

**IMPACT OF TRADE CREDIT ON SHAREHOLDER WEALTH:**

**MODERATING ROLE DIVIDEND POLICY**

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**DEPARTMENT OF BUSINESS STUDIES**

**PAKISTAN INSTITUTE OF DEVELOPMENT ECONOMICS**

**(2020)**

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## Pakistan Institute of Development Economics

### CERTIFICATE

This is to certify that this thesis entitled: **“Impact of Trade Credit on Shareholder Wealth: Moderating Role Dividend Policy”** submitted by Mr. Mohibullah Khan is accepted in its present form by the Department of Business Studies, Pakistan Institute of Development Economics (PIDE), Islamabad as satisfying the requirements for partial fulfillment of the degree of **Master of Science in Management Sciences**.

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## **DECLARATION**

This thesis is a presentation of my original research work. Wherever contribution of others is involved, every effort is made to indicate this clearly, with due reference to the literature, and acknowledgement of collaborative research and discussions.

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Mohibullah Khan

## **DEDICATION**

*Dedicated from core of my heart to my beloved parents Mr. & Mrs. Muhammad Ilyas Khan for financial and ethical support and my respected teacher Dr. Jaleel Ahmed for technical and ethical support.*

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All the praises are for the Allah Almighty; the most beneficent and the most merciful; who granted man with knowledge. All salutations are upon the Prophet (P.B.U.H.) whose teachings enlighten my thought and thrives my ambitions.

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## Table of Contents

<b>List of Tables and Figures.....</b>	<b>vi</b>
<b>List of Abbreviations.....</b>	<b>vii</b>
<b>Chapter 1.....</b>	<b>2</b>
<b>Introduction.....</b>	<b>2</b>
1.1 Research Questions .....	7
1.2 Problem Statement.....	8
1.3 Research Gap and Innovation .....	8
1.4 Research Objectives.....	9
1.5 Significance of the Study .....	9
1.6 Plan of Study.....	10
<b>Chapter 2.....</b>	<b>11</b>
<b>Literature Review .....</b>	<b>11</b>
2.1 Background of the Study.....	11
2.2 Theories.....	16
<b>2.2.1 Financial Advantage Theory.....</b>	<b>16</b>
<b>2.2.2 Pecking order Theory .....</b>	<b>17</b>
2.3 Hypotheses Development:.....	18
<b>2.3.1 Trade Credit and Shareholder’s Wealth .....</b>	<b>18</b>
2.4 Contribution to the literature.....	21
2.5 Conclusion of literature.....	21
2.6 Theoretical Diagram .....	22
<b>Chapter 3.....</b>	<b>23</b>
<b>Data and Methodology.....</b>	<b>23</b>
3.1 Data.....	23
3.2 Sample Size.....	23
3.3 Discussion of Variables.....	24
3.4 Regression Models.....	27
<b>3.4.1 Market Capitalization .....</b>	<b>27</b>
<b>3.4.2 Market Value Added.....</b>	<b>27</b>
<b>3.4.3 Market Price Per Share .....</b>	<b>28</b>

3.5 Estimation Technique .....	29
<b>Chapter 4.....</b>	<b>30</b>
<b>Results and Discussion .....</b>	<b>30</b>
4.1 Descriptive statistics .....	30
4.2 Correlation.....	34
4.3 Hausman Test .....	37
4.4 Regression Analysis.....	38
<b>Chapter 5.....</b>	<b>48</b>
<b>Conclusion and Future Recommendations .....</b>	<b>48</b>
5.1 Conclusion .....	48
5.2 Limitations and Future Recommendations .....	49
<b>References.....</b>	<b>51</b>



## List of Tables and Figures

<i>Fig 2.1 Relationship among Variables</i> .....	26
<i>Table 3.1 Dependent and Independent Variables</i> .....	28
<i>Table 4.1 Descriptive statistics</i> .....	34
<i>Table 4.2 Correlation</i> .....	39
<i>Table 4.3 Regression Analysis</i> .....	42
<i>Table 4.4 Regression Analysis with Moderating Effect</i> .....	48

## List of Abbreviations

<b>MC</b> .....	Market capitalization
<b>MVA</b> .....	Market value-added
<b>MPS</b> .....	Market price per share
<b>DP</b> .....	Dividend policy
<b>AR</b> .....	Account receivable
<b>AP</b> .....	Account Payable
<b>GR</b> .....	Growth
<b>NF</b> .....	Net financing
<b>SZ</b> .....	Firm size

## **Abstract**

The impact of trade credit including both of its components is an integral part of the working capital management. This study incorporates the moderating role of the Dividend Policy and its impact on the relationship between the trade credit and the shareholder wealth. The Panel data has been taken from the Non-Financial sector of Pakistan over the period 2008 to 2018, with a sample size of 88 companies. Hence, the outcomes empirically declare that there is a positive relationship between trade credit and shareholder wealth along with the moderating role of the dividend policy.

**Key Words: Trade credit, Shareholder Wealth, Dividend Policy, Moderating Role**

# Chapter 1

## Introduction

The main idea behind the decisions taken by the management of the business is to enhance the value of the firm means to increase the profitability of the firm and also to increase the shareholder wealth as stated by the giant coca cola's ex chief executive "increasing shareholder value over time is the bottom line of every move we make" same is stated by the board of the directors of McDonald "We (the board of directors) are united in our goal to ensure MacDonalld strives to enhance shareholder value" also by the Philips "the desire to increase shareholder value is what drives our actions".And in order to do so, the management has to take care of each and every aspect of the business. One aspect of the business is the working capital and its management means the company has to have sufficient cash in order to fulfill its frequent obligations or in other words the company should be able to meet its short term obligations. Previously researchers had stated that effective working capital management leads to impact on a company's risk its profitability and shareholder wealth by Ganesan (2007), Watson and Head (2007). The importance of working capital was further discussed by Dong and Su (2010)and according to them in order for the long term survival of the firm the working capital should be strictly managed by the management of the firm because of its relation with the daily activities of the firm.

The components are dealt by the management on a daily basis while among these components (AR and AP) are collectively named as trade credit. Their importance can be clarified by the findings of Aktas et al. (2015) that at the end of 2011 the overall investment in the inventories and receivables by the US firms were \$4.5 trillion which accounted for the 24% of their total sales as well as 18% of the total book value of the assets and out of this total working capital,

40% was financed by the account payables bringing to the finding that aggregate investment in net operating working capital of \$2.5 trillion. In case of the United Kingdom firms, trade credit (account receivable) is offered more frequently and accounts for the 35% of the total assets while in the Spanish small and medium sized firms it accounts for 34% of the total assets Ferrando and Mulier (2013), Martinez-Sola et al.(2013).

Above mentioned figures of the trade credit offered by the firms in the developed countries indicates that they are quite important in increasing firms value as suggested by the finding of the Abuhommous(2017) that firm value and trade credit are positively related, but different firms have different characteristics and they keep in mind different motives while providing trade credit to its customers like motives of commercial, operational and financial nature and these motives impact differently on the level of the profitability by supplying trade credit. As the main aim of the business is to enhance the real owners value which are the shareholders of the firm and in their study they found a clear and notable effect of trade receivables on shareholder wealth also checking for different motives of the suppliers while providing trade credit also stating that effective management of trade credit is essential because of its impact on firms's risk and performance.

Previously researchers have mainly concentrated on the impact of working capital management or of trade receivables (account receivables) on the firm value which almost neglects the other aspect of the trade credit (account payables) as stated that both the buyers and the sellers will use the trade credit if both of them get benefit out of it means the supplier will provide account receivable while the seller will demand account payable by carefully considering the benefits and cost affiliated with the usage of account receivable and account payable Danielson and Scott(2000). According to Schwartz(1974), the time value of the money urges the buyer to

enhance their demand for the trade credit while the supplier will provide the trade credit to enhance his sales.

Trade credit is provided by the supplier for a specific time being to his customers in order to increase the sales volume and also providing help to the customer Ng et al.(1999) and further, they stated that if the customer chooses to select prepayment than he has to face the greater risk about the product quality that he cannot inspect the product quality but if he selects to post payment means he goes for the trade credit than he can properly assess the product quality and in that case, the supplier of the goods take the risk of collecting the receivables and even the returning back of the defected goods.

One must be wondering that what are the advantages for the supplier to give the trade credit to the customers while there are advantages of financial, operational and commercial perspectives. Some of the major contributions regarding the motivation to use trade credit in this regard are from Meltezer (1960) that trade credit is used to mitigate the financial constraints of the customers by the suppliers. Trade credit is also used to reduce transactional cost Ferris (1981) and Emery (1987). Again Emery (1984) found that trade credit is also used to adjust sales in slack demand period and moving further another important finding which states that trade credit also reduces information asymmetry between customer and supplier by Smith(1987), Long et al.(1993), and Pike et al. (2005). This motive of granting trade credit as to signal the product standard is confirmed by many like Lee and Stowe (1993) and also Emery and Nayar (1998). Findings of Brennan et al. (1988), Petersen and Rajan (1997) gave us a new insight to look at the trade credit that it is also used as a method to discriminate between the cash and credit customers. In the end trade credit as suggested by the Ng et al (1999) and Cunat (2006) improves the relationship between the supplier and the customer. It is not just that firms only provide trade

credit but they also demand trade credit according to it is available without any formal agreement, no need to pledge, collateral, sign or note or adhere to a strict payment Van Horne and Wachowicz(2008).

Now, on the contrary, some researchers have also found some findings concerning the utilization of trade credit like Nadri (1969) and Oh (1976) that the use of trade credit is expensive and it comes with an opportunity cost. Investing too much in the trade credit means that we are investing too much in the current assets and due to which problems like less liquidity and low profitability may arise why so the problem of less liquidity and low profitability due to attachment of the credit risk with the trade credit and customer can also get defaulter Cheng and Pike (2003). They further stated that trade credit is an indicator to the customer that the supplier wants to keep a beneficial to both parties long term trading relationship with them in order to retain them by providing them trade credit as Kestens et al. (2012) stated that the negative impact of the financial crisis on the firms profitability is reduced by the increase in their trade receivables. In the report entitled “European Payment Report 2017” figures related to the late payment of the customers were mentioned and according to the report 27% of the bankruptcies are because of the late or non-payment of the trade credit in the case of the SME. So the efficient handling of the working capital is quite necessary by the management and it includes to maintain proper level of cash and also not to accumulate too much inventories as well as account receivables and also the account payables because for the increase in the shareholders wealth management has to keep a proper check and balance on them Ramiah et al. (2014), Vurel et al. (2012). One other thing stated by Aktas et al. (2015) that efficient management means that the management has to keep a strict check and balance on the liquidity and the profitability of the firm while managing the working capital of the firm.

Here this should be mentioned that certain researchers have put forward some model in order to tell that what will be the optimal level of trade credit like the one developed to select the optimal level of trade credit in order to maximize the profits by Nadri (1969). Another model was developed with certain assumptions and these assumptions are competition and certainty that under this two trade credit does not impact the firm value but on the contrary, if we relax these assumptions then trade credit has an impact on the company value Lewellen et al (1980). According to the above-mentioned motives we can expect a positive relationship between the trade credit and the shareholder's wealth.

Now moving towards the second component of our study which is dividend policy and this is actually the policy through which the company decides how much to retain in the business and how much to distribute away in the form of the dividends to its shareholders, Distribution of dividend to shareholders in the form of cash, can reduce the value of Retained earnings of the business. Cash dividends represent cash outflow and are recorded as reductions in the cash account. So, this outflow of cash impacts the liquidity of firm while trade credit is also related to the liquidity of the firm.

So it is rather very important decision of the business that which dividend policy to adopt and this decision has a lot of effect on the other business decision means the management cannot decide solely about the dividend policy or in the words of Pruitt and Gitman (1991) that investment, financing and dividend decisions are interrelated. In the actual business world, many managers give a lot of attention to the dividend policy decisions because according to them these decisions have a lot of impact on the shareholder's wealth and also on the overall firm's value Baker et al. (1985) Baker and Powell (1999). One must be wondering that this argument is actually opposite to the argument set forth by the Modigliani and Miller (1961) that dividend



policy doesn't play any role in determining the value of the firm but instead of the dividend policy investment policy is the one which determines the value of the firm. this argument set forth by the MM started a new hot debate about the role of dividend policy in determining the value of firm and effect on shareholders' wealth.

In their book by Lease et al. (2000) stated that divided policy can affect the shareholder's wealth because of the imperfections in the capital market and these imperfections have a different impact on different firms so do the dividend policy will be different of these firms. In their views over the payout policy relevancy, Deangelo and Deangelo (2006) stated that the payout policy is not to be neglected and just to give importance to the investment policy as it is not the sole determinant of the firms value and they said that by relaxing the assumptions of the MM's irrelevance theorem payout policy does have an effect.

In order to conclude the significance of the role of dividend policy in contributing towards the shareholder's wealth will be the remarks of Frankfurter and wood (1997) that corporate managers have to pay the dividends in order to keep their investors satisfied.

### **1.1 Research Questions**

Research questions which will be addressed in this study are as follows

- Does the Trade credit supply has an impact on the shareholder's wealth?
- Does Trade credit demand has an impact on the shareholder's wealth?
- Does Dividend policy has a moderating role in the relationship between Trade credit and Shareholder wealth?

## **1.2 Problem Statement**

Fulfilment of a firm's short term obligations is related to the liquidity of the firm, and trade credit is also related to the liquidity of the firm. If the firm has not enough a cash, than it will not meet its short term obligations, which will effect the firm's profitability and shareholder's wealth. So, the impact of trade credit must be checked on shareholder's wealth. Dividend policy is also related with the liquidity of the firm that the firms will give away the dividends when they have enough cash reserves left behind after paying the obligations of the business so the moderating role is taken of the dividend policy to check the intensity of relation between the trade credit and shareholders wealth.

## **1.3 Research Gap and Innovation**

Previously most of the studies have concentrated on finding the impact of working capital management on the firm's value Afrifa and Padachi (2016) little did we know about the stand alone impact of the components of the working capital like the impact of trade credit on firms value Abuhommous(2017) and some studies have mentioned the impact of trade credit on shareholder wealth but just considering one component of the trade credit (Account receivable) Hill et al. (2012) while not checking the impact of another component (account payable). In this study, we will be checking the impact of trade credit both aspects of it the supply side (Account receivable) and the demand side (Account payable) on the shareholder wealth along with the motives behind providing the trade credit.

From the innovative perspective, the moderating role of the Dividend policy will be used in order to find the intensity of the relationship behind the trade credit and the shareholder wealth because it is the dividend policy through which management decides how much to "retain in the business and the portion of profits of a business that are not distributed as dividends to shareholders but

are reserved for reinvestment back into business is called retained earnings. Generally, these funds are for working capital and fixed asset purchases or allotted for debt obligations”. So if the management decides to pay the dividends less will be available to meet the obligations of the business which is not good for the business. Previously the moderating role of the dividend policy has been checked by Shahwan(2019) on the impact of the financial disclosure towards corporate value.

#### **1.4 Research Objectives**

The main objectives of this study are.

- To study the impact of Trade credit supply/Trade credit demand on shareholder wealth.
- To study the moderating role of Dividend policy upon the relationship between Trade credit and shareholder wealth.

#### **1.5 Significance of the Study**

This study will enhance the literature in this way that previously most of the studies focused on the overall firm’s value while checking the impact of trade credit Abuhommous(2017) while we are taking the impact on shareholders wealth and secondly the study will take into consideration both aspects of the trade credit not just the single one like in the previous study by Hill et al. (2012) they took into consideration just the one aspect which was Account receivable (Trade credit supply).The final target of the company internal management is to increase the shareholders wealth as suggested by the wealth maximization motive.While doing so company will take certain measures which will in result enhance the overall company value so how can this be measured by checking the value of the firm’s common stock.This will be possible when the compay will return back to the shareholders some timely concessions in the form of

dividends. When the overall value of the firm increases than ultimately the MPS (market price per share) of the common stock also increases which happens when company takes proper investment, financing and dividend decisions. All of the three have different implications for different users while the dividend implication for investor will be that dividend is a criteria for them to judge the company either the company pay regular dividends or follow a special pattern it is an income for them. Most important implication is for the internal managers because they have to keep check on the cash and retained earnings that not too much dividend is paid out so the company will face the problem of liquidity means nothing left to invest in the future profitable projects and in the case of the loan providers not anything left to pay them back their interest and the principal amount. The unique thing of this study is that it will be checking the moderating role of the dividend policy along with the impact of the trade credit on the shareholder's wealth.

### **1.6 Plan of Study**

This study comprises of five chapters. The first chapter explains introduction, research questions, problem statement, research gap, study objective and the significance of study. The chapter 2 describes the literature review, theories, hypothesis development and theoretical diagram. The third chapter of study discusses the data and methodology which further divided into subsection with the headings of data, sample size, variables, and methodology. The chapter 4 is about results and discussion which further explored the descriptive stats, correlation, and regression among the variables of study. This chapter discusses the overall results of study. In the fifth chapter, the conclusion and future directions and limitations of study have been narrated. In the end of the study references are placed.

## Chapter 2

### Literature Review

#### 2.1 Background of the Study

Meltzer (1960) defined trade credit in such words that it is a way through which the buyer or the customer's financing is eased out by providing him timely concession in the payment of his obligations. While Nadiri (1969) stated that trade credit medium is used to enhance the proportion of sales and market share of the supplier who is allowing his customer to use trade credit channel. It is necessary to understand that trade credit is a two-way process like Petersen and Rajan (1997) in their research stated that a firm or supplier can be seen as the lender or provider of the trade credit which will be treated as its account receivable, and on the other side borrower of the trade credit which will be recorded as its account payable on the other hand Ferrando and Mulier (2013) also stated the same thing but with a slight addition in it by finding that those firms which receive trade credit from their supplier they also tend to extend it to their customers also they stated that in the financial crisis of 2009 the use of trade credit surpassed the use of short term bank loans.

Atanasova (2007) found that those firms which are constrained or having problems with financing use trade credit more frequently. Ferris (1981) in his finding stated that trade credit has a significant role in the corporate financing policy and proceeds with another statement about trade credit in which he considers trade credit as a short term loan and also this loan is bound with the timing and value of the exchange of the goods. Giannetti (2003) reported that in European countries, the portion of the trade debtors equal to the one-quarter of the total assets of the companies. Pike and Cheng (2001) reported in their work that too much investment in the account receivable by the firms certainly have implications in the firm's value while choosing

the credit management policies. Ng et al. (1999) described the importance of trade credit that it has economic significance on both micro and macro level, the 1990's vendor financing has accounted for almost on average \$1.5 trillion worth of all assets of US corporations and furthermore, they have approximately 2.5 times combined value of all new public debt and primary equity issues during a year. Being a factor of the money supply on average the trade credit (account payable) has surpassed the primary money supply (M1) by a factor of 1.5.

Burkart and Ellingsen (2004) suggested that trade credit is more prevalent in the countries where the creditor protection is weaker because of the quick diversion of the cash while the inputs are not so easy to divert. Earlier Demirguc-Kunt and Maksimovic (2002) stated that trade credit is more used in the countries having weaker legal protection, and also firms located in the countries where the banking sector is quite developed allow their customers to facilitate from the trade credit more often.

Another finding done by Wilner (2000) was this that the suppliers tend to finance their customers with trade credit when their clients are in financial distress to maintain long term trading relationship.

Peterson and Rajan (1997) suggested in their work that the firms can use more trade credit when they have weak banking relations as well as when the firms face the problem of losing sales and having a negative cash flow.

Choi and Kim (2005) supported the idea that a firm can use trade credit in order to absorb the shocks of a tight credit policy means they stated in their work that both the accounts receivable and accounts payable will increase as the monetary policy gets tighter.

Now having sufficient background for the trade credit, we will move towards the second element of our study and that element is dividend policy and it is defined in such words that the periodic payments to the real owners of the business (shareholders) and in what proportion should they be paid out of the profit by Arnold (2008). Zafar et al. (2012) stated while explaining the importance of dividend policy in such words that no company can ignore or postpone the decision of dividend either it can call upon a careful analysis to sort out the problem of payout and retention ratio which impact the share price and wealth maximization. Perhaps the importance of the dividend policy will be further clarified by the work of the Graham and Dodd (1934) in their book security analysis in which they stated that two companies working in the same environment and one of the companies pay regular dividends while the other company pays occasional dividends so the company paying the regular dividend will command higher P/E ratio as compared to the other company. Gordon (1959) confirmed his belief that dividend is necessary stating that the dividends have a positive and significant impact on the shareholder's wealth. Moving forward with the importance of the dividend policy another important finding was presented by Pettit (1972) and according to him the dividend announcement by the firm conveys important information to the investors. Preceding further with the importance of the dividend policy another study states that as the firm announces an increase in the dividend this generates an excess return by Charest (1978).

Aharony and Swary (1980) found that on the day the dividend was announced by the firm there were abnormal returns and after four years of the above-stated researchers, two other researchers Patell and Wolfson (1984) found that in the first fifteen minutes of the dividend and earnings announcement the detected price reaction occurs. Just a year later Miller and Rock (1985) suggested a model with the information about the dividend and unused earnings and they

suggested that due to information asymmetry between the internal management (managers) and external investors (shareholders) dividends can cause a market reaction. The dividend announcement is a better signal as compared to the earnings announcement signal due to the manager's ability to manipulate with the earnings stated by Asquith and Mullins (1986).

Prior research suggests that dividend policy does have both positive and negative effects on the shareholder's wealth just like Holder, et al. (1998) stated in their work. The case of the impact of dividend policy on the shareholder's wealth in a positive way means it enhanced their wealth was further strengthened by the findings of the Sajid Gul et al. (2012) and according to their findings, the dividend policy has a significant influence on the shareholders wealth in the case of the dividend-paying companies.

The case of the companies paying dividends to their shareholders and increasing their wealth was further strengthened in such words that the companies which pay initial and subsequent dividends have enhanced the shareholders' wealth by Asquith and Mullins jr. (1983). Another such finding by Bawa and Kaur (2013) on their work is done on the IT sector companies of India was that in the long run the wealth of the shareholders of the dividend-paying companies was enhanced as compared to the non-dividend-paying companies. In the case of the Nigerian firms, the relationship between the shareholder's wealth and dividend policy was checked by Chidinma et al. (2013) and they stated that dividend per share and the market price of the share do affect the shareholder's wealth. Another important finding in the case of the Sri Lankan firms was that dividend per share, ROE (Return on Equity) and profit payout ratio have a positive effect on the shareholder's wealth while on the other hand the retention ratio and shareholders' wealth has a negative relation Kumaresan (2014).



Now moving towards the control variables which are growth, net financing, and firm size while in their study Hoang et al. (2019), Law and Singh (2014) found that more the growth of a firm will be the more it will tend to use the trade credit while in their study Bawa and Kaur (2013) conducted on the IT sector found that the growing firms tend to provide dividends to its shareholders having a positive impact on their wealth.

In the case of the net financing both of the studies Faulkender and Wang (2006), Hill et al. (2012) have used it as a control variable while the latter study has specifically used it in the context of trade credit and shareholder wealth and according to their findings, the constrained firms which have problem with the availability of cash tend to hold cash more dear than providing it out in the form of trade credit while in the case of the unconstrained firms they have easy access to the capital market and can easily arrange extra funds they will tend to provide more trade credit to the constrained funds consistent with the findings of the former study.

According to the study conducted by the debt is positively related to firm size. As firms grow, managers have more power as the number of assets under their control increases. Accordingly, there may be excess "free cash flow" cash flows more than those required to invest in positive net present value projects. Several papers have found a positive relationship between firm size and the use of debt, Wald (1999) and Hoang et al. (2019). Both papers use the log of total assets to measure firm size. As stated by Dalbor et al.(2004) most effective proxy for firm size is the natural log of total assets. Finally, in their findings done on the Srilankan firms. Perera and Priyashantha(2018) found that firm size does impact the shareholder wealth significantly.

## **2.2 Theories**

Under this section, we will mention and describe those theories which are related to this research so starting with the theories of the trade credit.

### **2.2.1 Financial Advantage Theory**

This is not just a theory, but it is actually a composition of two to three aspects of the trade credit coined under just one head so according to this theory the supplier of the trade credit has better advantage over the rest of the lenders in the case that he can comparatively and easily check the status of his client. Like the supplier can more often visit his client premises the size of the order and how frequently the client is placing an order while the more taking of the early discount can also indicate the client's position while on the other hand, the other suppliers like banks obtain such kind of information more costly.

The supplier can also threaten the client in case of the delayed payments that he will cut the future supply of the supplies based on the nature of the supplies and also limited other alternatives available apart from the supplier which can force the client to pay his obligations while in the case of the banks or other financial institutions this threat may not work as effectively.

Another aspect is this that just in case the client defaults, the supplier can repossess the goods supplied based on the durability of the goods and how much the client has transformed them if he has transformed them a lot so they will be of little good to the supplier and one more thing that the supplier has better redistribution channel which helps him to collect back the goods and distribute them further.

So, from the above-mentioned theory the main issue of this study is that suppliers may be able to improve firm value via increased revenues and operating cash flows by resolving customers' liquidity constraints.

Now moving towards the theory of the dividend policy although there are many strong theories, we will be discussing which we will be using in our study.

### **2.2.2 Pecking order Theory**

The above-mentioned theory states that the management takes the capital structure decision according to the given hierarchy like first they prefer the retained earnings because it has no cost associated with it and after that, the management goes for the debt and finally if still, the management does not have enough resources than the company go for the equity means they collect the funds from the market via issuing new shares. This hierarchy exists because of the costs associated with each mode of financing if the company goes for the retained earnings than it is almost free and if the internal funds are not sufficient than the management will go for the debt and after that, the equity but the latter two have certain cost associated with them like in the case of the debt the company has to pay the interest while in the case of the equity the company will have more shareholders so eventually this will lead to the reduction in the amount of dividends.

The portion of profits of a business that are not distributed as dividends to shareholders but are reserved for reinvestment back into business is called Retained Earnings. Generally, these funds are for working Capital and fixed asset purchases or allotted for debt obligations.

Distribution of dividend to shareholders in the form of cash, can reduce the value of Retained earnings of the business. Cash dividends represent cash outflow and are recorded as reductions in

the cash account. owns. So, this outflow of cash impacts the liquidity of firm while trade credit is also related to the liquidity of the firm.

### **2.3 Hypotheses Development:**

This portion of the study focuses on how the relationship between the dependent and the independent variable will be stated based on the past findings done in the previous studies and it is the portion where the researcher supposes that what is going to be the relationship between the explained and the explanatory variables.

#### **2.3.1 Trade Credit and Shareholder's Wealth**

Trade credit is a combination of two terms which are account receivable and account payable while on one hand one is supplied (account receivable) and the other is received (account payable). In their study conducted to find the impact of receivables on the shareholder's wealth Hill, et al.(2012) found a positive relationship between the two. Another important finding by Long et al. (1993) states that trade credit is also helpful in increasing the revenue by reducing the information asymmetry regarding product quality. Another aspect of trade credit impact on the revenue as suggested by Emery (1984) is that the suppliers would extend credit if the implicit rate of return earned on receivables (i.e., forgone discount) exceeds that of the marginal investment. Ng et al. (1999) stated that the credit terms of 2/10 net 30 if forgone means not utilized, the consumer has to pay an implicit rate of 44% on the forgone discount.

Research also suggests that trade credit reduces the suppliers cost just as stated by Emery (1987) that the supplier which is troubled by the demand uncertainty for his product and he has to carry extra inventory, for that he has to pay for the warehousing and even altering plant capacity and this cost may exceed than providing financing to customers, relaxed credit policy is the viable

option. It is further supported by the findings of Long et al (1993) that receivables and demand uncertainty are directly related.

Moving further regarding the information collected about their customers' transactions the trade credit providers gather this information more easily as compared to the loan provider who has to do it by incurring costly monitoring Burkart and Ellingsen (2004). The supplier can also observe the early payment behavior of the customer. If the customer fails to use the early payment option so the supplier can easily detect that lower-cost alternatives were unavailable to the customer Smith (1987). Another tactic which was suggested by Cunat (2006) was that if the customer is not paying its obligations the supplier can cutoff the supply of its goods which will be troublesome for the customer's production as compared to the lenders which cannot use this tactic.

A theoretical model proposed by Fabbri and Menichini (2010) which consists of supplier information and liquidation advantages and this model proposes that extending trade credit to the customers is considerably cheaper than a similar bank loan granted to an applicant.

So from the above discussion, we will hypothesize the relation between trade credit and shareholders wealth

*H1: There exists a positive and significant relationship between Trade credit and Shareholders' wealth.*

and the second hypothesis about the moderating role of the dividend policy upon the trade credit will be built but the rationale behind doing this is this that the signaling theory states that information asymmetry exists between the internal management and the external investors as well as the shareholders of the firm which leads to the agency problems so in this regard to avoid

the agency problem the management tends to pay dividends to its shareholders in order to signal the company's better performance but in order to do so the company has to set aside a significant amount of retained earnings and retained earnings is not just for the dividend payment but also to meet the requirements of working capital, fixed asset purchases as well as the debt obligations of the firm.

The agency conflict in the company cannot be totally eliminated but they can be controlled by the combination of actions as suggested by the Vo and Nguyen (2014) that by combining the executive ownership, debt and dividend policy the agency conflicts in the company can be controlled. While on the other side the debt and the dividends both have certain costs associated with them that too much debt leads to bankruptcy and liquidation and the dividends require additional capital and retained earnings which will minimize the return to the investors of the firm. So the findings of the Rahma and Anisb (2018) states that the debt and the dividend policy have a negative relationship according to the pecking order theory. This point can be further supported by the findings of Rehman (2016) which also supports the above-mentioned findings in his study carried out in the context of Pakistani nonfinancial firms and further stated in their findings that the decisions regarding the dividend policy have great significance in determining the shareholder wealth because of the impact they have on the expectations of the future performance of the firm as well as the direct impact on the market share price. So from the above-mentioned findings like the negative relation between debt and dividend policy and the impact of dividend policy on shareholder wealth we can hypothesize the moderating role of the dividend policy upon the relationship between trade credit and the shareholder wealth to check the intensity of the relation between the two.

*H2: There exists a moderating role of the Dividend policy upon the relationship between Trade credit and the Shareholder's wealth.*

#### **2.4 Contribution to the literature**

This study contributes to the existing literature by empirically proving the relationship between trade credit and shareholder wealth. Previous studies focused mainly on the impact of Account receivable on shareholder wealth, while this study took into consideration both Account payable and Account receivable. It empirically explains the moderating role of dividend policy upon the impact of trade credit on shareholder wealth.

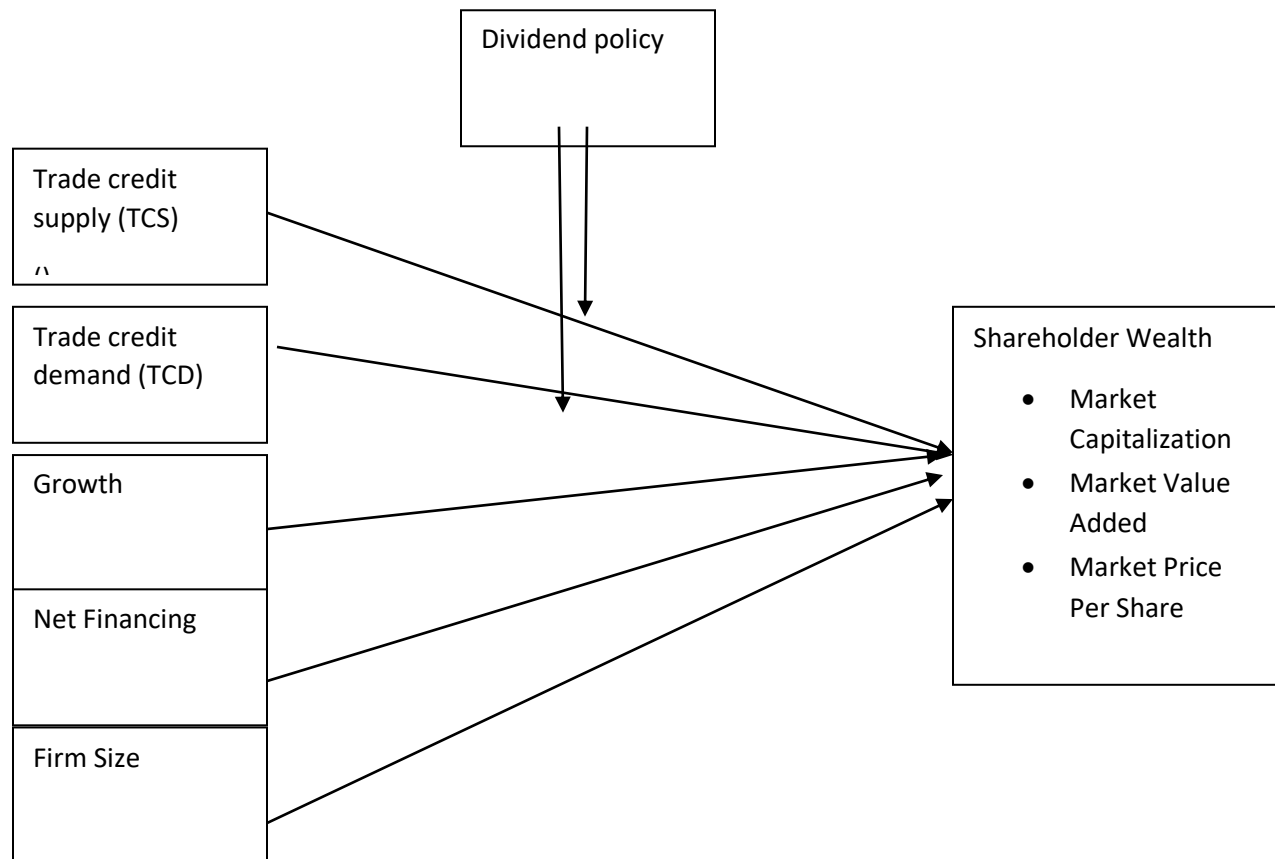
#### **2.5 Conclusion of literature**

Previous studies provide evidence about the impact of trade credit on shareholder wealth and firm's value. Various motives of providing trade credit along with their benefits on firm value shows significant result. Similarly, dividend policy has positive impact on shareholder wealth. This study empirically explores the link between moderating role of the dividend policy upon the impact of trade credit on shareholder wealth.

## 2.6 Theoretical Diagram

Theoretical diagram represents the total number of variables which were used in this study. The name of variables and their graphical representation shown in figure below.

**Fig 2.1 Relationship among Variables**



The above mentioned figure is the diagrammatical representation of the study conducted. On the left side of the diagram are the boxes having independent and control variables, while on the right side of the diagram boxes are showing the dependent variables. The central box of the diagram is showing the moderator of the study, which basically checks the intensity of the relationship between trade credit supply (Account receivable), trade credit demand (Account payable) on shareholder wealth.



## **Chapter 3**

### **Data and Methodology**

#### **3.1 Data**

As the study involves different variables so the collection of data will be done from different sources like data will be collected from the financial statements of the companies and from the documents published by the other authorized publishing institutions like a Stock exchange and The State Bank of Pakistan. The data will be collected from the firms which will be listed on the Stock exchange only and because they are listed on the Stock exchange so their financials will be more reliable than the ones which are not listed on the Stock exchange. In addition, the study applies a series of filters. Specifically, firms with incomplete data in the time period under examination and no operating activity for even one will be eliminated.

#### **3.2 Sample Size**

Basically, the research is conducted on the Non-financial sector of Pakistan means the companies which are listed on the Pakistan stock exchange excluding the banks and other financial institutions because these firms have very different accounting requirements and asset structures from non-financial ones. Initially, all the firms listed on the Pakistan stock exchange will be taken and then the actual number of firms will be determined after data mining, after removing the discrepancies from the data set. The data set will be taken from 2008 to 2018 so the time span will be of 11 years. Initially the sample size was taken of entire non financial firms listed on the stock exchange. After the dressing of data, removing the firms with missing data of dividend paying, the sample size reduced to the 88 non financial firms.

### 3.3 Discussion of Variables

Under this heading discussion about the variables both dependent and independent variables will be done taken in this study and also with reference from the previous studies.

**Table 3.1 Dependent and Independent Variables**

Variable	Used as	Calculation	Resource
Trade credit Account Receivable (AR)	Independent variable	AccountReceivable/Total Assets	• Hill et al (2012)
Account Payable (AP)	Independent variable	Account Payable/Total liabilities	• Barrot (2016)
Growth (GR)	Control variable	Current year sales – Last year sales/Last year sales	• Law and Singh(2014)
Net Financing (NF)	Control variable	Debt / Equity ratio	• Hill et al (2012)
Size	Control variable	Log of Total Assets	• Babalola (2013)
Dividend policy (DP)	Moderating variable	Dividends per common share/Earnings per share	• Bawa and Kaur (2013)

<b>Shareholder wealth</b>  Market capitalization(MC)  Market value added (MVA)  Market price per share (MPS)	Dependent Variable	<ul style="list-style-type: none"> <li>• Price per share*Number of shares</li> <li>• Market value of stock- Book value of stock holder's equity</li> </ul>	<ul style="list-style-type: none"> <li>• Iqbal et al. (2014)</li> <li>• Hall (2016)</li> <li>• Bawa and Kaur (2013)</li> </ul>
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### **Account Receivable**

“Accounts receivable are legally enforceable claims for payment held by a business for goods supplied and/or services rendered that customers/clients have ordered but not paid for. These are generally in the form of invoices raised by a business and delivered to the customer for payment within an agreed time frame”.

### **Account Payable**

“Accounts payable is money owed by a business to its suppliers shown as a liability on a company's balance sheet. It is distinct from notes payable liabilities, which are debts created by formal legal instrument documents”.

### **Growth**

“The change in a company's or nation's earnings, revenue, GDP or some other measure from one period of time (usually a year) to the next. Growth shows by how much the measure has grown

or shrunk in raw dollar amounts, but may be expressed as a percentage as well. It may or may not be adjusted for inflation”.

### **Net Financing**

“Also called the cost of carrying or, simply, carry, the difference between the cost of financing. the purchase of an asset and the asset's cash yield. Positive carry means that the yield earned is greater than. the financing cost; negative carry means that the financing cost exceeds the yield earned”.

### **Size**

“Refers to the magnitude of an offering, an order, or a trade”.

### **Dividend Policy**

“The Dividend Policy is a financial decision that refers to the proportion of the firm's earnings to be paid out to the shareholders. The amount of earnings to be retained back within the firm depends upon the availability of investment opportunities”.

### **Market Capitalization**

“Market capitalization, commonly called market cap, is the market value of a publicly-traded company's outstanding shares. Market capitalization is equal to the share price multiplied by the number of shares outstanding”.

### **Market Value Added**

“Market value added is the difference between the current market value of a firm and the capital contributed by investors. If MVA is positive, the firm has added value. If it is negative, the firm has destroyed value”.

## Market Price Per Share

“The market value per share or fair market value of a stock is the price that a stock can be readily bought or sold in the current market place. In other words, the market value per share is the “going price” of a share of stock”.

### 3.4 Regression Models

A regression model is used to investigate the relationship between two or more variables and estimate one variable based on the other.

#### 3.4.1 Market Capitalization

Generally known as market cap and it is derived by multiplying the number of outstanding shares by the current market price of the share and it is actually the total dollar market value of a company's outstanding shares. So the model of market capitalization will be developed like this

$$MC_{it} = \beta_0 + \beta_1 AR_{it} + \beta_2 AP_{it} + \beta_3 GR_{it} + \beta_4 NF_{it} + \beta_5 Size_{it} + \varepsilon_{it} \text{ eq. 1}$$

Above stated equation is previously estimated by the Hill et al (2012) in their study but due to data limitations we have to drop certain variables and also add some variables.

Now adding the moderating role of the dividend policy into the model

$$MC_{it} = \beta_0 + \beta_1 AR_{it} + \beta_2 AP_{it} + \beta_3 DP_{it} + \beta_4 AR_{it} * DP_{it} + \beta_5 AP_{it} * DP_{it} + \beta_6 GR_{it} + \beta_7 NF_{it} + \beta_8 Size_{it} + \varepsilon_{it} \text{ eq. 2}$$

#### 3.4.2 Market Value Added

It is actually a performance measure used to measure the performance of the company's stock it is actually measured for the stockholders but can also be computed for other investors as well. it

is calculated by subtracting the book value of the stockholder's equity from the market value of the stock.

$$MVA_{it} = \beta_0 + \beta_1 AR_{it} + \beta_2 AP_{it} + \beta_3 GR_{it} + \beta_4 NF_{it} + \beta_5 Size_{it} + \varepsilon_{it} \text{ eq. 3}$$

Now adding the moderating role of the dividend policy into the model

$$MVA_{it} = \beta_0 + \beta_1 AR_{it} + \beta_2 AP_{it} + \beta_3 DP_{it} + \beta_4 AR_{it} * DP_{it} + \beta_5 AP_{it} * DP_{it} + \beta_6 GR_{it} + \beta_7 NF_{it} + \beta_8 Size_{it} + \varepsilon_{it} \text{ eq. 4}$$

### 3.4.3 Market Price Per Share

It is usually known as the share price and can be defined as the price or the dollar amount which the investors are willing to pay is known as market price per share.

$$MPS_{it} = \beta_0 + \beta_1 AR_{it} + \beta_2 AP_{it} + \beta_3 GR_{it} + \beta_4 NF_{it} + \beta_5 Size_{it} + \varepsilon_{it} \text{ eq. 5}$$

Now adding the moderating role of the dividend policy into the model

$$MPS_{it} = \beta_0 + \beta_1 AR_{it} + \beta_2 AP_{it} + \beta_3 DP_{it} + \beta_4 AR_{it} * DP_{it} + \beta_5 AP_{it} * DP_{it} + \beta_6 GR_{it} + \beta_7 NF_{it} + \beta_8 Size_{it} + \varepsilon_{it} \text{ eq. 6}$$

Where

MC= Market capitalization

MVA= Market value-added

MPS= Market price per share

DP= Dividend policy

AR= Account receivable

AP= Account Payable

GR= Growth

NF= Net financing

Size= Firm size

### **3.5 Estimation Technique**

In this study, all hypotheses are tested based on panel data regression. This is because it allows us to control for the presence of unobservable heterogeneity. Individuals or firms are heterogeneous, and their different characteristics are difficult to observe and hard to measure. Hence, this method helps us to eliminate the risk of obtaining biased results arising from such heterogeneity. This study conducts a Hausman test to choose between the Fixed Effects Model (FEM) and Random Effects Model (REM) under the null hypothesis of no correlation between the independent variables and the unobserved company heterogeneity. When the result of the Hausman test rejects this null hypothesis, it means that the REM is not preferred and the FEM is appropriate for this study Hoang et al. (2019).

# Chapter 4

## Results and Discussion

### 4.1 Descriptive statistics

Descriptive statistics shows us the overall picture of the data in the form of the mean median and standard deviation means it shows us the overall trend of the firms that how the firms have responded.

**Table 4.1 Descriptive statistics**

	Mean	Median	Max.	Min.	Std. Dev.	Skewness	Kurtosis	Obs.
<b>MC</b>	4.75412	4.75505	6.94716	2.67025	0.81361	0.08235	2.71285	576
<b>MVA</b>	4.70019	4.70817	6.92730	2.38146	0.84437	0.00725	2.74823	576
<b>MPS</b>	2.05423	2.08421	3.45582	0.06819	0.50771	0.03499	2.57369	576
<b>AR</b>	0.13306	0.09811	0.53636	0.00000	0.11227	1.20444	3.99711	576
<b>AP</b>	0.47251	0.44343	0.99937	0.04903	0.25449	0.42501	2.14712	576
<b>GR</b>	1.13930	0.12163	0.91485	0.88948	0.21700	0.32108	5.50455	576
<b>NF</b>	1.03078	0.81579	5.95124	0.03249	0.81953	2.02541	8.90438	576
<b>SZ</b>	3.92400	3.84614	5.82379	2.05036	0.64236	0.35707	2.86985	576
<b>DP</b>	4.81709	4.28878	11.4503	1.02213	2.52050	0.58473	2.40873	576

**Note:** **MC**= Market capitalization, **MVA**= Market value added, **MPS**= Market price per share, **AR**= Account receivable, **AP**= Account payable, **SZ**= Size, **NF**= Net financing **GR**= Growth, **DP**= Dividend Policy.

Starting with the mean of the Market capitalization having the value of 4.75412 which shows the average response of the overall firms in the study that the firms have 475.41% market capitalization which shows that most of the companies have focused on the equity as compared and moving towards the median value of the MC which is 4.75505 almost same as the mean



value and shows that most of the firms in the study have use equity financing while the maximum value on the data set is 6.94716 and the minimum value on the data set is 2.67025. These maximum and minimum values show the upper and lower limit of the data set means no company can fall out from these two values in the data set and the value of the standard deviation is 0.81361 and the value of the standard deviation means how far the company can go from the mean value in the case of the market capitalization. Coming next are the values of the skewness and the kurtosis and the acceptable range according to the statisticians is from (-1.96 to 1.96) and (-3 to 3) so our value of both skewness and kurtosis 0.08235 2.71285 lie within the range and shows that there is no noise in the data. Finally, the number of observations is 576 which means the response of the firms under analysis.

Now moving towards the values of the MVA (market value added) and the first value is the mean and its value is 4.70019 which shows the average response of the firms include in the study while the value of the medium is 4.70817 which is the response of the most of the firms under study as the values are quite near to each other which shows that almost all of the firms have followed the same pattern and coming next is the value of the maximum value which shows the upper limit of the data set and after it is the minimum value which shows the lower limit and their values are 6.92730 2.38146 respectively. Coming next is the value of the standard deviation which shows the deviation from the mean value and its value is 0.84437 which shows that how much the firms can deviate from their mean values in the case of Market value added after the standard deviation come the values of skewness and the kurtosis which are 0.00725 2.74823 respectively and they are according to the standard so there is no noise in the data and the number of observations are the same in the case of the MVA which is 576.

Now next in the table of the descriptive statistics is the MPS which stands for the market price per share and the value of the mean of mps is 2.05423 which shows the average response of the firms in the dataset and the value of the medium is 2.08421 which shows the response of the firms in the study while coming next are the values of the maximum and the minimum value which are actually the data set limits 3.45582 0.06819 means no value can fall out of them and the value of the standard deviation is 0.50771 which shows that how much the firms can deviate from their average response in the case of the MPS and the value of skewness and kurtosis shows that the data set is normally distributed no noise in the data and their values are 0.03499 2.57369 respectively while in the end the number of the observations are again same which are 576.

As the descriptive statistics of the dependent variable has ended so now the next variable under study is the independent variable AR account receivable and its mean value is 0.13306 which shows the average response of the firms in the case of the account receivable while in the case of the medium value which is 0.09811 means that the response of the most of the firms is 9.811% and the maximum and the minimum value suggests the upper and the lower limit in the case of the data set and their values are 0.53636 0.00000 while proceeding further is the value of the standard deviation which shows how much the firms deviate from their mean and the value is 0.11227 while the value of skewness and kurtosis 1.20444 3.99711 suggest that there is noise in the data because they are slightly up from the set standard while the number of observations remain the same which is 576.

Now the second independent variable which is AP account payable and its value for the mean is 0.47251 which shows the average response of the firms in the data set and the value of the medium suggests the response of the most of the firms in the data set and its value is 0.44343 while coming next are the values of maximum and minimum values which are the data set limit

means the higher value in the data set and the lowest value in the data set and their values are 0.99937 0.04903 respectively while coming next is the value of the standard deviation which shows the deviation of the firms from the mean value or from the average response and its value is 0.25449 while the values of the skewness and kurtosis suggest that the data is normally distributed and their values are 0.42501 2.14712 while the number of observations are 576.

Coming next in the column is the first control variable known as Growth and denoted by GR and its mean value is 0.13930 which shows the average response of the firms in the data set and the next value is of the median which shows the response of the most of the firms and its value is 0.12163 while moving forward are the values of maximum and minimum values and their numerical values are 0.91485 0.88948 while the value of the standard deviation is 0.21700 which shows the deviation from their mean value and the value of skewness 0.32108 suggest that the data is normally distributed but the value of kurtosis 5.50455 suggests that the data is noisy while the number of observations are 576.

Moving towards the second control variable which is Net Financing denoted by NF and according to the value of the mean which shows the average response of the firms in the data set and the value is 1.03078 while right next to it is the value of the median which shows the value of the most response of the firms and its numeric value is 0.81579 while the value of the maximum is 5.95124 and the value of the minimum is 0.03249 which are the data limits and now the standard deviation value is 0.81953 which shows the level of deviation from the mean value and the values of skewness and kurtosis suggest that the data is noisy while their values are 2.02541 8.90438 respectively and the number of observations are same in the data set 576.

The last control variable is the Size denoted by the SZ and its mean value is 3.92400 which shows us the average response of the firms while the value of median is 3.84614 which shows us

the response of the most of the firms while now moving towards the maximum and minimum values which are 5.82379 2.05036 respectively and they tell us about the upper and lower limit of the data set while the value of standard deviation suggests that the variation from the mean value and its numerical value is 0.64236 while the values of kurtosis and skewness suggests that there is no noise in the data set it is normally distributed and their numerical values are 0.35707 2.86985 which are according to the standard and in the last the number of observations is 576.

The last variable of the study is the Dividend Policy which is denoted by the DP and its mean value is 4.81709 which shows the average response of the firms while the value of median is 4.28878 which shows the response of the most of the firms in the data set while in the case of the data limit values which are maximum and minimum values and their numeric values are 11.4503 1.02213 which shows the upper and the lower limit of the data set while the value of standard deviation is 2.52050 which suggests that by this much the firms deviate from their mean values and the values of skewness and the kurtosis suggest that the data is normally distributed while their numeric values are 0.58473 2.40873 which are according to the standard and the number of the observations is 576.

## **4.2 Correlation**

In this portion we will be explaining the relationship among the variables that either they are explaining each other or not and the word correlation means the interrelationship among the variables which means that if the value of the correlation is high than the variables have strong relation with each other or in other word the variables are explaining each other quite clearly.

**Table 4.2 Correlation**

	<b>MC</b>	<b>MVA</b>	<b>MPS</b>	<b>AR1</b>	<b>AP</b>	<b>SZ</b>	<b>NF</b>	<b>GR</b>	<b>DP</b>
<b>MC</b>	1.0000								
<b>MVA</b>	0.9983	1.0000							
<b>MPS</b>	0.5162	0.5284	1.0000						
<b>AR</b>	0.0147	0.0218	-0.0549	1.0000					
<b>AP</b>	0.1693	0.1787	0.2740	0.1095	1.0000				
<b>SZ</b>	0.8788	0.8601	0.2844	0.0341	0.0170	1.0000			
<b>NF</b>	-0.1916	-0.1812	-0.1254	0.2070	-0.0967	-0.0405	1.0000		
<b>GR</b>	-0.0459	-0.0398	-0.0090	-0.0473	-0.0286	-0.0891	0.0278	1.0000	
<b>DP</b>	0.2103	0.2173	0.0143	0.1166	0.2183	0.1109	-0.0576	-0.0443	1.0000

**Note:** **MC**= Market capitalization, **MVA**= Market value added, **MPS**= Market price per share, **AR**= Account receivable, **AP**= Account payable, **SZ**= Size, **NF**= Net financing **GR**= Growth, **DP**= Dividend Policy.

So in the first column and on the top of the column the relationship of the MVA and MC is mentioned with the value of 0.9983 which is quite high because the MVA is calculated by subtracting the book value of the equity from the market value of the equity and the market value of the equity is the market capitalization so that's the reason why they have this high correlation value and the second value is of the MPS 0.5162 which is 51.62% so this value is almost half and from this one thing is sure that these variables are explaining the shareholders wealth. The next variable in the column is AR 0.0147 or 1.47% which is relatively low means the correlation between Account receivable and market capitalization is quite low and the next variable is AP 0.1693 or 16.93% which states the relationship between the market capitalization and account payable. SZ value is 0.8788 or 87.88% which means that the relationship between size and market capitalization is very strong means the greater the company the greater the market capitalization is. While NF and GR have negative correlation -0.1916 -0.0459 with the market capitalization because the more the company tend to choose debt the less will be its market capitalization and the less the company will grow or the less the company will increase the sale

the less will be the market capitalization. While in the last of the first column is the variable DP having a value of 0.2103 or 21.03% which is the evidence of the relation between market capitalization and the dividend policy.

In the second column MVA and MPS have a strong correlation of 0.5284 or 52.84% which means they are measuring the same thing shareholders wealth. Following it is the AR having the value of 0.0218 or 2.18% which predicts a relationship between AR and MVA. After the AR is the AP with the value of 0.1787 or 17.87 which means that it has a strong correlation with the MVA as compared to the AR. GR in this column is the variable having the strong correlation with the MVA by having the value of 0.8601 or 86.01%. After this we have NF and GR having negative correlation values -0.1812 or 18.12% -0.0398 or 3.98% which means they have negative relation with the MVA which means that when they have high market value so they will tend to use less debt, in the last is the DP with the value of 0.2173 or 21.73% which suggests that dividend policy has a relation with market value added.

Now the third column and the first value is of AR which has a negative value of -0.0549 or 5.49% which shows that both of them has inverse relation and on the other side AP has a more stronger correlation with the AP as compared to the AR having a value of 0.2740 or 27.40% which means they are more correlated than the AR . GR is also correlated with the market price per share with the value of 0.2844 or 28.44%. Again, the NF and the GR have negative correlation with this variable and their correlation values are -0.1254 or 12.54% -0.0090 or 0.90% respectively where the value of the of GR is very low. In the last of the column is the DP having the value of 0.0143 or 1.43% which is also suggesting a relationship between DP and MPS.

The fourth column starts with the correlation of the AR and AP where the value is 0.1095 or 10.95% which suggests a correlation between Account receivable and account payable. Coming next is the value of the SZ 0.0341 or 3.41% which suggests a correlation with the AR so does the values of NF GR and DP and their values are 0.2070 or 20.70% -0.0473 or 4.73% 0.1166 or 11.66%.

In the fifth column the values of SZ, NF, GR and DP are 0.0170, -0.0967, -0.0286, 0.2183 and among the four values the value of dividend policy is quite high which shows strong correlation between the AP and DP. Moving towards the sixth column where the correlation of SZ with NF, GR and DP is showed having the values of -0.0405, -0.0891, 0.1109 with NF and GR having inverse relation while the DP having positive and comparatively strong relation with the SZ.

The sixth column has the values of GR and DP and showing their correlation with the values 0.0278 and -0.0576 which shows that the more the debt will be used by the firms the less will be paid in the form of the dividends because of the interest expense. In the last the correlation of GR and the DP is showing with the negative value of -0.0443 which shows that the firms which are growing tend to pay less dividend to its shareholders in order to retain the cash and reinvest in the business.

#### 4.3 Hausman Test

Test summary	Chi-Sq. Statistics	Chi-Sq. D.F.	Probability
Cross-section random	208.9396	5	0.0000

**H0:** Random effect will be applied.

**H1:** Fixed effect will be applied.

The probability value is 0.0000 less than .05. Hence, alternate hypothesis will be accepted.

#### 4.4 Regression Analysis

Under this section we will look at the relationship between the dependent and the independent variable their association their impact on the impact of independent variable on the dependent variable and the fitness of the model.

**Table 4.3 Regression Analysis**

<b>Models</b>	<b>Model 1</b>	<b>Model 3</b>	<b>Model 5</b>
<b>Variables</b>	<b>MC</b>	<b>MVA</b>	<b>MPS</b>
<b>Constant</b>	0.1117 [1.1180] (0.2640)	-0.0446 [-0.4037] (0.6866)	1.0005 [7.8765] (0.0000***)
<b>AR</b>	0.3102 [2.3084] (0.0213**)	0.3002 [2.0211] (0.0437**)	0.4252 [2.4792] (0.0134***)
<b>AP</b>	0.4677 [7.6598] (0.0000***)	0.4968 [7.3528] (0.0000***)	0.6058 [7.7760] (0.0000***)
<b>SZ</b>	1.0963 [46.4352] (0.0000***)	1.1148 [42.6795] (0.0000***)	0.2257 [7.5380] (0.0000***)
<b>NF</b>	-0.1399 [-7.7731] (0.0000***)	-0.1340 [-6.6226] (0.0000***)	-0.0507 [-2.0936] (0.0367**)
<b>GR</b>	0.1456 [2.1950] (0.0286**)	0.1441 [1.8588] (0.0636*)	0.0104 [0.1173] (0.9066)
<b>DP</b>	0.027130 [4.5980] (0.0000***)	0.0311 [4.5125] (0.0000***)	-0.0146 [-1.8382] (0.0665*)
<b>R-square</b>	0.80142	0.77505	0.16973
<b>Adj. R-square</b>	0.79970	0.77309	0.16257



<b>S.E. regression</b>	0.36540	0.40346	0.46628
<b>F-statics</b>	467.339	396.915	23.7135
<b>Prob.(F-statics)</b>	0.00000	0.00000	0.00000

**Note** = \*\*\*Significant at 0.01 level; \*\*significant at 0.05 level; \*significant at 0.10 level.

Now starting with regression analysis and on the table above we have values after running the regression analysis these values are actually the values on the basis of which this will be decided that either the relationship between the independent variables and the dependent variables hold as we hypothesized so starting with the first model which is market capitalization denoted with the MC and it is the dependent variable a measure for shareholders wealth so first of all the relation with the independent variable is Account receivable denoted by the AR and it is one component of the trade credit so the T statistics value [2.3084] indicates that the account receivable has a significant impact on the shareholders wealth and the case is further strengthened by the P value of the (0.0213) as previously stated by Hill et al.(2012) and Abuhommous (2017) that supplying trade credit has positive and significant impact on the shareholder wealth. the second component of the trade credit is the Account payable denoted by the AP it has also significant impact on the market capitalization while having the T statistic value of [7.6598] which fits the standard of the value of the t statistic means it is greater than the value of 1.5 and also the value of the P statistic (0.0000) indicates that it has significant impact on the shareholders wealth measured by market capitalization both the account receivable and account payable has positive impact on the firm value as stated by Ferrando and Mulier (2013), the use of trade credit of a firm is indeed twofold and is interlinked with the need to finance production. A firm can be seen a supplier and therefore its accounts receivable (TCR) are a proxy for how much it lends to customers. A firm is also a customer and its accounts payable (TCP) are its borrowing from supplier. Moreover it is often shown that firms that receive trade credit from

their own suppliers are more likely to extend trade credit to its customers. Trade credit receivable and trade credit payable have an inverted U-shaped relationship with Firm's profitability, which implies the existence of an optimal trade credit level that balances between cost and benefits to maximize firm's profitability Hoang et al (2019). As we have mentioned both the components of the trade credit and also the independent variables now moving towards the control variables which are Size, Net Financing, and the Growth so first of all stating the results of the size which is denoted by the SZ and its T statistics value shows that it has significant impact on the shareholders wealth and also the value of the F statistics show that it has significant impact on the shareholders wealth as previously indicated by Irfan et al.(2017) that larger the company, the more it will use trade credit to retain its customers. Here this should be mentioned that its value is the most highly significant from the rest of the variables in the model which indicates that greater the size of the firm the more it tends to use the trade credit. Next in the row is the net financing which is measured by the debt to the equity ratio and according to the values of the T and P statistic [-7.7731] (0.0000) respectively it has significant but negative impact on the shareholders wealth which means that more a company is using debt the less it will add to the shareholders wealth because of the interest expense they have to pay on their debt as reported by the findings of the Hill et al. (2012) and also according to the pecking order theory the firm tends to use more of its internal finance which are retained earnings. The last of the control variable is the growth which is measured by the figures of the sales by looking at the difference of the previous year sales and the current year sale and then dividing the result again with the previous year sales so by looking at the values of the T statistic and P statistic [2.1950], (0.0286) gives us a clear indication that the growth has a positive and significant impact on the shareholder wealth which means that the companies having greater sales tend to use trade credit more frequently

which results in greater sales as well as significant impact on the shareholders wealth. Now measuring the impact of the dividend policy which is the moderating variable in the study but still it is necessary to check either the dividend policy has a significant impact on the shareholder wealth which as the result indicate that the dividend policy has significant on the shareholder wealth as measured by the market capitalization in the model the value of T statistic and P statistic are [4.5980] and (0.0000) previously investigated by Farrukh et al. (2017), Bawa and Kaur (2013).

After explaining the values of the variables it is necessary to explain the characteristics of the model that either the model is proper or not either the variables are explaining the relationship properly so starting with the R-square (its value should be between 0 to 100% and higher the value the better model fits the data) having the value of 0.80142 which means that the value is 80.14% which is nearer to the 100% which is good and secondly is the Adj. R-square (which is a modified version of the R-square) having the value 0.79970 which is actually 79.97% which is a little bit less than the R-square but since not that much less so our model is suitable according to the value. The standard error of regression has statistical value of 0.36540 which shows the distance of observed values from regression line. The F-statics which measures the overall significance of model has probability value 0.0000 which is less than benchmark value of 0.05 indicates that the model is significant. So, the overall results were according to the previous research and also according to the stated theories.

Now moving towards the third model which is actually having the same independent variables the control variables also the same moderating variable but here in this model the shareholders wealth will be measured with the second component which is Market Value Added denoted by MVA and it is measured by subtracting the book value of the equity from the market value of the

equity so starting from the first variable in the model which is Account Receivable and according to the values of the T statistic [2.0211] and P statistic (0.0437) the account receivable has significant impact on the shareholder wealth as hall (2016) identified that various measures are used to check the sources of value creation for shareholders, looking at the trade credit is one of them ,and so the second component of the trade credit also suggests the same result which is account payable and according to the values of the T statistic and the P statistic respectively [7.3528] (0.0000) both suggest that the account payable has significant impact on the shareholder wealth. So after looking at the result of independent variables the result of the control variables should be discussed as the dependent variable is market variable added so the control variable which starting from the Size has the result of T statistic [42.6795] which shows that the size has significant impact on the trade credit and also confirmed from the value of the P statistic which is (0.0000) as in the previous model its value was highly significant so the larger a company is the more it will tend to provide trade credit as suggested by the previous studies Ferrando and Mulier (2013) firms having subsequent assets tend to provide more trade credit to supplement the growth of the firm. Second control variable is net financing which has significant but negative result on the market value added as we will clearly say by looking at the value of the T statistic which is [-6.6226] and the value of the P statistic is (0.0000) the reason behind the negative relation of net financing with the market value added is explained by the pecking order theory that firm will give more preference to the debt than equity while trade credit is used as substitute for bank loan Cunat (2006) so MVA is the net of book value of equity and market value of equity . The third and the last control variable of the study is the growth which is also significant by looking at the value of the standards which are T and P statistic [1.8588] (0.0636).

Now moving towards the dividend policy and according to the results it has also significant impact on the market value added as suggested by the T and P statistic [4.5125] (0.0000).

The characteristics of the model that either the model is proper or not either the variables are explaining the relationship properly so starting with the R-square (its value should be between 0 to 100% and higher the value the better model fits the data) having the value of 0.77505 which means that the value is 77.50% which is nearer to the 100% which is good and secondly is the Adj. R-square (which is a modified version of the R-square) having the value 0.77309 which is actually 77.30% which is a little bit less than the R-square but since not that much less so our model is suitable according to the value. The standard error of regression has statistical value of 0.40346 which shows the distance of observed values from regression line. The F-statics which measures the overall significance of model has probability value 0.0000 which is less than benchmark value of 0.05 indicates that the model is significant. So, the overall results were according to the previous research and according to the stated theories.

The last model in the table is the Market Price per Share denoted by the MPS, and according to the result of the first variable which is Account Receivable AR it has significant impact on the MPS as one can easily tell by looking at the values of the T statistic [2.4792] as well as the value of the P statistic (0.0134) both values are fulfilling the criteria. The second variable as well as the second component of the trade credit has also the significant impact on the MPS which is Account Payable and by looking at the values of the T and P statistics [7.7760] (0.000) both are meeting the criteria which is the value of T statistic greater than the value of 1.5 and the value of P statistic smaller than .05. Moving further and explaining the results of the control variables the first among the others is the Size and by looking at the result which are the values of the T and P statistics [7.5380] (0.0000) we conclude that size has significant impact on the shareholder

wealth. Net financing just like the other two models have significant but negative impact on the shareholder wealth as suggested by the value of T statistic [-2.0936] while the value of the P statistic is (0.0367) which is also according to the criteria. Now the third variable is the Growth and it is not significant as suggested by the value of the results and the values of the T and P statistic [0.1173] (0.9066). Now moving towards the last variable of the model which is dividend policy and according to the results of the T and P statistic [-1.8382] (0.0665) this variable is significant but has negative impact on the shareholder wealth.

The characteristics of the model that either the model is proper or not either the variables are explaining the relationship properly so starting with the R-square (its value should be between 0 to 100% and higher the value the better model fits the data) having the value of 0.16973 which means that the value is 16.97% which is further from the 100% which is not good and secondly is the Adj. R-square (which is a modified version of the R-square) having the value 0.16257 which is actually 16.25% which is a little bit less than the R-square but since much less so our model is not suitable according to the value. The standard error of regression has statistical value of 0.46628 which shows the distance of observed values from regression line. The F-statics which measures the overall significance of model has probability value 0.0000 which is less than benchmark value of 0.05 indicates that the model is significant.

**Table 4.4 Regression Analysis with Moderating Effect**

<b>Models</b>	<b>Model 2</b>	<b>Model 4</b>	<b>Model 6</b>
<b>Variables</b>	<b>MC</b>	<b>MVA</b>	<b>MPS</b>
<b>Constant</b>	0.04503 [0.3866] (0.6992)	-0.1402 [-1.0744] (0.2831)	1.0714 [6.8279] (0.0000***)
<b>AR</b>	0.4419 [1.5901] (0.1124)	0.5244 [1.6870] (0.0921*)	0.1444 [0.3846] (0.7006)
<b>AP</b>	0.6462 [4.8534] (0.0000)	0.7091 [4.7504] (0.0000***)	0.2766 [1.5375] (0.1247)
<b>SZ</b>	1.1023 [48.9087] (0.0000***)	1.1194 [44.38058] (0.0000***)	0.2390 [7.8975] (0.0000***)
<b>NF</b>	-0.1374 [-7.6661] (0.0000***)	-0.1314 [-6.5259] (0.0000***)	-0.0493 [-2.0389] (0.0419**)
<b>GR</b>	0.1529 [2.3095] (0.0213**)	0.1916 [2.5856] (0.0100***)	0.0180 [0.2015] (0.8403)
<b>DP</b>	0.06511 [4.5589] (0.0000***)	0.0732 [4.5714] (0.0000***)	-0.0299 [0.0193] (0.1213)
<b>AR*DP</b>	-0.0973 [-2.1321] (0.0334**)	-0.1117 [-2.1914] (0.0288**)	-0.0771 [-1.2511] (0.2114)
<b>AP*DP</b>	-0.0467 [-2.0906] (0.0370**)	-0.0525 [-2.0993] (0.0362**)	0.0552 [1.8287] (0.0680*)
<b>R-square</b>	0.82712	0.79926	0.18743
<b>Adj. R-square</b>	0.82471	0.79644	0.17612
<b>S.E. regression</b>	0.34275	0.38265	0.46317
<b>F-statics</b>	343.285	284.185	16.5794
<b>Prob.(F-statics)</b>	0.00000	0.00000	0.00000

**Note** = Notes: \*\*\*Significant at 0.01 level; \*\*significant at 0.05 level; \*significant at 0.10 level.

In the models explained earlier the moderating role of the dividend policy was not measured because in those models we were simply checking the impact of trade credit on the shareholders wealth but now in these models we are explaining the moderating role of the dividend policy and in the model of the market capitalization all the independent and control variables are same and all the variables both independent and control variables have significant impact on the market capitalization but the main thing to explain in this model is the moderating role of the dividend policy because it is trying to capture the intensity of the relationship between the trade credit and the shareholders wealth so by looking at the results of AR\*DP one thing is clarified that dividend policy does has moderating role in between the Account receivable and the shareholders wealth by looking at the values of the T and P statistics [-2.1321] (0.0334) and the moderating role is significant.

Now moving towards the second component of the trade credit which is Account payable and the moderating role of the dividend policy was captured by multiplying the values of both the variables just like we multiplied the value of the previous component of the trade credit (Account receivable) so AP\*DP results which are the values of T and P statistic [-2.0906] (0.0370) suggest that moderating role of the dividend policy exists because the results are significant.

The reason that dividend policy is reducing the impact of trade credit (AR and AP) is, because that dividend policy is also related to the liquidity of the firms. On the other hand, trade credit components are also related to the liquidity of the firms so whenever the firms pay dividends it impacts the liquidity that's why dividend policy is reducing the positive impact of Account receivable and Account payable. Watson and Head (2007) explains that a company before paying dividends must consider its liquidity and dispels the notion that a company with high



profits can afford high dividends. They noted that profits are not the same as cash and therefore the amount of dividends paid must reflect not just the company profits but its ability to pay dividends.

After explaining the results of the market capitalization model we will move towards the next model which is Market Value Added and the moderating role is checked on both the aspects of the trade credit here this should be worth mentioning that all the other independent and control variables have significant impact on the shareholders wealth so directly proceeding towards the results of the variables relating to the moderating role of the dividend policy over the relationship between trade credit and shareholders wealth so starting with the AR\*DP and by looking at the values of the T and P statistics [-2.1914] (0.0288) we can say that the moderating role exists and the AP\*DP result also suggests that moderating role exists by looking at the values of the T and P statistics [-2.0993] (0.0362).

In the last MPS model needs to be explained and, in this model, the moderating role of the dividend policy does not exist as by looking at the value of the variable AR\*DP [-1.2511] (0.2114) and also the variable AP\*DP [1.8287] (0.0680) also the variable AR [0.3846] (0.7006) is not significant as well as the GR [0.2015] (0.8403) variable and if we look at the characteristics of the model they are also not according to the standards like the value of the R-square is 0.18743 which is 18.74% and according to the standard the more the model should be near the 100% the more the model will be good.

## **Chapter 5**

### **Conclusion and Future Recommendations**

#### **5.1 Conclusion**

As stated in the start of the study that working capital management is an important aspect of the business because it deals with the liquidity and the day to day operations because its importance is not hidden because of its important components while one among them is the trade credit which is mostly used by the suppliers to enhance their sales as well as strengthen their relationship with their clients which is quite necessary for efficiently running the business and to ensure their profits.

So, this study has tried to look deeper in this and taken both aspects of the trade credit into consideration which are account receivable and the other is account payable while account receivable is the supply side and the account payable is the demand side, so the study has tried to capture both important and basic units of the economy the demand and the supply.

To do so the study has taken data of the non-financial sector of Pakistan for a time span of eleven years from 2008 to 2018. Three models were employed to check the relation between the trade credit and shareholders wealth. First proxy to measure the shareholder wealth is market capitalization and it has significantly impacted by trade credit. The second proxy of shareholder wealth is Market value added and it is also impacted by the trade credit. The third proxy is Market price per share and according to this model trade credit supply do affect the shareholder wealth.

In the above three mentioned models along with the shareholder proxies control variables were also taken to further understand the impact and these control variables are size, growth and net financing.

The innovative aspect of the study is the moderating role of the dividend policy while according to the MM irrelevance theory the dividend policy should be neglected while taking the business decision but according to the results the dividend policy cannot be neglected while taking the business decisions.

It is an important decision and should be taken with great consideration because if the management decides to give the dividends to its shareholders than the management has to keep in mind the availability of the cash and also enough cash should be in reserve to meet the day to day obligations of the firms while also keeping in mind the equity needs of the firm because according to the pecking order theory the cheapest source of the finance is the retained earnings and the dividends are also paid from the retained earnings so the company should keep check and balance while offering dividends to its shareholders. While the result is significant which suggests that providing dividend without carefully considering the amount of cash and the retained earnings the consequences will be bad.

## **5.2 Limitations and Future Recommendations**

- The data set was taken for the non-financial sector of Pakistani Firms and some of the firms in the non-financial sector were missing the data of the Dividend policy due to which the data set was reduced.
- Most of the companies in the textile sector were declared defaulter by the Pakistan stock exchange so their data was also removed from the data set which also limited the data sample.
- The study cannot be applied on the financial sector because of their different reporting standards and the non-usage of trade credit.

- Managers must keep in mind while deciding to invest too much in the trade credit because sometimes it becomes too expensive to regain the trade credit.
- Managers must retain a specific amount in the business in order to keep the business liquid enough to meet its day-to-day obligations.
- In the future the study can be carried out on the non-financial sector of other developing countries like Bangladesh, Afghanistan, and India.
- The results can be compared of the developing countries with the developed countries like European countries.

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