", (Gujarati, 2003). "If a set of explanatory variables is uncorrelated, then VIF_j is equal to 1. If the set is highly inter-correlated, then VIF_j may exceed even 10", (Levine, et al., 2003). If multicollinearity exists, the variable with the largest VIF value is deleted. Variance inflationary factors for each multiple regression conducted in the second stage of analysis are reported in this study.

In the second stage of analysis, twelve regression runs are conducted based on the above base model considering the three measures of profitability (Return on Asset, Return on Equity and Return on Total Income) as dependent variables and four measures of independent variables (Total Outside Liabilities to Total Net Assets ratio, Long Term Debt/ Total Net Assets ratio, Short Term debt/ Total Net Assets ratio and Debt-Equity Ratio) and the control variables Liquidity, Growth, Size, Tangibility and Age. The control variables are considered in each regression run. The debt ratios and profitability ratios selected do not appear simultaneously in any regression run. Separate regression runs are conducted for each debt ratio with the three measures of profitability.

5 DATA ANALYSIS, RESULTS AND DISCUSSION

Descriptive statistics and Correlation statistics among various indicators of dependent and independent variables selected for the purpose of study are presented in Table 1 and Table 2. Variance Inflationary factors calculated for regression runs are presented in Table 3.

5.1 Descriptive Statistics

The mean debt ratios of 54 FDI companies in Table 1 reveal that the sample companies have been relying on very low debt levels in their capital structure. TOL/TNA ratio indicates that out of the Total assets being financed; 49% contribution is being made by external funds as opposed to internal funds. The LTD/TNA ratio was 14% with a median value of 9% indicating that only 14% of Total assets were financed through Long Term Debt funds. The mean and median values of STD/TNA ratio are 35% and 33% respectively, which indicates that out of 49% of Total outside liabilities used to finance the

total assets, 35% are being financed by short term debt funds. This also implies that, short term debt funds as represented by current liabilities are an important mode of financing adopted by sample FDI companies. The mean Debt-Equity ratio is 0.71:1.00 while median is 0.27: 1.00; which reveals that sample companies prefer lower debt levels in financing their capital structure. Variability in relation to mean was 34.74% and 34.06% respectively for TOL/TNA ratio and STD/TNA ratios as opposed to a high coefficient of variation of 80.06% for LTD/TNA ratio and a very high coefficient of variation of 293.65% for Debt-Equity ratio. This denotes that TOL/TNA ratio and STD/TNA ratio are two most representative measures of capital structure of the selected sample of FDI companies.

Table 1. Descriptive Statistics of Dependent and Independent Variables of 54 FDI Companies (2010-2018)

Variable	Mean	Median	Standard Deviation	Coefficient of Variation
TOL/TNA	0.49	0.50	0.17	34.74
LTD/TNA	0.14	0.09	0.11	80.06
STD/TNA	0.35	0.33	0.12	34.06
Debt/Equity	0.71	0.27	2.10	293.65
ROA	0.10	0.10	0.07	64.64
ROE	0.20	0.17	0.23	117.92
ROTI	0.09	0.09	0.05	53.94
Size	8.76	7.80	1.08	12.35
Growth	12.38	11.65	6.23	50.31
Liquidity	1.79	1.66	0.61	34.07
Tangibility	0.24	0.23	0.12	50.14
Age (in Years)	55.35	56	25.56	46.19

The mean Return on Equity as represented by PAT/NW ratio which measures a firm's efficiency at generating profits from every unit of shareholders' equity was 20% whereas Return on Assets and Return on Total income were 10% and 9% respectively. The coefficient of variation of Return on Equity was 117.92%. Return on assets 64.64% and Return on Total Income 53.94%. Size of the sample firms is measured as natural logarithm of total net assets and according to Table 1, the figure 8.76 represents the mean natural logarithm of Net Sales, median size being 7.80. The independent variable Growth is measured as compound annual growth rate in sales. The mean Growth rate is 12.38% and median Growth rate is 11.65%. Liquidity is represented by current ratio and mean current ratio is 1.79, median 1.66 indicating that current assets of sample firms are 1.79 times of their current liabilities. Tangibility is represented by ratio of Net fixed assets to Total net assets and mean is 0.24, median is 0.23 indicating that Net fixed assets of sample firms on an average constitute 24% of Total net assets. The average Age sample firms is 55 years and median is 56 years. According to (Yazdanfar & Öhman, 2014), the mean age implies that the firms are generally well-established and have reached a significant scale of operation.

5.2 The Correlation Matrix

To detect multicollinearity, one of the options is to examine the correlation structure between all the predictors. On examination of Correlation Matrix in Table 2 it is found out that the indicator Liquidity is negatively correlated with all measures of Debt, but the correlation coefficients are below 0.80. None of the other indicators of independent variables

depicted high correlations among them. On examination of correlation among various indicators of Dependent variable and Independent variables in Table 2, it is observed that the firm's profitability as measured by Return on Assets (PAT/TNA) is negatively correlated with TOL/TNA, LTD/TNA ratio, Debt/Equity ratio and Tangibility.

	TOL/TNA	LTD/TNA	STD/TNA	D/E	ROA	ROE	ROTI	Liquidity	Size	GrowthRate	Tangibility	Age
TOL/TNA	1											
LTD/TNA	.708**	1										
STD/TNA	.765**	.088	1									
DE	.497**	.695**	.071	1								
ROA	-.185	-.454**	.151	-.319*	1							
ROE	-.046	-.447**	.339*	-.608**	.845**	1						
ROTI	-.432**	-.368**	-.275*	-.380**	.650**	.533**	1					
Liquidity	-.775**	-.502**	-.633**	-.286*	.200	-.006	.534**	1				
Size	.157	.209	.032	.177	-.181	-.159	-.085	-.278*	1			
Growth	-.187	-.136	-.145	-.085	-.007	-.008	-.104	.072	-.146	1		
Tangibility	.193	.485**	-.163	.380**	-.268*	-.312*	-.389**	-.378**	.066	-.057	1	
Age	.007	-.003	.017	-.095	.170	.188	.210	.058	.235	-.225	-.148	1

**Correlation is significant at the 0.01 level (2-tailed)
*Correlation is significant at the 0.05 level (2-tailed)

Profitability measure – Return on Equity (PAT/NW) is negatively correlated LTD/TNA ratio, D/E ratio, Tangibility, and positively related to Short Term Debt ratio STD/TNA. Profitability as measured by Return on Total Income (PAT/Total Income) is negatively related with all the Debt ratios, and Tangibility but positively related to Liquidity. The results are in confirmation with the Pecking Order Theory as it suggests negative relationship between leverage and profitability.

	Run1	Run 2	Run 3	Run 4
TOL/TNA	2.764	--	--	--
LTD/TNA	--	1.585	--	--
STD/TNA	--	--	2.757	--
D/E	--	--	--	1.233
Liquidity	3.217	1.461	3.315	1.289
Size	1.195	1.178	1.278	1.192
Growth Rate	1.127	1.081	1.124	1.077
Tangibility	1.236	1.389	1.833	1.312
Age of Firm	1.149	1.149	1.147	1.156

Variance inflationary factors calculated for regression runs as per Table 3 indicate that none of Variance inflationary factors exceed 3.315, indicating that there is no problem of multicollinearity among the independent variables and hence all indicators were simultaneously included in multiple regression runs.

5.3 Regression Results and Analysis

The results of twelve regression runs conducted, considering the three measures of profitability (Return on Asset, Return on Equity and Return on Total Income) as dependent variables and four measures of independent variables (Total Outside Liabilities to Total Net Assets ratio, Long Term Debt/ Total Net Assets ratio, Short Term debt/ Total Net Assets ratio and Debt-Equity Ratio) and the control variables Liquidity, Growth, Size, Tangibility and Age are presented in Table 4 ; Table 5 and Table 6.

Results of Multiple Regressions (Dependent Variable: Return on Assets- PAT/TNA) (Table 4):

In Run-1, the value of R^2 is 0.148 which indicates that a maximum of 14.80% variations in PAT/TNA ratio are explained by indicators in regression Run-1, Table 4. None of the independent variables had significant impact on dependent variable ROA, although all the independent variables TOL/TNA, Liquidity, Growth, Size and Tangibility and Age of the firm had negative coefficient indicating negative relationship with the dependent variable ROA. In Run-2, the value of R^2 is 0.261 which indicates that a maximum of 26.10% variations in PAT/TNA ratio are explained by significant indicators in regression Run-2, Table 4. LTD/TNA has significant negative impact on PAT/TNA ratio, the 't' statistic being significant at 1% level of significance. This indicates that as the proportion of Long Term Debt to Total Net Assets increases, Profitability as measured by Return on Assets decreases. None of the other independent variables had significant impact on dependent variable ROA, although the independent variables Liquidity, Growth, Size and Tangibility of the firm had negative coefficient indicating negative relationship with the dependent variable ROA whereas Age

variable had positive coefficient though not statistically significant. In Run-3, the value of R^2 is 0.20 which indicates that 20% variations in PAT/TNA ratio are explained by indicators in regression Run-3, Table 4. Short term debt ratio does not have any significant impact on PAT/TNA ratio although the variable has positive coefficient indicating that profitable firms prefer to use short term debt. While there is positive association between ROA and Liquidity, Growth and Age and negative association between PAT/TNA ratio and Size and Tangibility, the coefficients are not statically significant.

Regression Run	1	2	3	4
Intercept	0.209	0.150	0.533	0.121
TOL/TNA	-0.079 (-0.901) [0.372]	--	--	--
LTD/TNA	--	-0.276 (-2.853)** [0.006]	--	--
STD/TNA	--	--	0.240 (1.988) [0.053]	--
Debt/Equity	--	--	--	-0.007 (-1.447) [0.155]
Liquidity	-0.012 (-0.461) [0.647]	-0.011 (-0.648) [0.520]	0.047 (1.806) [0.077]	0.004 (0.211) [0.833]
Growth	0.000 (-0.273) [0.786]	0.000 (-0.334) [0.740]	0.001 (0.348) [0.729]	0.000 (-0.169) [0.867]
Size	-0.013 (-1.450) [0.154]	-0.010 (-1.193) [0.239]	-0.007 (-0.740) [0.463]	-0.010 (-1.141) [0.260]
Tangibility	-0.129 (-1.553) [0.127]	-0.028 (-0.338) [0.737]	0.000 (-0.003) [0.998]	-0.079 (-0.932) [0.356]
Age	-0.026 (-1.278) [0.208]	0.027 (1.449) [0.154]	0.024 (1.244) [0.220]	0.022 (1.120) [0.268]
R^2	0.148	0.261	0.200	0.170
Adjusted R^2	0.039	0.167	0.098	0.064
F statistic	1.356 [0.252]	2.765* [0.022]	1.960 [0.091]	1.603 [0.167]
* indicates significance at 5% level, ** indicates significance at 1% level				
(t-statistics) , [p-value]				

In Run-4, the value of R^2 is 0.17 which indicates that 17% variations in PAT/TNA ratio are explained by indicators in regression Run-4, Table 4. Debt-Equity ratio does not have any significant impact on PAT/TNA ratio although the variable has negative coefficient. Other independent variables do not have a significant impact on dependent variable Return on Assets. The regression results in Table 4 indicate LTD/TNA has significant negative impact Return on Total assets confirming the predictions of Pecking-Order theory where profitable firms prefer to use internally generated funds out of surplus profit to finance their investments and hence resort to lower levels of debt in their capital structure. Size measured in terms of Total Net assets has no significant impact on Return on Total Assets although the coefficient is negative in all regression runs.

Results of Multiple Regressions (Dependent Variable: Return on Equity- PAT/NW) (Table 5):

In Run-1, the value of R^2 is 0.221 which indicates that a maximum of 22.10% variations in PAT/NW ratio are explained by significant indicators in regression Run-1, Table 5. TOL/TNA does not have any impact on PAT/NW ratio although the variable has negative coefficient indicating that profitable firms prefer lower debt levels in their capital structure. Liquidity has significant negative impact on PAT/NW ratio, the 't' statistic being significant at 5% level of significance. This indicates that as Liquidity measured in terms of Current Ratio increases, Profitability as measured by Return on Equity decreases. Tangibility has significant negative impact on ROE, the 't' statistic being significant at 1% level of significance. Size also has negative impact on PAT/NW ratio. Growth has positive correlation coefficient, but not significant. Age also has positive coefficient although not significant. In Run-2, the value of R^2 is 0.366 which indicates that a maximum of 36.60% variations in PAT/NW ratio are explained by significant indicators in regression Run-2, Table 5. LTD/TNA has significant negative impact on PAT/NW ratio, the 't' statistic being significant at 1% level of significance. This indicates that as the proportion of Long Term Debt to Total Net Assets increases, Profitability as measured by Return on Equity decreases. Liquidity has significant negative impact on ROE, the 't' statistic being significant at 1% level of significance. Size has negative impact on PAT/NW ratio. Growth has negative coefficient, but not significant. Age has positive coefficient although not significant. In Run-3, the value of R^2 is 0.248 which indicates that 24.80% variations in PAT/NW ratio are explained by indicators in regression Run-3, Table 5. Short term debt ratio does not have any significant impact on PAT/NW ratio even as the coefficient enters with a positive sign indicating that profitable firms prefer short term debt over long term debt in their capital structure. None of the other indicators have significant impact on ROE. Liquidity, Growth and Age has positive coefficient whereas Size, Tangibility have negative coefficients in the regression run. In Run-4, the value of R^2 is 0.467 which indicates that 46.70% variations in PAT/NW ratio are explained by indicators in regression Run-4, Table 5. Debt/Equity ratio has significant negative impact on ROE, the 't' statistic being significant at 1% level of significance indicating that as debt levels increase, profitability of firms decrease. Liquidity has significant negative impact on ROE, the 't' statistic being significant at 1% level of significance indicating that as the liquidity of firms increase, profitability decreases. Growth, Size, Tangibility have negative coefficients in the regression run but not significant. Age has positive coefficient although not significant.

Regression Run	1	2	3	4
Intercept	1.003	0.663	-0.223	
TOL/TNA	-0.417 (-1.433) [0.158]	--	--	--
LTD/TNA	--	-1.128 (-3.637)** [0.001]	--	--
STD/TNA	--	--	0.791 (1.953) [0.057]	--
Debt/Equity	--	--	--	-0.065 (-4.960)** [0.000]
Liquidity	-0.182 (-2.057)* [0.045]	-0.154 (-2.863)** [0.006]	0.052 (0.589) [0.558]	-0.111 (-2.391)* [0.021]
Growth	0.002 (0.325) [0.746]	-0.002 (-0.333) [0.740]	0.002 (0.407) [0.686]	-0.001 (-0.326) [0.746]
Size	-0.059 (-1.947) [0.058]	-0.045 (-1.642) [0.107]	-0.035 (-1.145) [0.258]	-0.036 (-1.427) [0.160]
Tangibility	-0.740 (-2.689)* [0.010]	-0.309 (-1.175) [0.246]	-0.288 (-0.875) [0.386]	-0.320 (-1.362) [0.180]
Age	0.103 (1.561) [0.125]	0.108 (1.813) [0.076]	0.097 (1.492) [0.142]	0.075 (1.358) [0.181]
R ²	0.221	0.366	0.248	0.467
Adjusted R ²	0.122	0.285	0.152	0.398
F statistic	2.226 [0.057]	4.518** [0.001]	2.587* [0.030]	6.850** [0.000]
* indicates significance at 5% level, ** indicates significance at 1% level				
(t-statistics) , [p-value]				

The regression results in Table 5 indicate that Long Term Debt ratio and Debt/Equity Ratio had significant negative impact on Return on Equity again confirming to predictions of Pecking-Order Theory. The numerator in Debt-Equity ratio and Long Term Debt ratio comprises of only long term debt. Which means that as long term debt increases, profitability of firm decreases. Size has negative impact on Return on Equity in all the four regression runs. Liquidity has negative impact on Return on Equity in three regression runs indicating that as the liquidity ratio increases, the profitability measured in terms of Return on Equity goes down.

Results of Multiple Regressions (Dependent Variable: Return on Total Income- PAT/Total Income) (Table 6):

In Run-1, the value of R² is 0.373 which indicates that a maximum of 37.30% variations in PAT/Total Income ratio are explained by indicators in regression Run-1, Table 6. Although none of the variables have significant impact on PAT/Total Income ratio, TOL/TNA, Growth, Size and Tangibility has negative coefficients indicating negative impact of these variables on profitability. Age has positive impact on profitability.

Regression Run	1	2	3	4
Intercept	0.053	0.008	0.041	0.003
TOL/TNA	-0.045 (-0.864) [0.392]	--	--	--
LTD/TNA	--	-0.037 (-0.601) [0.551]	--	--
STD/TNA	--	--	-0.038 (-0.509) [0.613]	--
Debt/Equity	--	--	--	-0.005 (-1.679) [0.100]
Liquidity	0.024 (1.553) [0.127]	0.033 (3.071)** [0.004]	0.029 [1.780] [0.081]	0.033 (3.389)** [0.001]
Growth	0.001 (-1.169) [0.248]	0.000 (-1.049) [0.300]	0.000 (-1.084) [0.284]	0.000 (-1.129) [0.261]
Size	0.000 (-0.046) [0.963]	0.001 (0.128) [0.898]	-0.645 (-0.445) [0.660]	0.002 (0.310) [0.758]
Tangibility	-0.086 (-1.747) [0.087]	-0.066 (-1.268) [0.211]	-0.096 (-1.598) [0.117]	-0.053 (-1.073) [0.289]
Age	0.012 (1.033) [0.307]	0.012 (1.016) [0.315]	0.012 (1.000) [0.323]	0.010 (0.863) [0.393]
R ²	0.373	0.368	0.366	0.399
Adjusted R ²	0.293	0.287	0.286	0.322
F statistic	4.657** [0.001]	4.557** [0.001]	4.530** [0.001]	5.200** [0.000]
* indicates significance at 5% level, ** indicates significance at 1% level				
(t-statistics) , [p-value]				

In Run-2, the value of R² is 0.368 which indicates that a maximum of 36.8% variations in PAT/Total income ratio are explained by significant indicators in regression Run-2, Table 6. LTD/TNA has negative impact on PAT/Total income ratio, however not significant. Liquidity has significant positive impact on PAT/Total income ratio, the t' statistic being significant at 1% level of significance. Growth, Tangibility have negative coefficients whereas Size and Age have positive coefficients, though not significant. In Run-3, the value of R² is 0.366 which indicates that 36.60% variations in PAT/Total Income ratio is explained by significant indicators in regression Run-3, Table 6. None of the independent variables have significant impact on Return on Total Income. Short term debt ratio, Growth, Size, Tangibility have negative coefficients and Age have positive coefficient. In Run-4, the value of R² is 0.399 which indicates that 39.90% variations in PAT/Total Income ratio is explained by significant indicators in regression Run-4, Table 6. Liquidity has significant positive impact on PAT/Total income ratio, the t' statistic being significant at 1% level of significance. Debt-Equity ratio, Growth, Tangibility have negative coefficients and Age have positive coefficient. The regression results in Table 6 indicate that Liquidity has positive impact on Return on Total income. All the four debt measures have negative impact on Return on Total Income indicating that as Return on Total income increases, the need to resort to debt in capital structure decreases.

6 FINDINGS OF THE STUDY

Overall empirical results indicate that debt ratios TOL/TNA, LTD/TNA, Debt-Equity have negative impact on profitability in all regression runs. LTD/TNA ratio is able to explain the variation in ROA and ROE better as the coefficients are negative and statistically significant at 1% level of significance in Table 4 and Table 5, Run 2. Debt/Equity ratio has significant negative impact on ROE in Table 5, Run 4. The results support findings by (Titman & Wessels, 1988); (Rajan & Zingales, 1995); (Abor, 2005); (Yazdanfar & Öhman, 2014); the results indicate that higher debt levels lead to lower profitability. This indicates that there are sufficient internally generated cash reserves and profitable FDI Companies in India do not prefer to borrow from long term debt sources. This result confirms the prediction of Pecking-Order Theory where profitable firms prefer to use internally generated funds out of surplus profit to finance their investments firms and hence resort to lower levels of debt in their Capital Structure. Table 4 and 5 indicate a positive impact of STD/TNA with ROA and ROE, but the t statistic is not significant. Although in regression runs, STD/TNA is not a significant predictor of profitability, the correlation coefficient (Table 2) between STD/TNA and ROE is positive and significant at 5% level. This result is in confirmation with (Abor, 2005), who suggest that, "Short-term debt tends to be less expensive, and therefore increasing short-term debt with a relatively low interest rate will lead to an increase in profit levels." Liquidity measured in terms of current ratio has positive impact on ROTI. The results are consistent with the findings of (Dawar, 2014). According to (Rustagi, 2018), "By maintaining a large investment in current assets like cash, inventory etc., the firm reduces the chances of production stoppages and loss of sales from inventory shortages and inability to pay creditors on time". According to (Dawar, 2014), "Liquidity has a positive and significant association with profitability (or performance) signifying the benefits of superior working capital management and gains accruing on account of lower interest cost". As ROTI is measured as Profit after Tax to Total Income, increase in liquidity must be supporting increase in sales, thereby increase in profits and hence positive impact of liquidity on profitability as measured in ROTI. At the same time, Liquidity has significant negative impact on ROE when enters into regression run with LTD/TNA ratio and Debt/Equity ratio. This result is consistent with the findings of (Abeywardhana, 2015). Liquidity is also negatively correlated with all Debt ratios (Table 2). This may be due to the fact that firms having greater liquid assets would mean that they would have lower need of financing from short term or long term sources of borrowings. Growth, measured as compound annual growth rate in sales has no significant impact on profitability, and has negative coefficient in nine regression runs. Size measured as natural logarithm of total net assets had no significant impact on Profitability of FDI firms in manufacturing sector India though the coefficient was negative in most of the regression runs. It is likely that as Size in terms of assets increases, the firms may be financing these assets through long term borrowings. Evidence can be seen in positive correlation coefficients of Tangibility with all measures of Debt (Table 2) except short term debt ratio. This indicates that purchase of fixed assets are being financed through long term debt sources and as it is observed that debt levels have negative impact on profitability, so does firms Size measured in terms Total Net assets has negative impact on profitability. In the same way, Tangibility as

measured by ratio of Net fixed assets to Total net assets had significant negative impact on ROE and had negative coefficient in all other regression runs. It is possible that financing the fixed assets through long term debt is costly and therefore has negative impact on shareholders return. The indicator Age had positive coefficient in eleven regression runs indicating that mature firms are profitable firms.

As per the results of multiple regression analysis,

- The study accepts the null hypothesis H_{01} that there is no significant impact Total Outside Liabilities / Total Net Assets ratio of a company on its Profitability.
- The study rejects the null hypothesis H_{02} , that there is no significant impact of Long Term Debt / Total Net assets ratio of a company on its Profitability and accepts the alternative hypothesis that Long Term Debt / Total Net assets ratio has significant negative impact on Profitability.
- The study accepts the null hypothesis H_{03} that there is no significant impact of Short Term Debt / Total Net Assets ratio of a company on its Profitability.
- The study rejects the null hypothesis H_{04} that there is no significant impact of Debt / Equity ratio of a company on its Profitability and accepts the alternative hypothesis that Debt/Equity ratio has significant negative impact on Profitability.

7 CONCLUSION

Role of Capital Structure decision in maximizing the value of the firms with Foreign Direct Investment in Indian manufacturing sector cannot be underemphasized. An appropriate Capital Structure is a crucial decision for any firm as it influences the value of the firm. The objective of any firm should be to use the most appropriate financing mix which will maximize the value of firm, minimizing the overall cost of capital. Success of a company depends on effectiveness of managers in obtaining positive financial results which will help to maintain the stability and increase the shareholders wealth. Better profitability of a company will directly have an effect on the development of the country in which they operate. Hence, the main objective of this study is to evaluate the relationship between Capital Structure and Profitability of Foreign Direct Investment companies of Indian manufacturing sector. In this study, an attempt is made to evaluate the relationship between Capital Structure and Profitability of a sample of 54 Foreign Direct Investment companies from S&P BSE 500 Index representing Indian manufacturing sector for a study period of 9 years from 2009-2010 to 2017-2018. Three profitability measures were employed as indicators of profitability- ROA, ROE and ROTI. Four debt measures were employed to study the impact of capital structure on profitability- TOL/TNA, LTD/TNA, STD/TNA and Debt/Equity ratio. The control variables included in the study were Size, Growth, Liquidity, Tangibility and Age. Multiple regression technique was applied to study the impact of Capital Structure on Profitability. Overall empirical results indicate that Long term Debt ratio and Debt/Equity ratio have significant negative impact on profitability. The result confirm the prediction of Pecking-Order Theory where profitable firms prefer to use internally generated funds out of surplus profit to finance their investments firms and hence resort to lower levels of debt in their Capital Structure. Short term debt funds as represented by current liabilities are an important mode of financing adopted by sample FDI companies. Short term debt ratio (STD/TNA) has positive impact on ROA and ROE although statistically not significant. The correlation

coefficient between STD/TNA and ROE is positive and significant at 5% level indicating that increase short-term debt might lead to increase in profits of sample companies. Liquidity has a positive and significant impact on profitability measured in terms of ROTI. Increase in liquidity must be supporting increase in sales, thereby increase in profits and hence positive impact of liquidity on profitability as measured in ROTI. Liquidity has significant negative impact on ROE. Growth has no significant impact on profitability. Size has no significant impact on Profitability though the coefficient was negative in most of the regression runs. Tangibility has significant negative impact on ROE indicating a possibility that financing the fixed assets through long term debt is costly. The indicator Age had positive coefficient in regression runs indicating that mature firms are profitable firms. It may be concluded that Capital structure does have a significant impact on profitability and the right choice of financing the assets may have an effect on the performance of Foreign Direct Investment companies in the Indian Manufacturing sector. The study reveals that Foreign Direct invested companies from Indian manufacturing sector prefer lower debt levels in their capital structure. They prefer to use more short term debt than long term debt and prefer to use internal funds over external funds to finance their activities. It is suggested that the top management should make appropriate choice of mix of capital structure as it has long term impact on profitability and survival of the firm. The companies should be able to use their investment in fixed assets effectively to increase their returns. The sample selected for present study consists of only Foreign direct investment companies from S&P BSE 500 Index representing Indian manufacturing sector. Domestic companies with no FDI are not included in the sample. So it is suggested that future research may incorporate and evaluate the impact of capital structure on profitability of domestic companies from various other sectors in India to get further insights into the capital structure choices of Indian companies. Other performance indicators may be included in future research work to capture the impact of capital structure on profitability. A longer study period may be selected by for future research work to incorporate the effects of liberalization, recession period and post-recession scenario.

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