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Capital structure of E-startups in India

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Abstract
The present study has been conducted for e-startups which are growing very fast nowadays. This study has two-fold objectives: Firstly, to identify important determinants of capital structure and secondly to verify for the applicability of trade-off and pecking order theory for Indian e –start-ups. A period of study is from 2012-2016. Data for the present study comprise sources and uses of funds and balance sheet of Indian e start-up companies. Capital structure, the dependent variable, is considered in as the logarithm of all the sources of financing which makes it as a log linear model. Eight explanatory variables are firm size, asset structure, interest coverage ratio, quick ratio, cash ratio, plant property and equipment, growth opportunities and profitability.

Keywords: Capital structure, e-start-ups, determinants

Introduction

Innovation and e-start-ups are helpful in the development of India's economy. It is anticipated that these startups would have a favorable impact on the development of the nation. Honorable Prime Minister, On August 15, 2015, Mr. Narendra Modi unveiled "Start-up India," which aims to promote bank funding for startups and offer other incentives to boost employment creation and entrepreneurship."We are looking at systems for enabling start-ups," he stated in a speech to the nation on the 69th Independence Day. We wish to make it possible for startups to rank India No.1 in this field…. Start-up India; Stand up India.

Our goal is to empower startups to establish India as the leader in this industry. "Indian startup; India stand-up." According to the most recent India Start-up Report 2014 [27] study on Indian start-ups National Association of Software and Services Companies (NASSCOM) on Indian start-up named as India Start-up Report 2014 [27] reveals that India is the fastest growing and third largest start-up ecosystem in the world after the USA and the UK. NASSCOM also said that around 11,500 Start-ups will come up in the Country by 2020, creating over 2.5 lakhs jobs, compared to the current 75,000 jobs.

A start-up also helps and boosts a nation's competitiveness when it introduces a new good or service to the market. Owing to the successful growth of start-ups, the Indian Prime Minister on January 16, 2016, unveiled the Start-up Action Plan, another initiative to support start-ups along with a start-up portal and mobile app.In this action plan they say"I see start-ups, technology and innovation as exciting and effective instruments for India's transformation."The start-ups can start their business in one day by registering their company in one day, against 15-20 days as of now. As far as tax is concern no tax on profit, inspection for three years. Additionally, it has a credit guarantees program, an easy and quick withdrawal policy, and a capital gains tax exemption.

The recently founded e-startups are technically innovative, they encounter several issues or difficulties in their early stages of development.

One such constraint for e-start-ups is financial sources which are limited. Finding every opportunity to raise money is the first and most important stage for an entrepreneur, and typically at that point they enlist the assistance ofthe entrepreneurs for looking some different options to finance their e-start-ups development.

E-startups are able to secure funding through debt financing, such as bank loans. But the major barrier for them is non-existence of track record of performance because they are newly established. Fundraising through the private equity market is now the simplest option. However, the private equity market's regulations differ from those governing debt funding. It might be a lot harder to attract private equity investors as well as they may get deeply involved in the management of a start-up company.

It might be a lot harder to attract private equity investors as well as they may get deeply involved in the management of a start-up company. This may dilute the ownership. Nevertheless, the help that is offered by private equity investors can also be extremely beneficial.

The private equity sector, including venture capital and angel investors, is a relatively recent trend and is currently underperforming as a source of funding for start-up businesses. However, the interest about such financing possibilities is gradually increasing. Development of private equity market could be an excellent way to reduce the lack of financial resources that are necessary for start-up companies in their business development.

Finance is the engine of every business. Regardless of their size—small, medium, or large—or location, finance is crucial for everyone. So effective and sound financial planning for raising the fund and proper combination of debt and equity capital is the key to successful e-startups or any business. the funding patterns of e-startups differ from those of traditional businesses, and limited information is available regarding the financing patterns of e-startups in India.

e-startups depend on their financial resources to survive and expand, so effective financial management is essential to accelerating their profitability. Traditional and contemporary sources of funding for e-startups are numerous. But firstly, they need to decide when, where from and how to acquire funds to meet the firm's investment needs because the finance decision will affect

the growth, profitability and risk-taking ability. The two most popular financing options are debt and equity, however they are separated into two categories. The capital structure of e-startups is represented by the combination of old and modern sources of funding.

Damodaran (2004) [7] examined G7 financing trends, Rajan and Zingales (1995) [22], and Boyle and Eckhold (1997) [4] examined the capital structure of industrialized nations such as the United States, United Kingdom, and New Zealand. The majority of the time, researchers from underdeveloped nations have discovered outcomes that differ from those from developed ones. The works of Bhole and Mahakud (2004) [2, 3] and Sahoo & Omkarnath (2005) [23, 24] demonstrate this. Less established finance markets in developing nations like India could be the cause. To determine their applicability in the Indian environment, and specifically for e-startups, the capital structure theories that have been validated in the context of Western nations require empirical testing.

Table 1: Main theories of capital structure for e-startup/startup

Main Theories of Capital Structure	Description of Theory for Startups	Authors with Favor/Against
Capital Structure Irrelevance Theory (Modigliani and Miller 1958)	Based on certain assumptions conclude that the market value of a firm is independent of its capital structure. It does not matter if the startups capital is raised by equity or debt sources.	No result found in case of startups
Trade-off Theory (Kraus and Litzenberger 1973)	A startup decides the best possible capital structure by balancing the costs of financial distress and the tax shield benefits of debt.	(Day *et al*., 1983) Timo Fischer and Gaétan de Rassenfosse 2011 [9, 10] said not applied on startups due to bankruptcy cost
Pecking Order Theory (Myers and Majluf 1984)	This theory depicts the order of financing for new startups that are firstly fund raised through internal funds, then debt, and lastly from equity source. Due to asymmetric information, transaction costs were involved in each form of financing.	Hédia Fourati, Habib Affes (2013) [11], Andrew Atherton (2012) [1], Li-Ju Chen (2011) [5], Mazur (2007) [21], Gaud *et al*., 2005 [12]; were in favour
		Opposed by Hogan and Hutson 2005 [15]

Source: Author own calculations

Literature review

Capital structure is the primary focus of this literature analysis because e-startups are relatively new in India and have not yet been thoroughly studied.

Ghosh, Cai, and Le (2000) [14] used the Compustat and Fortune 500 data sets to examine the factors influencing capital structure in the United States for 362 companies across 19 manufacturing industries. For cross sectional studies two years 1982 and 1992 have been taken and for panel data the period of 1982-1992 has been taken. Regression analysis has been done by having long term debt to total assets as dependent variable and asset size, growth of assets, non-debt tax shield, fixed asset to total asset ratio, net profit margin, research and development expenditure, advertising expenditure, selling expenses and business risk as explanatory variables. The results show that advertising expenditure, growth of assets, fixed assets to total assets and R & D expenditure have been found to be important variables and the relationship between leverage and business risk is quadratic.

Damodaran (2004) [7] uses data from the Organization for Economic Cooperation and Development for the years 1984–1991 to analyze financial trends in the G7. The research hastaken net equity (difference between new equity issue and share buyback), internal financing and net debt as the sources of financing. According to the report, US businesses rely more on debt (via bond issuance) than equity for outside funding. The reason behind is that the US firms are mostly in maturity stage of their life cycle in contrast to the emerging market. So, they have easy access to the corporate bond market. Bank loans are the primary source of funding for businesses in Europe, Germany, and Japan. However, this limits the utilization of additional debt in some ways. But this places some constraints on the use of new debt. So now firms in these companies also started accessing more to bond market.

The study on Indian firms done by Singh and Hamid (1992) [26] says that the Indian firms rely heavily on external financing than internal financing because the capital markets in India are not yet fully developed, so they fail to raise equity. These results are just opposite to the results of the developed countries. After contrasting the structure and pattern of corporate finance in industrialized and developing nations, Singh (1995) asserts that the cost of debt and the cost of equity financing are very high for developing countries.

Kakani (1999) [17] conducted research on the factors that influence capital structure. The study's goals were to compare the factors influencing capital structure before and after liberalization, analyze the debt structures of major private manufacturing companies in India, and determine the factors influencing the corporate debt maturities for both short- and long-term debt. The study's sample comprised 100 companies from the top 400 (by sales) companies listed on the BSE between 1985 and 1995. Growth, originality, company size, earnings risk, net exports, capital intensity, non-debt tax shield, regulation, corporate strategy, profitability, and collateral value of assets are the independent variables taken into consideration for the study. Long- and short-term debt divided by equity book values and the ratio of total debt to total assets are the dependent variables. Correlation analysis followed by multiple regression shows that profitability, non-debt tax shield and capital intensity are significant determinants of capital structure during pre-liberalization whereas net exports has been found to be significant in post liberalization period and trade off theory seems to be more applicable.

Using panel data from balance sheets, Bhole and Mahakud (2004) [2, 3] conducted a study on the trends and determinants of corporate capital structure in India, focusing on both public and private limited businesses. The information was extracted from a number of RBI bulletin releases. According to the trend research, all kinds of businesses are becoming much more reliant on borrowed capital than on stock capital. Debt to equity and total borrowings to equity ratios have also increased. The ratio of total borrowings to total

liabilities has gone up, but it has changed less than other ratios. They have given the model for determinants by breaking up the study period into three segments namely1984-99, 1984-1991, and 1992-99. All other variables, with the exception of profitability and growth rate, are significant at 1%, according to the analysis, indicating their significance in a company's financing decision.

In their capital structure analysis, Sahoo and Omkarnath (2005) [23, 24] examined the financing trends of the Indian private corporate sector and determined if liberalization had caused any changes. They have also tested pecking order theory of capital structure in Indian context. The annual data on sources and uses of funds from various issues of RBI bulletin and Report on Currency and Finance have been taken for analysis for a period of 1980-81 to 2003-04. The results of the study suggest that non-debt tax shield, asset structure and profitability are the major determinants of long-term capital structure. Large public limited corporations rely more on external than on internal sources, according to the averages. They reason may beliberalisation in early 1991 due to which the dependence on external source of financing increased but in later years it declined. It means there is a change in the composition of external source of financing due to liberalisation. The internal sources of financing increased due to provisions. They have given ranking to various sources of financing on the basis of proportionate percentage of each source to the total sources and the results there from are completely against the pecking order theory.

Kaur and Rao (2009) [18, 19] conducted research on the factors that influence capital structure in the cotton textile sector in India. The objectives of the study are to identify the important variables that affect the debt -equity choice of these companies and to test for their (determinants) significance through regression analysis. The study's second goal is to determine if the trade-off or pecking order theories are applicable based on the regression coefficients' signals. They have taken a sample of 78 profit making cotton textile companies for a period of 2003-04 to 2007-08 from CMIE database. The result of the study suggests that profitability and growth opportunity, liquidity and business risk are the most important determinants of debt-equity choice in Indian cotton textile industry at 1% level and uniqueness at 7.2%. The outcome also indicates that, based on the signs of the regression equation's coefficients, trade-off theory appears to be more appropriate.

Objectives

In the light of above discussion this study has following objectives:

1. To use literature to determine the factors that determine capital structure.
2. To find their (identified) impact on capital structure of e start-ups and to test for the applicability of pecking order theory or trade-off theory.

Research methodology

This analysis will be done by using multiple regression analysis by using E-views 7 as Panel data analysis. The various variable identified are give below (table 1). In regression capital structure as a sum of all sources of financing has been used as dependent variable. Growth opportunity, lagged values of capital structure, non-debt tax shield, firm size, asset structure, profitability, lagged value of profitability and liquidity are the independent variables. The study uses fixed-effects (FE) panel data analysis because it aims in analyzing the impact of variables that vary over time.

The model used for analysis is:

$$\textbf{(Ln capital structure)}_{it} = \alpha i + \beta 1(LnTA)it + \beta 2QRit + \beta 3ICRit + \beta 4\ (PBIT/Capital\ Employed)it + \beta 5\ LTDit + \beta 6\ (Growth\ Opportunity)it + \beta 7(PPE)it + \beta 8\ (cash\ and\ cash\ equivalent)it + uit$$

Where the terms meaning has been defined below:

αi (i=1....n) is the unknown intercept for each company

Capital structure: Sum of all sources of funds
Ln TA: measure of firm size
QR: Quick Ratio
ICR: Interest coverage ratio
PBIT/ Capital Employed: Profit before tax to capital employed ratio
LTD: Long term debt ratio
Growth Opportunity: average growth of annual sales
PPE: Plant, property and equipment to total assets ratioas a measure of investment
cash and cash equivalent: for cash reserves

Table 2: Hypotheses according to both theories

Variables	Definition Used	Expected Relationship	
		Trade-off theory	Pecking order theory
Asset structure	Gross fixed Assets / Total asset	Positive	No Relationship is Specified.
Profitability	PBIT / capital employed	Positive	Negative
Growth Opportunity	Compounded average growth of annual sales.	Negative	Positive
Firm size	Natural Logarithm of total assets	Positive	Negative
Interest Coverage ratio	$\frac{EBIT}{Interest}$	Negative	No Relationship is specified.
Cash	Cash and marketable securities divided by current liabilities	Positive	Negative
Quick Ratio	Current Assets excluding inventories divided by current liabilities	Positive	Negative
PPE	Plant, property and equipment to total assets	Negative	NoRelationship is specified.

Analysis

Table 3: Collinearity diagnostic

Variable	VIF
(Constant)	
LTD	2.466
GO	1.291
LN TA	1.754
ICR	1.205
PBT	1.586
PPE	1.182
QUICK	1.108
Cash	1.194

Table 4: Coefficients diagnosis

Dependent Variable: Lnfunds				
Method: Panel Least Squares (Fixed effect)				
Cross-sections included: 20				
Total panel (balanced) observations: 100				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
CS	0.003934	0.001098	3.581956	0.0004
LTD	0.040106	0.010560	3.797916	0.0007
GO	0.017406	0.020416	0.852551	0.3943
LN TA	0.009149	0.003561	2.569222	0.0013
ICR	-3.58E-08	5.58E-07	-0.064135	0.9489
PBT	-2.79E-08	2.21E-06	-0.012671	0.9899
PPE	-1.59E-07	1.47E-06	-0.107779	0.9142
QUICK	0.000684	0.002614	0.261740	0.7936
Cash	0.005728	0.001084	5.284129	0.0004
C	0.303807	0.251074	1.210033	0.2269
Effects specification				
Cross-section fixed (dummy variables)				
Period fixed (dummy variables)				
R-squared	0.703328	Mean dependent var		0.482801
Adjusted R-squared	0.643748	S.D. dependent var		1.180403
S.E. of regression	0.704546	Akaike info criterion		2.290088
Sum squared resid	239.7538	Schwarz criterion		3.026311
Log likelihood	-567.2707	F-statistic		11.80473
Durbin-Watson stat	2.655180	Prob(F-statistic)		0.000000

Table 5: Obtained signs

Variables	Expected Signs	Obtained signs
Interest coverage ratio	Positive	Negative
Long-term debt ratio	Negative	Negative
Quick ratio	positive	Positive
Cash	positive	Positive
PPE	negative	negative
Profitability	Positive	Negative
Growth opportunity	Positive	Positive
Firm size (SIZE)	mixed	Positive

Results and conclusion

It is evident from the analysis that 64.3% of variation in sources of funds has been explained. As it is a time series data so Durbin Watson statistic has also been considered which doesn't give any evidence of autocorrelation. The table 1 shows the co linearity diagnosis among the independent variables. The results of this table do not suggest any correlation among independent variables. The VIF confirms the absence of multi co-linearity among the independent variables.

The significant F statistic (table 2.) show that the model taken for the analysis is significant and the R square value (table 2.) explains that the independent variable are able to account for roughly 64% of the dependent variable's volatility.

The table 2 and 3 shows the firm characteristics of the sample consisting of 20 firms in the period from 20012 to 2016 which contribute to the panel data of 100 observations. The chosen firm characteristics are sources of funds, interest coverage ratio, long-term debt ratio, quick ratio, cash, PPE, profitability, growth opportunity and firm size.

This table presents the result for fixed effect regression on the sources of financing of firm. For every control variable, the result firstly shows the coefficient whose sign determines whether the relationship is positive or negative, and next the coefficient of the P-value determines whether the result is statistically significant or not. The fixed effect regression shows that the coefficient of long-term debt, cash and firm size is positive, which means that the debt usage may increase firm value. However, the P-values of around fifty percent variablesare less than 1%, which demonstrates that the result is not satisfactorily statistically significant. The investment growth demonstrates the statistically insignificant but positive relationship with sources of financing which means that increase in capital may lead to increase in growth opportunities. It signifies that firms with more growth opportunities rely more on debt financing which is in line for traditional firms' results of various researchers. The reason might be development of new product and services provide more opportunity to attract income.

Damodaran (2004) [7] after analysing patterns of financing, mentioned that countries like Brazil and India utilize internal and external equity more. But various researchers in India such as Sahoo and Omkarnath (2005) [23, 24] have found that Indian firms rely more on debt due to less developed capital market. The reason can be availability of finances from external sources or less developed capital market in a developing country. The present study also concludes that Indian e-start ups are depending more on borrowing more than the equity.

As there has been an argument on the applicability of trade off theory or pecking order theory, the results of the analysis show both the theories are applicable. The findings of earlier research, such as those conducted by Sahoo and Omkarnath (2005) [23, 24], Mahakud (2006) [20], and Kaur and Rao (2009) [18, 19], indicated that the trade-off hypothesis was more relevant in the Indian setting. But the results of the present study provide no conclusive evidence.

References

1. Atherton A. Cases of start-up financing: An analysis of new venture capitalisation structures and patterns. International Journal of Entrepreneurial Behavior & Research,2012:18(1):28-47.
2. Bhole LM, Mahakud J. Trends and determinants of corporate capital structure in India: A panel data analysis. Finance India,2004:18(1):37.
3. Bhole LM, J Mahakud. Trends and determinants of corporate capital structure in India: A panel data analyais. Finance India,2004:18(1):37-55.
4. Boyle GW, Eckhold KR. Capital structure choice and financial market liberalization: evidence from New Zealand. Applied financial economics,1997:7(4):427-437.
5. Chen SY, Chen LJ. Capital structure determinants: An empirical study in Taiwan. African Journal of Business Management,2011:5(27):10974.
6. Damodaran A. Applied corporate finance. John Wiley & Sons, 2014.
7. Damodaran A. Corporate finance: Theory and practice. 2nd ed. New Delhi: John Wiley and Sons, 2004.
8. Dikshit A. Startup India, Standup India: a review. In Emerging Trends and Innovations in Modern Management, 2018, 83–86. https://www.inspirajournals.com/uploads/Album/236129742.pdf
9. Fischer T, de Rassenfosse G. Debt financing of high-growth startups: The venture debt business model, 2011.

10. Fischer T, Rassenfosse G. Debt financing of high-growth startups. DRUID Working, 2011.
11. Fourati H, Affes H. The Capital Structure of Business Start-Up: Is There a Pecking Order Theory or a Reversed Pecking Order? —Evidence from the Panel Study of Entrepreneurial Dynamics. Technology and Investment,2013:4(04):244.
12. Gaud P, Jani E, Hoesli M, Bender A. The capital structure of Swiss companies: an empirical analysis using dynamic panel data. European financial management,2005:11(1):51-69.
13. Ghosh A. Capital structure and firm performance. Routledge, 2017.
14. Ghosh A, F Cai, W Li. The determinants of capital structure. American Business Review. June, 2000, 129-132.
15. Hogan T, Hutson E. Capital structure in new technology-based firms: Evidence from the Irish software sector. Global Finance Journal,2005:15(3):369-387.
16. Kakani RK, Saha B, Reddy VN. Determinants of financial performance of Indian corporate sector in the post-liberalization era: an exploratory study. National Stock Exchange of India Limited, NSE Research Initiative Paper, 2001, (5).
17. Kakani RK. The determinants of capital structure: An econometric analysis. Finance India,1999:13(1):51-69.
18. Kaur R, Rao NK. Determinants of Capital Structure-Experience of Indian Cotton Textile Industry, 2009.
19. Kaur R, N Krishna Rao. Determinants of capital structure: An experience of Indian cotton textile Industry. Vilakshan,2009:4(2):97-112.
20. Mahakud J. Testing the pecking order theory of capital structure: Evidence from the Indian corporate sector. The ICFAI Journal of Applied Finance,2006:12(11):16-26.
21. Mazur K. The determinants of capital structure choice: evidence from Polish companies. International Advances in Economic Research,2007:13:495-514.
22. Rajan RG, Zingales L. What do we know about capital structure? Some evidence from international data. The journal of Finance,1995:50(5):1421-1460.
23. Sahoo SM, Omkarnath G. Capital structure of Indian private corporate sector: An empirical analysis. The ICFAI Journal of Applied Finance,2005:11(10):40-56.
24. Sahoo SM, G Omkarnath. Capital structure of Indian private corporate sector: An empirical analysis. The ICFAI Journal of Applied Finance, 2005, 41-56.
25. Singh A. Corporate financial patterns in industrialising economies: a comparative international study, 1994.
26. Singh A, J Hamid. Corporate financial structures in developing countries. International Finance Corporation Technical paper, World Bank, Washington, DC, 1992.
27. Start-up Report - Momentous Rise of the Indian Start-up Ecosystem, (2014, December 19). Nasscom. https://www.nasscom.in/ knowledge-center/publications/start-report-momentous-rise-indian-start-ecosystem