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A Comparative Study of Gujarat, Punjab and Himachal Pradesh in Reference to Selected Industries

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Methodology: The data of selected industries from 2005-06 to 2007-08 has been taken as sample for the purpose of study. The secondary data has been used for the present research. Descriptive statics is being used to check the normality and the average. The line graphs have been used to compare the growth rate of the states.

Findings: The findings reveal that the Gujarat is the most leading states among all three. There are several reasons behind this growth. The government policies, High per capita income, geographical advantage played an important role in the growth of the Gujarat, whereas Himachal is also showing the signs of growth after a slow down in the fiscal year of 2006-07. In the case of Punjab the government have to rethink about the policies.

Originality: The research compared the industrial growth of the three states: Gujarat, Punjab and Himachal Pradesh. The secondary data has been collected and used for the purpose of the study and study revealed the important facts behind the disparity among the growth rate of the states.

Keywords : *GDP, government policies, gujarat, punjab, himachal pradesh.*

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A Comparative Study of Gujarat, Punjab and Himachal Pradesh in Reference to Selected Industries

Dr. Hiteshkatyal [α] & Sanjeet Singh [σ]

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I. Overview of the Study

With the globalization the GDP of the developing countries grows rapidly. India is among those few countries whose growth touched new heights and remained constant for several years. Figure 1 shows the data of Indian GDP.

Figure 1 : Annual GDP of India

Source : Indian Statistical Department

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The Indian states also played an important role in this growth. Delhi, Punjab, Gujarat, Bombay, Himachal Pradesh are amongst those states who contributes significantly in this growth. As far as economic growth is concerned, the developmental capacities of the Indian state are middling, some where between the more efficacious East Asian states on the one hand and the poorly performing sub-Saharan African states on the other hand (Kohli, 2004). It shows that the states play a vital role in the growth of India's GDP growth. Figure 2 shows the growth rate of Indian states, Punjab, HP and Gujarat.

It shows that there is disparity in the contribution of the states in the overall growth of the economic country. This disparity got impacted by a lot of factors such as geographical condition, labor, State government policy etc. The current study will investigate the growth comparison of the Punjab, Gujarat and Himachal Pradesh and attempts to find out the variations and the reason behind these variations. The study selects few selected industries for the purpose of research. These Industries include Food & Beverages, Chemical, Apparel and Textile industry.

The study is divided into six parts. The first part shows the overview of the study. The second part depicts the objectives of the study. The third part finds the review literature and find out the gap in the literature. The forth part reveals the methodology used for the purpose of the study. The fifth part discusses the findings of the study and the last part shows the conclusion of the study.

II. Objectives of the Study

- To compare the growth rate of the Punjab, Gujarat and Himachal Pradesh in reference to selected industries.
- To find out the reason of variations in the growth rate of the states.
- To suggest the possible ways for Punjab to accelerate the growth rate for the all the states in future.

III. Review of Literature

A number of researchers study the growth pattern of the India. *Bajpai et al. (2004)* measure the

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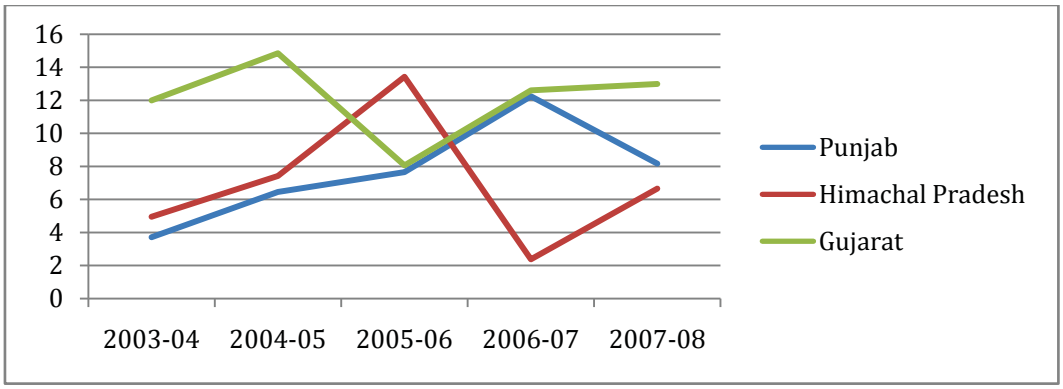
Figure 2 : State Wise Growth Rate (%) Gross State Domestic Product.



investment climate prevalent in 1996 and 2001 in 28 states of India. The study reveals that there is a high degree of heterogeneity across the states of India. However there is a pattern that emerges. Further the study find that the western states of India perform much better in 2001 than the eastern states. Assam, Bihar, and Orissa constitute the worse off states, thereby making the east west divide highly conspicuous. Maharashtra and Punjab do not show much improvement but remain on top with regards to investment attractiveness. West Bengal, though improved in investment climate in the view of a business-oriented person, has shown no improvement with respect to investment attractiveness. Uttaranchal depicts an improvement in all sectors. Assam does not rank high but at the same time shows a large improvement in all sectors.

PHD Chamber (2011) performed the economic analysis of the Indian states. The study concludes that since majority of the population in the northern and central states depends on agriculture; these states must work towards improving the yield or productivity of farm sector so as to ensure the sustained livelihood of the people. The region must focus on increased farm infrastructure and stronger supply chain so as to facilitate the growth of the agriculture and allied sectors. The states must lay emphasis on attracting private and foreign investment in manufacturing sector in particular and industries in general to lay the solid foundation to the growth of the country.

Chakravarti and College (2008) investigate the critical factors which drive investment inflows across Indian states. The empirical findings predict that political stability and fiscal reforms are the two most important factors determining investment inflows across states. Using a disaggregated analysis, the study predicts that states successful in maintaining political and fiscal stability stand to gain most from public investments in human capital formation in terms of increased investment inflows. The study concludes that investors select states as investment destinations predominantly on the basis of their contemporary socio economic performance as opposed to their past images as investment destinations.

Dollar, Iarossi and Mengistae (2002) also expect a good investment climate to facilitate a higher volume of investment inflows, especially in the high productivity manufacturing and services sectors, leading to job creation, income growth and, ultimately, poverty reduction.

Ferro, Rosenblatt and Stern (2004) identify a good investment climate to be a key factor driving agricultural productivity and non-farm growth, especially through small-scale and medium-scale enterprises. The above-mentioned authors recognize an investment climate conducive to growth acceleration to be one of the pillars of poverty alleviation.

Veeramani and Goldar (2004) discuss the effects of investment climate on total factor productivity in the manufacturing sector. Both these studies select a number of variables which together constitute the investment climate of a state and test their effect on total factor productivity using firm level data.

Though the scholars investigated the Indian states and the investment climate in these states, not many studies have been concentrated on the north Indian states Punjab and Himachal. The present studies evaluate the investment climate and industrial scenario of Punjab Himachal Pradesh and Gujarat and compare the investment in these states with reference to selected industries.

IV. Research Methodology

The present study evaluates the growth rate of the Punjab, Gujarat and Himachal Pradesh in reference to selected industries. The study also evaluates the reason behind the variation is the growth rate. The study uses the data of the four industries (Food & Beverages, Apparel, Chemical and Textile). The data from 2006 to 2010 has been used for the purpose of study. The study used secondary data for the purpose of the study.

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Following tools are used for data analysis.

The *mean* is a particularly informative measure of the "central tendency" of the variable if it is reported along with its confidence intervals.

$$\text{Mean} = \frac{\sum X_i}{n}$$

Usually we are interested in statistics (such as the mean) from our sample only to the extent to which they can infer information about the population. The confidence intervals for the mean give us a range of values around the mean where we expect the "true" (population) mean is located (with a given level of certainty).

$$s = \sqrt{\frac{\sum (x_i - \mu)^2}{N}}$$

Where

μ is the population mean and N is the population size

$s = [S (x_i\text{-}m)^2/N]^{1/2}$

The sample estimate of the population *standard deviation* is computed as:

$$s = \sqrt{\frac{\sum (x_i - \bar{x})^2}{(n-1)}}$$

Where of $\bar{x}$ is the sample mean and n is the sample size

The *variance* of a population of values is the square of standard deviation.

Skewness measures the deviation of the distribution from symmetry. If the skewness is clearly different from 0, then that distribution is asymmetrical, while normal distributions are perfectly symmetrical.

$$\text{Skewness} = \frac{1}{n-1} \frac{\sum_{i=1}^{n} (x_i - \bar{x})^3}{s^3}$$

Where

n = number of data points

s = standard deviation

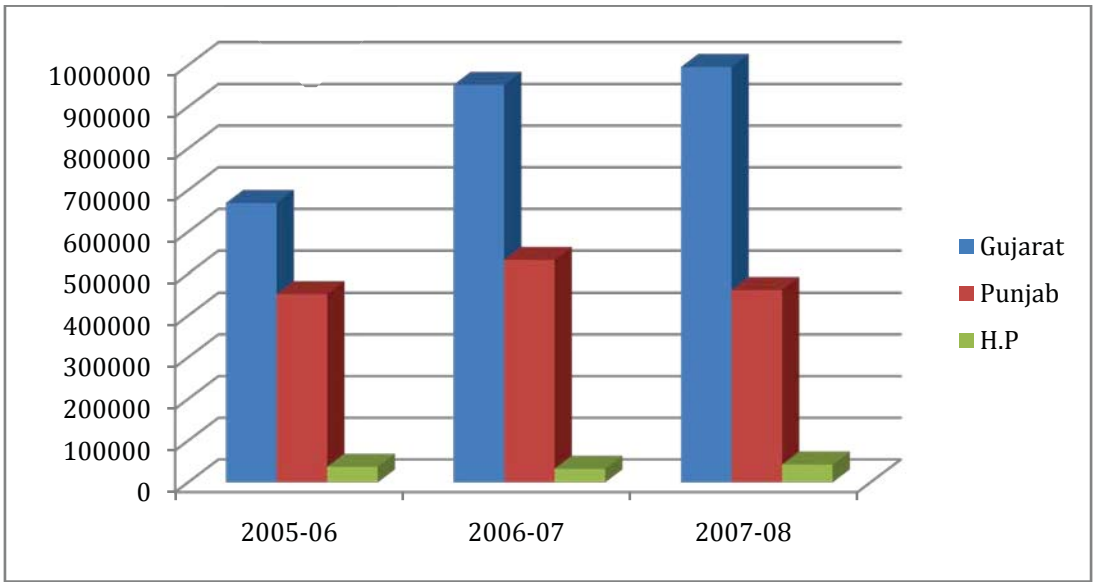
$\bar{x}$ = mean return

Further, the growth pattern of all the three states has been compared with the help of charts.

V. Findings and Analysis

This part of the study shows the findings and analysis of the study. The study selected the data of the four major industries i.e., Food Products and Beverages Industries, Textiles industry; Wearing Apparel, Dressing Industry and Chemical and Chemical manufacturing industry to compare the growth rate of the Gujarat, Punjab and Himachal Pradesh. The comparison of Food and Beverages industries is shown below with the help of Figure 3 followed by the descriptive statistics in table 1. It can be observed by the image and table that Gujarat is the only one industry among all three whose growth rate is consistent for all the years.

Figure 3 : Comparison (Investment) 2005-06 to 2006-08 in INR LakhsMfr. of Food Products and Beverages



Descriptive Statics for investment in Food Product and Beverages 2005-06 to 07-08

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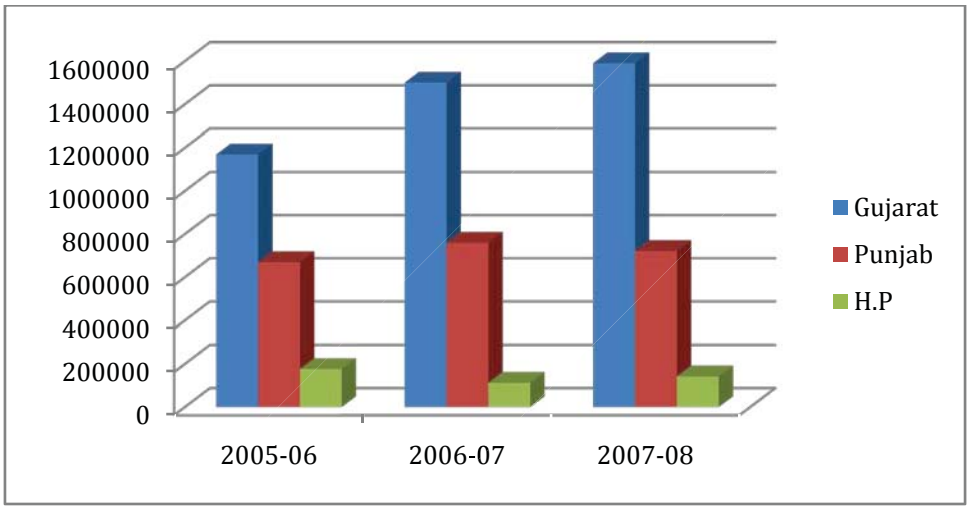
Table 1

	Gujarat	Punjab	H.P
Mean	872328.7	481755.333	37394.67
Standard Error	102386.7	25403.8264	2910.047
Median	952550	461442	37237
Standard Deviation	177338.9	44000.7181	5040.35
Sample Variance	3.14E+10	1936063194	25405126
Skewness	-1.61907	1.6346975	0.140626
Range	326328	80662	10077

Further figure 4 shows the comparison of investment in textile industries. It can be visible that the Gujarat is the major states where companies have invested the capital. In the case of Himachal the growth is stagnant and in the case of Punjab the growth is declining. Table 2 supports these finings. The mean value of the Gujarat 1419783, Punjab 716856 and H.P, 143725, shows that the investment is Gujarat is far more than the Punjab and Himachal Pradesh.

Figure 4 : Comparison (Investment) 2005-06 to 2006-08in INR Lakhs Mfr. of Textiles



Descriptive Statics for investment in textiles 2005-06 to 07-08

Table 2

	Gujarat	Punjab	H.P
Mean	1419783	716856	143725
Standard Error	127912.6	26081.31408	18591.31
Median	1500025	721432	142145
Standard Deviation	221551.1	45174.16111	32201.09
Sample Variance	4.91E+10	2040704832	1.04E+09
Skewness	-1.41603	-0.451158449	0.220268
Range	420741	90000	64344

Table 3 shows the descriptive statistics for the investment in apparel industry. The same trend can be observed in this case also. The mean value in the table shows that the investment in Gujarat is far more than the Punjab and Himachal Pradesh and the trend is also upwards. The standard deviation also shows the same. Figure 5 also shows the same where the bar of Gujarat is growing at a rapid speed and it's very high in the comparison to Punjab and Himachal Pradesh.

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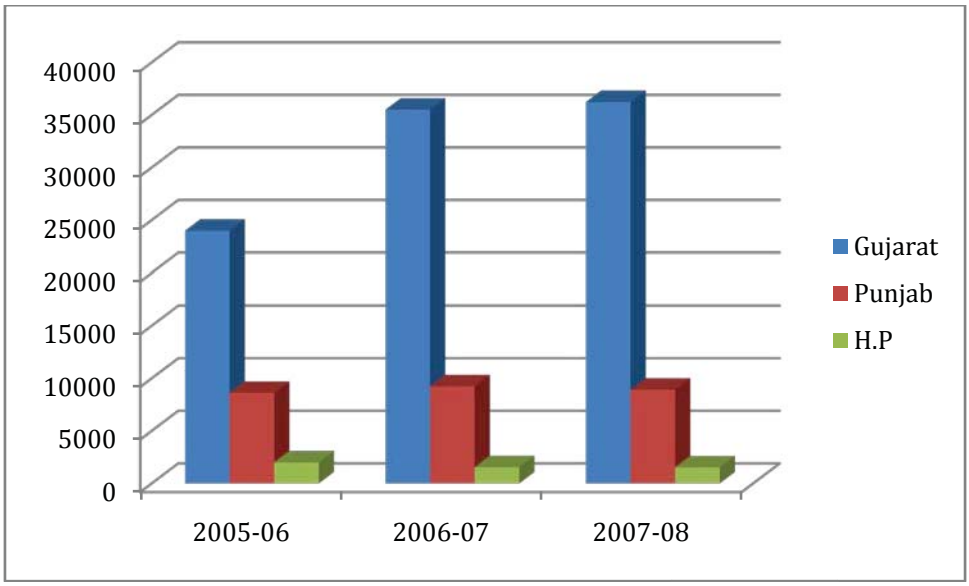
Figure 5 : Comparison (Investment) 2005 -06 to 2006-08 in "Mfr. of Wearing Apparel, Dressing & Dyeing of Fur"



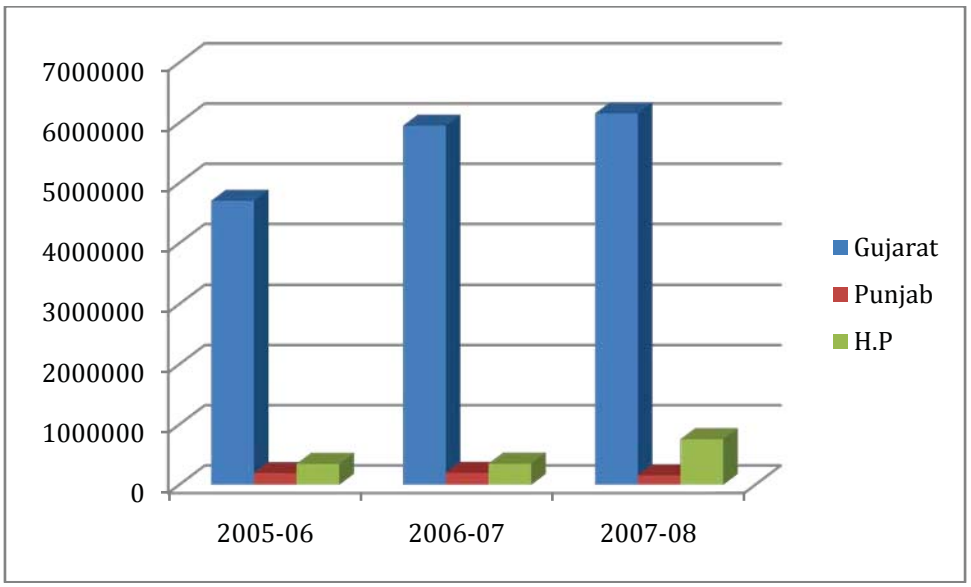
Descriptive Statics for Investment in Wearing Apparel, Dressing & Dyeing of Fur 2005-06 to 07-08

Table 3

	Gujarat	Punjab	H.P
Mean	31907.33	8921.667	1690.667
Standard Error	3965.847	177.8767	154.7055
Median	35500	8913	1542
Standard Deviation	6869.048	308.0914	267.9577
Sample Variance	47183816	94920.33	71801.33
Skewness	-1.70977	0.126486	1.728144
Range	12248	616	470

Figure 6 also supports the same trend as the last tables showed. In the case of chemical industry Gujarat is the most favorable state for the investment in the chemical manufacturing industry. Himachal Pradesh is also growing slowly but rapidly. In the case of Punjab the growth is very low and declining. Table 6 also validates the same findings.

Figure 6 : Comparison (Investment) 2005-06 to 2006-08 in Mfr. of Chemical and Chemical Products



Descriptive Statics for Investment in Chemicals and Chemical Products 2005-06 to 07-08

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Table 4

	Gujarat	Punjab	H.P
Mean	5603796	182239.7	484021.7
Standard Error	453739.7	13893.26	135809.2
Median	5952134	193920	350034
Standard Deviation	785900.3	24063.83	235228.5
Sample Variance	6.18E+11	5.79E+08	5.53E+10
Skewness	-1.60271	-1.66964	1.731586
Range	1451392	43669	409233

After evaluating the charts shown above as well as the descriptive statistics for all the industries, its visible that the growth rate of Gujarat is far more than the Punjab and Himachal Pradesh. Himachal Pradesh is also growing in chemical manufacturing industry. But in the case of Punjab it's shown that the growth is stagnant or declining in all the industries. There are a number of reasons behind this. The study further evaluated the reasons behind these.

Firstly the study evaluated the reason behind the growth of Gujarat and the following reason came.

Reasons behind the Development of Gujarat

Geographical Advantage – Gujarat have the geographical advantage of the port. Gujarat is the only state among all three who have ports. Because of it Gujarat has been connected with the globe. Kacch region of Gujarat is a most attractive place for the companies because of the port. The international trade becomes very easy for the companies from this place.

One of the highest per capita income state in India – The Gujarati consumers are quick adopters and move fast to stay ahead of the latest technologies. Companies in Gujarat look carefully to consumer demands when developing new products.

World-class companies and SMEs with unique strengths - Gujarat's strong technology based industries offer a multitude of opportunities for foreign companies looking to partner with Gujarat based entrepreneurs at all stages.

Loyalty and commitment to long-term partnerships - Foreign companies have long found their partnerships with Gujarat based companies to be ones based on loyalty and commitment. Such relationships provide the ever-essential stability in the long-term while offering cost reduction and improved quality.

Gujarat is a thriving center for Pharmaceutical innovation and product development.

Partnerships with Gujarat based companies enable foreign companies to leverage their respective talents to remain globally competitive.

Favorable business environment through Special Investment Regions . Gujarat's attractiveness as an investment destination is ever increasing, as the government works to improve its business friendly environment with not only Special Economic Zones but large Investment Regions with robust infrastructure.

Apart from the above points the government of Gujarat provides a stable political environment in the state. BJP is ruling Gujarat from last 1.5 decades which gives the companies an assurance of risk free business in long term because the business policies doesn't changed after every five years.

Himachal Pradesh is also growing slowly but at a consistent speed.

The reason for the development of Himachal Pradesh is:

Subsidy : The government provides the land at the subsidized rates to the company. This attracts the pharmaceutical manufacturing companies towards Himachal Pradesh because the industry needs the cheap land.

Infrastructure : The government developed the suitable infrastructure in the states i.e., Baddi. This gives the assurance to the companies that the state will work for there well being.

Human Resource : As per the Himachal is a hilly state, the people are hard worker and they seek for the jobs. In this way the industry got the cheap labor.

Apart from these government provides the electricity and other supplies uninterruptedly to the industry. This motivates the investors to look towards Himachal as a suitable option for the investment.

The Condition of Punjab:

When we compare the Punjab in terms of these factors the condition seems to unfavorable for the investors. The industries running in the Punjab from so long is also suffering from the ignorance of the government as well as from the lack of the human resources. The people from Bihar were the major source for human resource in Punjab. But after the schemes like MANREGA and the industrial development in Punjab these migrants started shifting towards there own states. Following are the major problems of the Punjab:-

Ignorance of Industry development : As per the Punjab is famous as an agricultural state, government focus mainly on the farming. All the subsidies in electricity or taxes have been given to farmers and the burden of the taxes has been shifted towards the industries.

High cost of Land : The cost of land is very high in Punjab. If we compare the cost of land which is a major concern for the companies while selecting a particular state for investment, we will find that the Punjab is the most costly state for the investment. The average cost of per acre land in Punjab is approximate 10 Million (2crores), whereas in Himachal Pradesh it's 4-5 Million and in Gujarat the rate is 5 Million per acre.

High cost of Electricity : The case is same in the case of electricity. The cost of electricity per unit in

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High cost of Electricity : The case is same in the case of electricity. The cost of electricity per unit in Punjab is INR 5.25, whereas in Himachal the rate is 3.01 and in Gujarat it's INR 3.65.

Apart from this the policies of Punjab government are agriculture centered. All the subsidies are given to the agriculture sector but the industrial sector is ignored. The land is so costly in the Punjab region. The raw material cost is very high in Punjab because the Punjab is dependent on the other states for the raw material.

VI. Conclusion

Out of the three states Gujarat is growing at a rapid speed and it's observed that it continue to grow in the near future. The companies are interested in investing in the Gujarat because apart from the geographical advantage the government policies are also favorable for the companies. The government is providing subsidies, special economies zones, and suitable business environment. The customer of Gujarat is also quick adoptive which provide the companies an efficient market. In the case of Himachal Pradesh, The growth is slow but consistent. The pharmaceutical industry is growing in Baddi and nearby areas. The government is providing the support by improving the infrastructure as well as giving the companies subsidies. In the case of Punjab the scenario is a bit reverse. The growth is stagnant and declining for some industries. The growth in textile industry is stagnant because of the labor, electricity and other government policies. The food and beverages industry is also suffering from a decline as per the major companies Verka, Milkfed etc are suffering from losses. There is a need for government to rethink on the issue and to restructure the policies of the government so that the industries of Punjab can be recovered from the downturn. The Punjab government has to subsidize the raw material rates as well as the rates of the electricity in terms to attract the Industries. The government also has to provide the subsidized land to the industrialist. The Punjab is also ignored from the center side. None of the central schemes have been started in the Punjab where the Himachal have a number of center sponsored schemes.

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