

“DETERMINANTS OF FINANCIAL PERFORMANCE: EVIDENCE FROM PAKISTAN STOCK EXCHANGE”

¹*Hassan Ali, ²Hira Fatima

¹MS (Finance), Department of Management Sciences
Capital University of Science and Technology, Islamabad, Pakistan.
Corresponding Email: hassanalib22@gmail.com

²MS Scholar, Department of Management Sciences
Capital University of Science and Technology, Islamabad, Pakistan.
Email: hirafatima9002@yahoo.com

ARTICLE INFO	ABSTRACT
Article History: Received: Aug, 2020 Revised: March, 2021 Accepted: May, 2021 Available Online: June, 2021 Keywords: Financial Performance, Firm's Growth, Pakistan Stock Exchange JEL Classification: L29, M49	<i>This study investigates various determinants of financial performance of a company by taking variables such as sales, financial leverage, fixed assets, equity, current ratio, total assets and age of a firm and their impact on growth of firms in Pakistan. In this research, secondary data is used from the listed companies in “Pakistan Stock Exchange” the listed companies on the Pakistan Stock Exchange from 2009-2019 as well as from individual websites of firm's researcher have calculated age. To estimate the impact of various above-mentioned factors on firm's growth. By use of correlation matrix, descriptive analysis and regression analysis following results are obtained that profitability is positive correlated with growth. Financial leverage and fixed assets are a strong determinant of firm's growth. The equity has moderate impact on firm's growth, so it is also a determinant. While liquidity and age of a firm are weak determinant of firm's growth. The results have also shown that sales and size in form of total assets do not impact growth of a firm. So, they are not determinants of financial performance of a company.</i>

© 2021 The authors, under a Creative Commons Attribution-Non-Commercial 4.0

1. INTRODUCTION

A company's success can be measured in various ways. A key measure of company success is its internal growth. The firm growth is considered such an essential measure of success of a company that various authors consider a difference between firm success and firm growth obsolete (Roper, 1999; Bergstrom, 2000). The Development factors are categorized into qualitative and quantitative determinants. Quantitative determinants are mainly firm specific which are in relation to the external environment. The qualitative determinants are the components which deal with personality traits of the entrepreneur. To recognise firm growth; managers need to respond in a good manner to those (Kochhar, 1996; Cassar, 2004).

The key emphasis will be on definite determinants of firm including profitability, leverage, liquidity, equity, and sales. Fixed assets, size and age will also be tested for their affect. Likewise, Abraham & De Becker (1999) examined potential growth factors in a wide range on a local scale, but sample was limited to the province of Limburg. The latitude of this study will be restricted to monetary relations as development determinants by taking in to account all firms of Pakistan that meet specific requirements. Moreover, it inspects Pakistani context as a whole and is not limited to a specific province. So, the study will vary from other authors who have studied the Pakistani companies in this respect. Naz, F., Ijaz, F., & Naqvi, F. (2016) studied financial performance of cement sector of Pakistan by using ratios such as profitability ratios, asset utilization ratios, leverage ratios, liquidity ratios and cash conversion cycle from the period 2006-2014.

In this study Return on investment (ROI) is Dependent while other ratios are independent variables and results conclude positive relationship of all independent variables with ROI except Leverage that shows insignificant relationship with dependent variable. Both profitability and growth are of great importance for the organization and no generalized link can be established between them. Still there is no agreement among all researchers. Different studies were conducted that have revealed different results, few of them are given here. In 2011, Jang and Park studied relationship among firm productivity and development and found that increase in profits will increase growth, but an increase in growth will obstruct the profits of the company. Researchers also debate that profit has a positive effect on the growth of a firm (Coad, 2007). One of the most important pillars of growth is finance. This is true both for micro and macro level. This question the financial development and economic growth was well answered by (Schumpeter, 1911). Financing constrains have a negative impact on growth on micro-level. But then we come across an example when a cross-country sample and shown that those firms who consider finance as one of their majors constrain have to bear a penalty of 3 percent as compared to other firms who don't find finance and hurdle.

For small and medium scale enterprises the impact of constrain to financial access is found to be more severe by (Beck & Demirgüç-Kunt, 2006; Beck et al., 2005). If we consider example of Eastern Europe, we come across that there is 9 percent employment growth from 2002 to 2005. In 2009, World Bank along with an adequate increase of revenue growth of 36 percent greater than those firms who have a source of access to financial institutions. Total factor productivity Decomposition shows we have seventeen percent of both aggregate and average productivity among different kind of investment climate variables. Ahmad, N., & Ali, M. (2016) find the impact of capital structure (leverage) on the financial performance of companies listed on KSE in the cement sector. Seven years data was used from 2009 – 2015 of 14 firms of cement sector that are listed on stock exchange. Correlation and Ordinary Least squares models are used. The results show that leverage measured by Debt to Assets has a statistically significant negative results are found between leverage and firms' financial performance.

Pakistan has underdeveloped financial markets when we compare it to other developing countries. At micro level similar trend prevails if we take in account the sources of the working capital in Pakistan. The value of capital working financed through commercial banks is extremely low as compared to Bangladesh, Sri Lanka, and India as per World's Bank Report. This valuation about financial performance of firms is very helpful to concerned parties who are in search of firms' growth. The develop countries and developing countries a lot of differences in economic factor. The Pakistan is the develop country and its market is slowly growing. Pakistani firm's data is easily available for the researcher. The main objectives of our study to find out the determinants of financial performance of Pakistani firm and to provide relevant information to different stockholders in Pakistan market. The view in depth of basic factors that influence the firm's strength in Pakistan.

Haris, M., HongXing, Y., Tariq, G., & Malik, A. (2019). Studied the impact of internal factors on performance of individual and public sector banks of Pakistan. They have used balanced panel data and regression to test the impact of internal factors. the results show negative impact of government transition on performance. Investors, stakeholders, and economy at large are interested in performance of firms. Investor's value the return on investments highly, and a well performing business can fetch high and long-term returns. Additionally, a firm's financial profitability will result in boosting the income of its employees, bringing improved quality products for its customers, and have better environment friendly production units. Also, additional profits will mean additional future investments, which will create more employment opportunities and will increase income of people.

2. LITERATURE REVIEW

Model of growth presented by (Ahlstrom, 1998) put emphasis on the role played by mayor of growth competency and resources, growth potential and growth ambitions. According to Andersson, Andersson, Gran & Mossberg, 2007), those companies are more likely to grow who try to grow their competencies. Tahir, M., & Mushtaq, M. (2016) investigated the determinants of dividend payout by working on Oil and Gas industry of Pakistan by using secondary data of published annual reports for periods of 2008 to 2014 listed on KSE (Karachi Stock Exchange). Dividend payout can be affected by profitability, firm size, financial leverage, sales growth, investment opportunities, liquidity, business risk, and ownership structure. Panel data techniques are used with OLS regression model. Financial leverage, sales growth and business risks are the most significant variables of the study where financial leverage and business risk have significant negative effect on dividend payout while sales growth has favorable positive impact on dividend payout. Results revealed significant positive link of profitability and firm size with dividend payout whereas government ownership is negatively associated with dividend payout. Investment opportunities, liquidity and managerial ownership showed insignificant relationship with dividend payout.

Gibrat's law (1931) in conflict to Ahlstrom's model states that a company's growth is a random process and the company's size is independent from firm progress. Conversely, Evans's paper (1987), which is based on a tester of 100 manufacturing firms determined the opposed conclusion. Oliveira & Fortunato's research (2006) set up evidence of the dependence of age. Firm age and firm size as determinants of growth are a precondition for distinguishing weaker companies from strong growing companies. On the other hand, most of the companies showed firm size as a growth standard, which is used to measure growth of a firm. The aim of this study is to discover evidence of financial determinants of growth of firm in the context of Pakistan and not to define which growth standard is the finest indicator of growth of a company. Existing literature will be reviewed in the next paragraphs to make hypothesis statements.

2.1 Determinants of firm's profitability

Following are the determinants of firm's profitability and the hypotheses are also developed as under.

2.1.1 Profitability

Profit making is one of the definitive goals of financial activity. There are many ways to measure Profit of a company such as by measuring return on equity ratio (ROE), by dividing net profit through shareholders' equity. Shareholders' equity denotes share capital and quantities of profit retained in funds of company named as 'retained earnings. Even though there are many other ways of measuring profit are available but return on equity (ROE) is preferred as it is the supreme common measure of profitability in business. Naz, F., Ijaz, F., & Naqvi, F. (2016) studied financial performance of cement sector of Pakistan by using ratios such as profitability ratios, asset utilization ratios, leverage ratios, liquidity ratios and cash conversion cycle from the period 2006-2014. In this study Return on investment (ROI) is Dependent while other ratios are independent variables and results conclude positive relationship of all independent variables with ROI except Leverage that shows insignificant relationship with dependent variable.

A company's long-term growth prospect can be determined by return on equity (ROE) and profitability. If return on equity (ROE) is high, it generates a room to invest and worthy investments lead in the direction of enhanced growth. Even though it is not obligatory for a company to reinvest whole of its profits, it is assumed that all companies will reinvest a minimum number of profits at least. Firms can choose to retain some proportion in the firm funds and distribute more or less of the profit to stockholders as dividends. It is taken as for granted that any growth of investment budget would conform to the profitability. Various previous works are mentioned to understand whether the idea of conformity of investment budgets are functioning for relationship among firm growth and profitability.

Unpredictably, the hypothetical relationship among firm growth and profitability is undistinguishable and has not been the focus of consistency in empirical investigation (Coad & Holz, 2010). Friedman (1953) explained about the relationship of profitability of firm and its growth with the help of theoretical models. These theoretical models of Friedman approved the above stated theory of conformity of investment budgets. It is considered that Profitable companies will be further encouraged to grow, because these companies will not only have the monetary means for expansion, but continuing profit creation made possible for them to sustain their growth (Nelson & Winter, 1982). Another opinion of Goddard, Molyneux & Wilson (2004) on the theoretical belief on performance of firm and its growth is not witnessed. Their findings revealed that profitability of firm and its growth is not essentially linked to each other. Furthermore, some latest studies approve the concerns of Goddard and some of his co-writers (Coad, 2007).

Naseem, M. A., Xiaoming, S., Riaz, S., & Rehman, R. U. (2017) study the impact of board characteristics over performance of companies listed in Pakistan Stock Exchange. Board assists in achieving goals and financial performance is increased in view of agency theory and resource dependence perspective. Parameters such as board size, number of meetings, board independence, audit committee independence, gender diversity in board and executive directors' compensation are studied using Data of listed companies of Pakistan Stock Exchange (PSX) of six different sectors of the economy from 2009 to 2015. Accounting and market measures are taken as indicators of financial performance and consider as the outcome variables in this study, whereas the board characteristics are taken as explanatory variables. Panel Data regression analysis is used. The study reveals that in emerging economies firm financial performance is affected by board characteristics.

The financing constraint theory (Goldratt, 1990) claims those companies which are not able in making profits and consequently have no cushion to invest, will not be able to finance the growth of their company or as a minimum their survivability, and will have to disappear finally. Here, the word buffer used is referred to the retained earnings. This buffer will be less if the company is not making profits or agrees to distribute all the profit to the stockholders. According to the pecking order theory the buffer is equivalent with the internal capital, that is favored on external capital. Penrose's theory (1959) has added the conception of management impact towards the relationship among profitability and growth. The ability and the concern for maximizing the profitability of the firm will decide the dedication to grow. Glancey (1998) showed interest towards the useful worth of Penrose's opinions and established a positive correlation among the profitability of a firm and its growth. Glancey's research was conducted on a sample of small owner-managed businesses.

Additionally, there are numerous authors who appealed the relationship among profit of firm and growth as positive. Commonly, the inter-relationship among profitability and growth has been examined. In few circumstances, the reverse influence of growth on profitability has also been tested. Moreover, it is interested to indicate the conclusions of the reverse growth-profit association. Chandler & Jansen (1992) established a very significant positive relationship between growth of sales and profit. The same conclusion was reported by Mendelson (2000) and Cowling (2004). Capon, Farley & Hoenig (1990) revealed that growth of firm is correlated with extraordinary monetary performance, however this was merely significant in just few industries.

According to the Ricardian Theory (1817) growth is considered as an unfavorable element for profitability. The more a company is making profit, the more will be its want to grow with reasonable less profit-making projects. This greed for growing more will result in leading the company towards those projects which are generating less money and are wasting more money. It will lead to increased growth, but decreased profit that is not viable for any company. Same story is being told in The Neoclassical Theory but by using another storyline. First of all, the profitability of firm will go up and down depending on growth opportunities and then will ultimately meet a thinner base than the pre-growing period.

Marris and Mueller (Marris, 1964; Mueller, 1972) presented the theory of growth maximization. Growth was placed in a competitive relationship with profitability by these two authors. The objective of managers was to maximize a firm's growth relatively than profit and it will lead to a negative consequence for profitability. There is also evidence of impartial find in the literature review. Markman & Gartner (2002) also reported a very non substantial relationship among growth and profitability. However, we believe on most of the theoretical proof and are therefore investigating the validity of the increasing effect of profitability upon sales growth. Therefore, following hypothesis is formulated:

Hypothesis 1: "Profitability has a positive effect on firm growth."

2.1.2 Sales

The sale of every firm is measure to the company growth; the sales is increasing its means to profitability is increase and no. of employees is also increase. The variation in demand of product or services also changes the sales of that company, and demand is the forecaster of growth (Vijayakumar and Devi, 2011).

- **Kaldor-Verdoorn Law**

This law states that firm productivity can be improved by increasing the firm growth and this increased productivity will result in increased sales consequently increasing the profit of the organization (Kaldor, 1966).

If volume of sales (turnover) is large it is not necessarily interconnected with improved performance. Studies examining the link between turnover and corporate performance were inconclusive.

Hypothesis 2: "Sales is a determinant on firm growth."

2.1.3 Financial leverage

This process is explained by the fact that in raising additional capital internal finance is the economical way. Young companies have less access to external financing. Attracting the external financing is not a problem for them but they must pay a high price for external financing. Their failure risk is also high (Huyghebaert & Van de Gucht, 2007). This results in the fact that small companies have a low probability to grow.

Ahmad, N., & Ali, M. (2016) find the impact of capital structure (leverage) on the financial performance of companies listed on KSE in the cement sector. Seven years data was used from 2009 – 2015 of 14 firms of cement sector that are listed on stock exchange. Correlation and Ordinary Least squares models are used. The results show that leverage measured by Debt to Assets has a statistically significant negative results are found between leverage and firms' financial performance. If the financier of a particular company wants an entire control of the company, then this can be another way that we can explain hierarchy for financial decisions. In this sense the financier has no interest in raising the company's capital with the help of debt financing because the banks do not have the data of the earlier records of that company.

Information irregularity is another important concept we must keep in mind. Myers & Majluf (1984) has explain that there is part of information which is only known by the company's manager and the investor is also aware of it. That is why the investor asks for a high equity cost for the risk premium, and it is in the form of capital which investor must pay to the company. Similar kind of information symmetry exists between the debt holders of the company and the company. But the cost of equity is higher than the cost of debt because when a company fails and gets liquidated dent holders are privileged in receiving the money. Then the residual part of the money is priced by the investor. That is why even if a higher cost of equity is demanded by the investor, then still it is acceptable. Another reason that we must accept this that the bank also make company get restricted to some clauses it wants and those clauses the bank must write in the contract. And the risk for the bank is reduced. But with the increase in companies' maturity there will be no information asymmetry. (Fazzari, Hubbard, Petersen, 1988).

Durinck, Laveren & Lybaert (1997) were from Belgium and they made their research on 370 SMEs and they proved the fast-growing firms were more relied on the external financing as compared to retained financing. However, when there is an increase in external equity then we have limited financing, but it is significant for the increase of external debts. These results were analogous to pecking order theory. Leverage has a positive impact on the firms' growth is proved by various studies. (Heshmati, 2001; Honjo & Harada, 2006). External financing will not be available for a company with small growth and reputation. But within increase in company maturity it gets the trust of the bank. Then capital can be generated by the small company to support its growth by using external financing. This is the way a company can get the high leverage. Considering the above theories and findings we can conclude that:

Hypothesis 3: "Firm growth is improved by leverage".

2.1.4 Fixed Assets

Investment in fixed assets is dependent, to a large extent, on the business of a company. Certain companies are more capital intensive than others. Large amount of fixed-asset investment is critical to large capital equipment producers. Relatively small amount of fixed assets is required by service companies and computer software producers. A fixed asset is an asset with a useful life more than one reporting period, and which surpasses minimum capitalization limit of an entity. A fixed asset is not acquired for immediate resale, but it is for productive use within the entity.

Hypothesis 4: "Fixed assets are determinant of firm growth."

2.1.5 Equity

Capitalization is the addition and usage of resources for the support of achievement of mission of organization over time. Development of a capitalization strategy should be done by considering business model drivers, time horizon, lifecycle stage, and other factors which define risk and flexibility of an organization. Capital structure is irrelevant in the classical theory, for measuring performance of company, bearing in mind that performance is influenced only by real factors in a perfectly competitive world. Latest studies contradict this theory, arguing that capital structure plays a significant role in determining corporate performance.

Hypothesis 5: "Equity is a determinant of firm growth."

2.1.6 Liquidity

The liquidity is that the Current ratio = current asset / current liabilities. The current ratio is the working capital, and the assets of the companies and liabilities of the companies.

Hypothesis 6: "Liquidity has a positive impact on firm growth."

2.1.7 Total Assets

The firm size can be measured through total assets of that firm. In 2002, Audretsch & Elston devoted significance to the effect of size of firm on its profitability-growth relationship. Firm size is considered as a dynamometer that will measure the influence of the profitability-growth relationship. As the firm size decreases the impact of profitability on growth becomes weak. This theoretic line of intellectual is related to the renowned theory of constraints (Goldratt, 1990). This theory explains that larger firms have fewer financial constraints, while smaller firms must face constraining elements. Those constraints that are non-financial and can decline the enhancing effect of profitability on growth of firm.

According to Wagenvoort (2003), smaller firms must face greater financial suffering that hampers the growth of such companies.) Carpenter & Petersen (2002) and Bechetti & Trovato (2002) held that these constraints generally affect the growth of small companies. Conversely firms that are larger in size will face fewer monetary constraints and they are more likely to be relieved to maintain profitability. Therefore, larger firms exploit profitability more perfectly and greatly, leading towards higher investments and a more rapid process of growth. Summarizing, it is expected that large firms shall experience a stronger effect of the profitability on growth of that firm.

Hypothesis 7: “Firm size has a positive impact on firm growth”.

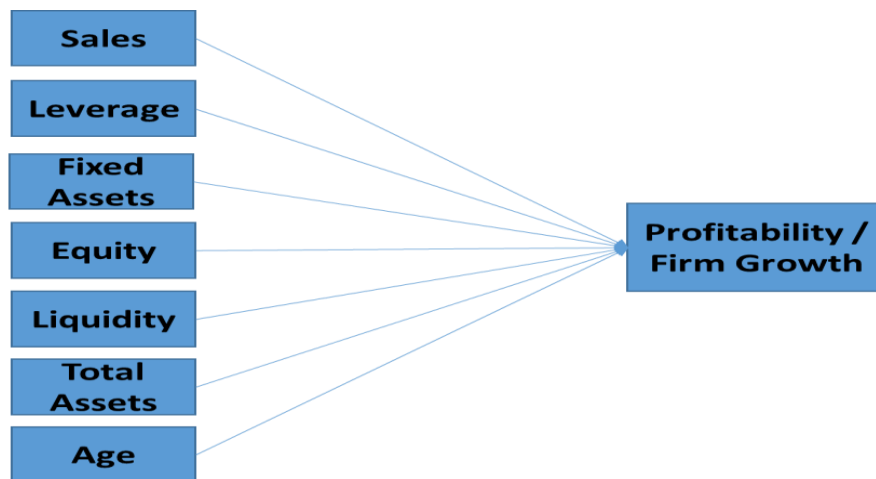
2.1.8 Firms Age

The last independent variable is company age. The researcher calculates the company age at the end of the year 2019 based on the date of incorporation. Evans (1978) discovered based on panel data from manufacturing firms of U.S. that the age has a bad effect on growth of a firm. In England, Dunne, and Hughes (1994) reached the same conclusion by employing data from manufacturing firms.

Hypothesis 8: “Age effects firm growth”.

2.2 Theoretical Framework

In this study is to find the factors that affect firm growth in Pakistan. For this reason, following important determinants of firm growth such as sales, leverage, fixed assets, equity, liquidity, total assets and age of a company are chosen and how these factors affect financial growth in terms of profitability of a company.



3. METHODOLOGY

In this research, one dependent variable and eight independent variables is used. The dependent variable is firm growth is $ROE = \text{Net profit} / \text{Shareholder equity}$. The eight independent variables, first variable is sales that is exchange of commodity, the second variable is leverage that is $\text{Liabilities-to-equity ratio} = \text{total liabilities} / \text{shareholder's equity}$, the third variable is fixed assets that is fixed assets of a firm, the fourth variable is equity that is Ownership interest, the fifth variable is liquidity that is $\text{Current ratio} = \text{currents asset} / \text{current liabilities}$, the sixth variable is total assets that is total assets of the firms, the seventh variable is age that is no. of years.

3.1 Methodology for determinant of financial performance

The methodology for each section mentioned in literature review. For the purpose, the mythologies are divided into following section.

- **Regression assumption test**

The regression model is based on four critical assumptions: normality, collinearity, linearity, and homoscedasticity (Gujarati, 2003; Berenson et al., 2009). These assumptions are explained as under:

- **Co-Linearity test**

The multiple regression analysis is always exposed to one of the main problems of co-linearity. The probability of co-linearity between independent variables clearly states that the variables are not fully independent (Berenson et al., 2009). Moreover, the issue seems to disfigure the model because of a serious concern of isolating the impact of these independent variables separately. For this purpose, the study used correlation and variance inflation factor (VIF) to test the issue of co-linearity issue.

- **Correlation Matric**

To compute correlation, correlation coefficient is computed, that ranges between +1 and -1. The correlation coefficient of +1 describes perfect correlation amongst the variables.

- **Normality Test**

The second important assumption of regression models is based on assumption that if data has normal distribution of variables, the more reliable the results (Berenson et al., 2009). To normality test, the study uses descriptive statistics.

- **Descriptive Study**

Descriptive statistics is the parameter of quantitative measure that describes the main features of the collected data. There is a difference between descriptive statistics and inductive statistics (or inferential statistics). The main purpose of the descriptive statistics to abridge a sample, rather than intend to use the data to gain knowledge about the population that the sample of data represents. In general, the descriptive statistics, contrast to inferential statistics, are not based based on probability theory. When a data analysis illustrates its main conclusions by using inferential statistics, descriptive statistics are normally also presented. For measuring central tendency, we include median, mode and mean. Similarly, for measuring variability, standard deviation, or variance, maximum and minimum, skewness and kurtosis are included.

- **Pooled ordinary least square analysis**

Kamaly (2004) pointed out that there is no specific methodology accepted theoretically for any type of analysis. The methodology depends upon the data selected, time span of data, the structure of variables and number of variables. Pooled Ordinary Least Squares (OLS) is developed to assessment of regression models as it reduces the error between the estimated points on the line and the actual observed points (Hill et al., 2008). The following estimated equation assesses the association between determinants of growth and growth for the balanced panel:

- **Numeric Equation**

$$ROE_{it} = \alpha_1 + \beta_1 SALES_{it} + \beta_2 FL_{it} + \beta_3 FA_{it} + \beta_4 EQ_{it} + \beta_5 CR_{it} + \beta_6 ASSET_{it} + \beta_7 AGE_{it} + \epsilon_{it}$$

4. RESULTS AND DISCUSSION

4.1 Correlation matrix

The results of correlations between the dependent variables and the independent variable are presented in table 1.1. The ROE is dependent variable while sales, financial leverage (FL), fixed asset (FA), equity (EQ), current ratio (CR), total assets (TA) and age are independent variables. The sales and ROE are positively correlated. It means when sales increase ROE also increases and when sales decrease resultantly ROE is also decreased. The FL and ROE are negatively correlated. It means when FL increase ROE decreases and when FL is decreased; ROE is increased. The correlation between FL and sales is also negative.

The FA and ROE have positive correlation indicating any increase in fixed assets will result in increase in ROE and decrease in fixed assets will decrease ROE. The FA and sales also have positive correlation. The FA and FL are also positively correlated. The EQ and ROE are positively correlated. An increase or decrease in EQ will increase or decrease ROE, respectively. A positive correlation exists between EQ and sales. But there is negative correlation exists between EQ and FL. The EQ and FA have a positive correlation. The asset and EQ are positively correlated. The CR and ROE have a negative correlation. The CR and sales have negative correlation. CR and FL negative correlation as well. The CR and FA are negatively correlated, CR and EQ are also in a negative correlation. The assets and sales are positively correlated.

The assets and ROE have a negative correlation. The assets and sales are also negatively correlated. Between assets and FA exist a negative correlation. The assets and CR are in negative correlation. The age and ROE are having negative correlation. The age and sales are in positive correlation. The age and FL have a positive correlation. The age and FA have correlation. The age and EQ are having positive correlation. The age and CR have positive correlation. The correlation between age and asset; it is perfect correlation of +1 between ROE & ROE which shows that.

Hypothesis 1: “Profitability has a positive effect on firm growth” is accepted.

Table 1.1. Correlation Matric

	ROE	Sales	FL	FA	EQ	CR	TA	Age
ROE	1							
Sales	0.01369	1						
FL	-0.1639	-0.0092	1					
FA	0.10698	0.03379	0.0077	1				
EQ	0.00726	0.40376	-0.018	0.13119	1			
CR	-0.0068	-0.0240	-0.004	-0.0136	-0.026	1		
TA	-0.0223	0.03499	-0.004	-0.0009	0.02374	-0.0111	1	
Age	-0.0183	0.06362	0.0245	-0.0033	0.15278	0.05373	-0.0363	1

4.2 Descriptive statics

In table 1.2. Shows sample of the companies is 101. The table also shows that the average ROE is 28.89. The average sales of a company mean are 16696.40. Furthermore, the companies had an average financial leverage (debt to equity) of 12.74. The mean of fixed assets is 22777.50. The value of mean equity is 4149.26. The average current ratio is 2.44 which means that an average company had current assets which can pay off the current liabilities almost two and a half times. Average of total assets is 64255. The average age of the companies is thirty-one years.

The maximum ROE is 4375 while minimum value is 1021.70 with standard deviation of 161.30. Maximum sales are 820530 while minimum value is 0.00 with standard deviation of 61696.70. Maximum financial leverage is 6234.90 while minimum value is 76.82 with standard deviation of 188.246. Maximum fixed asset is 2276597 while minimum value is 0.00 with standard deviation of 178495. Maximum equity is 138288 while minimum value is 1841.00 with standard deviation of 2840.00. Maximum current ratio is 226.20 while minimum value is 0.01 with standard deviation of 2.95. Maximum total assets is 1057342 while minimum value is 5.10 with standard deviation of 707104. Maximum age is 154 while minimum value is 1 with standard deviation of 25.05.

Table 1.2. Descriptive statistics

	ROE	Sales	FL	FA	EQ	CR	TA	Age
Mean	28.89	16696.40	12.74	22777.50	4149.26	2.44	64255	31.08
Maximum	4375	820530	6234.90	2276597	138288	226.20	1057342	154
Minimum	1021.70	0.00	76.82	0.00	1841.00	0.01	5.10	1
Std. Dev.	161.30	61696.70	188.25	178495	2840.00	2.95	707104	25.05
Observations	1412	1412	1412	1412	1412	1412	1412	1412

4.3 Regression Results

Based on regression results, the study explained the developed hypotheses as under.

Hypothesis 2: “Sales is a determinant on firm growth.”

In OLS sales of coefficient value is 4.09 with standard error of 7.48 and t-statistic 0.55 having probability of 58% which means that sales is not a determinant of financial performance. And in Random effect model of the sales coefficient value is 2.57 with standard error of 0.00 and t-statistic 0.18 having probability of 85%. This result also confirm that sales is not a determinant of growth.

The hypothesis 2 is rejected based on above results and it is concluded that sales is not a determinant of growth of a firm.

Hypothesis 3: “Firm growth is improved by leverage”.

In OLS financial leverage’s coefficient value is 0.14 with standard error of 0.02, t-statistic value is 6.29 with probability of 0%. So financial leverage is highly effective determinant of strength of a company. And in Random effect model of the FL coefficient value is 0.11 with standard error of 0.02 and t-statistics 5.13 having probability of 0%. So, FL is a highly effective determinant of strength of a company as it is affecting the strength at 0% significantly. The hypothesis 3 is accepted based on above results and it is concluded that leverage has strong influence on growth of a firm.

Hypothesis 4: “Fixed assets are determinant of firm growth.”

In OLS fixed asset coefficient value is 9.89 with standard error of 2.39, t-statistics value is 4.14 with probability of 0%. So fixed assets are highly effective determinant of strength of a company. And in Random effect model the fixed asset’s coefficient value is 0.00 with standard error of 3.58 and t-statistics 10.26 having probability of 0%. So fixed assets are a highly effective determinant of strength of a company as it is affecting the strength at 0% significantly. The hypothesis 4 is accepted based on above results and it is concluded that fixed assets have strong impact on growth of a firm.

Hypothesis 5: “Equity is a determinant of firm growth.”

In OLS Equity value of coefficient is 0.00, standard error 0.00, t-statistics 0.48 and probability of 3.33 % it is affecting ROE but not strongly in fact moderately. And in Random effect model the equity's coefficient value is 0.00 with standard error of 0.00 and t-statistics 0.46 having probability of 3.99% it is a moderate determinant of strength of a company. The hypothesis 5 is accepted based on above results and it is concluded that equity does influence growth of a firm.

Hypothesis 6: "Liquidity has a positive impact on firm growth."

In OLS current ratio's value of coefficient is 0.07, standard error 0.33, t-statistics 0.21 and probability of 8.31 % it is affecting ROE but weakly. And in Random effect model the Current ratio's coefficient value is 0.02 with standard error of 0.38 and t-statistics 0.06 having probability of 5.56% it is a weak determinant of strength of a company. The hypothesis 6 is accepted based on above results and it is concluded that liquidity has some influence on growth of a firm.

Hypothesis 7: "Firm size has a positive impact on firm growth".

In OLS total asset's value of coefficient is 5.40, standard error 98, t-statistics 0.90 and probability of 37.64 % it is not affecting so it is not a determinant of firm's strength. And in Random effect model the Asset's coefficient value is -4.30 with standard error of 7.06 and t-statistics -0.61 having probability of 54.19% it is not a determinant of strength of a company. The hypothesis 7 is rejected based on above results and it is concluded that size of the firm does not impact growth of a firm.

Hypothesis 8: "Age effects firm growth".

In OLS age's value of coefficient is 0.09, standard error 0.17, t-statistics 0.50 and probability of 6.14 % it is affecting ROE but weakly. And in Random effect model the age's coefficient value is 0.73 with standard error of 0.69 and t-statistics 1.03 having probability of 9.94% it is a weak determinant of measuring strength of a company. The hypothesis 8 is accepted based on above results and it is concluded that age of firm has some influence on growth of a firm.

In OLS C's value of coefficient is 31.68, standard error 6.84, t-statistics 4.63 and probability of 0 % it is affecting ROE strongly. And in Random effect model the C's coefficient value is 59.69 with standard error of 21.75 and t-statistics 2.74 having probability of 0.62% it is a strong determinant of strength of a company. It is a constant.

In OLS the values of R-squared is 0.54, Adjusted R-squared is 0.03, S.E. of regression is 158.47, Sum squared residue is 35256249, Log likelihood is 9152.07, F-statistic is 8.28, Prob (F-statistic) is 0.00, Durbin-Watson stat is 1.58. In Random effect model the values of R-squared is 0.28, Adjusted R-squared is 0.022, S.E. of regression is 142.35, Sum squared residue is 26421950, Log likelihood is 8948.42, F-statistic is 4.75, Prob. (F-statistic) is 0.00, Durbin-Watson stat is 2.15

Ordinary least square and random effect model

Ordinary least square					Random effect model			
Variable	Coefficient	Std. Error	t-Statistic	Prob.	Coefficient	Std. Error	t-Statistic	Prob.
Sales	4.09	7.48	0.55	0.58	2.57	0	0.18	0.85
FL	0.14***	0.02	6.29	0	0.11***	0.02	5.13	0
FA	9.89***	2.39	4.14	0	0.00***	3.58	10.26	0
EQ	0.00**	0	0.48	0.03	0.00**	0	0.46	0.03
CR	0.07*	0.33	0.21	0.08	0.02**	0.38	0.06	0.056
TA	5.4	98	0.9	0.37	-4.3	7.06	-0.61	0.54
Age	0.09*	0.17	0.5	0.061	0.73*	0.69	1.03	0.09
C	31.68***	6.84	4.63	0	59.69***	21.75	2.74	0.06
R-squared	0.54				0.28			
Adjusted R-squared	0.03				0.02			
S.E. of regression	158.47				142.35			
Sum squared resid	35256249				26421950			
Log likelihood	9152.07				8948.42			
F-statistic	8.28				4.75			
Prob(F-statistic)	0				0			
Durbin-Watson stat	1.58				2.15			

5. CONCLUSION

The study investigates various determinants of financial performance of a company by taking variables such as sales, financial leverage, fixed assets, equity, current ratio, total assets and age of a firm and their impact on growth of firms in Pakistan. In this research, secondary data is used from the listed companies in “Pakistan Stock Exchange” the listed companies on the Pakistan Stock Exchange from 2009-2019 as well as from individual websites of firm’s researcher have calculated age. To estimate the impact of various above-mentioned factors on firm’s growth. By use of correlation matrix, descriptive analysis and regression analysis following results are obtained.

For the regression models, an OLS regression is used with random effect model. Descriptive statistics and correlation matrix are also used. And on basis of these tests, it is concluded that Profitability is positive correlated with growth. Financial Leverage and Fixed assets are a strong determinant of firm’s growth. Equity has moderate impact on firm’s growth, so it is also a determinant. While liquidity and age of a firm are weak determinant of firm’s growth. The results have also shown that sales and size in form of total assets do not impact growth of a firm. So, they are not determinants of financial performance of a company.

REFERENCES

- Abraham, F., & De Becker, C. (1999). Groeideterminanten van de grote Limburgse ondernemingen. *Tijdschrift voor economie en management*, 44(4), 467-503.
- Ahmad, N., & Ali, M. (2016). Impact of capital structure on firm's financial performance: Cement industry of Pakistan. *European Journal of Business and Management*, 8(4).
- Andersson, T., Andersson I., Gran G., & Mossberg A. (2007). Competence development for growth, *IKED*.
- Audretsch, D. B., & Elston, J. A. (2002). Does firm size matter? Evidence on the impact of liquidity constraints on firm investment behavior in Germany. *International Journal of Industrial Organization*, 20(1), 1-17.
- Beck, T., Demirgüç-Kunt, A. S. L. I., & Maksimovic, V. (2005). Financial and legal constraints to growth: do firm size matter? *The Journal of finance*, 60(1), 137-177.
- Capon, N., Farley, J. U., & Hoenig, S. (1990). Determinants of financial performance: a meta-analysis. *Management science*, 36(10), 1143-1159.
- Carpenter, R. E., & Petersen, B. C. (2002). Is the growth of small firms constrained by internal finance? *Review of Economics and statistics*, 84(2), 298-309.
- Cassar, G. (2004). The financing of business start-ups. *Journal of business venturing*, 19(2), 261-283.
- Chandler, G. N., & Jansen, E. (1992). The founder's self-assessed competence and venture performance. *Journal of Business venturing*, 7(3), 223-236.
- Coad, A. (2007). Testing the principle of 'growth of the fitter': the relationship between profits and firm growth. *Structural Change and economic dynamics*, 18(3), 370-386.
- Evans, D. S. (1987). Tests of alternative theories of firm growth. *journal of political economy*, 95(4), 657-674.
- Friedman, M., & Friedman, M. (1953). *Essays in positive economics*. University of Chicago press.
- Gibrat, R. (1931). Les Inégalités Économiques, Librairie du Recueil Sirey, Paris. *What makes firms grow in developing countries*, 169.
- Glancey, K. (1998). Determinants of growth and profitability in small entrepreneurial firms. *International Journal of Entrepreneurial Behavior & Research*.
- Goddard, J., Molyneux, P., & Wilson, J. O. (2004). Dynamics of growth and profitability in banking. *Journal of money, credit, and banking*, 1069-1090.
- Goldratt, E. M. (1990). *Theory of constraints*. Croton-on-Hudson: North River.
- Haris, M., HongXing, Y., Tariq, G., & Malik, A. (2019). An evaluation of performance of public sector financial institutions: evidence from Pakistan. *International Journal of Business Performance Management*, 20(2), 145-163.
- Heshmati, A. (2001). On the growth of micro and small firms: evidence from Sweden. *Small business economics*, 17(3), 213-228.
- Honjo, Y., & Harada, N. (2006). SME policy, financial structure and firm growth: evidence from Japan. *Small Business Economics*, 27(4-5), 289-300.

- Jang, S. S., & Park, K. (2011). Inter-relationship between firm growth and profitability. *International Journal of Hospitality Management*, 30(4), 1027-1035.
- Kaldor, N. (1966). Causes of the Slow Rate of Economic Growth in the UK. *Economic Growth in Theory and Practice: A Kaldorian Perspective*.
- Kochhar, R. (1996). Explaining firm capital structure: The role of agency theory vs. transaction cost economics. *Strategic Management Journal*, 17(9), 713-728.
- Limère, A., Laveren, E., & Vanhoof, K. (2004). A classification model for firm growth on the basis of ambitions, external potential and resources by means of decision tree induction.
- Markman, G. D., & Gartner, W. B. (2002). Is extraordinary growth profitable? A study of Inc. 500 high-growth companies. *Entrepreneurship theory and practice*, 27(1), 65-75.
- Marris, R. (1964). The Economic Theory of " Managerial" Capitalism (London, 1964). *MarrisThe Economic Theory of" Managerial" Capitalism1964*.
- Mendelson, H. (2000). Organizational architecture and success in the information technology industry. *Management science*, 46(4), 513-529.
- Mueller, D. C. (1972). A life cycle theory of the firm. *The Journal of Industrial Economics*, 199-219.
- Myers, S. C., & Majluf, N. S. (1984). *Corporate financing and investment decisions when firms have information that investors do not have* (No. w1396). National Bureau of Economic Research.
- Nelson, R. R. (2009). *An evolutionary theory of economic change*. harvard university press.
- Naseem, M. A., Xiaoming, S., Riaz, S., & Rehman, R. U. (2017). Board attributes and financial performance: the evidence from an emerging economy. *The journal of developing areas*, 51(3), 281-297
- Naz, F., Ijaz, F., & Naqvi, F. (2016). Financial performance of firms: evidence from Pakistan Cement Industry. *Journal of Teaching and Education*, 5(01), 81-94.
- Oliveira, B., & Fortunato, A. (2006). Firm growth and liquidity constraints: A dynamic analysis. *Small Business Economics*, 27(2-3), 139-156.
- Penrose, E. (1959). T. (1959) The Theory of the Growth of the Firm. Reid, G. C. (1995). Early life-cycle behaviour of micro-firms in Scotland. *Small Business Economics*, 7(2), 89-95.
- Roper, S. (1999). Modelling small business growth and profitability. *Small Business Economics*, 13(3), 235-252.
- Tahir, M., & Mushtaq, M. (2016). Determinants of dividend payout: Evidence from listed oil and gas companies of Pakistan. *The Journal of Asian Finance, Economics, and Business*, 3(4), 25-37.
- Wagenvoort, R. (2003). Are finance constraints hindering the growth of SMEs in Europe? *EIB papers*, 8(2), 23-50.