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Determinants of Financing Decisions of Start Up Firms in India

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ABSTRACT

Having an optimum capital structure is crucial as it leads the company to its better operating performance. This paper examines the key determinants affecting the financing decision of start-up firms with reference to the Delhi NCR region in India by using panel data regression models. The hypotheses are formed based on theories of capital structure and existing literature. The financial information data of a final sample of 29 manufacturing start-up firms are taken into consideration for empirical analysis. The results of this research revealed that firm size, growth opportunities, profitability and liquidity are key factors significantly affecting the capital structure decision of start-up firms in India. The relationship found for firm size, profitability and liquidity supported the hypothesis of pecking order theory while growth variable results supported the hypothesis of trade-off theory. Therefore, the pecking order theory is found to be more applicable here in startup firms in India.

SARI PATI

Memiliki struktur modal yang optimal sangat penting karena membawa perusahaan ke kinerja operasi yang lebih baik. Makalah ini mengkaji faktor-faktor penentu utama yang mempengaruhi keputusan pembiayaan perusahaan start-up dengan mengacu pada wilayah Delhi NCR di India, dengan menggunakan model regresi data panel. Hipotesis dibentuk berdasarkan teori struktur modal dan literatur yang ada. Data informasi keuangan dari sampel akhir dari 29 perusahaan start-up manufaktur dipertimbangkan untuk analisis empiris. Hasil penelitian ini mengungkapkan bahwa ukuran perusahaan, peluang pertumbuhan, profitabilitas dan likuiditas merupakan faktor kunci yang secara signifikan mempengaruhi keputusan struktur modal perusahaan start-up di India. Hubungan yang ditemukan untuk ukuran perusahaan, profitabilitas dan likuiditas mendukung hipotesis teori pecking order, sedangkan hasil variabel pertumbuhan mendukung hipotesis teori trade-off. Oleh karena itu, teori pecking order ditemukan lebih dapat diterapkan di sini di perusahaan pemula di India.

INTRODUCTION

Small firms and new businesses are becoming an important component of the economic growth and development of a country (Berger and Udell, 1998, Denis, 2004, Paul, 2007, Deloof and Vanacker, 2018). They play an important role for the economy via employment generation, drive innovations, create competition and promote exports (Cassar, 2004). Small firms, in comparison to many large corporations, are capable of creating the greatest number of job possibilities per unit of capital spent. As a result, small businesses are the economy's second-largest employer. Even though large companies dominate the stock market of every country, it is small businesses and startups that keep the economy going. Taking into account, their increasing role in the economy, there is a need to focus on how they keep their business going in this competitive world, how they make their financial decision, what are major factors influence the financial decision of these businesses.

In recent years, the government of India has taken several measures to support start-ups and promote entrepreneurship culture in India. One of them is the Start-Up India scheme launched by the government on 16 January 2016 to bring new opportunities for the youth of the country aimed at making India become a nation of job creators instead of a nation of job seekers, it has promoted bank financing to start a business, various other incentives include the exemption in tax and capital gain, easy self-certification compliance, no inspection for 3 years, ease in incorporation and exits, setting up 10,000 cr. fund of funds, fast-tracking of patents and legal support, etc. As per the economic survey 2020-21, 41061 startups have been recognized by the government till December 2020, and 4, 70,000 jobs have been reported by more than 39000 startups. Currently, India is having the world's third-largest startup ecosystem.

Financial capital is the backbone of every type of business whether it is large or small. Firms can finance their activities through a variety of financial sources, and the mix of these sources is generally known as capital structure (Myer, 2001). The ideal capital structure for a business is a mix of debt and equity financing that reduces the company's weighted-average cost of capital while increasing its market value. A lot of research has been carried out yet that identified the factors influencing financing choice of large listed firms and SMEs in developed and developing countries (Titman and Wessels, 1988, Rajan and Zingales, 1995, Song and Wang, 2006, Abor, 2008, Handoo and Sharma 2014, Ohman and Yazdanfar 2017, Rao *et al.*, 2019).

The capital structure theory establishes a link between a firm's capital structure and its value. Modigliani and Miller (1958) have developed the approaches of the capital structure under which they postulated that the value of a firm is irrelevant to a firm's capital structure with the assumptions of a perfect market, no corporate taxes, symmetrical information, no transaction and bankruptcy cost. They stated that a company's average cost of capital is unaffected by the capital structure and the value of a firm is solely determined by its investment decision. Later on, in Modigliani and Miller's (1963) work they dropped unrealistic assumptions of taxes as when taxes are taken into account, firms can profit from an increase in the debt portion of the capital structure due to the tax shield, which then results in lowering the weighted average cost of capital. So, therefore, they suggested that increasing debt lowers the average cost of capital due to the interest tax shield, which helps in increasing the return on equity and market value of the firm. So the firm's value with debt would be higher than that of a firm's value with no debt by an amount of the firm's debt being used by the levered firm multiplied by the tax rate.

With time, some other theories have been introduced like agency theory, trade-off theory, pecking order theory and life cycle theory etc. These theories have been used in past research for explaining the capital structure of firms. The two mainly used include the first one was trade-off

theory according to which a firm's capital structure can be optimized by balancing the cost of financial distress with the benefit of the tax advantage of using component (Kraus and Litzenberger 1973). Another theory that has been widely used in small firms context was the pecking order theory, which states that due to information asymmetry, firstly internal sources of finance were used by firms when they got exhausted, then debt sources would be preferred, and only at last equity would be used (Myers, 1984). It has been seen that the problem of information asymmetry was found to be more severe in the case of SMEs, unlisted ventures and new firms which caused financial problems for them. Studies on the financing of young entrepreneurial ventures are scarce due to the limited availability of data and they are also not obliged to publish their financial reports publically. Earlier the studies have focused on large well established ventures and SMEs but in recent years, studies on new venturing financing have been started to be conducted. Information asymmetry and agency issues between a firm's management and outside investors are more significant in small businesses than in large businesses, according to (Scherr, 1993), resulting in greater variations in costs between internal equity, debt component, and external equity. Thus, the pecking order theory should be more appealing to small businesses even more than to large businesses. Some of the empirical studies have confirmed the applicability of pecking order theory (Abor 2008, Achleitner *et al.* 2011, Rao *et al.*, 2019) while the findings of most of the studies supported predictions of both or we can say not a single theory but both trade-off and pecking order theories in combination helps in explaining the firm's financial decision (Cassar and Holmes, 2003, Chakraborty, 2010, Sheikh and Wang, 2011, Chadha and Sharma, 2015, Sofat and Singh, 2017, Sakr and Beider, 2019).

Scherr *et al.* (1993) empirically investigated the capital structure of new small firms using a CBO questionnaire survey undertaken in 1986, by taking into consideration the firm's characteristics, owner/ manager's characteristics and cost of financing at their initial stage using OLS regression analysis. The findings revealed that firm profitability, managers expected income from a business, marital status was positively related to debt financing whereas age, ethnicity was found as negatively related. Expected firm size, Gender, experience and education were found to be playing important roles in getting finance from lenders other than financial institutions. Cassar (2004) found that the capital structure of these startups got influenced through the firm characteristics like asset structure, incorporation, growth opportunities and more extensively by firm size while owner characteristics were not found to be having a significant influence on startup financing if once the firm characteristics have been considered. Ortqvist *et al.* (2006) found asset structure was the most important determinant that affects both short and long-term debt ratios and also found that the explained variance was decreasing over the years studied depicting other factors are becoming more important with the life cycle of the businesses.

Achleitner *et al.* (2011) analyzed the financial structure within the first months of their existence. They had revealed that firm (size, innovation, R&D expenditure, industry) and owner's characteristics (entrepreneurial team, age education, and experience) determine the financing choice decision of the new ventures.Gartner *et al.* (2012) and Coleman *et al.* (2016) had also explored how firm and entrepreneur characteristics influence the financing decision of startup firms. They found some of the factors like firm size, growth intention, incorporation, location, education, prior experience, net worth etc. which influenced the financing behavior of startup firms.

Honjo (2017) suggested that the Japan startup firms had relied more on debt financing than equity as compared to other European countries. Hirsch and Walz (2019) revealed that the initial financing decisions had a detrimental impact on the accumulation of debt type of capital. Loan *et al.* (2020) revealed firm size, profitability, growth

orientation, age, and work experience as the important determinants influencing the capital structure decision of business start-ups in Vietnam. Singh and Subrahmanya (2022) explored the factors that helped tech startups in accessing financial capital at different stages of lifecycle in Banglore. The results have shown that startups in the growth stage, service oriented and those with a large firm size had received more amount of funding. The startup founder characteristics like successful entrepreneurial experience and strong investor's network have a positive significant impact on raising amount of finance at any stage of its lifecycle factors influenced the amount of finance raised by them.

SMEs and new ventures face difficulty in accessing finance from external sources of funds so hence, they have to depend upon internal sources of funding (Berger and Udell, 1998) and later on as they grow, they got access to many more financing sources (Ortqvist 2006). The financial life cycle theory of Berger and Udell 1998 has stated that the availability of financing choices is found to be different at different stages of business growth. Initially, they acquire the needed capital from internal sources like own savings of entrepreneurs, family and friends, retained earnings etc. but as a business grows, it needs more capital to run smoothly, grow and expand the business, for which after a certain point, they need to resort to external financing sources like banks, the capital market for debt and equity funds.

It would be interesting to see if empirical findings from large publicly traded firm's capital structure decisions can be applied to small businesses. The increasing role of small businesses in the worldwide economy has led researchers all around to explore this area more. The analysis of financing decisions of new ventures will present an additional dimension to the literature on capital structure. The present study is an attempt to examine the determinants of financing decisions of the new ventures as they often face problems in financing specifically in their initial few years. It may help to get some understanding about which are the factors behind the capital structure of these newly founded firms so that higher failure risk at an initial stage can be avoided. But limited studies have analyzed yet the financing decision of the new ventures so this study will be going to do this. It will help founders or managers to better understand the relevance of various factors in the financing decision of firms and that may prevent the failure risk of these new firms due to deficiency in their capital structure.

To conduct the studies on financing decisions of new firms is quite important also due to the high failure rate of new ventures (Ortqvist et al. 2006). These firms have some unique characteristics like having a high risk of failure, no prior history and reputation, highly concentrated ownership, etc. which affect the cost, availability of finance and also the decision-making of entrepreneurs (Huyghebaert and Van De Gucht, 2007). The main sources of capital on which startups are mainly based include owner's capital, bank loan and trade creditors (Berger and Udell, 1998, Robb and Robinson, 2014) to finance their business activities.

Firm size

Firm size is an important factor in determining the capital structure of a firm due to economies of scale that helps in reducing information asymmetry, the transaction cost involved, the existence of barriers to market access and risk exposure (Cassar, 2004). According to Rajan and Zingales (1995), larger businesses are more diverse and fail less frequently, and the probability of bankruptcy, therefore, is small. So in this case, the size would have a positive impact on debt supply. The positive relationship of firm size with leverage have been supported by various previous studies (Cassar 2004, Huang and Song 2006, Sheikh and Wang 2011, Sakr and Beider 2019) While some have reported a negative relationship between firm size and total debt, short-term debt (Benkraiem and Gurau 2013, Handoo and Sharma 2014). Here, we are assuming a positive relationship of firm size with leverage.

H1: firm size will be positively related with leverage of firm

Asset Tangibility

The type of assets owned by firm's influence its capital structure choice as these tangible assets can be put to use as collateral that would help the firm in acquiring more debt (Titman and Wessels, 1988) as it may increase the liquidation value and reduces the bankruptcy risk and risk of lenders. Prior studies such as (Rajan and Zingales, 1995, Huang and Song, 2006, Chadha and Sharma, 2015, Sofat and Singh 2017) have shown a positive relationship between leverage and asset tangibility. So, a positive relationship is expected between asset tangibility and leverage.

H2: asset tangibility has a positive relationship with the leverage of firm

Profitability

It is a measure that shows the firm's ability to generate profit for its assets. As per pecking order theory, profitable enterprises are more inclined to employ internal sources of capital rather than costly external (debt) capital to meet their financing requirements. So, therefore a negative relationship has been suggested between profitability and leverage. The majority of previous empirical studies confirmed this negative relationship (Rajan and Zingales, 1995, Huang and Song 2006, Psillaki and Daskalakis, 2009, Sheikh and Wang, 2011, Benkraiem and Gurau 2013, Sofat and Singh 2017, Bhat, 2020). Therefore, the hypothesis is formulated as:

H3: profitability will be negatively related with the leverage of firm

Growth Opportunities

Firms that foresee high future growth are more likely to use a higher amount of equity (Rajan and Zingales, 1995) rather than debt. But in the case of small firms and startup businesses, for meeting the growing demand pace, they need a higher amount of capital which requires considering the use of alternative sources of external capital. If a firm expects that it will need capital in near future at the early stage of its financing, then it will be more interesting to establish credit relationships with the external finance providers like banks etc. so that they may get benefits in terms of both access as well as in the cost of debt financing (Cassar, 2004). Some of the prior studies have found growth was negatively related to leverage of firm (Rajan and Zingales, 1995, Huang and Song, 2006, Chadha and Sharma, 2015) while various studies supported a positive relationship of growth with leverage (Cassar and Holmes 2003, Benkraiem and Gurau, 2013, Ohman and Yazdanfar, 2017, Loan *et al.,* 2020).

H4: growth opportunities have a positive relationship with the leverage of firm

Liquidity

The firms having poor liquidity would get debt at a higher financial cost and the trade creditors would also be likely to provide limited or lesser credit so then they could only use a lesser amount of debt. The pecking order theory also predicts a negative relationship of liquidity with leverage, as a firm having higher liquidity would prefer to use internal funding for financing newer investment opportunities. This negative association between liquidity and leverage has been supported by some empirical research (Sheikh and Wang, 2011, Ohman and Yazdanfar 2017, Sakr and Beider, 2019). Accordingly, in this study, we assume that liquidity and leverage have a negative relationship.

H5: liquidity will be negatively related with the leverage of firm

METHODS

This paper examines the determinants of capital structure for manufacturing start-ups firms formed as unlisted private limited companies located in the Delhi NCR region. The sample firms have been selected that met the following criteria like i) firms being relating to the manufacturing industry, that is incorporated during the year 2014-2015 ii) Having annual turnover not exceeding 100 crores iii) located in Delhi NCR region. Further, we have

also excluded the firms whose complete 4 years financials are not available and those having missing values in either of the dependent or independent variables throughout the time of the study. After applying these selection criteria, a final sample of 29 firms is available for analysis.

The annual financial statements data of sample companies for four-year periods from 2016-2017 to 2019-2020 have been taken from the Tofler database. The quality of the study is merely dependent upon the database's accuracy, dependability, and quality. This database provides company data which is pulled directly from the website of the Ministry of Corporate Affairs, India. The appropriate regression techniques will be applied using E-views statistical software.

Based on the literature, the various variable and the proxies that have been used to measure them are shown in Table 1. The capital structure measure used here is leverage which is the dependent variable and firm-specific attributes, firm size, tangibility, growth opportunity, profitability and liquidity are the independent variables that are supposed to impact the capital structure decision of firms.

This empirical research has been conducted on panel data. We have used a balanced panel model. The leverage of startup firms is the dependent variable while firm size, profitability asset tangibility, growth opportunities and liquidity are the independent variables. The given variables are calculated from the data presented in the financial statements of startup firms extracted

Table 1. The description of dependent and independent variables

Variables	Denotation	Scales	Researches
Leverage	LEV	Total debt/total assets	Cassar and Holmes 2003, Cassar 2004, Sheikh and Wang 2011, Onofras 2012, Benkraiem and Gurau 2013, Elomo 2014, Rao *et al.* 2019, Bhat *et al.* 2020.
Firm size	FS	A natural logarithm of sales	Rajan and Zingales 1995, Huang and Song 2006, Psillaki and Daskalakis 2009, Sofat and Singh 2017, Rao *et al.* 2019
Asset Tangibility	AT	Tangible assets/total assets	Abor 2008, Psillaki and Daskalakis 2009, Loan *et al.* 2020
Growth opportunities	GO	(Total sales in the period (t)-Total sales in the period (t-1))/ Total sales in (t-1)	Ortqvist *et al.* 2006, Abor 2008, Abor and Beikpe, 2009, Chakraborty 2010, Benkraiem and Gurau, 2013 Napompech 2013, Rao *et al.* 2019
Profitability	PRO	Profit before interest tax and depreciation /Total assets	Chakraborty 2010 Onofras 2012, Rao *et al.* 2019
Liquidity	LIQ	Current assets/Current Liabilities	Sheikh & Wang 2011, Elomo 2014, Chadha and Sharma 2015, Sakr and Bedeir 2019, Rao *et al.* 2019

from the Tofler database. The regression model is suggested as follows:

$$LEV_{it} = \beta_o + \beta_1 FS_{it} + \beta_2 AT_{it} + \beta_3 GO_{it} + \beta_4 PRO_{it} + \beta_5 LIQ_{it} + \varepsilon_{it}$$

Where:

LEV_{it} = total debt to total assets ratio of firm i at the time period t
FS_{it} = the size of firm i at time period t
AT_{it} = asset tangibility of firm i at time period t
GO_{it} = percentage change in Sales of firm i between time t and t-1
PRO_{it} = profitability of firm i at time period t
LIQ_{it} = current ratio of the firm i at time period t
β_o = common y-intercept
β_1-β_5 = coefficient of independent variables
ε_{it} = is the error term

RESULTS AND DISCUSSION

Descriptive statistics of the variables

Table 2 presents the descriptive data of the dependent and independent variables taken under this study. The mean (median) value of leverage of the sampled firms is 68.16 (59.55) percent which indicates that a major part of assets is financed through debt in manufacturing startup businesses and the remaining 31.84 comes from equity. The average asset tangibility of the firms is 29.38% of the total assets. The mean profitability of the firms is found to be negative which indicates that the context of new ventures is quite different because they suffer loss or rarely can make a profit in their initial years of operations.

Pearson correlation matrix

The sample data has been examined for multicollinearity. Table 3 presents the correlation analysis of each pair of dependent and independent variables for manufacturing start-up firms included in the study. The matrix has revealed that the cross-correlation coefficient for mostly each pair of independent variables is not higher than 0.70, thus, there is no need to be concerned about multicollinearity among the independent variables used in this study.

Model selection

In panel data regression, there are three models, which mainly include pooled regression, fixed effect and random effect model. For selecting which one model will be best suitable for the considered data,

Table 2. Descriptive statistics

Variables	Mean	Std. dev.	Median	Min.	Maxi.
LEV	0.681	0.609	0.595	0.011	3.503
FS	17.926	1.463	17.873	14.030	20.243
AT	0.293	0.312	0.167	0.005	1.682
GO	2.277	6.104	0.476	-0.558	39.556
PRO	-0.079	0.374	0.062	-1.666	0.332
LIQ	1.447	1.386	1.152	0.113	8.679

Author's caluculations

Table 3. Correlation matrix of variables

Variables	LEV	FS	AT	GO	PRO	LIQ
LEV	1.000					
FS	-0.362	1.000				
AT	0.103	0.125	1.000			
GO	-0.035	-0.190	0.010	1.000		
PRO	-0.458	0.220	0.127	-0.090	1.000	
LIQ	-0.318	-0.034	-0.294	-0.066	0.015	1.000

Author's caluculations

we have applied the Likelihood ratio (LR) test and Hausman test (Table 4).

Firstly, the likelihood ratio (LR) test is conducted for comparing pooled OLS and fixed-effect models. As the p-value of cross-section chi-square is less than 0.05 leads to reject the null hypothesis of pooled OLS model being the appropriate model, so results imply that the fixed effect model will be preferred to pooled OLS. Then, the Hausman test is applied to compare the appropriateness of the fixed effect vs. random effect model. As the p-value is larger than 0.05, the null hypothesis that the random effect model is the best is accepted. Therefore, a random-effect model is used in analyzing the panel data of this study to explore the relationships in capital structure and firm-specific determinants of start-up firms in India.

We have also applied Breusch and Pagan Lagrange Multiplier test that also verified that the random effect model is appropriate. It has been shown in Table 5, where for cross-section the value is found to be significant, and for the time the value is insignificant. It implies that we have to select a one-way REM, as for the cross-section the value is significant and for both, it is also found to be significant.

The results of the regression model are shown in Table 6 The F-statistic p-value is found to be significant (less than 5% level of significance) indicating that the model is overall fit. It means all independent variables taken into study jointly can influence the dependent variable which is the leverage. R^2 has indicated that 43.00% of the variation lies in the dependent variable is explained through the independent variables that have been taken under this study. The Durbin Watson test value is (1.277587) which is lying between 1 to 3 means there is no autocorrelation in the residuals.

According to the findings presented through Table 6, the variables size, profitability and liquidity have a significantly negative impact on leverage of firms at 1% level of significance, and growth has a significant negative effect and it is found to be statistically significant at 5% level of significance, while tangibility has no effect on the leverage at any level.

The results have shown that firm size has a negative significant effect on leverage, thus rejecting H1. It means that large-size firms can accumulate more retained earnings that may be utilized in financing future business activities so consequently their need to take debt decreases. Here, the smaller start-up firms have used a relatively higher amount of debt as compared to larger ones. It is because as these are the young growing firms and have lots of investment opportunities, to grab them they need finance, and internal finance is not sufficient to meet all their expenses so they have to acquire a higher amount of debt, as it has been seen here. The other reason behind this negative relationship, as per the literature, may be higher information asymmetry for smaller firms and it's more costly for them to get external equity financing than debt

Table 4. Results of Likelihood ratio (LR) and Hausman test

Model	LR Test	Hausman Test
LEV	96.59 (0.000)***	6.34 (0.273)

Note: p-value *** indicates significant at 1% level.

Table 5. Results of Bruesch- pagan test

	Cross-section	Time	Both
Breusch-pagan Test	23.86(0.000)***	0.09 (0.760)	23.96 (0.000)***

Note: p-value *** indicates significant at 1% level

Table 6. Results of regression analysis

Variables	POLS	Fixed effect	Random effect
Constant	3.230 (0.00)***	5.369 (0.00)***	3.925 (0.00)***
FS	-0.135 (0.00)***	-0.251 (0.00)***	-0.173 (0.00)***
AT	0.213 (0.15)	0.262 (0.44)	0.238 (0.22)
GO	-0.015 (0.03)**	-0.012 (0.06)	-0.011 (0.05)**
PRO	-0.668 (0.00)***	-0.457 (0.01)***	-0.583 (0.00)***
LIQ	-0.132 (0.00)***	-0.188 (0.00)***	-0.159 (0.00)***
Cross sectional units	29	29	29
Time	4	4	4
Total number of observations	116	116	116
R^2	0.419	0.747	0.430
Adj. R^2	0.393	0.646	0.404
F statistics	15.921 (0.00)	7.364 (0.00)	16.602 (0.00)
Durbin- Watson	0.755	1.795	1.277

Note: ***,** significant at 1 % and 5% level of significance respectively.
Source: Author's Computations

financing. This result is in line with the hypothesis of the pecking order theory which suggested that the inverse relationship exists between firm size and leverage of firm due to the informational asymmetry problem being more severe in the case of small firms. This finding supported the results of many previous empirical studies (Titman and Wessels 1988, Chakraborty 2010, Napompech 2013, Handoo and Sharma, 2014, Chadha and Sharma 2015, Rao *et al.*, 2019). The study of Hirsch and Walz (2019) showed that the smallest newly founded businesses rely on equity the most, while the larger businesses rely on debt the most. Despite this disparity, the crucial point is that even the smallest firms used debt instruments to finance two-thirds of their assets. In the study of G-7 countries of Rajan and Zingales (1995), a negative relationship between firm size and leverage has been found for the firms in Germany, except this country, leverage increased with the size in all countries and a possible explanation for being positively related has been given that larger companies are better diversified and they can take on more debt because their estimated bankruptcy costs are lower.

For asset tangibility, there is a positive relationship found between asset tangibility and leverage but it is found to be insignificant. Hence, rejecting H2 But this positive relationship may indicate that proportion of fixed assets in the asset structure of a firm helps small firms to take debt to finance their business operations. But, this variable is found to be significant in various studies (Titmam and Wessels 1988, Cassar 2004, Ortqvist *et al.* 2006 Onofras 2012, Handoo and Sharma 2014, Loan *et al.* 2020). Concerning profitability, a significantly negative relationship is found between profitability and leverage, thus accepting H3. It implies that startup firms would prefer to use internal financing over external sources of financing.

A one-unit increase in profitability decreases the debt by 0.58 units. Hence, means high profitable firms borrow less amount of debt because higher profitability leads to more retained earnings available to a firm as internal capital that reduce the need for external capital. As a result, it follows the pecking order theory, which states that firms prefer to use internal sources of funding first and avoid taking on debt to meet their financial needs. The profitability has a high degree of impact on debt than the other significant factors concerned in this study. This finding has confirmed the results of various previous studies (Rajan and Zingales, 1995,

Cassar and Holmes, 2003, Huang and song, 2006, Psillaki and Daskalakis, 2009, Abor and Biekpe, 2009, Chakraborty, 2010, Sheikh and Wang, 2011, Onofras 2012, Handoo and Sharma, 2014, Ohman and Yazdanfar, 2017, Bhat, 2020).

In the case of growth opportunities, a negatively significant effect is found between growth opportunities and leverage, indicating that the startup firms are less relying on debt capital to finance their early operations. It suggests that firms seeing for themselves prospects of having higher growth opportunities in the future would be more likely to avoid the debt burden, thus we are rejecting H4. The growth factor has relatively a smaller degree of influence on the debt of the firm than the other significant factors found under this study as the coefficient is just 0.01. Some previous findings have also presented the same relationship (Rajan and Zingales 1995, Huang and Song, 2006, Chadha and Sharma 2015). Elomo (2014) study on startup firms in the South African context, has depicted a negative relation between short-term debt and growth, indicating that startup firms with higher growth opportunities are more probably like to use lesser short-term debt.

Lastly, for liquidity, a negatively significant effect is found between liquidity and leverage, thus accepting the H5. It indicates that startups firms with higher liquidity would tend to borrow less and use internal funds to meet their financial needs. This result is also following the pecking order theory. Some of the existing studies supporting this negative relationship are (Sheikh and wang 2011, Chadha and Sharma 2015, Ohman and Yazdanfar 2017, Sakr and Beider 2019). Therefore, we can say the negative relation of profitability and liquidity with the leverage has indicated that firms have preferred internally generated funds over the external funds which are in line with the financing hierarchy stated by pecking order theory. Moreover, high costs in raising finance, severe information asymmetry may be restricting the startup firms to rely upon internally generated funds.

The relationship found for firm size, profitability and liquidity supported the hypothesis of pecking order theory while growth variable results supported the hypothesis of trade-off theory. In the case of startup firms, therefore, we can say pecking order theory is more applicable. Start-ups are perhaps the most informationally opaque firms in the economy due to their limited operating experience. As a result, it is widely assumed that start-ups rely largely on initial insider financing due to the possible difficulty of securing external financing (Cassar 2004).

Mostly the discussion over the pecking order theory had focused on large publicly traded firms, with little research into its application to small businesses, particularly start-ups. The study of (Paul, 2009) provided two reasons which give compelling evidence that this theory is significantly more relevant to new firms. Firstly, at start-ups, the presence of information asymmetry is found to be greater in results is strongly supporting the pecking order theory. The potential investors in small businesses, particularly start-ups, have less historical performance data on which to base investment decisions than large businesses. The second one, the key motivation for starting a business is, most people want to become their own boss which incorporates in it the benefit of greater control. As a result, businesses may decide to get capital through banks rather than using equity finance, which is likely to result in lesser interference into their business and the desire of having their own more control over the business remains with themselves. The validation of the pecking order theory in the context of small firms has contributed a lot to the development of capital structure decisions, and a better understanding of how start-up firms get financed will improve our understanding of entrepreneur behavior.

MANAGERIAL IMPLICATION

This study can provide various implications and suggestions to the present and future entrepreneurs regarding determining the financial structure of their firms. The owners/managers can consider these

and various other factors as well to make a better decision for their firms.

The startup firms are initially found to be relying more upon internal financing rather than using external financers for financing their business activities during the early years of their operations. But such behavior if consistently used for a longer period can affect them in growing and taking the future profitable opportunities. Hence, they need to be motivated to establish good long-term relationships with the outsiders like creditors which will help them in mitigating the problem of information asymmetry and which may help them in the future in accessing external financing at more favorable terms.

Specifically in the case of small firms, we have seen that they face difficulties in getting finance from various external sources. So, policymakers are required to get an insight into this financial issue faced by startup firms. Various policies and programs are needed to be framed by them to help the new ventures to grow and become successful ventures of India. The results of the study also highlighted the need to strengthen the financial choices of the start-up entrepreneurs in India so they can grow smoothly without any complications.

CONCLUSION

The findings of this research will aid in gaining a better understanding of the financial behavior of startup firms in India. This study has explored the determinants of capital structure of 29 manufacturing start-up firms of India during the period 2017-2020. The study is conducted using a panel data regression model. Here, leverage has been employed as a dependent variable represented as the capital structure measure for this study. This ratio included total debt which is comprised of both long-term debts as well as short-term debt. According to the empirical findings, the variables firm size, profitability, growth opportunities, and liquidity have shown a significantly negative relationship with the leverage. Because of the negative relationship between profitability and leverage, more profitable companies may be able to utilize internal capital and hence be less reliant on external debt.

Secondly, the negative relationship between liquidity and leverage also supported this finding that the firms with higher liquidity would have more internal funds that can be utilized to finance their business needs so they need a lesser amount of debt. The relationship between growth opportunities and leverage is found to be negatively significant implying that firms predicting better investment opportunities in the coming future would like to take less debt so that its high-interest burden could not become an obstacle at its early growth stage. In the case of firm size, a significant negative relationship between firm size and leverage has been found, implying that larger firms are relying less on debt sources of financing. Small firms are relying more on debt rather than costly external equity for financing their business operations in the early stage of their life cycle. There is no significant relationship found between the tangibility and leverage of the firms.

The findings have supported the hypothesis of pecking order theory, so it can be said from the findings that entrepreneurs of small startup firms are firstly more likely to utilize the internal financing, then source from debt, and last resort to equity financing. This study makes an important contribution to the existing literature, as we specifically analyzed the case of new small ventures whereas the majority of previous studies were focused on large listed firms and small and medium enterprises only, till now. The startup firms are different from these, as they have no prior history, higher information asymmetry; more risk involved in them, therefore it is a more challenging task for the entrepreneurs to finance such firms. ■

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