

CAPITAL UNIVERSITY OF SCIENCE AND  
TECHNOLOGY, ISLAMABAD



**Trade Credit and Firm  
Profitability: An Empirical  
Evidence from Pakistani  
Non-Financial Firms**

by

Touseef Nawab

A thesis submitted in partial fulfillment for the  
degree of Master of Science

in the

Faculty of Management & Social Sciences  
Department of Management Sciences

2021

Copyright © 2021 by Touseef Nawab

All rights reserved. No part of this thesis may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, by any information storage and retrieval system without the prior written permission of the author.

*To My Beloved Parents*



## CERTIFICATE OF APPROVAL

### **Trade Credit and Firm Profitability: An Empirical Evidence from Pakistani Non-Financial Firms**

by

Touseef Nawab

(MMS191026)

### THESIS EXAMINING COMMITTEE

S. No.	Examiner	Name	Organization
(a)	External Examiner	Dr. Aijaz Mustafa Hashmi	NUML Islamabad
(b)	Internal Examiner	Dr. Arshad Hassan	CUST Islamabad
(c)	Supervisor	Dr. Jaleel Ahmed Malik	CUST Islamabad

---

Dr. Jaleel Ahmed Malik

Thesis Supervisor

November, 2021

---

Dr. Lakhi Muhammad

Head

Dept. of Management Sciences

November, 2021

---

Dr. Arshad Hassan

Dean

Faculty of Management & Social Sci.

November, 2021

## *Author's Declaration*

I, **Touseef Nawab** hereby state that my MS thesis titled “**Trade Credit and Firm Profitability: An Empirical Evidence from Pakistani Non-Financial Firms**” is my own work and has not been submitted previously by me for taking any degree from Capital University of Science and Technology, Islamabad or anywhere else in the country/abroad.

At any time if my statement is found to be incorrect even after my graduation, the University has the right to withdraw my MS Degree.

**(Touseef Nawab)**

Registration No: MMS191026

## *Plagiarism Undertaking*

I solemnly declare that research work presented in this thesis titled “**Trade Credit and Firm Profitability: An Empirical Evidence from Pakistani Non-Financial Firms**” is solely my research work with no significant contribution from any other person. Small contribution/help wherever taken has been duly acknowledged and that complete thesis has been written by me.

I understand the zero tolerance policy of the HEC and Capital University of Science and Technology towards plagiarism. Therefore, I as an author of the above titled thesis declare that no portion of my thesis has been plagiarized and any material used as reference is properly referred/cited.

I undertake that if I am found guilty of any formal plagiarism in the above titled thesis even after award of MS Degree, the University reserves the right to withdraw/revoke my MS degree and that HEC and the University have the right to publish my name on the HEC/University website on which names of students are placed who submitted plagiarized work.

**(Touseef Nawab)**

Registration No: MMS191026

## *Acknowledgement*

Firstly I would like to gratitude to Almighty Allah who create the nature, who deem me to accomplish my study and to write this degree requirement (Thesis). I would like to thank of those people who give me his research based opinions, suggestion, guiding and mentoring timely. Again my special thanks to all of them for her long life and better tomorrow.

I wish thank to my thesis supervisor Dr. Jaleel Ahmed (faculty member) at Capital University of Science and Technology, (CUST) Islamabad Pakistan, who has guided me timely throughout the journey.

I wish thank to my family for their continuous encouragement and moral support. Finally, I pray for my family and my parents.

**(Touseef Nawab)**

## *Abstract*

Credit relationship between a supplier and buyer, has come to be an important part now a day's. This credit relationship between buyers and sellers also known as trade credit in the modern age of business. It refers as an essential source of financing for businesses. Businesses that are cash-strapped are able to obtain financing in form of trade credit from their suppliers in order to keep their own operations running. The goal of this research is to examine the relationship between trade credit on the profitability of Pakistani non-financial firms. Panel data used to analyze the problem. Secondary data used in this research for the period 2008 to 2019. On the basis of Hausman test, fixed effect model used to find the results. Results suggested that the receivable has positive impact on firms profitability. The effect of excessive receivables on firms profitability has different effects which is negatively significant. The trade receivables helps to increase the profitability but at industry average, excessive receivables becomes ineffectual with the profitability. The study suggested to enhance the trade credit practices up to certain level.

**Keywords:** Trade Credit, Profitability, Receivables, Excessive receivables, Size, Growth.

# Contents

<b>Author’s Declaration</b>	<b>iv</b>
<b>Plagiarism Undertaking</b>	<b>v</b>
<b>Acknowledgement</b>	<b>vi</b>
<b>Abstract</b>	<b>vii</b>
<b>List of Figures</b>	<b>x</b>
<b>List of Tables</b>	<b>xi</b>
<b>Abbreviations</b>	<b>xii</b>
<b>1 Introduction</b>	<b>1</b>
1.1 Background of the Study . . . . .	1
1.2 Trade Credit Terms . . . . .	13
1.3 Trade Credit in Pakistan . . . . .	15
1.4 Research Gap . . . . .	16
1.5 Problem Statement . . . . .	16
1.6 Research Questions . . . . .	16
1.7 Research Objectives . . . . .	17
1.8 Significance of the Study . . . . .	17
1.9 Organization of the Study . . . . .	18
<b>2 Literature Review</b>	<b>19</b>
2.1 Hypothesis Development . . . . .	40
2.1.1 Trade Credit and Profitability . . . . .	40
<b>3 Research Methodology</b>	<b>44</b>
3.1 Data Description . . . . .	44
3.2 Population . . . . .	44
3.3 Sample . . . . .	44
3.4 Sources of Data . . . . .	45
3.5 Variables . . . . .	45
3.5.1 Dependent Variables . . . . .	45

---

3.5.1.1	Return on Assets . . . . .	45
3.5.2	Independent Variables . . . . .	46
3.5.2.1	Receivables . . . . .	47
3.5.2.2	Excessive Receivables . . . . .	47
3.5.3	Control Variables . . . . .	47
3.5.3.1	Growth . . . . .	47
3.5.3.2	Size . . . . .	47
3.5.3.3	Liquidity . . . . .	48
3.6	Descriptive Statistics . . . . .	48
3.7	Correlation Analysis . . . . .	48
3.8	Multicollinearity . . . . .	49
3.9	Econometric Model . . . . .	49
3.9.1	Panel Data Analysis . . . . .	49
3.9.2	Common Coefficient Model . . . . .	49
3.9.3	Fixed Effect Test . . . . .	50
3.9.4	Likelihood Ratio Test . . . . .	50
3.9.5	Random Effect Model . . . . .	50
3.9.6	Hausman Test . . . . .	51
3.10	List of Variables . . . . .	52
<b>4</b>	<b>Results and Discussion</b> . . . . .	<b>53</b>
4.1	Descriptive Statistics . . . . .	53
4.2	Correlation Matrix Analysis . . . . .	54
4.3	Panel Unit Root Test . . . . .	55
4.4	Result of Hausman Fixed Effect Test . . . . .	55
4.5	Effect of Trade Credit on Company's Profitability . . . . .	56
<b>5</b>	<b>Conclusion</b> . . . . .	<b>59</b>
5.1	Policy Recommendations . . . . .	60
5.2	Limitations . . . . .	61
5.3	Future Directions . . . . .	61
	<b>Bibliography</b> . . . . .	<b>62</b>

# List of Figures

1.1 Trade Credit Cycle . . . . .	5
----------------------------------	---

# List of Tables

3.1	List of Variables . . . . .	52
4.1	Descriptive Statistics . . . . .	54
4.2	Correlation Matrix . . . . .	55
4.3	Panel Unit Root Test . . . . .	55
4.4	Likelihood Ratio Test . . . . .	56
4.5	Hausman Test . . . . .	56
4.6	Effect of Trade Credit on Firm's Profitability . . . . .	57
4.7	Sector Wise Average Recivables . . . . .	58

# Abbreviations

<b>DALL</b>	Debtall
<b>ER</b>	Excessive Receivables
<b>G</b>	Growth
<b>GR</b>	Growth $\times$ receivables
<b>REC</b>	Receivables
<b>ROA</b>	Return on asset
<b>S</b>	Size

# Chapter 1

## Introduction

### 1.1 Background of the Study

Trade credit, or the credit relationship between a supplier and a buyer, has come to be an important part of now a day's economy. A trade credit contract is a procedure in which together the supplier and the customer work together to complete the agreement. When consumers become hazardous and unable to get money due to a liquidity crisis or a lack of investment, they turn to alternative finance methods, for example trade credit, to achieve their common goals.

In this study the trade credit offer as a tool to support the sale policy. In this point of view the trade credit is a mean to building the relationship and establishing relation with new customers by granting them trade credit (Schwartz, 1974). In this study the account receivable is the dimension of trade credit as the firms offers trade to their customers.

Study of Ahmed and Khalid (2016) indicates trade credit is used to offer money to businesses who are unable to get cash through regular methods. One of the primary aims of firms is to grow their company in order to generate money and stay in business. Suppliers and buyers benefit from trade credit since it allows them to develop their companies and establish long-term relationships. As a means of capturing their business, the supplier offers funds to the purchasers. Suppliers, unlike financial institutions, utilize information in a different way to regulate and

monitor payments. As a result, the form of trade credit differs from one customer to the next.

The supplier has the option of returning the products and reselling them to another buyer. The cost of transactions has been decreased by using trade credit. For the past 25 years, countries like as Italy, Germany, and France have represented trade credit as firms assets. As per Ge and Qui (2007) in growing economies like China, trade credit is especially important for companies acquiring limited resources from banks. When a supplier supplies goods to a client, the buyer is frequently unable to pay the supplier on the spot, according to the trade credit arrangement. As a result, suppliers grant the buyer a credit term, allowing them to pay at a later period.

The credit extended by suppliers to their buyers. The suppliers let their buyers buy the product now and they receive the bills later that is called trade credit. The financial relationship between suppliers and buyers resulting from providing credit time to buyers by their suppliers. So, the trade credit is also the source of short term financing (Seifert et al., 2013).

Companies use trade credit as an additional source of finance from financial institutions, which is regulated from a financial standpoint (Petersen and Rajan, 1997; Nilsen, 2002). Providing credit limits to customer's fosters customer loyalty, which reduces the risks of moral hazard and adverse selection while also improving the financial purpose of trade credit. Furthermore, granting trade credits may encourage additional purchases in the short term, but it can also boost future earnings by allowing creditors to solve liquidity problems.

This research observes a sample of Pakistan companies during the period 2001–2018 and have three primary objectives. Firstly, it pursuits to confirm that profits increase through allocating credit limit might result in more productivity for Pakistani firms. Previous studies have discussed actual inspirations for the use of trade credit scores, claiming that allowing payment extensions improves the sales policy and allows for more market stocks.

Accounts receivable are linked to the industry in which the company operates (Fisman and Love, 2003). Firms in similar sectors face similar market conditions,

so they must be able to deal with the terms of payment postponements granted by organisations in the same field in order to maintain their market competitiveness (Paul and Boden, 2008). As a result, the study aims to see if alternative credit provided by companies to a lesser extent than credit provided by companies in the same sector has a negative impact on the profitability of businesses.

The study's goal is to see if the profitability associated with granting trade credit is beneficial to financially sound businesses. Imperfect economic markets provide suppliers with information advantages over monetary intermediaries, which may lead to the granting of trade credit at a lower cost and with more straightforward terms and conditions than other types of financing.

Empirical analysis is carried out using the General Method of Moment (GMM), fixed and random effect models. Indigeneity issues arose as a result of organisational heterogeneity and similarity between key variables, which needed to be addressed.

For a variety of reasons, this research will contribute to the reference literature. First, the research adds to the body of knowledge regarding the financial outcomes of credit limit extensions. Although the increasing importance of trade credit in market transactions has prompted many researchers to investigate the factors that influence trade credit levels, the impact of trade credit extension on overall company performance has received little attention (Box et al., 2018).

Second, in contrast to other studies that look at financial and actual motivations separately (Molina and Preve, 2009; Hill et al., 2012; Garcia-Appendini and Montoriol-Garriga, 2013; Yazdanfar and Ohman, 2015), this study will look at the impact of trade credit score on organisation profitability, aiming to capture both actual and financial results. Indeed, granting trade credit is a way to establish new buyer relationships or strengthen existing ones while also contributing to an organization's profitability.

Third, in comparison to previous research (Molina and Preve, 2009; Abuhommous, 2017; Martnez-Sola et al., 2013; Box et al., 2018), this study will contribute to the literature by conducting a moderation analysis to capture the effect of credit score rationing situations and indebtedness closer to banks and other corporations on the

contribution of debts receivables to the return on assets and income. Meanwhile, considering the financial situation, the situation of controlling through the credit system, the existence of debt to suppliers or the banking system, and the increase conditions, the impact of trade credit on the profitability of organisations can be moderated by using the factors listed above.

Small and medium-sized businesses encounter several challenges in obtaining external funding. (Berger and Udell 1995). When compared to external parties, the owner/management of small businesses has a good understanding of their business (Storey 1994). He goes on to say that trade credit is a viable foundation of funding for any company, but especially for MNS businesses, according to the financial mix of UK businesses.

Many businesses nowadays use trade credit to achieve their various business goals, and they frequently choose to create the best use of their money. Trade credit is valued differently in different countries, according to Marotta (1997). Trade credit is used by the majority of industrial businesses from all over the world.

According to a survey of industrial businesses in Finland, 9.7% of their balance sheet items are receivables and 6.1 percent are payments. For many businesses in the United States, trade credit is both a substantial source of money and a big use of capital.

Ahmed and Khalid (2016) indicates businesses who are unable to get financing through regular methods might use trade credit. Expanding a company's business in order to generate money and stay in business is one of their primary aims. Both buyers and suppliers get benefited through trade credit because this one allows them to grow their companies and form long-term relationships.

From trade credit buyers and suppliers benefited since this allows them to develop their companies and establish long-term relationships. As a means of capturing their business, the supplier offers funds to the purchasers. Suppliers, unlike financial institutions, have access to more information on the buyer. Suppliers, unlike financial institutions, use information in a unique way to regulate and monitor payments. As a result, trade credit takes on different forms depending on the buyer.

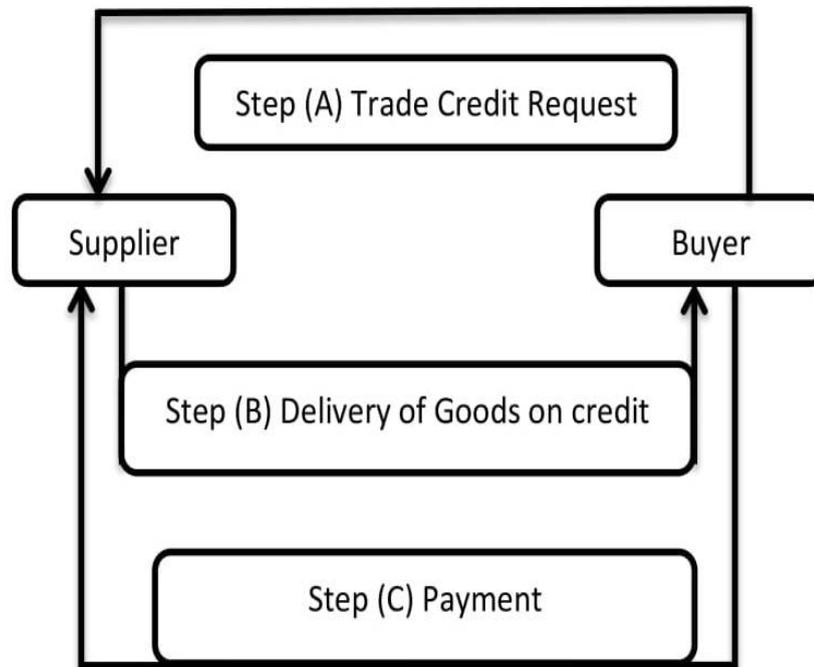


FIGURE 1.1: Trade Credit Cycle

The purchaser's primary goal is to acquire industries. The majority of buyers rely on the provider for money. They get better information from the provider and the buyer. The nature of trade credit has evolved from buyer to buyer.

Companies generally receive financial assistance in the form of short-term credit. Industries cannot thrive without capital, and their basic need for money to invest in a new resource, such as an asset or a machine, cannot be met. Every company has two types of capital: long and short term financing. Although trade credit is short-range loan, any company's capital can be divided into two categories: long-term and short-term financing. (Ivanov ,Mateev and Poutziouris, 2013).

In the balance sheet, current assets and current liabilities are listed. According to Nieuwkerk,1979 One of the most important sources of capital that is not linked to a bank is trade credit. Therefore in particular instance, trade credit is defined as a single rm that combines payables and receivables to meet the country's capital requirements.

As a result, the country's growth is lawful, and monetary support has the ability to affect and utilize trade credit. (Kunt and Maksimovic, (2001). For the firms,

short-term financing is required. In the event of trade credit, there is also the potential of a cheap price. Most businesses struggle to obtain financial assistance, but in the event of a setback, they may rely on their well-established route for assistance. If the anticipated cost exceeds the amount that may be borrowed from a bank. When there is an imperfect time length risk for the provider to agree on short span financing, trade credit is basic foundation of financial assistance. Fewer of them prefer to create a bank loan agreement in this circumstance (Petersen and Rajan, 1997).

In terms of economics, short-term financing allows firms to build a relationship with the lender while simultaneously allowing customers to build a stronger bond. Existing market entrants and the source of trade credit have no connection. Trade credit is critical for new entrants into the market, since it leads to the potential of doubtless consumers, but in the case of banks, there may be a cash shortage (Wilson and Summers 2002). Trade credit is unique in that it does not fall within the banking sector. Trade credit is not under the jurisdiction of any government. It is displayed as account receivable (trade credit supply) on both sides of the balance sheet and belongs to current assets, while account payable (trade credit demand) belongs to current liabilities. As a result, the TC assesses trade credit demand and supply in this study. The type of currency used is also determined by the country's growth and the financial (Demirguc-Kunt and Maksimovic, 2001).

Trade credit is a form of financing that is offered to businesses that are unable to get funds through regular means. The goals of all businesses are to improve their operations in order to raise their prospects for the future. TC helps businesses grow while fostering long-term relationships between suppliers and buyers. The supplier gives financing to the purchasers for company growth under the Trade credit agreement. When compared to financial organizations, suppliers have a greater understanding of market circumstances, which allows them to deliver better benefits to their customers than banks and other financial institutions (Daripa and Nilsen, 2005).

Wal-Mart (2006) also employs the Trade credit since it is advantageous when payments are delayed and purchases are made on time and without loss. According

to Wal-2006 Mart's annual report, a major buyer with a high rate and standardized account payables accounts for three quarters of the company's overall debt.

The TC cycle, according to theories, is a two-way process involving buyers and providers. Buyers demand products or commodities to operate their companies; providers, on the other hand, require benefits to improve their selling and expand their market share. Because the nature of suppliers' job is similar to that of buyers, it is highly beneficial for suppliers to comprehend the conditions that buyers confront.

When companies are unable to obtain financial assistance from traditional banking institutions, Trade credit has become a preferred source of funding. Non-financial companies in Pakistan have also experienced a funding constraint and have turned to Trade credit agreements to solve their problems. As a result, they were able to better utilize their resources, as well as boost their prospects of expanding their businesses, thanks to mutual agreements between buyers and suppliers.

The transaction cost is also decreased with the trade credit since it does not require any sort of transaction costs between the two parties. According to Petersen and Rajan (1997), when the provider delivers the items to the clients, the customers do not pay on the spot. Buyers are given credit terms by suppliers, which allow them to pay after a certain length of time. One of the most significant forms of short-term financing is TC; it is an external source that businesses obtain from their suppliers.

As per the 1998 survey of SME Finance Survey (SSBF), supplier offers discount terms to the customer so that they pay at early. In almost 90% of companies, trade credit used as short-term corporate debt. The fact behind this is that suppliers offer different terms and relatively stable terms for different buyers. In the case of trade credits, many alterations implemented by supplier for ease of buyers and as well as helpful for the industry. In order to adapt the changing demand, suppliers tend to change product prices than price of credit.

According to suppliers, trade credit has several advantages over bank borrowing. This is because the supplier can more easily get the quality information of the buyer's company. Suppliers pay close attention to the customers discussed

by (Dell, Laevena and Marquez, 2014). According to a study by Burkart and Ellingsen (2004), suppliers have a low liquidation risk because traded goods themselves are strong collateral for suppliers. Study by Garca and Solano (2011) show that problems such as asymmetric information, moral hazard and adverse selection has a greater impact on commercial loan applications as compared to trade credit transactions. SMEs are more interested in increasing their market share by increasing trade credit.

Suppliers offer more concessions to their customers than financial institutions like banks. According to Dell, Laevena and Marquez (2014) looking for the right seller at the right time is a problem and maintaining the relationship is another matter. Allowing buyers to accept payment delays is natural for long-term relationships. Suppliers can distinguish buyers.

According to Cunat (2006), when a company faces the problem of liquidity and negative growth rate, trade credit also affect the growth process of the company. As per the study of Petersen and Rajan (1997), those companies which already in financial crisis are more interested in expanding trade credit because trade credit is the source to increase the receivable for company. This gives suppliers exhibility in payment. Trade credit contract extended for many periods. The relationship between the parties is an ongoing process, as the supplier becomes the buyer and the buyer becomes supplier.

Smith (1987) and Maksimovic (2008) explain that buyers are more likely to choose business-related contracts when dealing with trade credit contracts, depending on their financial situation and business characteristics. Trade credit used to describe the status and financial condition of a buyer in the business world. In order to adapt changes in demand, suppliers are willing to accept changes in product prices than the credit terms. Discounts can also adjust in the price of the product and discount offered also varies from customer to customer.

Trade credit is a contract or agreement whereby companies buy supplies from other companies on credit instead of paying immediately they agree to pay in the near future. Suppliers become financial intermediaries when they decide to finance the arrangement on firm reputation and size. According to the Meltzer (1960) study,

these suppliers extend the financing of trade credit to deprived enterprises. In fact, in trade credit, non-financial companies record suppliers' who provides goods and services on credit as accounts receivable, while recipient companies report accounts payable in their balance sheets. Because of this function trade credit is considered as short-term financing of the business.

Trade credit allows buyers to take their goods now and pay later. The scope of trade credit may be determined by the mutual trust between the supplier and buyer company, and both parties are required to agree according to the terms. This type of credit encourages sales. Bank loans are not completely ignored or prohibited, but companies demand more desirable alternatives like trade credit. Bank lending takes longer time and is more complicated. This is why SMEs prefer trade credit. Trade credit helps companies to create new investment plans and create new markets that are more productive for the company's success. In competitive environments it is time saving and helpful for new companies to turn toward trade credit. In US trade credit as debt is twice as much as any other debt. In the 1990s, US trade credit ratio averaged \$ 1.4 billion across all countries.

According to Martinez-Sola et al. (2011), firms offering TC are further profitable as compare to the companies offering no trade credits. Petersen and Rajan (1994); Saarani and Shahadan (2013) ; Molina and Preve (2012) are of the view that trading is largely dependent on the availability of bank loans and the trade credit size will increase if buyers are unable to obtain loans from financial institutions.

Trade credit shows a vital part in the economic and financial fields, and it has recently become a hot topic in the literature. According to the results of Alphonse et al. (2003) clearly stated that trade credit increased when bank debt is shortfall. The study further pointed out that companies cannot obtain bank loans or low availability of bank debt, and businesses or individuals use trade credits. The study by Frank and Maksimovic (2004) emphasizes that trade credit helps suppliers and borrowers to meet their financing and investment needs, especially when financial markets are inefficient.

In most developing countries, such as China, bank lending is not easy to use. It is difficult for non-state owned enterprises to get loan as compared to state-owned

enterprise. A survey by the World Bank (2000), non-state-owned enterprises in China received less than 1% of bank loans at the end of 1990. State-owned enterprises can easily receive loans from banks, but growth rates of non-state owned firm are much higher than the state owned firms. The state-owned enterprise is considered more reputable either they are a financial or non-financial firm. According to the records of 370 different cities in China from 1989 to 1991, state-owned enterprises can easily obtain bank loans. These stat-owned companies that can secure funds from banks account for only 20% of China's total industrial output still they are only eligible for this purpose.

Cyert and March (1963) for the transaction cost hypothesis was first introduced, which was subsequently extensively described by Williamson (1996) with theoretical assumptions. When there is an economical trade, they claim, transaction cost occurs. Firms pay a commission for gathering information, resulting in transaction costs. Willaimsom (1981) claims that the firm's management faces transaction costs when it pays commission for services and other benefits.

A company's trade credit plays an essential function in lowering its transaction costs. According to Ferris Transaction Theory (1981), trade credit lowers product and service exchange costs, and therefore transaction costs may be lower as a result of trade credit incentives. The idea goes on to say that under trade credit, the buyer and seller's interactions become more frequent, lowering both sides' transaction costs. As a result, when transaction costs are decreased, the firm's receivables holding power increases. Trade credit lowers costs by bringing goods and credit financing together in one place. Both credit financing and the supply of products on credit exist on the same account.

Smith and Mian (1992) proposed that when stock of products and services are obtained from a single location, the transaction cost decreases, and the monitoring and exchange relationship becomes more efficient. The assumption derived from Petersen and Rajan (1997) findings also implies that companies can utilize trade credits to save money. In comparison to credit suppliers, lenders have far less information about purchasers or borrowers. Credit and supplies require information on buyers or borrowers, thus suppliers have traditionally had an edge in trade credit owing to strong informative relationships (Schwartz, 1974).

Liquidity can also be obtained through trade credit. When a customer's access to finance is limited, or when suppliers have greater access to financing than the client, trade credit is the result. The earliest kind of finance available to purchasers from suppliers is trade credit (Emery, 1987). Trade credit suppliers, according to this notion, have a direct advantage over other financiers. One of the most significant advantages is that suppliers have direct touch with their consumers or purchasers and can quickly assess and monitor their creditworthiness. Furthermore, suppliers have a faster and more efficient method of liquidating their assets on trade credit than other institutional financiers. As noted by Peterson and Rajan (1997), the standpoint of this liquidity theory is buyer opportunism. The aim of trade credit, according to Wilner (2000), clearly demonstrates liquidity motivations for buyers and suppliers. According to Evan (2000) previous research, trade credit given by suppliers is more beneficial to suppliers even when they are in financial trouble. When the financial market is in crisis, suppliers provide buyers additional concessions, which should be recognised as advantages for purchasers. According to the results of Petersen and Rajan (1997); Evan (2000), seller opportunism exists in trade credit, where buyers are reliant on suppliers (trade creditors).

Information on purchasers or borrowers is always contingent on credit evaluations. Most of the time, lenders lack comprehensive knowledge and information about their clients, resulting in difficulties in determining credit eligibility. Similarly, purchasers may be unaware of the high quality of lenders' or suppliers' items, resulting in a loss. As a result, there are two points of view. The first is that it saves money for both purchasers and lenders, as previously stated. In comparison to credit suppliers, lenders have far less information about purchasers or borrowers. Credit and supplies require information on buyers or borrowers, thus suppliers have traditionally had an edge in trade credit owing to strong informative relationships (Schwartz, 1974; Willaimsom 1981).

In the second view, trade credits save both suppliers and buyers money, but they might lead to product quality issues for purchasers. Smith (1987) identifies the issue by stating that trade credit is maintained in firms only if the quality of the products is maintained. Many studies show that trade credit is more prevalent in businesses with low product quality. They argue that merchants should pass

on low-quality items at a high cost in trade credit. According to Ravid and Long Malitz (1993); Wei,Zee (1997), large firms offer low-quality items on trade credit since small firms are more concerned about their reputations. These investigations also show that many industries in the trade credit industry falsify information concerning product quality.

The influence of the macroeconomic environment on trade credit utilization cannot be overlooked, as several studies have shown. According to Smith (1987), account receivables are paid based on the economic condition. With the deterioration of the gross domestic output, the usage of trade credit has grown (Niskanen and Niskanen, 2006). The link between GDP and the economy is adversely connected, according to Ahmed, Xiaofeng, and Mujtaba (2014). Suppliers, according to Smith (1987), have an informational edge over banks. If state circumstances are not stable, trade credit has been extended, and increasing borrowing has made trade credit a feasible short-term fund.

The uncertain product market, according to Smith (1987), can constitute a full system. In terms of product quality at the buyer's and customer's standards, suppliers have total information advantage over banks. The provider can protect the customer against a variety of hazards because of the informational interests. To decrease the information asymmetry between the lender and the borrower, credit scrutiny has been completed and the borrower's quality has been checked by indicating the liquidity or leverage ratio.

According to Vaidya (2012), there is significant evidence in India that inventory management incentives for trade credit are beneficial. Businesses are using trade credits or on a net basis to enhance sales and reduce finished goods stockpiles. When a company's inventory builds up, it tends to postpone payments to suppliers, resulting in a bigger accounts payable balance on the books. This is likely to assist businesses in overcoming sales fluency issues. As a result, trade credits may be thought of as a monetary reaction to the fluctuating demand for finished goods.

Liquidity is not a concern for large-scale firms, according to the inventory management concept. The expense of storage is very inexpensive with large businesses. Large corporations, according to Long et al., (1993), have a strong reputation and

may readily acquire money as a result. Large firms do not need to offer assurance for their products, according to (Ahmed, Xiaofeng, and Mujtaba, 2014). Storage expenses are relatively inexpensive for large businesses. According to Long et al. (1993), huge firm has a high reputation, and as a result, they can easily obtain financing. According to Ahmed, Xiaofeng, and Mujtaba (2014), major corporations are not required to give product guarantees. Businesses with late payments or fines have demonstrated increased credit charges, according to companies that have previously offered reductions. Late payment has served as a signal to the seller that the buyer may be unable to make the next due payment, raising the risk of default. In the presence of hazardous clients, the seller is fully aware of the sunk costs in the connection with the buyer and collects information about the buyer's financial condition. According to Bougheas (2009) inventory management model, businesses with liquidity issues should offer further trade credit to consumers in effort to expand their receivables as assets.

## 1.2 Trade Credit Terms

The trade credit has two terms, according to Smith (1987); Ng et al. (1999) the seller of goods shall demand full payment before to delivery of the products. The contract specifies the time range for payment. The term "Net 30" denotes that payment must be made within 30 days of the product's delivery. The supplier will impose a late payment fee if the buyer does not pay on time. If the customer does not pay within the specified period, then customer must be termed as default.

According to Smith (1987), the phrase is 2/10 of 30 net. This phrase implies that a 2% discount is available within the first ten days of payment. If the payment is made before the specified time, the supplier gives the customer a discount.

When the customer agrees to pay the transaction amount during the discount period, the supplier will provide to buyer a lower transaction amount. Early payment will allow the customer to receive an early delivery of the product in the future. If the customer is unable to pay during the discount period, he must pay in full within 30 days (Schwartz 1974).

According to Smith (1987), this phrase of trade credit demonstrates the risk of lending to consumers. The discount reflects the firm's financial difficulties; otherwise, a high rate of interest would be charged. As a result, the adoption of two-part trade credit conditions gave an early warning of the businesses' financial status.

According to Petersen and Rajan (1994, 1997), TC is a more expensive form of credit than bank lending. Despite the greater cost of trade credit, most firms continue to use it as a short-term finance source. According to Schwartz (1974), trade credit facilitates transactions between suppliers and buyers, as well as reducing uncertainty regarding product delivery and improving cash management efficiency.

During the recession, small and medium businesses are harmed by a lack of financing. External sources of funding give them a leg up on the competition and are crucial for their expansion and success. According to a review of Spanish data conducted in 2005, trade credit as a source of finance is causing problems for businesses suffering from credit constraints.

Financial institutions also send out the message that these SME's are well-established and will be able to obtain a bank loan in the future. Firms utilize a combination of their external funding arrangements when the country's monetary policies are restrictive. This sort of financing mix has an impact on a company's investment structure, which includes the monitoring interest rate over time.

Petersen and Rajan (1994, 1997) go on to explain why companies choose to employ trade credit over the low-cost option. They further contend that trade credit is utilized by businesses who are unable to obtain financing from institutions, despite the fact that it captures higher costs than bank credit.

During a monetary crisis, trade credit is frequently extended. When a supplier is given a trade credit, the risk to the supplier is lower than when a bank credit is given. That's why the buyers allow the suppliers to take credit. Suppliers benefit from trade credit since it allows them to analyse the customer's financial performance and creditworthiness. They also efficiently assess the consumers' default.

### 1.3 Trade Credit in Pakistan

Trade credit is distinct from corporate and other financial obligations in Pakistan. To begin with, the majority of providers use items in the transaction that aren't directly in cash. In financial institutions such as banks, trade credit has not acted as a legal agreement between the seller and the purchasers. A bond is formed between the two people as a result of the oral permission. Third, Pakistan's non-financial sector uses trade credit as a source of funding. Finance is a major source of income for the majority of businesses and many countries. Trade credit is regarded as a vital resource for businesses at all levels.

Pakistan's non-financial businesses have struggled to find funding. For firms to tackle the problem of financial shortages, external finance is required, to manage the financial conditions the type of credit which is trade credit funds availed by the majority of the sectors. Pakistan's textile industry is one of the country's most important trading industries, which is overseen by trade credit.

Other non-financial industries that are financed by trade credit include the automobile, cement, chemical, and sugar industries, among others. Banks, on the other hand, have traditionally needed security before giving credit. As a result, most clients find it difficult to obtain loans through banks, and trade credit becomes a significant source of financing in Pakistan.

The market value of the firms is likewise increased by trade credit. The trade credit is utilized as a measure of the company's growth. Trade credit also boosted the number of firms' clients, which might contribute to an increase in firms' revenues. Buyers have the opportunity to control the quality of the products on the market that they acquire under the trade credit agreement. It also boosts the product's demand. Trade credit is also seen to be a means of boosting revenue.

If companies are unable to obtain financial assistance and are experiencing liquidity problems, trade credit has become a common form of financing. Non-financial businesses in Pakistan have also experienced a funding constraint. The trade credit is also preferred as a source of finance by the businesses. It has the potential to boost business and improve resource usage.

## 1.4 Research Gap

Pakistan is a developing country, and mostly non-financial firms suffers from loan procedures and these businesses are unable to obtain loan and also unable to obtained short-term credit. On a micro and macro level, trade credit is a source of growth opportunity.

According to Huang et al., (2009), trade credit is an alternative form of financing that has a important effect on the firm's success. Babalola and Ivanivna (2017) investigated trade credit and company performance and discovered some interesting results. It is advantageous for businesses to have access to trade credit. Trade credit is a good source of funding in transition economies, according to (Delannay and Weill, 2004). Pakistan is likewise a developing country, and it is important to detect the trade credit gap in these circumstances. In this context, no empirical research on the performance of Pakistani listed non-financial firms has been conducted. This study fills the research gap.

## 1.5 Problem Statement

One of the most significant forms of financing for a company is trade credit. This study also explains that most firms that do not have access to the market are also in financial trouble, thus trade credit is the most fundamental kind of assistance in this scenario. However, financial institutes decrease the cost of financing for customers, and their money is supplied by the provider of substitute, effectively in the emerging market's trade credit, resulting in flaws and disorganization.

## 1.6 Research Questions

This study tried to answer the following questions:

### Research Question 1

What is the impact of trade credit on firm profitability?

### Research Question 2

What is the impact of excessive receivables on firm profitability?

### **Research Question 3**

What is the Impact of other control variables on firm profitability?

## **1.7 Research Objectives**

Objectives of the study are as follow:

### **Research Objective 1**

To find the impact of trade credit on firm's profitability.

### **Research Objective 2**

To find the impact of excessive receivables on firm profitability.

### **Research Objective 3**

To find the Impact of other control variables on firm profitability.

## **1.8 Significance of the Study**

This study provide an important understanding about the role of trade credit in organization profitability that firms can reach the potential benefits associated with trade credit. This study will tell us about how the excessive receivables decrease the firm profitability. The study also helpful to understand how the role of growth effect the organization's performance. Their firm is given trade credit in what way they are steadfast in the firm's solvency. As a result, trade-credit promises to disclose the reasons for their company's growth and payment of credit. As a result, short-term financing is chosen by a large number of non-financial firms if the cost of trade credit increases costs climb sharply.

According to the findings, investors and shareholders should be cautious about investing in trade credit. It assists market participants in making decisions about investments, operations, and business laws. In addition to financing, businesses may use trade credit in their sales and marketing departments, as well as their operations department, to increase sales and growth. When companies evaluate the benefits of trade credit, they may decide to include it in their business model

for a variety of reasons, as briefly mentioned previously. Companies may also be interested in establishing the best degree of trade credit for financing. This research serves as a basis for determining the degree of trade credit that firms should keep.

## **1.9 Organization of the Study**

The remaining part of the research is organized as Chapter 2 covers the literature on the topic. Section 3 discusses the methodological approaches, which include econometric model; Section four discusses results as well as discussion, as well as limitations. Chapter 5 discusses the study's conclusion, recommendations, and future directions.

# Chapter 2

## Literature Review

In trade credit, according to Ferris (1981), is a tool for lowering the transaction's associated costs. According to Peterson and Rajan (1997), trade credit is a significant component of the financial statement of every American business, accounting for 18% of total assets. They discovered that big businesses borrow and lend more trade credit. Despite having a higher cash flow and less prospects for development, larger businesses tend to borrow more. They are more creditworthy as a result of this.

Bussoli and conte, (2020) explained trade credit and firm profitability period from 2008 to 2016 of Italian firm. The results indicate that the trade credit contribute in company profitability of Italian companies. The findings also suggested that increasing trade credit investments on a large scale is a cause of improved organisation profits, and that the best utilization of TC to sellers and contribution of bank loans on a large scale minimise the involvement of debt in the organization's profitability. The study proposed useful ideas for working capital management, such as decreasing net working capital to reduce debt expenses and increasing liquidity, which influence the affirmative effect created by payables. The study also gives viable proposals to heads on working capital administration by showing that decreasing net working capital to lessen debt costs and improve liquidity probably won't consider the beneficial outcomes produced by trade credit. In fact, a higher measure of trade receivables may decide, from one viewpoint, the increment in financial needs, at the same time, then again, it reinforces relations

with clients, creating a positive effect on the productivity of organizations. The obtained outcomes place a premium on trade credit as a tool for dealing with the company's sector's suffocating competition. The provision of instalment expansions at a higher level than industry peers enables benefits that exceed the cost directly associated with the acquisition of new market shares. As a result, the precise outcomes suggest reconsidering trade credit the executive's policies as a way to support firm effectiveness. Finally, the findings suggested that financial organisations should benefit from the agreeable improvement of trade credit channels through motivations for the development of a financial framework suitable for assisting organisations in adopting a reasonable capital situation and raising capital to sell.

García-Teruel and Pedro Martínez-Solano, (2010) studied trade credit granted and received period from 1996-2002 of 47197 SMEs in Europe. The study looked for a consistent pattern in the variables determining trade credit in European countries. From one point of view, firms with a greater ability to obtain assets from the capital business sectors, and thus more economically, provide more trade credit to their clients. Furthermore, the results appear to support the value separation hypothesis. Organizations also responded by increasing the amount of credit they give out in an attempt to stem the decline in sales. Bigger companies, on the other hand, get more money from their sellers because they have more notable development opportunities and are more interested in actual assets. Where firms have elective wellsprings of account they are less inclined to depend on seller funding (replacement effect).

Trade credit offered by providers is especially significant for SMEs, taking into account the more noteworthy trouble they have in getting money through credit organizations. In addition, the degree of trade credit allowed and got shifts across various European nations. The key drivers of credit terms granted as well as received inside a case study of European SMEs have been examined. They wanted to see if there are any differences in the factors that influence degree of credit terms between European countries. Trade credit as a means of communicating information about the nature of a company's goods does not appear to be declared in any of the countries, according to all accounts. Firms with lower sales turnover (higher

capacity) and smaller firms (lower standing) offer less trade credit to their customers. Trade credit, on the other hand, addresses a proper market system. The outcomes seem to help the value segregation hypothesis, since they find that organizations with higher borders award more trade credit. Likewise, confronted with a decrease in their business, firms respond by expanding the credit they provide trying to stem falling trades. At the end the conclusion was particularly intriguing for firms working in various nations, since the research showed the primary components they need to consider to set up their trade credit strategy. Also, firms set up in nations having a place with the 'mainland' model (Belgium, France, Greece and Spain), which show the most elevated levels of trade credit conceded and got, must be especially worried about working capital administration rehearses to minimize borrowers' credit periods.

Non-financial businesses have a variety of options for generating the money they require. According to ideas, there are two primary ways to create finance: one is short-term and the other is long-term. Long-term financing is more profitable, but it necessitates a significant investment in the firm. The other is less profitable producing, but it provides an advantage against the firms' collapse. When a client is faced with a danger, he should consider alternative simple financing options, such as short-term financing, which has become more appealing to her. According to theory, unequal information causes problems in the market. This informational asymmetry occurs when some providers are more knowledgeable about the product deployed than others. As a result of asymmetric knowledge, certain suppliers have been able to modify their business practices differently from other suppliers in the same industry.

Trade credit is one of the alternatives for dealing with the problem of short-term financing. One of the options for dealing with the problem of short-term finance is trade credit. A trade credit agreement is one in which the seller commits to supply products or services to the buyer and the buyer agrees to pay the seller in the future according to the terms and circumstances of the agreement (Martinez Sola et al., 2012). As a result, trade credit is a critical tool for all sizes of businesses, particularly medium and small businesses. Different ideas were described by Petersen and Rajan (1997) for the reason that stable businesses may easily

obtain assistance from financial institutions, but unstable or small/newly arrived in market firms must seek out other sources of funding that are beneficial to the business. Buyers and sellers can use trade credit to simplify cash management and enhance efficiency. Trade credit is the most effective way to assess a buyer's creditworthiness and financial condition.

In the United Kingdom, for example, short-term debt is recorded as 70% account due on the balance sheet and 50% as cumulative debt. According to Burkart and Ellingsen (2004), In France, Germany, and Italy, credit terms accounts for one - third of corporate assets, and a quarter of corporate assets in growing nations where firms find it difficult to obtain bank loans, such as China (Ahmed, Xiaofeng and khalid,2014). In trade credit, the supplier has a comparative advantage over financial institutions in terms of collecting information about the client simply and promptly. Suppliers have an edge over financial institutions in terms of information.

Summers and Wilson (2002) define trade credit as a tool for completing all business elements. When a new firm enters the market, it might develop a reputation and success if it uses trade credit transactions since it creates new market ties. Small and medium-sized businesses are unable to obtain financing on favorable terms, which causes them to collapse. According to Ono (2001), suppliers have an edge and influence over consumers since they control the supply of products. They also know the customer's financial situation. According to Smith (1987), when a buyer receives a discount, it represents the buyer's poor financial situation. When financial institutions refuse to give credit, businesses must look for other possibilities, which includes trade credit (Petersen and Rajan, 1997).

When a little quantity of money is needed for commercial purposes, it becomes a roadblock to growth, and borrowing for this purpose requires paying a lot of interest (Storey, 1994). These issues occur as a result of unequal information, according to economic theory.

In Pakistan, trade credit contracts are the most common method of financing for non-financial businesses. According to Frank and Maksimovic (2008), due to the financial market's volatility, buyers and suppliers might benefit from a trade credit

arrangement. When there is an issue with financing, purchasers will always look for another option, such as a trade credit contract, which is more convenient to use.

According to Ahmed, Xiaofeng, and Mujtaba (2015), the usage of trade credit rose in the country as a result of the 2008 financial crisis. Trade credit allows a buyer to stay competitive in a competitive market. It implies a very effective usage of trade credit in developing countries and developed countries. In the early 1990s, TC accounted for 17.8% of total assets for all American businesses (Rajan and Zingales, 1995). According to Kohler (2000), trade credit accounts for 55 percent of trade credit obtained by other businesses. Martinez Solano (2013) found that trade credit parameters and company characteristics vary by culture, and that the nature of trade credit is influenced differently by different cultures.

Trade credit is an external method of financing a business that is cheaper at a discount if the buyer pays sooner (Giannetti et al., 2011). Trade credit, according to Jain (2001), is a financial source for businesses and has a direct link with business. Because of the inefficiency of the financial markets, both the buyer and the seller utilize trade credit to develop their enterprises (Maksimovic, 2008). Small and medium-sized businesses may acquire trade credit from their suppliers far more readily than they can secure a bank loan to run their firm.

Existing businesses in industrialized countries, according to Buch, Eickmeier, and Prieto (2014), are more interested in loan funding. Financial institutions spend more money and time gathering information about their customers' financial situations and the products they want to use, whereas suppliers can obtain more accurate and up-to-date information about their customers for a lower cost. This cost helps the suppliers to deliver the goods at highest benefit because they are in the same industry or business. In comparison to banking organizations, recovering money on trade credit is a simple job.

When a client delays payment, it signals to the supplier that he or she should discontinue supplying that particular customer in the future. When a customer is unable to pay the stipulated sum to the provider, the supplier has the right to repossess the supplies and sell them to another buyer, as indicated in the contract.

However, this was not an easy task for the bank. Proper documentation is not necessary in trade credit contracts, but it is required by financial institutions.

Finance has been a signal between buyer and supplier Jimenez, Lopez and Saurina (2013) and trade credit and bank loan are two sources of finance (Maksimovic, 2008). Because of the cheap cost, suppliers operate as intermediaries, according to Carbo, Rodriguez, Fernandez, and Udell (2016). Non-financial businesses (particularly small businesses) experience a shortage of short-term loans from banks.

Trade credit plays an essential part in any company's non-financial policy. Using trade credit to finance a company investment is a good idea. Trade credit supply is a portion of the assets of European firms, according to their balance sheets. According to Beck (2008) and Ge and Qiu (2007), TC serves as an alternate way of external finance for developing nations who lack access to appropriate financial institutions and are unable to fulfil the standards of such institutions.

The usage and impact of trade credit in various nations has been studied by Petersen and Rajan (1997); Niskanen and Niskanen (2006). Trade credit was seen as a significant component on the balance sheet of American businesses in the early 1990s the Americans avail trade credit more than regular finance (Rajan and Zingales, 1995). Trade credit, according to theorists Smith (1987); Long (1993), is a mechanism for ensuring product quality as well as reducing information asymmetry for buyers.

According to Coleman (2000), tiny and medium-sized firms are unable to obtain the necessary finance, and as a result, they fail in comparison to big firms. Suppliers provide products on credit to differentiate the price to the consumer, according to suppliers (Emery, 1987). (Rajan, 1997). In transaction cost theory, Ferris (1981) stated that trade credit is the optimum option.

According to Wilner (2000); Cunat (2006), suppliers provide discounts to depressed customers in order to maintain long-term relationships and resolve their customers' liquidity problems. Countries such as Italy, France, and Germany, as well as growing countries such as China, have greater trade credit than total assets. Qiu and Ge (2007). Commercial banks in emerging nations are more hesitant to finance non-financial firms, according to (Rajan and Zingales, 2003).

According to Long et al. (1993), large firms have a high reputation and have more storage capacity for keeping merchandise, but they do not have the liquidity problem that small businesses do, and they can acquire cash from any source. The value of trade credit varies depending on the sector and the nation. Marotta explains trade credit users in nations where products production is an essential element of the economy 1998.

Small businesses are more interested in issuing trade credit to handle their liquidity problems. Large corporations are less interested in credit transactions and are not required to provide product guarantees (Long et al., 1993). 19.7% of investment is financed by trade credit as an external source, based on a survey of 48 nations (Kunt, Beck, and Maksimovic, 2008).

Trade credit accounts for more than 30% of foreign financing in developed nations such as the United Kingdom and France. Berger, Udell (1998), and Cunat (2006) claim that firms in their early stages and newer companies depend on heavily on trade credit as an outside source of finance. More assistance is provided by the supplier, who also offers working capital financing. According to Cook (1999), these offers enable purchasers to begin a new period of commerce and create a fresh payment history for the foreseeable future.

In comparison to other types of financing, the function of trade credit for development has received less scholarly attention. When a supplier extends trade credit, he frequently charges zero interest to his customers. To maintain a long-term commercial relationship with the buyer, the supplier issues items in limited quantities or at a significant discount. According to Schwartz (1974), trade credit has been widely employed and is still more important than other external sources of finance. Information theory and transaction cost theory the asymmetry hypothesis is economically significant and fully explains the desire for trade credit. Buyers confront credit limitations as well as investment opportunities, and they might expand their business to enhance their investment. With increased sales, they may easily acquire market share and flourish.

Trade credit, according to Emery (1987), is a financial reaction to fluctuating demand. Consider a business that has seen a sudden drop in demand. There

are two choices available to the firm. Either stockpile pricey merchandise (which may or may not be sold later) or offer trade credit to clients who are experiencing financial difficulties. Between inventory and trade credit, there is obviously a trade-off. Trade credit is a win-win situation for the supplier and the customer. Enterprises that offer trade credit must have the financial cost to sustain (down in demand) advantages, but they must be disadvantaged in terms of maintaining the operating expenses of larger finished products inventories.

Businesses that get trade credit from their suppliers are more likely to give trade credit to their customers and match the time period of their payment with the contractual requirements of their receivable, according to Fabbri and Klapper (2008). They also observed that companies with higher retained earnings are less likely to fund their own accounts payable, whereas those that rely on costly, informal financing are more likely to match accounts payable and receivable. As a result, the trade credit operations of these businesses are more likely to become self-sustaining sources of capital.

They observed that businesses that used retained revenues to fund themselves were more likely to provide their clients trade credit, comparable to the result that profitable private enterprises were more likely to do so. These companies are net providers of trade credit, presumably to creditworthy but cash-strapped companies, because they don't rely on their suppliers' trade credit.

According to the research, if trade credit is used as an informal financing method to improve efficiency, more profit-making firms will expand trade credit. According to Petersen and Rajan (1997), failing businesses may use trade credit extensions to keep their sales flowing, although some trade credit extensions are more beneficial than others provided by economically disadvantaged enterprises may be forced.

According to Yang and Lin, (2011), cost of goods sold has a significant positive impact on accounts payable for all organisations, with estimates for large enterprises being greater than estimates for small businesses, corresponding to cost of goods sold and accounts payable. Large firms, on the other hand, may be able to obtain more trade credit from suppliers since they use more account payable in their operations than small businesses.

According to Vaidya (2012), the inventory-to-sales ratio is inversely connected to trade receivables (at level of 5 percent). The finished goods inventory coefficient is negative when inventories are divided into finished products inventories, raw materials inventories, and semi-finished goods inventories (at level of 1 percent). The outcome of the raw material stock coefficient is positive but not significant. This means that firms have more accounts receivable and less finished product inventories, so they provide more trade credit to boost sales and reduce finished goods inventory. As a result, inventory management is critical for businesses that issue trade credit to other businesses. The inventory reason has a positive account payable indication, but it's only significant at 10%. Both finished and raw material stocks exhibit positive and significant signals of larger finished product inventory when we classify inventories. As the firm accumulates both types of inventory, they are able to offer more trade credit to enterprises who have seen a drop in sales.

Inventories always have a favourable impact on accounts payable, with large-scale forecasts outperforming small-scale forecasts. This is consistent with the idea that accounts payable may be issued against stock since stock is readily liquidated, which is particularly true for small businesses. Stocks have a significant negative impact on all businesses, especially large ones. Negative effects may indicate that stocks, rather than accounts receivable, are used as a hedge against internal financing (Carpenter, Fazzari, and Petersen, 1994; Choi and Kim, 2001).

Cash and cash equivalents maintained by the firm have a favorable influence on accounts receivable and trade payable, according to Yang and Lin (2011). Companies having more bank credit can provide less trade credit to their customers. Even so, it demonstrates that the firm has no financial issues. Companies with larger bank loans will not pass them on as accounts receivable to their purchasers. Furthermore, having liquid assets may indicate the ability to pay back debts on schedule.

Peterson and Rajan (1997) also point out that the size of the firm affects the amount of trade credit borrowed and extended. Institutional credit is given to more trustworthy businesses. Despite having greater cash owes and less development prospects, large firms often have more borrowing, implying that they are

more respectable. Companies with a healthy cash flow provide relatively greater receivables.

According to Petersen and Rajan (1997), a company's creditworthiness should influence the credit lines it offers. The creditworthiness of a firm is particularly essential when determining whether or not to extend loans. The explicit price of trade credit does not appear to be affected by credit quality. Customers in an industry get typical trade credit terms, according to (Smith, 1987).

Suppliers must employ a quantitative limit if they do not utilize pricing and do not charge lower-quality borrowers greater and de native prices. As a result, we anticipate that more high-quality firms will be granted greater trade credit. Changes in the size (dummy) and credit ratings of large and small businesses have resulted in significant credit quality improvements and declines.

The provider's terms and conditions, as well as the price, must contain any credit quality-related information that the supplier can observe and believes is relevant. It may be viewed as a valuable source of information for suppliers. As a result, suppliers appear to provide credit to both the most pro table and the least pro table businesses. This indicates that they may have an edge in lending to a consumer with a lower credit score who would otherwise be turned down by financial institutions.

Why do suppliers seem so willing to extend trade credit to businesses that don't have access to bank financing? One reason could be that, as previously stated, unprofessional table companies may not be around in the future. Suppliers might capture future revenues from a firm by investing in connections with companies that are now unprofitable. Suppliers can invest in their clients' future viability and stability by lending to these ostensibly high-risk businesses. For the sake of management efficiency, asset turnover is an essential ratio.

Asset turnover is a metric for calculating income earned from the usage of assets. It demonstrates the company's capacity to increase revenue. According to Koh and Amherst (2017), asset turnover indicates how much of the company's assets were utilized to generate revenue. A greater asset turnover value shows that the firm has utilized the asset effectively against the sale. Asset rotation reveals that

the resulting assets have a significant influence on both receivables and payables trade credit arrangements. More trade credit will be available if asset turnover increases. The shift in asset turnover, according to Faireld and Yohn (2001), forecasts the company's future viability. The researchers also argue that variations in asset turnover should be monitored by investors and analysts since they indicate a company's future viability.

Rashid and Abbas (2011) performed research to forecast the non-financial sector's insolvency in Pakistan. They examine pro stability, liquidity, leverage, and turnover over the five years preceding bankruptcy using 24 financial measures. They claim that between 1996 and 2006, financial ratios were critical in predicting bankruptcy. Total assets, EBIT, current liabilities, and cash were sold as a result of the discriminant analysis. Ratios are interesting. Their findings demonstrate that "firms with Z below zero are bankrupt," whereas "firms with Z above zero are non-bankrupt." Furthermore, when the model is used to forecast bankruptcy, it has a prediction accuracy of 76.9%.

Smaller businesses have grown their trade credit as a proportion of sales in comparison to previous research, such as (Petersen and Rajan, 1997). This is because small business clients are often smaller, require trade financing, or small firms are better informed about their customers, more adept and driven to recover receivables, and therefore more likely to extend trade credit (Cull, Xu, and Zhu, 2008).

According to Diamond (1989); Rajan, Zingales (1995); Akhtar, Javed, Maryam, and Sadia (2012), small and medium-sized businesses have more access to trade credit and less possibilities to obtain a bank loan, but large businesses have easier access to bank loans.

Different factors of capital structure exist for businesses of various sizes. Companies that have previously completed credit transactions do not need to guarantee the goods, but they must ensure that the supplier and buyer's reputations are maintained makes the company stronger than before and leads to a circumstance where the company is bigger firms, the more credit they will be able to obtain (Long, 1993). Large firms are offering greater trade credit, according to Petersen

and Rajan (1997), since they have a lot of accounts payable. The larger the firm, the more opportunities there are for correctly managing and maintaining the mechanism so that analysts may produce more accurate transactions and records, as well as a huge number of trading floor. These factors contributed to the company's massive financing. When large corporations use their market power, they have an influence on profitability.

Huyghebaert, (2006) discussed the Determinants and Dynamics of Trade Credit Use over the period 2006. They examined new and considerable evidence on why firms depend on commercial debts by analyzing the trade credit utilization of business new startups during the initial ten years of their life cycle. Their chances of more failure and financial imperatives, furthermore, their absence of relationship with banks and dealers differentiate new establish firms from well-organized firms. We find that fire up business obligation use is impacted by these particular firm qualities. Moreover, they find that trade credit use reflects the changing highlights of developing business new companies. New businesses that are financially forced, as estimated by their inward money creation and the cost of bank loans, utilize more trade credit. The last impact is more grounded when the business is developing and suppliers may have an encouragement to differentiate among cash and credit clients. Regardless of whether suppliers rehearsing cost separation drive this connection, it can't be deciphered as providers are abusing the law. Without a doubt, providers may offer equivalent terms to all purchasers while particularly monetarily compelled firms effectively utilize the all-encompassing trade credit.

Cull et al, (2009) studied Formal finance and trade credit during China's transition Using a huge panel data of Chinese industrial firms over the period 1998 to 2003 Utilizing an extraordinary wide example of Chinese firms and organizations, they found that proper credit designation in China was one-sided towards generally unfruitful SOEs and in this way incompetent; there is proof, however, that the distribution of formal credit improved over the long run. A one-sided and wasteful financial framework may on a basic level offer ascent to the replacement of trade credit for formal credit. In fact, their objective at the start of the study was to more readily see how the private area can develop when admittance to

outside account is so restricted for non-SOEs on the grounds that formal financial organizations will in general make debts to unprofitable SOEs. In any case, they didn't discover solid proof that trade credit assumed a financially critical part in China. SOEs expanded more trade credit than different sorts of firms, however this is in all possibility because of compulsory loaning by less productive SOEs to cover financial overdue debts, a circumstance stemming to some degree from their low motivations to gather receivables. Productive private firm's additionally on-loaned part of their conventional credit by means of trade credit to help their exchanging accomplices, and the on-loaning declined when the allotment of formal credit turned out to be more effective. Trade credit may have given a substitute for advances for private firms' exchanging accomplices that were closed out of formal credit markets.

This is reliable with the expectations of Burkhart and Ellingsen (2004) in regards to the chance of repossessing and exchanging the merchandise sold, however it can likewise be clarified by the way that retailers create more money comprising better insurance for financial creditors.

Coricelli and Frigerio, (2019) examined Interenterprise Credit and Adjustment during Financial Crises. They concluded that in a time of financial crises, trade credit is a significant source of heterogeneity of impacts on liquidity of firms described by various market power, financial attributes, and innovations. Specifically, the study shows that European SMEs have been pressed in their liquidity during the Great Recession through an increment in their net trade credit. Our examination shows also that the elements of net trade credit played a quantitatively huge impact on actual execution, both on work market factors and on investments. Accordingly, the extra liquidity just barely get actuated by changes in net trade credit positions decided since quite a while ago run negative consequences for firms. Given that SMEs showed the biggest expansion in their net trade credit positions, they additionally suffered most regarding funds. An especially stressing marvel is that the liquidity crush on SMEs has been an industrious wonder, waiting in any event 5 years after the beginning of the monetary emergency in 2013.

Engemann et al, 2014 described Trade Credits and Bank Credits in International Trade using a sample of German manufacturing firms for the period 1994–2009. In

this paper the hypothetical model, they showed that despite the fact that provider credits can include high verifiable loan costs, they are interesting to financially obliged exporters. Supplier credits give extra liquidity to a firm, however they fill in as a sign of the nature of bought intermediates. Firms that are allowed a supplier credit can condition the payment of the middle of the road contribution on the quality conveyed and consequently vulnerability concerning the nature of the info is diminished. From one perspective, this raises the normal productivity of the fare exchange.

Then again, it decreases liquidity imperatives emerging from defective agreement requirement. This can make up for the high provider credit loan fees since banks will broaden a corresponding bank credit at a less expensive loan fee than without provider credit financing. The higher the vulnerability, the more appealing provider credit financing becomes. While all in all, provider credit and bank credit are substitutes, for those organizations that can't stand to trade if just unadulterated bank financing is accessible, provider credits display a corresponding impact on bank credits, that is, empower a firm to acquire extra bank credit. In this way, the correlative impact weakens the general replacement impact. The reciprocal impact is especially solid for monetarily compelled exporters

Udell et al, (2016) explained Trade Credit, the Financial Crisis, and SME Access to Finance using the data of 40,000 Spanish SMEs. They concluded that, they dissect whether trade credit gave an elective source of outer account to SMEs during the emergency utilizing firm-level board information on more than 40,000 Spanish SMEs. Like other ongoing examinations utilizing European SME information we find huge proof of an overall credit emergency in the SME area during the emergency. However, interestingly, they additionally find that SME admittance to these two elective wellsprings of outer money fluctuates across firms and that it changed during the emergency curiously.

In particular, they find that credit compelled SMEs rely upon trade credit, however not bank advances, to fund capital use—and that the force of this reliance expanded during the monetary emergency. Unconstrained firms, interestingly, are reliant on banks advances yet not trade credit. This proposes that trade credit was a significant instrument that caused some SMEs adapt to the credit emergency

initiated by this emergency. At the end, they discover proof that trade creditors assume a part in the SME area as moneylenders after all other options have run out and this job turns out to be more significant during a credit emergency.

Seifert et al, (2013) explained in review of trade credit literature that trade credit emerges when a buyer defers disbursement for bought products or facilities. Its inclination has mostly been a zone of request for specialists from the orders of finance, marketing, and financial aspects however it has gotten generally little consideration in different areas. Lee and Stowe, (1993) described product risk, asymmetric information and trade credit using two-periodic economy they concluded that there is an isolating balance where the size of the cash discount passes on information about item quality. The main impetuses of this balance result are the risk sharing thought processes of the manufacturer and purchaser just as unequal information about item quality. They also concluded that the risk sharing intentions of the delivering firm and the speculation banker, just as unequal data on the nature of new matters, might be significant fixings that clarify the development of institutional practices and the perception of observational normality in the IPO market.

Trade Credit Terms: Asymmetric Information and Price Discrimination was investigated by Pike et al. (2005). This study examines whether trade credit terms provide legally binding answers for enlightening asymmetry between purchasers and sellers, based on responses from 700 large firms in the United States, the United Kingdom, and Australia. The credit period allows buyers to reduce their uncertainty about item quality prior to payment, while the merchant can reduce buyer payment expectations by approving instalments prior to or on delivery, or by using two-section payment terms and various instruments. Companies can also cost-segregate by using a variety of trade credit terms. They also discovered evidence to support the idea that the strength of competing asymmetrical information pressures dictates to some extent the credit strategies and terms adopted by firms.

Long et al, (2014) examined the Trade Credit, Quality Guarantees, and Product Marketability The financial, duty, and liquidity hypotheses all anticipate that bigger, more creditworthy firms will expand more trade credit and that organizations

which sell on trade credit won't accepting on credit.

Ferris, (2014) studied A Transactions Theory of Trade Credit Use. The described that at the point when the trade credit is utilized, the trader who is assigning products will at the same time award credit to the trader accepting the products. The advance allows the collector of the products to delay his utilization of cash until the finish of the advance time period. In some cases, although substantially less regularly, trade credit will be given to the deliverer through the development installment of cash.

Also, subordinate creditors decrease the rates they charge all the more quickly as their client's probability of default diminishes. At the point when a reliant creditor can totally segregate, its clients are apathetic between all credit types. On the off chance that total segregation can't happen, a monetarily upset firm, craving the related renegotiation benefits, acquires from the needy creditor regardless of whether the nondependent creditor offers lower rates.

Wilner, (2000) examined The Exploitation of Relationships in Financial Distress. They focused on trade credit, yet it similarly shows, all the more by and large, that reliance in reciprocal connections clarify frequent surprises about loaning. Initial, a needy creditor gives more concessions in renegotiation than a creditor without such a belief. To compensate for these concessions, the reliant creditor's financing cost rises with the level of reliance. Because of these concessions, the ward creditor's financing cost fluctuates more than the nondependent creditor's rate due to changes in the risk free rate.

According to Long et al. (1993), large firms have a high reputation and have greater storage capacity for keeping merchandise, but they do not have the liquidity problem that small businesses do, and they can obtain cash from any other source. The value of trade credit varies depending on the sector and the nation. Marotta explains trade credit users in nations where products production is an essential element of the economy 1998. Small businesses are increasingly interested in extending trade credit to handle their liquidity issues. Large corporations have a lower interest in credit transactions and are not required to provide product guarantees (Long et al., 1993).

According to Beck, Kunt, and Maksimovic (2008), 19.7% of investments are financed by trade credit as an external source, based on a survey of 48 nations. More than 30% of finance in developed nations like the United Kingdom and France comes from trade credit. According to Elliehausen and Wolken (1993), 60 percent of small businesses in the United States rely on trade credit as a primary source of funding. Businesses at the start and younger firms, according to Berger, Udell (1998); Cunat (2006), rely on trade credit as an external source of finance. Suppliers provide additional assistance and give working capital finance. According to Cook (1999), these offers enable purchasers to enter a new age of commerce and establish a new payment history for the foreseeable future.

In comparison to other types of finance, the function of trade credit for development is relatively understudied in academic circles. When a supplier extends trade credit, he frequently charges zero interest to his customers. To maintain a long-term commercial relationship with the buyer, the supplier issues items in limited quantities or at a significant discount. According to Schwartz (1974), trade credit has been widely employed and continues to be more important than other external sources of funding. The trade credit demand is completely described by transaction cost theory and information asymmetry theory, both of which are economically significant. Buyers confront credit limitations as well as investment opportunities, and they might expand their business to enhance their investment. With increased sales, they may easily acquire market share and flourish.

Trade credit, according to Emery (1987), is a financial reaction to fluctuating demand. Consider a business that has seen a sudden drop in demand. There are two choices available to the firm. Either stockpile pricey merchandise (which may or may not be sold later) or offer trade credit to consumers who are cash-strapped. Between inventory and trade credit, there is obviously a trade-off. Trade credit is a win-win situation for both the supplier and the customer. Businesses that offer trade credit must have the financial resources to withstand (down in demand) advantages, but they must also be disadvantaged in terms of maintaining greater completed products inventories.

According to Fabbri and Klapper (2008), companies that get trade credit from their suppliers are more likely to provide trade credit to their customers and match

the time period of their payment with the contractual conditions of their receivable. They also discovered that businesses with larger retained earnings are less likely to fund their own accounts payable, whereas businesses that rely on expensive, informal sources of finance are more likely to match their accounts payable and receivable. As a result, these firms' trade credit activities are more likely to become self-sustaining sources of funding.

They discovered that businesses that financed themselves with retained earnings were more inclined to offer trade credit to their clients, which was comparable to the finding that profitable private firms were more likely to increase trade credit. Because these businesses do not rely on trade credit from suppliers, they are net providers of trade credit, presumably to creditworthy but cash-strapped businesses. However, since trade credit is an informal financing channel for increasing efficiency, it is expected that more profit-making businesses will grow trade credit. According to Petersen and Rajan (1997), struggling firms may utilize trade credit extensions to maintain sales, but some trade credit provided by economically disadvantaged businesses may be forced.

The inventory-to-sales ratio and trade receivables are inversely linked, according to Vaidya (2012) at level of 5 percent. The completed products inventory coefficient is negative when inventories are divided into finished items, raw materials, and semi-finished goods significant discount. According to Schwartz (1974), trade credit has been widely employed and continues to be more important than other external sources of funding. The trade credit demand is completely described by transaction cost theory and information asymmetry theory, both of which are economically significant. Buyers confront credit limitations as well as investment opportunities, and they might expand their business to enhance their investment. With increased sales, they may easily acquire market share and flourish.

Trade credit, according to Emery (1987), is a financial reaction to fluctuating demand. Consider a business that has seen a sudden drop in demand. There are two choices available to the firm. Either stockpile pricey merchandise (which may or may not be sold later) or offer trade credit to consumers who are cash-strapped. Between inventory and trade credit, there is obviously a trade-off. Trade credit is a win-win situation for both the supplier and the customer. Businesses that

offer trade credit must have financial resources to withstand (down in demand) advantages, but they must also be disadvantaged in terms of maintaining greater completed products inventories.

According to Fabbri and Klapper (2008), companies that get trade credit from their suppliers are more likely to provide trade credit to their customers and match the time period of their payment with the contractual conditions of their receivable. They also discovered that businesses with larger retained earnings are less likely to fund their own accounts payable, whereas businesses that rely on expensive, informal sources of finance are more likely to match their accounts payable and receivable. As a result, these firms' trade credit activities are more likely to become self-sustaining sources of funding.

They discovered that businesses that financed themselves with retained earnings were more inclined to offer trade credit to their clients, which was comparable to the finding that profitable private firms were more likely to increase trade credit. Because these businesses do not rely on trade credit from suppliers, they are net providers of trade credit, presumably to creditworthy but cash-strapped businesses. However, since trade credit is an informal financing channel for increasing efficiency, it is expected that more profit-making businesses will grow trade credit. According to Petersen and Rajan (1997), struggling firm may utilize trade credit extensions to maintain sales, but some trade credit provided by economically disadvantaged businesses may be forced.

The inventory-to-sales ratio and trade receivables are inversely linked, according to Vaidya (2012) (at level of 5 percent). The completed products inventory coefficient is negative when inventories are divided into finished items, raw materials, and semi-finished goods stocks (at level of 1 percent). The outcome of the raw material stock coefficient is positive but not significant. This shows that businesses have more accounts receivable and less completed goods inventories, so they extend more trade credit to boost sales and reduce finished goods inventories. As a result, inventory management is critical for businesses that issue trade credit to other businesses. The inventory reason has a positive account payable indication, but it is only significant at a 10% level. Both finished and raw material stocks exhibit positive and significant indicators of higher finished product

inventory when we categories inventories. As the corporation accumulates both forms of inventory, they have access to additional trade credit, which they may then provide to businesses who have seen a drop in sales.

Inventories always have a positive influence on accounts payable, with large-scale estimations being greater than small-scale estimates. This is in line with notion that accounts payable may be issued against stock since stock is easily liquidated, which is especially true for small firms. Stocks have a significant detrimental impact on all businesses, particularly large businesses. Negative impacts might indicate that stocks are utilized as a buffer against internal financing rather than accounts receivable (Carpenter, Fazzari, and Petersen, 1994; Choi and Kim, 2001).

Cash and cash equivalents maintained by the firm has favorable influence on accounts receivable and trade payable, according to (Yang and Lin, 2011). Companies with better bank credit might provide less trade credit to customers. Even, it demonstrates that firm has no financial issues. Companies with larger bank loans will not pass them on as accounts receivable to their purchasers. Furthermore, having liquid assets may indicate the ability to pay back debts on schedule. The amount of accounts payable is decided once again by the credit granted by the supplier to the company and the future needs of the company. Small businesses, according to Petersen and Rajan (1997), use trade credit less than large businesses. Large firms' accounts payable accounted for 11.6 percent of sales, whereas smaller companies' accounts payable accounted for 4.4 percent of sales. Small firms are likewise less likely to provide trade credit.

Petersen and Rajan (1997) also point out that size of organization impacts the amount of trade credit borrowed and extended. Institutional credit is given to more trustworthy businesses. Larger firms frequently borrow more, while having better cash flows and fewer expansion prospects, implying that they are more respectable. Companies with a healthy cash flow provide relatively greater receivables.

According to Petersen and Rajan (1997), a company's creditworthiness should impact the credit lines it offers. The creditworthiness of a firm is particularly essential when determining whether or not to extend loans. The explicit price of trade credit does not appear to be affected by credit quality. Customers in

an industry get typical trade credit terms, according to Smith (1987). Suppliers must employ a quantitative limit if they do not utilize pricing and do not charge lower-quality borrowers greater and ultimate prices. As a result, we anticipate that more high-quality firms will be granted greater trade credit. Changes in the size (dummy) and credit ratings of large and small businesses have resulted in significant credit quality improvements and declines.

For the sake of management efficiency, asset turnover is an essential ratio. Asset turnover is a metric for calculating income earned from the usage of assets. It demonstrates the company's capacity to increase revenue. According to Koh and Amherst (2017), asset turnover indicates how much of the company's assets were utilized to create revenue. A greater asset turnover value shows that the item has been successfully utilized against the sale.

Asset rotation reveals that the resultant assets have a significant influence on both receivables and payables trade credit arrangements. More trade credit will be accessible as asset turnover increases. The shift in asset turnover, according to Faireld and Yohn (2001), forecasts the company's future profitability. Investors and analysts should also look at changes in asset turnover, according to the experts, because they show the company's future profitability.

The trade credit, according to Shaheen and Y.Javid (2014), is a tool that evaluates the likelihood of investors receiving interest on debt and principal repayments under the applicable contract provided by the borrower. Beaver (1966) forecasts the financial statements of the previous year before the bankruptcy using financial parameters such as cash flow ratio, profitability ratio, liquidity ratio, and turnover ratio in the financial statements. They used asset sizes and data from both failed and successful firms in the same industry to keep the data balanced.

Bissoondoyal-Bheenick (2005) tested the quantitative determinants of credit ratings using the firm's financial ratios. The primary findings demonstrate that profitability, size, and leverage ratio all have an effect on the credit rating prediction. Furthermore, early evidence of the impact of changes in ratings shows that simply the impact of a credit rating drop on markets cannot be extended to all credit rating agencies, according to the findings.

Smaller businesses have grown their trade credit as a proportion of sales in comparison to previous research, such as (Petersen and Rajan, 1997). This is because small business customers are often smaller, require trade financing, or are more knowledgeable about their customers, more capable and motivated to collect receivables, and thus more willing to extend trade credit (Cull, Xu, and Zhu, 2008). According to Diamond (1989), Rajan, Zingales (1995), Akhtar, Javed, Maryam, and Sadia (2012), small and medium-sized businesses have more access to trade credit and have fewer odds of getting a bank loan, but big businesses have easier access to bank loans.

It focuses on the monetary aspects of trade credit. When firms' acquiring and lending rates differ, trade credit, according to Emery (1984), can be used to compensate for the difference. According to Smith (1987) and Biais and Gollier (1997), a dealer obtains knowledge on the true state of a buyer's business in usual course of business that is not known to money related delegates. They may not have up-to-date information on industry circumstances and are forced to rely too heavily on accounting data. Because this information is potentially essential, dealers who follow up on it extend loans to buyers on conditions that they would not be able to acquire via money-related middlemen.

## **2.1 Hypothesis Development**

### **2.1.1 Trade Credit and Profitability**

Hill et al, (2012) studied Shareholder Returns from Supplying Trade Credit. They inspect investor wealth consequences of giving financing to clients. The outcome recommend that abundance returns and changes in trade receivables are straightforwardly and fundamentally related. Further evidence demonstrates that providers with more grounded intents associated with working and contracting costs have a larger estimation of receivables.

The outcomes additionally recommend a limited estimation of receivables for monetarily unconstrained firms. Generally, they conclude that financial backers perceive trade credit as a successful instrument in relieving gratings upsetting deals

development. Accordingly, certain providers are situated to get expanded vital advantages from credit strategy.

Martenz-Sola et al., (2013) studied Trade credit policy and firm value. They concluded the state of the connection between firm worth and trade credit for an example of Spanish recorded firms in the time frame 2001 to 2007. They concluded the trade-off among advantages and expenses of investing resources into trade credit, they estimate a non-direct connection between records of sales and firm worth.

As expected, the outcomes acquired show a positive connection between firm worth what's more, trade credit at low degrees of receivables and a negative one at significant levels. To offer power to the outcomes, they dissect whether deviation from target accounts receivable level diminishes firm worth. Predictable with the past examination, they find that deviations from this degree of receivables decline firm worth.

Yazdanfar and Ohman,(2015) examined the effect of credit supply on growth of sales. They investigate effect of industry connection on sales growth, inferring that development is a cross-area phenomenon naturally. Quite compelling is that the health care area shows reverse connections between sales growth, on one hand, and big growth in sale and firm size, individually, on the other, contrasted and the generally design in the retail and metal areas. Despite such irregularities, the effect of the autonomous factors on deals development for every industry area by and large affirm the ends drawn from the primary model.

An association's credit strategy is straightforwardly connected with its business strategies, and an association's achievement is by all accounts identified with its capacity to gather and forecast default on interests in debt claims. Since the supply of trade credit is attached to the two expenses and advantages, management should to be worried about how records of sales are overseen. By embracing formal records receivable administration schedules to accomplish or keep a satisfactory records receivable level, SMEs can improve development. Anyhow, it should be recalled that records of sales are only one segment tended to in working capital management, the firm leader should likewise focus on stock and records payable.

Abuhommous, (2017) examined The Impact of Offering Trade Credit on Firms' Profitability. They said investment in trade credit speeches a lot of an organization's balance sheet thing. Trade credit exists since firms permit clients to defer the installment for their buys. With a huge sum put resources into records of sales, it very well may be normal a company's management of this venture affects the company's productivity. Hence, firms plan to exploit this venture and increment their benefit. Along with that, they investigate inspects the job of interest in records of sales on firms' productivity, utilizing an example of openly recorded Jordanian firms from 1999 to 2015.

Box et al, (2018) studied operating performance and aggressive trade credit policies. They analyze the working performance enhancements related with the increase of trade credit. Their outcomes propose a positive and huge connection between future benefit and contemporary trade credit arrangement. They further discoveries demonstrate essentially higher edges, incomes and pieces of the pie for firms that expand more trade credit than industry contenders with comparative attributes, operational necessities and monetary pain levels. These inductions are strong to a few econometric concerns, for example, the joint assurance of trade credit expansion and firm execution. In general, their outcomes suggest that forceful trade credit arrangements can give firm administration an exceptional channel to improve item market execution.

**Hypothesis 1:** There is positive significant impact of trade credit on company's profitability.

**Hypothesis 2:** There is negative significant effect of excessive receivables on company's profitability.

The capital structure of businesses of various sizes is determined by a variety of factors. Companies that have already completed credit transactions do not need to guarantee the goods, but must ensure that the supplier and buyer's reputations are enhanced, resulting in a system in which the larger the company, the more credit it may obtain (Long, 1993). Large firms are offering greater trade credit as compare to low volume of firms according to (Petersen and Rajan 1997), since they have a lot of accounts payable.

**Hypothesis 3:** There is significant positive relationship between other control variables on company's profitability.

**Hypothesis 4:** There is significant negative relationship between Debtall on company's profitability.

**Hypothesis 5:** There is significant positive relationship between Size on company's profitability.

**Hypothesis 6:** There is significant positive relationship between Growths on company's profitability.

# Chapter 3

## Research Methodology

### 3.1 Data Description

This portion of research explains how the data was obtained and where it came from. The data of all non-financial firms registered in the Pakistan stock exchange was obtained from the official website of the Pakistani Central Bank, and the methodology was adopted to determine impact of independent variables (return on assets) on dependent variables (Receivables and excessive receivables) and control variables (growth, debtall, size, and GR) of Pakistani non-financial firms.

### 3.2 Population

A research population is a group of data that are the subject of a research. Research is carried out for the benefit of the general public. A common, binding quality or attribute is generally shared within a research data. The Population of this research includes all non-financial firm of Pakistan, listed on PSX.

### 3.3 Sample

The sample size of any study should be the representative of population. For this study the sample size includes data of all those non-financial firms which provides

complete information which concerns with this study is the part of this analysis. The selection of sample is based on the basis of the availability of data according to the need of the study. In this study total 100 companies selected according to the availability of complete data which matches to our variables and helps in analysis.

The Financial firms does not included in this study because trade credit deals in non-financial firms, only non-financial firms data use to do the analysis. This study uses both cross-sectional and time-series data, with data collected over a 12-year period from 2008 to 2019.

### **3.4 Sources of Data**

The secondary data is already available and ready for analysis because this study is based on secondary data. The sources of secondary data which collected for analysis include both government and private publications, i.e financial reports of entities and website of State bank of Pakistan (SBP). Secondary data from annual financial accounts of non-financial firms are used related to trade credit. Balance sheets of non-financial firms used to collect the data of accounts payable for analysis.

### **3.5 Variables**

In this study receivables and excessive variables are used as independent variables, and dependent variable of this study is return on asset. Growth, size and debt are control variables, while growth multiply by receivables is interaction variable.

#### **3.5.1 Dependent Variables**

##### **3.5.1.1 Return on Assets**

Return on assets (ROA) depicts a firm's profitability in relation to its total asset value, and it serves as a reference for managers, investors, and legitimate analytical

ideas in determining how efficiently a firm's management uses assets to generate profits for profit maximization and long-term growth. Return on assets is always expressed as a percentage, and a high value of ROA indicates a firm's efficient position, which is measured by dividing total income by total assets.

As assets reports on the left side on balance sheet which indicates the firm efficient position. The position of the company should be much stronger with high value of ROA so in this sense the ROA representing profitability in our study. In its basic form, return on assets tells us how earnings are generated from the company's invested capital in the form of total assets. The return on investment (ROI) for public limited companies might vary substantially depending on the sector. As a result of the argument over why some organizations use ROA as a comparable outcome, it's preferable to identify any firm's alternative in prior particular research regarding the varied number of firms utilizing ROA in comparison to each other. The ROA statistic depicts how effective the business is at transforming the firm's account for investors and shareholders into a portion of net profit.

The top business always gets good earnings and more money with less investing capital because of the high degree of ROA quantity. Keep in mind that the total number of assets is mostly comprised of the entire amount of short and long-term payables, as well as the amount of equity held by investors. Both funding options were made in order to operate the company's operations, and the finance department always reports the company's financial status, whether it is in debt or equity.

Some analytical and shareholder perspectives ignore the cost of acquiring assets by raising interest rate expenditures in the ROA calculation. On the other hand, the impact of obtaining extra debt financing is mitigated by adding back cost of loanable charges to net income and using the period's average asset cost as the numerator. Except for interest expenses, interest rate expenditures are included to the net profit of the come statement.

### **3.5.2 Independent Variables**

The Independent variables in this thesis are as follows:

### **3.5.2.1 Receivables**

Trade credit is a form of short-term financing obtained by organizations from their dealers and given to their customers Burkart and Ellingsen, (2004). The ratio of trade receivables to sales from dealers is used by Ahmad, (2019) and Vaidya, (2011) to calculate Trade Credit Receivables. A higher ratio indicates that an organization is granting advantage of additional dealer credit, whilst a lower ratio indicates that an organization is granting advantage of less dealer credit.

### **3.5.2.2 Excessive Receivables**

In terms of excessive receivables, excessive receivables is a mechanism that allows the seller to ensure the quality of the items offered by giving the buyer time to examine them before paying (Smith, 1987).

## **3.5.3 Control Variables**

### **3.5.3.1 Growth**

Economic development is a key driver of energy consumption. Increased energy consumption is a result of rising economic growth (income impact). This shows that energy consumption grows in lockstep with GDP, although at a slower pace. GDP per capita (constant, 2010 US\$) is used to calculate it. It is the sum of all resident producers' gross value contributions, plus a number of product taxes, minus any subsidies not included in the product value.

### **3.5.3.2 Size**

Rosen (1982) analyses a hierarchical organizational system in which increased labor productivity at any level has a cascading impact on all lower levels. The hierarchy is divided into three layers: management, supervision, and production. Management is vulnerable to scale economies since it entails making separate and indivisible decisions. However, because the manager loses control as the business grows in size, there are substantial diminishing returns in monitoring.

### 3.5.3.3 Liquidity

In the financial world, liquidity is crucial. It is described as the capacity to purchase and sell shares at a minimal cost, regardless of the amount. Because liquidity is seen as a nebulous and enigmatic term, there are various measurements or interpretations in the literature (Kyle, 1985). Due to the uncertain nature of liquidity, academics have employed the different aspects to construct stock liquidity proxies. Furthermore, the literature Aitken (1997) claims that 68 proxies to gauge stock liquidity were utilized. The current study, on the other hand, employed a turnover ratio to assess stock liquidity.

## 3.6 Descriptive Statistics

A descriptive statistic is a statistical summary that quantitatively characterize or summaries aspects from a set of data. Measures of central tendency and measures of variability are two types of descriptive statistics (spread). It measures of central tendency include the mean, which provides the average of data, median, which divides the data set into two equal segments and is the mid value of the data set, and mode, while measures of variability include standard deviation, variance, minimum and maximum variables, and kurtosis, which tells us about the data splines. We can collect crucial information about variables by utilising descriptive statistics.

## 3.7 Correlation Analysis

The degree of strength among variables is captured through correlation analysis. This tool additionally considers the direction of a variable's association. The correlation analysis of variables reveals both positive and negative relationships between them. It has a range of -1 to +1. Low correlations between two variables imply a low likelihood of multicollinearity, whereas high correlations suggest a high likelihood of multicollinearity. The correlation analysis among the variable are discussed in detail in next chapter.

## 3.8 Multicollinearity

Multicollinearity happens in a regression model when there are significant inter correlations between two or more independent variables. Multicollinearity can lead to skewed or misleading conclusions when a researcher or analyst tries to figure out how effectively each independent variable can be used to predict or explain the dependent variable in a statistical model.

## 3.9 Econometric Model

### 3.9.1 Panel Data Analysis

The panel data model have both time series and cross sectional data dimensions. A balanced panel is one in which each cross-section of a variable has the same sequence of time observations. The term "unbalanced panel" refers to a panel that has a sequence of time observations that vary among cross sections Gujarati, (2003). In panel data analysis, three different models are employed. For the intercept, each model makes a different assumption.

### 3.9.2 Common Coefficient Model

The first model of common coefficient model. It has constant intercept across all cross sections and time period.

The Common effect model general equation is:

$$Y_{it} = \alpha_0 + \beta(X)_{it} + \mu_{it} \quad (3.1)$$

Where, Y is dependent variable is Y and The X represents the list of independent variables and  $\mu$  is error term.

Because trade credit represents 2 segments which are receivables and excessive receivables. Here, two equations tested to find the effect of trade credit on company's profitability.

$$ROA_{it} = \beta_0 + \beta_1(receivables)_{it} + \beta_2(Excessive\ receivables)_{it} + \beta_3(size)_{it} \quad (3.2)$$

$$+ \beta_4(growth)_{it} + \beta_5(liquidity)_{it} + \beta_6(rec \times growth)_{it} + \mu_{it}$$

### 3.9.3 Fixed Effect Test

The second model explains the intercept is change for all cross sections. The second model is Fixed effect Model. General equation of fixed effect model:

$$Y_{it} = \alpha_i + \beta(X)_{it} + \mu_{it} \quad (3.3)$$

In this study: Equation for effect of trade credit on company's profitability is.

$$ROA_{it} = \alpha_i + \beta_1(receivables)_{it} + \beta_2(Excessive\ receivables)_{it} + \beta_3(size)_{it} \quad (3.4)$$

$$+ \beta_4(growth)_{it} + \beta_5(liquidity)_{it} + \beta_6(rec \times growth)_{it} + \mu_{it}$$

### 3.9.4 Likelihood Ratio Test

Between the common and fixed effect models, redundant fixed effect test is an essential decision maker. If the F statistic and cross-section Chi-square are both less than 0.05, fixed effect model is employed; if the P-value is  $\geq$  0.05, the common coefficient model is used.

### 3.9.5 Random Effect Model

In a random effect model, the intercept is treated as an error factor that has no bearing on the cross sections (companies). This model explains the differences between the firms. It has the following advantages.

In compared to the fixed effect model, the random effect model has fewer parameters to estimate. It allows for the insertion of more independent variables with the same amount of observations.

General equation of random effect model:

$$Y_{it} = \alpha_0 + \beta_1(X)_{it} + \beta_k(X)_{kit} + (V_i + \mu_{it}) \quad (3.5)$$

In this study: The random effect model used mention below.

$$ROA_{it} = \beta_0 + \beta_1(receivables)_{it} + \beta_2(Excessive\ receivables)_{it} + \beta_3(size)_{it} \quad (3.6)$$

$$+ \beta_4(growth)_{it} + \beta_5(liquidity)_{it} + \beta_6(rec \times growth)_{it} + (V_i + \mu_{it})$$

Where (above equation),

$Y_{it}$  is dependent variable like return on assets (ROA). X is the list of independent variables. X explanatory variables REC as receivables and EXREC as excessive receivables and other control variables which includes size as dummy variable, g as a growth variable, dall as liquidity and GR as an interaction variable. i represent different firms at time t. u represent error term.

Unknown parameters exist in many probability distributions; likelihood estimate these unknowns using sample data. The study use the Likelihood function to see how effectively the data summarizes these parameters. Bayesian inference relies heavily on likelihoods. The researchers also utilize likelihoods to build estimators. The greatest likelihood estimator is nearly always the best choice.

### 3.9.6 Hausman Test

In panel data analysis, the Hausman test can help you decide whether to use a fixed effects or random effects model. According to the null hypothesis, the preferred model is random effects; according to the alternate hypothesis, the preferred model

is fixed effects. Tests are designed to see if there's a link between the model's repressors and the unique errors. According to the null hypothesis, there is no link between the two.

This test was used to determine whether a random or fixed effect model should be used. If the F stat. and Chi-Square of cross-section is less than 0.05 than fixed effect model is used if P-value is insignificant than random effect model is applied.

### 3.10 List of Variables

TABLE 3.1: List of Variables

DV/I	Variable Name	Abbreviation	Measurement	Sources
Dependent Variable	Return on asset	ROA	Net income divided by total assets	Bussoli and Conte, (2020)
Independent Variable	Receivables	REC	Ratio between Account receivables and total assets	Bussoli and Conte, (2020)
Independent Variable	Excessive Receivables	EXREC	Account receivables minus the average value of the sector divided by the average value of sector	Bussoli and Conte, (2020)
Control Variable	Growth	G	$(\text{Sales } t - \text{Sales } t-1) / \text{Sales } t-1$	Martinez-Sola et al., (2013)
Control Variable	Debtall	DALL	Accounts payable/total asset	Martinez-Sola et al., (2013)
Control Variable	Size	S	Natural Log of total assets	Martinez-Sola et al., (2013)
Interaction variable	Grorec	GR	growth*rec	Martinez-Sola et al., (2013)

# Chapter 4

## Results and Discussion

### 4.1 Descriptive Statistics

Table 4.1 displays descriptive statistics for all variables used in this study; the mean value of return on assets (ROA) is 0.042, with a standard deviation of 0.115 meanwhile minimum and maximum value of ROA which is independent variable in our study are -1.960 and 0.436. Return on assets tells us about that how much return gain on assets it represents the firm's profitability. The maximum and minimum of ROA is 0.0436 and -1.960 and the standard deviation is 0.11. Average value of account receivables (REC) which is the dependent variables is 0.0937 with the maximum and minimum of 0.000221 and 0.5363. The median of REC is 0.733 and standard deviation of REC is 0.0822. The REC represent the trade credit in this study.

The effect of receivables is checked on ROA in the study. The excessive receivables which is also dependent variable the study examines the effect of excessive receivables on return on assets have the average value -0.4115 and the minimum and maximum values are -0.999 and 3.6411.

Excessive receivables used as proxy of trade credit. The standard deviation of excessive receivables is 0.7768 and median of excessive receivable is -0.6971. The mean value of liquidity is 0.2584 and the minimum and maximum values are -0.7457 and 1.6168 and the standard deviation and median of liquidity(dall) is 0.2301 and 0.2444.

The result shows the maximum and minimum value of growth to sales is -1 and 3.882 and the mean value is 0.1145 and the standard deviation is 0.2985 and the median and skewness is 15.02605 and 0.107684. The size which symbol is S and calculated by taking natural log of total assets have mean value 15.075 and the minimum and maximum values are 1.3172 and 10.8559 and the standard deviation and median of g is 0.2985 and 0.1037. The GR which is interaction value shows the average value 0.0129 and the maximum and minimum values are 0.5677, -0.2019 and standard deviation of GR is 5.3136.

TABLE 4.1: Descriptive Statistics

	ROA	REC	ER	DALL	S	G
<b>Mean</b>	0.04219	0.0933	-0.4115	0.2585	15.0756	0.1146
<b>Median</b>	0.0367	0.0734	-0.6971	0.2445	15.0261	0.1037
<b>Maximum</b>	0.4364	0.5363	1.9032	0.7042	19.0380	3.8829
<b>Minimum</b>	0.0021	0.0101	-0.9999	0.0127	10.8559	0.0010
<b>Std. Dev.</b>	0.1157	0.0822	0.7768	0.2301	1.3172	0.2985
<b>Skewness</b>	-5.2403	1.7384	2.4687	0.3299	0.1077	2.4580
<b>Kurtosis</b>	90.0741	7.1629	9.9619	5.2783	3.2870	29.2867
<b>Jarque-Bera</b>	352537.9	1348.316	3338.832	257.8628	5.8999	32778.06
<b>Probability</b>	0.0000	0.0000	0.0000	0.0000	0.0523	0.0000
<b>Sum</b>	46.4096	102.6004	-452.6718	284.3246	16583.10	126.0498
<b>Observations</b>	1100	1100	1100	1100	1100	1100

## 4.2 Correlation Matrix Analysis

Table 4.2 shows the level of relationship among variables. Pearson correlation test used to explain direction and strength of relationship. Correlation between Receivables and trade credit supply is positive. It means both variables move in same direction. Correlation shown between return on assets and receivables is positive. Return on assets shows positive relationship with trade credit supply. Receivables, Excessive receivables, size and growth shows positive relation with return on assets and debt shows negative relation with return on assets. Excessive receivables, size and growth shows the positive relation with receivables but the size variable shows the negative relation with the receivables. Debt all, size, growth and the interaction variable which is GR all have positive correlation with excessive receivables. Size, growth and GR all shows the negative relation with debt all.

The Correlation between growth and size is positive. The interaction variable GR has a positive relation with growth.

TABLE 4.2: Correlation Matrix

	ROA	REC	ER	DALL	S	G
ROA	1.0000					
REC	0.0064	1.0000				
ER	0.1326	0.0865	1.0000			
DALL	-0.0957	0.1584	0.0768	1.0000		
S	0.2592	-0.2977	0.6411	-0.0398	1.0000	
G	0.2701	0.0991	0.0709	-0.0864	0.0561	1.0000

### 4.3 Panel Unit Root Test

In this study, research employed a variety of methods to find the data set's unit root. Im, Pesaran, and Shin (2002), as well as Levin, Lin, and Chu (2002), were utilised. The findings of unit root test are summarized in Table 4.3. Results show that there is no unit root in any variable and that series are stationary at level.

TABLE 4.3: Panel Unit Root Test

Variables	Levin, Lin & Chu T*	Prob.	Im, Pesaran And Shin W-Stat	Prob.
ROA	-19.9386	0.0000	-598520	0.0000
REC	-7.17225	0.0000	-3.9921	0.0000
ER	6.30486	0.0000	5.81361	0.0000
S	-12.678	0.0000	7.20176	0.0000
DALL	-4.36327	0.0000	-3.2547	0.0006
G	-10.6456	0.0000	-5.3963	0.0000

### 4.4 Result of Hausman Fixed Effect Test

The hausman fixed effect test of trade credit and receivables for the period of 2008 to 2019 is applied for selection between fixed effect model and random effect model the Study apply redundant. p-value of cross-section F and Chi- square is (0.0000).

It is less than 0.05 so fixed effect model is appropriate. The hausman test is used to decide among fixed effect and random effect model. The p-value of cross-section random is (0.0118). In case of trade credit, the p-value of cross-section random is (0.0000). It also indicating that fixed effect model will be applied.

TABLE 4.4: Likelihood Ratio Test

	Statistic	Prob.
<b>Cross-section F</b>	6.858	0.000
<b>Cross-section Chi-square</b>	572.679	0.000

TABLE 4.5: Hausman Test

	Chi-Sq. Statistic	Prob.
<b>Cross-section random</b>	16.3838	0.012

## 4.5 Effect of Trade Credit on Company's Profitability

Table 4.6 explains the relationship between return on assets and receivables where return on assets is independent variable. Return on assets represents the firm's profitability in in this model and receivables and excessive receivables which are dependent variables represents the trade credit in model. The symbols of return on assets is ROA and the dependent variables i.e receivables and excessive receivables having symbols REC and ER. The other control variables include liquidity, size and growth. The liquidity symbol is DALL, the size symbol is S and the growth symbol is G where as the model have 1 interaction variable also which is growth\*receivables and the symbol of this interaction variable is GR. The receivables coefficient value is 0.170916 their p-value is 0.0076 is less the 0.05 which is significant. It shows that there is significant positive association between ROA and REC which indicates that if receivables of the firm which is trade credit increase the firm profitability will also increase. According to Bussoli and Conte, (2020) The granting of payment extensions to customers entails higher profitability, despite the existence of management costs referred, for example, to the management of

receipts or the possibility of delayed or missed payments. So according to research first objective the trade credit has positive significant impact on firms profitability. So, the first hypothesis is accepted.

TABLE 4.6: Effect of Trade Credit on Firm's Profitability

<b>Variables</b>	<b>Coefficient</b>	<b>Std.Error</b>	<b>t-Statistic</b>	<b>Prob.</b>
<b>C</b>	-0.6205	0.1133	-5.4730	0.000
<b>REC</b>	0.1709	0.0638	2.6749	0.008
<b>ER</b>	-0.0173	0.0068	-2.5326	0.012
<b>DALL</b>	-0.0769	0.0158	-4.8673	0.000
<b>S</b>	0.0433	0.0073	5.9059	0.000
<b>G</b>	0.0823	0.0091	9.0271	0.000
<b>GR</b>	-0.2834	0.0655	-4.3251	0.000
<b>R-squared</b>	0.5013	<b>Durbin-Watson stat</b>	1.9819	
<b>Adjusted R-squared</b>	0.4486			
<b>F-statistic</b>	9.5161			
<b>Prob(F-statistic)</b>	0.0000			

The other dependent variable excessive receivables having symbol ER have coefficient value -0.17301 and p-value 0.0115 which is also less the 0.05 It means it is significant but the coefficient is negative so the impact of excessive receivables on firms profitability is significant negative which means if excessive receivables increase then the firm profitability should decrease.

According to Bussoli and Conte, (2020) if a company's trade credit is not competitive in comparison to other companies in the same industry, in the other words if the TC issued beyond the average of the sector then it have a negative impact on profitability. So the second objective of research is measured and the relation between excessive receivables and ROA is negative significant in this study.

The control variable liquidity Dall coefficient value is -0.076913 with its p-value 0.000 that is less than 0.05 which shows relation between liquidity and ROA is significant negative. Bussoli and Conte, (2020) Identify the role of trade credit in delivering company performance as the level of payables of suppliers to the financial system or other enterprises rises that is, as the structural conditions that allow a comparable virtuous circuit reduce the ability to create improved performance through deferred payments decreases.

The second control variable size S coefficient value is 0.043367 with its p-value 0.0000 significant positive which means the relation between size and ROA is significant positive i.e if size increase then the profitability of firm will increase significantly. As size is linked to firms profit so when the firms makes profit it effects the size accordingly as the firm profits increases the size of the firm increase accordingly. According to Bussoli and Conte, (2020) the effect of size on firms profitability is positive.

The third control variable which is growth G having significantly positive impact because the coefficient value of G is 0.082301 and p-value 0.000 it indicates that if the growth of the company increase then the firm profitability must be increase with the same ratio. Hafiz, (2019) also indicates the positive significant relation between trade credit and growth. According to Bussoli and Conte, (2020) as the profit of the firm increase the growth of the company increase eventually. The adjusted R-squared value is 0.448624 which means the data represent 44% of results and the value of darban watson state is 1.9819

TABLE 4.7: Sector Wise Average Recivables

Sectors	Average
Spinning, Weaving, Finishing of Textiles	912,027
Made-up textile articles	1,563,944
Other textiles	262,684
Food Sector	4,317,016
Sugar	290,015
Other food products	605,974
Chemicals, Chemical Products and Pharma.	1,431,296
Manufacturing	715,921
Mineral products - Overall	608,743
Other Non-Metallic Mineral Products	3,984,469
Cement	665,688
Mineral products	291,939
Motor Vehicles, Trailers & Auto parts	770,098
Fuel and Energy Sector	46,431,646
Information, Comm. and Transport Services	5,611,369
Coke and Refined Petroleum Products	49,633,027
Paper, Paperboard and Products	1,256,259
Electrical Machinery and Apparatus	4,319,527
Other Services Activities	592,937

# Chapter 5

## Conclusion

For short-term finance, trade credit, buyer and supplier contracts, and trade credit are the best options. The significance of trade credit has grown in a new era. Businesses make the most of their resources to maximize the potential of their working system and trade credit to achieve this goal in a cost-effective and efficient manner. Customers opted to trade credit agreements with suppliers when they became hazardous due to a lack of financing and were unable to conduct their businesses efficiently. Trade credit finance is used by short-term enterprises since it is in their mutual benefit.

The purpose of this research is to find the effect of trade credit on company's profitability. The previous studies explained much about trade credit but impact of trade credit on company's profitability as per non-financial firm of Pakistan has not been explore yet. Therefore, this study examined the effect of trade credit on profitability of compay as per non-financial firms of Pakistan. Trade credit are the most efficient way to do business. The buyer, on the other hand, has the advantage of not having to deal with any hassles because the supplier is already in the same company and may utilize the supplier's credit facilities directly. Bank loans can be difficult to understand, and loan collateral might be problematic for buyers. Precarious purchasers have higher possibility of getting reduced loans from supplier that supplies products.

Current research examine the impact of trade credit on company's profitability of non-financial firm in the Pakistan. Annual financial data from 100 non-financial

firms was used for analysis over a 12-year period (2008 to 2019). For businesses, trade credit is essential source of funding. Those businesses who are cash-strapped might get financing from suppliers in form of trade credit to keep their operations running. The result shows the trade credit have the significant positive impact on companies profitability. If trade credit increase then it put positive impact on firm's profitability. The firm profitability will increase accordingly as firm's trade credit increases. The results also indicates that if the receivables turns to excessive receivables then the impact will not be the same. There will be significant negative impact which means if excessive receivables increases the firm profitability decreases accordingly.

Size and growth plays an important role in companies productivity as it controls variables of our study. The results indicates that the size has positive significant effect on companies profitability which proves when the size of company increase profitability of company increases eventually as well as the growth of the company also has the same impact on profitability of the company. The result indicates that the growth has significant positive impact on company's profitability which interpret that when the growth of the company increases the profitability increases accordingly. The other control variable and interaction variables also has the positive significant effect on companies profitability.

## **5.1 Policy Recommendations**

Based on these empirical findings, it is past time for legislative authorities to enhance trade credit system as well as to motivate little businesses to participate in trade credit. This scientific conclusion also supports a number of important policy implications. It offers policymakers with fundamental principles for developing and encouraging the trade credit channel. It's also beneficial to promote and improve trade credit, in our economy, as well as to foster trust and improved customer connections, while discouraging the use of the traditional method.

This study will help in the operations of the firms. Study will guide the management that how to manage firms receivables to avoid the uncertain loss. Study

will also be helpful for the future policymakers of the firms for better management of accounts receivables.

## **5.2 Limitations**

Despite the fact that this empirical study has several practical applications. However, current study has the same limitations and unobserved component as previous one. First, this analysis exclusively considers non-financial firms that are listed on the Pakistan stock exchange and provide financial data at a regular basis. Additionally, research was confined to Pakistan's non-financial sector. Findings cannot be applied to all Pakistani businesses.

## **5.3 Future Directions**

This research is limited to a single developing country (Pakistan). Many additional nations should be considered for trade credit and companies profitability, according to the report. As a result, the study analyses yearly data from non-financial businesses to investigate the influence of trade credit on firms profitability, as well as nations for future research. The research time frame is twelve years from 2008 to 2019, but it can be extended by another few years to get more precise results. Pakistan's empirical research funding has spawned new research breakthroughs in this subject that can be replicated in other countries.

# Bibliography

- Ahmed, J., & Khalid, J. (2016). Determinants of Bank Loan Availability: Evidence From Pakistani Non-Financial Firms. *Romanian Economic Journal*, 18(59), 61-72.
- Ahmed J., Xiaofeng H. & Mujtaba G. (2014), "Effects of Firm Specific & Macro Economic Factors on Trade Credit Supply: The Case of a Developing Country", *International Journal of Financial Management*, 5(1), 1-12.
- Bastos, R., & Pindado, J. (2007). An agency model to explain trade credit policy and empirical evidence. *Applied Economics*, 39(20), 2631-2642.
- Berger, A. N., & Udell, G. F. (1995). Relationship lending and lines of credit in small firm finance. *Journal of business*, 68(3), 351-381.
- Beck, T., Demirgüç-Kunt, A., & Maksimovic, V. (2008). Financing patterns around the world: Are small firms different?. *Journal of financial economics*, 89(3), 467-487
- Buch, C. M., Eickmeier, S., & Prieto, E. (2014). In search for yield? Survey-based evidence on bank risk taking. *Journal of Economic Dynamics and Control*, 43, 12-30.
- Burkart, M., & Ellingsen, T. (2004). In-kind finance: A theory of trade credit. *American economic review*, 94(3), 569-590.
- Bussoli, C. and Conte, D. (2020), "Trade credit and firm profitability: moderation analysis of intercompany financing in Italy", *Journal of Small Business and Enterprise Development*, 27(6), 965-985.
- Box, T., Davis, R., Hill, M., & Lawrey, C. (2018). Operating performance and aggressive trade credit policies. *Journal of Banking & Finance*, 89, 192-208.

- Chou, J. H., Yang, M. C., & Line, T. T. (2011). An empirical analysis of the effect of credit rating on trade credit. *In International Conference on Financial Management and Economics IPEDR* 11, 278-283.
- Choi, W. G., & Kim, Y. (2001). Monetary policy and corporate liquid asset demand. *IMF Working Paper*, 01/177, Available at SSRN.
- Duca, J. V. (1986). Trade credit and credit rationing: a theoretical model (No. 94). *Board of Governors of the Federal Reserve System (US)*.
- Emery, G. W. (1987). An optimal financial response to variable demand. *Journal of Financial and Quantitative Analysis*, 22(2), 209-225.
- Ferris, J. S. (1981). A transactions theory of trade credit use. *The Quarterly Journal of Economics*, 96(2), 243-270.
- Fairfield, P. M., & Yohn, T. L. (2001). Using asset turnover and profit margin to forecast changes in profitability. *Review of Accounting Studies*, 6(4), 371-385.
- Fabbri, D., & Klapper, L. (2008). Market power and the matching of trade credit terms. *World Bank Working Paper*
- Fisman, R., & Love, I. (2003). Trade credit, financial intermediary development, and industry growth. *The Journal of Finance*, 58(1), 353-374.
- Giannetti, M., Burkart, M., & Ellingsen, T. (2011). What you sell is what you lend? Explaining trade credit contracts. *The Review of Financial Studies*, 24(4), 1261-1298.
- Ge, Y., & Qiu, J. (2007). Financial development, bank discrimination and trade credit. *Journal of Banking & Finance*, 31(2), 513-530.
- García-Teruel, P. J., & Martínez-Solano, P. (2010). Determinants of trade credit: A comparative study of European SMEs. *International Small Business Journal*, 28(3), 215-233.
- Hanif, H. M. A. (2019). Effect of Trade Credit on Firms Growth: A Case Study of Pakistani Non-financial Firms. *Journal of Accounting and Finance in Emerging Economies*, 5(2), 167-178.
- Hill, M. D., Kelly, G. W., & Lockhart, G. B. (2012). Shareholder returns from supplying trade credit. *Financial Management*, 41(1), 255-280.

- Lee, Y. W., & Stowe, J. D. (1993). Product risk, asymmetric information, and trade credit. *Journal of Financial and Quantitative analysis*, 28(2), 285-300.
- Long, M. S., Malitz, I. B., & Ravid, S. A. (1993). Trade credit, quality guarantees, and product marketability. *Financial management*, 22(4), 117-127.
- Molina, C. A., & Preve, L. A. (2009). Trade receivables policy of distressed firms and its effect on the costs of financial distress. *Financial management*, 38(3), 663-686.
- Marotta, G. (1997). Does trade credit redistribution thwart monetary policy? Evidence from Italy. *Applied Economics*, 29(12), 1619-1629.
- Molina, C. A., & Preve, L. A. (2012). An empirical analysis of the effect of financial distress on trade credit. *Financial Management*, 41(1), 187-205.
- Martínez-Sola C., García-Teruel, P. J., & Martínez-Solano, P. (2013). Corporate cash holding and firm value. *Applied Economics*, 45(2), 161-170.
- Martínez-Sola, C., García-Teruel, P. J., & Martínez-Solano, P. (2013). Trade credit policy and firm value. *Accounting & Finance*, 53(3), 791-808.
- Niskanen, J., & Niskanen, M. (2006). The determinants of corporate trade credit policies in a bank-dominated financial environment: The case of Finnish small firms. *European Financial Management*, 12(1), 81-102.
- Ono, M. (2001). Determinants of trade credit in the Japanese manufacturing sector. *Journal of the Japanese and International Economies*, 15(2), 160-177.
- Paul, S., & Boden, R. (2008). The secret life of UK trade credit supply: Setting a new research agenda. *The British Accounting Review*, 40(3), 272-281.
- Petersen, M. A., & Rajan, R. G. (1997). Trade credit: theories and evidence. *The review of financial studies*, 10(3), 661-691.
- Rosen, S. (1982). Authority, control, and the distribution of earnings. *The Bell Journal of Economics*, 311-323.
- Rajan, R. G., & Zingales, L. (2003). The great reversals: the politics of financial development in the twentieth century. *Journal of financial economics*, 69(1), 5-50.

- Storey, D. J. (2016). Understanding the small business sector. *Routledge*.
- Smith, J. K. (1987). Trade credit and informational asymmetry. *The journal of finance*, 42(4), 863-872.
- Summers, B., & Wilson, N. (2002). An empirical investigation of trade credit demand. *International Journal of the Economics of Business*, 9(2), 257-270.
- Vaidya, R. R. (2011). The determinants of trade credit: Evidence from Indian manufacturing firms. *Modern Economy*, 2(05), 707.
- Wilner, B. S. (2000). The exploitation of relationships in financial distress: The case of trade credit. *The journal of finance*, 55(1), 153-178.
- Williamson, O. E. (1996). The mechanisms of governance. *Oxford University Press*.