

# IMPACT OF TAX INCENTIVE ON ECONOMIC DEVELOPMENT OF UTTARAKHAND

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**Abstract:** In this paper author studies the impact of Tax Incentive scheme federally financed by the Govt. of India to the State Govt. for the economic development of hilly states which are not able to join the race of socio-economic development of the country. The tax holiday was provided to Uttarakhand for initial period of ten years from 2003 till 2013. The study uses time series data for the study and find that there is a large increase in employment, total output, fixed capital, the number of firms and total amount invested as a result of the scheme. The author has used data to study the impact of tax incentive on treated state. The study shows that new firms entering the treated state are larger and more productive and therefore there is increase in the GSDP.

**Keyword:** Economic Development, GSDP, Tax Incentive, Employment, Output, Fixed Capital.

## Introduction

In the last several decades geographically targeted tax incentive scheme have been offered by state and local governments to stimulate economic development in blighted regions/areas. These Schemes consume billions of rupees each year in expenditures and forgone tax revenues, so it needs to be studied that whether these policy have positive impact on the beneficiary state. . Uttarakhand is predominantly hilly state and is forest covered areas. The hill states of the country have not been able to join in the race of socio-economic development of the country even post more than 60 years of independence. The situation and the underlying causes need to be analysed and critical corrective measures need to be taken. The entire Indian Himalayan Region has considerable potential for environmentally benign industrial development. Though the region does not have a high population density, human capital and locally available resources could be harnessed to realise the industrial potential of the region (Planning Commission, 2010)

Pre analysing the socio-economic development, it is necessary to go through the historical background of the newly created states Uttarakhand was formed on 9th November 2000 as the 27<sup>th</sup> State of India, when it was carved out of Uttar Pradesh. To stimulate the economic growth, Government of India offered tax Incentive to this Himalayan state in 2003.

## 1.1 Policy Detail

The Tax Incentives for the states of Himachal Pradesh and Uttarakhand were introduced by Department of Industrial Policy and Promotion (DIPP) on 7<sup>th</sup> January, 2003 for a period of ten years. The package was introduced to promote industrialisation as well as generating employment for local people in these states.

New industrial units and as well as current industrial units on their substantial expansion means increase by at least 25 per cent in the value of fixed capital investment in plant and machinery of an industrial unit for the purpose of expansion of capacity/modernization and diversification set up in 'designated' industrial estates/growth centres were entitled to:

- (1) 100% excise duty exemption for a period of 10 years from the date of commencement of commercial production
- (2) 100% income tax exemption for an initial period of five years and therepost 30% for companies and 25% for others for a further period of five years

(3) All new firms and existing units (upon substantial expansion) in the notified locations would be eligible for capital investment subsidy of 15% of their investment in plant and machinery, subject to a ceiling of ₹ 30 lakh.

## 2-Literature Review

Bartik J .Timothy (1991) In this article author had studied the factors which may impact corporate decision about location of a new manufacturing plant in the USA. For this purpose, he studied fifteen factors, such as land area, ,corporate tax rate, property tax rate, employment and unemployment rate, workers' unionisation percentage reimbursement, insurance rate, road miles, existing manufacturing activity, wage rate, education level of population, construction costs, population density, energy price and work stoppages. He found that difference in unionisation across the states has a major impact on the decision about industrial location in the USA and taxes as a factor is much lower down below in deciding the plant location. He advised that states should not be fearful of becoming an economic wasteland due to slight increase in business taxation.

Paranjape (1988) has found that the government inc entives have been effective in supporting industry mainly in areas which are reasonably near the conventional industrial centres or those which have an easy access to such places and areas which have fairly developed urban and industrial facilities. Thus government assistance is likely to be successful in inducing industrial expansion only in areas where incentives are available in conjunction with other facilities.

Stellar Society (2011).This study was conducted by Trivenee School of Excellence Research Institute and it was sponsored by Planning Commission. The society has studied about the impact of special package given by Department of Industrial Policy and Promotion for special category states of Jammu and Kashmir, Himachal Pradesh and Uttarakhand. These states were given tax exemption to accelerate economic development. This study was conducted by Stellar Society, their findings are there was definite positive and significant impact of the package, both in with and without framework as well as pre and post framework, in the special category states in terms of increase in the no. of factories, total fixed capital, total invested capital, number of industrial workers, total persons engaged in industry, wages to workers, total remunerations, net value added, value of output and gross fixed capital formation.

Sikandar and Lall (2017).In this paper authors have studied the impact of location based tax incentive given by federal Indian Govt. to Himachal Pradesh in the year 2003. They have done pre-and -post analysis for period of 1998-2013 on the basis of number of factories, employment, total output, fixed capital, total wages, value added, and invested capital. They have concluded that there is a positive impact of tax incentive on the economic development of Himachal Pradesh due to the tax incentive.

## 3-Objectives

- To analyse the impact of Tax Incentive on Industrialisation of Uttarakhand.
- To do the pre and post analysis of chosen variables.
- To analyse the impact of tax incentive on Economic Development of Uttarakhand.

## 4-Hypotheses

- **H<sub>0</sub>**: There is no significant difference in the impact of pre and post-tax incentive on number of factories.
- **H<sub>0</sub>**: There is no significant difference in the impact of pre and post-tax incentive on number of workers employed.
- **H<sub>0</sub>**: There is no significant difference in the impact of pre and post-tax incentive on fixed Capital.
- **H<sub>0</sub>**: There is no significant difference in the impact of pre and post-tax incentive on emolument.
- **H<sub>0</sub>**: There is no significant difference in the impact of pre and post-tax incentive on output.
- **H<sub>0</sub>**: There is no causal relationship between Gross value added and Gross State Domestic product of Uttarakhand.

## 5-Research Methodology

- **Collection of Data:** The researcher have used the secondary source of data ,collected from the various sources like – Annual survey of Industries, Central Statistics Office, Ministry of Statistics and Programme Implementation(MoSPI), Govt. of India, Handbook of Statistics on State Government Finances, Department of Industrial Policy and Promotion.
- **Period of Study:** The present study covers a period of five years from 1998-99 to 2002-03 and ten years of 2003-04 to 2012-13.
- **Variables of Study:** The different variable of this study are number of Factories, Total Output, Number of Workers, Fixed capital, Total Emolument, Gross Value added (GVA) and Gross State Domestic Product(GSDP)
- **Techniques of Analysis:** The study has been made by converting the collected data in to meaningful table and quantitative research is undertaken to compare hilly state. The study has been made by using collected data of ASI 3-digit Industry level into relative measure such as percentage, ratio. For analysing the data we have used annual growth rate technique and also used statistical tool *t-test* to analyse the pre –and- post impact of tax incentive upon Uttarakhand. Authors have used SPSS 20 version for analysing the data.

## 6-Empirical Study

In this section we empirically analyse the chosen variables of the study:

### 6.1-Growth of Number of Factories

Table1 shows the year wise growth rate in the number of factories in Uttarakhand during 1998-99 to 2012-13.It also shows the pre and post-tax difference in the growth rate. The growth rate in the pre-tax period is 0.86 per cent while it 15.67 per cent in post-tax incentive period. The difference of pre post-tax incentive is 14.81 per cent in growth rate of number of Factories. Thus we can say that it has positive impact on growth rate of factories in Uttarakhand.

**Table 1: Growth of Number of Factories**

Year	Growth rate
1998-99	-
1999-00	-13.60
2000-01	20.78
2001-02	-6.18
2002-03	2.44
2003-04	-5.03
2004-05	10.75
2005-06	19.68
2006-07	27.78
2007-08	28.26
2008-09	29.29
2009-10	22.92
2010-11	16.85
2011-12	3.80
2012-13	2.39
Annual Average Growth rate (1998-2003)	0.86
Annual Average Growth rate (2003-13)	15.67
Difference in Growth (Pre and Post)	14.81

Source: Authors own calculations based on ASI data, MoSPI

## Group Statistics

	Year	N	Mean	Std. Deviation	Std. Error Mean
No. of Factories in Uttarakhand	Pre Tax Incentive	5	697.20	48.350	21.623
	Post tax Incentive	10	1770.00	894.138	282.751

## Independent Samples Test

		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
No. of Factories in Uttarakhand	Equal variances assumed	-2.631	13	.021	-1072.800	407.753	-1953.696	-191.904
	Equal variances not assumed	-3.783	9.105	.004	-1072.800	283.577	-1713.171	-432.429

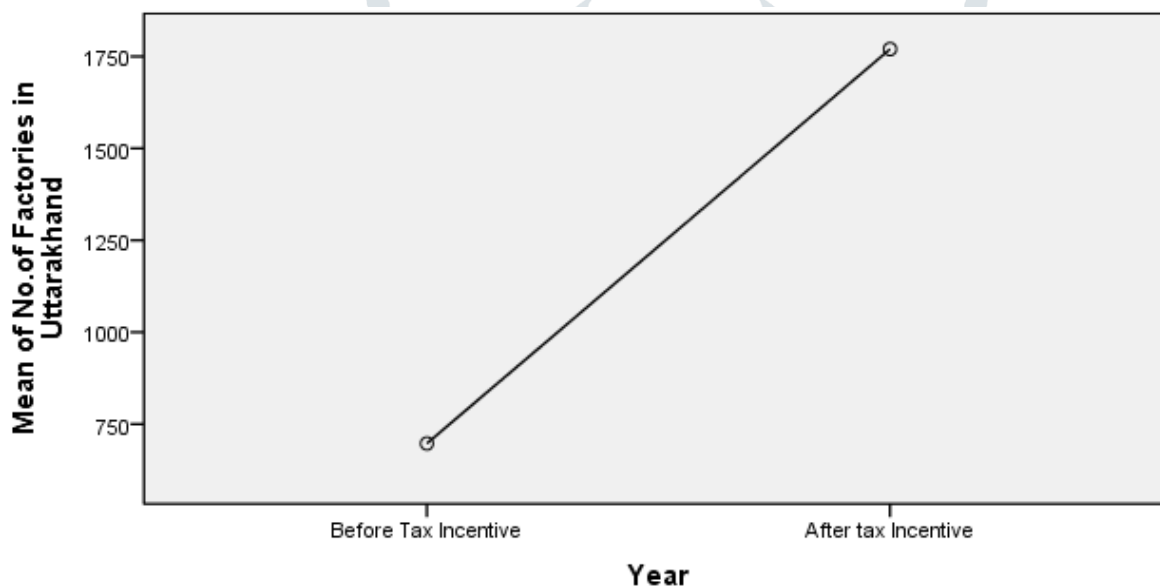


Figure 1: Means Plots of Number of Factories in Uttarakhand

We have tested the hypothesis by using independent *t-test*. We have found there is significance difference in the pre and post-tax incentive period in the number factories in the Uttarakhand. Pre mean= (697.20), Post mean= (1770.00), it significant at p value of .021. Thus we reject null hypothesis. It is also evident from the above figure 1.

*Note:* We reject null hypothesis.

## 6.2-Growth of Number of Workers

Table2 shows the year wise growth rate in the number of workers in Uttarakhand during 1998-99 to 2012-13. It also shows the pre and post-tax difference in the growth rate. The growth rate in the pre-tax period is negative 5.69 per cent while it 27.37 per cent in post-tax incentive period. The difference of pre post-tax incentive is 33.06 per cent in growth rate of number of workers. Thus we can say that it has positive impact on growth rate of workers in Uttarakhand.

**Table 2: Growth of Number of Workers**

Year	Growth Rate
1998-99	-
1999-00	-27.07
2000-01	7.34
2001-02	-4.83
2002-03	1.82
2003-04	-0.80
2004-05	28.11
2005-06	51.63
2006-07	32.67
2007-08	37.36
2008-09	76.95
2009-10	9.28
2010-11	23.92
2011-12	16.83
2012-13	-2.27
Annual Average Growth rate (1998-2003)	-5.69
Annual Average Growth rate (2003-13)	27.37
Difference in Growth (Pre and Post)	33.06

Source: Authors own calculations based on ASI data, MoSPI

### Group Statistics

	Year	N	Mean	Std. Deviation	Std. Error Mean
Number of Workers Employed	Pre Tax Incentive	5	29449.6000	4100.03333	1833.59065
	post Tax Incentive	10	142191.1000	96534.91549	30527.02067

### Independent Samples Test

		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
Number of Workers Employed	Equal variances assumed	-2.56	13	.024	-112741.5000	44011.75112	-207823.10764	-17659.89236
	Equal variances not assumed	-3.687	9.065	.005	-112741.5000	30582.03796	-181847.57356	-43635.42644

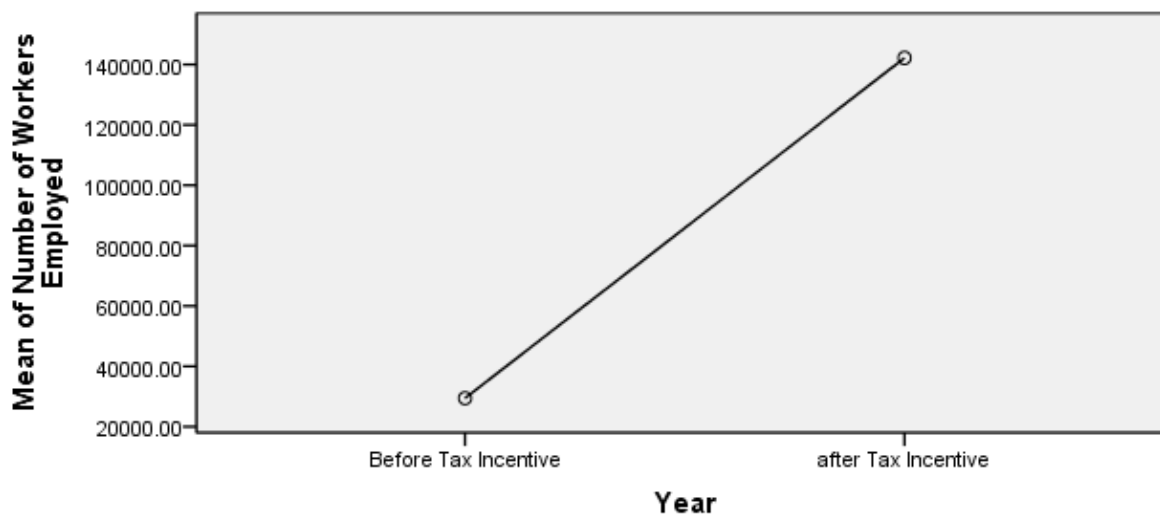


Figure 2: Means Plots -Number of Workers Employed

We have tested the hypothesis by using independent *t-test*. We have found there is significance difference in the pre and post-tax incentive period in the number of workers in the Uttarakhand. Pre mean= (29449.6000), Post mean= (142191.1000), it is significant at p value of .024. Thus we reject null hypothesis. It is also evident from the above figure 1.

*Note:* We reject null hypothesis.

### 6.3-Growth of Fixed Capital

Table3 shows the year wise growth rate in the fixed capital in Uttarakhand during 1998-99 to 2012-13. It also shows the pre and post-tax difference in the growth rate. The growth rate in the pre –tax period is 8.11 per cent while it 42.06 per cent in post-tax incentive period. The difference of pre post-tax incentive is 33.96 per cent in growth rate of fixed capital. Thus we can say that it has positive impact on growth rate in fixed capital in Uttarakhand.

**Table3: Growth of Fixed Capital**

Year	Growth rate
1998-99	-
1999-00	-14.64
2000-01	38.67
2001-02	4.35
2002-03	4.07
2003-04	6.64
2004-05	31.86
2005-06	45.99
2006-07	126.04
2007-08	36.64
2008-09	68.82
2009-10	49.13
2010-11	10.67
2011-12	40.20
2012-13	4.60
Annual Average Growth rate (1998-2003)	8.11
Annual Average Growth rate (2003-13)	42.06
Difference in Growth (Pre and Post)	33.95

*Source:* Authors own calculations based on ASI data, MoSPI

## Group Statistics

	Year	N	Mean	Std. Deviation	Std. Error Mean
Fixed Capital	Pre Tax Incentive	5	17691.8600	2865.66448	1281.56412
	Post Tax Incentive	10	226086.2100	194532.52123	61516.58460

## Independent Samples Test

		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
Fixed Capital	Equal variances assumed	2.351	13	.035	208394.35000	88659.10918	399930.71059	16857.98941
	Equal variances not assumed	3.387	9.008	.008	208394.35000	61529.93246	347566.33346	69222.36654

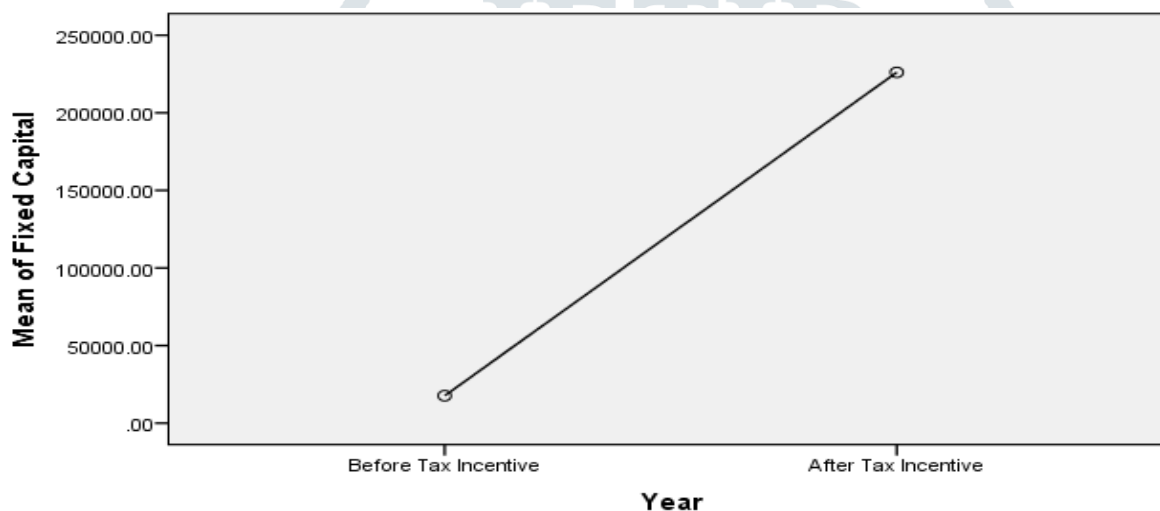


Figure 3: Means Plots-Fixed Capital

We have tested the hypothesis by using independent *t-test*. We have found there is significance difference in the pre and post-tax incentive period in the fixed capital in the Uttarakhand. Pre mean= (17691.8600), Post mean= (226086.2100), it significant at p value of .035. Thus we reject null hypothesis. It is also evident from the above figure 1

*Note:* We reject null hypothesis.

## 6.4-Growth of Total Emoluments

Table4 shows the year wise growth rate in the Emolument in Uttarakhand during 1998-99 to 2012-13. It also shows the pre and post-tax difference in the growth rate. The growth rate in the pre –tax period is 40.07 per cent while it 40.10 per cent in post-tax incentive period. The difference of pre post-tax incentive is 0.04 per cent in growth rate of Emolument. Thus we can say that it has almost same impact on growth rate of Emolument in Uttarakhand.

**4: Growth of Total Emoluments**

Year	Growth Rate
1998-99	-
1999-00	-8.19
2000-01	183.17
2001-02	-18.26
2002-03	3.54
2003-04	4.10
2004-05	15.08
2005-06	24.12
2006-07	43.94
2007-08	40.32
2008-09	236.12
2009-10	-36.33
2010-11	28.72
2011-12	31.17
2012-13	13.78
Annual Average Growth rate (1998-2003)	40.07
Annual Average Growth rate (2003-13)	40.10
Difference in Growth (Pre and Post)	0.04

Source: Authors own calculations based on ASI data, MoSPI

**Group Statistics**

	Year	N	Mean	Std. Deviation	Std. Error Mean
Total Emolument	Pre Tax Incentive	5	3620.0200	1558.22982	696.86156
	Post Tax Incentive	10	25605.2700	19960.38778	6312.02884

**Independent Samples Test**

		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
Total Emolument	Equal variances assumed	2.414	13	.031	21985.25000	9108.91285	41663.85981	2306.64019
	Equal variances not assumed	3.462	9.218	.007	21985.25000	6350.37984	36299.26607	7671.23393



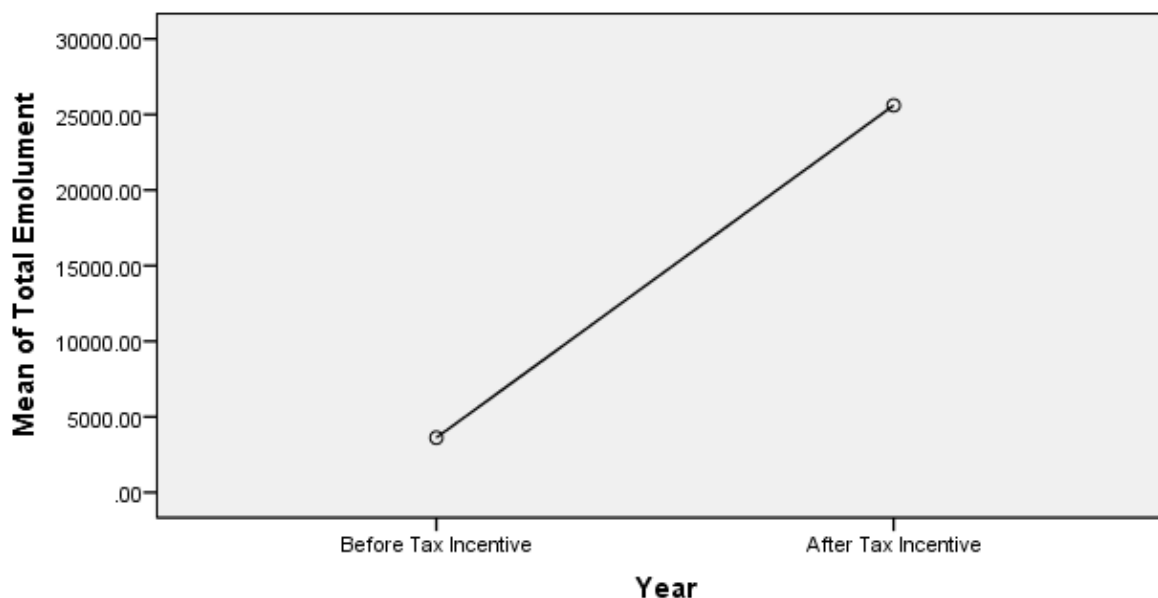


Figure 4: Means Plots-Total Emoluments

We have tested the hypothesis by using independent *t-test*. We have found there is significance difference in the pre and post-tax incentive period in the Emolument in the Uttarakhand. Pre mean= (3620.0200), Post mean= (25605.2700), it significant at p value of .031. Thus we reject null hypothesis. It is also evident from the above figure 1.

*Note:* We reject null hypothesis.

### 6.5-Growth of Gross output

Table5 shows the year wise growth rate in Output in Uttarakhand during 1998-99 to 2012-13. It also shows the pre and post-tax difference in the growth rate. The growth rate in the pre –tax period is 19.18 per cent while it 43.69 per cent in post-tax incentive period. The difference of pre post-tax incentive is 24.51 per cent in growth rate of Output. Thus we can say that it has positive impact on growth rate of Output in Uttarakhand.

**Table 5: Growth of Gross output**

Year	Growth Rate
1998-99	-
1999-00	-1.24
2000-01	55.47
2001-02	6.76
2002-03	15.75
2003-04	20.10
2004-05	38.97
2005-06	54.66
2006-07	38.75
2007-08	52.96
2008-09	150.78
2009-10	-4.34
2010-11	33.43
2011-12	36.76
2012-13	14.88
Annual Average Growth rate (1998-2003)	19.18
Annual Average Growth rate (2003-13)	43.69
Difference in Growth (Pre and Post)	24.51

*Source:* Authors own calculations based on ASI data, MoSPI

	Year	N	Mean	Std. Deviation	Std. Error Mean
Gross Output	Pre Tax incentive	5	44914.4600	12845.59764	5744.72591
	Post Tax Incentive	10	666696.9800	581947.25066	184027.87902

		Independent Samples Test						
		t-test for Equality of Means						
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
Gross Output	Equal variances assumed	-2.344	13	.036	-621782.52000	265241.11500	-1194801.11126	-48763.92874
	Equal variances not assumed	-3.377	9.018	.008	-621782.52000	184117.52261	-1038161.90259	-205403.13741

We have tested the hypothesis by using independent *t-test*. We have found there is significance difference in the pre and post-tax incentive period in the Emolument in the Uttarakhand. Pre mean= (44914.4600), Post mean= (666696.9800), it significant at p value of .036. Thus we reject null hypothesis.

*Note:* We reject null hypothesis.

## 6.6-Gross State Domestic Product and Gross Value Added Correlations

We have run Pearson Correlations test on the causal correlations between Gross Value Added and Gross State Domestic Product (GSDP) at current prices; we have found positive relations between GVA and GSDP, which is presented in below correlations table. Both variables have positive relations of 1 and .961 with significance level of  $p=0.000$ . It is also presented in the figure 6, which shows positive correlations. Thus we can reject null hypothesis.

### Descriptive Statistics

	Mean	Std. Deviation	N
Uttarakhand Industry Gross value Added	1205136.4000	1441817.36866	15
Uttarakhand GSDP (at Current price)	5149607.2000	3886449.29210	15

### Correlations

		Uttarakhand Industry Gross value Added	Uttarakhand GSDP (at Current price)
Uttarakhand Industry Gross value Added	Pearson Correlation	1	.961**
	Sig. (2-tailed)		.000
	N	15	15
Uttarakhand GSDP (at Current price)	Pearson Correlation	.961**	1
	Sig. (2-tailed)	.000	
	N	15	15

\*\* . Correlation is significant at the 0.01 level (2-tailed)

*Note:* We reject null hypothesis

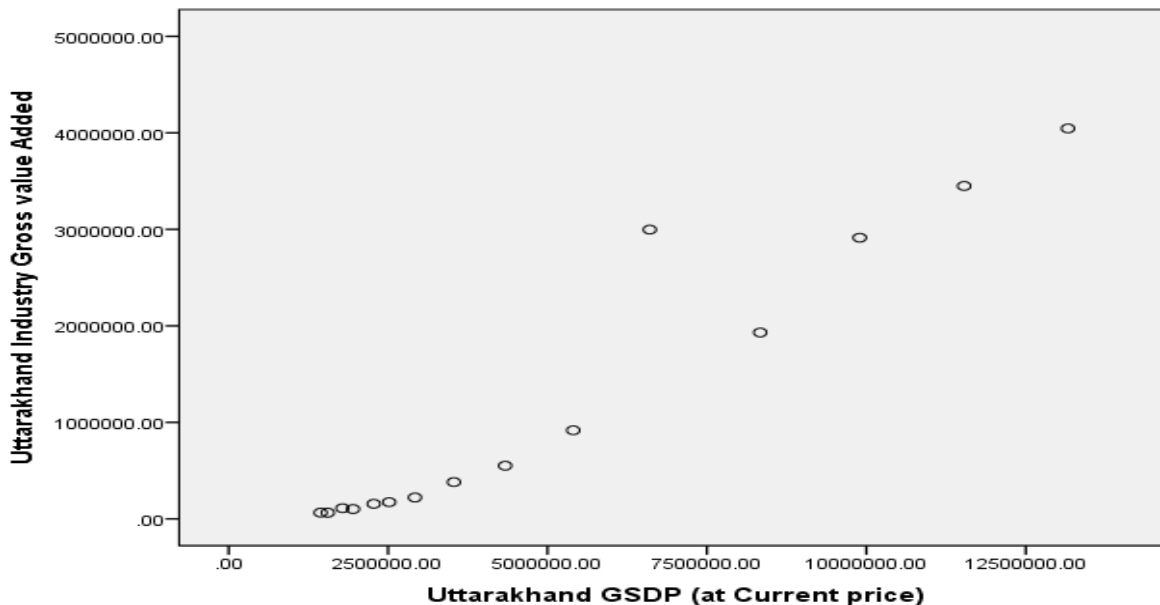


Figure 6: Correlations between Industry Gross value Added and GSDP of Uttarakhand

## 7-Conclusion

This study has examined impact of Central tax incentive programme given to hilly state of Uttarakhand in 2003 for economic development. This study is based on comparing the pre and post-tax incentive on following different variables - number of Factories, Total Output, Number of Workers, Fixed capital, Total Emolument, Gross Value added (GVA) and Gross State Domestic Product (GSDP).we have used annual growth rate and t test to compare the period. We have found that there is positive impact of the tax incentive on Uttarakhand. Thus we should recommend that state should provide such incentive to lagging regions so that these areas join in the race of socio-economic development.

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