

Firm Specific Determinants of Growth in a Post CPEC Situation

Shaaban Ali  Muhammad Usman Akmal 

University of Education Lahore, Pakistan

UE Business School, Division of Management and Administrative Science, University of Education Lahore

ARTICLE INFO

Received: 08 July 2022

Revised: 06 September 2022

Accepted: 24 September 2022

Keywords:

Determinants of Growth,
Post CPEC,
Endogeneity Problems

Corresponding Author:
Shaaban Ali

Email:

shaaban51214@gmail.com

Copyright © 2022 by author(s).

This work is licensed under the
Creative Commons Attribution
International License (CC BY 4.0).
<http://creativecommons.org/licenses/by/4.0/>



ABSTRACT

Purpose: The study explores the determinant of firm growth in a post CPEC scenario by taking a panel data of 53 textile based firms listed on Pakistan Stock Exchange (PSX).

Approach/Methodology/Design: The data were extracted from the Financial Statement Analysis (FSA) published by State Bank of Pakistan for a period ranging from 2012 to 2017. In this research, we applied some methods to evaluate results descriptive statistics, correlation analysis and regression models such as random effect model, fixed effect model and pooled OLS and also we use GMM method (generalized method of movement).

Findings: The results after the calibration of CPEC as dummy variable proved that profitability and financial leverage are significant determinants of firm growth in the textile sector of Pakistan even after controlling the endogeneity problems.

Originality/value: The results imply that the firms in textile sector should focus on sustained profitability and also the availability of healthy financial arrangements to pursue growth in the long term.

INTRODUCTION

Firms expand to meet their goals which may include expanding sales, boosting profit or increasing market share. Firms can expand in two ways such as internal expansion and external expansion. Growth is crucial to long term survival of business. Some business they cannot grow they cannot survive and field to attempt his goals. Through growth we can easily add new resources to the business, increase new sale opportunities also a company expand range of product and services and also acquire new customer's intentions. Growth can boost your business credibility. An enterprise in an industry with a high growth rate should have enough cash to cover its operating expenses. Fast-growing businesses use more debt than slower-growing businesses (Thornhill, Gellatly & Riding (2014). A newly generated firm or a small corporation experiencing sales growth has increasing demand for asset additions, as growth will not occur as predicted until assets are increased.

Company sustainability depends on its ability to grow. It promotes in acquisition of assets, the employment of innovative and talented peoples and funding of investment. It also affects business profitability and success of a company. Growth also assists you to responding to market demand, expending your market shares and leveraging your growing brand. It frequently stimulates creativity, allowing you to stand out in the market and the competition. .

Firms can expand in two ways such as internal expansion and external expansion. Internal growth is also known as organic growth. It occurs when a company extends its operations by utilizing its own internal strengths and weaknesses. This can be accomplished, for example, by using the VRIO framework to examine a company's core skills and determine and leverage the strengths of its current resources. Additionally, firms might choose to grow organically by expanding existing operations and enterprises or by launching new ventures. It's worth noting that all growth occurs without the involvement of other resources or parties. Organic growth techniques strengthen a company's knowledge by involving it directly in a new market or technology, resulting in more in-depth first-hand information that is more likely to be assimilated. Internal growth that is gradually helps to spread investment across time. Organic expansion allows for the creation of new activities within the existing cultural environment, reducing the possibility of cultural clashes. External growth is also known as inorganic growth. This methods help to maximize output or expand the company's reach by utilizing resources and capabilities that were not generated internally. Rather, these resources are obtained through the acquisition, merger, or collaboration of other businesses. External growth is much faster than internal growth. It is easy way to obtaining finance.

The theory of firm life cycle is most commonly relates to this research. The following are the features of the four stages of the business life cycle. The introduction stage is when businesses first enter the market and there is a lot of variability and risk. This is also a good opportunity to invest heavily in the future. The growth stage is a period during which Companies expand and new firms develop. To survive the competition at this stage, you'll need a strategy, and is also a period when new ideas are developed. The mature stage is characterized by increased competition. Sales and business expansion for the company are stagnating. As a result, at this stage, businesses must to avoid competition, be more discerning. Finally, the decline stage occurs as growth slows of industry or decreasing. Firms are considering a withdrawal or exit at this moment Friesen and Miller (1984). Kwon and Moon (2009) examined whether the effects of return on equity (ROE) and its components on future profitability and value relevance depend on the firm life cycle.

Financial leverage has a discovered favorable impact on business growth Gamlath (2019) also Iqbal and Usman (2018) examines that financial leverage or Debt Financing had a positive impact on the firm growth. According to Javadi, Alimoradi and Ashtiani (2017) Financial debt and firm performance is positively related. Sari and Sedana (2020) examine that Liquidity has a negative and large impact on capital structure.

This study is also conducted between the Innovation of CPEC program so it's an important to discuss this project on the Impact of Pakistan economy. CPEC have a significant Impact on Pakistani firm's growth. The project has significant economic and geographical implications for Pakistan. The China-Pakistan Economic Corridor (CPEC) is a strategic economic initiative aimed at improving regional connectivity for Pakistan's and China's economic development. Between 2014 and 2016, an economic corridor will connect Pakistan's Gwadar's port with China's northwest area. It is projected to benefit not just Pakistan and China, but also other neighboring countries by improving Pakistan's geographical

connectivity with landlocked Central Asian republics. The CPEC would invest around US\$46 billion in Pakistan's power, infrastructural, industrial, and agricultural sectors. As of 2020, the CPEC projects are worth \$62 billion. In the annals of Pakistani history, the CPEC is a historic initiative. It is China's largest investment in any foreign country and Pakistan's greatest since independence. Pakistan considers CPEC to be economically crucial in assisting the country's progress. CPEC investments have been dubbed a "game and fate changer" for the region by Pakistan's media and government, with both China and Pakistan hoping that the vast investment plan will transform Pakistan into a regional economic center and strengthen the two nations' already strong connections. Zhang Baozhong, chairman of China Overseas Port Holding Company, told The Washington Post a year after the announcement of CPEC that his company planned to spend an additional \$4.5 billion on roads, power, hotels, and other infrastructure for Gwadar's industrial zone, which would be one of the largest ever sums of foreign direct investment into Pakistan. By increasing trade with China, Central Asia, Russia, the Middle East, and Europe, the CPEC will significantly boost Pakistan's economy. Even throughout the building period and after the CPEC is completed, Pakistan would see a 3 percent improvement in economic growth due to increased industrial development and the availability of resources. CPEC provides different kinds of advantages to Pakistan such as increase in imports and exports between both countries through new roads, increase jobs opportunities for both countries peoples, strength PAK-CHINA relationship, tourism and many other benefits.

REVIEW OF LITERATURE

Leverage and Firm Growth

Huynh and Petrunia (2010) in this paper author describe the study of some determinant such as leverage, age and size of the firms in firm growth. The methodology use for this data is a unique administrative data set because small firms and also private firms have not much more information about financial data. Researcher also gathers this information through General Index of Financial Information (GIFI).

Cole and Sokolyk (2017) in this research researcher discuss the study of financial leverage on the start-up firm's growth. This study examines that Information collect through The Kauffman Firm Survey (KFS). Mostly new start-up Firms depends on the debt to generate more revenue and Employment. New generated firms have lack of informational data so they mostly focus on debt Financing.

Gamlath (2019) This study examines the impact of financial leverage on business growth using data from Twenty (20) Sri Lankan Publicly traded enterprises over a five year period from 2013-2017. This study examines the Firms growth in terms of sales and profit. Financial leverage is evaluated in term of total debt to total assets growth whereas total assets growth is assessed in terms of assets growth. According to this analysis there is a considerable positive correlation between TDTE and enterprise growth. In addition, the finding reveals the financial leverage has a considerable impact on corporate performance. As a result financial leverage has a discovered favorable impact on business growth.

Iqbal and Usman (2018) the goal of this study is to determine the link between financial leverage and the performance of Pakistani Textile Composite Companies. The Textile Composite Companies of Pakistan that are listed on the PSX (100-index) have been chosen. Data over the past five years has been gathered. The top 16 organizations were chosen as a sample from 2011 to 2015. Making use of descriptive language the findings will be

determined using statistics, correlation analysis, and a regression model. According to additional research, the value of equity is reduced by a high interest rate and a larger debt load. Financial leverage has a beneficial influence on a business. According to the studies, if the debts do not above the equity, the achievement will be good.

Hamouri, Al-Rdaydeh and Ghazalat (2018) in this paper author study about financial leverage that how much financial leverage effect on firms growth. Collect information from 91 firms of Jordan through Penal Data Regression Method study taken between 2006 to 2015. Financial leverage has a positive correlation between sales growth and employment. Jordanian enterprise is not constrained according to speculator.

Javadi, Alimoradi and Ashtiani (2017) the relevance of financial variables as factors of business growth has been reported in recent concepts of firm economics. The majority of technical literature indicates that financial leverage and company performance are positively related. The goal of this research is to see if such a link exists within the Organization of Petroleum Exporting Countries (OPEC) occurs among oil and gas firms (OPEC). The information was gathered from the individuals who are members of the Organization of Petroleum Exporting Countries (OPEC). The data was then evaluated using the GMM approach and the Sargan test developed by Arellano and Bond (1991). Financial leverage and corporate performance have a strong and favorable link. This study adds to the corpus of knowledge by focusing on a specific and important area across numerous nations. It demonstrates that industry or nation have no influence on the existing concept.

H₁=Financial leverage has a significant positive impact on firm growth of textile sector.

H₂=Financial leverage has a significant positive impact on firm growth of textile sector in a post CPEC scenario.

Profitability and Firm Growth

Niar, at al. (2018) The Determinants of Profitability and Firm Value in the Manufacturing Sector of Indonesian Firms are investigated in this study. As a sample, 55 businesses listed on the Indonesia Stock Exchange were selected. Data collected from 2014 to 2016. The Structural Equation Modeling Test employing analysis of moment structures ver. 22 shows that investment decisions have a substantial beneficial impact on profits but not on company values. The company's profitability increased as evaluated by characteristics of sales growth, asset growth, and profit growth.

Fareed, at al (2016) the paper investigates the impact of important factors of profitability in Pakistan's power and energy sector, such as business size, company age, profitability ratios, performance, financial leverage, and the electricity issue, as presented in a broader interdisciplinary environment. In this study, panel data from 16 companies in the power and energy sector was used from 2001 to 2012. The study takes into account both firm-level and individual- profitability level examining hypotheses produced from resource-based theories at various degrees of industry affiliation approaches. The random effect model is used to find the variables that work together. The findings suggest that firm size, firm expansion, and the electrical issue all have a favorable impact and also Firm age, financial leverage, and productivity, on the other hand, have a negative impact.

Margaretha and Supartika, (2016) The goal of this study is to look into things like company size, age, growth, lagged profitability, productivity, and industry to see how these affect profitability Affiliation of SMEs enterprise listed in Indonesia stock Exchange. The data for this study was gathered from secondary sources that is PEFINDO 25 index. The finding

revealed that profitability is influenced by business size, growth, lag profitability, productivity and industry affiliation. According to the regression coefficient, the variables firm size, growth, and lagged profitability have a negative impact on financial performance, but the factors productivity and industry affiliation have a positive impact. As a conclusion, in order to improve the company's performance even more, the management should develop a plan to increase profitability by focusing on production.

Musah, et al. (2018) Working capital management practices, capital structure management, accounting information and financial reporting practices, capital budgeting methodologies, and fixed asset management were all reviewed as part of this Research. Data collected from Questionnaire from 100 SMEs in Accra. Descriptive statistics and Pearson correlation analysis were used to examine the data. Descriptive statistics and Pearson correlation analysis were used to examine the data. Working capital management methods received the highest mean score, followed by financial statement, according to the descriptive statistics and financial reporting methods, capital structure management, and capital budgeting usage. In that order, methodologies and fixed asset management. The Pearson correlation analysis demonstrated a significant relationship. There is a link between the four components of financial management techniques and the profitability of small businesses as well as development. The findings highlight the necessity for SMEs to enhance their financial management practices in order to succeed. These businesses' profitability and growth can be improved. It is suggested that capital budgeting be used. Although this field of financial management has a favorable impact on the economy.

Jang and Park (2011) Examines that business expansion and profitability are inextricably linked. The majority of previous research on business growth and profitability, on the other hand, were done without consideration of mutual relationships. Only a few researchers have examined into the interplay between business expansion and profitability so far, with mixed results. The lag structure of the models in each study is the principal cause of inconsistency. To overcome the problem, researchers used dynamic panel system GMM estimators to run panel unit root tests on firm growth and profitability independently. This study discovered that the profitability of the previous year had a beneficial impact on the current year's growth rate in restaurant enterprises by analyzing these models.

H₁=Profitability has a significant positive impact on firm growth of textile sector.

H₂=profitability has a significant positive impact on firm growth of textile sector in a post CPEC scenario.

Liquidity and Firm Growth

Sari and Sedana (2020) The purpose of this study is to determine the effect of profitability and liquidity on firm value, as well as the role of capital structure in mediating the effect of profitability and liquidity on firm value, in companies listed on the Indonesia Stock Exchange (IDX) in the construction and building subsector for the period from 2013-2017. The participants in this study are design and construction subsector enterprises that are registered on the Indonesia Stock Exchange and have a market capitalization of at least \$1 billion financial accounts for the years 2013 to 2017. This research makes use of the census method is used to collect samples. Path analysis was performed to analyze the information. Profitability has a large and positive impact on the capital structure. Liquidity has a negative and large impact on capital structure, capital allocation, and capital allocation. The structure of a company has a positive and significant impact on its worth.

Donati (2015) we examine the impact of liquidity limitations on firm growth in Italy using a large firm-level panel data collection. In most European countries, big financial firms are unable to supply small businesses with reasonable finance. As a result, these businesses are compelled to rely almost entirely on retained earnings to fund their expansion. We calculate a dynamic version of Gibratlaw for two different size classes of small and medium-sized firms, as well as many industries in the manufacturing and service sectors, using cash flow as a measure of financial limitations. Small manufacturing firms, on average, have larger growth-cash flow sensitivity than medium manufacturing firms, according to the data. Our findings, on the other hand, reveal significant variation in the impact of liquidity constraints on business performance in the services sector.

Quader (2016) This research uses an unbalanced panel data on 1122 UK enterprises registered on the London Stock Exchange to find differential quantitative effects of internal finance on growth among firms experiencing various degrees of financial restrictions. The results of the modified methods of moments (GMM) analysis are consistent with financial restrictions resulting from capital market imperfections, and they show a significantly higher responsiveness of growth to cash flow for company years with the most stringent financial constraints. Additionally, the leverage impact theory is supported by the fact that these enterprises can extend their size beyond the limit of any increase in cash flow. Following that, the anticipated impact declines monotonically when financial constraints loosen, allowing firms to finance a larger part of their expansion through external borrowing.

H₁=Liquidity has a significant and negative impact on firm growth of textile sector.

H₂=Liquidity has a significant positive impact on firm growth of textile sector in a post CPEC scenario.

Size and Firm Growth

Fiala and Hedija (2015) the purpose of this article is to look into the relationship between firm size and firm in the Czech Republic from 2007 to 2012. The goal of the study is to see how much the acceptance or rejection of Gibrat's law is influenced by the firm size variable. We utilize three indications to measure the size of a company: revenue, employee count, and total assets. The study makes use of data from the Albertina CZ Gold Edition database. The final collection contains information on almost 35,000 businesses. A linear regression model with a first-order autoregressive process was used to test the validity of Gibrat's law. For all three indices of firm size, Gibrat's law is rejected. As a result, the business size indicator chosen does not appear to be a significant influence in determining the validity of Gibrat's law. It was also discovered that in the Czech Republic, small profit industries (A-N according to CZ-NACE classification) expand faster than their larger counterparts.

Waluyo (2017) determined the company's CSR, stock index, and growth. The annual report of the corporation is used to assess the company's social responsiveness. This study includes 30 samples from a total population of 49 property and real estate firms. During the period of 2012 to 2016, all of the companies were listed on the Indonesia Stock Exchange. Multiple linear regressions are used by the researcher. The findings reveal that firm size, age, and growth all have significant effects on CSR disclosure at the same time. In part, the size of the company has a considerable impact on CSR disclosure. This demonstrates the increased transparency of CSR. Because large corporations have a vast number of entities that the market highlights.

Posada and Sanguinetti (2015) Previous research suggests that judicial enforcement quality has a beneficial impact on average firm size, but it has not distinguished its effect on

incumbent firm expansion from that on business demographics. This difference is critical since newcomers are typically smaller than holders, but both high entry rates and fast firm growth are linked to improved economic performance. This paper addresses that gap, demonstrating that judicial efficacy encourages incumbent growth and entry in Spain. For the first time, the study demonstrates that the sort of judicial procedure that firms encounter in the event of a dispute, rather than the overall functioning of courts, is the crucial issue. Judge efficiency has a beneficial impact on both company growth and entry at the declaratory stage (when a debt is verified by a judge), but no impact at the operation stage (when the judge requires its payment).

H₁=Size has a significant positive impact on firm growth of textile sector.

H₂=Size has a significant positive impact on firm growth of textile sector in a post CPEC scenario.

METHODOLOGY AND PROCEDURES

Data and variable measurements

This paper attempts to determine a few selected determinants of firm growth. The selected independent variables include financial leverage, firm size, profitability and liquidity. The data were taken from the financial statement analysis (FSA) for the years 2012 to the year 2017. The research focus on textile firms which is the largest sector listed at Pakistan Stock Exchange (PSX). The total number of firms in this sector is 136.

We included only those firms in our sample for which there were no missing values or which remained listed on PSX during our study periods. Therefore, the final sample consisted of only 53 based on these criteria. This FSA is published on regular basis by the State Bank of Pakistan. For firm growth we considered growth in assets as proxy that represents the rate of change in assets based on each preceding year. Financial leverage is calculated by dividing firm's total liabilities over total assets. Firm size is determined by taking the natural log of total assets for each firm and for the individual years. For liquidity we have used current ratio as proxy. Profitability is measured through return on assets ratio. We divide earnings before interest and tax by total assets to determine the return on assets. The variables, with their assigned notations, measured techniques and their references are given in table 1.

Table 1 Measurement of Variables

Sr #	Variable	Notation	Measurement	Author
1	Firm Growth	FG	Rate of growth in assets	Xuezhou et al. (2022)
2	Financial leverage	FL	Ratio between total liabilities and total assets	Hussain et al. (2020)
3	Profitability	PROF	Earnings before interest and tax scaled by total assets	Hussain et al. (2018)
4	Liquidity	LIQ	Peroxide by current ratio i.e., current assets divided by current liabilities	Hussain et al. (2022)
5	Size	SIZE	Natural log of total assets	Hussain et al. (2021)

Source: Authors

3.2 Econometric Model

This study involves firm specific characteristics as determinants of firm growth. The characteristics selected for this study include firm growth, leverage, profitability, liquidity and size.

$$FG = \alpha + \beta_1(FL) + \beta_2(PROF) + \beta_3(LIQ) + \beta_4(SIZE) + \beta_5(CPEC\ dummy) + \varepsilon_t$$

In this equation we have use all the notations include in table 1. In this equation FG is Firm growth, FL is Financial Leverage, PROF is profitability, LIQ is liquidity, and Size is size, α is Intercept and β is known as coefficient, year means we have created the dummies for year and ε_t is known as Error term.

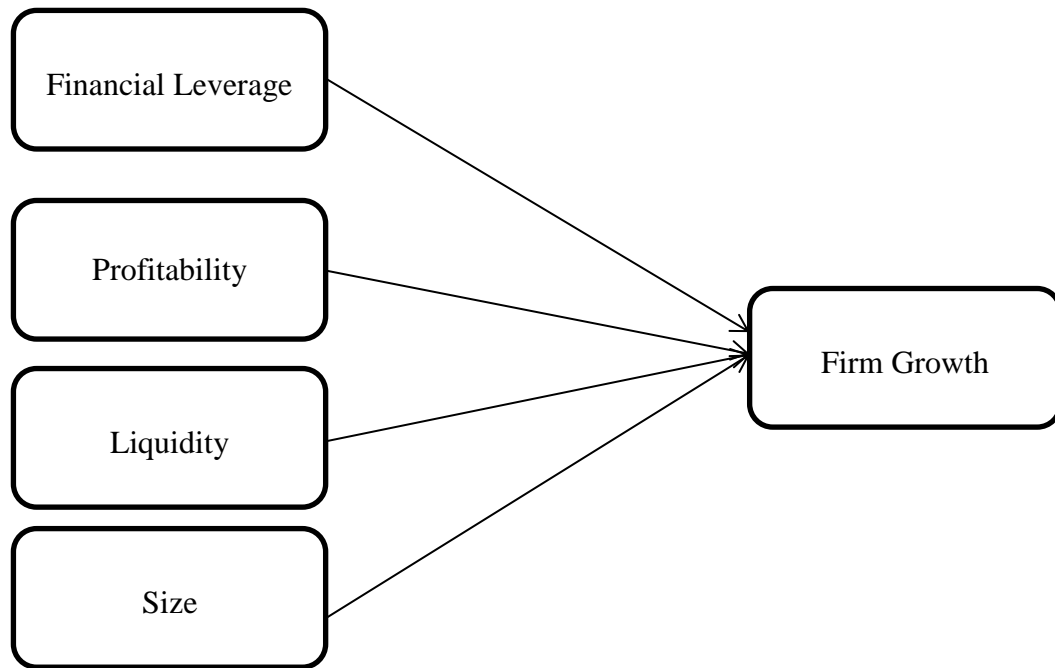


Figure 1: Determinants of Firm Growth
Source: Authors

RESULTS AND DISCUSSION

This section involves the interpretation of results obtained through various statistical methods applied to data. It also involved the discussion on the results obtained in the light of previous literature.

Table 1. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
FG	318	.7150651	3.732354	-41.60865	28.94239
LEV	318	.6033159	.2381552	.0340031	1.583706
ROA	318	2.065755	8.825321	-27.99	29.48
CH	318	.0230643	.0463411	.0002053	.4288004
SIZE	318	15.1089	1.093509	13.10002	18.59233

Source: Authors

The table 1 explained the descriptive statistics is basic tool understand the nature of our data. All the variables of 318 observations are obtained. The entire variable's has a data of 53 companies are selected and a data of 6 years for each firm were included hence the total observations of 318 were obtained. The mean value of our dependent variable firm growth is

.7150651 and standard deviation of firm growth is 3.732354 and minimum value is -41.60865 and also maximum value of firm growth is 28.94239. Further we generate some value of our independent variables such as leverage, ROA, cash holding and size. The mean value of our independent variable leverage is .6033159, standard deviation of leverage is .2381552, minimum value of leverage is .0340031 and maximum value is 1.583706. Another independent variable is ROA his mean value is 2.065755, standard deviation is 8.825321, minimum value is -27.99 and maximum value is 29.48. Cash holding is also a dependent variable his mean value is 0.230643, his standard deviation is .0463411, his minimum value is .0002053 and his maximum value is .4288004. Our last independent variable is size. The mean value of size is 15.1089, standard deviation value is 1.093509, size minimum value is 13.10002 and his maximum value is 18.59233.

Table 2. Correlation

VERIABLE	FG	LEV	ROA	CH	SIZE
FG	1.0000				
LEV	-0.0490 0.3839	1.0000			
ROA	-0.0854 0.1285	-0.5039* 0.0000	1.0000		
CH	-0.0019 0.9735	-0.1391* 0.0131	0.0952 0.0900	1.0000	
SIZE	0.0743 0.1865	-0.0951 0.0904	0.0884 0.1157	-0.0099 0.8606	1.0000

Source: Authors

Table 2 explains the pairwise correlations among the study variables. It also highlights the value that's statistically significant as depicted by the star (*) given over coefficient value. In this table the correlation between leverage and firm growth is negative but insignificant. Correlation between firm growth and return on assets is also negative and insignificant. As same as the correlation between firm growth and cash holdings is also negative and insignificant. Size shows a positive and insignificant impact on firm growth. ROA, cash holding and size shows negative but insignificant impact on leverage. As follows cash holding and size shows positive and insignificant impact on ROA. Cash holding and size shows negative and insignificant impact on each other's.

Table 3. Multicollinearity

VARIABLES	VIF	1/VIF
LEV	1.36	0.734932
ROA	1.34	0.743709
CH	1.02	0.979208
SIZE	1.01	0.988148
MEAN VIF	1.18	

Source: Authors

Table 3 there are not very high values of correlation which indicates there are lesser chances of multicollinearity. However to satisfy or claim of multicollinearity we have also used the variance inflation factor test. The variance inflation test refers that all the values of much smaller. The cutoff value is 10 and they are much smaller than 10. We can see leverage is 1.36, ROA is 1.34, cash holding is 1.02, and size is 1.01. So, it depicts that there is multicollinearity is none existed. Even the mean value of VIF is 1.18.

Table 4. Multiple regression results

VERIABLES	RANDOM EFFECT		FIXED EFFECT		POOLED OLS	
	COEF.	P.V ALUE	COEF.	P.VALUE	COEF.	P.VALUE
LEV	-1.927	0.061	-5.052	0.026	-1.927	0.062
ROA	-0.070	0.018	-.103	0.015	-.070	0.018
CH	-.313	0.945	-2.936	0.672	-.313	0.945
SIZE	.271	0.159	-.136	0.900	.271	0.160
CPEC dummy	.255	0.577	.290	0.582	.255	0.577
R-SQUARE	0.025		0.013		0.025	
WALD CHI ² (p-value)	8.14(0.1489)		1.70(0.1350)		1.96(0.1004)	
HAUSMAN	3.18(0.671)					

Source: Authors

Table 4 reports the mean regression results while using random effect model, fixed effect model and also pooled OLS. Under random effect coefficient of leverage, ROA, cash holding are negative coefficient but significant at 10% and the p-value of leverage, ROA and cash holding are respectively 0.061, 0.018 and 0.945. Size is positive and insignificant coefficient in random effect model and his value is .271 and the p-value of size is 0.577. CPEC dummy also shows positive and insignificant coefficient and his value is .255 and the p-value of dummy is 0.577. R-square value in random effect model is 0.025 and WALD CHI² value in this model is 8.14(0.1489). Also we obtain the results of fixed effect model in this model the coefficient of leverage and ROA are negative but significant impact on firm's growth and the p-value of leverage is 0.026, p-value of ROA is 0.015. Cash holding and size shows negative but insignificant impact and the p-value of cash holding is 0.672 and the p-value of size is 0.900. Dummy shows positive and insignificant coefficient and the p-value of this is 0.582. R-square value of fixed effect model is 0.013 and CHI² value is 1.70(0.1350).

In pooled effect model the coefficient of leverage and cash holding shows negative and insignificant coefficient and the values of these variables are respectively -1.927 and -.313. P-value of leverage is 0.062 and p-value of cash holding 0.945. In this model ROA shows negative but significant impact on FG the coefficient value of ROA is -.070 and p-value is 0.018. Size and dummy also shows positive and insignificant coefficient and the p-value of size is 0.160 and p-value of dummy is 0.577. R-square value of pooled OLS model is 0.025. The WALD CHI² value in pooled OLS is 1.96(0.1004). My results are consistence from all the above techniques. However to know the suitability I have applied the HAUSMAN test. HAUSMAN test has a value of 3.18 which is insignificant. If the value of HAUSMAN is insignificant then the random effect model is more suitable.

Table 5. Robustness check using One-step differenced GMM

VERIABALE	COEF.	STD. ERR	P.VALUE
FG _{t-1}	-.225	.0793	0.004
LEV	-11.025	3.794	0.004
ROA	-.229	.055	0.000
CH	-10.440	10.999	0.343
SIZE	2.856	2.135	0.181
CPEC dummy	2.372	.706	0.001
WALD CHI ²	34.16(0.000)		
SARGAN'S TEST	45.130(0.0000)		

Source: Authors

Table 5 in this table we check robustness using one-step differenced GMM. GMM means generalized method of movement technique is appropriate to address the endogeneity concerns. It considers the dynamic relationships on the variables. In this model the coefficient of firm growth, leverage and ROA are negative but insignificant and the value of FG is -.225, LEV is -11.025, ROA is -.229. Cash holding shows negative but CH is -10.440. Size shows positive and insignificant coefficient and the coefficient value of size is 2.856. The dummy variable CPEC is also positive and significant impact and the value of this variable is 2.372. Standard error of FG is .0793, LEV is 3.794, ROA is .055, CH is 10.999, SIZE is 2.137 and Dummy is .706. P-value of FG, LEV, ROA, CH, SIZE and DUMMY are respectively 0.004, 0.004, 0.000, 0.343, 0.181 and 0.001. SARGAN'S value has positive and significant which means there is no endogeneity concern. WALD χ^2 purposes that it is a good model and the value of this is 34.16.

CONCLUSION AND SUGGESTION

This study was conducted to investigate the impact of certain independent variables such as leverage, profitability, liquidity and size on the dependent variable firm growth. The study is conducted in Pakistan on 53 textile companies listed in Pakistan stock exchange (100 index) and taking 6-year data from 2012-2017. Results shows that leverage, ROA and cash holding has negative impact on firms growth values given in above tables. Size and CPEC dummy shows positive impact on the growth of Pakistani firms.

In the study, there are some important factors such as size CPEC. Thereby, management should focus on these variables for the firm's growth. Firm life cycle theory should focus on these factors that's we identify in above tables that are insignificant and focus on that why these variables are not significant. However those variables contribute in firm's growth. In this study my suggestion is that to measure firm growth in future researches researcher should include firm specific factors as well as macroeconomic factors. Firm growth should attach to firm performance because we can see if growth increases what impact on firm performance. Some limitations in my study is that my study is limited on just on sector (textile composite) so researcher should focus on overall sectors and also focus this study on other countries not only Pakistan. My data sample is too small and also used some advance method rather than GMM and others used in my study.

Conflict of interest

There is no conflict of interest

Funding

No Funds received.

REFERENCES

- Cole, R. A., & Sokolyk, T. (2018). Debt financing, survival, and growth of start-up firms. *Journal of Corporate Finance*, 50, 609-625. <https://doi.org/10.1016/j.jcorpfin.2017.10.013>
- Donati, C. (2016). Firm growth and liquidity constraints: evidence from the manufacturing and service sectors in Italy. *Applied Economics*, 48(20), 1881-1892. <https://doi.org/10.1080/00036846.2015.1109044>
- Fareed, Z., Ali, Z., Shahzad, F., Nazir, M.I., & Ullah, A. (2016). Determinants of

- profitability: Evidence from power and energy sector, *Studia Ubb Economica*, 61(3), 59-78. <https://doi.org/10.1515/subboec-2016-0005>
- García-Posada, M., & Mora-Sanguinetti, J.S. (2015). Does (average) size matter? Court enforcement, business demography and firm growth. *Small Business Economics*, 44, 639–669. <https://doi.org/10.1007/s11187-014-9615-z>
- Gamlath, G.R.M. (2019). Impact of Financial Leverage on Firm Growth of Sri Lankan Listed Companies. *Journal of Management and Tourism Research*, 2 (I) 64-83. <http://www.erepo.lib.uwu.ac.lk/handle/123456789/1724>
- Hussain, R. Y., Irshad, H., Akhtar, S., & Ismail, H. (2018). Analyzing the Factors of Firm Liquidity in Chemical Products and Pharmaceuticals Sector of Pakistan. *Review of Applied Management and Social Sciences*, 1(1), 1-7. <https://doi.org/10.47067/ramss.v1i1.3>
- Hussain, R. Y., Wen, X., Butt, R. S., Hussain, H., Ali Qalati, S., & Abbas, I. (2020). Are growth led financing decisions causing insolvency in listed firms of Pakistan?. *Zagreb International Review of Economics & Business*, 23(2), 89-115. <https://doi.org/10.2478/zireb-2020-0015>
- Hussain, R. Y., Xuezhou, W., Hussain, H., Saad, M., & Qalati, S. A. (2021). Corporate board vigilance and insolvency risk: a mediated moderation model of debt maturity and fixed collaterals. *International Journal of Management and Economics*, 57(1), 14-33. <https://doi.org/10.2478/ijme-2020-0032>
- Hussain, R. Y., Wen, X., Hussain, H., Saad, M., & Zafar, Z. (2022). Do leverage decisions mediate the relationship between board structure and insolvency risk? A comparative mediating role of capital structure and debt maturity. *South Asian Journal of Business Studies*, 11(1), 104-125. <https://doi.org/10.1108/SAJBS-05-2020-0150>
- Huynh, K.P. & Petrunia, R. J. (2010). Age effects, leverage and firm growth. *Journal of Economic Dynamics & Control* 34. 1003–1013. <https://doi.org/10.1016/j.jedc.2010.01.007>
- Hamouri, B., Al-Rdaydeh, M. & Ghazalat, A. (2018). Effect of financial leverage on firm growth: empirical evidence from listed firms in Amman stock exchange. *Investment Management and Financial Innovations*, 15(2), 154-164. [http://dx.doi.org/10.21511/imfi.15\(2\).2018.14](http://dx.doi.org/10.21511/imfi.15(2).2018.14)
- Iqbal, U., & Usman, M. (2018). Impact of financial leverage on firm performance: Textile composite companies of Pakistan. *SEISENSE Journal of Management*, 1(2), 70-78. <https://doi.org/10.33215/sjom.v1i2.13>
- Janga, S., & Park, K. (2011). Inter-relationship between firm growth and profitability. *International Journal of Hospitality Management*, (30) 1027–1035. <https://doi.org/10.1016/j.ijhm.2011.03.009>
- Javadi, S. M., Alimoradi, A., & Ashtiani, M. R. (2017). Relationship between financial leverage and firm growth in the oil and gas industry: Evidence from OPEC. *Petroleum Business Review*, 1(1), 9-21. <https://doi.org/10.22050/pbr.2017.58117>
- Miller, D., & Friesen, P. H. (1984). A longitudinal study of the corporate life cycle. *Management science*, 30(10), 1161-1183. <https://www.jstor.org/stable/2631384>
- Kwon, S. Y., & Moon, B. Y. (2009). Decomposed return on equity, future profitability, and value relevance over the firm life cycle. *Korean Management Review*, 39, 1231-1249.
- Margaretha, F., & Supartika, N. (2016). Factors Affecting Profitability of Small Medium Enterprises (SMEs) Firm Listed in Indonesia Stock Exchange. *Journal of Economics, Business and Management*, 4(2), 132-137. <https://doi.org/10.7763/JOEBM.2016.V4.379>
- Musah, A. Gakpetor, E.D. Pomaa P. (2018). Financial Management Practices, firm Growth

- and Profitability of Small and Medium Scale Enterprises (SMEs). *Information Management and Business Review*, 10(3), 25-37. <https://doi.org/10.22610/imbr.v10i3.2461>
- Niar, H., Mus, A.R., Masud, H.M., & Mursalim (2018). Determinants of profitability and firm value in the manufacturing sector of firms in Indonesia. *International Journal of Arts and Humanitie*, 2(3), 2581-3102. <https://doi.org/10.20885/AMBR.vol2.iss1.art7>
- Quader, S. M. (2017). Differential effect of liquidity constraints on firm growth. *Review of Financial Economics*, 32, 20-29. <https://doi.org/10.1016/j.rfe.2016.09.004>
- Sari, A.G.D.M., & Sedana, B.P., (2020). Profitability and Liquidity on Firm Value and Capital Structure as Intervening Variable. *International Research Journal of Management, IT & Social Sciences*, 7(1), 116-127. <https://doi.org/10.21744/irjmis.v7n1.828>
- Stewart Thornhill, Guy Gellatly & Allan Riding (2004). Growth history, knowledge intensity and capital structure in small firms. *Venture Capital*, 6:1, 73-89. <https://doi.org/10.1080/1369106042000175591>
- Waluyo, W., (2017). Firm Size, Firm Age, and Firm Growth on Corporate Social Responsibility in Indonesia: The Case of Real Estate Companies. *European Research Studies Journal*, XX(4A), 360 – 369. <https://www.um.edu.mt/library/oar/handle/123456789/32639>
- Xuezhou, W., Hussain, R. Y., Salameh, A. A., Hussain, H., Khan, A. B., & Fareed, M. (2022). Does Firm Growth Impede or Expedite Insolvency Risk? A Mediated Moderation Model of Leverage Maturity and Potential Fixed Collaterals. *Frontiers in Environmental Science*, 120. <https://doi.org/10.3389/fenvs.2022.841380>