



RESEARCH PAPER

Cotton Processing and Spinning Industry in Pakistan: A Case Study of Lyallpur City

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PAPER INFO	ABSTRACT
Received: May 14, 2018	This study explores the growth of cotton processing and spinning industry in Lyallpur. Cotton industry was established by British government especially in Lyallpur which was renowned as the greatest industry of Pakistan. Cotton the white gold enhanced the position of spindles and spinning industry. These industries played important role in the economy of Pakistan generally and especially in Lyallpur, a city of Punjab. Library research has been used to analyze the growth of cotton processing and spinning industry in Lyallpur. Primary and secondary sources were used to draw a rational conclusion. This study observed that due to vague strategy of governments the cotton industry faced problems in growth. Heavy taxes were imposed on production of cotton industry and many taxes were also imposed on the imports of industrial machinery. This study recommends that government should reserve a special budget for industry. Machinery and industry must be given rebate on imports and exclusion of taxable income.
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Introduction

Faisalabad city is not only famous for cultivation but also well known for its industries; cotton, wheat, flour, sugarcane, beverages, vegetables, oil seed, fruits, repair yards, engineering works, and ghee. It is also treated as Centre of industry due to mills that process sugar, cotton, silk, textiles, hosiery, dyes, industrial chemicals, clothing, pulp, paper, printing, agricultural equipment etc. Faisalabad is also producer of superphosphates which is used in making of fertilizers and as leaving agent. Due to its vast industrial sector Faisalabad is known as "Manchester of Pakistan" (Christophe, 2002).

Textile industry of Pakistan contributes approximately a sum of 5.2 billion US Dollars these days which are more than 60 percent in total exports of the country. In exports Lyallpur make 45% of its contribution in total output of the country. There are 1,221 textiles ginning and 442 spinning units are present.

Cotton was one of the four major cash crops of Pakistan it is also known as “King Cotton” and “white gold”. Cotton was mostly grown in Punjab and Sindh especially in Lyallpur.

Pakistan government established the CEC (Cotton Export Corporation of Pakistan) in 1974 for check and balance of cotton industry. Pakistan is the 4th largest cotton producer and consumer. The cotton industry is also a cause of better economy. It is true that main part of economy is based upon textile sector but textile also never can be produced without cotton. So it can be said that cotton is a principal crop.

If we talk about industrial development in Lyallpur, on the eve of partition only 16 textile mills fell to the share of Pakistan. There were 177,418 spindles and 4824 looms, small amount of cotton, spinning, hosiery, and agricultural engineering and oil industry at Lyallpur.

Spinning is a major part of the textile manufacturing process in textile industry. There are three steps in which fiber converted into yarn, then fabrics, and after that singeing, desizing, washing, equalizing bleaching, dyeing, printing and finishing process occurs to make a textile (McCallum, 1993). These textiles are used in garments, home textiles, clothes and other products. In Lyallpur clothes were made of rayon, acetate, triacetate, nylons and polyesters. These fibers collected from sheep, goat, rabbit, silk-worm, asbestos, cotton, flax, sisal, flax, hemp, jute. The way of spinning was: Ring-spinning, air-jet spinning, open-end spinning, electrostatic spinning, hand spinning and wheel-spinning.

For proper check and balance of industrial sector in Faisalabad provincial Government and industrialists structured a chamber. That is named as “Faisalabad Chamber of Commerce” which monitors Industry and all industrial activities in the city. It reports their findings to the Federation of Pakistan Chamber of Commerce and Industry.

With comparison of the country Faisalabad's average annual GDP is \$20.55 billion (USD) and its contribution towards country's annual GDP is about more than 20% (Loyd, 2016). In this contribution about 21% comes from cotton, wheat, sugarcane, vegetables, fruits and agricultural land. Faisalabad is famous due to its large textile industry in all over the Pakistan as well as world, so about half of Pakistan's total textile shipments are made by Faisalabad (Farhan, 2016).

In 1947 the economy of Pakistan was much effected due to unbalanced distribution of wealth and therefore it has emerged as a semi-industrialized one so it based upon on majorly on textiles, agriculture and food production. Instead of

this all of these things get through technological issues in recent years of Pakistan. Textiles supported at large scale to economy of Pakistan because country had more export earnings from this field. Average inflation Rate in Pakistan was 7.99 percent from 1957 to 2015 but if we see the highest rate of inflation it was 37.81 percent in December 1973 and at the lowest one -10.32 percent in February 1959.

It was Ayub Khan's era in Pakistan when economy grown up to 5.82% during his eleven years regime. It was the highest growth phase of Pakistan in manufacturing about 8.51% and it was never ever being done in the history of Pakistan. At that time Pakistan also got his first automobile industry, cement industry and other heavy manufacturing industries.

Before and after independence of Pakistan, it has been seen that this area was an agrarian area and caused economic strength since its independence. In 1947, 62% of GDP was agricultural based and it contributed more than other things like manufacturing sector which contribution was only 7% in GDP. Automobile industry, cement industry, engineering industry, Pharmaceutical Industry, Leather Industry, Textile Industry, Gems and jewelry Industry, Oil and Gas Industry, chemical industry, fashion industry, food and beverages industry, Tobacco Industry, Energy Industry, Construction Industry, Sugar Industry, also were at minor level.

Development of Cotton industry in Lyallpur

Cotton is a soft, fluffy staple fiber that grows in a boll, or protective case, around the seeds of the cotton plants of the genus *Gossypium* in the mallow family Malvaceae. Pakistan has fortune regarding to cotton industry because the land is much sufficient for production of cotton. Cotton had produced in Indo-Pak till 3000 BCE but we will discuss cotton production and its industry in Pakistan from 1947-1977. Cotton is one of the basic cash crops in Pakistan and had 4th rank in the world exports. It is a major crop regarding to crops of Pakistan as well as in the world.

Top 10 Cotton Producing Countries (in metric tons)				
Rank	Country	2010	2012	2014
1	China	5,970,000	6,281,000	6,532,000
2	India	5,683,000	6,071,000	6,423,000
3	United States	3,941,700	3,412,550	3,553,000
4	Pakistan	1,869,000	2,312,000	2,308,000
5	Brazil	973,449	1,673,337	1,524,103
6	Uzbekistan	1,136,120	983,400	849,000
7	Turkey	816,705	754,600	697,000
8	Australia	386,800	473,497	501,000
9	Turkmenistan	230,000	295,000	210,000

10	Mexico	225,000	195,000
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Source: UN Food & Agriculture Organization

At the time of emergence cotton was one of the major sources of income and it contributed a lot in economy of Pakistan. When India and Pakistan got independence from British Raj then unequal distribution of wealth held and due to this Pakistan faced a lot of problems. The weak system of economy needed a lot of time to establish itself. This had become possible with the help of different exports in which cotton had also contributed its main part. Government of Pakistan as well as public also tried to improve the infrastructure of the industry.

The industrial development was made under different projects and the progress was been done with the short span of time. Industrial zones were made in Punjab and Sindh especially at Karachi and Lyallpur. The progress in cotton textile industry was also made because cotton and cotton product was most valuable products of Pakistan at that time. The progress in installation of cotton industry was as follow (Textile commissioner, 1955):

Progress in installation of cotton looms, their production, imports and cloth consumptions

Year	Capacity at the end of the year	Production		Imports		Cloth consumptions	
	Looms	Cloth bales (1500 yards)	Surplus yarn bales (1400lbs)	Cloth bales (1500 yards)	Yarn bales (400lbs)	Total (million yards)	Per capita (yards)
1947	4,824	74,000	Nil	N.A	N.A	N.A	N.A
1948	4,824	58,705	15,506	97,044	74,650	377.9	5.2
1949	5,330	61,632	23,150	179,153	178,865	684.4	9.2
1950	5,330	70,443	37,192	254,953	185,098	843.8	11.2
1951	5,904	85,112	48,037	245,169	201,400	894.4	11.6
1952	9,318	118,209	56,040	233,831	155,000	865.7	11.0
1953	11,911	167,751	133,674	10,144	66,200	586.7	7.3
1954	18,421	231,906	251,125	66,073	62,500	937.2	11.5
1955	26,000	302,156	384,170	19,925	8,711	1095.5	13.4

Source: Office of the textile commissioner; Textile industry year book, 1955.

In start, Pakistan faced lack of wheat especially in regime of Ayyub Khan when they received aid from America. Major trading items were clothes, yarn, cement, tubes, tobacco, and rice in 1947-48 and other sources were much lowest. Two provinces of Pakistan Punjab and Sindh grow Cotton mainly. The cultivation of cotton in Punjab is at 79 percent of total cultivated land and production is 70 percent with respect to cotton production in the country. Sindh cultivates cotton on its 20 percent area and contributes 29 percent in production of cotton with respect to country. Khyber Pakhtoon Khawah (KPK) and Balochistan contribute only 1 percent of production.

In first five years plan, Government of Pakistan structured the cotton improvement regarding to its production and exports. They gave a gateway to improve the value, grade and types of cotton. PIDC (*Pakistan Industrial Development Corporation*) was established for check and balance of cotton yields its production and improvement. The economical year 1954-55 shows that there were 807 factories present in which 450 were small scale industries and remaining was large scale industry (Government of Pakistan, 1955).

The estimated amount was Rs134.4 billion which were invested on creation of new factories for cotton yield and production of different things from it. Their capacity was 2 million bales per annum. Government had set a goal to take it up to the highest level and for this purpose 20 new factories were started. These factories cost were Rs16.2 million and for machinery, its parts and for renewal about Rs68 billion were sanctioned. Total investment was made under this project was Rs84.2 million (Government of Pakistan, 1955).

During this era improvement was not made much effectively and only small amount of industries can be started. This was due to weather, low yield, and illiteracy of peasants, lack of canal system, improper check of fields and lack of fertilizers.

Pakistan was a poor country when she got independence and agriculture was not much established. With these issues Pakistani nation never let them as they were and tried to make them better in every field of life. Approximately forty years needed to make it well and the average economic growth rate in these years was much higher with respect to world. Average annual real GDP growth rates were 6.8% in the 1960s, 4.8% in the 1970s, and 6.5% in the 1980s (ministry of Finance, 2016). The GDP and PCI were as follow:

Year	GDP	US Dollar Exchange	Inflation Index (2000=100)	PCI As % of US
1960	20,058	4.76 Pakistani Rupees		3.37
1965	31,740	4.76 Pakistani Rupees		3.40
1970	51,355	4.76 Pakistani Rupees		3.26
1975	131,330	9.91 Pakistani Rupees		3.36
1978	283,460	9.97 Pakistani Rupees	21	3.83

Source: Pakistan Economical Survey.

There are 48 different varieties of cotton present in Pakistan and some of these were cultivated before independence and some of them were after independence. We focused the area of 1947-77. In that time period following varieties were formed:

#	Varieties	Year of Release	G.O.T %	S.L. (mm)	Mike (μ/inch)	Strength (tppsi)
1	AC-134	1959	34.5	26.5	4.5	92.5
2	L-11	1959	33.7	27.7	4.0	90
3	BS-1	1962	34.5	25	4.5	91.5
4	MS-39	1970	33.6	31.5	3.8	87.5
5	MS-40	1970	32.7	31.3	3.8	88
6	149-F	1971	34.5	28	4.1	94.3
7	B-557	1975	34.5	27.5	4.5	92.5

Source: Punjab Seed Council

In provinces of Pakistan, Punjab was a major province in production of cotton at the time of independence. So at that time quick movement of raw material was not so easy and mills which were already present in Punjab started their work more effectively. So the Punjab had started a flourishing export trade in cotton and textiles and become a leading industrial sector of Pakistan. In Punjab, upland seeds of America were used for getting better result in cultivation of cotton so the seeds were sown near the Lower Chenab canal to improve Lyallpur's textile cluster. The Lower Chenab canal also constructed to cultivate barren lands of the region by irrigating them effectively. The construction of canal had been proven effective for more yield and increase in the production of cotton which increased export of cotton.

The first textile mill was established in Lyallpur in 1934. The only one cotton mill at Lyallpur was Lyallpur Cotton Mills which was actually a Branch of Delhi Cloth and General Mills Co Ltd which had 32,052 spindles, 994 looms and 1,485 employees. There were only five industrial units in Pakistan before Pakistan's independence (Vati, 1986). These five industries were

- Daulat ram Spinning and Weaving Mills Karachi
- Lyallpur Cotton Mills, Lyallpur
- Mela Ram Cotton Mills, Lahore
- Punjab Textile Mills, Kot Dunichand, Lahore
- Sutlej Cotton Mills, Okara

There was limited development in industry after making of Pakistan. As Zaidi explained "the area constituting Pakistan was the "bread-basket of India" and a net importer of industrial goods and exporter of wheat and jute". According to Lewis, "the country had virtually no manufacturing capacity, with the exception of an oil refinery in West Pakistan, a few cotton textile plants, and some capacity in sugar refining, tea processing, and the manufacture of cement".

In 1950s Government of Pakistan declared Lyallpur as industrial zone and the region started growth in industry specially in textiles and relevant to textile (Government of Pakistan, 1955). In laps of time the region got a significant boost because Government had declared tax holiday for new factories. The most famous and major textile mills Kohinoor Textiles, Crescent Mills, Nishat Mills, Premier cloth mills, zeenat textile mills, and Rehmania textile mills were also founded at the same time.

- Kohinoor Textiles, a weaving bleaching and yarn spinning company was founded in 1948 by Sehgal group (Kohinoor, 2016).
- Crescent Mills, a yarn spinning mill was founded in 1950 by Mr. Muhammad Shafi (crescent, 2016).
- Nishat mills, a Yarn spinning mill was founded in 1951 by Nishat group and its subsidiaries (nishat, 2016).
- Premier cloth mills, a yarn and cloth mills established in 1953.
- Zeenat textile mills, dying, spinning and yarn mill founded in 1953.
- Rehmania textile mills, yarn, spinning, cotton and textile industry established in 1955.

Under the projects of Government these mills were established on cheap land providing by Government and with the help of Japanese assistance program. This program was provided machinery by Japanese company on very cheap yen loan. Soon after that 4 looms the number of looms increased to 40 and many looms as cottage industry. This increase was caused due to exemption from taxes and labor regulations. These cotton industries further supported for their growth to large number of weaving units, yarn sizing and fabric processing. Other famous cotton and cotton relating industries were started with the lapse of time such as:

- Ibraheem fabric was initiated by Haji Sheikh Muhammad Ibraheem in 1955 under Ibraheem group of industries.
- Sitara textile was also one of famous cotton textile industry which incorporated in 1956.
- Monnoo group of Industries which had 5 textile mills were started in 1965 by Monnoo family.

These were the famous and biggest names of the cotton industry. Other locally famous cotton industries which are present these days includes Arif Textiles, Adam Fabrics, Aftab Textile, Ahmad Textile, Al-Hamra Textile, Al-Jannat Textile, Al-Karam Mills, Arzoo Textile Mills, Amtex, Al-Barka Fabric,

Bismillah Fabrics, Bismillah Textile, Dawood Textile, Firdous Mills, Five Star Textile, Masood Textile and Moon Textile (fcc, 2016).

Pakistan was inherited by an institute which dealt with agricultural purposes and cotton was also under this institute which was in Lyallpur, having name, the Punjab agricultural college and research institute Lyallpur. Hence this institute was established before the independence of Pakistan but had not modified any type of seed certification. In 1950's all system was ran upon that system but in 1961 in the era of Ayub Khan two major steps took upon the agricultural research,

- Ayub Agricultural Research Institute (AARI) was established in Lyallpur (aari, 2016).
- West Pakistan Agricultural Development Corporation (WAPDC) was established at Lyallpur as well.

These two institutions not only took care of crops in Lyallpur as well as in whole country. They mainly focused on Rice, Wheat and cotton in and outside Punjab. They also had done their works for improvement in irrigation system especially in Punjab and Sindh because these two provinces were highly cotton productive provinces. Cohen describes the Ayub period, for example, as "a break from the chaos and disorder that preceded his coup" where "Ayub and his colleagues set about creating a Pakistan that was both intellectually coherent and administratively effective (Cohen, 2004)." These steps were not applied much effectively because West Pakistan separated from East Pakistan then WAPDC was wounded up. Cohen states that the recovery of the 1980s was further energized by the economic reforms of Mahbub-ul-Haq who introduced policies for liberalization, privatization and deregulation of the economy when appointed finance minister in 1985 (Cohen, 2004). That's why they cannot seek out the issue of seed certification much effectively in Ayub's era and improvement remained slow as polices were much effective.

According to Lamb, "Bhutto's nationalization of cotton ginning and rice husking mills were specifically designed to hit political opponents, and it was during his rule that economic activity was really replaced by political activity (Lamb, 1992)." However, in 1973 Pakistan had grown itself for seed certification when they took help from World Bank first time after its independence in the field of agriculture. So after that start Pakistan had made its Seed act in 1976 which was known as "Seed act 1976" (government of Punjab, 1976). Under this act new institutions were constituted for check and balance in seed certification which included National seed council and provincial seed council. Under this act rules were modified for seed registration its modification, sales and purchase as well.

So it can be said that was the start in improvement in cotton production and the items which were produced by cotton. The industry regarding to cotton yarn and cotton textile was grown itself much from the beginning of Pakistan to

that days. The improvement in cotton Industry and cotton textile industry at Lyallpur from independence of Pakistan 1947-77 had been shown in the following table:

Cotton (yarn and textile production)			
Year	Number of Mills #	Production of Yarn (000MT)	Production of Cloths (000Yds)
1947	1
1948	2	0.006	35378
1949	2	0.008	44826
1950	3	0.012	55411
1951	4	0.017	70053
1952	4	0.022	105223
1953	4	0.046	192440
1954	4	0.078	282254
1955	4	0.114	389436
1956	4	0.124	438389
1957	4	0.128	470390
1958	4	0.138	511008
1958-59	70	0.149	539418
1959-60	72	0.160	544216
1960-61	72	0.163	613636
1961-62	71	0.167	639117
1962-63	76	0.174	761727
1963-64	81	0.199	693161
1964-65	83	0.206	714755
1965-66	89	0.194	651358
1966-67	94	0.207	683619
1967-68	95	0.225	714825
1968-69	100	0.239	710245
1969-70	107	0.273	725421
1970-71	113	0.304	787313
		(000Sq M)	
1971-72	131	335.702	628189
1972-73	150	376.122	588606
1973-74	155	379.460	592172
1974-75	143	351.200	555855
1975-76	127	349.653	520438
1976-77	135	282.640	408287
1977-78	140	297.894	391347

Source: Pakistan Bureau of Statistics

If we see statistics of Pakistan regarding to cotton, its production and area which is covered by cotton, Lyallpur includes about 106.5 bales in production and covered about 37.6 hectares. Department of Industries of the Government of Punjab proposed a survey report in 2002 in which they told that 7600 manufacturing units are working these days. The actual increase in new textile business had been started in 1965-69 in Faisalabad and the peak point was 1985-89 (PBS, 1989).

District Lyallpur had two major crops, wheat and cotton which had grown many thousands year ago and still these are big crops of district. In 1911 British era, 101,368 acres area of land was reserved of Lyallpur for cotton cultivation only which further increased to 259,519 acres in 1932. With the passage of time it grown itself more and more and cultivation is now in Faisalabad is 355,833 acres.

Cotton is cultivated at a large area in Lyallpur and it is a staple crop of district and grows into Kharif season. Kharif season for cotton starts in March and ends in May. There are some common varieties which are never founded anywhere else at this production level. These varieties are different from American varieties having local names as:

- Punni
- Narma
- Khaki
- Tiller
- Desi or Amin

These varieties are famous for their color long staple, scant, value and short staple as well. The importance of these types of cotton is in textile industry and in oil production also. By making textiles and growth in textiles gives Lyallpur more importance than other cities of the province as well as country. This helps to improve exports. Another positive factor is that Pakistan never has to import raw material as it has its own production at high level. The district's prime factor is that due to industrial sector it covers a lot of exports and helps to improve GDP of country.

It can be said that this industry is self-based industry and created its strong base in the country. The cotton industry and textile industry covers a large number of labor and providing employment to thousands of workers, technicians, and other types of jobs. At time of partition there were 435 textile mills and only 16 textile mills were in Pakistan of which only one was in Lyallpur. However, in these six mills only three were working well and one of them was working in East Pakistan and two of them were in West Pakistan.

These were:

- Lyallpur Cotton Mills, Lyallpur
- Sulej Cotton Mill, Okara

- Mohini Textile Mills Daccan

The Lyallpur Cotton Mill was consists on departments such as ginning, spinning, weaving, dyeing and bleaching as well as processing and printing. In 1947 there were 1,77,418 spindles and 4824 looms and it rose up to 1,797,376 spindles and 27, 428 looms in 1956 which change was due to combined efforts of Government and private sectors. Mr. Muhammad Ali Bogra proposed one unit plan and ordered to work combine to both provinces and then Prime Minister of Pakistan proposed a speech in favor of textile industry. He declared, "In the year of 1955, Pakistan would now self-sufficient in cloth of coarse and medium varieties and that in cotton textiles it should now be possible for us to undertake exports on an expanding scale after satisfying the demand of the home market." After two years in 1957, he declared, "By the end of 1957, Pakistan would also be able to produce sufficient cloth to meet all the internal requirements of the country".

Syed Abdul Quddus wrote in his book "Punjab, the land of beauty, love, and mysticism" that, "the city that truly responded to the Quaid's call was Faisalabad and by the fifties this overgrown village had come to be called the "Manchester of Pakistan"(Quddus, 1992). Bogra tried to follow the Quaid-e-Azam appeal. The Quaid asked entrepreneurs, "to quickly develop textiles as the nation's industry No.01". The regime of Bogra ended and Ayub's era started, however, martial law was imposed but the industry never lost his origin and industry flourished rapidly. He also gave importance to Lyallpur for its huge industry especially to cotton and textile industry.

Pakistan which had only six large textile mills at the time of independence grown itself as much as possible in the short span of time and in 1970 there were 288 textile mills. The divisions of these cotton and textile mills were district wise as follow:

Name of District	Number of Industries	Name of District	Number of Industries
Karachi East	14	Nooriabad	16
Karachi South	17	Kotri	24
Korangi & Federal area	11	Dera Ghazi Khan	7
Thatta	10	Attock	3
Lesbela	10	Bahawalpur	3
Faisalabad	21	Jhang	4
Jhelum	5	Kasur(chunian)	47
Khushab	5	Lahore	8
Multan	11	Rahimyar Khan	5
Sargodha	2	Sheikhupura	26
Vehari	4	Azad Kashmir	5
Kohat	7	Misc	24

Source: Pakistan chamber of industry and commerce.

In 1980's, many industries moved their self to Lyallpur when it changed to Faisalabad (Burki, 2015) and King of Arabia Shah Faisal gave special aid for development of city. Then Manchester of Pakistan moved ahead and other cities were left behind.

The raw material was quite fair and at good sense with relevance to its staple length, ranging from 7/8" to nearly 1-1/8" which shows good quality. District Lyallpur was famous for its cotton and when there was no textile mill then initially only raw cotton was produced so in spite of textile there were only ginning and pressing factories. At that time this cotton was only converted to bales to export it to England and sending locally to other factories. Although the local people had Khaddi (small hand looms) for making of clothes which they need or other local people needs. These Khaddi was locally established and their work was traditional which have been done by special local workers. These handmade clothes were called as "Khaddar". These handlooms consist on "Charkha" (consisted of a drum wheel that is composed of two disks, separated by a wooden cylinder, but still held together by lacing cards) and charkha was spin by a person to spun cotton. That spun cotton doesn't directly convert to cloth it should pass through the process by making it thread and then cloth. Now a days Pakistan has approximately 300,000 cotton looms about which 200,000 looms are present in Faisalabad district (fcci, 2016).

Faisalabad is now known as industrial zone which leads whole Pakistan as well as to world for cotton and textile industry. The history of the Industrialization of city shows that in 1914, there were only 3 industries which rose to 47 in 1947 including 44 small industries. In 1948 there were 569 small and 7 medium industries and from 1950 to 1964, it grown up to 687 to 2086 small and 41 to 211 medium industries. There were total 3025 units in which 2773 were small and 252 were medium industries at the end of 1965. These units had 2.5 million spindles and 37,000 looms which increased up to 3.1 million spindles and 38,000 looms in 1970. In March 1972, these industries tend to move 716 large scale mills having 2.6 million spindles and 30,000 looms

If we see 1980 census report there were 78 factories of cotton textiles, 75 of cotton yarn, 25 of cotton cloth and 360 of cotton ginning and pressing industries in Punjab. Out of the 78 textile industries there are 53 cotton spinning, 03 weaving and 22 composite units.

The cotton industry of Pakistan is a strongest industry which is very helpful to uplift the economy. However in this cotton industry a huge bulk is from a single city, the city of textile, Faisalabad. Its contribution always remained positive towards economy of Pakistan from independence to now. Industry of Lyallpur grown day by day and now it is well developed however; the industry still needs further renovation. The positive aspect can take it up to that edge where the cotton and textile industry of Japan prevails. The government should take

positive steps and create new industries at government level as well as private by encouraging industrialists.

Development of Spinning Industry in Lyallpur

Faisalabad the city of textile is also famous for cotton, spinning and its products because a large scale of textiles is produced by cotton and its spinning. However artificial fibers are also made by machines. These polymers extrudes by a spinneret. These polymers passed through a polymer making cycle which makes it harder and these becomes able for making a strengthen cloth. The growth of spinning industry also opened the new ways of spinning as well as new types of fibers. These are classified as

- Wet spinning of polymer makes rayon
- Dry spinning of polymer makes acetate and triacetate
- Melt spinning of polymer makes nylons and polyesters

Sheep, goat, rabbit, silk-worm, asbestos, cotton, flax, sisal are those basic things which are used as raw material for fiber. Machinery and the process of spinning will be different for everything. The major part of spinning of fiber is based on cotton in Faisalabad.

Faisalabad has a great history about spinning. There was only one textile industry in Lyallpur having name as "Lyallpur cotton mills" and only it had the latest machinery of that time. Lyallpur Cotton Mills was Lyallpur based however it was the branch of Delhi Cloth and General Mills Co Ltd having 32,052 spindles, 994 looms and 1,485 numbers of employees. However the spinning was not only based on that mill there was spinning also present at lower level in villages of Lyallpur. The lower level spinning had been done on 'khaddi' manufactured by 'Jalahas'.

Spinning is a major part in cloth making process where different types of fiber such as cotton fiber, tufts of animal hair or plant fiber are converted into yarn in textile industry. The yarn will be changed to fabrics. Fabrics will be preceded to different processes such as designing, dyeing, printing, and washing to finalize the process of making a textile.

In Pakistan three types of spinning yarn is present in industrial processes. The historical famous way was hand spinning which is still present in villages for special type of cloth making. These handicrafts still made by *Khaddi* or Charkha which is used locally in the Jhang, Chiniot, Hafizabad, Faisalabad and some other regions of country. This is used by a specific way and the persons who use it are known as *Jalahas* community.

History tells us that the simplest way of spinning started at Lyallpur. *Julahas* started to spin on a wood then moved towards stones and then they moved towards charkha. In Lyallpur spinning at charkha started before the independence of Pakistan. However it had two different types as tabletop or floor charkha. That was also one of the oldest spinning wheels. In charkha a great wheel was present, which was turned by hand and spun comes out at the tip of the spindle. As the word charkha relates to Persian word *charkh* having meaning of wheel. Soon it was shifted to great wheels and then treadle wheel. After a long while it moved towards machines.

The other ways of spinning which also available now are: (McCallum, 1993)

- Ring spinning
- Rotor spinning
- Air Jet spinning
- Friction spinning
- mule spinning
- Self-twist spinning
- Electrostatic spinning
- Vortex spinning
- Twiss less spinning

After conversion of that raw material to yarn these are wound onto the cones.

About 67% of exports of Pakistan made by the textile sector and this sector facing competition from other countries such as: China, Hong Kong, Thailand, India, and Bangladesh. To increase or to maintain that export percentage Pakistan has to make some positive decisions by improving its textile sector. It is said that spinning is the major process in textile manufacturing so the main object is to make spinning powerful in textile industry. However, due to large scale production of cotton Pakistan's spinning sector is powerful. As Pakistan is the fourth largest producer of cotton yarn so the country not only meets its required yarn as well as it exports about one third of the total production of yarn.

Pakistan had fortune that it never faced the spinning issue in its textile works as it had issues of non-existence of many other industries at the time of emergence. The industry was not much wider however was able to meet local needs as well as a small contribution in exports.

Lyallpur's textile industry had a vast spinning sector and helps to run textile industry effectively. Presently there are about 450 large scale textile mills are working in Pakistan which have about 10.1 million spindles. 9.19 million Spindles are working effectively out of 10.1 million and the other one have different issues such as old machinery problems, load shedding and high cost of cotton yarn. That is due to change in cotton production and yield issues which vary with the weather of Pakistan because Pakistan lies on that place where weather never remains same. The production of yarn increased from 1,473 million Kg to 2,156

million kg however it decreased so much unfortunately. All Pakistan Textile Mills Association's (APTMA) Ex Chairman Akbar Sheikh said "global slowdown had hit the spinning industry of Pakistan more severely than other competing countries (APTMA, 2017)." He also said "the government tackles the issue of electricity and gas on political considerations." He said "all mills on average suffer depreciation loss of Rs5 million monthly and the financial charges also came to more or less Rs5 million".

Pakistan has most capacity of spinning which is about 1550 million kg's yarn these days. The country has the third largest spinning capacity in Asia. It contributes about 7.5% of the capacity of Asia and 5% of spinning capacity of the world. The industry provides employment at large scale about 38% of labor force and 6% of the management employment of the country.

The famous spinning units of Lyallpur were Abu Bakar textile mills, Akram industries, Al Muqet textile, Chakwal Group, Dar us Salam textile, Deen textile, Gul Ahmed textile, Gulistan group, Indus group, Kohinoor spinning, Masood spinning, MGM, Nagina, and Nishat mills.

At the time of independence there were only 6 spinning industries in Pakistan which had only 177,148 spindles which gradually increased time by time. The government provided tax free industry for the objective of promoting textile industry so the increase in textile industry also increased the numbers of spindles. However these days there are 503 spinning factories are present in Pakistan. The growth increased at unexpected rate and at the mid of 1950's it moved toward its peak there were about 10 million spindles in industry. The increase in overall spindles from 1947 to mid of 1950's are by the year is given below in the table: (PBS, 1955)

Overall Growth Of Spindle Industry	
Year	Increase in the number of Spindles
1947	177,148
1948	177,148
1949	235,618
1950	290,280
1951	333,126
1952	630,368
1953	792,898
1954	1,316,312
1955	1,1683,000

Source: Pakistan Bureau of Statistics

Spinning is based on quality of cotton if the staple is long it works well however short staple increases the issues. Many problems may cause in spinning due to poor raw materials which also move industry downward.

In Pakistan's spinning sector, Lyallpur worked more effectively and still working effectively because there is lot of investment came in textile industry. Due to latest investment in this sector latest machinery also used which decreased issue of loss and it waste material in raw material decreased due to efficient working of machinery. It increased the demand of yarn and spinning became most useful business. The working spinning mills in Pakistan had 8.5 million bales of cotton consumption per annum. However, machinery regarding to spinning industry is not produced in Pakistan which increases cost of machinery and plants due to imports. In 2008-2009 about 400 Texting Spinning machines were imported by paying 1,142,394,000 rupees. 178,052 Spinning Rings kg were also imported by the same year by paying 190,809,000 rupees (Ministry of commerce, 2016)

54.91% of the total exports of Pakistan only came from export of cotton & cotton products (yarn, fabrics, Garment, & made up) having amount of \$4568.88 million. This was due to improvement in spindles the improvement in registered spindles is shown in following table:

Growth Of Spindle Industry With Their Working Capacity In Lyallpur

YEAR	UNITS	INSTALLED CAPACITY		WORKING CAPACITY	
		SPINDLES	GROWTH%	SPINDLES	GROWTH%
1948	NA	78,000	0	78,000	0
1949	NA	137,000	75.64	137,000	75.64
1950	NA	182,000	32.85	182,000	32.85
1951	NA	225,000	23.63	225,000	23.63
1952	NA	499,000	121.78	302,000	34.22
1953	NA	649,000	30.06	600,000	98.68
1954	NA	1,113,000	4.76	940,000	56.67
1955	NA	1,449,000	3.29	1,355,000	44.15
1956	NA	1,518,000	0.06	1,422,000	4.94
1957	NA	1,568,000	0.76	1,447,000	1.76
1958	NA	1,569,000	0.06	1,459,000	0.83
1958-59	70	1,581,000	0.25	1,488,000	1.99
1959-60	72	1,582,000	3.66	1,491,000	0.2
1960-61	74	1,586,000	12.53	1,531,000	2.68
1961-62	71	1,644,000	3.41	1,524,000	-0.46
1962-63	76	1,850,000	2.82	1,810,000	18.77
1963-64	81	1,913,000	4.52	1,792,000	-0.99

1964-65	83	1,967,000	-0.63	1,852,000	3.35
1965-66	89	2,056,000	0.24	1,871,000	1.03
1966-67	94	2,043,000	6.2	1,888,000	0.91
1967-68	95	2,048,000	10.21	1,916,000	1.48
1968-69	100	2,175,000	8.68	2,090,000	9.08
1969-70	107	2,397,000	9.9	2,327,000	11.34
1970-71	113	2,605,000	14.08	2,491,000	7.05
1971-72	131	2,863,000	2.45	2,650,000	6.38
1972-73	150	3,266,000	0.6	3,057,000	15.36
1973-74	155	3,346,000	2.64	3,034,000	-0.75
1974-75	144	3,366,000	2.63	2,823,000	-6.95
1975-76	147	3,455,000	1.1	2,579,000	-8.64
1976-77	153	3,546,000	4.02	2,650,000	2.75
1977-78	174	3,585,000	1.39	2,585,000	-2.45

Source: Pakistan Bureau of Statistics

From above we see that spinning industry had grown gradually and statistics shows that it was a great business at that time as well as now a day. It was a big invested sector having major contribution in national income. Lyallpur is still contributing a major part in spinning industry with respect to other cities of Pakistan.

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