DETERMINANTS OF FINANCIAL LEVERAGE: AN EMPIRICAL EVIDENCE FROM PAKISTAN STOCK EXCHANGE Determinants of Financial Leverage: An Empirical Evidence from Pakistan Stock Exchange

Article *in* INTERNATIONAL JOURNAL OF MANAGEMENT · January 2021

CITATIONS
0

READS
122

13 authors, including:

Mansoor Ahmed
Mohammad ali jinnah university-karachi, Pakistan
6 PUBLICATIONS **0** CITATIONS
SEE PROFILE

Kashif Arif
University of Malaya
20 PUBLICATIONS **62** CITATIONS
SEE PROFILE

Bilal Eneizan
Jadara University
90 PUBLICATIONS **509** CITATIONS
SEE PROFILE

International Journal of Management (IJM)
Volume 12, Issue 1, January 2021, pp. 1002-1019 Article ID: IJM_12_01_086
Available online at http://www.iaeme.com/ijm/issues.asp?JType=IJM&VType=12&IType=1
Journal Impact Factor (2020): 10.1471 (Calculated by GISI) www.jifactor.com
ISSN Print: 0976-6502 and ISSN Online: 0976-6510
DOI: 10.34218/IJM.12.1.2021.086

DETERMINANTS OF FINANCIAL LEVERAGE: AN EMPIRICAL EVIDENCE FROM PAKISTAN STOCK EXCHANGE

Mansoor Ahmed
Mohammad Ali Jinnah University, Karachi, Pakistan

Shahnawaz Baloch
Mohammad Ali Jinnah university, Karachi, Pakistan

Asaad Alsakarneh*
School of Business, Jerash University, Jordan.

Kashif Arif
Shaheed Zulfiqar Ali Bhutto Institute of Science and Technology, Karachi, Pakistan

Bilal Eneizan
Business School, Jadara University, Jordan
*Corresponding Author

ABSTRACT

The current study aimed to investigate the impact of several factors i.e. profitability, tangibility, size, growth, financial risk, liquidity, tax shield on firm's financial leverage. The data was collected for a panel of 83 companies from 6 high performing sectors of Pakistan stock exchange from 2006 to 2016. The results of panel data analysis were compared for random effect, fixed effect and pooled regression models. The findings revealed that Profitability, Tangibility, Firm Size, Liquidity, Tax Shield and Tobin's Q had a significant role in leverage decision of the sample firms while financial risk, business risk and growth were found to be insignificant. The fixed effect model was found to be more appropriate to explain the relationships. The implications of the results were also mentioned.

Key words: Financial leverage, profitability, tangibility, Pakistan Stock Exchange (PSX)

Cite this Article: Mansoor Ahmed, Shahnawaz Baloch, Asaad Alsakarneh, Kashif Arif and Bilal Eneizan, Determinants of Financial Leverage: An Empirical Evidence from Pakistan Stock Exchange, *International Journal of Management*, 12(1), 2021, pp. 1002-1019.

http://www.iaeme.com/IJM/issues.asp?JType=IJM&VType=12&IType=1

1. INTRODUCTION

Financial leverage is vital to mold organizational performance. Number of companies use it as their prime business strategy to compete in the market. It posits how firms are using its fixed financial charges. Modigilani and Miller (1958), introducing financial, concluded that absence of firm tax does not rely on debt. Leverage is the combination of debt and equity and it mainly focuses on debt financing that's why capital structure and leverage decisions are used interchangeably (Brigham et al., 2016). It is found that debt financing receives major consideration while deciding about capital structure mix (Brigham et al., 2016).In Pakistan mostly non- financial sector's capital structure depends on leverages, and it is the main source of finance.

Practical issues associated with the capital structure decisions are to include portion of debt in the overall capital structure; debt is relatively cheaper and appeals due to tax shield against interest payments. While deciding about the mix of financing managers must consider best interest of company's owners. Owners are interested in wealth maximization. That's why capital structure decisions require careful consideration as the goal of wealth maximization can be achieved.

Debt-Equity has become very core factor in financial management because of its effects on the firm's profitability, risk and hence its value. There are several significant reasons that's why the management has significant role to both small and big organizations to control the financial leverage. Pindado, Requejo, and Torre (2008) find the importance of capital structure decisions and suggest that stockholders are more concerned with better control on financial decisions than financial risk. Sheikh and Wang (2011) and Bradley, et al. (1984) find business risk negatively influences on capital structure decisions in both national and international settings respectively. Optimal capital structure is achieved when benefits received from tax saving are equal to costs associated with debt.

Capital structure preferences directly affect company's performance. These preferences are also important to attain basic goal to maximize stockholders' wealth. In order to align interest of stockholders and managers, it is important to pay attention on the financing decisions. Despite of its importance in Pakistan, lesser researches can be found providing empirical evidences on performance-capita structure relationships. Therefore it requires identification of determinants which influence the choice of the company's debts decisions. This research is an attempt to identify those determinants which have influence on borrowings decisions. Myers (1977) toy, sonehill, wright and bekhuisen (1974). The variables that explain the debt are: capital intensity (tangibility), size, growth rate and profitability of the company. (Gómez, Castro ∗, Ortega 2016). Many researchers have test this impact by taking three or four variables, but by the best of my knowledge none of them test this with so many variables (financial risk, business risk, liquidity, tax shield and Tobin's q) rely on inquiry to assessment that either fixed effect model is the best or random effect model.

The core objective of this research is to assess the determinants of borrowings for listed companies of non-financial sector of Pakistan. Apart from that, the study examines the appropriateness of fix and random effect models in predicting the impact of the above mentioned variables on financial leverage of the selected firms.

The Non-financial sector is most important sector of Pakistan. This sector plays a vital role in the country's economy. A well-established industrial base is essential for the economic development. This sector has major contribution in the GDP growth. It employs second major employment after agriculture sector. This is the second highest backbone of the economy of Pakistan. In Pakistan non-financial sector consists on diversified nature of businesses. The research on financial leverage focusing on non-financial sector of Pakistan (Fuel and Energy, Motor and Vehicle Sector, Machinery and Apparatus Sector, Cement Sector, Paper Sector and

Textile Sector) is almost/ nearly non-existent for the period of 11 years (2006-2016), therefore this study is an attempt to fill this gap. This study is also helpful for finance managers as well as financial institutions to take leverage decisions.

2. THEORIES OF FINANCIAL LEVERAGE

2.1. Signaling Theory

Signaling theory was initiated by Leland and Pyle (1977). Leland and Pyle (1977) come to the conclusion that firm's value was higher when real share holder of a firm hold high number of shares that means holders discover their share is underrate and issue of new share is not required, for that reason any firm is discern as a signal stocks are overrate that issue of new shares in the market. It move to descending pressure on shares rate to lead at equilibrium while firm is discern as a signal that stocks are underrate that issue of debt in the firm resulting it move at a higher place pressure on price of share to lead it at equilibrium.

According to Leland and Pyle (1977) that association between share holder and the public to deduce the information gap had to take part in specific role in financial institution. In additional, Masulis and Angelo (1980) come to the conclusion that signaling theory functioning correctly because his study research verified that price of shares and debt issuance were straight relationship with each other on 133 announcement returns of exchange present. This theory also hold up by Copeland and Weston (1988).

Lee (1987) come to the conclusion that signaling theory propose did response as inside owners while in additional, Copeland and Weston (1988) conclude that inside owner think about their price of stock was higher than price of market and take to lead support of future evaluation because they believe in loss of power is short term. So, signaling hypothesis be in view to apply an impact on capital structure.

2.2. The Pecking Order Theory

This theory is consist of additional points towards corporate finance literature that firms performance and decisions of capital structure. Pecking theory was initiated by Myers (1984), Myers and Majluf (1984). They conclude that firm treated as great importance of retained earnings than the issuance of new stocks because their quarrel rely on internal equity (retained earnings) obtained and an affordable as estimate to external equity (new stocks). Firm has to raise their equity cost which carry to cost of flotation in terms of new issue of shares.

According to Barclay, Morellec, and Smith, 2001 draw a special attention towards the exterior finance is costly making that exist between participants of outside market and manager's information is asymmetric regarding retained earnings more attractive. It's mainly discern to increase the affordable capital lead to manager consistent issue under rate share. Investor's demand always high because they demand more profit from the investment which lead to more new issue of shares costly. This theory at the end of conclude that firm should go for interior financing initial, second will go to finance debt and lastly to go for exterior equity. So, it's a satisfactory direction and proper preference way.

2.3. Bankruptcy Cost Theory

Myers and Majluf (1988) initiated this theory and they stated that firms favor debt above equity and internal equity above external equity because of bankruptcy cost contain accounting, legal and other administrative costs while all are rely on re-accommodation of financials and legal action at bankruptcy. Peak of debt position also raises fixed charges in form of interest also before the real legal proceedings reach for and hold location that indirect cost increase. Their debt financing had been limited for firm's set concluded by Altman (1989). Copeland and

Weston (1988) investigated that total value of firm consist of 20% direct and indirect cost of bankruptcy.

Capital structure decisions had been significant and negative influenced through bankruptcy cost by Bradley, Jarrell, and Kim (1984) also Myers (1984) gave a talk to momentousness of bankruptcy cost. His focal point that association ship of firm's value and fund decision must be assessed. Martin, Cox, Jr, and McMin (1988) proposed that discussed on issue of capital structure lead to extend any last conclusion.

2.4. Titman and Wessel Theory

According to Titman and Wessel (1988) discover that those firms which had high return that means they kept low debt distance because they can connect their needs of financial with interior funds. Profitability had opposite influence in leverage decisions by Cassar and Holmes (2003), and Hall (2004). Their discovered were especially so as to be fair or accurate with this theory and these tests consisted of long term and short term ratios as leverage decisions.

In additional, Fama and French (1998) investigated that agency problem raises in terms of more debts towards capital structure between lenders and stockholders and also tax had not only a single element to decision regarding debt but its association had inverse between profitability and leverage.

According to Graham (2000) come to the conclusion that firms had high return with high magnitude of small quantity of debt their resolution of capital structure. In another way, leverage decision had positive and significant influence on profitability by Petersen and Rajan (1994). Scherr, Surgue, and Ward (1993) investigated that firms anticipate which high return in terms of high debt as similar with high equity. Champion (1999) and Leibestein (1966) investigated that firms utilize high debt to lead raise their financial capabilities.

2.5. The Trade-Off Theory

This theory focal point on tax shield and bankruptcy cost. According to Ross (2008) hold up trade off theory and come to the conclusion that volume of firms debt where large amount of borrowing advantage equivalent to the cost of bankruptcy. In additional, this doesn't holdup to select a measure of optimal capital structure and they highlighted two focal pints i.e. bankruptcy cost and tax shield in terms of trade-off.

There are two forms of trade-off theory first is Static Trade-Off Theory (single length) and Dynamic Trade-Off Theory (multiple length). According to Miller (1977) opposite to this theory that means he disapproved of regarding theory of Static Trade-Off interpretation that an advantage of high amount of debt are peaked than cost sustain. Most of the researcher had opposed to theory of Static Trade-Off. Dynamic Trade-Off Theory was initiated by Fischer, Heinkel and Zechner (FHZ) (1989) and they stated that firms become different with their action of time and influence of performance their capital structure.

3. HYPOTHESES DEVELOPMENT

The area of financial leverage is an important topic of the finance because prior research which was gave their empirical evidences had been done by the well-known researchers such as Myers (1977), Wright and Bekhuisen (1974). Different research studies return on assets as a proxy formula used as profitability and some research studies had been taken as a proxy return on equity or net income as a profitability but in this study we simply take profitability variable and other variables as well that explain for each and individually characteristics and performance with financial leverage.

3.1. Profitability and Financial Leverage

Profitability which is measured as net income divided by total assets. As Peking order theory proposes there is a negative connection between leverage and profitability by reasoning is that companies who got profits on behalf of funding of cash flow in respect to fixed their independence and to abstain from vulnerability to asymmetry information. Hussain et al., (2016) and Saleem et al., (2016) stated that there is positive connection between leverage and profitability exist as supported by Trade-off theory predicts; profitability has a positive connection with leverage by reasoning is that profitable companies tends to favors debt it enhance their tax edge and also to diminish a symmetric information. It is very essential to added more; when profitability computed, income before interest and tax and funds employed are the part of it meanwhile it used for the acquisition of profits by a firm and also refer to as the value of all assets used by a firm to generate earnings. Some firms looked to the profitability due to low leverage intensity with consistent earning while some firms focused on high return with high leverage to get more profitability, but they are on high risk as compare to low leverage intensity firms. Prior studies have shown positive connection between profitability and leverage for example Pinkova (2012), Kartikasari and Merianti (2016), Manu, et al., (2019) and by Rahayu, et al ., (2019) which has done in the same way over time by Trade-off theory. Hence it the hypothesis can be stated as:

H_1: There exists a positive relationship between profitability and financial Leverage.

3.2. Tangibility and Financial Leverage

Tangibility refers the relationship of fixed assets with total assets. Shah and Khan (2007), Khraiwesh and Khrawish (2010), Ali (2011), Sabir and Malik (2012) argued that tangibility has positive connection with leverage as same as corroborated by Trade-off theory predicts there is positive connection between tangibility and leverage while Peking order theory usually predicts a negative influence. Some financial organizations cannot generate revenues because it is unable to meet its financial obligations due to high fixed costs to economic downturns that tangible assets generally keep hold of their value. Such financial organizations have intangible assets like IT firms based be liable to look towards challenges in take and use money from financial institutions due to absence of collateral. Throughout, many recessions with these panics, want tangible assets to work for as a collateral is intensify anticipated of lenders liquidity. In additional, when a firm has a huge measure of fixed assets accurately, it can get within a responsive way lower financing costs from creditors. So a firm with constantly fixed assets gets more than a firm with low degree of fixed assets as the interest will be lower. In this manner there is a positive connection between leverage and tangibility which some studies corroborated such as Pinkova (2012), Çekrezi (2013), Sun et al., (2013), Hassan (2015), Saleem et al., (2016) and Guruswamy and Marew (2016) which is constant with the Trade-off theory. Consequently, the it can be claimed that:

H_2: Tangibility has a positive relationship with financial leverage

3.3. Firm Size and Financial Leverage

There are mixed theories supports to firm size and leverage connections that Trade-off theory suggests there is positive connection between leverage and firm size meanwhile Peking order theory contradicts it. According to Trade-off theory claims bigger companies have a bigger debt that's why they liable to possess more varieties and have under default risk as measure to little companies. Peking order theory states bigger companies favors debt-equity, thus have less cost of debt because bigger companies have a potentially good image in borrowing banks that's why they have less cost of debt. In the course of financial distress lenders have very adequate options

to borrow money and liable to choose giant companies with good image and low risk. Firm size has affecting relationship with temporary task of financing. Some of them part transferred financing and it gives the making a lot of an item, so each item financing less to huge firms. As showed by information reveal is for each situation higher in huge firms either smart or little firms, huge firms have low level of transferred and all virtually that truly matters reliably vital inspiration in their leverage. In this way, there is a positive connection between size and leverage also prior empirical findings have corroborated for example; Shah and Khan (2007), Fowdar et al., (2009), Khraiwesh and Khrawish (2010), Ali (2011), Sabir and Malik (2012), Çekrezi (2013), Sun et al., (2013), Masoud (2014), Anderloni and Tanda (2014), Tariq (2015), Dakua (2018), Yigit and Jermias (2019), Zafar et al. (2019) which is constant with Trade-off theory. The above discussion leads to the following hypothesis:

H_3: A positive relationship exists between firm size and firm leverage.

3.4. Firm Growth and Financial Leverage

According to Frank and Goyal, (2009) and Koksal and Orman, (2014) stated that chances of growth are considered by the sales growth at the same time as Pecking order theory forecasts a positive influence of firms growth on leverage, Trade-off theory proposes a negative influence it. Various analyst such as Shah and Khan (2007), Fowdar et al., (2009), Ali (2011), Masoud (2014), Anderloni and Tanda (2014), proposed a negative connection between growth and leverage because of high risk with rising of debt. When any firm took leverage there is risk involving in that side while chances of high leverage get growth set of circumstances that makes it possible to do more but sometime firms cant attained the benefit of taking debt resulting growth chances declined. Empirical findings have shown mixed conclusions but most of the findings have negative connection between growth and leverage which is corroborated by Hussain et al., (2016), Saleem et al., (2016), Guruswamy and Marew (2016) and Yigit and Jermias (2019) which is constant with the Trade-off theory. Keeping in the view the above discussed point it can be claimed that:

H_4: There is a negative relationship between firm growth and financial leverage.

3.5. Financial Risk and Financial Leverage

Financial risk which is measured as earnings before interest and tax divided by earnings before and tax. These earning ability quick more results of utilization of obligation capital i.e. those firms involved to raise their own equities that they have a big chance to meet their financial needs because their bankruptcy chances lower as compare to risky firms while as appeared by (Horne and Wachowicz, 2005) gave financial risk may assigned since it makes of turn into cash of the standard cash related performs very well nearly as mixed group of earning per share. Empirical findings corroborated such as Fowdar et al., (2009), Gunarathna, (2016) and Almanaseer, (2019) that positive connection between financial risk and leverage exist. Hence it can be hypothesized that:

H_5: There is positive impact of financial risk on financial leverage.

3.6. Business Risk and Financial Leverage

Business risk which is referred as gross profit divided by earnings before interest and tax. Peking order theory and Trade-off theory anticipates there is negative connection between leverage and business risk. Meanwhile, both theories agreed on some volatility involved in business risk payment that becomes risky when nature is out of order and partial by chance in good position. Firms with high running risk utilize the moderate level of commitment regard

combine by quality of broaden business risk by Kim and Sorensen (1986). According to Ward, (1993) stated that leverage is a combined word and desire to do something in a appropriate scale, needed for running the standard assignments of connections in terms of business risk can be shown as cash related risk and business chance. Thusly the connection is working in with no uncertainty risky condition should deal with their obligation use so they can reduce business risk which will diminish their not having enough money to payment chance. Empirical findings have shown mixed conclusions but most of the findings have corroborated with negative connection between business risk and leverage i.e., Alnajjar, (2015), Dakua (2018) and Zafar et al. (2019) which is consistent with both theories. Hence the following hypothesis is posed.

H_6: There is a negative relationship between business risk and firm leverage.

3.7. Liquidity and Financial Leverage

Liquidity referred as currents assets divided by current liabilities. As Trade-off theory forecasts there is positive connection between leverage and liquidity because of bigger companies have a high potential of liquidity to corroborate comparatively higher leverage to meet their short term obligations. Almanaseer, (2019) asserted that there is a negative connection between the liquidity and leverage resulting the relationship with higher liquidity, the higher its ability to pay its commitments achieving lower risk, and won't depend on without getting the open door needs to challenge of business group. As Pecking order theory anticipates a negative connection between liquidity and leverage by reasoning is that companies have huge liquidity favors internal funds to expenditure as supported by Dejong, Kabir & Nguyen, (2008). Liquidity both impacts the affiliation money related structure, where the connection between the liquidity degree and duty may negative or positive, that relationship with high liquidity degree will have a high capacity to fulfill their commitments raised by Ozkan (2001). Empirical findings have shown mixed conclusions but most of the findings have negative connection between liquidity and leverage which is corroborated such as Fowdar et al., (2009), Pinkova (2012), Masoud (2014) and Zafar et al. (2019) which is constant with Pecking order theory. Hence the following hypothesis states that:

H_7: There exists a negative relationship between liquidity and financial leverage.

3.8. Tax Shield and Financial Leverage

Tax shields it constructs more productive when further financing opt in terms of debt. Trade-off theory foresees a negative connection between leverage and non-debt tax shield. Notwithstanding, Peking order theory does not give an obvious clarification in terms of influence of tax on leverage. The total depreciation of yearly charges and understanding instructions of credit always given to variety of positions means it diminished interest and responsibilities to restrictions of tax shields Bradley et al. (1984) while companies likes a tax position in favorable for debt financing relies on the trade-off in the middle of these two influences. They find leverage is positively related with tax shield and also some empirical findings have corroborated such as Fowdar et al., (2009), Ali (2011), Saleem et al., (2016) and Dakua (2018).shown positive connection between tax shield and leverage which is corroborated by Fowdar et al., (2009), Ali (2011) and Saleem et al., (2016). The following hypothesis states that

H_8: There is a positive impact of tax shield on financial leverage.

3.9. Tobin's Q and Financial Leverage

Tobin's q which is referred as a total market value of company sum with liabilities divided by total asset value and adding liabilities. Alipour, (2013) pointed out that the positive aspect of Tobin's Q display the current worth and predicted future payment of the firm. It checks money-related professionals put on a firm showed up almost the same as the expense of setting up such a firm. Tobin's Q is more basic than one, respect has been added to firms over years, showing an especially managed firm and if Tobin's Q is short of what one, respect has disappeared. Empirical findings regarding this hypothesis have shown positive connection between tobin's q and leverage which is corroborated by De Jong (2002) and Al-Nsour & Al-Muhtadi (2019). Consequently the following hypothesis is developed

H_9: There is positive effect of Tobin's Q on Financial Leverage.

4. METHODOLOGY:

4.1. Data Collection

The study used the data from 83 non financial firms representing 6 industrial sectors of Pakistan stock exchange. The time dimension of the comprises of annual data from 2006 to 2016 of the sample firms. The data has been collected from the Balance Sheet Analysis provided by the State Bank of Pakistan. The number of companies included in the sample are provided in the table below:

Table 1

S.no	Sector	No. of Firms Included in the Sample
1	Fuel & Energy	18
2	Motor Vehicles/Trailers and auto parts	22
3	Electrical machinery & apparatus	08
4	Cement sector	15
5	Paper & paperboard products	09
6	Textile sector	11
Total Number of Firms Included		*83*

Research Variables and its Formula:

FLD = Financial Leverage decisions (measured as total debts divided by total equity).

PROF= Profitability (net income divided by total assets)

TANG = Asset tangibility (measured as fixed assets divided by net total assets)

SIZE = Size of the company (measured as log of total Assets)

GROWTH = Growth Potential (measured as % Increase in net total assets)

FRISK = Financial risk (measured as EBIT/EBT)

BRISK = Business risk (measured as Gross Profit/ EBIT)

LIQ. = Liquidity (measured as current assets / current liabilities

TSHIELD = Tax shield (measured as interest expense multiplied by corporate tax rate)

Tobin's Q = Total market value of company + liabilities divided by total asset value + liabilities.

Specification of Model

This study wants a model (PLS, FEM and REM) to identify the financial factors or determinants to influence on financial leverage of the non-financial companies. Model identification are as follows:

$FLD_{it} = \beta_0 + \beta_1 PROF_{it} + \beta_2 TANG_{it} + \beta_3 SIZE_{it} + \beta_4 GTH_{it} + \beta_5 FRISK_{it} + \beta_6 BRISK_{it} + \beta_7 LIQ_{it} + \beta_8 TSHLD_{it} + \beta_9 TOBQ_{it} + \varepsilon_{it}$ …… (1)

Where,

FLD_{it}– Firm i's Financial Leverage at time t

β_0 – Intercept.

β_1 to β_9 – Coefficients of independent variables.

β_{0i} – Firm i's Intercept

$PROF_{it}$ – Firm i's Profitability at time t.

$TANG_{it}$ – Firm i's Asset Tangibility at time t.

$SIZE_{it}$ – Firm i's Size at time t.

GTH_{it} – Firm i's Growth at time t.

$FRISK_{it}$ – Firm i's Financial Risk at time t.

$BRISK_{it}$ – Firm i's Business Risk at time t.

LIQ_{it} – Firm i's Liquidity at time t.

$TSHLD_{it}$ – Firm i's Tax shield at time t.

$TOBQ_{it}$ – Firm i's Tobins Q at time t.

ε_{it} – Firm i's Error term at time t.

Descriptive Statistics

Table 2

	Mean	Std. Dev.	Skewness	Kurtosis	Jarque-Bera	Probability
Financial Leverage	21.58867	14.72087	-1.87895	8.694765	1770.922	0.00
Profitability	17.63267	13.84279	0.205083	2.825316	7.560775	0.02
Tangibility	11.11573	9.431487	0.484801	1.914331	80.60287	0.00
Size	7.961895	0.42506	0.101876	2.281123	21.23862	0.00
Growth	0.377985	0.517678	1.970414	5.772821	883.2766	0.00
Firm Risk	13.00296	11.07423	0.628296	2.893942	60.49651	0.00
Business Risk	9.93494	6.327606	1.379472	5.547394	536.4252	0.00
Liquidity	2.301331	5.156517	2.598675	7.999841	1978.58	0.00
Tax Shield	1.562048	1.402835	4.753897	31.61341	34584.64	0.00
Tobin's Q	5.1946	2.683601	1.517082	7.982248	1294.517	0.00

In this descriptive table mean of (FLD) is 21.58, median is 26.69 and standard deviation is 14.72 that's mean is > than standard deviation or low deviation from the mean while skewness showed negative and Kurtosis valued is 8.69 also minimum value is -83.72 and maximum value is 38.91.

Further, other means of variables such as (PROF), (TANG), (SIZE), (FRISK), (BRISK), (TSHLD) and (TOBQ) is (17.64, 11.11, 7.96, 13.00, 9.93, 1.56 and 5.19) along with median (17.05, 6.63, 7.8, 14.5, 9.3, 1.2 and 4.7) and standard deviation is (13.84, 9.43, .425, 11.07, 6.32, 1.4 and 2.68). Mean of all variables are greater than standard deviation that meaning is low deviation from the mean. Minimum value of all variables is (-9.48, -4.64, 6.5, .13, 2.1, .06

and .12) and maximum value is (55.87, 29.29, 8.82, 42.6, 34.8, 13.89 and 22.82) exist in this table. Skewness and Kurtosis showed positive of all variables.

Mean of two variables such as (GTH) and (LIQ) is (.3779 and 2.301), median is (.17 and .50) and standard deviation is (.51 and 5.15) so it showed that mean is < standard deviation or can be say that in other way is weighty deviation from the mean. Kurtosis and Skewness showed positive while Jarque-bera (883.27 and 1978.58) along with minimum value is (.02 and .143) and maximum value is (2.14 and 20.52).

According to the descriptive table counts of observations are 913 of all sectors data such as (Fuel and Energy, Motor and Vehicle Sector, Machinery and Apparatus Sector, Cement Sector, Paper Sector and Textile Sector) fluctuated year to year because of standard deviation.

Correlation Matrix

Table 2

	FLD	PROF	TANG	SIZE	GTH	FRISK	BRISK	LIQ	TSHLD	TOBQ
FLD	1									
PROF	0.2528	1								
TANG	0.6594	0.1081	1							
SIZE	0.3062	-0.2142	0.4134	1						
GTH	-0.006	-0.034	0.0083	0.0124	1					
FRISK	-0.061	-0.035	-0.1074	0.0247	0.0138	1				
BRISK	-0.1314	-0.0718	-0.157	-0.0046	0.0653	0.0198	1			
LIQ	-0.4386	-0.0665	-0.3235	-0.286	0.0138	0.0798	0.086	1		
TSHLD	0.0832	0.0558	0.0405	-0.0628	-0.0204	-0.009	0.0002	-0.0652	1	
TOBQ	0.0671	0.0420	0.0104	-0.0580	0.0061	-0.033	-0.1764	-0.0033	-0.1254	1

According to the Correlation table FLD is positive association with (PROF, TANG, SIZE, TSHLD and TOBQ) that means these variables goes up along with FLD and strength of variables are such as FLD with TANG is strong (65.9%) while PROF and SIZE with moderate (25.2% and 30.62%) whereas TSHLD and TOBQ with very weak position (8.3% and 6.7%) but negative association with (GTH, FRISK, BRISK and LIQ) is (-.65%, -6.11%, -13.14% and -43.86%) that means correlation of FLD with four variables goes down.

5. DATA ANALYSIS AND RESULTS DISCUSSION

5.1. Panel Unit Root Test

Table 3

Variables	Method	Statistic	Prob.	Combination Order
FLD	Levin, Lin &Chut*	-16.8036	0	
	Im, Pesaran and Shin W-stat	-7.8931	0	1(0)
	ADF - Fisher Chi-square	307.845	0	
	PP - Fisher Chi-square	325.227	0	
PROF	Levin, Lin &Chut*	-25.4616	0	
	Im, Pesaran and Shin W-stat	-18.8575	0	1(0)
	ADF - Fisher Chi-square	622.452	0	
	PP - Fisher Chi-square	801.082	0	
TANG	Levin, Lin &Chut*	-27.1662	0	
	Im, Pesaran and Shin W-stat	-15.249	0	1(1)
	ADF - Fisher Chi-square	571.522	0	
	PP - Fisher Chi-square	716.431	0	
SIZE	Levin, Lin &Chut*	-11.944	0	
	Im, Pesaran and Shin W-stat	-3.78713	0.0001	1(0)

	ADF - Fisher Chi-square	229.651	0.0008	
	PP - Fisher Chi-square	214.285	0.0068	
GTH	Levin, Lin &Chut*	-28.4033	0	1(0)
	Im, Pesaran and Shin W-stat	-8.50602	0	
	ADF - Fisher Chi-square	280.695	0	
	PP - Fisher Chi-square	307.143	0	
FRISK	Levin, Lin &Chut*	-34.9964	0	1(0)
	Im, Pesaran and Shin W-stat	-9.46764	0	
	ADF - Fisher Chi-square	301.675	0	
	PP - Fisher Chi-square	337.569	0	
BRISK	Levin, Lin &Chut*	-15.4645	0	1(0)
	Im, Pesaran and Shin W-stat	-2.74446	0.003	
	ADF - Fisher Chi-square	233.816	0.0004	
	PP - Fisher Chi-square	212.902	0.0082	
LIQ	Levin, Lin &Chut*	-325.662	0	1(0)
	Im, Pesaran and Shin W-stat	-82.4641	0	
	ADF - Fisher Chi-square	257.64	0	
	PP - Fisher Chi-square	334.314	0	
TSHLD	Levin, Lin &Chut*	-11.8939	0	1(0)
	Im, Pesaran and Shin W-stat	-6.56326	0	
	ADF - Fisher Chi-square	324.381	0	
	PP - Fisher Chi-square	328.788	0	
TOBQ	Levin, Lin &Chut*	-6.6411	0	1(0)
	Im, Pesaran and Shin W-stat	-5.17592	0	
	ADF - Fisher Chi-square	306.307	0	
	PP - Fisher Chi-square	323.985	0	

In this above table of panel unit root (PUR) test is stationary exist at level 1(0) such as (Financial Leverage, Profitability, Firm size, Growth, Financial Risk, Business Risk, Liquidity, Tax shield and Tobin's q but only Tangibility stationary at first difference 1(1), So, majority of the variables are stationary at level.

5.2. Panel Johansen Co-integration Model

Table 4 Kao Residual Co-integration Test

		t-Statistic	**Prob.**
ADF		-18.25233	0.000
Residual variance		173.9754	
HAC variance		91.12792	

In this above table of panel co-integration test showed p-value (.000) which is less than 5% or .05 that means financial leverage effectiveness can be expected using the explanatory variables (Profitability, Firm size, Financial Risk, Business Risk, Liquidity, Tax shield, Asset Tangible, Growth and Tobin's Q) in the long run using Kao Residual Co-integration method.

5.3. Pooled Regression Model

Table 5

	C	**PROF**	**TANG**	**SIZE**	**GTH**	**FRISK**	**BRISK**	**LIQ**	**TSHLD**	**TOBQ**
Coefficients	-10.34	0.2003	0.8380	2.223	-0.04	0.030	-0.00	-0.663	0.503	0.345
P-value	0.1711	0.00	0.00	0.01	0.94	0.32	0.93	0.00	0.039	0.00
R^2	**0.530**									
Prob. (F-stat.)	**0.000**									
Durbin-Watson	**1.889**									

Table 01 analyzed above that financial leverage is significant influence on (PROF.), tangibility of assets (TANG.), size of firm (SIZE.), liquidity (LIQ), tax shield (TSHLD) and tobin's q (TOBQ) with only (.000, .000, .017, .000, .039 and .007) that means probability value is less than .05 or 5% but another way rest of the explanatory variables such as firm risk (FRISK), business risk (BRISK) and growth (GTH) are insignificant impact on financial leverage i.e., is .3248, .9327 and .9434 which means these values are greater than .05 or 5%. R^2 is 53.03% remains in this model that means financial leverage is dependent on profitability (PROF), asset tangibility (TANG), firm size (SIZE), liquidity (LIQ), tax shield (TSHLD) and tobin's q (TOBQ) or 53.03% fluctuation of financial leverage can be detailed. We can see rest of the part which means 46.97% fluctuation on financial leverage can be detailed by more variables, which means outer variables are influenced on 46.97%. F-statistics has shown only 113.98 that means P-V of (F-stat) is 0.000 that means p-value is less than .05 or 5% or in another way this is a good sign of this model. D-W. Stat. shows 1.889 that equals to 2 which means there is no evidence of auto- correlation in the residuals.

Equation 01

*FLD = - 10.344 + 0.200*PROF + 0.838*TANG + 2.223*SIZE - 0.046*GTH + 0.030*FRISK - 0.004*BRISK - 0.663*LIQ + 0.503*TSHLD + 0.345*TOBQ*

Fixed Effect Model

Table 6

	C	PROF	TANG	SIZE	GTH	FRISK	BRISK	LIQ	TSHLD	TOBQ
Coefficients	2.244	0.196	0.822	0.703	-0.510	0.03	-0.11	-0.433	0.5819	0.414
P-value	0.82	0.00	0.00	0.56	0.48	0.35	0.11	0.00	0.06	0.00
R^2	**0.572**									
Prob. (F-stat.)	**0.000**									
Durbin-watson	**2.007**									

Table 06 analyzed above that financial leverage is significant influence on (PROF.), tangibility of assets (TANG.), liquidity (LIQ) and tobin's q (TOBQ) with only (.000, .000, .000 and .002) that means probability value is less than .05 or 5% but another way rest of the explanatory variables such as firm risk (FRISK), business risk (BRISK), firm size (SIZE), growth (GTH) and tax shield (TSHLD) are insignificant impact on financial leverage i.e., is .3561, .1187, .5691, .4857 and .0624 which means these values are greater than .05 or 5%. R^2 is 57.23% remains in this model that means financial leverage is dependent on profitability (PROF), asset tangibility (TANG), liquidity (LIQ) and tobin's q (TOBQ) or 57.23% fluctuation of financial leverage can be detailed in outer variables. We can see rest of the part which means 42.77% fluctuation on financial leverage can be detailed by more variables, which means outer variables are influenced on 42.77%. F-statistics has shown only 12.07 that means P-V of (F-stat) is 0.000 that means p-value is less than .05 or 5% or in another way this is a good sign of this model. D-W. Stat. shows 2.00 that equals to 2 which means there is no evidence of auto-correlation in the residuals .

Equation 02:

*FLD = 2.24 + 0.196*PROF + 0.822*TANG + .703*SIZE - 0.510*GTH + 0.033*FRISK - 0.118*BRISK - 0.432*LIQ + 0.581*TSHLD + 0.414*TOBQ*

Table 7 Random Effect Model

	C	***PROF***	***TANG***	***SIZE***	***GTH***	***FRISK***	***BRISK***	***LIQ***	***TSHLD***	***TOBQ***
Coefficients	*-10.34*	*0.200*	*0.838*	*2.223*	*-0.046*	*0.030*	*-0.004*	*-0.663*	*0.503*	*0.345*
P-value	*0.171*	*0.000*	*0.000*	*0.017*	*0.943*	*0.325*	*0.932*	*0.000*	*0.0392*	*0.0074*
R^2	***0.5303***									
Prob.(F-stat.)	***0.000***									
Durbin-Watson	***1.889***									

Table 07 analyzed above that financial leverage is significant influence on (PROF.), tangibility of assets (TANG.), size of firm (SIZE.), liquidity (LIQ), tax shield (TSHLD) and tobin's q (TOBQ) with only (.000, .000, .017, .000, .039 and .007) that means probability value is less than .05 or 5% but another way rest of the explanatory variables such as firm risk (FRISK), business risk (BRISK) and growth (GTH) are insignificant impact on financial leverage i.e., is .9434, .3252 and .9327 which means these values are greater than .05 or 5%. R^2 is 53.03% be found in this model that means financial leverage is dependent on profitability (PROF), asset tangibility (TANG), firm size (SIZE), liquidity (LIQ), tax shield (TSHLD) and tobin's q (TOBQ) or 53.03% fluctuation of financial leverage can be detailed in outer variables. We can see rest of the part which means 46.97% fluctuation on financial leverage can be detailed by more variables, which means outer variables are influenced on 46.97%. F-statistics has shown only 113.29 that means P-V of (F-stat) is 0.000 that means p-value is less than .05 or 5% or in another way this is a good sign of this model. D-W. Stat. shows 1.889 that equals to 2 which means there is no evidence of auto- correlation in the residuals.

Equation 03:

*FLD = - 10.34 + 0.200*PROF + 0.838*TANG + 2.223*SIZE - 0.046*GTH + 0.030*FRISK - 0.004*BRISK - 0.663*LIQ + 0.503*TSHLD + 0.345*TOBQ*

Hausman Test

The Hausman test an evaluation model to be better model to investigate that well-order gives better model. It's always used to measure between Random Effect Model (REM) and Fixed Effect Model (FEM) and also analyze between these models which model is more appropriate. To evaluate hausman test that hypothesis are as under:

Ho: Random effect model is appropriate

Ha: Fixed effect model is appropriate

Test Summary	**Chi-Sq. Statistic**	**Chi-Sq. d.f.**	**Prob.**
Cross-section random	53.303878	9	0.0000

The Chi-Sq. Stats is 9 along with P-value is .000 which is significant that means .000 less than .05 or 5%. So, null hypothesis is rejected that means fixed effect model is more appropriate than random effect model.

Wald Test:

Test Statistic	***Value***	***Df***	***Probability***
F-statistic	*113.2980*	*(9)*	*0.0000*

This model mostly predicted give better results between fixed effects and pooled (OLS). So, p-value is less than 5% that means fixed effect model is an appropriate.

After the different test of models have been proved that Fixed Effect Model has appropriate model. Equation are as follows:

*FLD = 2.24 + 0.196*PROF + 0.822*TANG + .702*SIZE - 0.510*GTH + 0.033*FRISK - 0.118*BRISK - 0.432*LIQ + 0.581*TSHLD + 0.414*TOBQ*

6. DISCUSSION

The paper was aimed to study the impact of several factors i.e. profitability, tangibility, size, growth, financial risk, liquidity, tax shield on firm's financial leverage. The data was collected for a panel of 83 companies from 6 high performing sectors of Pakistan stock exchange from 2006 to 2016. The results of panel data analysis were compared for random effect, fixed effect and pooled regression models. The findings revealed that Profitability, Tangibility, Firm Size, Liquidity, Tax Shield and Tobin's Q had a significant role in leverage decision of the sample firms while financial risk, business risk and growth were found to be insignificant.

Hussain et al., (2016) and Saleem et al., (2016) stated that there is positive connection between leverage and profitability exist as supported by Trade-off theory predicts; profitability has a positive connection with leverage by reasoning is that profitable companies tends to favors debt it enhance their tax edge and also to diminish a symmetric information. Prior studies have shown positive connection between profitability and leverage for example Pinkova (2012), Kartikasari and Merianti (2016), Manu, et al., (2019) and by Rahayu, et al ., (2019) which has done in the same way over time by Trade-off theory. Hence the result of the current study are aligned with the previous studies.

Shah and Khan (2007), Khraiwesh and Khrawish (2010), Ali (2011), Sabir and Malik (2012) argued that tangibility has positive connection with leverage as same as corroborated by Trade-off theory predicts there is positive connection between tangibility and leverage while Peking order theory usually predicts a negative influence. Some financial organizations cannot generate revenues because it is unable to meet its financial obligations due to high fixed costs to economic downturns that tangible assets generally keep hold of their value. So a firm with constantly fixed assets gets more than a firm with low degree of fixed assets as the interest will be lower. In this manner there is a positive connection between leverage and tangibility which some studies corroborated such as Pinkova (2012), Çekrezi (2013), Sun et al., (2013), Hassan (2015), Saleem et al., (2016) and Guruswamy and Marew (2016) which is constant with the Trade-off theory and supporting the results of the current work.

There is a positive connection between size and leverage also prior empirical findings have corroborated for example; Shah and Khan (2007), Fowdar et al., (2009), Khraiwesh and Khrawish (2010), Ali (2011), Sabir and Malik (2012), Çekrezi (2013), Sun et al., (2013), Masoud (2014), Anderloni and Tanda (2014), Tariq (2015), Dakua (2018), Yigit and Jermias (2019), Zafar et al. (2019) which is constant with Trade-off theory. As Pecking order theory anticipates a negative connection between liquidity and leverage by reasoning is that companies have huge liquidity favors internal funds to expenditure as supported by Dejong, Kabir & Nguyen, (2008). Liquidity both impacts the affiliation money related structure, where the connection between the liquidity degree and duty may negative or positive, that relationship with high liquidity degree will have a high capacity to fulfill their commitments raised by Ozkan (2001). Empirical findings have shown mixed conclusions but most of the findings have negative connection between liquidity and leverage which is corroborated such as Fowdar et al., (2009), Pinkova (2012), Masoud (2014) and Zafar et al. (2019) which is constant with Pecking order theory. Hence the current research findings are align with the previous studies that followed Pecking order theory.

While companies likes a tax position in favorable for debt financing relies on the trade-off in the middle of these two influences. They find leverage is positively related with tax shield

and also some empirical findings have corroborated such as Fowdar et al., (2009), Ali (2011), Saleem et al., (2016) and Dakua (2018).shown positive connection between tax shield and leverage which is corroborated by Fowdar et al., (2009), Ali (2011) and Saleem et al., (2016). Moreover Alipour, (2013) pointed out that the positive aspect of Tobin's Q display the current worth and predicted future payment of the firm. Empirical findings regarding this hypothesis have shown positive connection between tobin's q and leverage which is corroborated by De Jong (2002) and Al-Nsour & Al-Muhtadi (2019). Hence the results of the study are well supported by the literature.

7. CONCLUSION

The core point and credence of this research study is to assessment the association between determinants or financial factors and financial leverage of the non-financial firms which have listed in Pakistan Stock Exchange (PSX). These discovery of Fuel & Energy (18 companies), Motor Vehicles/Trailers and auto parts (22 companies), Electrical machinery & apparatus (8 companies), Cement sector (15 companies) and Paper & paperboard products (9 companies) and textile (11 companies) whereas data were taken from the financial statement and SBP Balance Sheet for the period of 11 years (2006-2016) based on quantitative data using pooled regression model, random effect model and fixed effect model.

The queries of our research paper were assessed out the facts and figure in terms of determinants or financial factors influence on financial leverage while outcomes of these discovery majority of variables were significant influence on financial leverage such as (Profitability, Tangibility, Firm Size, Liquidity, Tax Shield and Tobin's Q) and rest of variables (Financial Risk, Business Risk and Growth) had insignificant influence on financial leverage. The association of financial leverage with (Profitability, Tangibility, Firm Size, Financial Risk, Tax Shield and Tobin's Q) had positive but negative association with (Growth, Business Risk and Liquidity) whereas Profitability and Tangibility had more influential variables exist in this study. The findings of this study were also corroborated to the Fixed Effect Model because this model had more appropriated than Random Effect Model with respect of Hausman Test.

FUTURE RESEARCH

This research is focused on auto motive sector, fuel and power sector and general industrial sector, in future other non-financial sectors would be explored. More data samples should be taken in the future in terms of financial sectors. Data sample should be gathered from China or India Stock Exchange to evaluate the leverage and its factors regarding financial and non-financial sectors in the future. More variables should be added in future in terms of operating risk or systematic risk.

REFERENCES

[1] Adaramola, A.O., & Olarewaju, O.M. (2015). Determinants of Capital Structure in Nigerian Quoted Composite insurance Companies. Global Journal of Management and Business Research, Vol. 15, No.10, pp: 7-15

[2] Ali, L. (2011). The Determinants of Leverage of the Listed-Textile Companies in India. European Journal of Business and Management, Vol. 3, No.12, pp: 54-59.

[3] Alipour, Mohammad, (2013), "An investigation of the association between ownership structure and corporate performance: Empirical evidence from Tehran Stock Exchange (TSE)", Management Research Review , Vol.36, No.11, pp.1137-1166.

[4] Almanaseer, S.R. (2019). Determinants of Capital Structure: Evidence from Jordan. Accounting and Finance Research. pp: 186-198.

[5] AL-Mutairi, A., & Naser, K. (2015). Determinants of Capital Structure of Banking Sector in GCC: An Empirical Investigation. Asian Economic and Financial Review, Vol. 5, No.7, pp: 959-972

[6] Alnajjar, M.I.M. (2015). Business Risk Impact on Capital Structure: A Case of Jordan Industrial Sector. Global Journal of Management And Business Research: C Finance. pp: 1-7

[7] Al-Nsour, O.J., & Al-Muhtadi. M.I. (2019). Capital Structure, Profitability and Firm's Value: Evidence from Jordan. Research Journal of Finance and Accounting. Vol. 10, No.20, pp: 73-80

[8] Altman. E.I. (1989). Measuring Corporate Bond Mortality and Performance. Journal of Finance, Vol. 44, No.4, pp: 909-922

[9] Amidu, M. (2007). "How does dividend policy affect performance of the firm on Ghana Stock Exchange" *Investment Management and Financial Innovations*, 4(2):104-112. Ghana: University of Ghana Business School.

[10] Anderloni, L., & Tanda, A. (2014).The Determinants of Leverage: A Comparative Analysis. Journal of Economics and Management, Vol. 18, pp: 196-208.

[11] Baloch, Q.B., Ihsan, A., Kakakhel, S.J., &Sethi, S. (2015). Impact of Firm Size, Asset Tangibility and Retained Earnings on Financial Leverage: Evidence from Auto Sector, Pakistan. Abasyn Journal of Social Sciences, Vol: 8, No.1, pp: 143-155

[12] Barclay, M.J., Morellec, E., Smith, C.W., 2001. On the debt capacity of growth options. Unpublished working paper. University of Rochester, NY.

[13] Bitok, J., Kibet, L., Tenai, J., & Mutwol, M. (2011). The Determinants of Leverage at the Nairobi Stock Exchange, Kenya. The Second Asian Business and Management Conference, pp: 1-21

[14] Bradley, Jarrell and Kim. 1984. "on the existence of an optimal capital structure: theory and evidence, Journal of Finance", Vol. 39, pp. 857-878

[15] Brigham, E. F., Ehrhardt, M. C., Nason, R., & Gessaroli, J. (2016). *Financial Managment: Theory And Practice, Canadian Edition*. Nelson Education.

[16]

[17] Cekrezi, A. (2013). The Determinants of Capital Structure: Evidence from Albania. Academic Journal of Interdisciplinary Studies, Vol. 2, No.9, pp: 370-376

[18] Copeland, T. and Weston, J., Financial Theory and Corporate Policy, 3rd edition, Addison-Wesley, 1988, Ch. 12, A-C

[19] Dakua, S. (2018). Effects of determinants on financial leverage in Indian steel industry: A study on capital structure. International Journal of Finance & Economics. pp: 1-10.

[20] De Jong, A. (2002). The Disciplining Role of Leverage in Dutch Firms: European Finance Review. pp: 31-62

[21] DeAngelo, H., and R.W. Masulis, "Optimal Capital Structure under Corporate and Personal Taxation," Journal of Financial Economics 8, 1980, pp. 3-29.

[22] Fama E.F., and K.R. French (1998), "Taxes, Financing Decisions, and Firm Value", Journal of Finance, 53 (3).

[23] Fama, E. F., and K. R. French (2005), 'Financing Decisions: Who Issues Stock?', Journal of Financial Economics, 76, 549–82.

[24] Fischer E.O., R. Heinkel, and J. Zechner (1989), "Dynamic Capital Structure Choice: Theory and Tests", Journal of Finance, 44 (1).

[25] Fowdar, S., Lamport, M.J., Sannassee, R.V., Agathee, U.S., & Chong, J.W.W. (2009). Factors affecting Leverage: An Empirical Analysis of Mauritius Companies. University of Mauritius Research Journal, Vol. 15, pp: 230-243

[26] Graham, J.R. (2000). How Big Are the Tax Benefits of Debt? . The Journal of Finance, Vol. LV, No. 5

[27] Gunarathna, V. (2016). How does Financial Leverage Affect Financial Risk? An Empirical Study in Sri Lanka. Amity Journal of Finance. pp: 57-66.

[28] Guruswamy, D. &Marew, A. (2016). Determinants of Capital Structure of Selected Insurance Companies in Ethiopia. Developing Country Studies, Vol. 6, No.10, pp: 6-20

[29] Handoo, Anshu.,& Sharma, Kapil. (2014). A study on determinants of capital structure in India, IIMB Management Review, 26, 170-182

[30] Hassan, M.G. (2015). Factors Determining Capital Structure: An Analysis of Listed Companies in the Colombo Stock Exchange in Sri Lanka. 5th International Symposium, pp: 25-28

[31] Hussain, S., Ilyas, M., Rehman, M., & Fatima, T. (2016). Investigation of Relationship between Capital Structure Determinants and Market Power on Leverage: A Case of Cement Sector in Pakistan. Sci.Int. (Lahore), 28(3), 2847-2851

[32] Jermias, J., & Yigit, F. (2019). Factors affecting leverage during a financial crisis: Evidence from Turkey. Borsa Istanbul Review. pp: 171-185

[33] Kartikasari, D., &Merianti, M. (2016). The Effect of Leverage and Firm Size to Profitability of Public Manufacturing Companies in Indonesia. International Journal of Economics and Financial Issues, Vol. 6, No.2, pp: 409-413

[34] Khrawish, H.A., & Khraiwesh, A.H.A. (2010). The Determinants of the Capital Structure: Evidence from Jordanian Industrial Companies. JKAU: Econ. & Adm., Vol. 24, No. 1, pp: 173-196

[35] Kim, W.S. and Sorensen, E.H. (1986), "Evidence on the impact of the agency costs of debt on corporate debt policy", Journal of Financial and Quantitative Analysis. Vol. 21, No. 2, pp. 131-44.

[36] Kontesa, Maria, (2015),"Capital structure, profitability, and Firm Value, What's New?" Research Journal of Finance and Accounting , Vol. 6, No. 20, 185-192.

[37] Leibenstein, H. (1966) Allocative Efficiency vs. X-Efficiency. American Economic Review, 56, 392-415.

[38] Leland, H. E., & Pyle, D. (1977). Informational asymmetries, financial structure and financial intermediation, J. Finance 32, 371-387.

[39] Manu, R., Alhabsji, T., Rahayu, S., and Nuzula, N., (2019), "The effect of corporate governance on profitability, capital structure and corporate value", Research Journal of Finance and Accounting, Vol.10, No.8, pp.202- 214.

[40] Masoud, N. (2014). The Determinants of Capital Structure Choice: Evidence from Libyan Firms. Research Journal of Finance and Accounting, Vol. 5, No.1, pp: 67-83

[41] Menacer, A., Saif-Alyousfi, A.Y.H., & Ahmad, N.H. (2019). The Effect of Financial Leverage on the Islamic Banks' Performance in the Gulf Cooperation Council (GCC) Countries. International Journal of Financial Research. Vol. 11, No. 1, pp: 13-24.

[42] Miller M.H. (1977), "Debt and Taxes", Journal of Finance, 32 (2).

[43] Modigliani, F., Miller, M.H. (1958), The Cost of Capital Corporation Finance and the Theory of Investment, American Economic Review, 48, 261-297.

[44] Myers, S.C., 1977. Determinants of corporate borrowing. Journal of Financial Economics 5, 147175.

[45] Myers, S.C., 1984. The capital structure puzzle. Journal of Finance 39, 575-592.

[46] Myers, S.C., 2001. Capital structure. Journal of Economic Perspectives 15, 81-102.

[47] Myers, S.C., Majluf, N., 1984. Corporate financing and investment decisions when firms have information that investors do not have. Journal of Financial Economics 13, 187-221.

[48] Ozkan, A. (2001). Determinants of capital structure & Adjustment to long run target: evidence from UK company panel data. Journal of business finance & accounting, 28(1-2), 175-198. https://doi.org/10.1111/1468-5957.00370

[49] Pinkova, P. (2012). Determinants of Capital Structure: Evidence from the Czech Automotive Industry. Actauniv. agric. etsilvic. Mendel. Brun, LX, No. 7, pp. 217–224

[50] Rahayu, S.M., Saif, S., and Saif, M., (2019), "the reciprocal relationship between profitability and capital structure and its impacts on corporate values of manufacturing companies in Indonesia", International Journal of Productivity and Performance Management , DOI 10.1108/IJPPM-05-2018-0196

[51] Rajan, Raghuram, and Luigi Zingales, 1995, What do we know about capital structure? Some evidence from international data, Journal of Finance 50, 1421–1460.

[52] Sabir, M., & Malik, Q.A. (2012). Determinants of Capital Structure – A Study of Oil and Gas Sector of Pakistan. Interdisciplinary Journal of Contemporary Research in Business, Vol. 3, No.10, pp: 395-400

[53] Sadiq, M.N., & Sher, F. (2016). Impact of Capital Structure on the Profitability of Firm's Evidence from Automobile sector of Pakistan. Global Journal of Management and Business Research, Vol. 16, No.1

[54] Saleem, S., Makki, M., Majeed, S., Aziz, T., & Butt, H. (2016). Determinants of Capital Structure of Banks in Pakistan: An Empirical Approach. Research Journal of Finance and Accounting, Vol. 7, No.1, pp: 52-61

[55] Scherr, F.C., Sugrue, T.F. and Ward, J.B. (1993) "Financing the Small Firm Start-up: Determinants of Debt Use," Journal of Small Business Finance, 3(2), p.17-36.

[56] Schmukler, Sergio, and Esteban Vesperoni, 2001, Firms' financing choices in bank-based and market-based economies, in AsliDemirgu¨¸c-Kunt, and Ross Levine, ed.: Financial Structure and economic growth: A cross-country comparison of banks, markets, and development. chap. 9, pp. 347–375 (MIT Press).

[57] Shah, A., & Khan, S. (2007). Determinants of Capital Structure: Evidence from Pakistani Panel Data. International Review of Business Research Papers, Vol. 3, No.4, pp: 265-282

[58] Sun, F., Too, S.W., & Chin, S.K. (2013). Firm Characteristics and Leverage: Empirical Evidence in China. pp: 60-63

[59] Tariq, A. (2015). The Joint-Determinants of Leverage and Dividend Policy: A Balanced Panel Study of Non-Financial Firms of India and Pakistan. European Scientific Journal, Vol. 11, No.10, pp: 311-328

[60] Vijeyaratnam, H., & Anandasayanan, S. (2015). The Determinants of Leverage of Sri Lankan Manufacturing Companies Listed on Colombo Stock Exchange. Research Journal of Finance and Accounting, Vol. 6, No.5, pp: 189-195

[61] Vithessonthi, Chaiporn., & Tongurai, Jittima. (2015). The Effect of Firm Size on the Leverage-Performance Relationship during the Financial Crisis of 2007–2009, Journal of Multinational Financial Management, 29, 1-29

[62] Ward, K. (1993), Corporate Financial Strategy. Butterworth Heinemann, Oxford.

[63] Zafar, Q., Wongsurawat, W., & Camino, D. (2019). The determinants of leverage decisions: Evidence from Asian emerging markets. Cogent Economics & Finance. pp: 01 to 28