Antecedents of capital structure and firm performance: evidence from G-7 countries

Muhammad Riaz, Shu Jinghong and Muhammad Nadeem Akhtar
School of International Trade and Economics, University of International Trade and Economics, Beijing, China

Abstract
Purpose – The main goal of this study is to analyze how monetary debt effects firm behavior of 167 registered manufacturing companies in G-7 countries.

Design/methodology/approach – The sample of the present study is taken from the listed firms in G-7 countries. For the building companies, the yearly financial statements of 2007–2018 have been taken from world stock exchange and Thomson Reuters Data Stream. In this study, regression analysis are directed with panel data over the period of 2007–2018 using ordinary least square summary statistics, correlation matrix and generalized method moments. Data were analyzed by employing E Views and Stata 13 software.

Findings – The significant findings of the current study indicated that fixed assets, tangible assets, taxes, net cash and profitability have positive association with debt level.

Research limitations/implications – The current work include only registered manufacturing firms in G-7 countries. Moreover, ownership types are not accounted for in this study.

Practical implications – The current analysis is an empirical investigation of antecedents of debt regarding G-7 countries with up-to-date data. Various regression inquires have been made to design the models using different measures of debt and measure of firm performance indicators. These works will assist G-7 countries firms to know the effects of identified factors on time raising debt level.

Originality/value – The current work has been finalized using genuine data of yearly reports and database. This study incorporated antecedents of debt, which have limited discourse in prior literature. Furthermore, this study explores the connection between debt level and firm performance of G-7 countries.

Keywords Capital structure, Debt level, Firm performance, G-7

Paper type Research paper

List of abbreviations
OLS Ordinary least square
GMM Generalized method of moments
TD Total debt
Introduction

Capital structure is the mixture of debt and the firm’s performance elements used for its capitalization. The present study inspects the importance of equity structure company performance of G-7 most developed industrial country in the world. Most developed countries are (UK, US, France, Germany, Italy, Canada and Japan) main purpose of G - 7 is to solve the international economic and monetary issues. In 1970, the leaders of UK, US, France, West Germany and Japan informally discussed the oil crisis and recession. The president of France, Valery Giscard, invited the leaders of these countries and Italy in 1975 for discussion of further issues about oil on a global level. Therefore, the next year Canada also joined these countries. In 1999, through FSB (financial stability forum) to managing international level monetary problems.

There is a general view about the effect of debt on firm performance that is vague. Several studies find a positive or no relation (Azeez, 2015; Walaa Wahid, 2007); on the other hand, some have a negative association (Chen, 2004; Saeedi, 2011; Salawu, 2007). Capital structure theory suggests that the firm determination refers to debt level, which is based on different trade-offs between debt and equity. The contemporary theory of capital structure was the earliest established MM theory in 1958. Enormous theoretical literature developed on Modigliani and Miller (1958), which escorts the formulation of alternative approaches acting as peking order theory, marketing timing theory, agency cost theory and trade-off theory.

Trade-off theory put forward the capital structure and leverage level ratio, balancing the back and forth between profits along with debt. Following the approach, Myers (1984) explains tax shield and deficit equal to a present value of the financial distress. The study of Porta and Florencio (1997) describes external financing needs for growing firms and equity financed. Debt finance is most common for firms with tangible assets (TA) (Rajan and Zingales, 1995). This research’s principal goal was to examine the association of debt and assets structure determinants of industry corporations in G-7.

The latest study of (Kruk, 2021) explains the concept of capital structure and examines the techniques in classifying this structure. Furthermore, the analysis (Mavruk and Sjögren, 2021) describes local owners’ capital structure and monitoring. Similarly, the study of (Mardones and Cuneo, 2019) finds a positive relationship between firm performance and capital structure. Additionally, the work of (Singh 2019) examines the effect of capital structure on profitability (PR). The number of forgoing studies about the determinants of capital management describes the debt level with different approaches. However, we captive that some studies enhance the analysis by using the zippy technique. The vigorous process is not a new approach to study capital structure. It is already used in forging studies (Taggart, 1977). The present studies also use this approach (Hovakimian and Li, 2011; McMillan and
Camara, 2012; Öztækin and Flannery, 2012; Dang et al., 2014). Although we observe that the study of the firm’s level is less in developed industry countries (G-7). Past researchers have a practically enrapt capital structure in developed and developing countries. They are currently concentrating on the capital management behavior of firms operating in developed industries. These industries’ markets have various features differentiated to developed one and effect market structure possibility.

By using the data of G-7 industry in developed country, we look for answers of the following questions? What are the determinants of capital structure? What are the effects of capital structure enticement on debt level? The main objective of this study is about capital structure companies listed on the G-7 stock exchange. We use the time-series panel data model to meet G-7 listed firms’ theoretical and empirical results. We use descriptive summary, correlation and generalized method of moments (GMM) to analyze capital position determinants and debt level for different result analysis. In this article, the author has tried to explain the elements of capital formation determinants such as PR, assets tangibility, net cash (NC), taxes (TX) and long-term assets used in this study. Some previous empirical studies like Wessels (1988) in USA and Rajan and Zingales (1995) in G-7 countries. Another study in developing countries by Booth et al. (2001).

This paper’s firm characteristics variables were empirically examined with the connection of debt level and performance of listed firms of G-7 throughout 2007 to 2018 utilizing the panel data accounting-based measure of TD, LTD and STD. In this paper, the first positive connection between PR, NC, assets tangibility, long-term assets and TX with TD, LTD and STD have been discussed. According to trade-off theory, capital management is set on by trade-off between firm characteristics variables and debt to analyze the firm performance outcomes. In this article, the author has used some limitations; there is no use of macroeconomic factors and primary data variables like as survey. Only secondary data were analyzed. The next part describes the detailed literature review, and Section 3 explains the data. Section 4 explains the methodology and analysis of the proposed IV and DV. Section 5 discusses the results and section 6 presents the remaining part of the study, like summary and implications and future extensions.

Literature review

The literature review helps create a structure for the study by pointing out the important matter in capital structure and its theories to the related article. The primary objective of this study is to test the connection between joining debt and firm performance theoretically; our assessment of the literature review will be a cornerstone on work around this zone. Various forgoing articles have described the connection between allying debt and firm operation. Numerous previous studies (Abor, 2005; Ruland, 2005; Robb and Robinson, 2014; Tayyaba, 2013) found a pragmatic relationship between indebtedness and firm staging. Additionally, another study Robb and Robinson (2009 has a significant relation of debt with firm performance. The article of Modigliani and Miller (1958) and Jensen (1986) also declare a positive association between debt and PR. On the other hand, some earlier reports have a negative relation with debt and no significant connection with firm performance. The study (Fama and French, 1998) describes debt generating agency problems without association with leverage and PR.

Kinsman and Newman describe various important reasons and alliances connecting appreciation and company achievement. Among these causes 1) Specific firm right decisions for the debt level to clarify the influence of insolvent on firms’ effecting. 2) Shareholders and managers may have various attention the respective power of any particular achievement of obligation on firm performance must be familiar. 3) Necessary
cause to study the liability and firm staging explain the interconnection joining debt level and shareholders substance.

Correspondingly, previous articles disclose conflicting outcomes regarding debt level benefits across the country (Wald, 1999; Frank and Goyal, 2003; Phillips and Sipahioglu, 2004; Lin and Chang, 2011; Berger and Bonaccorsi di Patti, 2006; Yazdanfar and Ohman, 2015). Additionally, several old studies report a positive connection with debt level and profit (Ruland and Zhou (2005); Jensen (1986); Berger and Bon Accorsi di Patti (2006), (Margarites and Psillaki, 2007); on the other hand, some articles narrate negative relation with leverage and profit. According to these essays (Campello, 2006; Weill, 2008; Pattitoni et al., 2014; Bae et al., 2017), there is an irregular connection between capital management and firm performance in the country.

The capital management of the corporation could be described by trade-off theory. According to trade-off theory, capital structure balances the various advantages to cost linked with debt funding. Debt assists include saving (tax shield) induced by the tariff-free interest expense from the corporation’s pre-tax income. This theory also recounts the choice of debt ratio, which sums up the financial structure outcome from trade-off between debt and expenses tax benefits. This structure is familiar to static trade-off theory. A few writers expand this structure and promote the trade-off theory. It suggests that corporations may diverge from their debt level by adjusting costs and issuing the cost of debt and equity. We mention these conditions (Marsh, 1982; Sheel, 1994; Tim opler rohan williamson 1999), who explained capital structure adjustment to a long-run debt level.

According to some antecedent empirical work, no significant relationship has been found between debt level and capital structure in 2004 (Philips et al.). Therefore, another article (Walaa Wahid, 2007) talks about how debt level and equity do not affect the firm’s performance. There are several previous studies told (TD, STD and LTD) has a positive link with firm measured by Abor (2005), Saeedi (2011) and Saeedi (2011). In developing countries, advanced research (Balakrishnan and Fox, 1993; Majumdar and Chhibber, 1999; Gleason et al., 2000; El-Sayed Ebaid, 2009; Foong and Idris, 2012; Varun Dawar, 2014) notice that leverage has negative relation with firm value. On the other hand, some studies revealed mixed analysis regarding debt and firm measured by (Cuong, 2016; Jaisinghani and Kanjilal, 2017; Le and Phan, 2017). A study of Rajan and Luigi Zingales (1995) write about international data which provide a unique opportunity for results.

The findings explained that capital structure has a significant relation with assets and no relation with profit (Qamar et al., 2016) endeavor to examine the predictors of external financing by spoiling the panel facts of Pakistani 304 nonfinancial companies enrolled on the stock exchange of Pakistan. Additionally, the study of Zerriaa and Noubbigh (2015) investigated the finance structure determinants in registered corporations in Tunisia, too, discovered tangibility has a pragmatic relationship with debt.

**Firm performance variables**

**LN assets**
The study (Fama and French, 2002) proclaims a positive association between LN assets and leverage level. Some prior studies found a significant relation with debt (Jong et al., 2008; Deesomsak et al., 2004; Eriotis et al., 2007). Similarly, the study of (Tong and Green (2005) investigated LN assets and leverage are positively correlated. Moreover, some forgoing analyses (Ahmed Sheikh and Wang, 2011; Ahmad et al., 2015) positively correlate with long-term resources and liabilities. Furthermore, the trading belief with the empirical results reported in Gropp and Heider (2010) have a positive link between LN assets and debt level.
Taxes
The review of recounts tax should be positively associated with debt level. Therefore, in the trade-off theory, corporations choose debt financing because debt is tax-exempt. This tax benefit of debt allows the corporation to acquire more tax rates. In addition to the survey of Pettit and Singer (1985), portable ventures are less likely to post-high surplus with tax benefit. In addition, the evaluation of Bates and Kahle (2009) relates the opposing alliance of financial leverage and TX. The number of old research shows no significant link between TX and debt level (Afza and Hussain, 2011; Irfan, 2011).

Profitability
Some prior research (Hovakimian et al., 2004) spell out companies with high profits could have high debt. Moreover, (Hovakimian et al., 2001) PR allows the corporation to have more beneficial assets and taller debt. Further, the investigation of Dalci (2018) leverage impact on PR is explained by a U-shaped correlation allying profit and debt; therefore, another article (Evgeny, 2015) shows positive influence of leverage on firm performance. Similarly, the work of Lavorskyi (2013) examines long-term liabilities are more dominant because the non-current penalties would be considered a tool of manager’s discipline.

Tangible assets
Furthermore, the work of Bharath and Pasquariello (2009), also describes TA have a significant association with debt. Similarly, some earlier research (Rajan and Zingales, 1995; and Ozkan, 2002) shows a strong connection with leverage and assets tangibility. Therefore, another survey Myers (1977) and Booth et al. (2001) explained that the debt level expands TA. In addition, some past studies (Hall and Nicos, 2004; Michaelas et al., 1999; Harris and Ravi, 1990) have examined that when the firms have more TA, investors should be more ready to extend term credit and leverage should be higher.

Net cash
A few previous analyses (Opler and Williamson, 1999; John and John, 1993) report that corporates which are less financially secure hold more cash, and have less debt. Besides, the evaluation of Graham and Harvey (2001) and Brounen et al. (2006) also recounts the financial solidity of cash. Additionally, there are some prior studies (Bates and Kahle, 2009; Duchin, 2010; Dittmar and Mahrt-Smith, 2007; Mulligan, 1997; Harford et al., 2008, 2014; Almeida, 2004) have examined that the LTD ratio gradually changes due to economic factors, and corporations increase their cash.

Research method
The current research is a factual analysis of antecedents of debt of listed companies in G-7 countries with the most up-to-date obtainable data. It is a descriptive study and has used a computable technique. A specimen of top 167 industry firms were rent on the basics of their promote capitalization and secondary information alliance via monetary evidence were gathered from their 12-month reports. Data collected of the selected corporations were from year 2007 to 2018, and chosen corporations were four or more years earlier used for analysis in this study. The specimen contains all manufacturing companies listed on a stock exchange in the G-7 industrial area, 167 companies are obtained with 2004 observations.

Multivariate least square method OLS regression is working on setting a connection between multiple explanatory variables (ln assets, PR, NC, TX, TA) and response variable (debt and its level). Data were reverted using E Views and Stata 13 software and results in regressions outputs were analyzed. Compound progressive is concluded of the basic regression paradigm. In a basic regression design, at most single predictor variable is
available. However, there is more than one predictor of the response variables in multiple regressions. We notice from the previous studies that there may be more than one regressor variable of debt; in the current inquiry, various variables are used (see Table 1). Over and above mathematical problem, $b_0$ is the y-intercept, $b_1$ is the slope, and $X$ is regressor adaptable.

$$y = b_0 + b_1 X$$  \hspace{1cm} (1)$$

$$y = b_0 + b_1 X$$  \hspace{1cm} (2)$$

Where $b_0$ is the size of $y$ and $b_1$ and $b_2$ are the slant of $X_1$ and $X_2$.

$$y = b_0 + b_1 X_1 + b_2 X_2 + \ldots b_k X_k$$  \hspace{1cm} (3)$$

The various variables diverse regression model is given above.

$$TD_{it} = \beta_0 + \beta_1 LA_{it} + \beta_2 T_{it} + \beta_3 PT_{it} + \beta_4 TA_{it} + \beta_5 NC_{it} + \epsilon_t$$  \hspace{1cm} (4)$$

$$LTD_{it} = \beta_0 + \beta_1 LA_{it} + \beta_2 T_{it} + \beta_3 PT_{it} + \beta_4 TA_{it} + \beta_5 NC_{it} + \epsilon_t$$  \hspace{1cm} (5)$$

$$STD_{it} = \beta_0 + \beta_1 LA_{it} + \beta_2 T_{it} + \beta_3 PT_{it} + \beta_4 TA_{it} + \beta_5 NC_{it} + \epsilon_t$$  \hspace{1cm} (6)$$

In the above Eqs (4)–(6) the dependent variables (DV) are TD, LTD, and STD, and independent variables (IV) are LN (fixed assets), TX, PT, TA and NC, IT $i$ = firm and $t$ = time period, $\epsilon$ = error term.

**Results**

Results are shown in Tables 2–4.

**Generalized method of moments**

Generalized method of moments (GMM) is shown in Tables 5–7.

**Discussions and results interpretation**

Table 2 shows the summary statistics of the IV and DV used in the current study. Table 1 presents the mean values for TD and LTD is 160.30 and 671.01, respectively, whereas the median values are 112.01 and 421.17, respectively. SD (short-term debt) mean value is 936.12, and the median of 535.23. The mean and median values of other capital structures, PR, NC, LA, TX, TA (556.51,125.02,131.11,408.8,116.01), respectively. On G-7 firms, the previous study (Rajan and Zingales, 1995) including developing countries research (Booth et al., 2001) about Chinese PLCs are not more highly levered firms in developing countries. A notable

<table>
<thead>
<tr>
<th>Variables</th>
<th>Definitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>TD</td>
<td>Total debt to assets</td>
</tr>
<tr>
<td>LTD</td>
<td>Long term debt to assets</td>
</tr>
<tr>
<td>STD</td>
<td>Short term debt to assets</td>
</tr>
<tr>
<td>LA</td>
<td>Fixed assets</td>
</tr>
<tr>
<td>TX</td>
<td>Taxes</td>
</tr>
<tr>
<td>PT</td>
<td>Profit after tax</td>
</tr>
<tr>
<td>TA</td>
<td>Tangible assets</td>
</tr>
<tr>
<td>NC</td>
<td>Net cash</td>
</tr>
</tbody>
</table>

**Table 1.** Variable’s definitions
The difference between Chinese PLCs firms and developing countries is that both present a very low non-current liabilities ratio. There are some further surveys about LTD and STD is extremely low by Chen (2004), Huang and Song (2006) and Kasseeah (2008).

Table 3 reports the correlation between every pair of variables (IV and DV). The results clarify that TD, LTD, and STD compute are strongly positively or not correlated with LA, NC, PR, TA and TX at 0.049, 0.307, 0.33, 0.616 and 0.685 respectively. In the table, some variables have a high correlation with TD, LD AND SD. Thus, there are appear multicollinearity is an exit in the variables. We calculate the VIF for each variable to suggesting that multicollinearity is not a serious problem in the current study.

Table 4 shows the VIF test and indicates no multicollinearity between IV and DV. Therefore, even though there are relatively high correlations between some variables in Table 4, all variables can be used together for analysis.

<table>
<thead>
<tr>
<th>LTD</th>
<th>TD</th>
<th>SD</th>
<th>PR</th>
<th>NC</th>
<th>LA</th>
<th>TAX</th>
<th>TA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>671.01</td>
<td>160.30</td>
<td>936.12</td>
<td>556.51</td>
<td>125.02</td>
<td>131.11</td>
<td>408.8</td>
</tr>
<tr>
<td>Median</td>
<td>421.7</td>
<td>112.01</td>
<td>535.23</td>
<td>399.50</td>
<td>893.01</td>
<td>1164.5</td>
<td>174.01</td>
</tr>
<tr>
<td>Maximum</td>
<td>1.45</td>
<td>2.07</td>
<td>7.32</td>
<td>3.02</td>
<td>1.25</td>
<td>8.92</td>
<td>1.47</td>
</tr>
<tr>
<td>Minimum</td>
<td>-3.21</td>
<td>-423.03</td>
<td>1.95</td>
<td>-3.15</td>
<td>-1.49</td>
<td>-299.01</td>
<td>-429.02</td>
</tr>
<tr>
<td>Std. Dev</td>
<td>50.95</td>
<td>95.02</td>
<td>50.75</td>
<td>12.2</td>
<td>11.2</td>
<td>65.1</td>
<td>24.22</td>
</tr>
</tbody>
</table>

Note(s): TD (total debt), LTD (long term debt) STD (short term debt) LN (long term assets), NC (net cash), PR (profitability), TA (tangible assets) and TX (taxes)

<table>
<thead>
<tr>
<th>TD</th>
<th>LD</th>
<th>SD</th>
<th>LA</th>
<th>NC</th>
<th>PR</th>
<th>TA</th>
<th>TAX</th>
</tr>
</thead>
<tbody>
<tr>
<td>TD</td>
<td>1</td>
<td>0.936</td>
<td>0.685</td>
<td>0.049</td>
<td>0.307</td>
<td>0.337</td>
<td>0.616</td>
</tr>
<tr>
<td>LTD</td>
<td>0.939</td>
<td>1</td>
<td>0.754</td>
<td>0.049</td>
<td>0.222</td>
<td>0.256</td>
<td>0.39</td>
</tr>
<tr>
<td>LA</td>
<td>0.685</td>
<td>0.754</td>
<td>1</td>
<td>0.042</td>
<td>0.353</td>
<td>0.375</td>
<td>0.765</td>
</tr>
<tr>
<td>NC</td>
<td>0.049</td>
<td>0.685</td>
<td>0.754</td>
<td>1</td>
<td>0.199</td>
<td>0.556</td>
<td>0.693</td>
</tr>
<tr>
<td>PR</td>
<td>0.307</td>
<td>0.222</td>
<td>0.353</td>
<td>0.199</td>
<td>1</td>
<td>0.068</td>
<td>0.107</td>
</tr>
<tr>
<td>TA</td>
<td>0.337</td>
<td>0.256</td>
<td>0.375</td>
<td>0.556</td>
<td>0.068</td>
<td>1</td>
<td>0.335</td>
</tr>
<tr>
<td>TAX</td>
<td>0.616</td>
<td>0.39</td>
<td>0.765</td>
<td>0.693</td>
<td>0.107</td>
<td>0.335</td>
<td>1</td>
</tr>
</tbody>
</table>

Note(s): TD (total debt), LTD (long term debt) SD (short term debt) LN (long term assets), NC (net cash), PR (profitability), TA (tangible assets) and TX (taxes)

<table>
<thead>
<tr>
<th>Variables</th>
<th>VIF</th>
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<tr>
<td>TD</td>
<td>1.21</td>
</tr>
<tr>
<td>LTD</td>
<td>2.45</td>
</tr>
<tr>
<td>STD</td>
<td>2.40</td>
</tr>
<tr>
<td>LA</td>
<td>2.33</td>
</tr>
<tr>
<td>NC</td>
<td>1.90</td>
</tr>
<tr>
<td>PR</td>
<td>1.22</td>
</tr>
<tr>
<td>TA</td>
<td>1.92</td>
</tr>
<tr>
<td>TX</td>
<td>2.11</td>
</tr>
<tr>
<td>Mean VIF</td>
<td>1.94</td>
</tr>
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</table>

Note(s): TD (total debt), LTD (long term debt) SD (short term debt) LN (long term assets), NC (net cash), PR (profitability), TA (tangible assets) and TX (taxes)
Tables 5–7, present the results of TD relation with other IV with the analysis of GMM-LN (long-term assets) has a statistically significant positive effect on TD under GMM ($\beta = 0.877$, $p < 0.000$). In the view of some prior studies (Jong et al., 2008; Deesomsak et al., 2004; Eriotis et al., 2007) associated fixed assets have a perfect connection with liability. Similarly, LN (fixed assets) has a complete connection alongside LTD ($\beta = 0.428$, $p < 0.00$) and STD ($\beta = 0.429$, $p < 0.000$). Fixed assets are long-term assets that a company has purchased and is using to produce its goods and services for company business volume enhance.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob</th>
</tr>
</thead>
<tbody>
<tr>
<td>PR</td>
<td>0.783</td>
<td>0.085</td>
<td>9.136</td>
<td>0.000</td>
</tr>
<tr>
<td>NC</td>
<td>0.368</td>
<td>0.087</td>
<td>4.194</td>
<td>0.000</td>
</tr>
<tr>
<td>TX</td>
<td>0.689</td>
<td>0.582</td>
<td>1.183</td>
<td>0.023</td>
</tr>
<tr>
<td>TA</td>
<td>0.138</td>
<td>0.123</td>
<td>1.124</td>
<td>0.026</td>
</tr>
<tr>
<td>LA</td>
<td>0.428</td>
<td>0.023</td>
<td>18.345</td>
<td>0.000</td>
</tr>
<tr>
<td>C</td>
<td>153</td>
<td>977</td>
<td>1.573</td>
<td>0.115</td>
</tr>
<tr>
<td>Mean Dep var</td>
<td>6710342</td>
<td>R-squared</td>
<td>0.298</td>
<td></td>
</tr>
<tr>
<td>S.D Dep var</td>
<td>5095907</td>
<td>Adjusted R-squared</td>
<td>0.297</td>
<td></td>
</tr>
</tbody>
</table>

Table 6. LTD GMM results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob</th>
</tr>
</thead>
<tbody>
<tr>
<td>PR</td>
<td>0.824</td>
<td>0.051</td>
<td>15.990</td>
<td>0.000</td>
</tr>
<tr>
<td>TA</td>
<td>0.314</td>
<td>0.074</td>
<td>4.232</td>
<td>0.000</td>
</tr>
<tr>
<td>TX</td>
<td>6.930</td>
<td>0.350</td>
<td>19.783</td>
<td>0.000</td>
</tr>
<tr>
<td>NC</td>
<td>0.603</td>
<td>0.052</td>
<td>11.435</td>
<td>0.000</td>
</tr>
<tr>
<td>LA</td>
<td>0.449</td>
<td>0.014</td>
<td>32.016</td>
<td>0.000</td>
</tr>
<tr>
<td>C</td>
<td>127</td>
<td>588</td>
<td>2.161</td>
<td>0.023</td>
</tr>
<tr>
<td>Mean Dep var</td>
<td>9361209</td>
<td>R-squared</td>
<td>0.744</td>
<td></td>
</tr>
<tr>
<td>S.D Dep var</td>
<td>5075883</td>
<td>Adjusted R-squared</td>
<td>0.743</td>
<td></td>
</tr>
</tbody>
</table>

Table 7. STD GMM results

Note(s): LN (long term assets), NC (net cash), PR (profitability), TA (tangible assets), TX (taxes), Mean and S.D (standard deviation)
NC has also applied positive association with debt level under GMM ($\beta = 0.972, p < 0.000$). NC is a figure that is reported on a company’s financial statements. NC presents you how much capital you have on hand to continue operating the business. Cash is more important for day-to-day business operations. In parallel, NC (i) has an effective relationship with LTD ($\beta = 0.368, p < 0.000$) and STD ($\beta = 0.603, p < 0.000$). Therefore several previous inquires (Bates and Kahle, 2009; Duchin, 2010; Dittmar and Mahrt-Smith, 2007; Mulligan, 1997; Harford et al., 2008, 2014; Almeida, 2004) have investigated NC positive link between debt level.

PR has a significant interrelation with debt under GMM ($\beta = 1.607, p < 0.000$). Profit gives mangers a clear picture of the entire company, enabling them to strategize better and plan for growth. Profitability is a measurement of efficiency and success or failure. In the context of some prior work (Dalci, 2018; Evgeny, 2015; Lavorskyi, 2013) explained PR has a significant influence on debt level. Similarly, profit has a positive connection between LTD ($\beta = 0.783, p < 0.000$) and SD ($\beta = 0.824, p < 0.000$).

TA have a significant positive association with debt level under GMM ($\beta = 0.452, p < 0.014$). TA are more important to a business because they show the company’s worth. When a company shows worth with good documentation, the assets can serve as collateral for loans and make it easier for companies to get financing; they need to continue the business. Alliance with LD ($\beta = 0.138, p < 0.026$) and SD ($\beta = 0.314, p < 0.000$) TA has a positive association. Forgoing analysis (Rajan and Zingales, 1995; Ozkan, 2002; Bharath and Pasquariello, 2009) described TA have a unique link with leverage level.

TX also has a positive association with debt level under GMM ($\beta = 6.241, p < 0.000$). Tax planning strategies are typically employed to help a business achieve its financial and business goals. There are benefits of tax planning for both small and large companies. Tax pays for public goods and services; it is also a key element in the social contract between citizens and the economy. Some prior research (Bates and Kahle, 2009, Afza and Hussain, 2011; Irfan, 2011) has a significant connection between TX and debt level. In parallel, tax has a significant positive relation with LTD ($\beta = 0.689, p < 0.023$) and STD ($\beta = 6.930, p < 0.000$).

Conclusion
This new study investigates a positive link between debt and firm functioning, utilizing evidence from 167 registered companies in G-7 countries over the period 2007 to 2018. We apply three measures of debt, total liabilities, non-current liabilities and current liabilities, including five measures of company power: PR, tangibility, TX, NC and fixed assets which are accounting performance measure. Furthermore the results disclose positive relationship between financial leverage (TD, LTD and STD) and firm performance measure (PR, TX, LA, NC and TA). While the trade-off theory is fully supported, our results (PR, TX, fixed assets, NC and TA) support the trade-off theory.

Finally, in the view of some past studies (McConnell and Servaes 1995; Stulz 1990) examined the positive link between firm performance and debt based on growth. The results of the present paper should be estimated in light of some limitations. First, this paper focuses on only listed manufacturing firms in G-7 countries. There, to work out anyhow, the outcomes can be generalizable. Future research must focus on the functioning other fabrication in G-7 countries. Second, ownership types are not considered inside research. Therefore the prospective study can be investigated ownership types and debt levels in developed industrial countries.

References


**Corresponding author**

Muhammad Riaz can be contacted at: riazswl@hotmail.com

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