

# **IMPACT ANALYSIS OF INCENTIVES: A CASE OF PAKISTAN TEXTILE SECTOR**



*By*

**Iram Zehra**

**PIDE2019FMPHILEAF19**

*Supervisor*

**Dr Ahmad Waqar Qasim**

**PIDE School of Economics**

**Pakistan Institute of Development Economics**

**Islamabad**

**2021**



**Pakistan Institute of Development Economics, Islamabad**  
*PIDE School of Economics*

**CERTIFICATE**

This is to certify that this thesis entitled: "**Impact analysis of incentives: A case study of textile industry in Pakistan**" submitted by **Ms. Iram Zehra** is accepted in its present form by the School of Economics, Pakistan Institute of Development Economics (PIDE), Islamabad as satisfying the requirements for partial fulfillment of the degree in Master of Philosophy in Economics and Finance.

Supervisor:

Dr. Ahmad Waqar Qasim

Signature:

External Examiner:

Dr. Samina Naveed

Signature:

Head,

PIDE School of Economics: Dr. Shujaat Farooq

Signature:

## **Author's Declaration**

I Iram Zehra hereby state that my M. Phil thesis entitled “**IMPACT ANALYSIS OF INCENTIVES: A CASE OF PAKISTAN TEXTILE SECTOR**” is my work and has not been submitted by me for taking any degree from this University, Pakistan Institute of Development Economics, or anywhere else in the country/world. I have not used any further means except for those that I have explicitly mentioned in this report. All the items copied from the internet or other written sources have been properly mentioned in quotation marks and with a reference to the source of the citation.

Iram Zehra

Date: \_\_\_\_\_

Sign: \_\_\_\_\_

## ***Dedication***

*I would like to wholeheartedly dedicate this thesis to my parents and my uncle (Late) for their continuous support in all facets of my life. I hope this achievement will complete the dream that you had for me all those many years ago when you chose to give me the best education you could.*

## ACKNOWLEDGEMENT

All glories to Allah Almighty, the Omniscient and the Omnipotent, and His Benedictions may be upon His Holy Prophet (Peace be upon him)-A savior of mankind from the darkness of ignorance, a symbol to be and to do right. My deepest thank to Allah Almighty Who made me able to accomplish this task with great devotions. I would like to express my gratitude to my supervisor Dr. Ahmad Waqar Qasim, Senior Research Economist Pakistan Institute of Economic (PIDE), Islamabad for his supervision, support, and encouragement throughout this research work.

Finally, I would like to express my deepest appreciation to my Grandfather, my Grandmother, my Siblings, **Khurram Abbas**, **Andleeb Zehra** and **Nayab Zehra** my family members and my friends **Ms Rubab Khan**, **Ms Maryam kifayat** who are part of my life.

## Contents

List of Abbreviations .....	viii
ABSTRACT.....	ix
CHAPTER-1 .....	1
INTRODUCTION .....	1
1.1 Government measures related to the textile sector (2000-2020) .....	4
1.2 Textile policy (2009-14) .....	4
1.3 Textile policy 2014-19 .....	5
1.4 Significance of the study.....	5
1.5 Research Gap .....	6
1.6 Research Questions.....	6
1.7 Objectives: .....	6
1.8 Organization of the study.....	7
CHAPTER-2 .....	8
LITERATURE REVIEW .....	8
2.1 Theoretical Framework:.....	19
CHAPTER-3 .....	20
REVIEW OF TEXTILE SECTOR OF PAKISTAN .....	20
3.1 Long term finance facility (LTFF).....	23
3.2 Export finance (EF): .....	24
3.3 Duty Draw Back on Local Taxes (DLTL):.....	25
3.4 Regionally Competitive Energy Tariff (RCET).....	25
3.5 Structure of Textile Sector:.....	26
3.6 Export Performance of Textile Sector .....	26
3.8 Production cost of the textile sector:.....	31
CHAPTER-4 .....	33
METHODOLOGY .....	33
4.1 Difference in Difference Approach: .....	33
4.2 Empirical Analysis:.....	35
4.3 Estimation Methodology:.....	35
4.3.1 Data.....	35
4.3 Conceptual framework:.....	36
4.4 Research Design: .....	40
4.5 Construction and definition of Variables used in the study: .....	41

4.5.1 Panel data: .....	41
4.5.2 Dependent Variable: .....	41
4.5.3 Independent variable:.....	41
4.5.4 Dummy Variable:.....	42
4.5.5 Econometric Model.....	43
Chapter-5 .....	44
Results& Discussions: .....	44
5.4 Descriptive Analysis: .....	44
5.1 Estimated result of Group (1).....	47
5.1.1 Delay Payments: .....	49
5.1.2 Documentation:.....	49
5.2 Estimated result of Group (2).....	50
5.3 Estimated result of Group (3).....	52
CHAPTER-6.....	54
CONCLUSION& RECOMMENDATIONS .....	54
REFERENCES: .....	59

## **LIST OF TABLE**

Table 1 Rate of LTFF .....	24
Table 2 Number of Textile Mills .....	31
Table 3 Name of Variables .....	43
Table 4 Estimation Results .....	47
Table 5. Estimation Results .....	50
Table 6 Estimation Results .....	52

## **LIST OF FIGURE**

Figure 1 Brief Overview Of The Cotton Textile Manufacturing Process: .....	29
Figure 2 Conceptual framework: .....	39
Figure 3 Exports RCET .....	45
Figure 4 Export DLTTL .....	46



## List of Abbreviations

---

APTMA	All Pakistan Textile Mill Association
DID	Difference In Difference
DLTL	Duty Draw Back on Local Taxes and Levis
GDP	Gross Domestic Product
LTFE	Long term Financing Facility
PBS	Pakistan Bureau of Statics
RCET	Regionally Competitive Energy Tariff
SBP	State Bank of Pakistan

## **ABSTRACT**

The textile industry is one of the most leading industries of Pakistan, which perform an outstanding performance, during the covid 19 pandemic the industry suffered but become successful to get recover from shock, the share of the textile industry in GDP is remarkable. The textile industry is the only industry that attracts foreign customers also in the pandemic situation. To enhance the performance in these fields countries introduced different strategies. The study is conducted to analyze how much the given incentives play a significant role to enhance the performance of this sector Using Difference In Difference approach, which is used to evaluate the policy performance of the targeted sector, the panel data is taken from a period of 2000-2020, of textile firms. The results indicate that LTFF is working effectively to increaseExports, and RCET is a significantly impact on increasing exports by reducing production cost, while the DLTL policy shows no impact to boost exports of the textile sector.

**Keywords:** DLTL, LTFF, RCET, GDP, DID

# **CHAPTER-1**

## **INTRODUCTION**

The industry is known to be the basic element of any country, particularly an industry that contributes a major portion to the GDP (Gross Domestic Product), export, and in employment. To boost such performance in these fields countries introduced different strategies. Most of the countries introduced different export promotion policies to increase their exports. The main objective of these policies is not only to boost export but also to make firms sustainable and competitive in the international market. These policies not only increase export but also increase productivity, employment, and reduce fixed costs. Firms of the developing countries face different hurdles to enter the international market, to make them compatible with the international market, the government gives them different types of incentives. Export allows any country to enter the competition in the international market. Countries export provide many advantages to the economy like a trade-off in the balance of payments, Export provide firms to use their products more economically, export helps in the currency appreciation, increase employment. Underdeveloped countries are trying to provide incentives to the export-oriented sectors because of their importance in the economy. There are many types of incentives introduced by the government to the exporters in form of tax relief, easy finance schemes, and other policies like a free trade agreement with the neighboring countries. Previously, South Asian countries introduce many new policies to the exporters. Literature is mostly based on incentives given to export-oriented sectors argue that government should focus to assist exporter, as the export sector also contributes to providing employment generation, currency appreciation. As the textile industry is known to be a zero-rated sector. Besides, the availability of cheap raw

material plants and machinery are important factors of any industry to be more productive and efficient. If any industry uses an upgraded technology then its production will be different as compared with that which still relies on old technology and machinery. The upgraded technology not only increase productivity but also help the firm to decrease the other cost, and produce a quality product. The textile industry is no exception as well and the performance of the textile sector is also dependent on up-graded technology. Keeping in view the key importance of technology up-gradation and new machinery, the government of Pakistan introduces Long Term Finance Facility to the textile sector (2007). Under this scheme, long-term finance of up to 10 years is given to Participating Financial institutions (PFI), to the borrowers' machinery importers as well as the purchase of locally manufactured machinery set up for export-oriented projects. For the up-gradation of technology of the textile industry, LTFF was provided at the discount rate of 9% for 3 to 10 years duration from the State Bank of Pakistan. Duty drawback is an incentive given that many countries allow both exporters and importers to recover many duties and taxes paid on imported merchandise. Refund of duties collected on imports which are then exported at a certain percentage given by the government. If the exports of textile products are 10% increase every year as compared with the previous year then DLTTL policy will be given to textile exporters. This scheme was introduced for all zero-rated sectors and starting from 2005 to now, the government has spent an average of Rs1174 million on the textile sector in the form of these incentives. The Regionally Competitive Energy Tariff, and firstly introduced in 2017. As the other raw material and factors of production are important, the importance of energy in the textile sector is undeniable. To highlight the importance of energy in the textile sector, consider the case of the Spinning sector where energy cost accounted for 38% of total conversion cost while weaving account for 23% of conversion cost. Therefore the provision of uninterrupted and

cheap energy of textile to the textile sector is imperative for its role being the leading exporting sector of the economy. By providing consistent energy the textile exporters would be able to complete their demand in due time. In Pakistan there is a lot of problem in energy and powers sector, due to this the exporters unable to complete their demand in due time and they lose their lot of foreign customer due to delay in providing their demands. The energy crisis and high cost of fuel affected the textile industry badly. It is to be well known that textile mills use thermal energy in two major operations, in the heat of the water and the second is to drying of the water. As compared with other textile exporting countries like China, India, and Vietnam the energy tariff on the textile industry is much lower than in Pakistan, which makes the textile industry of Pakistan uncompetitive in the international market. If the Pakistani industry has to enter incompleteness in the international market it is necessary to make tariff power sector will be revised to a competitive level. For making better and efficient performance one must enter the competition, For this, it is necessary to make the power tariff also be lower. To improve the performance of this sector it needs to availability of energy at regionally competitive energy tariff. The government of Pakistan offered under this policy to the textile sector is RLNG at \$6.5/mm btu and electricity tariff at 7.5 cents. In September 2020 the energy tariff was raised to 9. As there are many sources to provide energy in very cheaper like from wind-solar etc. there is need to install new plants, new sources of energy nuclear and tidal power.

### **1.1 Government measures related to the textile sector (2000-2020)**

The textile sector in Pakistan is one of them which are the main export sectors like agriculture, to make this sector sustainable the government introduces many policies. The textile industry is known to be the backbone of Pakistan's economy. The government of Pakistan has given different types of incentives to the textile industry. Following are the major incentives given by the government of Pakistan to encourage exports and productivity of the textile sector.

### **1.2 Textile policy (2009-14)**

In 2009 the textile policy was introduced. The basic purpose of this policy is to achieve the exports target of \$25 billion. The textile industry has a natural comparative advantage in Pakistan and is connected with three major sectors as Agriculture, large employment opportunities for the urban population, and the largest contribution to the country's export. The first textile policy of Pakistan aims to achieve this goal. This policy is designed with basic objectives like encouraging exports, technology, and labor productivity. Reducing the cost of doing business by supporting allied industry, e.g., machinery manufacturing. (Pakistan textile policy 2009-14). The main hurdles face by the textile sector which are a quantitative restriction, quota regime are the external factors that affect the growth sector of the textile industry. As given in the textile policy Industry (2015) suffered due to the lack of physical and institutional infrastructure, low value-added textile products decline the exports and diminish Pakistan comparative advantage.

The main beneficiaries of this policy are exporters, producers, allied industry, e.g. machinery manufacturing, dyes, and chemical industry and accessories for reducing the cost of doing business.

### **1.3 Textile policy 2014-19**

In 2014 the other textile policy was introduced with different initiatives and objectives. The goal of this policy is to double the value addition from \$1 billion to \$2 billion per million bales in five years, double the exports from \$13 to \$26 billion per year in the next five years with budgetary support. This policy would encourage investment in narrow width capacities to increase the production of finished fabrics for the apparel sector. The policy is introduced to not only facilitate the exporters of the textile but also the importer's plant and machinery for the textile industry and to support SMEs. These policies incorporated the incentives given for the textile manufacturing process and encourage investment in new capacities in finer counts, rotor technology, and value-added attachments, and economies of scale will be encouraged. Through the PSDP program, weaving city was visioned to be established starting with the city of Faisalabad and then other parts of the country.

### **1.4 Significance of the study**

As an agricultural country, Pakistan has the advantage to give better performance in the textile sector, but Pakistan is in 4th position in the production of cotton in the world ranked after China and India. To analyze the problems faced by the textile industry to increase its exports government gives incentives to this sector. Incentives are the source to boost the performance of any sector. These incentives also show the importance given by the government to that sector. As the textile industry is the backbone of Pakistan's economy with a major contribution to exports and employment. The textile industry faces many problems like the breakdown of energy, gas, and other issues. The main purpose of the incentives is to address these issues. Our research will base on those incentives and critically analyze how much these issues are solved by given incentives.

### **1.5 Research Gap**

The textile industry is one of the largest export industries in Pakistan by sharing a larger portion in GDP after the agriculture sector. The government gives different incentives to boost the export performance of this sector. The textile industry is the main pillar of Pakistan's economy with sharing a larger part in exports and contributing a major portion in GDP. To boost the exports and productivity of the textile industry-government introduce different policies. There is no such specific study based on the incentives given to estimate the export performance of the textile industry in my knowledge.

In my study, I will try to identify which policy is playing an effective and significant role in increasing exports and what are the hurdles faced by textile millers to avail incentives introduced by the government.

### **1.6 Research Questions**

- 1) How much Duty Draw Back policy is effective for increasing textile export?
- 2) How long term Finance Facility is effective to increase Export?
- 3) How is Regionally Competitive Energy Tariff on is effective in textile export?

### **1.7 Objectives:**

- 1) Analyzing the role of the significance of duty drawback policy in exports.
- 2) To study whether Long Term Finance Facility plays any role in exports.
- 3) To study whether Regionally Competitive Energy Tariff plays any role in increasing exports.



## **1.8 Organization of the study**

After Chapter one which is comprised of the introduction of the textile sector, the second section is an empirical literature review on different incentives given to the textile sector to boost its exports, and chapter third comprises of overview of the textile sector of Pakistan, four consists on methodology and variables. Chapter five is about results and discussions and chapter six last chapter of the study is about conclusions and recommendations.

## **CHAPTER-2**

### **LITERATURE REVIEW**

The study of trade policy is a very important part of international economics. Implementation of any trade policy will have a direct effect on trade volumes and indirectly affect wages, employment, and consumption.

J. A. Memon, Aziz, and Qayyum (2020) wrote that the textile industry is one of the significant contributors to the exports of Pakistan. 50 to 60% of the total exports of Pakistan account for the textile, and it utilizes 40% of the total workforce. It has been said that the textile sector has not delivered its 100 % and has accomplished far from its true potential.

Ashraf and Rezina (2020) studied the capital structure of the textile industry and the factors on which the capital structure of the Bangladesh textile industry is dependent. By using multiple regression econometric model for panel data of the period between 2000-2017, they concluded that their study that the debt ratio has positively and significantly impact on firm size, growth, and liquidity while leverage ratio gives has insignificant results related with firms size, growth, and tangibility. Jahan (2014) critically examine by using panel data of the textile industry that there is a positive and significant relation between debt ratio, firm size, growth, and tangibility, the results also supported with trade-off theory which told that there is an apposite relationship of profitability and tangibility to leverage. Lall (1992) researched which on the importance of technology and its impact on firms' productivity and industrialization, by using micro-level data he concluded his study that through the proper channel like incentives and applied them successfully, intervention plays a positive role in industrialization.

Žamborský and Čajka (2015) identified that in the agriculture product export taxation is harmful to the poor because of the significant share of these products in their consumption. Solleder (2013) In recent era export on taxes has been rise. From the available data using the gravity model, it is concluded that due to increase in taxes which cause an increase in prices identified the burden of taxes is shared by exporters and importers and due to this price are increases

Beckman, Estrades, Flores, and Aguiar (2018) analyzed in their study about that impact on trade and international prices due to export taxes and by sing econometric gravity framework and concluded that there is no significant effect of export taxes on international prices but its impact on some particular good like dairy products, vegetables.

Piermartini (2004) concluded that export taxes are not simple and limited as they consider one should study about their substitutes and complementary goods before leaving tax on that product in the backward and forward markets in the production chain”.

Bao, Hou, Li, and Wang (2017) used the difference in difference technique to analyze the effect of an export tax rebate, using the data between and 2009 and found that this policy is effective to boost export growth and it also opens the door to measure the effect policies, the tax rebate policy is the guide for government policymakers to increase their exports.

Gnangnon and Brun (2017) using panel data cover a sample of 172 countries in which both developing and non-developing countries are included in their study from the period of 1980 to 2010 and found that except for low-income countries there is the positive and significant effect of export product up-gradation on non-resource tax revenue examined that trade openness experience higher no resource tax revenue both in the short and long term in context to upgrade their export products.

Weinberger, Xuefeng, and Yasar (2017), By using firm-level data, custom transaction, and tax administration applying difference in difference approach that in 2004 the policy change or the game-changer of that time is export tax rebate policy and found that by using difference in difference approach they are easily able to make comparison the production and pricing of eligible and non-eligible firms of export rebate policy and concluded that in Chinese policymaker tax rebate policy is a common instrument used to increase exports.

De Wulf (1978) concluded his study that developing countries use export incentives as a tool to boost their export activity by increasing the export revenue of the exporter, by reducing input costs, or by lowering or eliminating the profit tax liability of the exporter.

Khude (2017) concluded his study in which he shed light on the importance of energy in the textile sector, as per his research about the importance of energy the textile sector he concluded his study that the Textile sector is the largest and oldest sector of the country, in this modern era still some firms use old technology and the consumption of energy in the production process is 15% to 20%, there is need to provide energy incentives to this sector for the growth of the exports. Kwon and Stoneman (1995) examined the importance of technology on firms' productivity, based upon Coub Douglas production function taking capital-labor and technology by using 217 firms for the period between 1981 to 1990, and concluded that there is a positive and significant impact of technology on productivity of a firm.

Kasahara and Rodrigue (2008) researched to evaluate the impact of imported intermediaries on a firm's productivity as they found a positive and significant relation between imported intermediaries and plants production, their result also provide a proper guideline to the government for making policy regarding imports of the intermediate goods.

(Melitz & Redding, 2014) gives the concept of the heterogeneous firm trade model, in which he concluded that the decisions of firms to export are mainly dependent on the firm's productivity that heterogeneous product. Fan, Lai, and Qi (2013) Analyzed that how trade barriers, economies of scale, and country size are sinter linked to determine international trade, the model explains trade and international specialization are determined by trade openness. Johnson (2012) found that how prices affect trade in international markets when there is an increase in prices the product face difficulty to enter the target market meanwhile there is a positive correlation between the quality of product and firm size. Goldberg, Khandelwal, Pavcnik, Topalova, and Statistics (2010) analyzed that due to lower input tariffs, this effect appears on final goods and access to better inputs, both these increase the firm's productivity.

Munch and Schaur (2018) examined in their study that export promotion policy not only affects exports but also value-added, employment, and value-added per worker, while this policy is significantly effective for small firms for recovering fixed cost, export promotion policy positively impact the export-oriented firms.

Van Biesebroeck, Yu, and Chen (2015) getting data of Canadian firms from 1999 to 2006 concluded their study that Export promotion policies were found to be effective to boost exports which are the major objectives of the Trade service export program and found that if there is 1% increase in an export program then the export increase by 10%, and found that the objective of Trade Commissioner Service through export promotion policy program, achieve their objective by diversifying their exports beyond the united states meanwhile smaller firms increase their total exports.

Crespi and Alvarez (2000) found that in the last several decades export sector shows good performance and this boost the economic growth of the Chilean economy, the main factor behind this performance is some public promotion instruments. They concluded that promotion instruments have a positive impact on a firm's performance by enhancing technological innovations and increasing exports meanwhile they suggested that some instruments like exports committees show effectiveness to increase exports and opening new markets. Fernandes and Tang (2014) examined that new exporters always face hurdle to enter in export market and some of them are not willing to enter in the international market in their first year, this study found the reason behind hesitation of new exporters to enter in foreign market like, higher uncertainty as compared with old exporters because old exporters have experience and have proper strategy which include product differentiation to enter market by using transaction-level data from 2000 to 2006 which cover all Chinese export data concluded their study that reduced uncertainty and lower the entry cost to enter in international market to new exporters , and shed light on the importance of learning to exports from neighbors and concluded their study that firms can increase their exports not only from their own experience but also from their neighbors export strategy like number of product sells currently by their neighbors ,product heterogeneity in their sales and knowledge about the market.

Martincus and Carballo (2008) To enter the international market is a firm's own decision. Using the firm-level data of a small developing country from 2000-2007, found that export promotion strategies help firms to enter a new market with a differentiated product, after entering into a new country with a new product which causes sunk cost, the government policies and export promotion agencies reduced firms cost by helping the information available to them without any cost and these program helps in diversification of export goods, firms enter the new market face

several problems to expand their product and diversified their product destination in this regard export promotion policy help them to expand their exports while they concluded their research that if firms get support properly from the government the export promotion policy boost export and diversified export destinations.

Z. U. Ahmed, Mohamed, Johnson, and Meng (2002) examined There are different types of export program promotion policy are working in the economy in different countries, to help the firms to boost their exports, while the firms are well aware of the type of policy to get benefited from them, collected data from 53 Malaysian firms get information about export promotion programs, firms are divided into demographic and export characteristic and able to get conclusion from the above data that large firms are well aware from these policies as compared with small firms, which means that exporting industry is heterogeneous in their product as well as demographic and export behavior in their study that states provide export promotion program in wide range for the firms to help them in increasing exports, meanwhile the government also make initiatives to provide information of the export promotion programs especially to small and medium-sized firms.

Srhoj and Wagner (2020) evaluated that every state has a common goal which is to increase export and to increase export they make new policies, strategies. Exports are important for any economy especially for small open economies, to achieve this goal firms to become internationally innovative and competitive. By defining export promotion policy which includes promotion policies, financial subsidies, subsidized export loans intending to increase firms behavior, although there is a difference between export promotion policy and research development the aim of this is to increase export, to conclude whether the export boosting policies are effective or not took data of 26 countries including 5 continents concluded the study

that subsidies, grants are allocated for commercialization activities and production activities are more effective and found in their research about the export promotion policies and explain different types of policies introduced to boost exports of the country like public export guarantee schemes, subsidized export loans, and randomized foreign market access programs and concluded their study that these policies are effective to increase exports. Chen, Mai, and Yu (2006) examined in their analysis which was carried out by using statistical data from 1985 to 2002 by applying the spearman correlation coefficient test that by increasing export rebate than the production of domestic goods increase and export also increase, custom duties paid by domestic firms after importing intermediate goods is not only paid by government but also state offer subsidies on export of these final goods.

Kugler and Verhoogen (2009) found in their study that although plant and machinery positively affect the productivity of the firm and increase exports but importing plant and machinery, as these are imported from developed countries, in these the import prices are much higher as compared with developing countries, this exchange rate and transportation cost for importing plant and machinery play a negative impact because domestic prices are always less.

Chao, Chou, and Eden (2001) examined in their study that export tax rebates increase export but also increase employment, when a government gives incentives like this than firms increase their productivity which for this to hire labor which directly and indirectly increases employment opportunities, as by the data it is proven that although foreign income and exchange rate positively effect in the long run export tax rebate promote in the short as well as long run.

Tan, An, and Hu (2015) extended the Melitz model to analyze the direct and indirect effect of export tax rebate on firms level sale and productivity, and concluded there that the first one is



associated with the reduction in variable cost and the second one is related with productivity and labor cost as 1% increase in export tax rebate which increase 0.4% sales through direct channels and 0.2 through indirect channels. Defever, Imbruno, and Kneller (2020) examined in their study using firm-level data from 2011 to 2014 by applying doubly robust matching estimator by making control and targeted group in which subsidy is positively impacted exports and also help in export diversification by product and destination, they concluded their study that incentives significantly affect only if the firms receive consistently, any distortion or disturbance in receiving the incentives give not the targeted result, large firms have a comparative advantage to receive to get benefited from these incentives and boost their export with the product and destination diversification as compared to small firms because smaller firms have not much information as larger firms have

Girma, Gong, Görg, and Yu (2009) investigated using firm-level data from 1983 to 2002 of manufacturing industry and the variable used are export, employment, wages, by applying the difference in difference approach concluded their study that export increase when and only effected by those incentives when there is a large enough grant and its reach in the international market but for a smaller firm to reach in the international market for exports there is no such significant relation found in the study. Girma et al. (2009) investigated in their paper that is there any relation of export to the subsidies given to the production sector by using data from 1999 to 2005 with more than 446000 firms, employment, gross output, product innovation, geographical location is the main variable used in their study and concluded their study that firms production subsidy play a significant role in increasing export, while these subsidies are more profitable for capital intensive firms with a suitable location. Tekleselassie, Berhe, Getahun, Abebe, and Ageba (2018) investigated that the determinant of firms level of the textile industry using the census

data 136 firms for the year 2016 and found significant role labor to output, but there material to capital is weak, human capital and intensive system play a role in the productivity of the firms, incentive scheme not only increase productivity but also help to labors, Productivity is also depended on the high skilled labors . Harcar (2015)investigated in his study that from the data of 112 exporters and 188 non-exporters concluded his study that there is a distinct structural change in exporters and non-exporters by the size of their firm, professional skills of labors, objectives of the firms, capital intensive and technology up-gradation are the main factors that distinguish exporters and non-exporters firms. Demeter, Szász, and Boer (2017) concluded their study that production of any industry is dependent on the plant and machinery used by the firm, Plant and, machinery plays a vital role in the production process, to increase the productivity of any firm there is need to use up graded technology.

Imtiaz Ahmad (2015) concluded that to boost export, introducing export incentives, export promotion policy, and giving fiscal incentives are major factors for any economy, but also to maintain these trade policies for increasing productivity of any sector and to increase exports. For the last few decades Pakistan textile industry has faced many challenges within the country and foreign market due to increase in international market prices, to solve this problem government needs to revise the trade policies to stable textile industry this can be done by the incentives are easily accessible to all textile and eligibility criteria for those incentives are easily determined, he concluded that to keep up with its competitiveness in textile exports, Pakistan needs to improve its export incentives especially for value-added textile, as a comparison to three subcontinent countries Bangladesh operates highly export-oriented tax policies, he suggested that if Pakistan need to export incentives especially for value-added textile to maintain competitiveness in the textile industry.

Khan and Khan (2010) investigated that the government should provide subsidies to the textile industry, solve the problems of exporters and remove withholding and sale tax, they analyzed that there are many reasons for high-cost production in the textile industry like increasing interest rates, double-digit inflation and declining in the Pak rupee create a problem for the textile industry to compete international market while comparing with other subcontinent countries India and Bangladesh they found that Pakistan textile industry has equipment and machinery, due to this textile product have high cost. 65% and 18% declined in the exports of raw cotton and cotton during the fiscal year 2019. Y. Ahmed (2008) Concluded that an important foreign exchange, employing the country role play by the textile industry but, while there are a lot of reasons that resist the using the full capacity of textile machinery to earn more and more foreign exchange to the country. Zia and Mahmood (2013) found that slow growth in the exports side of the manufactured product is due to the volatility in the exchange rate. Dr. Salamat Ali and Shafqat Ali Khan (March 2019) found in their study that any type of industry which will be macro, Sectoral, and firm export and imports are travel in the same direction, to increase in production and boost export activity to reach the international market with competitive prices there is need to be a reduction in tariff which directly reduced the cost of intermediate goods and able to sell I international market with competitive prices, concluded their study that cut in tariffs will useful for diversification in exports because when the firm import intermediate goods than it also export so there is a wide area to boost the export activity study found that increases in the imports of firms are due to tariff cuts. Imports and exports are associated with each other, diversification of exports is associated with diversification of imports which means that firms that imported varieties of product/ raw material also export varieties of goods, increase in the manufactured product also increase in overall export growth. Imtiaz Ahmad and Mahmood

(2020) found in their study that uncertainty and risk-taking behaviors, firm size, and firm productivity affect exports, while they also concluded that risk-taking firms have a higher probability of high exports as compared to risk-neutral firms and firms adjust their cost according to the firm's size, the risk-taking behavior of firms is an important factor to enter in the export market. Latif and Javid (2016) examined in their study that devaluation currency and income of the opposite partner play a vital role in export performance of textile industry of Pakistan prices and real wages are main factors for exporters. They concluded their study by using data for the period between( 1973 to 2013) that supply side of the high income elasticity tell about the domestic side of the economy which play an important role in the textile sector of Pakistan.

Malik, Ghani, and ud Din (2017) evaluated in their study which is conducted to estimate the export performance of the textile industry and found in their study that Pakistan textile industry is facing many challenges which include power, energy, lack of upgraded technology, skilled labor, and poor infrastructure, these are the main causes due to which the textile industry is not performing well in exports. They concluded their study that Pakistan needs to enhance the productivity of the textile industry by introducing various new schemes for technology up-gradation, the textile industry needs to make their labor skill by providing them proper training and workshops to use the labor more efficiently, Government needs to provide cheap energy to the textile sector if they want to perform well this industry. W. Ahmad, Ahmed, and Shabbir (2015), examined in their study that for the growth in export firms size, improvement in technology, economic development, and foreign exchange earnings, financial variables play an important role to boost all these factors, from the data 2006 to 2011 firm level data of 111 textile industries are used and concluded their study that there is the significant positive role of financial

variables and textile industries used their assets in a proper efficient manner, any improvement in the firms play a vital role in the increment of the above variables.

### **2.1 Theoretical Framework:**

Several studies have theorized about the effects of an export tax rebate, energy policy, and importance for up-graded technology of the textile industry. According to the ministry of finance, the textile industry is one of the single largest manufacturing sectors, which contributes to the economic growth of the country along with its sharing to employment, export, investment, earning, and foreign exchange. Various findings support that energy prices play a very important role in the push of economic growth, by providing textile products at a cheaper price in the international market improvement of the production process, technology, full utilization of managerial skills, and labor force. Njma Pirzada reported Energy tariff reductions to encourage the textile industry, It is evident from Pakistan's recent export growth trajectory that the government's provision of regionally competitive energy tariffs over the last three years has been bearing fruit. The support for the textile industry has enabled the expansion in its capacity, technological upgrade, and new investment, leading to the setting up of over 100 new textile units and creating millions of jobs.

## **CHAPTER-3**

### **REVIEW OF TEXTILE SECTOR OF PAKISTAN**

After agriculture Pakistan economy is dependent upon the textile sector of Pakistan. The textile industry is one of the biggest industries with a major contribution to the international market. South Asia is also popular due to the emerging markets for textile and garments. Cotton, cheap labor, water, and raw materials for the textile industries are the main factors for gaining the top position in this sector. The major importers of textile products from South Asia are the “UK”, “US” and the “EU”. China holds a dominant position not just in Asia but also all over the world in producing and exporting textile products. In 2019 the export value of textile goods is approximately \$120 billion. India and Bangladesh are just after china in textile exports. Pakistan textile industry is one of the largest manufacturing industries and complex sectors as well and is considered the backbone of Pakistan’s economies. There are the main four sources from which textile material is made from animal, plant, minerals, and synthetic is. This sector contributes 8.5% to GDP by providing 40% of employment of the total labor force. The Textile sector of Pakistan achieved 8<sup>th</sup> position in the Asia ranking. 423 textile industries are working in the country. Pakistan is the 4<sup>TH</sup> largest producer of cotton in Asia and the 3<sup>rd</sup> largest spinning capacity after China and India. As per Statistics on the textile industry in Pakistan, having so many advantages, the total share in global share in global textile trade is less than 1% correspondent (March 17, 2013) The Pakistan textile sector is right now confronting a few challenges. Concurring to specialists, there's required for the industry to move forward the

quality of its items. There's too they require for more prominent esteem expansion in its products. The Pakistan textile industry is confronting intense competition from the Indian, Bangladeshi, and Chinese material businesses. The fetched of control in Pakistan is tall as compared to that in other countries. On account of these reasons, the Pakistan material industry is going through a basic condition. The textile industry is facing many challenges like electricity breakdown, irregularity in the supply of gas, direct and indirect taxes. Material may be a solid column supporting the economy of Pakistan. Textile items and garments constitute nearly 50 percent of the overall universal trades and bookkeeping to nearly 8.5 percent of the GDP of the nation utilizing 38 percent of the generation workforce. The government of Pakistan has too made ad-libs within the material approach of 2014-2015 in arrange to bolster and elevate the division. The revisions emphasize proper infrastructural offices, satisfactory speculations, legitimate preparing centers, investigating organizing for creating quality items within the material industry. It'll too concentrate on regional trading in arrange to grow generation capacities of pieces of clothing in Karachi, Islamabad, and Faisalabad., there have not been sufficient endeavors from the country's government within the matter of vitality emergency. The government has not however satisfied the guarantee of introducing nonstop power and gas plants to boost control supply. This has influenced the textile sector. There is a decline of 1.42 % in textile exports due to the high cost of doing business. Pakistani textile makes up only less than 5% of the total global textile exports according to Global Village Space News. Hence, the textile sector can play a pivotal role in the revival of the trembling economy of the country by enhancing the standard and volume of textile goods and increasing focus on the improved end products. According to UNESCAP, (2015) in 1995 when the world import tariff for developed and developing countries was brought down to a historically low level, but “Pakistan” still

maintain high effective rates for protection 14.3 against corresponding Asia while the Asia Pacific average 7.4%.Pakistan world trade organization(WTO) bound duty rate is 60.2%. This not only increases the price of consumer goods but also increases the manufacturing cost of exports given that many imported inputs are to be used as industrial raw materials. This could raise the production cost, could make countries export uncompetitive major constraints for export growth diversification. Due to the importance of this sector, the government of Pakistan shows seriousness toward this sector, past governments introduced many initiatives to promote this sector. It is related to note that, Pakistan has vigorous undiscovered send-out potential within the material segment. To unfold this inborn potential, huge venture in apparatus, improved ability set, and item development is basic. In any case, success in these avenues isn't conceivable within the nonappearance of supporting approaches from the government, particularly within the background of extreme competition inside the material division within the locale. Reform should be a top priority. Without deep reform, the energy sector will continue to bleed and eventually force our energy prices to rise to uncompetitive levels, incapacitating our productivity, growth, and investment. Due to insufficient policy support, the sector's performance has deteriorated significantly during the last 10-15 years. Due to high manufacturing costs, recurring power outages, and poor tactics, the sector's export, and growth performance suffered substantially. As a result, textile exports in 2020 were expected to be around \$12.78 billion (SBP). However, during the current epidemic, the textile sector has outperformed, with exports increasing 10.79 % in January 2021 over the same month last year (PBS). The textile firm's recent exceptional performance can be attributed in part to regionally competitive energy. The development of the modern creation area has been given the highest need since Pakistan is setting up with premier weight on Agro-Based areas. It is about time for Pakistan to re-decide her course to augment her



ability and thusly improve her economy. It won't just balance out the diminishing economy but will likewise assist Pakistan with improving her modern area. The Textile Industry of Pakistan has upheld Pakistan trade profit up to an extraordinary degree. In such manner, a broad assortment of things viz Cotton fiber, yarn and material, yarn other than cotton yarn, tents, bed-wears, towels, floor coverings, and an assortment of pieces of clothing have been the main results of Pakistan trade area. Notwithstanding, there is as yet an opportunity to get better as the area is exceptionally lively can yield much better outcomes for Pakistan. Hence, to keep track Pakistan needs to energize interests in this area. Enormous mechanical units ought to be furnished with very much arranged expense systems to import the most recent innovation. Essentially, work preparing, development in the items, and innovative work are likewise in need of great importance. The exports of the textile industry declined due to many reasons but some important reasons behind this decline are, the removal of import tariff create an increase in competition for Pakistan with its neighbor countries, as compared with Pakistan its neighbor product are cheaper. There is a lot of law and order issues in past Pakistan in Karachi, as Karachi city is the main industrial sector of the country due to this textile industry face lot of problems. An energy crisis always becomes a big problem for Pakistan and this problem affects the textile industry, increasing energy tariff and discontinuity the declining productivity and reducing their ability to compete with its neighbor competition.

Below are the major incentives introduced by the government of Pakistan to encourage exports and productivity of the textile sector.

### **3.1 Long term finance facility (LTFF)**

Besides, the availability of cheap raw material plants and machinery are important factors of any industry to be more productive and efficient. If any industry uses up-graded technology then its

production will be different as compared with that which still relies on old technology and machinery. The upgraded technology not only increase productivity but also help the firm to decrease the other cost, and produce a quality product. The textile industry is no exception as well and the performance of the textile sector is also dependent on up-graded technology. Keeping in view the key importance of technology up-gradation and new machinery, the government of Pakistan introduces Long Term Finance Facility to the textile sector (2007). Under this scheme, long-term finance of up to 10 years is given to Participating Financial institutions (PFI), to the borrowers' machinery importers as well as the purchase of locally manufactured machinery set up for export-oriented projects. For the up-gradation of technology of the textile industry, LTFF was provided at the discount rate of 9% for 3 to 10 years duration from the State Bank of Pakistan.

**Table 1 Rate of LTFF**

<b>S.NO</b>	<b>LTFF</b>
2014-15	9%
2015-16	6%
2016-17	9%
2018-19	5%

(Budget report 2019)

### **3.2 Export finance (EF):**

It is a concessional transaction short-term facility provided to exporters through banks to boost the country's exports. It is the difference between market interest rate and the interest rate on export finance for a maximum period of 180 (days).

### **3.3 Drawback of Local Taxes and Levies (DLTL):**

Duty drawback is an incentive given that many countries allow both exporters and importers to recover many duties and taxes paid on imported merchandise. Refund of duties collected on imports which are then exported at a certain percentage given by the government. If the exports of textile products are 10% increase every year as compared with the previous year then DLTL policy will be given to textile exporters. This scheme was introduced for all zero-rated sectors and starting from 2005 to now, the government has spent an average of Rs1174 million on the textile sector in the form of these incentives.

### **3.4 Regionally Competitive Energy Tariff (RCET)**

The Regionally Competitive Energy Tariff, and firstly introduced in 2017. As the other raw material and factors of production are important, the importance of energy in the textile sector is undeniable. To highlight the importance of energy in the textile sector, consider the case of the Spinning sector where energy cost accounted for 38% of total conversion cost while weaving account for 23% of conversion cost. Therefore the provision of uninterrupted and cheap energy of textile to the textile sector is imperative for its role being the leading exporting sector of the economy. By providing consistent energy the textile exporters would be able to complete their demand in due time. In Pakistan, there is a lot of problems in the energy and powers sector, due to this the exporter is unable to complete their demand in due time and they lose a lot of foreign customer due to delay in providing their demands. The energy crisis and high cost of fuel affected the textile industry badly. It is to be well known that textile mills use thermal energy in two major operations, in the heat of the water, and the second is to drying of the water. As compared with other textile exporting countries like China, India, and Vietnam the energy tariff on the textile industry is much lower than in Pakistan, which makes the textile industry of

Pakistan uncompetitive in the international market. If the Pakistani industry has to enter incompleteness in the international market it is necessary to make the tariff power sector will be revised to a competitive level. For making better and efficient performance one must enter the competition, For this, it is necessary to make the power tariff also be lower. To improve the performance of this sector it needs to availability of energy at regionally competitive energy tariff. The government of Pakistan offered under this policy to the textile sector is RLNG at \$6.5/mm btu and electricity tariff at 7.5 cents. In September 2020 the energy tariff was raised to 9. As there are many sources to provide energy in very cheaper like from wind-solar etc. there is need to install new plants, new sources of energy nuclear and tidal power.

### **3.5 Structure of Textile Sector:**

In Pakistan Textile sector is comprised of both organized and unorganized subsectors. Spinning units, integrated textile Mills, and a small number of shuttleless looms are organized and small-medium enterprises engaged in weaving, processing, garments, and hosiery are unorganized sectors. As per statistics of the textile commissioner organization (2018-19), this sector consists of 40 composites, 477 spinning units with 13 million spindles, and 198801 rotors. A. A. Memon et al. (2017) found in their study that as compared with china and India Pakistan share around 5% of global spinning capacity.

### **3.6 Export Performance of Textile Sector**

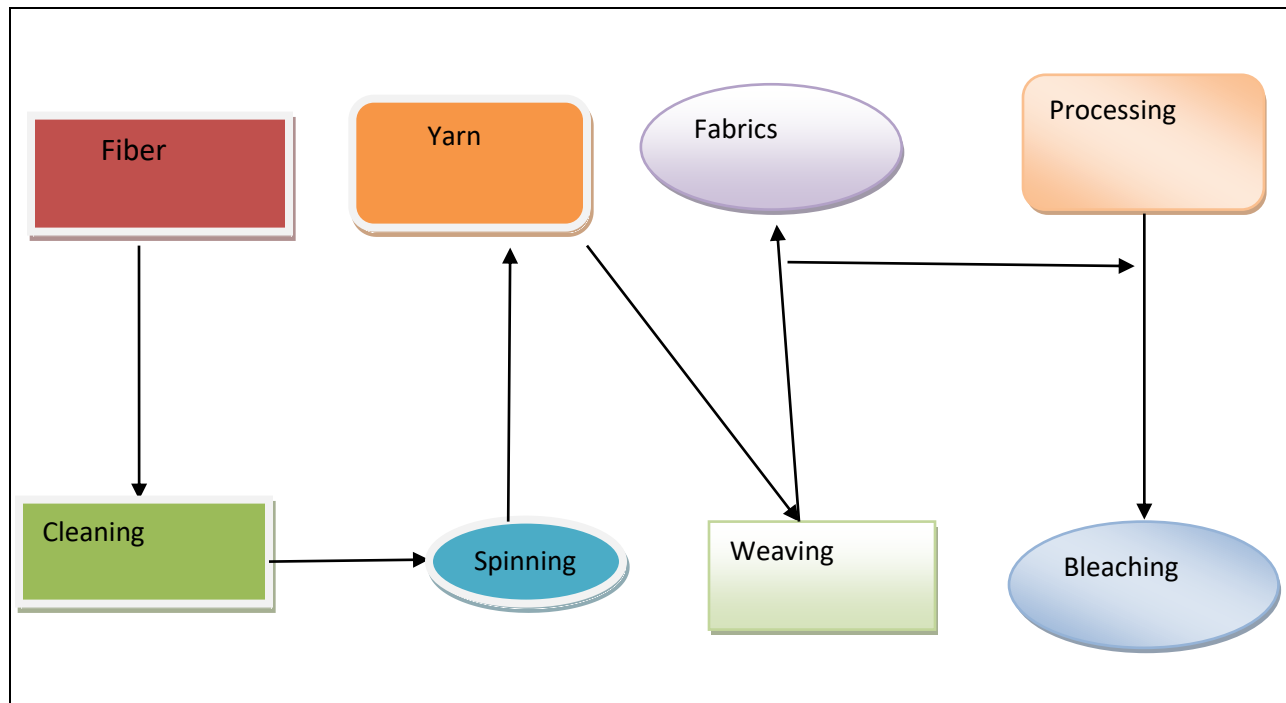
Between 1988 and 1993 when the confinements of MFA were in effect, the share of Pakistan was almost above 2.5 percent within the add up to world trades. But from 1995 to 2005 the share of Pakistani material declined underneath 1.5 percent on normal (Service of material, 2019). From 2005 to 2019 Pakistan has been exceptionally consistent in this share and appeared no change within the share to add up to sends out. It was 1.65 percent within the monetary year 2019. So

this issue ought to be addressed within the current time when Pakistan is going through a serious emergency within the adjust of payment account. Despite development in charges of material items, trade demand for South Asian material products made strides in European Union and joined together States America. Esteem included yarn has been a trademark of Pakistan's trade rather than utilizing it for the generation of preeminent quality items like attire and texture. So Pakistan has the tremendous advantage to create a huge amount of tall quality products to extend the sends out.

The Pakistan Textile Industry contributes generously to Pakistan trade income. The trades bin contains a wide scope of things viz Cotton filaments, yarn and fabric, yarn other than cotton yarn, tents, material, bed wears, towels, floor coverings, made-ups, and an assortment of articles of clothing. The Material Industry of Pakistan has potential for performing better underway and fare by the righteousness of its intrinsic mastery in the global market for its traditional items. Nonetheless, to keep up with its position and move in high worth-added items for the worth expanded market share, enormous interest in hardware gear and innovation is fundamental. The preparation of laborers, improvement in labor usefulness, research and advancement, item expansion, what's more, marking are the quick regions for each organization to center. The below table shows the last 20 years' export performance of the textile Industry. After the covid 19 pandemic conditions, the textile industry is the single largest exporting sector of Pakistan. According to the annual report, the share of the textile industry is reached 60%. The chairman of APTMA Mr. Inam said that the textile sector is working more efficiently as shown in the performance in the productivity, there is some unit shut down due to the Covid 19, we try them to back in working condition as soon as possible. This sector is working extraordinarily after the Covid 19 and in a much better position as compared with its demographic competitors. The

textile sectors become successful to gain diverse exporters, which are diverted from China, India, and Bangladesh. After this pandemic number of export orders increases from the countries like United State and Europe. Due to the support of the government the industry rapidly recovered from the poor condition and that they are in hope that the government will continue to support the textile industry for better performance and achieve the targeted exports, Siddiqui (September 20, 2020)The statics given by Pakistan Bureau of Statics (PBS) during the fiscal year 2021the exports of the textile sector are Rs 25.3 billion, 18.3% much higher than the previous year. Countries that are suffering from the current account deficit is somehow compensated by this increase in exports Hanif (September 07, 2021)

**Figure 1 Brief Overview Of The Cotton Textile Manufacturing Process:**



Source (Uddin, 2019).

The textile industry has one of the most confounded mechanical chains in the assembling business. It is a divided and heterogeneous area overwhelmed by SMEs, with an interest principally driven by three prevailing end-employments: clothing, home outfitting, and mechanical use. Portraying the material assembling is intricate in light of the wide assortment of substrates, cycles, apparatus, and parts utilized and completing advances attempted. The fundamental goal of the textile firm is to create yarn (string) from crude cotton which requires six phases of the cycle. These are talked about momentarily for perusers' understanding. The execution of energy preservation programs in turning plants has acquired wide acknowledgment in the background of the increasing expense of energy. With additional what's more, more use of electrical energy and quicker development of industry, the driving force on energy preservation

is expending huge amounts at a time. The pressing factor of energy bill and tension on the absolute accessible energy is particularly required for an additional turn of events.

### **Ginning:**

The first stage of processing cotton is called ginning. After collecting cottonseed from the field next step is lint is separated from the seed. The production of a typical gin is about 12 bales per hour. This process is either done by hand, small hand crack, or ginning machine. 1221 ginning factories work in the economy. This industry has more than one million bales on a single shift basis and a total capacity of around more than 20 million bales on three shifts.

### **Spinning:**

It is the second step. These yarns are made from fibers. The fibers form a mass of cotton wool are drawn out and twisted, after this fibers come together to form yarn. Spinning can be done by hands by takli or charkha. One large-scale spinning can be done with the help of machines. The spinning sector consists of the following process.

- 1) Blowing and mixing.
- 2) Carding
- 3) Combining
- 4) Drawing
- 5) Simplex
- 6) Ring Spinning
- 7) Cone Spinning



**Weaving:**

It is the process of combining warp and weft components to make the woven structure. In the production of fabrics by interlacing two sets so that they cross each other at the right angle. It is mostly used constructional methods as it is cheap, simple, and adaptable. In weaving, the warp is lengthwise yarns, wefts are cross-wise yarns and selvages are the outer edged finished. There are three basic weaves, which include Plain, Twill, and Satin. The woven Fabrics could vary in proportions to fill yarns.

**The finishing process:**

After the weaving process, the next step is the finishing process. Now the fabric is called Grieg cloth. The fabric finishing process includes both physical and chemical finishing that converts the greige cloth into finishing fabrics.

**Table 2 Number of Textile Mills**

Cities	Composite	Spinning
Baluchistan	0	10
KP	0	19
Punjab	23	332
Sindh	17	127

**3.8 Production cost of the textile sector:**

The cost which is incurred during the conversion of raw materials into finishing goods is called conversion cost, this cost includes the cost of raw material purchased, labor, and energy. Energy cost is the main factor particularly in the textile sector in spinning and weaving units. The conversion cost is a very important factor that tells the competitiveness of the product in the foreign market. This cost causes a big and negative impact on the prices of the textile product

when these are compared with competitive exporters and among neighbor's countries which share same almost same conditions. Due to this the textile millers were always in fear and asked the government to solve the problem for better performance of the textile sector. As Pakistan is the 4<sup>th</sup> largest producer of cotton but its textile products are expensive in the foreign market, and the exporters face a big problem in the international market. The remuneration given to labor in the form of wages and salaries is very low as compared with India.

### **Issues of Textile Industry.**

After a go through of the whole textile industry for last 10 years I have found that following major issues faced by textile industry of Pakistan.

- 1) Lack of up graded equipment and technology.
- 2) Electricity issues.
- 3) Gas problems
- 4) Power crisis
- 5) No new investment in the research and development
- 6) Compared with competitors, high cost of production.
- 7) Old and poor quality seed

## CHAPTER-4

### METHODOLOGY

The current study will use Difference In Difference approach to estimate the performance of the textile industry after receiving the incentives given by the government. This chapter will provide detail of this Difference In Difference approach.

#### **4.1 Difference in Difference Approach:**

When the government announces any new policy for better performance then there is a need to research how much such policy is effective for that sector. We can estimate it by the performance of that sector by before and after treatment DID is utilized in observational settings where exchangeability cannot be expected between the treatment and control bunches. DID depends on a less strict exchangeability suspicion, i.e., in nonattendance of treatment, the in secret contrasts between treatment and control bunches are the same extra time. Thus, Difference-in-difference could be a valuable strategy to use when randomization on the personal level isn't conceivable. DID requires information from before/after-intervention, such as cohort or board information (person-level information over time) or rehashed cross-sectional information (person or bunch level). The approach expels predispositions in post-intervention period comparisons between the treatment and control gather that may be the result from permanent differences between those bunches, as well as inclinations from comparisons over time within the treatment gather that might be the result of patterns due to other causes of the result. DID is as a rule executed as an interaction term between time and treatment bunch sham factors in a relapse demonstrate. The Difference In Difference method is used in hundred of studies in economics to check how much government policy effect the economy or performance of the applied sector. The Difference In Difference approach is used in the simple panel data

method. This method is specifically well suited to estimate the cause and effect relationship between the dependent and independent variable, to analyze the change in policies of the government, and assist better result policy makers to make efficient policies in the future. The difference in Difference is also used to analyze the intervention of a new strategy and its impact on the given target. To use the difference-in-difference method, one must first ensure that some form of the natural experiment can be carried out. We must have a clear understanding of the intervention that must be implemented. We also need to figure out who will be in the therapy group and who will be in the control group. We also require details about the intervention's timeline, which indicates when it will begin and stop. We can use the timeline to assist us to figure out what we need to do next. After intervening in the target sector we got some information like

- 1) Characteristics of the targeted variable before implementation of policy.
- 2) Characteristics of targeted variable after implementation of policy.
- 3) Characteristics of control variable before implementation of policy.
- 4) Characteristics of control variable after implementation of policy.

The difference-in-difference strategy captures the noteworthy contrasts in results over the treatment and control bunches, which happen between before-treatment and after-treatment periods. Within the least complex quasi-experiment, a result variable is watched for one bunch sometime recently and after it is uncovered to a treatment. The same result is watched for a second group (control bunch) that's not exposed to the treatment. This alters within the outcome variable within the treatment gather compared to the alter within the result within the control gather gives a degree for the treatment impact.

## **4.2 Empirical Analysis:**

Recently the Difference In Difference approach is widely used in trade policies. There are many studies conducted across the world to estimate policy impact on targeted sectors. Ashenfelter (1978) used DID method to estimate the earning rate of trained laborers. Card & Kruger (1994) examined that the effect of the new policy about minimum wages on employment in fast-food restaurants, In their study they have taken the target group as new jersey and the control group as Pennsylvania. Pavcnik (2002) used this method to analyze the productivity of the Chilean firms after the firms got the Chilean trade policy, he concluded his study that the policy effect positively on the Chilean firm by increasing production between 3 to 10%.

Trefler (2004) studied by using this method, how much the productivity and employment of the US and Canada increase after the US-Canada free trade agreement, he concluded his results that this policy negatively affects the employment rate and positively affect the productivity of the firms. Tang & Wei (2008) got the result after using the Difference In Difference Approach that countries that follow WTO rules had experienced higher growth.

## **4.3 Estimation Methodology:**

### **4.3.1 Data**

To fulfill the objectives of the study, secondary data about the period (2000-2020) were collected from the Federal board of revenue (FBR), Economic Survey of Pakistan, state bank of Pakistan (SBP), and Pakistan stock exchange. To evaluate the impact analysis incentives given to the textile sector the data was obtained from the Pakistan stock exchange of listed textile companies. The period included to conduct the study is from 2000 to 2020. From 132 listed companies in which 67 are spinning, 58 are composite and 9 are weaving units. From 132 we take data of 35

export-oriented firms, the remaining are dropped due to the unavailability of data, defaulters, and halted production. Further, we divide these 39 into two groups one is that which receives DLTTL policy and the other is that which are not availing that policy.

#### **4.3 Conceptual framework:**

Incentives given to any sector show the importance of that sector, from the economic perspective and government perspective. Government always tries to facilitate the export-oriented sectors, especially which contribute a remarkable portion in GDP in form of export, employment. The industry is the main sector of any country which shares a major portion in GDP. Pakistan is a developing country, the textile industry is always known to be the backbone of Pakistan's economy. Due to its importance in the economy, the Government of Pakistan always tries to facilitate the textile sector in different forms, policies. In this research, we try to find out the relationship that exists between incentives given to the textile industry and its performance. The incentives are given to the Textile industry in the form of the fiscal, power sector, and mode of financing. We take different types of incentives as independent variables and export, sales as the dependent variable. Being a developing country there is a need for a lot of investment in the textile sector because of its importance in the Pakistan economy.

**Tax Incentives:**

Tax incentives always play a vital role in exports. In our study, we take the DLT scheme under this category. It is a kind of Tax incentive which is given to export-oriented sectors as the textile sector is one of those sectors. This scheme allows the exporters to a refund on custom duty which they pay during imports of raw materials and intermediate goods, the exporters first increase import intermediate goods and increase their production. They export their final product as when production increase export also increases, This scheme not only effect production and export but also increase employment as well as the capital of this sector because to increase production there is also a need for labor and capital. Rs 6billion under the DLT scheme has been released by the Ministry of Commerce, the share of the textile industry is Rs 5.6 billion. In this export-oriented sector. This incentive effect the export of the textile sector, as to avail of this incentive textile sector will increase their exports

**Energy sector:**

The energy crisis is always creating a big problem in Pakistan's export industry. The energy sector is the main sector for production activity, the crisis in energy causes not only effect exports but also increase production cost, delays in the delivery of the product and make the product un-competitive in the international market. As the RCET incentive given in the form of Tax incentives. In the textile sector after the capital, energy is known to be a major cost. Energy cost is that cost, occurred during the conversion of raw material into finishing goods. Cost plays an important role in the international market, consumers always prefer the cheap product. RCET is introduced to reduce costs by reducing tariffs. Reduction in the production cost encourages to

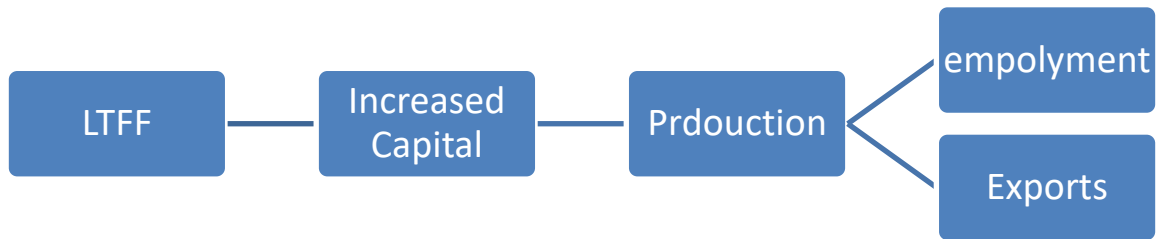
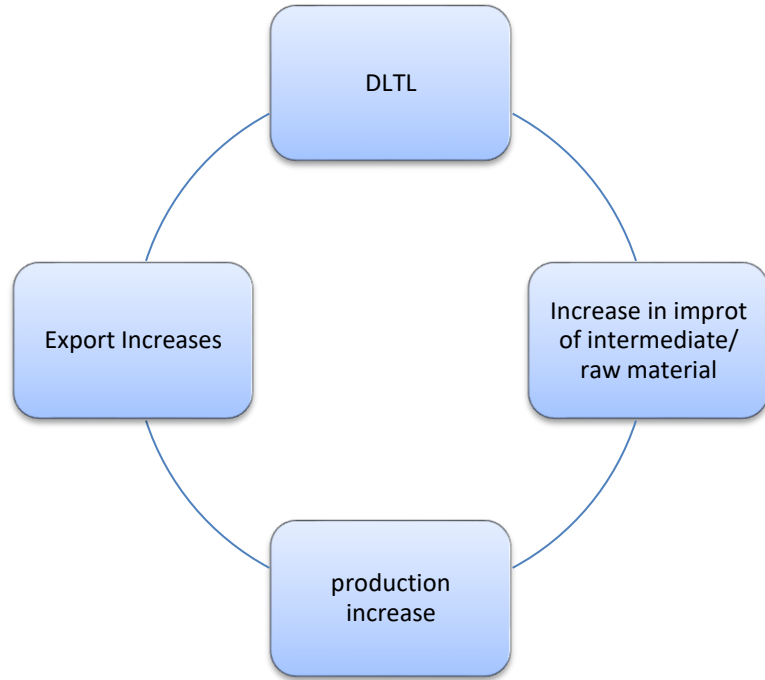
increase the production and also make the product and available at a cheaper rate in both international and domestic market, and demand will rises and export increase, which directly effect on employment and investment.

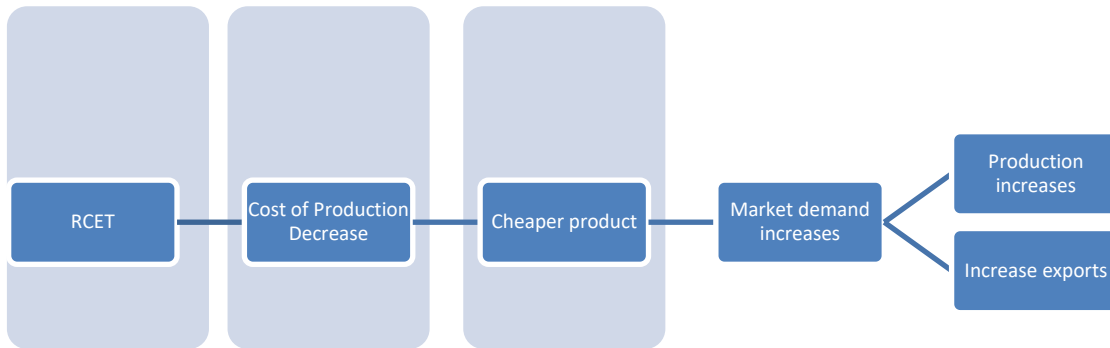
**Financing Incentives:**

Capital is the first and most important factor to start and expand any business. Capital in the form of Plant, Machinery, and cash. Providing finance to the industry is also a main objective of the government. The financing incentive will provide finance in due time which helps the sector to increase its capital in the form of plant and machinery. An increase in the capital in the form of up-graded machinery increase employment and make the product cheaper. LTFE is taken under the financing incentives, the objective of providing this incentive to increase the capital and up graded plant and machinery.



**Figure 2 Conceptual framework:**





#### 4.4 Research Design:

This study focuses on the incentives given to the textile industry to evaluate the performance of this sector. The incentives comprise of fiscal, energy, and financing have given to textile the sector. The variables of the study are as follows.

#### Empirical Equation;

$$\ln Exp = \alpha_0 + \alpha_1 \ln Cap_{it} + \alpha_2 \ln lab_{it} + \alpha_3 DLT L_{it} + \alpha_4 Y19_{it} + \alpha_5 DY_{it} + \varepsilon_{it}$$

The DLT L incentive is introduced to increase exports, for increasing export the firm will have to hire more labor and increase investment. All these three independent variables will help to boost the export of the firm. Y19 indicates the year 19 and DY is interaction term here 1 in the observations means that both the observations are in the year 19 and availing the DLT L incentive.

In my study, there are three different incentives for this the above equation is modified according to the objective of these incentives.

The objective of LTFF incentives is to increase the exports of textile sector by providing upgraded plant and machinery capital of the firm so for LTFF we take Capital as the dependent variable.

#### **4.5 Construction and definition of Variables used in the study:**

We make our data in the panel to estimate the overall performance of the textile industry after availing of the incentives.

##### **4.5.1 Panel data:**

A panel data or longitudinal data set, is the data set which contains multiple observations of different of the entity in which the data of the observed entities are evaluated at two or more than two time periods.

##### **4.5.2 Dependent Variable:**

Exports of any textile sector are dependent on many factors. Dependent variables are those variables that change due to other variables, they are dependent on other variables for their output. In research dependent variable is that which is under observed to evaluate its performance under certain variables and conditions. In our study as we proposed two models according to the incentives given by the government to evaluate the performance of the textile industry. First, we take Exports as the dependent variable and second we take capital employed as the dependent variable.

##### **4.5.3 Independent variable:**

Those variables which affect the dependent variable, do not affect other factors, but they can change the performance of the dependent variable. In the research, they are also known as

control variables. In our study, we take labor and the incentives given to the textile sector as the independent variable.

#### **4.5.4 Dummy Variable:**

Dummy variables some also known as indicator variables are used in regression to elaborate the different treatment groups. The dummy variables are used to check the presence of the characteristics of any variable. It is an artificial feature. In our study, we use a dummy variable for the textile sector, the textile industry which avails the given incentives. E.g. If DLTL receives any company in a given period will be 1 and 0 otherwise.

We take three major incentives to estimate the performance of the textile industry. The study is also divided into different periods as follows

- 1) We take data of the textile firms of 2001 to 2019
- 2) We take data of the textile industry of 2017-2019 (For RCET)

As per the above time different period, we regress the data accordingly to the three major incentives. Before applying the regression we first take the log of the variables.

The model which is designed for the study is under

$du$  and  $dt$  denotes dummy variables for group and period, if a particular firm is in the treatment group that avails DLTL and other incentives in that year then  $DY=1$ , if the firms receive an incentive in that year =1, 0 otherwise.

The Control group in our study is that which is not availing that incentive.

#### 4. 5.5 Econometric Model

$$\ln Exp = \alpha_0 + \alpha_1 \ln Cap_{it} + \alpha_2 \ln lab_{it} + \alpha_3 DLT_{it} + \alpha_4 Y19_{it} + \alpha_5 DY_{it} + \varepsilon_{it}$$

**Table 3 Name of Variables**

Variables	
Ln	Log
Lab	Labor
Cap	Capital
Exp	Exports
E	error term
Sale	Sales
Fasst	Fixed Aseets

I Crosss-ectional=1,2,3.....39(Firms)

T time period=2000, 2001,.....2019

DLTL is an incentive

Y20 and DY denote for firm and period, if the given firm is in the treatment group for that year then DLTL 1 and 0 otherwise, DY is the interaction term.

## **Chapter-5**

### **Results& Discussions:**

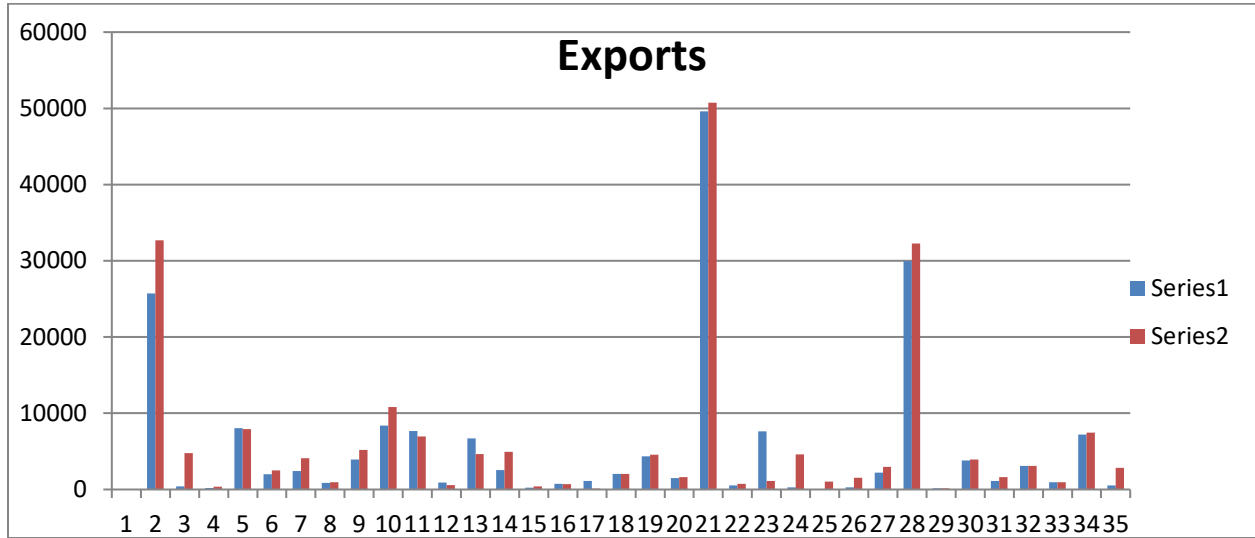
#### **5.4 Descriptive Analysis:**

Descriptive Analysis is used to interpret quantitative data which tells the description about the data and results. This method helps us to interpret the data in a very simple and easy manner, and any layman can also interpret the results from the descriptive method. In description analysis, the basic feature of the data is studied. It provides a simple interpretation of the result and data. In the descriptive analysis, the result of the interesting data is defined and explained through graphs, with this descriptive analysis one can easily understand the trend of data like increasing, decreasing, or fluctuating.

In our study, the descriptive result tells us about the export performance of the Pakistan textile industry in a different period and compares different textile industries which receive the incentives given by the government of Pakistan.

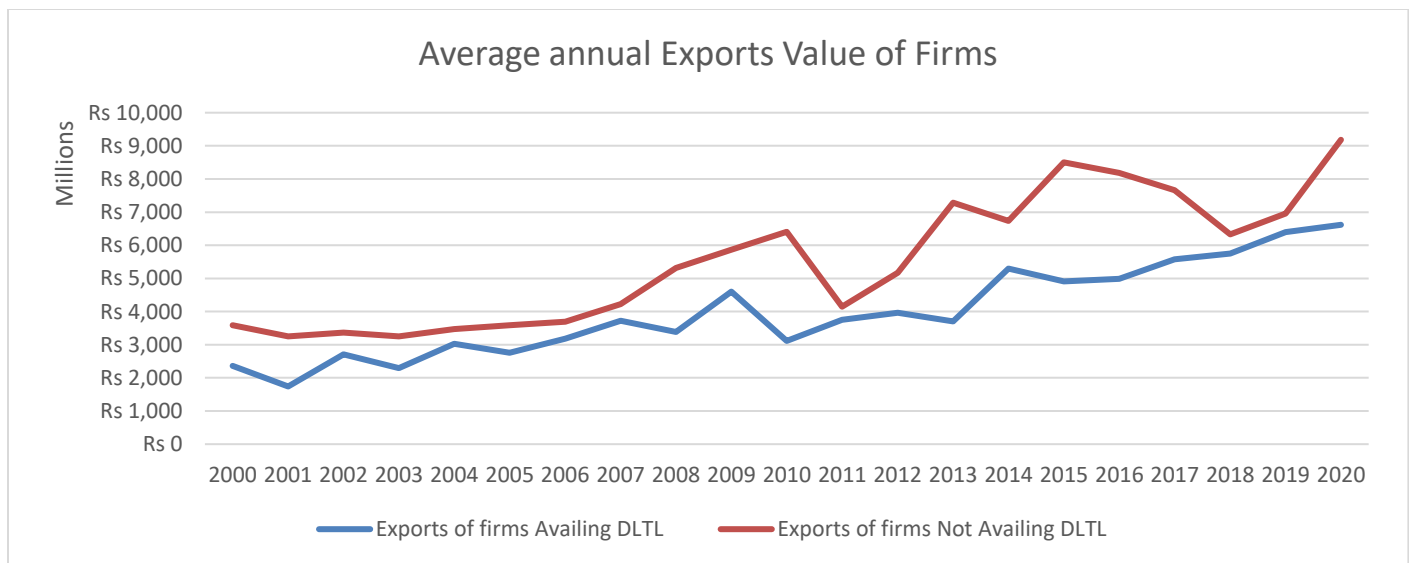
Following are the figures which show sthe export performance of textile sector

**Figure 3 Exports RCET**



The above figure is drawn from the export data of 35 textile firms from the two different time periods 2017 and 2019. In the year 2017 the government introduced Regionally Competitive Energy Tariff (RCET) to the textile sector. The objective of taking data of these two different point is to compare the export performance of the textile firms after the RCET incentive. series one which is in blue colour shows year 2017 and red colour for the year 2019. The above figures clearly shows that RCET incentive is much effective to increase export of the firms.

**Figure 4 Export DLTL**



From 35 firms there only 13 firms which receive DLTL incentive, we divide our study in two types of firms, one those firms which avail this incentive and the second which are not availing this incentive and comparing their average export performance. We can easily conclude from the above figure that firms that the average performance of which are not availing this incentive is much better than those which are availing.



## 5.1 Estimated result of Group (1)

$$\ln \text{Exp} = \alpha_0 + \alpha_1 \ln \text{Cap}_{it} + \alpha_2 \ln \text{lab}_{it} + \alpha_4 \text{DLTL}_{it} + \alpha_5 \text{Y19}_{it} + \alpha_6 \text{DY}_{it} + \varepsilon_{it}$$

Y19 is a dummy variable that indicates that we are in the year 2019, so far all observations other than the year 2019 are zero and for the year 2019, all the observations are 1. The inclusion of this variable will take care of the time trend problem

DY is an interaction term between DLTL and Y19, here 1 in the observations means that both the observations are in the year 2019 and avail the DLTL incentive.

DLTL is our main independent variable this will take care of the inherent difference between our treatment and the control group.

**Table 4 Estimation Results**

	Coef.	p-value
lExport		
lCap	0.13	0.03
lLabor	0.45	0.00
DLTL	0.17	0.19
Y19	0.16	0.18
DY	0.75	0.11
Constant	10.10	0.00
R-squared	0.74	
Prob > F	0.02	

### **Heteroscedasticity:**

One of the important assumptions of the classical linear regression model is that the variance of each disturbance term is constant, This assumption is known as Homoscedasticity. If this assumption is not satisfied we say that it is heteroscedastic.

### **Heteroscedasticity test:**

H<sub>0</sub>; there is no heteroscedasticity problem in the model.

H1: There is heteroscedasticity problem in the model.

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

chi2(1) = 4.51

Prob > chi2 = 0.0836

The Breusch-Pagan value clearly shows that it is greater than .05, so it means the data is Homoscedastic and we accept our null hypothesis.

### **R-squared :**

R-Squared ( $R^2$  or the coefficient of determination) is a statistical measure in a regression model that determines the proportion of variance in the dependent variable that can be explained by the independent variable. In the above table, its value is .74 which means that 74% of the data fit the regression model.

The above table shows the estimated regression result. lCap is the natural log of Capital which is the independent variable and its estimated coefficient value is 0.125, which indicates that 1% change in the capital will increase exports by 1.25%. lLab natural log labor expense, the estimated coefficient value of labor indicates changing in 1% in labor expenses bring 4.52% increase of exports. The firms receive DLTl incentives by 1 unit, exports of those firms increase by 16.5%, as compared with other firms but the p-value of DLTl is insignificant. Y20 is a dummy variable, the estimated coefficient result indicates that exports increased by 16.5% in the year 2020, the p-value of Y20 is greater than 5% which means it is insignificant. DY is an interaction term, the result indicates that the firm received an incentive in the year 2020, 1 unit of incentive increased exports by 7.5%.

When we discuss the DLTl policy it is seen that in Pakistan few of the textile industries are availing of these indirect concession schemes. The main reasons for failing this scheme are as under

#### **5.1.1 Delay Payments:**

Developing countries like Pakistan always suffer from delayed payment issues and due to this, they are not able payments in time. The reasons behind delayed payment are different like companies registration, approval from the grants from the government side, availability of cash, and lots of other problems.

#### **5.1.2 Documentation:**

As per the report of the World Bank (April 2021) recently published in which they highlight the main reason for the failure of the DLTl scheme in Pakistan, according to the world bank report there are a lot of documentation issues in Pakistan due to this many industries not apply for such schemes because they are fed up from such these extra formalities, due to this the Government should take notice and make proper channel if they want to make successful this scheme. Recently research on Textile Industry was done by PIDE in which also suggests that government should not rely on such an indirect scheme. Nadeem Ul Haque (2021) conducted a study to evaluate the efficiency of RCET incentive given to the textile industry, they concluded their study about DLTl incentive that this incentive is not much effective due to the inefficiencies in that scheme, they said that even if government shall successfully remove these efficiencies of DLTl payments but the documentation process create a big hurdle in the form of documentation cost. The documentation process is very complicated and costly, as to maintain proper records of export quantities, submission of prices to government agencies.

## 5.2 Estimated result of Group (2)

In the below estimation we take Export as the dependent variable to analyze the impact of LTFF policy on the capital. The purpose behind this is policy is to increase capital. The results clearly show that we accept our null hypothesis, which means that this policy is effective to increase the capital of the industry, and also there is a positive and significant impact on labor, as when there is an increase in the capital the productivity of the firm also increases which directly effect on labor and labor also increase. The significant result behind this policy is consistency, this policy is consistently available to zero-rated sectors especially the textile industry.

### Dependent Variable Exports

$$\ln\text{Exp} = \alpha_0 + \alpha_1 \ln\text{Fasst}_{it} + \alpha_2 \ln\text{lab}_{it} + \alpha_3 \text{LTFF}_{it} + \alpha_4 \text{Y19}_{it} + \alpha_5 \text{DY}_{it} + \varepsilon_{it}$$

Y19 is a dummy variable that indicates that we are in the year 2020, so far all observations other than the year 2019 are zero and for the year 2019, all the observations are 1. The inclusion of this variable will take care of the time trend problem

DY is an interaction term between LTFF and Y19, here 1 in the observations means that both the observations are in the year 2020 and avail the LTFF incentive.

LTFF will take care of the inherent difference between our treatment and control group.

**Table 5. Estimation Results**

IExports	Coef.	p-value
IFasst	0.39	0.07
ILabor	0.33	0.03
LTFE	0.50	0.05
Y19	0.63	0.01
DY	0.38	0.03
Prob > F	0.031	
R squared	0.71	

**Heteroscedasticity test:**

H0 ; there is no heteroscedasticity problem in the model.

H1: There is heteroscedasticity problem in the model.

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Prob > chi2 = 0.7572

The Breusch-Pagan value clearly shows that it is greater than .05, so it means the data is Homoscedastic and we accept our null hypothesis.

In the above table, its value of R squared is .71 which means that 71% of the data fit the regression model.

The above table shows the estimated regression results. IFasst represent the natural log of fixed assets which is the independent variable and its estimated coefficient result indicates that a 1% change in fixed assets increases the exports by 3.87%. Labors are the important factor to increase productivity if one productivity increases then sales increase which in return capital of that firm also increases. ILab is a natural log of labor expenses the results of regression indicate that a 1% change in labor expenses brings a 3.29% increase in capital. LTFE is a dummy

variable that indicates that firms receive this incentive and its effect on their capital, the above coefficients results indicate that 1 unit incentive received by firms, capital increased by 4.96% as compared with the other firms which not avail this incentive. Y19 indicates the year 2020 in which firms received an incentive, there is a 6.31% increase in capital of firms as compared with other years. DY indicates the firms receive incentives in the year 2020, the result of the coefficient DY indicates that 1 unit incentive received by the firm's capital of that firms increased by 3.7%

### 5.3 Estimated result of Group (3)

$$\ln \text{Exp} = \alpha_0 + \alpha_1 \ln \text{Cap}_{it} + \alpha_2 \ln \text{lab}_{it} + \alpha_3 \text{RCET}_{it} + \alpha_4 \text{Y19}_{it} + \alpha_5 \text{DY}_{it} + \varepsilon_{it}$$

**Table 6 Estimation Results**

LExport	Coefficient	P value
LCapital	0.05	0.05
LLabor	0.89	0.00
DY	0.01	0.04
RCET	1.67	0.00
Y19	0.13	0.02
Constant	2.83	0.05
R-squared	0.81	
Prob>F	0.00	

#### Heteroscedasticity test:

H0; there is no heteroscedasticity problem in the model.

H1: There is heteroscedasticity problem in the model.

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

$$\chi^2(1) = 1.82$$

$$\text{Prob} > \chi^2 = 0.773$$

The Breusch-Pagan value clearly shows that it is greater than .05, so it means the data is Homoscedastic and we accept our null hypothesis.

The value of R squared for the above model is .81% which means that 81% of the data fit the regression model.

The results indicate that there is a 1 unit decrease change in the energy tariff will bring a 16.7 % increase in the exports, an increase of 1% capital will bring a .5% increase in the exports. The dummy variable Y20 captures the period after the incentive received by the industry, having a positive coefficient of value suggest 1 unit change in the year 2019 brings increase exports by 1.28%. DY is an interacting term that implies that the firms which receive an incentive in the year 2019 increase exports by 1.3%. As the above figure shows that there is a positive and significant impact of RCET on the exports of the textile industry.

## CHAPTER-6

### CONCLUSION& RECOMMENDATIONS

Pakistan is the 8 largest textiles, 4<sup>th</sup> largest in cotton production, and 3<sup>rd</sup> largest in cotton consumption. As per statics textile industry is the main sector which shares a large portion of labor employed, exports, in GDP. This sector needs special attention for better performance in the future.

DLTL, RCET, and LTFF are the major incentives given by the government of Pakistan to increase the performance of the textile industry. By using the difference in difference approach which is most commonly used to measure the impact of policies on the given incentives. The availability of export finance is very important for the export sector to grow. Due to the longer production process and delivery of goods and services firms involved in international trade are particularly dependent on finance for their working capital needs, as compared with the domestic market export market being more sophisticated than the global demand requires constant investment in technology upgrading.

The main reason behind the decline in economic growth in Pakistan is the non-competitive energy tariff because it causes in-efficiencies in market prices, under such a situation the textile industry tries to give maximum output as it can within the uncompetitive energy tariff. Exporters face many hurdles and the share of export of textile goods is declining day by day.

The Government of Pakistan is much confident of the incentives given above to the textile sector for better performance, and to boost the productivity of this sector by different factors, like exports, sales, capital, and labor employed.



After empirical research on this industry, the study is concluded in a few words, by using Panel data of thirty-nine export-oriented textile sectors from 2000-2019, that the government DLT policy shows insignificant results toward the export of the industry, this policy is not effective due to the delayed payments, documentation issues, also there is no continuity in this policy. LTFF and RCET are significantly effective and helpful to achieve the stated goals. The performance of the textile sector is satisfactory for some years but there is also fluctuation in the performance of the industry.

### **6.1 Recommendations:**

The covid-19 pandemic affects the whole world badly, even the economies of the developed countries also affected can't handle such economic shock. When we look at our economy, as estimated this pandemic will affect it, but the actual side is quite positive as compared to what we assumed. The textile industry is one whose performance is very good as compared with its competitors. Customers switch from other countries and place the order in the textile sector of Pakistan, This is the only sector that becomes successful to attract foreign customers toward themselves. Pakistan (2021) Bureau of Statics highlights the contributions of the textile industry toward exporting and providing employment opportunities, by sharing a major portion in GDP. Exports play a very important role in any country especially developing countries to increase their income through exports. Pakistan is an agricultural country and in 4<sup>th</sup> position among cotton-producing countries. The major advantage of all of them is which is said to be a comparative advantage among textile exporters countries is, Pakistan is a labor-abundant country, cheap labors are easily available to the production sector of the country.

Being blessed with all the opportunities as mentioned in the above paragraph, when we look at the overall performance production sector especially in the textile sector, the performance does not show a positive picture. The Government is not able to utilize and take advantage at its maximum level, the output is not in its maximum or not good as compared with its competitors like Bangladesh, India, and China.

- Government should revise about DLTL policy because this policy is not effective to enhance the exports of the country. The government should not need to waste both time and funds in investing in this scheme, because of lots of issues like documentation, delayed payment, and other hurdles many of the textile millers did not apply to avail this opportunity. If a state wants to be successful in any policy then the government provides proper rules and continuity in the policy because without consistency no policy will show any positive result even how the policy is effective. When we compare our policies with other neighbor's countries they show a positive result for the same policy but in case of Pakistan it fails to give proper result, it is because of that in our country it takes more time for implantation and there is no continuity in the policies.
- LTFF is introduced for increasing capital and increasing exports in the form of importing plants & types of machinery for increasing the production of the textile sector it shows quite good and a positive result as compared with the DLTL policy. This policy also shows consistency. the government should introduce such schemes which not only increase capital but also production and employment opportunities to the country. Nowadays due to pandemics where every sector is shrinking the performance of the textile sector is outstanding, it's time to provide more funds to overcome the liquidity problems of the industry.

- RCET is bringing a new phase to the textile industry, as in this policy the state provides RLNG tariff at 6.5/mm btu and the electricity at 7.8 cents, but in 2020 the energy tariff increase at 9 cents. This raised in tariff, caused a decline in the share in the international market by increasing the process of the textile goods. As a comparison with old and new rates show slight change but the impact of this change will be brought a big and negative impact on the product by raising the prices textile sector. As in conversion raw material to finishing good the energy share is high which directly impact on end products. The main objective of introducing RCET is to decrease the cost of production, as disused earlier that the exporters face price hurdles in the international market. It is observed that the energy costs of India and Bangladesh are lowered as compared with Pakistan. The energy crisis is always a big problem of Pakistan which also hit the textiles sector badly, firstly due to the energy crisis exporters' not complete demands of their consumer and due to this they also lost their potential customers which reduce the goodwill of the sector as well as country, secondly due to the high energy rates the end product also become expensive to the textile millers and they are bound to sale it in that price, due to this, the exporters face uncompetitiveness in the foreign market. As sharing of the major portion of conversion cost the uncompetitive energy tariff the textile is being affected by the high energy tariff and which directly affect the price of the textile product. As the textile sector is now up-gradation level and the performance in the pandemic is just outclass so incentive like RCET is a very important tool to grip and for market capturing.



## REFERENCES:

- Ahmad, I. (2015). The value of export incentives. *20*(2), 99.
- Ahmad, I., & Mahmood, Z. (2020). Firms' heterogeneity and margins of trade under uncertainty. *29*(3), 272-288.
- Ahmad, W., Ahmed, T., & Shabbir, G. (2015). Determinants of textile firms' profitability in Pakistan. *11*(1).
- Ahmed, Y. (2008). Textile industry of Pakistan.
- Ahmed, Z. U., Mohamed, O., Johnson, J. P., & Meng, L. Y. (2002). Export promotion programs of Malaysian firms: an international marketing perspective. *55*(10), 831-843.
- Ashraf, A., & Rezina, S. (2020). Factors Affecting the Capital Structure of the Textile Industry in Bangladesh: An Inferential Study. *6*(1), 40-51.
- Bank, T. W. (April 2021). *PAKISTAN DEVELOPMENT UPDATE*.
- Bao, Q., Hou, J., Li, K., & Wang, X. (2017). The impact of tax rebates on export performance: China's textile exports to the USA. *31*(1), 79-89.
- Beckman, J., Estrades, C., Flores, M., & Aguiar, A. (2018). *The impacts of export taxes on agricultural trade*. Retrieved from
- Chao, C.-C., Chou, W.-L., & Eden, S. (2001). Export duty rebates and export performance: theory and China's experience. *29*(2), 314-326.
- Chen, C.-H., Mai, C.-C., & Yu, H.-C. (2006). The effect of export tax rebates on export performance: Theory and evidence from China. *17*(2), 226-235.
- correspondent. (March 17, 2013). Statistics on textile industry in Pakistan. *The Express Tribune*. Retrieved from <https://tribune.com.pk/story/522292/statistics-on-textile-industry-in-pakistan>
- Crespi, G., & Alvarez, R. (2000). Exporter performance and promotion instruments: Chilean empirical evidence. *27*(2), 225-241.
- De Wulf, L. (1978). Fiscal incentives for industrial exports in developing countries. *31*(1), 45-52.
- Defever, F., Imbruno, M., & Kneller, R. (2020). Trade liberalization, input intermediaries and firm productivity: Evidence from China. *126*, 103329.
- Demeter, K., Szász, L., & Boer, H. (2017). Plant role and the effectiveness of manufacturing practices.
- Dr. Salamat Ali, D. M. A. R., & Shafqat Ali Khan, a. S. G. G. J. (March 2019). When imports matter for exports
- Firm level evidence from Pakistan. 4. Retrieved from <https://www.theigc.org/wp-content/uploads/2019/05/Ali-et-al-2019-policy-brief.pdf>
- Fan, H., Lai, E. L.-C., & Qi, H. S. (2013). A model of trade with Ricardian comparative advantage and intra-sectoral firm heterogeneity.
- Fernandes, A. P., & Tang, H. (2014). Learning to export from neighbors. *94*(1), 67-84.
- Girma, S., Gong, Y., Görg, H., & Yu, Z. (2009). Can production subsidies explain China's export performance? Evidence from firm-level data. *111*(4), 863-891.
- Gnangnon, S. K., & Brun, J.-F. (2017). Impact of export upgrading on tax revenue in developing and high-income countries. *45*(4), 542-561.

- Goldberg, P. K., Khandelwal, A. K., Pavcnik, N., Topalova, P., & Statistics. (2010). Multiproduct firms and product turnover in the developing world: Evidence from India. *92*(4), 1042-1049.
- Hanif, U. (September 07, 2021). Exports of textile products rise in August 2021. *The Express Tribune*. Retrieved from <https://tribune.com.pk/story/2318888/exports-of-textile-products-rise-in-august-2021>
- Harcar, T. (2015). *An Empirical Analysis of Internal Determinants Affecting Exporting and Non-Exporting Companies in Turkish Textile Industry*. Paper presented at the Proceedings of the 1993 World Marketing Congress.
- Industry, M. o. T. (2015). *Textiles Policy 2014-19*. Ministry of Textile Industry
- Jahan, N. (2014). Determinants of capital structure of listed textile enterprises in Bangladesh. *5*(20), 11-20.
- Johnson, R. C. (2012). Trade and prices with heterogeneous firms. *86*(1), 43-56.
- Kasahara, H., & Rodrigue, J. (2008). Does the use of imported intermediates increase productivity? Plant-level evidence. *87*(1), 106-118.
- Khan, A. A., & Khan, M. (2010). Pakistan textile industry facing new challenges. *14*(14), 21-29.
- Khude, P. (2017). A review on energy management in textile industry. *6*(169), 2.
- Kugler, M., & Verhoogen, E. (2009). Plants and imported inputs: New facts and an interpretation. *99*(2), 501-507.
- Kwon, M. J., & Stoneman, P. (1995). The impact of technology adoption on firm productivity. *3*(3-4), 219-234.
- Lall, S. (1992). Technological capabilities and industrialization. *20*(2), 165-186.
- Latif, R., & Javid, A. Y. (2016). The determinants of Pakistan exports of textile: An integrated demand and supply approach. 191-210.
- Malik, A., Ghani, E., & ud Din, M. (2017). *An Assessment of Pakistan's Export Performance and the Way Forward*.
- Martincus, C. V., & Carballo, J. (2008). Is export promotion effective in developing countries? Firm-level evidence on the intensive and the extensive margins of exports. *76*(1), 89-106.
- Melitz, M. J., & Redding, S. J. (2014). Heterogeneous firms and trade. *4*, 1-54.
- Memon, A. A., Arbab, A. A., Sahito, I. A., Sun, K. C., Mengal, N., & Jeong, S. H. (2017). Synthesis of highly photo-catalytic and electro-catalytic active textile structured carbon electrode and its application in DSSCs. *150*, 521-531.
- Memon, J. A., Aziz, A., & Qayyum, M. (2020). *The Rise and Fall of Pakistan's Textile Industry: An Analytical View*.
- Munch, J., & Schaur, G. (2018). The effect of export promotion on firm-level performance. *10*(1), 357-387.
- Nadeem Ul Haque, A. W. Q., Saddam Hussein, Mohammad Shaaf Najib, Uzma Zia. (2021). Regionally Competitive Energy Tariffs and Textile Sector's Competitiveness. 35.
- Organization, T. C. s. (2019). *Textile Commissioner's Organization*. Government of Pakistan
- Pakistan, G. o. (2021). *Pakistan Economic Survey 2020-21*. Islamabad: Pakistan Economic Survey Team
- Piermartini, R. (2004). *The role of export taxes in the field of primary commodities*: WTO Discussion Paper.

- Siddiqui, S. (September 20, 2020). Pakistan's textile sector back at full capacity. *The Express Tribune*. Retrieved from <https://tribune.com.pk/story/2264762/pakistans-textile-sector-back-at-full-capacity>
- Solleder, O. (2013). *Trade effects of export taxes*. Retrieved from
- Srhoj, S., & Wagner, J. (2020). Export boosting policies and firm behavior: Review of empirical evidence around the world.
- Tan, Y., An, L., & Hu, C. (2015). Regional Effects of Export Tax Rebate on Exporting Firms: Evidence From China.
- Tekleselassie, T. G., Berhe, K., Getahun, T. D., Abebe, G., & Ageba, G. (2018). Productivity Determinants in the Manufacturing Sector in Ethiopia: Evidence from the Textile and Garment Industries.
- Van Biesebroeck, J., Yu, E., & Chen, S. (2015). The impact of trade promotion services on Canadian exporter performance. *48*(4), 1481-1512.
- Weinberger, A., Xuefeng, Q., & Yasar, M. (2017). Export Tax Rebates and Resource Misallocation: Evidence from a Large Developing Countr. (302).
- Žamberský, P., & Čajka, R. (2015). Taxation of exports-theory and practice. *61*(4), 158-165.
- Zia, U., & Mahmood, Z. (2013). Exchange rate depreciation and export price competitiveness: the case of Pakistani manufacturing industries. *18*(4), 529-542.