

**A STUDY ON THE DETERMINANTS OF CAPITAL
STRUCTURE OF INFORMATION TECHNOLOGY INDUSTRY
IN INDIA**

**A Project Report Submitted to the Delhi Technological University in
Partial Fulfilment of the Requirements for the Degree of**

**MASTER OF BUSINESS ADMINISTRATION
(EXECUTIVE)**

BY

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2K14/MBA/524

UNDER THE GUIDANCE OF

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DECLARATION

I, Nikhil Mudgal, do hereby declare that the thesis entitled “**A Study on the Determinants of Capital Structure of Information Technology Industry in India**” has been undertaken by me for the award of Master of Business Administration (Executive). I have completed this study **under the guidance of Dr. Archana Singh, Professor of Finance, Delhi School of Management, DTU Delhi.**

I also declare that this thesis has not been submitted for the award of any Degree, Diploma, Associateship or Fellowship or any other title in this University or any other University.

Place: Delhi

(Signature of the Candidate)

Date:

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CERTIFICATE

This is to certify that the report submitted by **Mr. Nikhil Mudgal**, on the title “**A Study on the Determinants of Capital Structure of Information Technology Industry in India**” is a record of research work done by him under my guidance and supervision in partial fulfilment of Master of Business Administration (Executive). This report has not been submitted for the award of any Degree, Diploma, Associate-ship or Fellowship or any other title in this University or any other University.

Place: Delhi

Date:

(Signature of the Guide)

Dr. Archana Singh

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I am indebted to many people who helped me accomplish this project successfully.

I sincerely express my deep sense of gratitude to Dr. Archana Singh for providing her extraordinary cooperation, sustained support and inputs for the project. This project is the result of her painstaking and generous attitude.

The study has used data from a number of published sources which have been acknowledged as far as possible.

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ABSTRACT

Capital structure refers to the mix of debt and equity used by a firm in financing its assets. The capital structure decision is one of the most important decisions made by financial management. Since the foundational work of Modigliani and Miller (1958), a number of authors extended their capital structure irrelevancy theory.

This study analyzed the impact of capital structure in the Indian IT Industry scenario. Generally after doing a number of review literature on this topic. I came across several independent variables which have an effect on the debt-equity variable (dependent). On the basis of these variables I have tried to form a model which will express the relationship model between the debt-equity variable with the independent variables.

This paper studies the leverage decisions of Indian information technology (IT) sector firms. It attempts to explain the variation in capital structure of IT firms and determining variables using a regression model. It aims to explore the various factors that determine the choice of long term financing for listed firms. The impact of firms' tangibility, size, profitability, liquidity and earning variability on capital structure of listed Information Technology is investigated.

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1.1. Background Of the study

Determination of an optimal capital structure is a very important aspect for any organization. This decision is important because it helps an organization in increasing its returns but also for helping with reacting properly with its competitive environment. The early studies regarding the capital structure were largely non-empirical in nature.

The capital structure decision basically aims at determining the cost of capital is at the minimum. One of the many objectives of a corporate financial manager is to ensure the lower cost of capital and thus maximize the wealth of shareholders. Trends in financial economies help in explaining the considerations that make the company to choose a particular financing policy.

The Indian software industry has been a remarkable success story. It has grown more than 30 percent annually for 20 years, with 2015 exports projected at close to \$ 21 billion. India exports software service to more than 60 countries, with two third to the United States, including half of all Fortune 500.

Economic policy has undergone substantial revision driven by this sector, and India began to open up. Foreign exchange reserves are high, markets greatly influence policy, and a string of coalition governments have not deviated from economic liberalization. Benefits are uneven, though as the very poor have not deviated from economic liberalization. Benefits are uneven, though as the very poor have been little affected. High unemployment continues, and huge bureaucracies still yield to corruption. While problems remain, India is an emerging economy fueled by techno-savvy manpower and a world-class information technology industry.

1.2. Statement of problem

The problem statement in this study would be to determine what factors affect the capital structure decision of the firms in the IT Industry, Moreover, it could be observed if the capital structure decisions of the IT Industry are governed by any major capital structure theory in particular.

1.3. Objective of the study

The main purpose of this study is to understand the problems that affect the decisions regarding the capital structure of the IT Industry in India and the various sources to meet these requirements. Efforts will also be made to identify the various factors that affect these decisions.

The objectives in more specific terms will be:

1. To obtain the main determinants of capital structure of IT Industry.
2. To build a model to find out the level of leverage in IT industry.
3. To explore the link between theory and practice of capital structure.

1.4. Research Methodology

This will be an exploratory research which will focus on empirical study based on factual data in order to identify the determinants of capital structure in the IT sector.

The study will mainly explain if the major capital structure theories hold true to the capital structure decisions of the IT Industry. The panel data methodology would be applied for this study.

The study would be restricted to the IT industry.

Secondary financial data to be used for the purpose of the study will be obtained from the CMIE database and BSE directory. Other sources of secondary data will be websites of the companies and other related financial websites.

Primary data will be collected through discussions, for the second phase of the study. The secondary data would be the historical financial statements of the companies over a periods of 5 years.

Different scales will be used for the construction of questionnaire and different statistical tools like, multiple regressions, Anova, Chi Square test etc. will be used in the process. With the help of these data certain techniques can be performed to get desired output.

1. Regression analysis
2. ANOVA analysis
3. Coefficients matrix

1.5. Expected contributions and significance of the study

This study will be helpful for the IT companies to better streamline their capital structure. It will also be helpful for the new enterprises to design their capital structure. It also offers scope for further research, as not much research has been done in this area in India.

2.1. Introduction

A literature review is an account of what has been published on a topic by accredited scholars and researchers. It can be defined as critical and depth evaluation of previous research which has been done. It can also be defined as summary and synopsis of particular area of research. It allows establishing the objective of particular research program. A literature review is a body of text that aims to review the critical points of current knowledge including substantive findings as well as theoretical and methodological contributions to a particular topic.

Besides enlarging your knowledge about the topic, writing a literature review lets you gain and demonstrate skills in two areas:

1. Information seeking: the ability to scan the literature efficiently, using manual or computerized methods, to identify a set of useful articles and books.
2. Critical appraisal: the ability to apply principles of analysis to identify unbiased and valid studies.

2.2. Features:

1. It is critical and evaluative account of what has been published on a given topic.
2. Its purpose is to summarize, synthesize and analyze the argument of others.
3. It is not an academic research paper, the main purpose of which is to support your own argument.
4. It should describe and analyze the knowledge that exists and what gaps occur in research related to your field of interest.
5. It should reveal similarities or differences, consistencies and inconsistencies in the previous research.

2.3. Importance:

1. It helps in finding out the previous research findings in a particular topic.
2. It also helps know the methodological approach to conduct the research.
3. It also helps detect conflicting points of view expressed by different authors in the research paper, which helps in understanding the diverging theories about the topic.
4. It provides an understanding of the current knowledge on a topic.

2.4. How the review has been done

To do the review of literature first the research paper is selected in accordance with the topic of research. Once the research papers are selected, the problem statement and objective of the research paper are identified. After identifying the objective of the research, the tools used and the methodology used is identified. In the process of doing a literature review, we must see its relevance. At last conclusion and the limitation of the research are identified

The development of the literature review has been done in 4 stages:

1. Problem formulation: which topic or field is being examined and what are its component issues?
2. Literature search: finding materials relevant to the subject being explored.
3. Data evaluation: determining which literature makes a significant contribution to the understanding of the topic.
4. Analysis and interpretation: discussing the findings and conclusions of pertinent literature.

2.5. Work done: I have done a review on 30 research papers by following a certain format as follows:

1. Title
2. Author
3. Tools used
4. Conclusion
5. Research gap

2.6. Review of Literature

Gill, A. Biger, Nahum. Pai. C. and Bhutani. S (2009) in their paper of the Determinants of capital structure in the service industry explained the tools used are logarithm of sales (LnS), ANOVA's test, and Regression analysis. The paper seeks to extend findings regarding the determinants of capital structure. Empirical results show that leverage is negatively related to the firm's profitability. This paper offers useful insights for the service industry owners and managers based on empirical evidence. Theoretical research predicts positive relationship between collateralized asset and leverage. Prior empirical studies use fixed assets as its proxy and the findings are consistent with theoretical predictions. The findings of this paper are inconsistent with the finding of Long and Maltiz in which they indicate the positive relationship between leverage and profitability. This study is limited to the sample of American service industry firms. The findings of this study could only be generalized to service firms.

Boora, Raj S. Dhankar and Ajit S (1996) in their paper published on Cost of capital, optimal capital structure and value of firm. An empirical study of Indian companies by the authors, RAJ S Dhankar and Ajit S boora. The tools used t-test, f-test, Karl Pearson's bivariate correlation coefficient. No significant relationship was found between change in capital structure and the value of a firm, at the micro level. This is because of the fact that the value of a firm is affected by a multiplicity of factors and capital structure is just one of them. But the results were not statistically significant. These results suggest that though cost of capital decreases when leverage increases, this decrease is very moderate and not proportional to debt level. The research gap can be sited as many of these factors like the reputation of promoters, management of the company, economic and political conditions, role of bulls and bears, government policies etc. are not measurable as they are qualitative in nature. Companies were found to differ significantly in capital structure irrespective of whether they belong to the same industry group or different groups. This is because of the fact that the magnitude of the effect of determinants of capital structure vary from company to company.

Pandey (2002) capital structure and market power. The tools used hausman statistics, correlation matrix, fixed effects model. This study has empirically examines the relationship between capital structure and market power using data for 208 Malaysian companies for the period from 1994 to 2002. The estimation method uses fixed firm and time effects model on

panel data. The study provides new insights on the way in which the capital structure measured by total debt-to-assets ratio and market power measured by Tobin's Q ratio are related. The have excluded the financial and securities sector companies as their financial characteristics and use of leverage is substantially different from other companies adjusted data of those companies, which change their financial year.

Getzmann,A., Sebastian, L., Spreman,K (2010) published determinants of target capital structure and adjustment speed evidence from Asian capital market. The tools used are multiple regression model, trade off theory, pecking order theory. As far as we know this is the first empirical study reporting a geographically as well an economically discussion on the target adjustment behavior for the Asian market. The result complete the capital structure puzzle by contradicting earlier findings of pecking order behavior in Asian. The target capital behavior was in the range 27% to 39% which don not cover all the companies. Effective adjustment on the basis of assumptions of the past data.

Welch,I,RI and NBER(2011) in their research paper published two common problems in capital structure research: the financial-debt-to-asset ratio and issuing activity versus leverage changes IVO WELCH, Brown University, RI and NBER. The tools used are regression analysis, leverage ratio. This paper points two common problems is capital structure research. First although it is not clear whether non-financial liabilities should be considered debt, they should never be considered as equity. Yet the common financial-debt-to-asset ratio (FD/AT) measure of leverage commits this mistake. The research on increases in FD/AT explains, at least in part, decreases in non-financial liabilities. Future research should avoid FD/AT altogether. The paper also quantifies the components of the balance sheet of large publicly traded corporations and discusses the role of cash in measuring leverage ratios. Second equity-issuing activity should not be viewed as equivalent to capital structure changes. Empirically the correlation between the two is weak. The capital structure and capital issuing literature are distinct. The cash may not have been committed for repayment but for real projects that have the same characteristics as the firm's projects. In this case, the 80% leverage ratio in the example may have been observed because it was the firm's optimal debt ratio, after all.(it may not have been the case that the unused parked cash merely served to distort the firm's correct 60% leverage ratio on its real asset into an 80% 'fake' measured leverage ratio)

Roshan and Boodhod (2009) Capital structure and ownership structure Modigliani and Miller hypothesis, the free cash flow analysis. This paper is a review of literatures on capital structure and provides empirical evidence that there exists a relationship between the capital structure and ownership structure of the firm. Economists have not yet reached on consensus on how to determine the optimal capital structure (debt to equity ratio) that will enable firms to maximize performance by simultaneously dealing with the principal-agent problem. Taking into consideration the shortcomings of both equity. The estimated model is very limited since it only includes variables which have been discussed in the brief literature review of this paper. In reality, it is much more complex to determine the optimal capital structure of the firm. However the estimated model provides empirical evidence regarding the relationship between capital and ownership structure

Abor.J, (2009) explained Determinants of the capital structure of Ghanaian Firms, Department Of Finance University Of Ghana Business School Legon, AERC Research. The tools used are Prais-Winsten regression model, Correlation analysis. This study examined the determinants of capital structure decisions of publicly quoted firms were found to have higher debt ratios than ITs Overall, listed and unquoted firms exhibit different financing behavior from that of ITs. Short term debt constitutes a relative high proportion of total debt of Ghanaian firms. The results indicate that older ITs are more likely to rely on long term debt finance. This is because they are often perceived to have better reputations with debt finance providers. Listed firms are better positioned to raise equity finance from the stock market, and large unquoted firms are also able to access equity finance from institutional investors usually through private placement located outside the capital city depend less on debt finance. These companies are not analyzed properly.

Gaud.P, Elion.J,(Oztek,2009) Martin.H and Andre. B (2008) The capital structure of Swiss companies an empirical analysis using dynamic panel data. The tools used Dynamic Model, Static Model. This paper presents a study of the determinants of capital structure for Swiss companies. The analyses are performed using data pertaining to 106 firms for the period 1991-2000. Both static and dynamic tests are conducted, and panel data specifications are used. The dynamic analysis is conducted using a combination of the GMM approach and instrumental variables to check for endogeneity in variables. Once data for a longer time period are

available, research should focus on the analysis of the stability of the speed of adjustment of swiss firms towards the target debt-to-equity ratio. Also, the results contained in our paper suggest that macroeconomic events and the institutional context play an important role on the capital structure decisions of swiss companies.

Frielinghaus.a, B.Mostert and C. Firer,(2007) on Capital structure and the firm's life stage, graduate school of business, University of Capetown, private bag, Randebosch 7701, republic of South Africa. The tools used agency cost theory, pecking order theory, information asymmetry theory, Static trade-off theory. In conclusion, this paper has argued the case for a relationship between capital structure and a firm's life stage. We provide an overview of the two sets of theories and follow this with a proposed linkage between the life stage and capital structure. The empirical study produced some interesting results with consequences for organizational life stage theory and capital structure theory, and for practical applications in the corporate finance field. It is very much a pilot study. It would need the cooperation of a major bank to reach a broad and deep sample. This would allow access to firm balance sheets, which would provide for more accurate assessment of capital structure. The larger sample would allocate for more precise conclusions to be drawn about the significance of individual life stages, and perhaps remove the need to group them.

Dr. Ong Tze San and Tch Boon Heng(2007) published capital structure and corporate performance of Malaysian construction sector. The tools used the pooling regression model, the hypotheses, trend analysis. This paper studies the relationship of capital structure and corporate performance of firm in construction sector before and during crisis. A Linear model has been developed to estimate the effect of variation in capital structure to the variations in the firms' capital structure and corporate performance. In the interim, the result also indicates that there are no relationships between the various variables that have been examined. Different proxies of capital structure will retort differently to the proxies of corporate performance. For big construction companies, only ROC and EPS for large construction companies have significant relationships with capital structure. Comparatively, ROC and DEMV are the most correlated and depicting the strongest relationship among all the variables examined. The limitation of the study is that the samples are only focused on construction sector which are listed in the main board of bursa Malaysia. In fact there are many other sectors in bursa

Malaysia. Therefore, the result may not represent the result on other sector in Malaysia. Apart from that, there is problem with the firms in the sample set which adopt different accounting policies. In addition, the period for annual closing account is different among the companies.

Campello (2000) published capital structure and product markets interactions evidence from business cycles, USA. The tools used Marginal costing method. While results from inter-industry studies are inherently difficult to interpret, they can provide valuable insights. The findings as evidence that capital structure influences competitive performance in a systematic way. Overall, the results suggest that firms' financing choices have implications for cyclical dynamics of strategic interactions in product markets in particular. These dynamics should be carefully accounted for in future work by both macro and financial economists. The equation may vary in case of high debt situation.

Bernadette A Minton and Karen H. Wruck (2001) financial conservatism: evidence on capital structure from low leverage firms tool used is pecking order theory. The analysis provides new insights into the behavior of financially conservative firms. It also raises a number of interesting and potentially areas for future research. The document that conservative firms follow a pecking order style financial policy. Conservative firms have a high flow of fund surplus and large cash balances relative to more leveraged firms. These internal funds are sufficient to fund the bulk of both the operation and discretionary outlays. The sample size is limited.

Robert W. Klein (2001) published the Capital structure of firms subject to price regulation: evidence from the insurance industry. The tools used regression analysis. This paper makes two important contributions to our understanding of the relationship between price regulation and the capital decisions of firms. First we extend the empirical literature investigating the interaction between capital structure and price regulation by conducting tests on insurers that operate in a variety of regulatory environments. The second manner in which this paper deepens our understanding of the price regulation and capital structure interaction is because of the particular form of debt capital issued by insurer's policyholder liabilities. The recent trend for states to move towards more restrictive regulatory system for auto insurance creates environments vulnerable to regulatory suppression and compression. These trends could

contribute to another round of regulator-insurer conflict over prices with adverse effects on insurer capitalization and financial risk.

S.M. Francisco, (2001) on capital structure in the small and medium enterprises. the tools used are ordinary least squares (OLS) In fiscal theory, we find leverage to be significantly negatively correlated with alternative tax shields like depreciation, which may seem to confirm DeAngelo and Masulis (1980) theory when we apply it to ITs. Trade off theory, allow us to extend the explanation in part of the financial behavior of ITs. First of all, size and asset structure are both positively correlated with firm debt level, as stated by the theory. Furthermore, the analysis could be enriched by taking a dynamical look to the issue and formulating dynamic models of debt policy with instrumental variables.

Andres A and Carlos. M, (2001) published intra-industry capital structure dispersion. The University of Texas at San Antonio. The tools used are univariate analysis, regression analysis, f test. This paper examines the dispersion in capital structures among firms within an industry characteristics. It is find out that intra-industry capital structure dispersion is greater in industries that (i) are more concentrated, (ii) use leasing more intensively, and (iii) have loose corporate governance practices. Do the main forces identified here also affect the dynamics of intra-industry dispersion of capital structures? How do firms adjust (Gustavo Grullon and George Kanatas, 2002) when they deviate from their optimal capital structures? Is the speed of adjustment related to industry characteristics? Do firms coordinate their financing decisions and, if so, how?

Franck Bancel & Usha R. Mittoo, (2002) The determinants of capital structure choice: a survey of European firms. The tools used are survey questionnaire, factor analysis, summary statistics, we can draw several important conclusions from the preliminary analysis of the sample. Two main considerations seem to drive the behaviors of managers facing financial policy decisions: the search for financial flexibility and the impacts on the financial. The survey analysis is at initial stages and the above findings are only preliminary as these are based on a subset of sample firms.

Gonzalez, (2002) published legal environment, capital structure and firm growth: international evidence from industry data. The tools used are regression, interaction analysis, size analysis. The evidence found suggests a significant impact of the legal environment, say banking

regulation disclosure requirements and investor protection, on industry growth in general terms. To the extent that sector growth is affected by national creditor and shareholder protection laws as well as banking rules, the adoption of an adequate legal environment may become a comparative advantage for national industries competing internationally, especially for those sectors more externally dependent and when financial markets are small.

Roberts and Micheal R. (2002) have published the dynamics of capital structure: an empirical analysis of a partially observable system. The tools used are covariance matrix. This study has presented evidence on the dynamics of capital structure using a framework on a number of issues. From a theoretical standpoint, these results suggest a movement towards dynamic specifications, a trend the field has been seeing in recent years. The economic interpretations of the results suggest that existing theories of capital structure need not be mutually exclusive. Much work remains, particularly with regard to the specification of what firms may be targeting.

K. Kaifeng (2002) published on the influence of capital structure on company value with different growth opportunities. The tools used are regression. The empirical tests provide weak support for the Ross (1977) model, but failed to support the McConnell and Servaes (1995) model, but failed to support the McConnell and Sravaes (1995) model. It is that the particular governance structure in the Netherlands may provide us partial explanation for the insignificant positive coefficient of the debt ratio to firm value. The strong position of the management board and the close link between the firm and the bank make the debt an ineffective disciplining mechanism. It is evident that the company value will be increased if the company chooses no debt capital structure in the Netherlands.

Gustavo. G and George.K, (2002) Financing decisions and advertising: An empirical study of capital structure and product market competition. The tools used are linear regression, endogeneity tests, instrumental variable approach, reverse causality test. Despite considerable interest among financial economists, the question of how capitals structure affects product market competition has remained an open empirical issue. One strand of the literature predicts that greater leverage motivates more aggressive or “harder” competition, while another associates it with less aggressive or “softer” competition. Nevertheless, the results are consistent with the prior work in rejecting the hypothesis that greater financial leverage

motivates a firm to undertake more intense product market competition. In fact, our results suggest the opposite- that a firm's relatively greater use of debt is associated with it being a less aggressive competitor.

Song, Samuel G.H. Huang and Frank M.,(2002) The determinants of capital structure: evidence from china. The tools used are OLS analysis and TOBIT model. The forces working on firms' capital structure in other countries also work in a quite similar way in china. Although china is still transforming its economy from a command economy to a market-based economy and the state is still the controlling shareholder for most listed companies, the factors which affect firms' leverage in other countries also affect Chinese companies' leverage in a similar way. Specifically, leverage, as measured by long-term debt ratio, total debt ratio and total liabilities ratio, decreases with profitability and increases the company size. Tangibility has a positive effect on long-term debt ratio. Firms that have experienced quick sales growth rate tend to have less leverage. While the findings in developed countries are mostly portable to china, the capital structure of Chinese companies has some different features like different approach in GAAP, external financing mode.

Patti, Allen N. Berger and Emilia.B (2003) Capital structure and firm performance: a new approach to testing agency theory and an application to the banking industry. The tools used are SPEFF analysis, empirical model. High leverage reduces the agency costs of outside equity and increases firm value by constraining or encouraging managers to act more in the interests of shareholder. Eventually profit efficiency is responsive to the ownership structure of the firm. Future research could consider other dimensions, such as the use of subordinate notes and debentures, or other individual debt or equity instruments.

Murray Z. F. and Vidhan K. G (2003) published on capital structure decisions. The tools used is factor analysis. This paper studies the leverage decisions of U.S. Firms. Top tier factors and second-tier factors are identified and distinguished from those factors that do not have reliable relationships with leverage. Changes over time and across firm circumstances are studied. The evidence that is consider does not allow to tell whether direct bankruptcy costs matter in this kind of research.

Joseph PH.F, Sheridan. T & Garry. T. (2004) An international comparison of capital structure and debt maturity choices. The tools used are sample survey, regression. At the outset, it is

described regression results that indicate that a firm's capital structure is determined more by the country in which it is located than by its industry affiliation, suggesting that the institutional environment can have a profound effect on how firms are financed. Specifically, find that a country's legal and taxation system, level of corruption and the preferences of capital structure is determined more by the country in which it is located than by its industry affiliation, suggesting that the institutional environment can have a profound effect on how firms are financed. Specifically, find that a country's legal and taxation system, level of corruption and the preferences of capital suppliers -banks and pension funds-explain a significant portion of the variation in leverage and debt maturity ratios. This is particularly true in the debt maturity regressions where corruptions, legal system and the size of the banking sector are very strong in all subsamples and sub-periods.

Miao.J (2003) published on optimal capital structure and industry dynamics, the tools used are aggregation, the base case model the analysis reveals that the interaction between financing and production decisions is important in an industry equilibrium. Moreover, the equilibrium output price has an important feedback. As a result, several conclusions reached in the standard single contingent claims models do not hold true in an equilibrium setting. The paper could be extended in several directions, which are left for future research like the expected returns of equity and other macroeconomic variables are constant. To study equity premium and other time series behavior of the industry, it is necessary to introduce aggregate uncertainty. Second, this paper consider only the conflict of interest between shareholders and bondholders.

Marques and Manuel, (2004) Optimal capital structure and industry dynamics. The tools used are trade-off model. Results show moderate support for the trade-off theories of capital structure. Little evidence was found in favor of the pecking order structure policy model. The majority of surveyed CEOs, 54.9 percent, admit that bank's stock price performance is relevant for timing new security offerings. This evidence is interpreted as consistent with the market timing theory. It is to be acknowledged that the lack a theory with the ability to explain and predict the dynamics of a firm's capital structure choice along its life cycle.

Frydenberg, Stein, (2004), Determinants of corporate capital structure of Norwegian manufacturing firms. The tools used are OLS- model, classical-regression analysis, the final

conclusion of the evidence given in this study could then be that the pecking order hypothesis dominates the other factors that are implicit in a Tradeoff theory.

The new findings of the study compared to previous literature are that only fixed assets appear to have economic significance as measured by the elasticity between debt and fixed assets. The other variables are statistically significant. However they do not have the non-trivial.

Suominen, paolo.F and Matti, (2005) expressed their views on Does bad corporate governance lead to too little competition? Corporate governance, capital structure, and industry concentration the tools used is correlation matrix. The main message from the paper is that the quality of the corporate governance system of an economy may be an important determinant of its competitive conditions. Thus, it suggest the existence of reverse causality between corporate governance and competition. For less efficient firms, whose financing opportunities determine the industry structure, convertible debt may not be an attractive option.

Rossi and Stefano, (2005) Patents, capital structure and the demand for corporate securities. Tools used is factor analysis. Technological innovations as measured by patents are an important positive determinants of firms' market valuations. In this paper assess empirically their implications of corporate financing, investments and subsequent stock returns. Further predictions on the cross-sectional variations of competitive pressure are not borne out in the data.

Fan, (2005) expressed his views How profitable is capital structure arbitrage? The tools used are trend analysis, CG Model. This paper presents the most comprehensive study to date of capital structure arbitrage, a popular trading strategy in recent years in which the arbitrageur takes advantage of the temporary divergence between CDS market spreads and predicted spreads from a structural credit risk model. These results are robust to CDS market transactions costs and several variations to the implementation of the trading strategy.

Ciaran Mac, Bhair, (2006) Capital structure and the financing of ITs: Empirical evidence from an Irish survey. The tools used are multivariate analysis, regression analysis, Univariate analyses. Empirical investigations on the capital structures of ITs have been dominated by studies using data from the US and the UK. This cross-sectional study addressed the deficit in the Irish context by providing fresh empirical evidence on the financial structures of ITs and

on the means of collateral on which debt financing is secured. This cross-sectional study is subject to survivor bias, and has a number of means we possibly understate the use of external finance not considered in this paper is trade credit, which means we possibly understate the use of external finance throughout the life cycle. Neither are the sources of financial advice and expertise employed by the ITs reported. These may have an important influence on the source of finance used, but their influence on the financing decision is difficult to differentiate from that of personal preferences.

Capital structure Theories

Trade off theory: Debt is typically cheaper for a firm to service because it does not imply any form of risk-sharing and it can be collateralized, unlike equity that is a residual claim. In this sense, a firm can lower its weighted average cost of capital, at least initially, through leverage. Leveraging, however, also increases the financial risk of the firm that must service its debt regularly, unlike its equity. In this sense, a firm must balance the benefit brought about by the lower average cost of capital against the increase in financial risk: trade off theory identifies the optimal debt-to-equity ratio as the level at which the two offset each other.

Pecking Order Theory: According to this theory, firms prefer to finance themselves internally through retained earnings; when this source of financing is not available, the company issues debt and only in the last instance does it issue equity. This is due to the type of message that the different type of securities send to the market: while debt signals to investors that management are confident that they can service the debt, equity signals that management believe the firm to be overvalued and could potentially trigger a fall in its share price

3.1. Statement of the problem

Although many studies have been conducted on the capital structure, still there's a gap of satisfactory, comprehensive and positive explanation for firms capital structure observed behavior, it is still not well understood why firms financial contracts recurrently appear in certain patterns and most of the research work had been carried out in developed economies and very little is known about the capital structure of firms in developing economies and very little is known about the capital structure has focused on public, nonfinancial corporations with access to U.S. or other international capital markets. The study on the determinants of capital structure of IT Industry in the developing countries like India has been overlooked and therefore a study on the determinants of the capital structure of Indian IT Industry is an important research area that needs to be explored.

3.2. Issues

To summarize, the purposes of the paper are to answer the questions below:

1. How do IT companies decide on their capital structure?
2. What is the method of capital raising they prefer to use in their capital structure long term strategy?
3. Is there any model that the IT Companies use in deciding their capital structure?

Furthermore, based on the idea that IT Industry is an attractive investment to the banks and equity investors and many investors are willing to put more money in the industry, we will give some discussion on how this matter would affect IT companies in terms of money raising.

3.3. Objective of the study

The present study has been undertaken with the following objectives:

1. To obtain the main determinants of capital structure of IT Industry.
2. To build a model to find out the level of leverage in IT industry.
3. To explore the link between theory and practice of capital structure.

3.4. Variables of the study

Dependent variable: The dependent variable in the study is the Debt Equity ratio

Independent variable used in the study are Profitability, Growth, Collateral/Assets Structure, Size, Liquidity, Age, Non-Debt Tax Shields, Default Risk, Cash Operating Profit and Effective Tax Rate.

3.5. Hypothesis

Hypothesis 1: A negative relationship will exist between profitability and debt equity ratio (Trade off theory).

Hypothesis 2: A negative relationship will exist between growth and debt equity ratio (Trade off theory).

Hypothesis 3: A positive relationship will exist between collateral and debt equity ratio (Pecking order theory).

Hypothesis 4: A positive relationship will exist between size and debt equity ratio (Trade off theory).

Hypothesis 5: A negative relationship will exist between liquidity and debt equity ratio (Pecking order theory).

Hypothesis 6: A negative relationship will exist between age and debt equity ratio (Pecking order theory).

Hypothesis 7: A positive relationship will exist between non debt tax shield and debt equity ratio (Trade off theory).

Hypothesis 8: A negative relationship will exist between cash operating profit and debt equity ratio (Agency theory)

Hypothesis 9: A positive relationship will exist between effective tax rate and debt equity ratio (Trade off theory).

Hypothesis 10: A negative relationship will exist between default risk and debt equity ratio (Trade off theory).

3.6. Working Definitions

3.6.1. Profitability:

Many authors have different views on the relationship between leverage and profitability. The pecking order theory suggests a negative relationship between leverage and profitability. If a firm has more retained earnings, it will be in a better position to finance its future projects by retained earnings, instead of external debt financing. Regardless of the industry in question, it has been found that the most profitable firms borrow the least. The finding that the more profitable the firms is, the less they borrow, is against the trade-off model. The trade-off model suggests that profitable firms should borrow the least. The finding that the more profitable the firm is, the less they borrow, is against the trade-off model. The trade-off model suggests that profitable firms should borrow more, since they have a greater need to protect income from corporate taxes. What should also support a positive relationship between profitability and leverage is that the profitability of bankruptcy decreases as profitability increases. We will use the ratio of operating income to total assets as the proxy for profitability.

Profitability = PAT/Total Assets

3.6.2. Growth Opportunities:

Different theories give different predictions on how a firm's growth is related to its leverage. The agency theory gives a negative relationship between growth and leverage. (Myers, 1977) Underinvestment problem suggests a negative relationship between growth and long-term debt.

The argument is that if a firm's growth opportunities are intangible assets instead of tangible assets, the liquidity assets, the liquidity effect of high leverage may reduce a firm's ability to finance its future growth. So he suggests that managers at firms with valuable opportunities should be highly levered while technology-based industries with many growth opportunities should have relatively little debt. This is due to the fact that growing firms have more flexibility in their investment choices and may accept risky projects (Myers, 1977)

Growth= [(Sales of current year-Sales of previous year)/Sales of previous year]*100

3.6.3. Collateral/Asset Structure:

In an uncertain world, with asymmetric information, the asset structure of a firm has a direct impact on its capital structure since a firm's tangible assets are the most widely accepted sources for the bank borrowing and secured debts. If banks have imperfect information regarding the behavior of the firm, firms with few tangible assets find it difficult to raise funds via debt financing. The type of assets the firms hold plays a significant role in determining that firm's capital structure. The reason can be that when a large fraction of the firms' assets is tangible, assets can serve as collateral, which diminishes the risk of the lender suffering agency costs of debt. The liquidation value of the firm's assets will also be higher with tangible assets, which will decrease the probability of mispricing in the event of bankruptcy and make lenders more willing to supply their loans. It has also been found that firms can borrow at a lower interest rate if their debt is secured by assets with a stable long-term value. (Williamson, 1998). Collateralizing the debt also restricts the firms to using the funds for a specified project and decreases the conflicts between equity holders and debt holders (Meckling, 1976). In short, it can be assumed that companies with tangible asset structures experience a lower business risk. The shipping companies are usually highly levered, whereas companies involved in technological R&D employ less debt. Tangible assets reduce business risk and therefore also the cost of financial distress (Asgharin, 1997).

Collateral = Net Fixed Asset/Total Assets

3.6.4. Size:

Many studies suggest there is a positive relation between leverage and size. The cost of issuing debt and equity is negatively related to firm size. A firm's size is considered positively related to leverage. The most important argument is that informational asymmetries are less severe for larger firms than for smaller firms. If the public is more aware of what is going on at larger firms, the firm will find it easier to raise debt. Furthermore, larger firms can diversify their investment projects on a broader basis and limit their risks. Large firms are often more diversified and have more stable cash flows, the probability of bankruptcy for large firms is smaller compared with smaller ones. Thus the financial distress risk can be considered lower for larger firms.

Size = Log (Average of total assets)

3.6.5. Liquidity:

It has been argued that liquidity of the firm may have an influence on the choice between internal and external financing. According to the pecking order hypothesis, firms with financial slack (i.e. liquid assets such as cash and marketable securities) will prefer internal sources to finance future investments. Accordingly, firms with higher liquidity ratio are expected to have lower debt equity ratio.

Liquidity = Current Assets/Current Liability

3.6.6. Age:

It has been argued that young firms are more likely to depend on debt instruments since they do not have sufficient internally funds to finance new investments. This in turn suggests negative correlation between age and leverage. On the other hand, aged firms have established a good relation with banks and form good reputation through time. Accordingly they have better conditions and easier access to debt market than those new established.

Age = Log (Current Year- Year of incorporation)

3.6.7. Non debt tax shield:

The impact of tax on capital structure is the main subject of the pioneering study by Modigliani and Miller (1958). Almost all researchers now believe that taxes must be important to companies' capital structure. Firms with a higher effective marginal tax rate should use more debt to obtain a tax-shield gain. However, if much of a firm's income is already protected from taxes by accelerated depreciation or tax loss carry forwards, its tax rate will be low, and in this case debt will not be advantageous as it would be to a firm with higher effective tax rate. Also, if the firm is not maintaining a profit, there is no tax advantage to debt; therefore a tax shield only can be considered in the profitable company. A profitable firm should have all intentions to protect its income from taxes, but the opposite situation is seen in real life. Very profitable firms use the tax shield to a smaller extent, because these firms do not need much debt financing. Their high rate of return enables them to do most of their financing with retained earnings (Donaldson, 1961). We will return to examine this factor in the case study to find out if the two companies in our example

take tax shield into consideration when determining their capital structure since they are both profitable companies.

NDTS = Depreciation/Total Assets

3.6.8. Cash Operating profit:

It has been pointed out earlier that agency theory argues that debt reduced the amount of free cash flow available to managers to undertake personally beneficial activities since it commits the firm to pay out cash (Jenson, 1986). This theory, therefore, suggests a direct relationship between free cash flow and leverage. However, if free cash flow is representing the capacity of the firm to generate internal resources, then a negative relationship between free cash flow and debt levels is expected (pecking order theory).

COP = Cash flow from operating income

3.6.9. Effective tax rate:

The scope of taxability of any entity in India depends on its residential status. A resident taxpayer is taxable in India in respect of its global income. A company incorporated in India or wholly controlled and managed from India is regarded as a Resident of India and thus would be chargeable to tax in India on its global income. A foreign company is taxed in respect of its Indian source income. Thus income of a branch and foreign company will be taxed in India.

ETR = Corporate tax/PBT

3.6.10. Corporate tax:

Domestic companies are currently taxed at the rate of 30%. The rates mentioned in this paper are exclusively of currently applicable surcharge at the rate of 10% on tax for domestic companies and education cess of 3% on tax and surcharge, foreign companies and a branch of a foreign company, which would be regarded as a permanent establishment (PE) of its parent in India, would be chargeable to tax at the rate of 30% (excluding the currently applicable surcharge of 2% on tax and education cess of 3% on tax and surcharge).

4.1. IT Industry in India

The Indian Government acquired EVS EM Computers from the Soviet Union, which were used in large companies and research laboratories. In 1968 Tata Consultancy Services established in SEEPZ, Mumbai Bijoy(2007) by the Tata Group were the country's largest software producers during the 1960s. As an outcome of the various policies of Jawaharlal Nehru (Office: 15 August 1947 - 27 May 1964) the economically beleaguered country was able to build a large scientific workforce, third in numbers only to that of the United states of america and the soviet union. On 18 august 1951 the minister of education Maulana abul kalam azad, inaugurated the Indian Institute of Techonology at Kharagpur in West Bengal. Possibly modeled after the Massachusetts Institute of Technology these institutions were conceived by a 22 member committee of scholars and entrepreneurs under the chairmanship of N.R. Sarkar.

Relaxed immigration laws in the United States of America (1965) attracted a number of skilled Indian Professionals aiming for research. By the 1980s a number of engineers from India were seeking employment in other countries. In response, the indian companies realigned wages to retain their experienced staff. In the encyclopedia of india, kamdar (2006) reports on the role of indian immigrants (1980- early 1990s) in promoting technology- driven growth.

The national informatics center was established in march 1975. The inception of the Computer Maintenance Company (CMC) followed in October 1976. During 1977-1980 the country's Information Techonology companies Tat Infotech, Patni Computer Systems and Wipro had become visible. The microchip revolution of the 1980s had convinced both Indira Gandhi and her successor Rajiv Gandhi that electronics and telecommunications were vital to India's growth and development MTNL underwent technological improvements. During 1986-1987, the Indian government embarked upon the creation of three wide area computer networking schemes;INDONET (intenede to serve the IBM mainframes in india), NICNET (the network for india's national informatics center), and the academic research orinted education and research network (ERNET)

Most of the Information technology industrial sector was dominated by a select band of family based conglomerates that had been dominant historically. Post 1991, a major restructuring has taken place with the emergence of more technologically advanced segments among companies. Nowadays, more small and medium scale enterprises contribute significantly to the economy.

By the mid 90s, the private capital had surpassed the public capital. The management system had shifted from the traditional family based system to a system of qualified and professional managers. One of the most significant effects of the liberalization era has been the emergence of a strong, affluent and buoyant middle class with significant purchasing powers and this has been the engine that has driven the economy since.

Another major benefit of the liberalization era has been the shift in the pattern of exports from traditional items like clothes, tea and spices to Information Technology automobiles, steel, etc.

The 'made in India' brand, which did not evoke any sort of loyalty has now become a brand name by itself and is now known all over the world for its quality.

Studies on capital structure of Indian Industries are inconclusive and often conflicting. A study by Sharma and Rao (1968) concludes that debt due to its tax deductibility is a prominent determinant of the cost of capital. Before 1980s Indian financial managers courted debt due to its low cost, tax advantages and the complicated procedures to be observed in garnering equity capital. The substitutability of short term debt for long term loan was another attraction.

However, with the waves of liberalization, privatization and globalization sweeping the capital market in recent years, the corporate world has started wooing equity capital in a big way. The arrival of a matrix of new financial instruments such as commercial papers, asset securitization, factoring and forfeiting services, and the market related interest rate structure and their stringent conditions for lending, force modern enterprises to court equity finance.

At the initial stage of a firm, fixed assets as well as current assets have to be financed by this equity capital, since other sources may not be easily available at that time. Subsequently, when the firms get momentum, several lenders may stretch their hands for advancing loan, but the importance of equity capital does not end altogether. On the ground of stability and security, each firm is to maintain "equity cushion" throughout its life time.

In 1970s the use of bank credit in Indian corporate sector became so excessive that the desired correlation between bank credit and the holding of inventory and book debt was hampered in most cases. Hence, attempt was initiated to bring in a 'check' on the use of bank credit. All the study Groups gave recommendations in favour of providing a 'restraint' on the use of bank credit,

Notwithstanding, the share of bank borrowings to total borrowings in public limited companies is 20% in average during the period 1981-90, and that to current assets is 22-25%.

The yearly scores during the decade of eighty are also in agreement with the average results, and hence the standard deviations calculated thereon have been very low. In government companies, the combined scores in relation to total borrowings as well as to current assets are only 56% no doubt, but in six out of ten government companies the individual scores range from 17% to 31%.

Use of public deposit may frustrate the Government's policy of canalizing the flow of funds to industrial sector according to planned priorities. from the standpoint of depositor companies, public deposit can be said to be a viable source of finance in many respects. The most important argument in favor of its use is that it is cheaper than bank borrowings and many other sources of finances.

Longterm borrowings like debenture, institutional loan and government loan have also a contribution to working capital financing, since, a part of current assets is usually covered by longterm funds. In RBI sample, both hold individually 14% of total borrowings. In case of ten selected public limited companies their individual scores are 7% and in case of government companies their scores are only 0.1% 0.3%. Government loan, on the other hand, occupies as much as 66% share of total borrowings in government companies, though its position in public limited companies is really insignificant.

Another viable source of working capital is trade credit, which is considered to be a formality free, security free and interest free source of finance. Due to the above advantages, trade credit has been practically a common source of working capital to almost all enterprises; notwithstanding the fact that there is some implicit cost associated with trade credit and the explicit cost is also originated when cash discount offered is foregone.

One of the important factors determining the feasibility or otherwise of a particular source of finance is stated to be the cost. Hence, he has attempted to see thereafter how far the cost actually plays the decisive role in the selection of sources. With an attempt to estimate the effect of cost on their selection, he has computed the specific costs of some sources. Trade credit has been taken to be less costly source of finance, although there are some implicit costs of trade credit over and above the cost of foregoing cash discount.

Bank borrowings, on the other hand, appear to be costliest of the three sources. Thus, on cost consideration, it is natural that share of bank borrowing in working capital finance will be much lower than that of trade credit.

Until the early nineties, corporate financial management in India was a relatively drab and placid activity. There were not many important financial decisions to be made for the simple reason that firms were given very little freedom in the choice of key financial policies. The government regulated the price at which firms could issue equity, the rate of interest which they could offer on their bonds, and the debt equity ratio that was permissible in different industries. Moreover, most of the debt and a significant part of the equity were provided by public sector institutions. At the beginning of the reform process, the Indian corporate sector found it significantly over levered.

The liberalization changed all of this. The corporate sector was exposed to international competition and subsidized finance gave way to a regime of high real interest rates. One of the first tasks for the Indian companies was substantial deleveraging. Fortunately, a booming equity market and the appetite of foreign institutional investors for Indian paper helped companies to accomplish this to a great extent in 1993 and 1994. The downturn in the stock market that has followed since then has stopped this process from going any further and has probably left many companies still excessively levered. According to the figures compiled by the Centre for Monitoring the Indian Economy, the average debt equity ratio of private sector manufacturing companies in India fell from 1.72 in 1990-91 to 1.00 in recent times.

4.2. Current scenario

IT sector in india aggregated revenues of USD 101 Billion in FY 2011, generating direct employment for over 2.8 million people, as the industry continued its journey on the core themes identified for the next decade- diversification, transformation, innovation and inclusion. The industry focused on emerging verticals, markets and customer segments, driving innovation-led transformation in client organisations and transforming its internal operations.

The domestic IT market witnessed the indian consumers going up the IT maturity curve, return of economic growth , efforts by organisations and the government to increase technology adoption, and emergence of new delivery platforms is expected to reach nearly 2.5 million, The sector

continues to be one of the largest employers in the country directly employing 2.8 million professionals, with over 230,000 jobs being added in FY2015.

On an addition of 280000 employees while indirect job creation is estimated at 8.3 million. As an proportion of national GDP the sector (merchandise plus services) increased from less than 4 percent in FY1998 to 14.57 percent in FY2015, Export revenues (including Hardware) estimated to reach USD 98.1 billion in FY2015, Domestic revenues (including hardware) of about USD 21 billion; total industry estimated to reach USD 119.1 billion. Software and services revenues (excluding Hardware) comprising over 77.7 percent of the total industry industry revenues, expected to post USD 98.1 billion in FY2011; estimated growth of about 14.57 percent over FY2015 NASSCOM(2015)

4.3.BSE Listed IT Company (Prices)

Table No. 4.3 Top Gainers (As on 3 March 2016)

<i>Company Name</i>	<i>High</i>	<i>Low</i>	<i>Last Price</i>	<i>Prv Close</i>	<i>Change</i>	<i>% Gain</i>
<i>Hexaware Tech</i>	252.95	246.00	252.90	245.40	7.50	3.06
<i>Infosys</i>	1,192.90	1,167.50	1,174.00	1,156.25	17.75	1.54
<i>Mindtree</i>	1,561.75	1,519.25	1,544.95	1,525.60	19.35	1.27
<i>TCS</i>	2,360.00	2,301.20	2,346.15	2,319.55	26.60	1.15
<i>Tech Mahindra</i>	461.60	456.80	459.00	456.10	2.90	0.64
<i>Wipro</i>	548.00	540.10	543.00	539.85	3.15	0.58
<i>HCL Tech</i>	865.95	852.40	857.45	854.60	2.85	0.33
<i>MphasiS</i>	437.80	431.95	434.75	433.85	0.90	0.21

Source: Money Control

5.1. Data Analysis

A Regression model was built with the following variables:

Dependent variable: Debt Equity Ratio

Independent variables: Profitability, Liquidity, Growth, Size, Age, Non Debt Tax Shield, Default Risk, Cash Operating Profit, Effective Tax Rate and Tangibility.

The equation set for the model is as follows:

Debt/equity ratio = β_0 + β_1 Profitability + β_2 Growth Opportunities + β_3 Collateral Asset Structure + β_4 Size + β_5 Liquidity + β_6 Age + β_7 Non debt tax shields + β_8 Cash Operating Profit + β_9 Effective Tax Rate + β_{10} Corporate Tax Where, β_0 is the value of the constant.

Table No.5.1.1. Regression Model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.987 ^a	.975	.850	.033	.975	7.802	10	2	.119

a. Predictors: (Constant), CorporateTax, Age, EffectiveTaxRate, GrowthOpportunities, CollateralAssetStructure, NonDebtTaxShield, Size, Liquidity, Profitability, CashOperatingProfit

b. Dependent Variable: DebtEquityR

Source: Self computation

Table No.5.1.2. ANOVA Table

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.084	10	.008	7.802	.119 ^a
	Residual	.002	2	.001		
	Total	.086	12			

a. Predictors: (Constant), CorporateTax, Age, EffectiveTaxRate, GrowthOpportunities, CollateralAssetStructure, NonDebtTaxShield, Size, Liquidity, Profitability, CashOperatingProfit

b. Dependent Variable: DebtEquityR

Source: Self computation

Table No.5.1.3. Coefficient Table

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.449	.797		-.563	.630
	Profitability	-1.296	.871	-.887	-1.488	.275
	GrowthOpportunities	.001	.002	.086	.379	.741
	CollateralAssetStructure	.243	.236	.532	1.030	.411
	Size	.345	.155	2.599	2.234	.155
	Liquidity	.063	.027	1.111	2.336	.145
	Age	-.221	.141	-.529	-1.564	.258
	NonDebtTaxShield	1.435	1.044	.885	1.374	.303
	CashOperatingProfit	-4.532E-5	.000	-1.980	-.698	.557
	EffectiveTaxRate	-1.715	.731	-.723	-2.348	.143
	CorporateTax	-5.801E-6	.000	-.099	-.068	.952

a. Dependent Variable: DebtEquityR

Source: Self computation

5.2. Interpretations

So according to the equation of the model it can be written as,

Debt/Equity Ratio = (-0.449) + (-1.296) Profitability + .001Growth Opportunities + .243 Collateral Asset Structure + .345 Size + .063 Liquidity + (-.221) age + 1.435 Non debt tax shields + (-4.532) cash operating profit + (-1.715) effective tax rate + (-5.801) corporate tax.

R, the multiple correlation coefficient is closer to 1 which predicts the viability of the model which proves to be a better fit for the model.

R Square interprets 97.5% of the proportion of variance of explains all the variability of the debt-equity around its mean from the various independent variables like liquidity, profitability, size, age etc. indicates that the model. The higher the R-squared, the better the model fits data.

Adjusted R-squared gives the 85 percentage of variation explained by only independent variables that in reality affect the dependent variable debt-equity ratio.

5.3. Analysis

The first variable (constant) represents the constant, also referred as the Y intercept, the height of the regression line when it crosses the Y axis. In other words, this is the predicted value of debt equity ratio when all other variables are 0. From the table coefficients, the β value tells us about the relationship of each variable with independent variable, i.e. debt equity ratio.

Profitability: the coefficient for profitability is -0.449. So for every unit increase in profitability, a 0.449 unit decrease in debt equity is predicted, holding all other variables constant.

Growth Opportunities: the coefficient for growth is 0.001. So for every unit increase in growth, small change of .001 in debt equity is predicted, holding all other variables constant.

Collateral/ assets structure: the coefficient for Collateral/ assets structure is 0.243. So for every unit increase in Collateral/ assets structure, slight change of 0.243in debt equity is predicted, holding all other variables constant.

Size: the coefficient for Size is 0.345. So for every unit increase in Collateral/ assets structure, slight change of 0.345in debt equity is predicted, holding all other variables constant.

Non debt tax shields: the coefficient for non-debt tax shields is 1.435. So for every unit increase in Non-debt tax shields, slight change of 1.435in debt equity is predicted, holding all other variables constant.

Cash operating profit: the coefficient for cash operating profit is -4.532. So for every unit increase in cash operating profit, a -4.532 unit decrease in debt equity is predicted, holding all other variables constant.

Effective tax rate: the coefficient for effective tax rate is -1.715. So for every unit increase in effective tax rate is -1.715 unit decrease in debt equity is predicted, holding all other variables constant.

Corporate tax: the coefficient for corporate tax is -5.801. So for every unit increase in corporate tax is -5.801 unit decrease in debt equity is predicted, holding all other variables constant.

5.4. Hypothesis Testing:

Hypothesis 1: A negative relationship will exist between profitability and debt equity ratio (Trade off theory).

Ho: Negative relationship between profitability and debt equity ratio

H1: Positive relationship between profitability and debt equity ratio

Sig: 0.275

Thus, Ho accepted.

Hypothesis 2: A negative relationship will exist between growth and debt equity ratio (Trade off theory).

Ho: Negative relationship between growth and debt equity ratio

H1: Positive relationship between growth and debt equity ratio

Sig: 0.741

Thus, Ho accepted.

Hypothesis 3: A positive relationship will exist between collateral and debt equity ratio (Pecking order theory).

Ho: Positive relationship between collateral and debt equity ratio

H1: Positive relationship between collateral and debt equity ratio

Sig: 0.411.

Thus, Ho accepted.

Hypothesis 4: A positive relationship will exist between size and debt equity ratio (Trade off theory).

Ho: Positive relationship between size and debt equity ratio

H1: Negative relationship between size and debt equity ratio

Sig: 0.155.

Thus, Ho accepted.

Hypothesis 5: A negative relationship will exist between liquidity and debt equity ratio (Pecking order theory).

Ho: Negative relationship between liquidity and debt equity ratio

H1: Positive relationship between liquidity and debt equity ratio

Sig: 0.145.

Thus, Ho accepted

Hypothesis 6: A negative relationship will exist between age and debt equity ratio (Pecking order theory).

Ho: Negative relationship between age and debt equity ratio

H1: Positive relationship between age and debt equity ratio

Sig: 0.258.

Thus, Ho accepted.

Hypothesis 7: A positive relationship will exist between non debt tax shield and debt equity ratio (Trade off theory).

Ho: Positive relationship between non debt tax shield and debt equity ratio

H1: Negative relationship between non debt tax shield and debt equity ratio

Sig: 0.303.

Thus, Ho accepted.

Hypothesis 8: A negative relationship will exist between cash operating profit and debt equity ratio (Agency theory)

Ho: Negative relationship between cash operating profit and debt equity ratio

H1: Positive relationship between cash operating profit and debt equity ratio

Sig: 0.557.

Thus, Ho accepted.

Hypothesis 9: A positive relationship will exist between effective tax rate and debt equity ratio (Trade off theory).

Ho: Positive relationship between effective tax rate and debt equity ratio

H1: Negative relationship between effective tax rate and debt equity ratio

Sig: 0.143.

Thus, Ho accepted.

Hypothesis 10: A negative relationship will exist between default risk and debt equity ratio (Trade off theory).

Ho: Negative relationship between default risk and debt equity ratio

H1: Positive relationship between default risk and debt equity ratio

Sig: 0.952.

Thus, Ho accepted.

Table No. 5.4.1. Hypothesis Testing

<i>Variables</i>	<i>Original Hypothesis</i>	<i>Obtained Results</i>	<i>Comment</i>
<i>Profitability</i>	Negative	Negative	Accept Ho
<i>Growth</i>	Negative	Negative	Accept Ho
<i>Collateral</i>	Positive	Positive	Accept Ho
<i>Size</i>	Positive	Positive	Accept Ho
<i>Liquidity</i>	Negative	Negative	Accept Ho
<i>Age</i>	Negative	Negative	Accept Ho
<i>Non Debt Tax Shield</i>	Positive	Positive	Accept Ho
<i>Cash Operating Profit</i>	Negative	Negative	Accept Ho
<i>Effective Tax Rate</i>	Positive	Positive	Accept Ho
<i>Default Risk</i>	Negative	Negative	Accept Ho

Source: Self Interpreted

6.1. Findings:

A research work a success ultimately depends on its findings. The results of the study show moderate support for the trade-off theories of capital structure. Little evidence was found in favor of the pecking order capital structure policy model and agency theory.

1. .001 Growth Opportunities, .063 Liquidity and -5.801 corporate tax having less volatility compared to other variables. So we can infer that the change of these variables will effect the debt-equity model not much. Where compared to other variables like Profitability, Collateral Asset Structure, Age, Non Debt Tax shields have major role to play.
2. Adopting the growth of sales as a proxy for the growth level of firms, the results of the tests demonstrated is 0.001, which indicates that the growth of a firm do not determine its capital structure. The significant level is very low compared to other variables.
3. According to the pecking order theory the role of liquidity in IT industries was predicted as a positive correlated variable, but the analysis proved that in case of service sectors like IT the role of liquidity place a less significant role.
4. According to the trade-off theory it was expected that the default risk will have a negative relationship with the dependent variable as we know increasing of risk may increase of the debt value of a firm. But according to the data analysis is proven just an opposite way that the relation is positive.
5. In case of collateral, pecking order theory also succeeded where it is proven that relationship was just similar which was predicted earlier.

6.2. Suggestions

The capital structure decision is difficult decision that involves a complex trade off among several considerations like income, risk, flexibility, control, timing etc. Giving the overriding objectives of maximizing the market value of a firm, the following guidelines should be kept in mind while deciding the capital structure of the firm.

1. Majorly for IT firms it is advised to go for trade-off theory as it can understand the IT Industry in India better than other theory.
2. Avail of the tax advantage of debt as interest on debt as interest on debt finance is a tax deductible expense.

3. Preserve flexibility as losing flexibility can erode shareholder value.
4. Ensure that total risk exposure is reasonable.
5. Subordinate financial policy to corporate strategy.
6. Examine the control implications of alternative financial plans.
7. Mitigate potential agency costs arising due to separation of ownership for smart moves on investment as financing sides of business do not often synchronize.
8. Know the norms of lenders and credit rating agencies as they are the principal providers and facilitators of raising capital.
9. Issue innovative securities to the advantage of the firm.
10. Widen the range of financing sources as in a dynamic financial environment, traditional sources of financing may diminish in importance or they may not be adequate or optimal.
11. Understand the signal value of financing choices arising due to the informational asymmetry between managers and shareholders.
12. Communicate intelligently with investors to ensure that intrinsic value of a company is fully reflected in its stock price.

Finally to segregate the variables with a given weight age which will make an impact on the debt and equity of an IT firm. For IT Firm, Trade-off and to some extent pecking-order theory would be applicable.

6.3. Limitations

The data taken for the study is secondary data and hence no primary research has been done for the study

1. Research data were dependent upon the prowess and ace analyzer database archive.
2. Some of the variable taken with the help of review literature may not equally suitable for the IT Industry.
3. Sample size was reduced as the companies having last five years data were taken.

7.1. Conclusion

The study investigates the determinants of capital structure of IT Companies. Measures of traditional factors that are hypothesized to affect financing decisions include Profitability, Liquidity, Growth, Size, Age, Non Debt Tax Shield, Default Risk, Cash Operating Profit, Effective Tax Rate and tangibility.

The study reveals a positive and significant relationship between capital structures. The study reveals a positive and significant relationship between collateral asset structure, liquidity, size and growth.

More profitable firms use more debts, in order to take advantage of the tax deductibility of interest, the firms that own greater fixed assets can use it for mortgaging or as security in order to issue more debt to take advantage of this. Secured debt is less expensive than equity and unsecured debt when the managers have better information than external shareholders.

Companies were found to differ significantly in capital structure irrespective of whether they belong to the same industry group or different groups. This is because of the fact that the magnitude of the effect of determinants of capital structure vary from company to company. In general, change in capital structure and profitability were found to be negatively related, but the results were not statistically significant.

These results suggest that though profitability decreases when leverage increases, this decrease is very moderate and not proportional to debt level. Probably, it is for this very reason that most of the companies are not high leveraged. Further, it was also found that Indian companies do not employ a specific model for computing the cost of capital and have no scientific model for determining their target capital structure. Thus, it could be concluded that like perfect capital markets of the west, in India, too, wherein the capital markets are imperfect, companies have to define model of determining their optimal capital structure.

The issue of capital structure is an important strategic financing decision that firms have to make. Clearly, the trade of theories appears to dominate the Indian it industry's capital structure story. It is therefore important for policy to be directed at improving the information environment.

Policy makers should place greater emphasis on the facilitation of equity capital since it provides a base for further borrowing, reduces businesses sensitivity to economic cycles, and provides unquoted firms with access to syndicates of private and institutional venture capital suppliers.

The forces working on firm's capital structure in other countries also work in a quite similar way in India with certain mix policies which could be useful in determining the capital structure in Indian IT scenario as the future is going towards innovation and growth in this sector.

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ANNEXURE

Financial Ratios

	D/E R	Profitabil	Growth	Collater	Size	Liquidit	Age	Non-debt	Cash Op	Effective	Corp Tax
Infosys	0.00	0.25	18.76	0.32	4.53	3.87	1.50	0.03	7322.20	0.28	3642.00
Wipro	0.06	0.22	11.67	0.56	4.47	1.68	1.83	0.03	5815.56	0.20	1734.80
Mphasis	0.06	0.14	16.23	0.54	3.68	1.40	1.83	0.03	663.01	0.25	210.39
Hexaware	0.03	0.24	20.73	0.54	3.04	2.03	1.32	0.03	224.44	0.17	64.87
Cyient	0.09	0.18	23.56	0.54	3.13	4.12	1.34	0.04	191.36	0.27	83.96
HCL	0.14	0.25	24.94	0.67	4.15	1.51	1.34	0.04	4160.78	0.22	1144.24
KPIT	0.11	0.17	33.58	0.77	2.98	1.50	1.36	0.05	135.50	0.19	48.26
Oracle	0.30	0.15	6.35	0.05	3.88	6.51	1.38	0.01	854.22	0.29	492.65
TCS	0.02	0.36	25.94	0.38	4.54	2.40	1.25	0.22	11865.34	0.22	4310.70
NIIT	0.02	0.18	21.60	0.62	3.00	2.03	1.32	0.05	171.61	0.24	61.06
Tech Mah	0.18	0.18	47.45	0.41	3.82	1.41	1.43	0.04	1207.02	0.21	444.28
Mindtree	0.02	0.23	22.50	0.56	3.06	2.08	1.14	0.06	287.18	0.21	87.70
Persistent	0.03	0.19	25.93	0.66	2.99	2.00	1.36	0.07	227.73	0.23	66.76

DEBT-EQUITY RATIOS

	INFOSY	WIPRO	MPHAS	HEXAW	CYIEN	HCL	KPIT	ORACL	TCS	NIIT	TECHM	MINDT	PERSIS
2015	0.0010	0.0444	0.0675	0.0247	0.2093	0.0410	0.0928	0.7377	0.0244	0.0285	0.0408	0.0177	0.0101
2014	0.0091	0.0515	0.0930	0.0285	0.1388	0.0578	0.1203	0.2291	0.0255	0.0274	0.0881	0.0119	0.0348
2013	0.0036	0.0145	0.1227	0.0320	0.0288	0.1304	0.1546	0.1925	0.0240	0.0310	0.1349	0.0068	0.0642
2012	0.0039	0.0977	0.0045	0.0320	0.0391	0.1978	0.1454	0.1764	0.0213	0.0138	0.3007	0.0087	0.0092
2011	0.0036	0.1118	0.0290	0.0116	0.0427	0.2849	0.0453	0.1569	0.0148	0.0054	0.3514	0.0318	0.0196
	0.0042	0.0640	0.0633	0.0257	0.0917	0.1424	0.1117	0.2985	0.0220	0.0212	0.1832	0.0154	0.0276

