

# EFFECTS OF SELECTED COMPANY-SPECIFIC VARIABLES IN THE DETERMINATION OF COMPANY LEVERAGE: EVIDENCE FROM TEXTILE INDUSTRY OF BANGLADESH

**Md Asaduzzaman Arif**  
**Lecturer**

School of Business  
Ahsanullah University of Science and Technology, Bangladesh  
E-mail: a.arif.du13@gmail.com

## ABSTRACT

*The purpose of this study is to investigate the effects of profitability, liquidity, size, tangibility, and asset turnover on the leverage of the textile industry of Bangladesh. This paper analyzed 20 companies out of 56 companies listed in the Dhaka Stock Exchange. The data set is for the periods from 2016 to 2019. To find the effects on the dependent variable, the Fixed Effects Model has been used which has been selected using the Hausman test. To test heteroskedasticity, the Breusch-Pagan heteroskedasticity test has been used. The study found size, profitability, and tangibility having a significant effect. While size and tangibility have a positive impact on leverage, profitability has a negative impact. The findings are diversified in nature. The results are not all consistent with the previous studies conducted in different developing countries. So, the policymakers should have in-depth insights while making decisions.*

**Keywords:** Leverage, Profitability, Size, Liquidity, Asset turnover, Tangibility.

## INTRODUCTION

The Capital Structure decision is always one of the most important decisions for a firm. Because of any wrong movement towards designing the capital structure, a firm may face the threat of bankruptcy or sometimes may end in bankruptcy. The capital of a firm combines Equity, Debt, and Preferred stock. Firms take debt for enjoying tax benefits from interest payments. On the other hand, excessive debt in the capital structure increases the probability of default. Therefore, firms need to set up debt at an optimum level. But what is the optimum level of Debt? What are the determinant factors of firms' leverage? are always in question to the financial researchers. In this paper, therefore, our objective is to find out the effect of five factors – profitability, liquidity, asset turnover, tangibility, and company size – on the capital structure of the firms trading in the Textiles Industry in Bangladesh.

Textile Industry is the most important sector for the economic survival of Bangladesh. Of the total export, this particular sector covers 80% or more. In the year 2019, the total export from textiles was 29.21 billion dollars which was 83% of the total export. Also, it is experiencing rapid growth holding the second-largest textile export share in the world. So, the importance of this sector for the economic boost up of Bangladesh is beyond description.

According to the literature, the capital structure determinants of firms are classified into two categories: (a) the macroeconomic factors (Country specific factors) that affect all the firms in

the economy (for instance, inflation, tax, and interest rate in the money market) (b) the company-specific factors such as liquidity, asset turnover, tangibility, profitability, and company size. Considering that the macro factors are common and existing in every industry, in our research we will try to find out the effect of five company-specific factors on the level of debt in the capital structure of the companies trading in the textile industry of Bangladesh. Till now, no paperwork has been carried on in this context in Bangladesh. So, there is a lack of investigating a comparative effect in this context.

The pecking order theory argues that firms will finance from internal sources first, then they will go for borrowed capital and then from the equity issues. According to this theory, it can be assumed that firms having high profitability will have a low level of debt and firms having low profitability will have a high level of debt in their capital structure. Therefore, the profitability variable is the best fit as an explanatory variable in this model. Banks and Financial Institutions will be more confident in lending large corporations as they have diversified sources of activities. So, there will be a positive relationship between leverage and company size. (Titman & Wessels, 1988)

Liquidity exerts a negative impact on the leverage of firms. As firms will finance from their internal sources first. (Ozkan, 2001)

Firms having a high proportion of current asset would have a low level of debt and firms having a higher level of non-current tangible assets would have high debt level in the Capital. (Mayers S. , 2003)

From this literature, the tangibility of assets has been incorporated as an independent variable in the model of our research.

In this paperwork, we would like to develop a model containing the variables that affect the leverage of textile firms significantly. In the second part we put some prominent capital structure theories. The third and fourth part contains the literature review and research output and discussions respectively.

## LITERATURE REVIEW

Dakua (2019) investigated the effects of capital structure determinants and their correlation with the company leverage on the Indian steel industry using data set 2010 to 2017. In his study, seven key determinants have been found: They are profitability, asset structure, size, growth opportunities, non-debt tax shield, liquidity, and risk. The profitability is found to be highly correlated with the debt ratio as was expected and reported in previous studies. The correlations among the determinants such as asset structure, size, and non-debt tax shield are statistically significant. Profitability and liquidity carry positive relationship with debt ratio, although there is a negative relationship between debt ratio and asset structure. (Dakua, 2019)

Frank and Goyal (2003) studied a broad cross-section of American publicly traded firms using data set from 1971 to 1998 to find the Pecking Order theory of corporate leverage and the result showed firm size is irrelevant in debt issues. Rather, they found that net equity issues track the financing deficit more closely than do net debt issues. (Frank & Goyal, 2003)

Frank and Goyal (2009) studied American publicly traded firms using data set from 1950 to 2003 to find the relevant factors to the capital structure decisions. In this study, they used both market leverage and book leverage as explained variable and median leverage, expected inflation, tangibility, market to book assets ratio, the log of assets, and profits as explanatory variable. The result showed a positive impact of median industry leverage, the log of assets expected inflation and tangibility and negative impact of the market to book assets ratio and

profits on leverage. Also, they found that dividend-paying firms tend to have lower leverage. And somewhat similar effects were found when book value leverage was considered. However, for book value leverage, the insignificant impact of firm size, the market-to-book ratio, and the effect of inflation was found (Frank & Goyal, 2009).

Gropp and Heider (2010) using 1991 to 2004 large US and European banks data tried to find out the determinant factors of Bank Capital structure and found that deposit insurance mispricing and capital regulation were second-order important in the capital structure determination. (Gropp & Heider, 2010)

Rajan and Zingales (1995) studied the major industrialized public limited firms to investigate the capital structure choice by these firms. Their findings show that at an aggregate level firm leverage is quite similar across G-7 countries. (Rajan & Zingales, 1995)

Titman and Wessels (1988) investigated the explanatory power of capital structure theories. They found volatility, collateral value, non-debt tax shield, and future growth have an insignificant impact on Debt ratios. (Titman & Wessels, 1988)

Shah and Khan (2007) investigated KSE listed non-financial firms for the period 1994-2002 to find the determinant factors of capital structure. They used the Fixed Effect dummy variables regression model. Using six explanatory variables, they found three variables significant. Their results found tangibility has a positive effect indicating the acceptance of trade-off theory whereas the earning volatility and depreciation variables did not conform to trade-off theory. The agency theory has been hypothesized by the growth variable whereas profitability confirms the predictions of pecking order theory. Size is the only variable that does not conform to any of the theories. (Shah & Khan, 2007)

Hossain and Ali (2012) tried to find out the effect of company-specific factors on company leverage using a sample of 39 companies listed on the Dhaka Stock Exchange (DSE). They used liquidity, profitability, non-debt tax shield, tangibility, managerial ownership, earnings volatility, size, growth opportunity, dividend payment, and industry classification. They found liquidity, profitability, tangibility, and managerial ownership have a significant negative effect on leverage whereas growth opportunity and non-debt tax shield having a positive effect on leverage. (Hossain & Ali, 2012)

Akhtar (2005) tried to find the determinants of capital structure by conducting an investigation from 1992 to 2001 on a sample of Australian multinational and domestic corporations using cross-sectional Tobit regression analysis. The results show that the level of leverage does not differ significantly between multinational and domestic corporations. Both types of corporations show that profitability, growth, and size are significant factors in the determination of leverage as well as collateral value has been found significant determinant of leverage for domestic corporations. Bankruptcy costs and the level of geographical diversification have been found significant for multinational corporations but bankruptcy cost has been found insignificant for domestic corporations. With interaction effects, bankruptcy costs and profitability are significant in explaining multinational leverage relative to domestic leverage. (Akhtar, 2005)

Zeitun and Saleh (2015) studied the impact of leverage on firm performance on Gulf Cooperation Council (GCC) countries. The authors use a panel data to examine the effect of financial leverage on firm's performance using the dynamic Generalized Method of Moments (GMM) estimator. The results from the GMM estimator show that companies' leverage is a significant determinant of firm's performance in GCC countries. (Zeitun & Saleh, 2015)

Firms' tradeoff their operating and financial leverage during good economic times, but do not engage in the tradeoff behavior during recessionary times. (Dugan, Medcalfe, & Park, 2018) Chadha and Sharma (2016) studied the impact of capital structure or financial leverage on firm financial performance using 422 manufacturing countries listed in Bombay Stock Exchange (BSE). It was found that financial leverage has no impact on the firm's financial performance parameters of return on asset and Tobin's Q. However, it is negative and significantly correlated with return on equity. (Chadha & Sharma, 2016)

Kizildag and Ozdemir (2016) used both the firm specific factors and macroeconomic factors to find the ups and downs in the firms leverage using data set from 1990 to 2015 of firms in Tourism industry of US. They took account of the recent economic upheaval in their analyses so that they can compare firms' leverage behavior as "before" and "after" the major economic turmoil in 2007–2009 periods. Their article complements previous work by examining whether leverage factors demonstrate discrepancies from the prior findings and by proposing rigorous industry-specific outlook and solution for the financial leverage literature. (Kizildag & Ozdemir, 2017)

## DATA AND METHODOLOGY

### Defining variables

In an empirical study, one of the most important tasks is selecting dependent and explanatory variables. For this work, the variable selection idea has been taken from the previous studies conducted by different researchers. For example, Laura Serghiescu and Viorela Ligia Vaidean (2014) have tried to find if there is any relationship between Debt ratio and Profitability, Asset size, Liquidity, Tangibility, and Asset Turnover. They used the Ordinary Least Square Method and Fixed Effects Model, Simple and Multiple Regression. In their study, they took the long term and Short-term Debt to Total Assets ratio as the Debt ratio of a firm. (Serghiescu & Vaidean, 2014) In another study, Rajan and Zingales (1995) used different capital structure measures. In their study, they used total capital less total equity to total assets as a Debt ratio. (Rajan & Zingales, 1995) In this research, the variables have been selected as follows.

### Explained variable:

$$\text{Debt Ratio} = \frac{\text{Total Debt}}{\text{Total Asset}}$$

Total Long-term debt and Short-term loans and Working capital loans have been considered in the numerator of Debt Ratio which indicates the actual leverage of a firm. Accounts payables, Deferred liabilities etc. have not been considered as they do not indicate the actual leverage in the firms' capital structure.

### Explanatory Variables

The profitability of the firms:

$$\text{Profitability} = \frac{\text{Earnings Before Interest and Taxes (EBIT)}}{\text{Total Asset}}$$

The Pecking Order Theory states a negative relationship between profitability and debt level of a firm as firms first finance from internal sources. On the contrary, Trade-off Theory states a positive relationship between Profitability and Leverage of a firm as firms finance through debt to reap the tax shield advantages from interest payment (Kraus & Litzenberger,

1973). Although most empirical researches have proven the absence of trade-off theory in practice showing a negative relationship between profitability and leverage of a firm leaning pecking order theory to be existing practically. (Mazur, 2007)

Company size:

$$\text{Size} = \ln(\text{Total Assets})$$

Log normal value (ln) of Total Assets have been considered for analytical purpose. A large number of diversified research results have been found while finding a relationship between the size and debt ratio of a firm. Large Corporations have diverse activities and so have less risk of bankruptcy. Therefore, large corporations seem to have more debt in their capital which means the company size and the leverage are positively correlated (Titman & Wessels, 1988). Although theories may not hold all the time practically. Studying large corporations, Hossain and Ali (2012) found that large corporations may have easy access to the capital market and so the size and leverage have a negative relationship. (Hossain & Ali, 2012)

The tangibility of Assets:

$$\text{Tangibility} = \frac{\text{Non-current tangible Assets}}{\text{Total Assets}}$$

Firms holding a large portion of fixed tangible assets indicate less probability of falling into financial distress. Therefore, lenders get an assurance of being paid for their debt even if the firm falls in financial distress. Considering this case, the Tangibility of assets has been taken into consideration as an explanatory variable in this paper. Therefore, there seems to have a positive relationship between tangible assets in the total assets structure and the level of debt of a firm as having more tangible assets is regarded as a guarantee to the lenders. Tangibility increases leverage (Gomez, Castro, & Ortega, 2016)

On the other hand, more tangible assets in asset structure and the level of debt in developing countries are negatively correlated (Nivorozhkin, 2002). As, in developing countries, the underdeveloped legal system causes a delay in the repayment to lenders in case of bankruptcy. Asset tangibility and Leverage have a negative relationship, proven in studies of several researchers. (Shah & Khan, 2007) (Abdullah, 2005).

Liquidity of the assets (Liquidity):

$$\text{Liquidity} = \frac{\text{Cash and Cash Equivalents}}{\text{Total Assets}}$$

*Pecking Order theory* states that firms having high liquidity depends on internal sources of financing. So, Liquidity puts a negative impact on the leverage of a firm (Ozkan, 2001). So, Liquidity can surely be an important determinant of a firm's capital structure. Thus, liquidity in the asset structure has also been considered as an explanatory variable. Liquidity conforms with the Pecking order theory and therefore, shows a negative impact on the leverage of firms. (Sheikh & Wang, 2010)

Asset Turnover:

$$\text{Asset Turnover} = \frac{\text{Total Sales}}{\text{Total Assets}}$$

Asset turnover indicates the efficiency of the company. It indicates the number of times the company's capital is invested to earn the company's total assets. A high turnover leads to more capital to be invested indicating a positive relationship between asset turnover and firm leverage. Whereas, a low turnover indicates less capital requirement and thus a low level of debt in the capital structure. Asset turnover has a positive impact on the debt level of a firm. (Hutchinson & Hunter, 1995)

### Data Collection

For the analysis purpose, four years of data (2016-2019) of 20 listed companies in the Dhaka Stock Exchange who are operating in the Textiles Sector of Bangladesh have been collected. All the data are secondary data collected from the financial statements of the companies published on their websites.

### Methodology and Analytical Models

Laura Serghiescu and Viorela Ligia Vaidean (2014) used the Ordinary Least Squares (OLS) and Fixed effects Model, single and multiple regression in their study of 'Determinants factors of Capital Structure of a firm (study conducted on the Romanian construction sector firms) (Serghiescu & Vaidean, 2014). Pornpen Thippayana (2014) in his paper on Determinant factors of capital structure in Thailand tried to find the impacts of explanatory variables on explained variables using the Multiple Regression Model. (Thippayana, 2014)

Multiple Regression Model has been used in the study to determine the effects of Profitability, Company size, Tangibility, Liquidity, and Assets Turnover. Therefore, the econometric model for the multiple regression analysis stands for this research as follows:

$$\text{Debt\_Ratio}_{i,t} = \alpha + \beta_1 * \text{Profitability} + \beta_2 * \text{Size} + \beta_3 * \text{Tangibility} + \beta_4 * \text{Liquidity} + \beta_5 * \text{Asset\_Turnover} + \epsilon_{i,t}$$

i = company, t = covered time period

$\alpha$  = Constant value (value of Debt when all independent variables are zero)

$\beta_1$  to  $\beta_5$  all are the coefficients of the independent variables of the regression

$\epsilon$  = Error term (normally distributed error term with an assumed mean value of 0)

As the study has been conducted on panel data, the Fixed Effects model has been used as a statistical model and the perfection of the Fixed Effects Model Over Random Effects Model has been determined using Hausman Test. To test the central tendency of data, Descriptive statistics have been used.

### Descriptive Statistics

Descriptive statistics present the mean, minimum, maximum, and standard deviation of the variables used in the study. The descriptive statistics of the variables used in this study is as follows:

Table 1. Descriptive Statistics

	Mean	Max	Med	Min	Std. Dev.	Obs.
DEBT_RATIO	0.258	0.61	0.23	0.01	0.1540	80
ASSET_TURNOVER	0.661	2.96	0.52	0.09	0.5479	80

LIQUIDITY	0.102	0.37	0.09	0.01	0.0839	80
LOG_SIZE	21.55	22.13	21.40	21.25	0.3470	80
PROFITABILITY	22.018	23.6	22.19	19.29	0.8991	80
TANGIBILITY	0.473	0.83	0.43	0.19	0.1269	80
TOTAL_ASSETS	5066.6	17791	4331	238	3861.1	80

Descriptive statistics shows the central tendency of the variables used in the research. The descriptive statistics above shows that the mean debt ratio is 0.258 with a minimum value of 0.01 and a maximum value of 0.61. The mean asset turnover is 0.6615 with a minimum of 0.09 and a maximum of 2.96. The average liquidity of the firms is 0.1021 with a minimum ratio of 0.01 and a maximum ratio of 0.37. Total Assets has been considered as the size of the firm. Therefore, the mean size of the firm is 5066.64 mn with a minimum value of 238 mn and a maximum value of 17791 mn. The mean profitability of the firms is 22.018 with a minimum of 19.29 and a maximum of 23.6. The mean tangibility of assets is 0.473 with a minimum of 0.19 and a maximum of 0.83.

### Correlation among variables

Table 2. Correlation Matrix

	DR	Prof.	Size_TA	Tang.	Liq.	Asset_TO
DR	1					
Prof.	-0.059	1				
Size_TA	0.117	-0.429	1			
Tang.	0.485	-0.051	0.313	1		
Liq.	-0.231	0.405	-0.618	-0.522	1	
Asset_TO	-0.217	0.228	-0.535	-0.486	0.682	1

The Correlation matrix above shows that there exists no strong correlation between any two variables and there exists no multicollinearity problem among the variables.

### Variance Inflation Factors (VIF) and Multicollinearity

The VIF model is an indicator of the presence of multicollinearity in the data set. It estimates the multicollinearity problem within the mean value of 10 or more. If the value remains below 10, it indicates there is no multicollinearity. And if the value is more than 10, it indicates a multicollinearity problem in the data set.

Table 3. VIF Test

Variable	VIF	1/VIF
Profitability	1.34	0.7448
Log_size	1.81	0.5515
Tangibility	1.49	0.6691
Liquidity	2.67	0.3743
Asset_Turnover	2.06	0.4855
Mean VIF	1.88	

The above table indicates that the mean VIF is 1.88 which is below 10. So, there exists no multicollinearity problem in the model.

### RESEARCH FINDINGS AND DISCUSSION

The probability value of the Hausman test is 0.0000 which is less than our critical value of 0.05 indicating that we can reject the null Hypothesis meaning the Fixed Effect Model is appropriate in our analysis.

#### Heteroskedasticity Test

There are several tests used to find out whether the data are heteroskedastic or homoscedastic. In our analysis, we used the Breusch-Pagan test to test the heteroskedasticity of the data. The Hypotheses for the test are as follows:

H<sub>0</sub>: Constant variance (Not Heteroskedastic)

H<sub>1</sub>: Inconstant variance (Heteroskedastic)

Table 4. Breusch-Pagan test result summary

Chi2(1)	Prob > chi2
2.40	0.1210

The test shows that the p-value is higher than 0.05 meaning that we cannot reject the null hypothesis. Therefore, it indicates that the data are homoscedastic.

#### Hausman Test

In panel data analysis, two types of models are mainly used. One is the fixed Effect Model and the other is the Random Effect Model. Hausman indicates the best fit model for a specific set of panel data. The Hypotheses are:

H<sub>0</sub>: Random Effect Model

H<sub>1</sub>: Fixed Effect Model

Table 5. Hausman Test result summary

Test Summary	Chi-Sq. df	Chi-Sq. Statistic	Prob
Cross Section Random	5	125.86	0.0000
Debt_ratio	Fixed	Random	Difference
Profitability	-1.783118	-0.8028673	-0.9802506
Log_size	-0.090234	-0.0529404	-0.0372936
Tangibility	0.4014503	0.4798101	-0.0783598
Liquidity	-0.1468696	-0.0746773	-0.0721923
Asset Turnover	0.250492	0.0522698	0.1982222

The result above shows that the p-value 0.0000 is lower than 0.05 meaning that we can reject the null hypothesis and the Fixed Effect Model is the best fit model for this analysis.



### Fixed Effect Model

Table 6. Fixed Effect Model results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.977945	0.907025	1.078189	0.2857
ASSET_TURNOVER	0.032789	0.082230	0.398746	0.6916
LIQUIDITY	-0.063428	0.226135	-0.280488	0.7802
LOG_SIZE	0.064488	0.028507	2.262174	0.0277*
PROFITABILITY	-0.103970	0.045128	-2.303882	0.0250*
TANGIBILITY	0.347175	0.124627	2.785704	0.0073*
* Significant at 5% level of significance				
R-squared	0.850410	Mean dependent var		0.258000
Adjusted R-squared	0.785135	S.D. dependent var		0.154095
F-statistic	13.02802	Durbin-Watson stat		1.196140
Prob(F-statistic)	0.000000			

P-value is 0.0000 which is less than 0.05 and F-statistic is 13.03 indicating that the model is robust and significant. R-squared and Adjusted R-squared are 0.8504 and 0.7851 respectively which means 78.51% predictability of the dependent variable is covered under this model by the independent variables. The table above shows a positive constant of 0.9779 meaning that without the presence of any independent variable covered under this model, there will still be some leverage in the firms. Among the variables studied Company size, Profitability and tangibility are significant variables.

Company size shows a positive influence on the level of leverage of a firm. And this result is consistent with the previous study which showed the company size and the leverage are positively correlated. (Titman & Wessels, 1988)

Tangibility shows a positive influence on the leverage of a firm which is consistent with the theory as stated in the data and methodology section. But the result is inconsistent with the previous concept of Nivorozhkin (2002) has shown a negative correlation between having more tangible assets in asset structure and the level of debt in developing countries. (Nivorozhkin, 2002)

Profitability shows a negative coefficient which is consistent with the Pecking order theory. The Pecking Order Theory states a negative relationship between the profitability and debt structure of a firm as firm's first finance from internal sources and the result is consistent with the empirical study conducted by (Onofrei, Tudose, Durdureanu, & Anton, 2015). Among the insignificant variables, Liquidity shows a negative relationship with the debt structure of the firm and the result is consistent with the previous study which shows liquidity puts a negative impact on the leverage of a firm (Ozkan, 2001). Asset turnover shows a positive relationship with the debt level.

## CONCLUSION

Textile Industry is the major foreign currency earning source of Bangladesh, not Bangladesh only but some other developing countries like Vietnam, India etc. Firms in this industry are mainly dependent on debt financing for meeting up the capital requirement. Financial scientists have always tried to give a framework on the optimum level of debt for a firm. But it has been always a challenge for them to conclude because capital structure selection is completely a firm's internal decision. However, no one acts irrationally and so in the study the intention was to find out the firm-specific factors that influence the capital structure decision of a firm. Taking 20 listed companies of DSE, in this study we found 3 variables significant (Company size, Profitability, and tangibility) among the 5 variables studied (Company size, Profitability, Tangibility, Liquidity, and Asset Turnover). Using the Fixed Effect Model, this paper found 85.04% R-squared value and 78.51% Adjusted R-squared value which proves the robustness of our model for predicting the Leverage of the Textile Industry in Bangladesh.

## REFERENCES

- Abdullah, A. M. (2005). Capital Structure and Debt Maturity: Evidence from Listed Companies in Saudi Arabia. *Journal of Business & Economics*, 11, 15-33.
- Akhtar, S. (2005). The Determinants of Capital Structure for Australian Multinational and Domestic Corporations. *Australian Journal of Management*, 30(2), 321-341.
- Chadha, S., & Sharma, A. K. (2016). Capital Structure and Firm Performance: Empirical Evidence from India. *The Journal of Business Perspective*, 19(4), 295-302.
- Dakua, S. (2019). Effect of determinants on financial leverage in Indian steel industry: A study on capital structure. *International Journal of Finance & Economics*, 24(1), 427-436.
- Dugan, M. T., Medcalfe, S. K., & Park, H. S. (2018). A reconsideration of operating-financial leverage tradeoff hypothesis. *Journal of Financial Economic Policy*, 10(4), 473-483.
- Frank, M. Z., & Goyal, V. K. (2003). Testing the pecking order theory of capital structure. *Journal of Financial Economics*, 67, 217-248.
- Frank, M. Z., & Goyal, V. K. (2009). Capital Structure Decisions: Which Factors Are Reliably Important? *Journal of Financial Management*, 38(1), 1-37.
- Gomez, A. P., Castro, G. A., & Ortega, M. F. (2016). Determinants of leverage in mining companies, empirical evidence for Latin American countries. *Contaduría y Administración*, 61(1), 26-40.
- Gropp, R., & Heider, F. (2010). The Determinants of Bank capital structure. *Review of Financial Journal*, 14(4), 587-622.
- Hossain, F., & Ali, A. (2012). Impact of Firm Specific Factors on Capital Structure Decision: An Empirical Study of Bangladeshi Companies. *International Journal of Business Research and Management (IJBRM)*, 3(4), 163-182.
- Hutchinson, R., & Hunter, R. (1995). Determinants of capital structure in the retailing sector in the UK. *The International Review of Retail, Distribution and Consumer Research*, 5(1), 63-78.
- Kizildag, M., & Ozdemir, O. (2017). Underlying factors of ups and downs in financial leverage overtime. *Tourism Economics*, 23(6), 1321-1342.
- Kraus, A., & Litzberger, R. (1973). A State-Preference Model of Optimal Financial Leverage. *Journal of Finance*, 28(4), 911-922.
- Mayers, S. (2003). Financing of corporations. *Handbooks of the Economics of Finance*, 1(1), 216-253.

- Mayers, S., & Majluf, N. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, 13(2), 187-224.
- Mazur, K. (2007). The determinants of capital structure choice: Evidence from Polish companies. *Int Advanced Econ Res*, 13(4), 495-514.
- Nivorozhkin, E. (2002). Capital Structures in Emerging Stock Market: the Case of Hungary. *The Developing Economies*, 40(2), 166-187.
- Onofrei, M., Tudose, M. B., Durdureanu, C., & Anton, S. G. (2015). Determinant Factors of Firm Leverage: An Empirical Analysis at Iasi County Level. *Procedia Economics and Finance*, 20, 460-466.
- Ozkan, A. (2001). Determinants of Capital Structure and Adjustment to Long Run Target: Evidence from UK Company Panel Data. *Journal of Business Finance & Accounting*, 28(1-2), 175-198.
- Rajan, R. G., & Zingales, L. (1995). What Do We Know about Capital Structure? Some Evidence from International Data. *The Journal of Finance*, 50(5), 1421-1460.
- Serghiescu, L., & Vaidean, V. L. (2014). Determinant factors of the capital structure of a firm- an empirical analysis. *Procedia Economics and Finance*, 15, 1447-1457.
- Shah, A., & Khan, S. (2007). Determinants of Capital Structure: Evidence from Pakistani Panel Data. *International Review of Business Research Papers*, 3(4), 265-282.
- Shah, A., & Khan, S. (2007). Determinants of Capital Structure: Evidence from Pakistani Panel Data. *International Review of Business Research Papers*, 3, (4), 265-282.
- Sheikh, N., & Wang, Z. (2010). Financing Behavior of Textile Firms in Pakistan. *International Journal of Innovation, Management and Technology*, 1(2), 130-135.
- Thippayana, P. (2014). Determinants of Capital structure in Thailand. *Procedia Social and Behavioral Sciences*, 143, 1074-1077.
- Titman, S., & Wessels, R. (1988). The determinants of capital structure choice. *Journal of Finance*, 43(1), 1-19.
- Zeitun, R., & Saleh, S. A. (2015). Dynamic performance, financial leverage and financial crisis: evidence from GCC countries. *EuroMed Journal of Business*, 10(2), 147-162.

### Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal. This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/4.0>)