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Punjab Textile Industry Economic Contribution Comparison of Two Decades

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Abstract
Textile Industry since the days of Independence has been known to serve the GDP of the nation. The scourge of the industrial output came in 1990s with LPG and this outbreak made the industry more confident of the fact that textile business is safe. The research conducted on the last two decades is throwing the light on it in the new millennium. Indian economy has taken a shift in two phases from agro economy to industrial and then a service based economy. Today the tertiary sector is serving the nation with two-third capacity. The shift is indicating a diversion in attention of the government towards the service sector and ignorance towards the agro sector. This research is indicating the two side of the coin by studying the output data of textile in Punjab and the rest of the nation for comparison. The indications provided by univariate analysis of mean and standard deviation shows the growth potential and actual growth and the bivariate analysis of t-test in the research indicates the pattern of the two decades differ or not. The outcome of the paper suggests the efficacy of the output is not at its true potential and the finding is the dedication towards the industry by farmers and government.
Keywords: Textile, GSDP, Export, Economy, Standard Deviation

Introduction

Punjab from a very beginning has been one of the richest states in terms of heritage and providence. The cultivatable land that Punjab has among the north Indian region has been highest in the north. The grain cultivation had been one of the most prominent farming techniques of Punjab. The cotton cultivation and textile industry setup came in a lot later. It was introduced to the farmer the amount of profit they can generate from it is much higher in comparison. The textile contribution towards the entire production from the rest of the nation for textile industry in today's era is almost 10% (Pavithra, 2020). The share that Punjab has among the total export in the textile industry is also highest and it stands at 13%. The City of Ludhiana in Punjab is known for the industrialization. One of the richest cities in India has been Ludhiana due to fast and correct industrialization. The city was attractive to many international players. As a matter of fact the imported cars have seen the highest demand in the early times from the state of Punjab and particularly from Ludhiana. All imported car companies initial distributors were established in Ludhiana due to high demand. The city is well known I the trading world for the woolen knitwear. The share of Ludhiana in total country's knitwear stands at 95%. Punjab's contribution 25% of cotton produces to the country and the astonishing fact is that the spindling capacity is a mere 1.5%. Textile is lucrative and a ready produce industry. Despite of the growth, majority contribution and demand, there have been units that have fallen sick or struggling with financial difficulties (Saini et al., 2020). The government of the state has time and now risen to provide a helping hand to the sick units to ensure the smooth running of the industry as this industry is a great provider.

There has been multiple facets to the journey of sickness. The sick units are made sick due to external environmental threats. The cynical attitude of the European nations towards the third world countries has been a reason for low exports and the alienation of government's attention from time and again has caused trauma to the industry as well. Scarcity of resources can be experienced as well as the fall in the cultivable land in the two decades has been an issue for the output (Singh, 2015). The government support is also falling short in giving a stand to the companies. The information network of India for researching the market is poor and inaccurate. The variety of problems is faced by the industry at different location, from raw material to finances and from transportation to credit and marketing facilities. The exposure of one's company is difficult to attain, the marketing facility is not good enough in the international market as there is no guidance or support (Mehra and Kaur, 2012).

In this research the authors aimed to establish the importance that the Punjab textile industry holds in the country. To ensure that the aim is achieved the analysis of the output that the state made and the output of

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the nation has been analyzed in various manners. The textile industry is important for the state as well and to established that the amount is also compared with the GSDP. This also helped the in establishing the importance of the industry. Before proceeding further in the studies we need to understand what the function of this industry is in general to establish more relevant context to the research paper (Shah, 2014).
Textile industry function is to produce textile which a long flexible material which is extracted from the natural raw cotton and artificial thread, this helps in creating textile in yarn or fibers. The Latin word *texere* which meant to weave was taken to create the word textile. This word denoted that we weave or knit to create that fabric. The textile industry is not only a production industry, it carries out research in order to create new kid of fabrics and also the creativity for the creation of beautiful fabrics that create new demand in the market. There are few industries that are, production, research and creativity oriented at the same time (Dritsaki, 2004). One of such industry is the textile industry; it goes more beyond just production than what meets the eye. The raw material processing for the industry is in so many different ways. The silk from silkworm, the wool from the sheep, the cotton from the fields, extraction of petroleum related products, fiber cultivation and so on to metals and minerals. There are new kinds of fabrics emerging in the market, Teflon in clothing is an example. The industry process doesn't end here it starts here from spinning and weaving the fiber to thread and then the thread to be converted in to cloth and then reaching the apparel shape to branding of every stage differently for the customers of different stage to understand the importance and association with the brand (Chandran et al., 2010).
The industry importance is far from being ignored. The immense contribution that textile industry has in theIndian economy is far beyond important. This industry generates. 27% of the foreign exchange earnings from the total, this contribution alone is a very big but t stretches far. Textile industry is responsible for 14% of the industrial production output and the contribution to GDP stands at 3%. The government collects as much as 8% revenue from the total collection from textile industry. Then the biggest contribution is if we see the entire cycle from raw material till the consumption of finished goods almost 21% of employed population is engaged and employed via this industry. These astonishing figures were furnished form the 2017-2018 GDP and GSDP reports (Saini et al., 2020).
India stands at number 2 after the neighboring China and the 370 lakh bales of cotton produced by India is close to the competition, the amazing thing is the 506KG unique growth rate per hectare of land. The 300 lakh bales are for the consumption in the Indian market and the rest for exports. The silk is also number two after the Chinese production, in 2017-2018 the 31,906 MT produced, India is the second largest afterwards.

Punjab Textile Industry

Punjab Textile industry is on the merge of development since independence. Punjab is an industrial hub for majorly three kind of industries. Agriculture based industrial units that function for manufacturing, Knitting cotton and woolen textiles, spinning, and the export preparation of hosiery units. Punjab environment is full of rich soiled resources that have gifted the state with huge cultivable land. Then there is machinery units and chemical plants that serve the state. Punjab is a state that leads in hosiery, woolen and blended yarn in the country, the spinning capacity of the industries in Punjab is highest in the nation. With the highest production capacity of cotton and woolen products in India it serves with 70% of best quality cotton products to the nation. The capacity at which it operated is 655 million KG of yarn is provided and cotton is approximately 2.2 million bales in production. The share of textile industry is 23% among the total industrial output of the state, which speaks for itself that how important is the textile industry o the state. More over this sector has a great contribution in exports of the state which is almost 38% of the total exports. The business in terms of foreign currency is a huge number for the state, it reaches USD 1300 million with hosiery, yarn and textile, the amount of export for readymade garments stands at USD 630 million. This means that close to USD 2000 million is provided by one industry alone to the state (Singh, 2015).
The sector is not only the thrust sector for the state but also the growth potential of the sector needs to be considered by the government. Various schemes and ways to uplift the sector has been done by the government. Like under the industrial and business development policy of 2017 the state ensures a special treatment for the textile sector by handing extra support and not only this the education towards the line of textile is also given importance and for that Northern India Institute of Fashion Technology was upgraded by the government. Punjab also started 4 integrated textile parks (Rhythm Textile and Apparel Park,Ludhiana Integrated Textile Park, Punjab Apparel Park and Lotus Integrated Textile Park), the purpose of these is to provide infrastructure and needed clearances to production units. The government has

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also exempted these production units of many property laws that fall under the category of textile industry from PAPRA 1995 (Mehran and Kaur, 2012).

Review of Related Studies

Similar studies on many other industries have been conducted one of which that serves a very similar purpose was a study by Vernekar in 1998 as he conducted a study to understand the problems and scope of the chaddar industry in the district of Solapur. There were 86 chaddar manufacturing firms in the entire area on which he conducted a census study and later on applied the t-test with descriptive uni-variate statistics. The results showed that there were variations in the firms which were denoted according to rating and coded provided y government this ensured that one the ratings given by government are correct and the situation also varies for the companies according to the level they are working under. There were problems being face by many units as they were financially weak or can be quoted as sick units with inadequate working capital, the market price fluctuations also impacts the company in a bad manner(Vernekar, 1998). There is agap suggested by the researcher that can relate and establish a correlation between the financial performances of a unit with the ISO 9000 certifications (Wayhan et al., 2002). The studies that followed the gap later ended up establishing that the impact of a company being certified with ISO 9000 doesn't end up being financially stable.

The aim of the study is to check the variation in the relationship of output by the textile industry in the state to its GSDP and the performance in exports wit total industrial exports. These variations are important to be understood as the picture many a times are different that what meets the eye. A study with similar grounds was conducted that aimed to establish a relationship between the tading done in an industry, with FDI flowing in due to the same with the economic growth of the country. This was a study based in Greece for the period of 1960 – 2002. The depicted results showed a strong relationship between the three factors. One impacts the other and the other the previous. Impacting any industry on which the economy is highly dependent on each other, this is how an economy normally functions (Dritsakis et al., 2004).

Labor is an important part of this industry as the labor is what makes the industry function from the beginning due to low automation in the industry. The author in a study conducted in 2009 studied the Global Production Network (GPN), this is related to the labor market. The GPN is an employment generator for the labors and the variety of labor intensity searched by the industrialists meets here. The export opportunity for the textile industry of India is eminent and this is due to the beautiful labor intensive work. The problem with market is quantitative and qualitative (Ramaswamy, 2009). The study needs to understand that there various factprs that impacts the performance and output of the study and at some point al factors needed to be studied. These studies only help any industry in a proper forecast of production and sales (Chandran and Seilan, 2010). Most studies aims to explore the problems faced by the textile industry but inspite of all the problems faced, the output and contribution provided has shown a growth pattern for many years. To understand the point of view of the authors the study that has been conducted with a similar view point but the implication and analysis were different was comparative financial ratio analysis of textile and apparel sector companies. It concluded that long term causal relationship between profitability, growth potential. The companies are seeking growth potential in numbers and this can be improved with lower number and higher quality and the number of companies are bent on the ideology of the fact that lower pro=icing and higher quantity is a safe game (Hyunju and Choosup, 2011).

Objective of the Study

While researching it I always needed to understand the gap in previous researches. The gap that the researchers found was to establish the fact that the growth that has happened in the last two decades in the textile industry in Punjab is worth the rise of the overall industrial rise. Also to establish that this growth contribution of textile sector in nation. The reason to choose two decades was to establish the limelight that textile industry saw in the new millennium. The researchers also decided to compare the two decades to establish the stability of the growth pattern. The stability of the growth pattern was an extra effort made by the researchers

Research Methodology

The study aimed to check and analyze the position of textile industry in Punjab and hence the area of study

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roamed in the state of Punjab. The population and sample is similar as all the industries producing garments, yarn, fabric and cotton related products fall under the category and a complete data of the output produced and export created is used by the researcher. So in short census of secondary data has been used. The selection of industrial unit of Punjab textile was done on the basis of NIC-2008 under 13 and 14.

The data from DIC Chandigarh was collected for the large textile output and exports in Punjab; this was done by personally visiting the office to ensure the correct data amount. Then SME, Ludhiana was visited similarly the department of textile technology and many other official data holding government offices were communicated or personally visited in order to collect the data. The annual report that was uploaded by the ministry of textile and various publications that the Punjab government did from time to time that carried statistical abstract of economic surveys and various thesis published were referred. The data reliability due to the source of government and authentication of publication helped in ensuring the credibility.

Data Analysis Technique

To analyze the collected data for achieving the objectives set, various descriptive statistics have been utilized. From the vast research conducted that had area of cultivation, production capacity and many more details, the output and export data is used. The mean and standard deviation helped in understanding the variations that took place in the initial and later decade. To compare the two decades data t-test has been used. The analysis is showing the comparison of the trend growth. The process the data the comparison percentage of Punjab's textile export to the total textile export of the nation was calculated in terms of percentage for each year. Then the similar calculation was done by checking the contribution of textile output to the GSDP (Gross State Domestic Product) of Punjab.

Analysis and interpretation of growth and contribution of textile industry in Punjab

In order to identify the contribution that the textile industry has made to the nation and towards the state of Punjab 4 kinds of data has been used. First is the Punjab's Textile out for the last 20 years from 2001 – 2020. Second is the GSDP of Punjab state for the last 20 years from 2001 – 2020. Third is the export produced by the textile industry of Punjab in the last 20 years from 2001 – 2020 and the last type of data is the textile export produced by the entire nation.

The data collected from various authentic sources was then calculated to fir the purpose. The percentage contribution of the Punjab's textile export in the textile export by the entire country was calculated on yearly basis for the past 20 years of data. The second kind was the output of the textile industry of Punjab percentage contribution to the total GSDP of Punjab every year for the past 20 years. The data calculated for 2001 – 2020 represents the two decades of the millennium that was available for the calculation so far.

The researchers in order to check the data of the two decades divided the data in two parts and compared the two decades of data with the help of a t-test to understand that whether the differences that occurred over the period carry any significant variation or not. These comparisons help in understanding the variation in the growth of the export and output in comparison to national and state growth. This shapes in justifying the fact that whether the harmony in the two decades have been there or not. The test needs to establish the fact that how volatile the contribution has been and also the rise will establish that the rise experienced by Punjab in the textile industry was bound to the region of Punjab or the entire nation output experienced the same.

Table 1.1: Descriptive Statistics of Punjab Textile Export to India Textile Exports Percentage Share and Punjab Textile output to GSDP Punjab

	Pre 2010 and post 2010	N	Mean	Std. Deviation	Std. Error Mean
Punjab and India Textile export ratio	2001-2010	10	2.8502	1.57611	.49790
	2011-2020	10	5.6847	.76201	.24101
Punjab Textile Output contribution to GSDP Punjab	2001-2010	10	.0491951	.01086700	.00343598
	2011-2020	10	.0198773	.00575432	.00182014

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Source: Data compilation by researcher based on secondary data using SPSS

The table 1.1 is the presentationof comparison statistics for the 10 years in lieu of the first decade of the millennium and the second decade of the millennium. If we study and analyze standard deviation of Punjab to India textile export comparison prior to studying the mean of the data, the figures are self explanatory in depicting the fact that how highly variable was the first decade of the millennium and the later decade is portraying stability to a high extent in comparison in the textile industries exports in Punjab input towards the total textile exports of the country.

The mean then interprets the first and the second decades of the millennium towards the export contribution by textile industries of Punjab to the rest of the nation were highly stable in the second decade. The mean rose from 2.85% to 5.65%, this increase is good news for the textile industry this increase is a healthy rise considering the 10 year average. Keeping in view the standard deviation big dip from 1.576 to .762establishesa strong increase in stability of export contribution, which also means that the industry has become stable in second decade for export contribution of textile industries to textile export of the entire nation. From 55% (Percentage of standard deviation to mean of the data) to 14% is a sign of strong stability of contribution. The government took correct steps in initiating policies that has made the companies and people optimistic to work in the industry and the number to rise.

The circumstancesof the second objective in which the textile industry of Punjab are contributing to the GSDP of Punjab are a disheartening stature. The standard deviation of the initial and the later decades of the millennium towards the Punjab textile output contribution towards the GSDP of Punjab portrays high stability. The mean too an unhealthily dip as it fell from 0.0491 to 0.0198; this fall is an indication that in spite of the growth in textile sector of Punjab and the flourished environment, the growth in comparison to the growth of Punjab overall indicated by GSDP was unmatched. The industry after these results proves that it needs to work for a better future of the textile industry. This contribution appears to be unhealthy at the 10 year average of second decade. Viewing the standard deviation dipped from 0.01086 to 0.00575 portrays reduced volatility to some extent, it means that the industry has gotten stable in terms of reducing contribution towards the GSDP of Punjab. The government although took right initiative and made good policies which encouraged the investment in the industry to rise but the overall growth in comparison to the entire Punjab, it needs more work and better policies.

Table 1.2: T-Test for Means of of Punjab Textile Export to India Textile Exports Percentage Share and Punjab Textile output to GSDP Punjab

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference Lower	Upper
Punjab and India Textile export ratio	AssumingEqual variances	4.047	.059	-5.123	18	.000	-2.83455	.55335	-3.99709	-1.67202
	Unequal variances assumed			-5.123	12.912	.000	-2.83455	.55335	-4.03003	-1.63905
Punjab Textile Output contribution to GSDP Punjab	AssumingEqual variances	11.547	.003	7.540	18	.000	.02931778	.00388860	.02114834	.03748721
	Unequal variances assumed			7.540	13.254	.000	.02931778	.00388860	.02095941	.03767615

Source: Data compilation by researcher based on secondary data using SPSS

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The Leven's value for percentage share of export of Punjab textile industry to the total export of textile industry of India is above significance level of 0.05, the variances of the two individual samples are equal. The significance value to be interpreted is the one in which equal variance is assumed. There is significant difference in mean with t=-5.123, sig. value =0.000 at α value of 0.05. There for it can be interpreted that significant change has happened in these two periods for the percentage share of export of Punjab textile industry to the total export of textile industry of India. Although the average percentages share of export of textile industry in Punjab in the total export of textile industry in Indian has increased in Punjab during the period 2011-2020 but the rise could have been better. The interpretation is a result of the qualitative research, one of the reasons is that the percentage being low is the reduction in the amount of land denoted to cotton cultivation and few more reason similar to this came to light in Punjab.

The Leven's value for percentage share of export of Punjab textile industry to the total export of textile industry of India is above significance level of 0.05, the variances of the two individual samples are equal. The significance value to be interpreted is the one in which equal variance is assumed. There is significant difference in mean with t=7.540, sig. value =0.000 at α value of 0.05. There for it can be interpreted that significant change has happened in these two periods for the percentage share of textile industry output of the state of Punjab contribution to the GSDP of Punjab these two periods. The average of percentage share of textile industry output of the state contribution to the GSDP of Punjab has decreased drastically during the period 2011-2020. Analyzing at the reduction in contribution and rise in volatility in small extent means that the industry has experienced a stable reduction in contribution towards the GSDP of Punjab. The low volatility represents the fact that slowly the rise in the textile industry is falling short of maintaining its importance and position in GSDP. There are other industries in the state that are on the merge of rising and contributing to GSDP in a faster pace than textile.

Findings of the Study

Findings Related to the Structure, Growth of Textile Industry in Punjab and its level of Contribution towards Export, Employment and Production of Punjab. The average area under production of cotton in Punjab has shown significant change but average production of cotton and average yield of cotton have not shown significant change. Total area under production of Cotton (in hectare) and total cotton production (in tonnes) in Punjab have decreased drastically but due to owing to mechanization, awareness, pesticides, medicines, irrigation facilities, good quality seeds and better instrumentation, overall yield per hectare has increased. Total number of large textile units, fixed investment, employment generated and output produced by textile industry in Punjab have shown significant change and increasing pattern. The contribution of Punjab in total export of textile from India has increased from 2001 to 2020 and also showing statistically significant change in percentage share in Indian export of textile.

It seems to be good until the contribution of the textile industry contribution in the GSDP of Punjab is analyzed. The official figure shows that there is a huge dip in the contribution. The GSDP of Punjab is rising and the contribution of textile in it lowers despite the growth. The growth that we look at in the textile output is not a healthy growth due to the fact that potential is higher which is undermined by fact that farmers are switching to more secure and profitable cultivations. The hectare land denoted to cotton has gone lower in terms of coverage and the government needs to show some education and support in this area.

Suggestions and Conclusion

The textile industry has been the backbone of the state economy and GSDP for a long time. Other industries flourishing and serving the state with higher output is a good thing but due to that the slower growth rate in a well established industry shouldn't happen. The state government needs to design policies that can amplify the output if the industry. There is a need to ensure that the policies design for the textile is parallel to and a in synch with the national policies and with other states that are doing well in the textile industry like Gujarat, Maharashtra and Jharkhand. There are no stringent labor laws in the industry as well. There is a need to specify the labor laws as industry intensive. The labor in the industry will make it better and the courses which are more practical and technical in nature for textile industry also needs to start and this can help the labor capability to grow high. The labor is treated on daily wages basis and the industrialists don't take any risk coverage or insurance coverage option. The labor is coming from a highly struggling life. The way to improve is by tightening up the labor laws ensuring the companies to create a financial security in the lives of the labors these companies keep.

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They need to create ease in doing business for the companies. The travel roots and billing systems with duty and tax barriers either should be eliminated or must be converted in to a digital format to ease the distribution of product. The producers of raw material also need the support. The minimum support price for the crops like cotton and jute is required to be raised which ensures the farmers that their produce will be beneficial for them. The tough times experienced by companies due to Covid19 must be put to ease, some relief packages must be provided to the industry. Setup of a portal that can create a centralized marketing information system and create a link between buyer and seller must be done.

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