DETERMINANTS OF PROFITABILITY OF NON-FINANCIAL FIRMS THROUGH PANEL MODEL

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Dedicated to my beloved parents for her devotion to empower through education

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Contents

Abstract

The profitability of the firm is a very important factor that determines a firm's stability. The main purpose of this study is to recognize the determinants of profitability through panel model. The variables are used for determining the profitability are ROE, EPS, total assets, inventory turnover and current asset. The data that is used in this thesis is collected by the authorized website of state bank Pakistan. We took the data of 20 companies of manufacturing sector and collected its data from the year 2006 to 2020 and ratios for further processing and analysis. For the profitability analysis we have used regression fixed effect model, random effect model, huasman test with the help of STATA which helped us to find out the most correct relationship between the variables of the profitability. We have used ROA and EPS to find out relationship between inventory turnover, total asset, and current ratio. The relationship between the total assets is weak positive relationship. The relationship between inventory turnover shows negative relationship whereas the current asset and total assets which indicates the size of the firm has a positive significant relationship with the profitability. This shows the positions of 20 manufacturing firms of Pakistan and results shows that the not in an unstable state as compare to others sector's firm.

CHAPTER 1- INTRODUCTION

1.1 Background

In order to evaluate a company's success, profitability is an important metric that shows how considerably profit a company makes compared to the amount of money invested in assets, equity, or sales. As Vietnam's economy increasingly integrates with the rest of the world, increasing profits is a top priority for businesses. In order to attract the attention and investment of both domestic and foreign investors, a stable economy with high profitability is necessary. Additionally, profitability may be used to predict the future success of a company based on its current performance. Investors are drawn to a company's profitability because it represents the wealth of its owners. This is why the study of economics, strategic management, accounting, and finance must focus on discovering many elements that influence profitability directly or indirectly.

The best capital structure for advancing the profitability of businesses has long been a focus of numerous studies (Miao, 2005). Other elements that have a direct impact on profitability, such financial leverage, solvency, liquidity, and financial sufficiency, must also be classified (Jumono, Sugiyanto, & Mala, 2019).According to various studies, the size of a company's capital structure, its capability to meet its debt repayments and its ability to maintain its solvency are all factors that affect profitability. In contrast to   Pakistani economic situation, most of these discoveries were made in industrialized nations, where there is a widening economic difference, leading to misunderstandings when the principles are applied. In addition, these scholars tend to specialize on a single sector rather than a wide range of topics. Consequently, the goal of this research is to conduct a wide empirical investigation, with both quantitative and qualitative techniques, to evaluate profitability in various sectors and to identify firm specific drivers (Yüksel, Mukhtarov, Mammadov, & Özsarı, 2018).

What we mean by profitability is the capacity of a corporation to generate profits from any and all of its operations. Businesses exist only to make money. The word profit is often used to refer to profitability. Despite the fact that they are interdependent and closely associated, they play various roles in the workplace. There's a big difference between the two words in actuality. In contrast to profit, profitability is a relative term, whereas profit is an absolute one. Both the manufacturing and cement industries plays a very important role in the country's profitable

development. Economic growth has been fueled by these businesses, which employ a wide range of Pakistanis from all across the country. Although these sectors of industry have had some difficulties in the past, they are nevertheless important to the country's financial system. Garments and hosiery contributed up 544 billion PKR of Pakistan's overall commerce in 2018-19, according to the Pakistan Financial Survey conducted by Gallup Pakistan in 2018. Because of its 2,263 billion exports and 5,371 billion imports, we conclude that our trade industry is in need of substantial growth measures (Gallup & Gilani, 2019).

1.2 Research Objective

Following are the research objective of the study

To study determines the profitability of the manufacturing sector of Pakistan.

To study do previously describe profitability variables determines the profitability of the textile sector in Pakistan.

1.3 Research Question

Following are the research questions of the study.

Q1: What are the determinants of the profitability in the manufacturing sector of Pakistan?

Q2: what the previously established factor or variables that determines the profitability of the manufacturing sector?

1.4: Problem Statement

This this study will address some of the aforementioned issues by studying five internal characteristics, including size, liquidity, solvency, financial leverage, and capital adequacy, which impact the profitability of listed businesses in the manufacturing sector of Pakistan. Because these elements are expected to be constant in the given time period and hence cannot be used as a basis for a business's profitability, they may be omitted in this scenario**.**

1.5 Significance of the study

Examining Pakistan's manufacturing industry by looking at how many factors affect the business's profitability is the goal of this study. Research on the profitability of many industries, particularly banks, has been extensively studied in the past. According to Pakistani government restrictions, only one external aspect of profitability is addressed in reports on these sectors, namely the general drivers for development and decline. little research has been done on how inner and outside factors affect profitability in the manufacturing and which are the backbones of our economy. Therefore, it will contribute towards the academic literature.

Chapter 2 - Literature review

2.1 Theoretical Review

2.1.1 Theoretical Profitability Analysis

Entrepreneurship thrives because of its potential to generate profits, and this is one of the primary motivations that keeps businesses in operation. Banks, like any other business, are designed to make money, just like any other company. That the bank is profitable in this area is an indication of how well run it is. Therefore, bank profitability is a critical metric for investors (Dechasa & Cherinet, 2018) Structural Adjustment Programs were introduced at the end of 1980, and since then, the banking industry has seen considerable changes. In order to regulate interest rates, some states have streamlined interest rate regulations, minimized government participation, and opened their doors to foreign banks (Olweny and Shipho, 2011). Because of this change, established state enterprises have become increasingly prominent in developing nations via their affiliates, branches, or acquisitions of foreign businesses.

They were pioneers in the field who recognized the value of a flexible profit function. It was expected that error terms were symmetrically distributed with a mean zero when computing a flexible profit function using the square or least squares approach (Knox, 2011). The validity of their study, on the other hand, may have been jeopardized by the hypothesis they made about the distribution of error.

When it comes to company profitability, Abbas et al. (2013) found that several financial variables (such as leverage and growth) have an influence on it. They employed a linear regression model using panel data from 2005 to 2010 for their investigation. Leverage has a detrimental influence on a company's profitability, whereas the dimensions of the business have a beneficial impact. The business's profitability is unaffected by the company's expansion and liquidity.

Chhapra and Asim (2012) studied the factors that influence the expansion of a firm's capital structure. They used data from 2005 to 2010 of 90 companies to develop a linear regression model to evaluate how fixed assets, size, taxes, and profitability affect the firm's financial leverage. Manufacturing spinning and composite units' financial leverage is unaffected by factors such as fixed asset size, tax rates and net profit, according to the research. Conclusion: Leverage is negatively impacted by business size, according to authors.

According to Hermelo and Vassolo (2007), a variety of factors contribute to the expansion of a business. They used data from Tucuman, Argentina's small and medium-sized businesses to get this information. Using a survey method, they gathered data on the company's growth, technology, financial capacities, investment, geographical market, and product variety. From 34 companies in various industries, including sugar, papermaking, manufacturing and food and beverage processing as well as citrus processing and equipment production. From 1994 to 1996, sales growth was employed as a dependent variable by the authors. They looked at factors such company size, financial resources, new technology investment, product variety, and sales in local and national markets while conducting the research . For the estimate, the research employed a linear regression model using the ordinary least square method. Size (resources of a company) was shown to have no effect on growth, while investment in technology was found to have a considerable negative influence. The F-value also indicates that the model is insignificant. According to Glancey, (1998), a variety of factors have an influence on the profitability and development of small and medium-sized businesses. The author utilized a linear model to evaluate the influence of the firm's size, age, location, and inter-industry variances on the growth and profitability of the company.

2.2 RBV Theory

There are three types of factors that may help determine a company's profitability: market-related variables, industry variables, and firm-specific features, all of which fall within the theoretical idea of theory. Many attempts have been made to explore the influence of these factors on profitability and also to see how these variables might explain profitability. For example, the market-based view (MBV), the organizational (OESP), structure conduct (SCP), strategy/structure/performance viewpoint and resource based (RBV) perspective are all wide theoretical aspects on profitability. Although the classic techniques of SCP and MBV describe industry characteristics, RBV explains the company-level drivers of profitability (Wernerfelt, 1984).

2.3 External Factors of RBV Theory

Bourke (1989) studied the relationship between profitability and total market expansion by using the rise in money supply as a proxy for market growth. Money supply and profit are shown to be favourably and strongly linked, according to the findings. According to him, growth in the whole market might provide an opportunity for banks to make higher profits if it is primarily related

with barriers to entry. Similar findings were made by Molyneux & Thornton (1992), who discovered a strong link between overall market expansion and profitability and carried conducted a study entitled "Firm and Industry Effects on Firm Profitability" in which they examined the link between profitability and several company characteristics. From 2004 to 2009, the state bank of Pakistan released the financial accounts of the companies. Market share, industry impact and firm effect are the independent variables, while ROA and ROE are the profitability metrics. Regression analysis was utilized by him to determine if the dependent and independent variables are statistically significant. Kessides (1990) estimates oligopoly as a mathematical model and discovers a strong link between profitability and market share. Concentration of industry is measured by the number and size of enterprises in the marketplace. The impact of industry concentration on an organization's profitability was examined by a number of scholars. All of them have reported mixed outcomes, ranging from good to negative to inconsequential.

2.4 Internal Factors of RBV

When it comes to the profitability of a business, there are a number of internal factors that must be considered. Data from 1987-1992 and pooled data were used in the analysis. Their study suffers from a lack of data and limited time periods. Return on equity, earnings per share, and return on assets were used as profitability proxies, and the regression model was used to examine their dependency on market size, concentration, and company risk. According to data from all three models, company risk and bank size appear to play a substantial effect in fiscal performance. Nagy, Newman, and Nelson (2009) analysed financial statement factors to determine the company's profitability in their study. The debt-to-equity ratio, acquisition activity, and reinvestment rate and dollar value of capital expenditures are among the parameters investigated in this study.

The company's ROA is a measure of profitability. These all have a role in determining the ROA, researcher concludes. Variables like as the composition of deposits and loans and the expenses of labour are thought to be within the control of management. The profitability of banks was mostly explained by their costs, followed by the mix of their loans and deposits(Hunter & Srinivasan, 1990). A company's financial success is influenced by the location in which it operates (Vernon, Location has a substantial impact on profitability, according to the results. They all come to the same conclusion: that a company's financial success is positively correlated with its impact on

the environment. A hands-on approach to environmental concerns, according to Shrivastava (1995), promotes the reliability of government, workers, consumers, and all other important stakeholders, improves the firm's image, and helps to avoid damaging responses from key stakeholders.

2.5 Trade off Theory

Kraus and Litzenberger (1973) laid the groundwork for the trade-off hypothesis, which was further, the idea of tradeoffs was developed to dispute this claim. The Modigliani-Miller Irrelevance Theorem was established by Modigliani and Miller in 1963. (MMT). They then published their conclusions in the American Economic Review in a 1958 essay titled 'The Cost of Capital, Corporate Finance, and the Theory of Investment.' In 1963, a follow-up study titled 'Corporate Income Taxes and the Cost of Capital: A Correction' supplemented and corrected this work. According to the MMT, an organization's value is not determined by its capital structure. It doesn't matter whether a company is financed with debt or equity as long as certain assumptions are met (no taxes, no transaction, bankruptcy, or agency costs; no asymmetrical information; and the presence of efficient markets). The previous MMT model was updated in this iteration to account for company taxes. Ehrhardt and Brigham (2011) devised the MM-2 model, which is also known as the MM model with corporate taxes.

The trade-off hypothesis states that businesses will employ debt up to a point when the tax benefits of not incurring more debt outweigh the costs of financial turmoil. As the company's reputation deteriorates, So do the costs of filing for bankruptcy or reorganization, as well as the fees charged by the various agencies. Taxes, agency costs, and the cost of financial distress are all factored into the trade-off theory used to determine the best capital structure; nonetheless, the assumptions of market efficiency and symmetric information, as well as the benefits of using debt, remain unchanged. When tax savings equal the cost of bankruptcy plus the maximum amount that may be saved, optimal debt levels are reached..

2.6 Theory of Profit Growth

Financing and investing are two aspects of financial management that focus on how to get the money you need at the lowest feasible cost, and how to get the most out of your investments (investment). When a corporation is formed, the goal is to maximize shareholder welfare by increasing the value of its stock. Companies may use a variety of financial management

strategies to better manage their finances. Signal theory and agency theory, on the other hand, may be used to increase a company's profit growth.

Problems with agencies develop when business owners contract with the company's management to operate the business in a way that maximises their personal benefit. Decisions may be made to maximise management's interests in situations of information asymmetry, according to agency theory. Agency theory is defined by Jensen & Meckling (1976) as a partnership between the principle (owner) and the agent (manager). Managers are ethically obligated to maximise the profits of their principals, yet managers are equally concerned about their own well-being. Because of this, it is possible that the agent will not always operate in the best interest of the principal, resulting in agency issues. Managing (agents) may generate money by manipulating the company's profit numbers. Because of this, the agent's actions to maximize his own interests might lead to large profit growth, which is not in line with the true worth of the company's revenue.

2.7 Empirical Review

Nanda and Panda (2018) looked at stock market data from India between 2000 and 2015 to see what factors, both firm-specific and macroeconomic, contribute to manufacturing business profitability. According to empirical models, a growth and upgrade in financial capital may assist the firm with capacity enhancement, then market share expansion, before taking use of competitive advantages to obtain better profitability.. Another thing to keep in mind when looking at the size of a company is that bigger companies have more resources than smaller ones, which means that they may anticipate a greater return rate.A significant correlation exists between capital adequacy and profitability in Nigerian commercial banks between 2010 and 2015, according to (Gutierrez, 2012). It was also observed that the capital adequacy and profitability had a positive link of the influence on banking sector profitability of capital adequacy. The SCP hypothesis and the GMM technique were used to demonstrate that Chinese commercial banks' capital sufficiency had a favourable impact on ROA. To put it another way, a bank with a solid capital position is better equipped to explore business opportunities and has more time and flexibility to deal with challenges such as unplanned losses, resulting in increased profitability.

The authors Pattitoni, Petracci, and Spisni (2014) also believe that a strong link exists between a company's liquidity and its profitability. The researchers found that all four models demonstrate

a considerable positive correlation between independent factors assessed by liquidity ratio and dependent variables assessed by ROE after utilising the study findings to develop four models using data from diverse industries and countries. A "high level of liquidity" reduces unfavorable economic shifts, short-term debt repayment difficulties and investment possibilities lost owing to financial limitations, all of which may be mitigated by a "high level of liquidity."According to Pattitoni, Petracci, and Spisni, using more debt resulted in worse returns on equity (2014). It's a proven reality that the more debt a company takes on and must pay, the less cash it has to operate with. This has a detrimental effect on the company's operational success. Ahmad, Salman, and Shamsi find that financial leverage has a negative influence on profitability with a 95% confidence level (2015). Because of greater interest payments on asset loans, remaining earnings are reduced, resulting in a drop in total profitability.

According to Alshatti (2015), a company's solvency ratio has a positive influence on its profitability. This is because the stronger a company's solvency, the greater the degree of financial stability it may achieve, allowing it to achieve more financial independence and security. As a result, production and efficiency may be enhanced, allowing the firm to increase profits.

A recent study by Zeitun and Saleh (2015) found that a company's size has a favorable and substantial impact on its success. the profitability of Ethiopian insurance businesses is positively impacted by their size. Panel data approaches were utilised to study the drivers of bank profitability in Vietnam over the period 2006–2015 by Batten and Vo (2019), who showed that capital adequacy, size, risk, productivity, and costs had significant influence on profitability. In addition, they showed that features of the banking sector and macroeconomic factors influenced the profitability of banks. However, past research have shown a negative correlation between size and profitability. According to this research, investors are rewarded with bigger returns since smaller businesses often have a higher degree of risk, resulting in larger returns for smaller enterprises. The outcomes of this study confirm all expectations and are consistent with the hypothesis that we developed after reviewing the literature. While growth, short and long-term leverage, as well as liquidity, has a negative impact on net profitability, asset turnover ratio and firm size have been found to have a positive impact. The findings of this study are consistent with those of prior studies. Manufacturing companies appear to be making good use of their present assets, but short- and long-term leverage implies that companies should work to reduce

these leverages in order to increase profitability. Textile producers should reduce their readily releasable assets to increase profitability (Ahmad, Ahmed, & Shabbir, 2015).

Firm performance in Pakistan's manufacturing business is strongly influenced by short term leverage, size, risk and tax and non-debt tax shield. As Pakistan's biggest non-financial industrial sector and a model for other sectors, the textile industry, according to the researchers, should consider the aforementioned aspects while making financial decisions. According to this researcher's findings, prior studies have found the same thing, too. The manufacturing industry's financial performance will suffer if it continues to rely on short-term loan financing, as would all other industries. Short-term debt should be used less often since it does not provide tax advantages and is not as inexpensive as long-term debt.

Laila et al. (2017) discovered that management ownership has an adverse effect on profitability, according to their research findings. According to a study published in 2016, there is no correlation between management ownership and profitability. Based on the study's findings, management engagement as an owner does not have a favorable effect on profitability. Because management owns a smaller percentage of the firm than the institutions that own the majority of the stock, this is more likely to occur.

Firm size is a size, scale, or variable that reflects the size of a business based on a range of factors such as total assets, market value, sales, total revenue, total capital, and others. Firm size is defined by Brigham and Houston (2015) as the sum of a company's total net sales over a period of time ranging from one year to several years. When sales exceed variable and fixed expenses, the amount of pre-tax profit will be realized. " Having a high number of employees might impact a company's ability to adapt to its environment, since large organizations have more resources and can see the bigger picture.

Managers of large corporations will be more adaptable when it comes to resource management and development, particularly when it comes to business growth. As a result, large-scale enterprises have a better chance of making money than smaller businesses. Effective and efficient asset management will lead to increased profitability if large earnings are created. It has been observed that business size has an impact on profitability in a research done by Laila and Hirdinis (2017).

Managerial ownership has a detrimental impact on business value, according to the findings of and Purba et al. (2020), on the other hand, found no correlation between manager ownership and

business value. Researchers found no evidence that including top-level executives in stock ownership has any effect on boosting the stock's market value. Because the quantity of management ownership is very modest, investors may not react immediately to managerial ownership when making investment choices because the value of the business is not directly affected by the level of managerial ownership. Because of this, it is possible that other factors, such as profitability, might have an impact.

Because investors are more likely to place their faith in huge corporations, their value rises as a result of their size. For the long term health of the organisation, managers must continue to walk on uncertain ground, implement policies and restrict predicted revenues and expenses. Managers must take deliberate initiatives to boost corporate development, such as soliciting capital from investors, to accelerate expansion and achieve new levels of profitability. As a result, managers must be able to present their ideas in a way that entices and persuades investors to participate in the firm.

Arifianto and Chabachib (2016) discovered that the size of a company has a favourable impact on its value. – While Hirdinis (2019) discovered that the size of a corporation has a detrimental impact on its value, this study's findings contradict those of Hirdinis (2019). A contrary conclusion was reached, who found that the size of the business had no impact on the value of the company. As the study's findings demonstrate, the relationship between a company's size and its worth is not well understood. Unfortunately, this lack of transparency is mostly caused by investors who believe that giant corporations cannot be relied upon to provide high returns on investment. Profitability has a favorable impact on business value, according to research by, Arifianto and Chabachib (2016), and Purba and Africa (2019) concluded that profitability has a detrimental impact on company value, this study shows the opposite. According to the findings of and Hirdinis (2019), profitability has no impact on the value of a company. Researchers found evidence that investors don't always look at a company's profitability as a basis to gauge its performance and make investment decisions.

The higher the debt-to-equity ratio, the lower the ROA and ROE values, according to the study. As a result, businesses should focus on their capital structure in order to reduce their debt-to-equity ratio. As a result, below are some possible solutions. First and

foremost, organisations must constantly assess their obligations in order to develop an appropriate repayment strategy. When an economy is in crisis, businesses should limit the

amount of loans they may take out from credit institutions. Debt financing may be used as a financial leverage to raise corporate efficiency as efficiency improves. Loans may have a detrimental impact on a company's business success in tough times. Additionally, raising shareholder ownership is a good strategy for businesses, since it increases the level of independence and autonomy of a company.

Because TURN has a substantial influence on ROA and ROE, companies need to increase asset usage efficiency. Enterprises must find all ways to enhance revenue and invest in assets wisely since asset turnover ratio is computed by dividing net sales by average total assets. The growth rate of revenue must outpace the growth rate of assets in order for an enterprise to succeed. Consequently, while making investment decisions, a corporation should take into account the predicted revenue. Investing in superfluous equipment is crucial. To put it another way, increasing revenue has a direct impact on the profitability of both assets and equity. Because of this, businesses need to develop their partnerships, identify new initiatives, and create a reputation for quality and advancement in order to gain the confidence of investors, which will lead to an increase in income. ROA and ROE are positively impacted by SIZE. This demonstrates that ROE and ROA rise in direct proportion to the size of the firm. While total assets are equal to total capital, SIZE is determined using ln(total assets). SIZE's value may be increased by increasing capital mobilization from both owners' equity and indebtedness, as shown in this example. For this reason, organizations need to balance the capital raised from debt and equity in order to grow in size while keeping TD under control and not grown, as shown above in the research (Le, Mai, & Nguyen, 2020).

By dividing current assets by current liabilities, CR may be computed. Short-term financial commitments may be met more easily when the CR is higher. But if the CR is lower, the firm's short-term financial commitments are less likely to be met, and as a result, the stock price of the company drops (Wibisono, 2016). Low profitability is a consequence of a company's inability to fully use its current assets, which is indicated by a high current ratio (CR). Wibisono (2016) found that profit growth is affected by the CR in earlier study. Control variable current ratio has an opposite impact on profitability (Nguyen et.al., 2020).

Profit Growth Is Affected by Current Liability to Inventory (CLI). For example, a large CLI shows that the firm relies heavily upon its suppliers, or that the company's short-term debt to fund its inventory is increasing, which increases the company's debt load. In the event that the

firm is unable to meet these commitments at maturity, the company will be forced to incur substantial interest charges, which would negatively impact the company's operations and lower its profits (Putriana, 2016). The findings of Anggrainingrum et al. (2019) show that CLI has been shown to have a positive impact on profit.

More effective use of resources is achieved when the TAT ratio is greater. The profitability of a corporation will be affected by the efficiency with which all assets are used to generate revenue. As a result, a rise in TAT value may boost sales volume while maintaining the same quantity of assets (Siregar & Batubara, 2017). We found that TAT had an impact on profitability that was large and good, The increase in a company's overall revenue or sales is known as sales growth. A company's revenue is comprised of both current and future cash inflows, such as sales of cash and credit (Rice, 2016). It is possible to anticipate future profit growth by looking at historical sales growth. Rice University's study shows that sales growth has a major impact on profit growth (2016). Profit growth is influenced by things such as FS. FS can tell you whether a firm is doing a good job of managing its wealth in order to make money. The larger the company's assets, the more likely it is that it will be labelled a huge one with significant profit margins. According to ROA and NPM increases, FS improves financial performance (Nguyen & Nguyen, 2020). According to Inyiama & Victoria (2014), the size of a corporation has a beneficial impact on profit growth.

We want to find out whether there are any differences in the financial performance of Mongolia's six primary industries as a result of profitability, growth, liquidity, and capital structure. Financial performance drivers for Mongolia's six sectors are examined. The dependent variables selected are ROA, ROE, and ROS. Profit growth, quick ratio, current ratio, and asset growth were the only six sectors' 13 independent variables that were not statistically significant. There is no way to measure financial success based just on liquidity and growth. For the food & grocery industry, building, mining, and service industries, return on investment (ROI) was one of the most important drivers that had a favorable influence. After that, profits per share is the most significant variable in the food & grocery, construction, mining, and agriculture industries. As a consequence of these findings, we infer that Mongolia's financial performance is influenced by its capital structure, cost structure, and profitability. Long-term debt to total assets ratio, for example, is important exclusively for the mining and agriculture sectors, but short-term debt to total assets ratio is only relevant for the service industry. This industry relies heavily on its short-

term solvency whereas the mining sector relies heavily on its long-term solvency for its survival (Bayaraa, 2017).

Dividend policy and profitability in the banking industry had a beneficial impact on company value between 2013 and 2017, according to the research. In the meanwhile, the value of a firm in the financial industry was unaffected by its size, leverage, or growth throughout the years 2013-2017. The following are the writers' recommendations: Increasing the firm's worth requires companies to pay attention to the dividend policy of the company and its profitability, which may be proxies by return on assets and the ratio of dividend payments made to shareholders. 2) The dividend policy-to-profitability ratio is an important consideration for investors looking to place their money in the financial industry. This is a reference to the study's findings that these two variables have a significant impact on the value fluctuations of financial sector companies, which in turn affects the stock price of the company (Endri & Fathony, 2020).

size does matter when it comes to profitability. The findings show that the size of a company's workforce has a significant role in determining production. So the findings of this study are inconsistent with previous research. The results imply a positive correlation between liquidity and company performance, supporting the findings of. This hypothesis was also found to be confirmed by the data. According to the fourth hypothesis, the connection between revenues and company performance is found to be positive, and this supports the results. The hypothesis of the research suggests that profitability and firm performance are linked, and this is also supported (Matar & Eneizan, 2018).

Companies with low dividend payment ratios and little or no non-financial effect are valued lower. Independent boards, institutional ownership, corporate social responsibility, and currency rates are examples of non-financial considerations. Independent Board members, corporate social responsibility, dividend payment ratio, currency rates, firm size, and inflation rate have no impact on company value, but Institutional Ownership does. According to this study, non-financial aspects such as an independent board, institutional ownership, corporate social responsibility, dividend payout ratio, and currency rates should all be considered when establishing performance improvement strategies (Riris Marintan Purba, 2019). Financial factors including leverage, liquidity, risk, size, and tangibility have a substantial impact on EVA as a consequence of the findings of this study and the general stock market scenario (financial performance). Leverage, liquidity, risk, and tangibility should all be given more consideration. If

they don't make their loan payments, companies with the highest levels of leverage risk going bankrupt. These businesses may also have difficulty obtaining further financing in the future. Leverage may help shareholders get a better return on their money, as well as take advantage of tax advantages associated with borrowing. EVA is a component that should be taken into account when measuring financial performance in the financial industry. A company's ability to leverage itself should not be based just on short-term debt (Kamran et al., 2017).

The assessed model found that the age of the manufacturing business had a positive sign, indicating that older manufacturing enterprises are more profitable. According to theories, older companies leverage their advantages of collected expertise and company reputation via cost reductions and increased profitability. Because many Croatian businesses were illiquid before to the financial crisis, liquidity was always a concern in the country. According to the data, this percentage went from 28% in 2005 to 33% in 2011. A corporate climate in which liquidity had a beneficial impact on profitability was not unexpected, even if this variable did not prove statistically significant. Firm profitability is negatively impacted by a rise in labor costs, according to this variable. According to this study, we can infer that the majority of Croatian manufacturing companies still use a strategy of cost leadership. The profitability of manufacturing companies is influenced by one of two industry factors. Market concentration has a negative impact on profitability, implying that it is unlikely that the Croatian economy's businesses would collide and raise the prices of their goods based on their market power. In spite of the fact that varied capital inputs might guarantee the application of modern technology, this variable was not determined to be statistically significant in this study (Pervan, Pervan, & Ćurak, 2019). Another study's empirical results show that ROA has a positive connection with cost efficiency, capital ratio, inflation expectations, and per capita GNI. Fuel Price, on the other hand, has a negative influence on ROA. It is thus vital to evaluate the elements that impact the profitability performance of Microfinance Institutions, as stated by, as it may assist to improve the quality and quantity of access to financing notably for the poor (Nurulhuda Ibrahim, Izzat Kamaruddin, & Daud, 2016).

Another study examines the factors that determine the profitability of Bangladesh's pharmaceutical business. The profitability of 20 publicly listed Bangladeshi pharmaceutical companies was impacted by both firm-specific and macroeconomic factors, according to data from the companies. To test the random effect regression hypothesis, we used a 10-year panel

dataset from 2007 to 2016. Sales, operating income, operational costs, return on equity, and total liabilities all have a significant influence on the profitability of the companies, according to the regression results. We observed that GDP growth and inflation rate had a significant deterministic effect on profitability among macroeconomic variables. The regression findings and recommendations will be extremely useful to both internal and external policymakers (Islam & Khan, 2019). Another study looked at some of the financial factors that drove the company's profitability using a combination of static and dynamic panel models. Throughout the five-year research period, ROA and ROE were constantly negative, according to the descriptive study. To put it another way, the ACE market is a risky investment, and in order to succeed, investors must have a thorough grasp of the firm, its technology, and its objectives. Model 1 (ROA) is positively influenced by ROA (return on assets), liquidity, and size in static models, but growth and debt have a negative impact.. There was a direct correlation between the size of the company and the rise in sales. Using a lagged dependent variable necessitates a dynamic model because of the assumption constraints of the ordinary least squares regression. For this reason, we used the GMM-SYS approach in the next step to see whether the liquidity, size of the business, lagged profitability, growth, and debt of the 60 ACE market-listed companies from 2009 to 2013 might be regarded as determining variables of their profitability(Ghasemi & Ab Razak, 2017)

Financial and non-financial criteria were used in this research to examine the competitiveness of firms. Competitiveness is measured by ROA, which stands for Return on Assets (Return on Asset). Leverage costs and business competitiveness were shown to be higher in manufacturing companies as a result of analysis. Ineffective asset management resulted in an average of 47% of the overall asset composition being comprised of these assets. Because the ineffectiveness of the firm's asset management has previously been shown, adding more productive assets, non-particular, was not recommended because doing so would reduce the firm's competitiveness. Because the company needed to produce more in order to achieve cost reductions and gain a competitive advantage over its rivals, it had to aim for the highest market share feasible (Javaid & Afridi, 2015).

The profitability of Pakistan's power and energy industry was investigated in another research throughout the period 2001-2012, which included periods before and after the country's electrical crisis. Debt holders, investors, and managers will all benefit from this study's focus on profitability. It may also serve as a springboard for additional research in the field of small

company studies. A large sample of 16 power and energy companies in Pakistan's power industry yielded favourable and statistically significant findings in the study of business size . The profitability of the power and energy industry is boosted by companies with strong sales volumes and large workforces. The profitability of a company is positively correlated with its growth are more likely to be successful, according to a correlation between productivity and profitability. Lagged company age and lagged profitability both have a considerable impact on current year profitability in the power and energy industry, according to the research. Profitability is strongly linked to a company's size and productivity (Fareed, Ali, Shahzad, Nazir, & Ullah, 2016).

Accounts payable has a negative influence on profitability whereas cash management, accounts receivable, and inventories all play a significant part in improving profitability for businesses. Given these findings, we can say with confidence that better control of a business' working capital may lead to greater profitability, as this is a key decision factor in overall financial management. According to previous studies, accounts receivable, inventory, cash, and profitability all have a favorable link. According to the results of this study, the findings are in agreement with the previous ones. A strong link exists between good profitability and quick recovery of accounts receivable, according to the research. The credit duration given to clients might be reduced by managers to increase profitability(Muhammad, Jan, & Ullah, 2012).

Research shows that business profitability is favourably and strongly linked to historical profitability, firm size in terms of total sales and net working capital but negatively linked to financial risk and R&D expenditures. Additional results show that Turkish manufacturing enterprises' profitability is not affected by market risk or capital intensity. Our findings are relevant to both the management of a company and the government. To begin with, company leaders should exercise more caution when using outside capital and strive to achieve a balance between overall liabilities and equity. R&D operations are critical to a company's growth and profitability in today's competitive environment. However, the findings of this research show that R&D expenditures have a negative impact on a company's profitability. As a result, business leaders should adopt a variety of steps to keep R&D expenses under control. The government's assistance, such as tax exemptions and incentives, may also encourage companies to invest more in R&D (Isik & Tasgin, 2017). Another study In light of the study's research topic, the findings imply that R&D investment, company growth, productivity leverage ratio and current ratio are

statistically significant and favourable. A correlation between business age and size and profitability could not be observed. A correlation between net asset turnover and profitability was discovered (Kant, 2018)

An analysis of Pakistan's textile industry's competitiveness looked at the financial side, productivity, supply and demand sides, and all four at the same time. According to the findings of the research, the factors affecting competitiveness on the demand side outweigh those on the finance side. In terms of competitiveness, productivity and supply seem to have had little influence. For the sake of bolstering current competitiveness, it is recommended that both businesses and governments spend much of their attention on factors such as demand and the financial sector. Improved communication and transportation systems in the local area may have a significant influence on a project's success. Maintaining the current financial and capital market circumstances by enforcing state bank regulations and enforcing applicable state policies to facilitate the availability of financing would contribute to the textile sector's overall competitiveness.

Only 24.40 percent of textile enterprises in Tshwane were determined to be unviable, according to the study's findings. According to the composite assessment created by cs, Szerb, and Autio, just 32% of firm owners possessed appropriate entrepreneurship abilities (2011). Businesses' capacity to generate a profit, get the capital they need to operate, and place bulk orders for items all have a substantial impact on the long-term health of textile companies, according to the research. In order to secure long-term profitability and viability, textile industry owners in the different regions of the City of Tshwane want better municipal services from the city. The City of Tshwane's help with security and business permits is needed by the majority of textile industry owners. Tshwane's and South Africa's economies are bolstered by the textile sector, which employs a significant number of people. Underperforming local governments responsible for delivering municipal services to South African SMMEs might benefit from adherence to King Codes of Good Governance (King, 2015).

The textile industry in Pakistan is largely considered to be the country's most important and crucial industry. It is the country's principal source of employment, exports, and GDP. It is extremely important to Pakistan's economy. The textile sector in Pakistan contributes for 38% of the country's total industrial production. Pakistan's cement sector also plays an important part in the country's socioeconomic development.The growth of this business indicates the necessity for

surveillance. Because this was a period of acute recession for both industries, the Karachi Stock Exchange's "internal and external listings" were examined from 2005 to 2010. The study's findings reveal that internal factors like liquidity and leverage impact the profitability of the textile and cement industries, whereas external characteristics like capital intensity, size, and market share have little bearing. The profitability of Pakistan's textile and cement industries is influenced by a number of variables. "Company Financial Statement Analysis" (non-financial) was the secondary source utilised to acquire the data (Kuliah & Kuliah, 2019).

The current study discovered that short-term leverage, size, risk, tax, and non-debt tax shield all have a significant influence on a firm's success in Pakistan's textile sector. The researchers recommend that Pakistan's textile sector make its financial decisions in light of the above-mentioned factors, since the textile sector is the country's largest non-financial business and serves as a standard for other sectors. The researcher's findings are also consistent with those of previous studies. The textile business should have avoided taking out short-term loans since it will harm the company's financial performance, whereas every other industry will benefit. The corporation should use less short-term debt since it neither provides tax benefits nor provides a tax shelter. The corporation should use less short-term debt since it does not provide tax benefits and is not as cost-effective as long-term debt financing (Abbas, Bashir, Manzoor, & Akram, 2013).

2.8 Theoretical frame work for the study
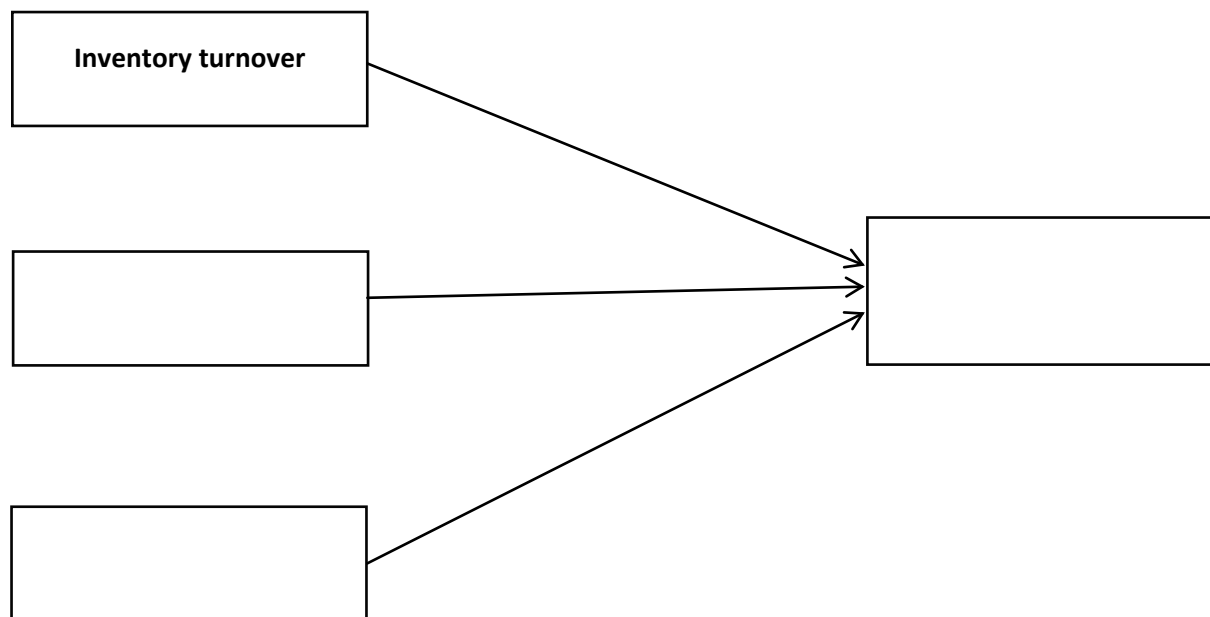
2.9 Hypothesis of the study

H1: firm's current ratio determines the profitability of manufacturing sector in Pakistan.

H2: firm's inventory turnover ratio determines the profitability of the manufacturing sector in Pakistan

H3: firm's total assets determine the profitability of the manufacturing sector in Pakistan.

Chapter 3 - Research Methodology

3.1 Introduction

The main purpose of this research work is to examine the influence of various determinants of profitability that can greatly affect the working of non-financial of Pakistan.

The major determinants of profitability of the firm are inventory turnover , current ratio, total assets ROE and EPS.

3.2 Research Approach

Research approach can be explained as "how one will go about studying a phenomenon" (Azizet al., 2019). We have two types of research approaches i.e. "Quantitative and Qualitative" and From time to time researchers use these as a combination of these two approaches. Qualitative study is constructed on unstructured Questions and researcher's versions.

But the other side in quantitative study, states that the data assembled is in numerical in nature and is examined statistically and testing of hypothesis uses to find out different relationships between different variables.

Qualitative studies are basically established on the paradigm of positivism, because it shows objectivity of the study.

As the research purpose of this study is "to determine the profitability of non-financial firms " and for this purpose the researchers need to know the possible relationships between different variables, which in this scenario are," inventory turnover , current ratio, total assets ROE and EPS ".

Hence for this research study we will go for quantitative approach. This approach will provide authentic and accurate data about the entire variable and their impact on the sensitivity of profitability determinants on non-financial firms. The numerical data used to quantify the Findings and take a broad view from the relations. Quantitative study has its own benefits to measure the impact of selected variables. This will help the researcher to view the data statistically for every variable and so that after this he is able to recommend some course of actions.

3.3 Study of non-financial manufacturing sector

In this chapter we will study the detailed version of profitability with respect in a relationship of "inventory turnover, current ratio, total assets ROE and EPS" this detailed version of analysis of results leads us towards objective study. Through accurate results of profitability we can easily

determine the firm's performance of manufacturing sector on both the overall as well as at sectorial level. The analysis of quantitative data is used in the study complex logical sequence of approaches i.e "Descriptive analysis, correlation analysis, pooled ordinary least square regression model, fixed effect regression model, random effect regression model and generalized method of moments". The manufacturing sector is regarded as the economy's backbone, and its primary job is to manufacture things (Ejelly, 2004). Working capital management is critical to this function's success (Raheman et al., 2010). Manufacturing businesses need to manage their working capital well since they create half of their total assets (Van Horne and Wachowicz, 2000; Nejad et al., 2013). Pakistan's economic development has historically hinged on manufacturing (Riaz et al., 2014). It accounts for 60% of all private-sector financing and is being given more attention in Pakistan's five-year growth plans.Pakistan's manufactured exports account for more than 75% of its total exports. The firm's profitability is on the rise, but its expansion may be negatively impacted. The notion of a company's performance is linked to profitability, growth, and market value. Profitability and expansion are important reasons for a company's existence, and they must be considered when attempting to evaluate its success (Santos and Brito, 2012).

3.4 Data Collection

For the purpose of analyzing the data of manufacturing company we have collected the data of 20 companies from the year 2006 to 2020 from the authentic source https://www.sbp.org.pk/
The companies are:

"Al-Khair Gadoon Ltd"
"Bata Pakistan Ltd".
"Crescent Steel & Allied Products Ltd".
"Dadex Eternit Ltd"
Diamond Industries Ltd
"Eco Pack Ltd.(Plastobag Ltd.)"
"Emco Industries Ltd".
"Fateh Industries Ltd".
"Gillette Pakistan Ltd"
"Goodluck Industries Ltd".
"Huffaz Seamless Pipe Industries Ltd"

"International Industries Ltd".
"KSB Pumps Co. Ltd".
"Khyber Tobacco Co. Ltd".
"Leather Up Ltd".
"MACPAC Films Ltd"
"Pakistan Engineering Co. Ltd"
"Pakistan Tobacco Co. Ltd".
"Pakistan Tobacco Co. Ltd'.
"Philip Morris (Pakistan) Ltd".

From the above companies, we collected several types of ratios for analyzing the profitability. Through which we can find out the basic relations for example its co relation with the other variables.

3.5 Measurement of variables

Variables	Definition
Return on Assets	"Return on assets" is the profitability ratio use to analyze the measurement the amount of profit generated through total percentage of assets. "*Return on Assets=Total Assets/Net Income*"
Earnings per share (EPS)	"Earnings per share" point toward how much currency a firm makes for every single share of its stock and is a widely used in metric for estimating company value. "Earnings per Share = End of Period Common Shares Outstanding / Net Income – Preferred Dividends".
Current ratio	"The current ratio helps investors understand more about a company's ability to cover its short-term debt with its current assets and make apples-to-apples comparisons with its competitors and peers".
Inventory turnover	"Inventory turnover" is a measure of a time period of a company that is able to swap the inventories that it has sold." A dawdling turnover involves weak sales and perhaps excess inventory, while a more rapidly ratio involves either robust sales or deficient inventory" "Inventory Turnover= cogs/Average Value of Inventory"

Total Assets	"The Total Assets usually refers to the firm size. it is the way of measuring a firm size and its strength ."

3.6 Data Analysis

In our findings we will see that there will be some relationships between the determinants of profitability and firm's performance in manufacturing sector of Pakistan. And these findings can only be done through panel data testing. The analysis through panel testing is a type of multivariate data analysis that can pool all type of observations cross section ally over multiple period of time. The observations through cross sectional way may be of domestic, nations, firms or of separate identity. There are two dimensions of panel model and regression square model. One of them is cross sectional unit and the other is times series model.

3.6.1. Correlation Analysis

The correlation coefficient depicts the link between two variables. There might be a significant correlation between two variables or none at all. The correlation coefficient has a range of -1 to +1. Where -1 denotes perfection. Correlation that is negative The number +1 denotes a strong and perfect positive co-relationship. "Correlation is an analytical technique for determining the strength of a relationship between variables." 2007 (Tabachnick and Fidell). "The positive correlation indicates that when one variable increases another also increases, while the negative correlation shows the inverse relationship" (Pallant, 2007). The strong point of the linear relationship between two variables can be measured by the correlation coefficient. A set of observation is given below

(x1, y1), (x2, y2)... (xn,yn),

The formula for correlation coefficient is given below.

$$r_{xy} = \frac{\sum (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum (x_i - \bar{x})^2 \sum (y_i - \bar{y})^2}}$$

Since the formula for calculating the correlation coefficient standardizes the variables, changes in scale or units of measurement will not affect its value. For this purpose, the relation of

correlation coefficient is usually more and most useful than a graphical depiction in calculating the strong relationship between these two variables.

For financing this theory is an advantage to the company which tells us why firms accept credit from their suppliers instead of having advantage from the financing institution. According to the tradeoff model of finance profitability of the firm and liquidity are in inverse proportion to each other. From this scenario there should be a proper decision making about level of current assets that should be maintained each time regularly. Smith (1995) suggests that "the management of working capital is important because of its effects on a firm's profitability and risk and consequently the shareholder's wealth".

3.6.2. Regression Test Analysis

The regression analysis used to indicates the independent variables that exactly tells us that how much it can be related to the dependent variable of the firm or many more different types of dependent variables. The main objective of the regression analysis is to see the relationship between the independent and dependent variables. Basically this test shows the intensity of influence of independent variable to the dependent one. Likewise this study will be used in determining the influence of total assets , current assets and inventory turnover to the Return On Equity and Earning Per Share. This data will be evaluated on the basis of R square, t-statics and coefficient. 0 to 1 is the range of R square. It is acceptable if it is more than 50%. It is valid if the valid ranging around 25% to the 30%.

3.6.3. Fixed Effect Model

"There is no specific methodology accepted theoretically for any type of analysis" said by Shah and Khan (2007).the methodology in the research is depends upon the data which is selected according to the time period of data and the arrangement of variables and the number of given variables. "Panel data methodology is the best available option to capture the time specific and cross section specific impacts" said by Beven and Estrien (2004). When the results of these data compiles cross section ally, it gives almost balance observations and thus this kind of panel data is known as "panel balanced data" "Panel data methodology is useful in Tumbling econometrics problems and where misplaced or miss-measured variables have significant strong correlation with explanatory variables" said by Hsiao (2005)

Basically in the research of experiment there is some unmeasured differences between the subjects of the research are over and over again measured through unsystematic assignment to

control & treatment groups. Therefore if a variable like economic and social factors is not descriptively measured, on account of casual assignment, this will be a rational thing that the effect of economic and social factors could be affected to all groups equally with equal intensity. Well it's true that in most cases factors in casual like economic and social is not recommended in research methodology. If we want to detect that variable in our study then we must descriptively measure it.

If we fail to take over it, then we are unable to control it. In some scenarios we are often unable to measure the variables or there may be a case of poorly measured variables, so that is the reason behind the inaccurate results of this model because it is created by biasness. When there is a use of panel data "the same subjects measured at two or more points in time" controls. With the use of panel data we can stabilize the characteristics that cannot be changed with the passage of time whether it is measured or not. Here the point of discussion is if this variable affect one time at the time, in a mean time they will have a same affect at different point of time. That is the reason why these kinds of variables don't change. For this purpose we can use fixed model effect but these model doesn't use for time varying affect. But yes these variables can be fixed in this model as descriptively such as income, status of an employee etc.

"Fixed effect method allows control for unobserved heterogeneity" (Mundlak, 1961). Behind this scenario, the phenomena are that every company has its unique properties that cannot be observable. Therefore fixed effect model depends upon the firms variations. According to Booth et al., (2001), "this model confines the complete information including omitted variables effect". In fixed effect the person's specific variable can be affected due to correlation as an independent variable that's why it cannot be biased just because of the gone astray time of immaterial characteristics.

3.6.4. Random Effect Model

"There is no specific methodology accepted theoretically for any type of analysis" said by Shah and Khan (2007).the methodology in the research is depends upon the data which is selected according to the time period of data and the arrangement of variables and the number of given variables.

"Panel data methodology is the best available option to capture the time specific and cross section specific impacts" said by Beven and Estrien (2004). When the results of these data

compiles cross section ally, it gives almost balance observations and thus this kind of panel data is known as "panel balanced data"

"Panel data methodology is useful in tumbling econometrics problems and where misplaced or miss-measured variables have significant strong correlation with explanatory variables" said by Hsiao (2005).

Like fixed effect another approach is popular and widely used that is "random effect". The "Linear random effects" models are expected via "generalized least squares (GLS)". If in the given data there are some absent variables ("or if the absent variables are uncorrelated with the variables that are in the model") then according to this kind of data a random effects model is more better to fixed effects just because of the reason, "the effects of time-invariant variables like race or gender can be estimated, rather than just controlled for" the second reason is "standard errors of estimates tend to be smaller. However, if relevant time-invariant variables have been omitted from the model, coefficients may be biased". So we will get started by the predicted random effects model of only varying variables. i.e. "the random effects version of the fixed effects model we have been estimating".

"As the study estimates panel estimator, so in order to include the unobserved firm specific and individual invariant time effects in the analysis, the study employs the fixed effect model" (Mundlak, 1961; Nguyen, 2014). "Fixed effect method allows control for unobserved heterogeneity" (Mundlak, 1961). The motivation behind this theory is that many firms have different kinds of unique things with the firms and its variations that sometimes being ignored in this model. Due to eliminating these models fixed model is used because of different variation in firms. According to Booth et al., (2001), "this model confines the complete information including omitted variables effect". Fixed effect is related with the special individual effect to the independent variable and it cannot be biased because of the characteristics that were ignored. On the other hand random effect says that the specific character of a person cannot be correlated with the independent variables. This is because there is a big difference between the fixed effect model and the random effect model is that "whether the unobserved individual effect embodies elements that are correlated with the repressors in the model, not whether these effects ate stochastic or not" (Green, 2008)." A fixed and random effect model can be précised for regression analysis that depends upon the assumptions made about $\alpha\alpha 1 ii$. The country specific error term is assumed to be normally distributed and independent of the other variables in the

model and the individual level error term" (Hox, 2010). "In fixed effects regression models the country specific error term is treated as a set of fixed numbers which are estimated in the model. Thus, it is irrelevant whether the error term is independent of the other variables in the model" (Allison, 2009).

For a random effect model, $\alpha\alpha 1ii$ is always assumed to be random not fixed. Moreover it is also assumed that its variance is $\delta\delta\mu\mu 2$ and its mean is equal $\alpha\alpha ii$. Through this way, generalized least square estimators are obtained in error component or random effect

3.6.5. Hausman Test

If you really want that your result should be correct in every sense then you have to apply hausman test on your collected data." The Hausman (1978) developed a test in order to choose the random effect model or fixed effect model for explanation of the analysis". The model of fixed and random effects are used by manipulative the value of "Probability >chi2". The rule in order to taking decision is totally depends on the probability of results. "If the probability is higher than the study of confidence level of 5%, the fixed effect model will be considered as an appropriate model for description of analysis and vice versa".

Besides these this test also helps to select the random effect and the fixed effect model. The "Hausman test (1978) helps to determine the use of fixed effect model or random effect model by calculating the value of Prob>chi2". "The decision rule is if Prob>chi2 is lower than the study confidence level of 5%, then the assumptions for the random effects estimation are violated and fixed effect should be used, and vice versa".

This model also helps to identify that the regression of fixed effect model is appropriate or not for determining the variables of profitability. So we can see that this test can only tell us about "fixed effect regression" model.

CHAPTER 4 - FINDING AND DATA ANALYSIS

4.1 Introduction

In order to determine something for the research it should be a combination of such key concepts that is used to solve different types of queries i.e. scientifically and in an organized proper way. If we want to be more precise about the results, Moutan and Marais (1988) has discussed "a research process in all of its broadness and complexity, the various techniques and methods that are employed, the rational that underlies the use of such method, the limitations of using each method and technique, the role of propositions and assumptions in selected techniques and methods, the influence of methodological preference on the type of data analysis and subsequent interpretations of findings and so on."

4.2 Non-financial sector (manufacturing sector)

"Manufacturing sector is considered as backbone for the economy and the key function is to produce goods (Ejelly, 2004), and this function mainly relies on working capital management (Raheman et al., 2010)". "Working capital management efficient is important particularly for the manufacturing firms as it produces half of its total assets (Van Horne and Wachowicz, 2000; Nejad et al., 2013)". "The manufacturing sectors had always played an imperative role in development of the Pakistan's economy (Riaz et al., 2014). It accounts for 60% of the overall credit of the private sector, and has gained augmented attention in various five year plans for the economic growth of Pakistan. More than 75% of the exports of the Pakistan are based on the manufacturing goods and it is vital that the manufacturing sectors should be strengthened (Nazir and Afza, 2009)". In Pakistan manufacturing sector is so important when it comes in the terms of tax revenue the number of jobs to the employees. Out of 100% the total share of manufacturing sector in Pakistan is 63% where as if we talk about corporate social responsibility, so it contributes 23% in these activities.

4.3 Data Analysis

4.3.1. Descriptive Analysis

Variables	Observation	Mean.	Std.dv	Min	Max
EPS	300	4.44545	0.85651	2.00	6.00
TA	300	4.15865	0.75555	3.00	6.00
IT	300	4.15416	0.51461	2.67	6.00
Cr	300	4.15578	0.82464	3.00	6.00

In our descriptive analysis which describe the mean standard deviation min and max of the the variables according to the observation and these will be our part of study. from the above table we can see that our variables are earning per share (EPS) total assets (tc) retention in business (rb) inventory turnover (IV) and current ratio. We took 300 number of observation for each variable. The earning per share has a mean of 4.44545 and its standard deviation is 0.85651 with the min value of 2.00 and max of 6.00. Here the positive data shows that the factors of firms cause the profitability that leads a firm to the stable environment. Likewise firm's total assets have a mean value of 4.15865 and its standard deviation 4.15865 is with the min and max of 3.00 and 2.00. These findings indicate that the manufacturing industries of Pakistan are in the good and standard stage because of having sufficient amount total assets. In the case of retention in business the above data defines that tha there is significant effect on retention we can see that the value of minimum and maximum shows that there is a positive effect and this is a healthy sign. Now if we talk about inventory turnover the mean of the inventory turnover is 4.15416 and standard deviation is and the max and min of the iv is 2.67 and 3.00. it means there is no positive sign so this variable is positive. The last one is current ratio which indicates the currents assets over current liabilities of the firm and here are the values. Its mean is standard aviation is 4.15578 and min max of the firm is3.00 and 6.00. There is no negative sign in the min but also not a positive in it.

From the above results this exactly means that most of the manufacturing firm of the Pakistan is in a stable form that's means they are able to meet their short term losses and financial obligations which is not an alarming situation for this sector. Whereas if you can see that total asset shows that some firms are in good and stable position. The results further reveal that firms on average range of current assets to total assets ratio is 4.15416 with a standard deviation of 0.51461. These results indicate that manufacturing firms in Pakistan has greater current assets to total assets and they are following aggressive working capital investment policy Similarly, the size of the firm depicts an average with a standard deviation, which means that larger the size of the firm, the higher the firm's profitability. The results thus explain that the manufacturing firms of Pakistan who withstand extraordinary debts can delay their prospective loan chances for forthcoming. Hence, this may act as an difficulty for the potential growth opportunities for these firms. These findings depict that when inflation is high, manufacturing of Pakistani's firms postponement their sum to its creditors because they can reinvest the additional funds to enhance

the profitability. These results highlight the significance of the economic growth for the Pakistani manufacturing firms.

4.3.2. Correlation

		Current ratio	Inventory turnover	Total assets	ROA	EPS
Current ratio	Pearson Correlation	1				
Inventory turnover	Pearson Correlation	.589[**]	1			
Total assets	Pearson Correlation	.460[**]	.629[**]	1		
ROA	Pearson Correlation	.660[**]	-.545[**]	.483[**]	1	
EPS	Pearson Correlation	.650[**]	-.587[**]	.517[**]	.563[**]	1

**. Correlation is significant at the 0.01 level (2-tailed).

The correlation analysis shows that there is a highly significant and moderate positive correlation between current ratio and inventory turnover (r=0.589, p<0.00). Moreover, the relationship between them is highly significant as the value of significance is less than 0.01. Similarly, there is a highly significant and moderate positive correlation between current ratio and total assets (r=0.460, p<0.00). Moreover, the relationship between them is highly significant as the value of significance is less than 0.01. Likewise, there is a highly significant and high positive correlation between current ratio and ROA (r=0.660, p<0.00). Moreover, the relationship between them is highly significant as the value of significance is less than 0.01. Lastly, there is a highly significant and high positive correlation between current ratio and EPS (r=0.650, p<0.00). Moreover, the relationship between them is highly significant as the value of significance is less than 0.01.

The correlation analysis shows that there is a highly significant and high positive correlation between inventory turnover and total assets (r=0.629, p<0.00). Moreover, the relationship

between them is highly significant as the value of significance is less than 0.01. Similarly, there is a highly significant but moderate negative correlation between inventory turnover and ROA (r=-0.545, p<0.00). Moreover, the relationship between them is highly significant as the value of significance is less than 0.01. Lastly, there is a highly significant but moderate negative correlation between inventory turnover and EPS (r=-0.587, p<0.00). Moreover, the relationship between them is highly significant as the value of significance is less than 0.01.

There is a highly significant and moderate positive correlation between total assets and ROA (r=0.483, p<0.00). Moreover, the relationship between them is highly significant as the value of significance is less than 0.01. Similarly, There is a highly significant and moderate positive correlation between total assets and EPS (r=0.517, p<0.00). Moreover, the relationship between them is highly significant as the value of significance is less than 0.01.

There is a highly significant and moderate positive correlation between EPS and ROA (r=0.563, p<0.00). Moreover, the relationship between them is highly significant as the value of significance is less than 0.01.

4.3.3. Regression

Step	Variable	ROA	
		B	R2
	Current Ratio	**0.439**	**0.273****

Step	Variable	ROA	
		B	R2
	Inventory Turnover Ratio	**-0.453**	**0.252****

Step	Variable	ROA	
		B	R2
	Total assets	0.339	0.153**

From the tables above we can see that there is 27.3% variation in dependent variable (ROA) because of independent variable (current ratio). The value of beta tells us about the unit change in dependent variable due to independent variable. We can see from the table that due to 1 unit

change in current ratio (IV) there will be 0.439 unit change in ROA. From the values we can see that there is positive relation between current ratio and return on assets, which means that if IV will increase by 1 unit then DV will also increase by 0.439 unit. Furthermore, the p value is less than 0.001 which means that the relationship between these two is highly significant.

There is 25.2% variation in dependent variable (ROA) because of independent variable (Inventory turnover ratio). The value of beta tells us about the unit change in dependent variable due to independent variable. We can see from the table that due to 1 unit change in inventory turnover ratio (IV) there will be -0.453 unit change in ROA. From the values we can see that there is negative relation between inventory turnover and ROA, which means that if IV will increase by 1 unit then DV will decrease by 0.453 unit. Furthermore, the p value is less than 0.001 which means that the relationship between these two is highly significant.

There is 15.3% variation in dependent variable (ROA) because of independent variable (total assets). The value of beta tells us about the unit change in dependent variable due to independent variable. We can see from the table that due to 1 unit change in total assets (IV) there will be 0.339 unit change in ROA. From the values we can see that there is positive relation between total assets and ROA, which means that if IV will increase by 1 unit then DV will also increase by 0.339 unit. Furthermore, the p value is less than 0.001 which means that the relationship between these two is highly significant.

4.3.4. Regression (EPS)

Step	Variable	EPS	
		β	R^2
	Current Ratio	0.454	0.303**

	Variable	EPS	
		β	R^2
	Inventory Turnover Ratio	-0.471	0.292**

Step	Variable	EPS	
		β	R^2
	Total assets	0.399	0.172**

From the tables above we can see that there is 30.3% variation in dependent variable (EPS) because of independent variable (current ratio). The value of beta tells us about the unit change in dependent variable due to independent variable. We can see from the table that due to 1 unit change in current ratio (IV) there will be 0.454 unit change in EPS. From the values we can see that there is positive relation between current ratio and EPS, which means that if IV will increase by 1 unit then DV will increase by 0.454 unit. Furthermore, the p value is less than 0.001 which means that the relationship between these two is highly significant.

There is 29.2% variation in dependent variable (EPS) because of independent variable (inventory turnover ratio). The value of beta tells us about the unit change in dependent variable due to independent variable. We can see from the table that due to 1 unit change in inventory turnover ratio (IV) there will be 0.471 unit change in EPS. From the values we can see that there is negative relation between inventory turnover ratio and EPS, which means that if IV will increase by 1 unit then DV will decrease by 0.471 unit. Furthermore, the p value is less than 0.001 which means that the relationship between these two is highly significant.

There is 17.2% variation in dependent variable (EPS) because of independent variable (total assets). The value of beta tells us about the unit change in dependent variable due to independent variable. We can see from the table that due to 1 unit change in total assets (IV) there will be 0.399 unit change in EPS. From the values we can see that there is positive relation between total assets and EPS, which means that if IV will increase by 1 unit then DV will also increase by 0.399 unit. Furthermore, the p value is less than 0.001 which means that the relationship between these two is highly significant.

4.4 Fixed Effect Model

4.4.1. Dependent Variable: EPS

Num of observations	346
Number of groups	23
Prob>F	0.0237
R squre overall	9%

Eps	Coef.	T	p>|t|
Cr	2.125	2.226	0.024
IT	2.042	1.99	0.035
TA	1.19	2.51	0.013

4.4.2. Dependent Variable: ROA

Num of observations	346
Number of groups	23
Prob>F	0.0237
R squre overall	**9%**

ROA	Coef.	T	p>|t|
Cr	2.125	2.226	0.024
IT	2.042	1.99	0.035
TA	1.19	2.51	0.013

The prob >F identifies that If this value is less than 0.05, your model is sound. This is a test (F) to determine if all of the model's coefficients are different from zero. The R-square displays how much of Y's variation is explained by X.

The regressors' coefficients show how much Y changes when X is increased by one unit. The hypothesis that each coefficient is different from 0 is tested using t-values. To rule this out, the t-value must be greater than 1.96. (for a 95 percent confidence). If this is the case, you can conclude that the variable has a considerable impact on the dependent variable (y). The greater the t-value, the more important the variable is.

The hypothesis that each coefficient is different from 0 is tested using p-values.

If the pvalue is less than 0.05 (95 percent), you may declare that the variable has a substantial impact on your dependent variable. If this is the case, you can conclude that the variable has a sig nificant influence on your dependent variable (y). according to this if we see the fixed effect mode of eps than we can see that the value of t table of every variable is greater than 1.96 that's means that the total assets, inventory turnover and current assets has a significant Impact on the eps which also effect the profitability of the firm. And if we see the p values of the table eps of fixed model effect then we can see that is less than 0.05 which is a good sign that's mean it has a significant impact on the variables

On the other hand if we can see the fixed effect model of ROA then we can see that the value of t table of every variable is greater than 1.96 that's means that the total assets, inventory turnover and current assets has a significant Impact on the ROA which also effect the profitability of the

firm. And if we see the p values of the table ROA of fixed model effect then we can see that is less than 0.05 which is a good sign that's mean it has a significant impact on the variables.

4.5 Random Effect Model

4.5.1. Dependent Variable: EPS

Num of observations	346
Number of groups	23
Prob>p	0.0337
R squre overall	12%

Eps	Coef.	z	p>|z|
Cr	2.465	1.226	0.034
IT	2.565	1.966	0.025
TA	1.232	2.556	0.016

4.5.2. Dependent Variable: ROA

Num of observations	346
Number of groups	23
Prob>p	0.0248
R squre overall	12.44%

ROA	Coef.	Z	p>|z|
Cr	2.465	1.226	0.034
IA	2.565	1.966	0.025
TA	1.232	2.556	0.016

The prob >p identifies that If this value is less than 0.05, your model is sound. This is a test (F) to determine if all of the model's coefficients are different from zero. The R-square displays how much of Y's variation is explained by X.

The regressors' coefficients show how much Y changes when X is increased by one unit. The hypothesis that each coefficient is different from 0 is tested using t-values. To rule this out, the t-value must be greater than 1.96. (for a 95 percent confidence). If this is the case, you can conclude that the variable has a considerable impact on the dependent variable (y). The greater the t-value, the more important the variable is.

The hypothesis that each coefficient is different from 0 is tested using p-values.

If the pvalue is less than 0.05 (95 percent), you may declare that the variable has a substantial impact on your dependent variable. If this is the case, you can conclude that the variable has a sig nificant influence on your dependent variable (y). according to this if we see the fixed effect mode of eps than we can see that the value of t table of every variable is greater than 1.96 that's means that the total assets, inventory turnover and current assets has a significant Impact on the eps which also effect the profitability of the firm. And if we see the p values of the table eps of fixed model effect then we can see that is less than 0.05 which is a good sign that's mean it has a significant impact on the variables

On the other hand if we can see the fixed effect model of ROA then we can see that the value of t table of every variable is greater than 1.96 that's means that the total assets, inventory turnover and current assets has a significant Impact on the ROA which also effect the profitability of the firm. And if we see the p values of the table ROA of fixed model effect then we can see that is less than 0.05 which is a good sign that's mean it has a significant impact on the variables.

4.6 Multi Co-linearity

Variable	VIF	1/VIF
IT	1.03	0.970982
TA	1.03	0.711366
Cr	1.03	0.975575
Mean VIF	**1.03**	

To test for collinearity between independent and dependent variables, the study used the variance inflation factor. The variance inflation factor was used to assess for multicollinearity.

It demonstrates which factors are significantly connected. The table demonstrates that all values are less than the conventional cutoff value of 10, indicating that multicollinearity is not an issue.

4.7 Hausman Test

if $p<0.05$ then we will go for fixed effect model.

Test	Chi- square	Prob>chi 2
hausman test	2.484	0.0456

This illustrates that if prob>chi2 is less than 5% confidence level, the random effect model assumptions are broken. The fixed effect model must be utilized in this case.

CHAPTER 5 - RESULTS AND CONCLUSION

5.1 Introduction

The report examines the influence of profitability drivers on business performance in Pakistan's listed manufacturing sectors, and emphasizes major results based on the research questions. The contribution of this study to theory development and policy implications is explained in the second portion of this chapter, which is followed by a discussion of the study's shortcomings which leads to further research. Because of the presence of sector specific features influencing a firm's investment choice, there is no one optimal strategy that can be applied to all enterprises (Moyer et.al., 1992). As a consequence, the influence of determinants of profitability on corporate performance is calculated on a sectoral basis using panel data methods to see if the results are sector/industry specific. To account for the company specific intercept, we employed a fixed effect model, which captures the impacts of variables that are distinctive to each sector and are stable through time.

5.2 Current assets and its significant impact on profitability of firm

This study investigates working capital measures to examine any substantial relationship between current assets measures and a business's profitability in order to justify the influence of current assets on firm performance. Management is interested in financial performance analysis for two reasons: to measure the efficiency and profitability of operations and to judge how efficiently the business's resources are being utilised (Keown et al., 2003). Due to the significant share of current assets in company and some of its distinctive characteristics, the administration of current assets is an essential and demanding responsibility in financial management. Working capital management is the management of current assets (normally converted into cash within an accounting year) and current liabilities (generally discharged within a year) and the interrelationship that exists between them. It has remained a serious cause for Pakistan's manufacturing sectors. Excessive amounts of current assets can hurt a company's profitability, whilst a low level of current assets can lead to a lack of liquidity and stock outs, making it difficult to keep operations running smoothly (Van Horne and Wachowicz, 2004). Working capital is traditionally defined as the difference between current assets and current liabilities. Working capital management is an endeavour to manage and control current assets and liabilities in order to maximize profitability and maintain a sufficient level of liquidity in a corporation. The issue is that growing revenues at the expense of liquidity might cause major challenges for

Pakistani businesses. As a result, a trade-off must be made between these two company objectives (liquidity and profitability). Because both objectives are equally important, one should not be sacrificed for the sake of the other. Firms that do not care about profit will not be able to thrive for long. In other words, if businesses do not priorities liquidity, they may suffer insolvency or bankruptcy.

5.3 Inventory turnover and its significant impact on profitability of firm

It is based on the findings of a correlation coefficient analysis between inventory turnover and profitability, which indicates that the correlation or relationship between profitability variables and inventory turnover variables is positive or directly proportional to the level of weak relationships. This indicates that if the inventory turnover value rises, profitability will rise slightly. In the other case, if the value of inventory turnover falls, profitability will fall slightly. The findings of this study support the findings of previous research, but they do not support the findings of previous research, which found that inventory turnover has a positive and significant effect on Return On Assets, whereas the findings of this study show that inventory turnover has no such effect. In terms of theory, the findings of this study do not support the inventory turnover theory, which states that the higher the inventory turnover, the more efficiently and effectively the company manages its inventory, as well as a high sales volume in the company, implying that the larger the company will earn more profits by assuming the minimization of costs incurred and the amount of profits obtained will maximize the return on assets ob. The higher the company's return on assets (Return On Asset), the better the company's profitability (one of which may be assessed by Return On Asset), but the findings of this study reveal that inventory turnover has no positive or negative influence on Return On Asset. Apart from the contrasts between the results of this study with past research and current theories, the automobile business financial report data shows that the firm has a rapid inventory turnover yet the amount of inventory is modest, necessitating reordering in tiny quantities.

5.4 Total assets and its significant impact on profitability of firm

The findings of the study revealed a weak positive link between total assets indicators and the profitability of Pakistan's listed manufacturing enterprises. The separation of ownership and management in modern organizations has switched managers' attention from profit maximizing to managerial utility maximization, which is why this link is weak. Given that, in today's capitalist international economy, companies' financial performance has a direct impact on the

stability of countries' economic systems, the variables impacting company profitability demand special consideration. There are a plethora of elements that might influence a company's profitability. One of these elements is business size, which has long been seen to be a key indicator of profitability. The impact of firm size on the profitability of manufacturing businesses listed on the Pakistan Stock Exchange was investigated using panel data in this study. The return on assets (ROA) is used to assess profitability, while total assets and total sales are used as proxies for firm size the inventory-to-total-assets ratio are used as control variables. Firm size has a beneficial influence on the profitability of Pakistan manufacturing enterprises, according to the findings, in terms of total assets

5.5 Analysis

The coefficient of the lagged dependent variable (i.e. return on assets) is positive and highly significant at the 1% level of significance, according to the regression findings at the overall level presented in table. At the 1% level of significance, there is a positive link between current assets and return on assets; however the regression findings show a substantial negative relationship between inventory turnover and return on assets at the 5% level of significance. At a 1% level of significance, the influence of business size and age on return on assets yields a very significant positive outcome. At a 1% level of significance, the regression result demonstrates a substantial positive association between total assets and return on assets.

The coefficient of the lagged dependent variable (i.e. earnings per share) is positive and highly significant at the 1% level of significance, according to the regression findings at the overall level presented in table. At the 1% level of significance, there is a positive link between current assets and earning per share; however the regression findings show a substantial negative relationship between inventory turnover and earning per share at the 5% level of significance. At a 1% level of significance, the influence of business size and age on return on assets yields a very significant positive outcome. At a 1% level of significance, the regression result demonstrates a substantial positive association between total assets and earning per share.

The coefficient of the lagged dependent variable (i.e. profitably) is positive and highly significant at the 1% level of significance, according to the regression findings at the overall level presented in table. At the 1% level of significance, there is a positive link between current assets and firm profitability; however the regression findings show a substantial negative relationship between inventory turnover and earning per share at the 5% level of significance. At

a 1% level of significance, the influence of business size and age on return on assets yields a very significant positive outcome. At a 1% level of significance, the regression result demonstrates a substantial positive association between total assets and profitability of the firm.

5.6 Limitations

The purpose of this research is to examine the impact of various aspects of determinants on the firm's performance. However, the following are some of the study's limitations:-

a. Because of their different nature of features from non-financial enterprises, this study excludes firms relevant to the financial sector and financial institutions.

b. This research is confined to identifying the link between profitability in a mix of public and private enterprises, but it does not categorize the performance of public and private firms.

c. The data was compiled from all manufacturing companies that remained open for the duration of the study. Manufacturing enterprises that were delisted or were in the process of merging and acquiring and were listed on Pakistan's state bank were also removed from the sample data.

d. Another restriction was the lack of full data since the corporate databases in Pakistan are not well organised. The study was unable to establish a few factors that related to the business and sector level due to a lack of data. Because the data used in the study was balanced, it was challenging to obtain data for all of the variables at various times.

5.7: Recommendation

In this study, we discovered that total assets and current assets have a strong positive impact on firm profitability; however inventory turnover has a negative impact on manufacturing company profitability. We determined that around 78 percent of manufacturing enterprises in Pakistan are stable as a result of these findings. The remaining companies are unable to turn their inventories into cash owing to a lack of management and financial shortages. Your profitability may be boosted by careful expense control. While most organizations can discover ways to minimize expenses, it's critical not to sacrifice the quality of your products and services. Activity-based costing is a useful method for determining the true cost of various company activities. Activity-based costing (ABC) identifies how much it costs to perform a certain company function by allocating proportions of all expenses - such as salaries, office space, and raw materials - to

specific activities. Although the initial research may take some time, activity-based costing frequently reveals expenses (and hence possible efficiencies) that traditional costing approaches would not reveal.

5.7 Conclusion

This chapter shows you the whole analysis and findings of the thesis. For this purpose this study has to run on many test. We have applied "regression, correlation, fixed effect model, random effect model and hausman test". The Hausmann test is used to determine whether a random or fixed effect regression model should be used. The Hausmann test shows that the findings of the fixed effect regression model are the best suited for explaining the results. As a consequence, the findings of the fixed effect regression model were explained.

The results of each independent variable are described individually because the study employed three independent variables for analysis. The findings demonstrated that a firm's profitability has an impact on its performance in the instance of Pakistani manufacturing concerns. Second, the research looked at the firm's profitability on a sectoral basis and discovered substantial disparities across these characteristics. Finally, the study found that determinants of profitability have an impact on business performance in the Pakistani manufacturing sector, and that there is a significant variance in the relationship between determinants of profitability and firm performance across different sectors in Pakistan.

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