A STUDY ON IMPACT EVALUATION OF PACKAGE OF SPECIAL CATEGORY STATES
(UTTRAKHAND, HIMACHAL PRADESH AND JAMMU & KASHMIR)

Submitted
to
The Socio Economic Research Division
Planning Commission, Government of India
by
Stellar Society
(Trivenee School of Excellence Research Institute)
Paonta Sahib, District Sirmour, H.P.

A STUDY ON IMPACT EVALUATION OF PACKAGE OF SPECIAL CATEGORY STATES

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SUBMITTED

TO

THE SOCIO ECONOMIC RESEARCH DIVISION

PLANNING COMMISSION, GOVERNMENT OF INDIA

BY

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1. INTRODUCTION/OBJECTIVES:

The Scheme of Package for Special Category States is under implementation for providing concession/subsidy to boost industrial investment in the States of Jammu & Kashmir, Himachal Pradesh and Uttarakhand in order to reduce regional imbalance. The scheme was under implementation for providing incentives to J&K w.e.f. June 2002 and was extended to HP and Uttarakhand w.e.f. January 2003. Under the package Central Investment Subsidy, Central Interest Subsidy, Comprehensive Insurance Subsidy and exemption on income tax and excise duty are given to industrial units established in these states. The study evaluates the impact of package to special category states with the following specific objectives:

1.1. To analyse the outcome of special package in terms of its impact on industrial investment (permanent vs. temporary nature), production, income, employment, net value addition and net permanent asset creation in the beneficiary States.

1.2. To study the role of nodal agencies and the approval procedures for the incentives, to identify problems in the implementation of the programme and suggest remedial measures.

1.3. To study whether the effectiveness of special package depends on the scale of industry, i.e. to study the effectiveness for small/medium/large scale industries.

1.4. To study whether the Special Industrial Package incentives given to the new industries may result in rapid firm turnover, with newly exempt firms driving out firms whose exemptions have expired. The older units may be rendered unviable with adverse effects on their capacity utilisation.

1.5. To study the spatial distribution of industries in Himachal Pradesh, Uttarakhand and Jammu & Kashmir.

1.6. To inquire whether the Special Industrial Package to Himachal Pradesh, Uttarakhand and Jammu & Kashmir had any adverse impact on the neighbouring states of Punjab, Haryana and Uttar Pradesh.

2. METHODOLOGY:

The study used both secondary and primary data. The major sources of secondary data used in the study were the Annual Survey of Industries, Plan documents, Economic Surveys etc. The primary data was collected through field surveys of industrial units. For impact assessment, a quasi-experimental evaluation design was adopted and attempts made to employ a mix of before & after and with & without methods. The qualitative notes were also used to supplement quantitative information. Purposive sampling technique was used to select the districts for field survey. Two districts each from the industrially backward beneficiary or special category states (Himachal Pradesh, Uttarakhand and Jammu & Kashmir) were selected to represent 'induced' growth centres. Further two districts each from the States in the control group (non-beneficiary bordering States which were not covered under the Special Industrial Package viz. Punjab, Haryana and Uttar Pradesh) were selected to represent 'spontaneous' growth centres (where industry developed without the benefit of incentives). Two districts were selected from each state, one that has been successful in attracting industry and the other which has been less successful. The selected sample districts were Jammu and Rajauri from Jammu & Kashmir; Solan and Bilaspur from Himachal Pradesh; Haridwar and Nainital from Uttarakhand; Faridabad and Kaithal from Haryana; Ludhiana and Tarn Taran from Punjab; and Gautam Budh Nagar and Kannauj from Uttar Pradesh. To select the firms stratified random sampling was used.

3. FINDINGS/CONCLUSIONS:

3.1. The package to Special Category States has led to industrialisation of these states but these states are still far behind other neighbouring states.

3.2. There was definite positive and significant impact of the package, both in with- and without framework as well as before- and after framework, in the special category states in terms of increase in the number of factories, fixed capital, invested capital, number of industrial workers, total persons engaged in industry, wages to workers, total emoluments, net value added, value of output and gross fixed capital formation.

3.3. There are inequalities in level of industrialisation not only among the states but also within the states themselves. Industrialisation in each of these States revealed high degrees of intra-state regional inequalities.

3.4. Uttarakhand has gained the most from the package and has overtaken Himachal Pradesh in terms of industrialisation. The unleashing of the untapped potential after formation of the separate state of Uttarakhand has also contributed to its success. Jammu & Kashmir has lagged far behind perhaps due to its unique problems.

3.5. Significant employment benefits have been filtered away to other states as majority of the industrial workers in special category states are migrants.

3.6. The basic infrastructure in even the best industrial areas in the special category states of Himachal Pradesh and Jammu & Kashmir was grossly lacking with the exception of SIDCUL areas in Uttarakhand.

3.7. In the special category states a comparatively much higher percentage of investors were from the other states. This validates the success of the package in attracting investment in special category states. However, investments in the special category states have come from all over India and not just from the neighbouring states viz. Haryana, Punjab and Uttar Pradesh.

3.8. Very high figures of net value as a percent of output for special category states reflect rampant misuse of the fiscal incentives. There is alleged manipulation and over-reporting of value addition in the Special Category States by the firms to gain excess-benefit illegitimately by availing the excise duty concessions over and above the actual value addition in the state.

3.9. Almost 50% of the organisations reported difficulty in finding local employees. The condition of ensuring at least minimum employment to the bonafide residents in the special category states is often violated by industries.

3.10. Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) has been successful in generating wage employment and raising the market wage rates. However, for the industries this has resulted in the problem of non-availability of labour and increase in the wage rates.

3.11. Most of the respondents' self-assessment of their understanding of the scheme was only fairly good reported by 32.9% of the respondents and only 29% reported it as 'very good'. Thus, there was lack of awareness and knowledge of the special package.

3.12. Only 44% of the respondents in the survey reported definite expansion plans while 29% of the respondents were unsure of expansion plans.

3.13. Only 39.6% of the respondents were satisfied with the government's interface with the private sector which was greater in the special category states at 51.7% in comparison to only 23.6% in the control group states.

3.14. Only 19.8% of the respondents reported that incentives were factored in investment's net present value calculations at inception of their factories. Significantly 48.8% of the respondents did not know whether these were included or not.

3.15. A very high percentage of respondents at 66.7% desired to be contacted by the government for making further investments.

3.16. In the special category states 53.4% of the respondents reported that they had applied for incentives under the special package. However, only 39.8 percent actually received the incentives.

3.17. More than 88% of the respondents in the special category states supported the statement that the incentives significantly increase firm's competitiveness.

3.18. The statement "The burden of compliance for availing industrial package incentives is very high" was supported hugely by 58.5% of the respondents.

3.19. The statement "The special package has helped in the industrialisation of the state." received the support of 89% respondents.

3.20. A very large number of respondents (56.7% in the special category states; and 71.9% in the control group) supported the statement that some of the firms benefit unfairly from incentives.

3.21. In terms of mean importance raw material was rated as the most important factor followed by Incentives and tax structure, government attitude, human resources and market respectively.

3.22. Redundancy is when incentives are provided to generate investment, but the investment would have been made anyway, even without the incentives. The redundancy rate was estimated to be quite high at 45.8%.

3.23. The Principal Component Analysis (PCA) was applied to location factors. The First Principal Component labelled "Infrastructure and Investment Incentives" accounted for 42.985% of the total variance in the data. The Second Principal Component labelled "Economic" accounted for 12.815% of the total variance. The third Principal Component labelled "Administrative and Political" accounted for 8.238% of the variance. The first three principal components together accounted for 64.038% of the total variance in the data.

4. RECOMMENDATIONS:

4.1. Providing good quality pre-investment and post-investment services to investors is important. Thus, there is need to set up an effective Single Window Clearance Authority (SWCA) in each state.

4.2. The incentives have more effect on business decisions-making if they are paid sooner rather than later, in part because firms use large discount rates when factoring-in future benefits. Thus there should be time-bound settlement of claims and subsidies.

4.3. The government must draw up an explicit contract with a company receiving package incentives. The contracts must specify explicit goals and performance requirements that the investor must satisfy. This may include such factors as the number of employees that must be hired to receive the incentives, the wages and benefits that must be paid, etc. The contract should also ban relocation of a facility for a specified period of time as well as specify the date by which the company should have fulfilled its performance requirements. Monitoring and disclosure requirements must be built into the incentive agreement. Penalties for breach of contract should be substantial,

including claw-backs provisions that stipulate the return of incentives awarded if conditions are not met.

4.4. **Skill Development:** The firms may sponsor either one or two centres or some students through fellowship in the technical institutes and get them trained according to their requirement. More Industrial Training Institutes (ITIs) should be opened and the course curriculum of ITIs redesigned and continuously updated to meet the changing requirements of the industry. Industry associations may be involved in developing course curriculum and in-plant training be made compulsory part of course curriculum. The stakeholders (government and the private sector) should develop a manpower needs plan identifying the current and future skill deficiencies in the state which should be used as the basis for developing training initiatives. The package should also include a budget aimed at developing skill levels of the labour force.

4.5. **Good Governance:** Good governance is the most important factor facilitating investment. More transparency should be brought in sanctioning and disbursement of the incentives. Greater use of IT interface should be ensured.

4.6. A simpler application procedure would also reduce the costs of implementing the incentives.

4.7. **Resource Mapping:** A resource map in respect of special category states should be developed to include minerals, forestry, fishery and agricultural resources. This resource map should be made available to all potential investors. The resource map should also be a primary component of the infrastructure plan and any market access opportunities.

4.8. **Research & Development:** The strengthening of the relationship between the private sector and research institutions should be pursued. The survey findings reveal that in general MSMEs are excluded from R&D funding. Thus MSMEs should be granted preferential treatment in technology incentives and support which should be included in the package.

4.9. **Infrastructure Development:** Adoption of Private-Public-Partnership (PPP) model can facilitate faster and cost effective development of infrastructure.

Grants or Soft loans on a significant scale may be provided to the Special Category States for integrated development of basic infrastructure.

4.10. The government should provide incentives for investors to develop the infrastructure associated with their production facilities including captive electricity generation and utilising non-conventional energy sources.

4.11. The facilities for treatment of industrial effluent and emissions can be planned as part of the infrastructure network.

4.12. Government needs to promote implementation of standards and certification. Incentives may be given to small scale enterprises for getting quality system certification. Special cells at state level need to be created that would work as facilitating centres for implementation of standards and getting certification.

4.13. The special category states should ensure that all industrialists have unhindered access to land. The necessary amendments in the relevant Acts must be made by the state governments.

4.14. There is need for regular government interface with industry.

4.15. The traditional industries in the special category states should also be encouraged through the package. The Ministry of Micro, Small & Medium Enterprises must establish more Development Centres in the special category states. The government must build the necessary analysis capacity to be able to fill the information need of industries in special category states.

4.16. Labour reform aimed at more flexibility is an essential step. This will encourage firms to employ and retain more permanent workers.

4.17. Most of the factors that influence industrial development are under the domain of other line ministries. Therefore, the planning machinery at the state level may be strengthened.

4.18. The package incentives, if extended, must notify the interior areas for the benefits. Selecting the right location in special category states for industrial development is the most important if the industrialisation is to be sustainable beyond the lifetime of the initiative.

Chapter 1

INTRODUCTION

1.1.   RELEVANCE AND NEED OF THE STUDY

The importance of monitoring and evaluation as a critical element in improving the effectiveness of development programmes is now recognised everywhere. The feedback it provides is a valuable input in taking corrective action in respect of existing schemes and also for designing new ones. The dynamic nature of socio-economic realities implies that the design of schemes needs to be revised from time to time and rigorous monitoring and evaluation on a periodic basis is the best way of achieving this objective.

The hill states of the country have not been able to join in the race of socio-economic development of the country even after 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).

Industrialization in hill States is comparatively a recent phenomenon. The severe climatic conditions, topographical and geographical severities are the main hurdles in this process. In such a scenario, the monetary and fiscal benefits in the form of incentives and subsidies as well as the development of appropriate infrastructure are the main instruments to off-set the locational and geographical disadvantages and to woo industrial investment in these States.

Before designing and using incentives to promote economic development in lagging areas, government should first find out why some areas are being bypassed by the market. The success of incentives depends on how well the problem is diagnosed. "Know thy economy," a phrase used in the World Development Report 2000/01, should be the motto of governments. Good information can promote constructive debate on development options and build consensus around a

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development strategy. For firms in sectors in which economies of scale and agglomeration are important for production, it is less likely that spatially targeted interventions will attract them to lagging areas. And from a national growth perspective, it is important to find out whether relocating targeted industries produces net additional employment and output nationally. If not, efforts of attracting industry can be zero-sum games. If the relocated industries are less productive, policy makers may face a negative sum (World Bank, 2009).

Paranjape (1988) has found that the government incentives have been effective in promoting industry mainly in areas which are relatively near the established industrial centres, or those which have 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 development only in areas where incentives are available in conjunction with other facilities.

Further Morisset and Pirnia (2000) have concluded that the fiscal incentives primarily benefit short-term investments, which often are undertaken in so-called footloose industries characterised by companies that can quickly disappear from one jurisdiction to reappear in another. They also tend to reward the founding of a company, rather than investment in existing companies and discriminate against investments that rely on long-lived depreciable capital. They can also lead to large erosion of the tax base as taxpayers learn how to escape taxation of income from other sources.

Thus it needs to be explored whether industrialisation in the Special Category States (Himachal Pradesh, Uttarakhand and Jammu & Kashmir) is also following such a pattern leading to creation of inefficient and uncompetitive screw-driver industry, which may not be able to sustain in the long run.

1.2. OBJECTIVES OF THE STUDY

1. To analyse the outcome of special package in terms of its impact on industrial investment (permanent vs. temporary nature), production, income, employment, net value addition and net permanent asset creation in the beneficiary States.

2. To study the role of nodal agencies and the approval procedures for the incentives, to identify problems in the implementation of the programme and suggest remedial measures.

3. To study whether the effectiveness of special package depends on the scale of industry, i.e. to study the effectiveness for small/medium/large scale industries.

4. To study whether the Special Industrial Package incentives given to the new industries may result in rapid firm turnover, with newly exempt firms driving out firms whose exemptions have expired. The older units may be rendered unviable with adverse effects on their capacity utilisation.

5. To study the spatial distribution of industries in Himachal Pradesh, Uttarakhand and Jammu & Kashmir.

6. To inquire whether the Special Industrial Package to Himachal Pradesh, Uttarakhand and Jammu & Kashmir had any adverse impact on the neighbouring states of Punjab, Haryana and Uttar Pradesh.

The specific objectives of the study as outlined above are in the nature of general hypotheses. Each of these could be converted into a number of empirically testable specific propositions. The results of such empirical test can help (a) answer if the mandated objectives of the programme being met and (b) in identifying the areas of strength/weakness and (c) in making diagnostic analysis of successes and failures.

1.3. HYPOTHESIS TO BE TESTED:

1. The Special Industrial Package to Himachal Pradesh, Uttarakhand and Jammu & Kashmir has increased the industrial investment, production, income and employment in these States.

2. The Special Industrial Package is effective irrespective of the scale of the industry i.e. the fiscal incentives are important for small, medium and large scale industries.

3. The Special Industrial Package incentives given to new industries rendered some of the competing old units unviable.

4. The major portion of the new industrial investment in Himachal Pradesh, Uttarakhand and Jammu & Kashmir has gone to the areas that are bordering the neighbouring developed States and are plains or valley areas.

5. The Special Industrial Package did not have any significant adverse impact on Punjab, Haryana and Uttar Pradesh.

1.4. PACKAGE FOR SPECIAL CATEGORY STATES:

The Scheme of Package for Special Category States is under implementation for providing concession/subsidy to boost industrial investment in the States of Jammu & Kashmir, Himachal Pradesh and Uttarakhand in order to reduce regional imbalance. The scheme was earlier under implementation for providing incentives to J&K w.e.f. June 2002 and was extended to HP and Uttarakhand w.e.f. January 2003. The package was introduced to promote industrialisation as well as generating employment for local people in these states. Under the package Central Investment Subsidy, Central Interest Subsidy and Comprehensive Insurance Subsidy are given to industrial units established in these states. Under the Central Capital Investment Subsidy Scheme, subsidy at the 15% of investment of plant and machinery subject to a ceiling of Rs. 30 lakh is being granted. These concessions are available for a period of 10 years from the date of commencement of commercial production. In respect of J&K, other benefits available under the scheme are 100% exemption on central excise duty with CENVAT benefit and 100% exemption on income tax. Similarly, other benefits available to Himachal Pradesh and Uttarakhand are 100% exemption on income tax for a period of five years. Excise duty exemption has not been extended by the Department of Revenue after 31st March, 2010 (Ministry of Commerce and Industry, 2011).

1.4.1. Special Package for Jammu & Kashmir:

New Industrial policy and other concessions for the State of J&K were introduced by the Department of Industrial Policy & Promotion (DIPP) on 14th June, 2002. Details of incentives/concessions provided for industrial development in the

State are:

- 100% excise duty exemption with CENVAT benefit for a period of 10 years available to new industrial units and existing units which have undertaken substantial expansion on or after 14th June, 2002. The scheme is valid till 14th June, 2012.

- A subsidy @ 15% for investment in plant and machinery subject to a maximum limit of Rs. 30 lakh available to new industrial units as well as the existing units which have undertaken substantial expansion under the Central Capital Investment Subsidy Scheme, 2002 notified by the Department. The scheme is valid till 14th June, 2012.

- Interest subsidy of 3% on working capital loan available to all new units as well as the existing units on substantial expansion under the Central Interest Subsidy Scheme, 2002 notified by the Department of Industrial Policy and Promotion. The scheme is valid till 14th June, 2012.

- The insurance premium to the extent of 100% on capital investment available to all new units and the existing units on substantial expansion under the Central Comprehensive Insurance Scheme, 2002 notified by the Department of Industrial Policy and Promotion. The scheme is valid till 14th June, 2012.

- 100% income tax exemption allowed to all new units for initial period of 5 years. Thereafter, 30% for companies and 25% for units other than companies, for a further period of five years, under Section 80-1B of Income Tax Act, 1961 would be allowed. The scheme is valid till 31st March, 2012.

- Industries like cigarettes/cigars of tobacco, manufactured tobacco and substitutes, distillation/brewing of alcoholic drinks and manufacture of branded soft drinks are ineligible under the package.

- Jammu & Kashmir Development Finance Corporation Ltd. (JKDFC) has been notified as Nodal Agency for routing the disbursal of subsidy under the aforesaid schemes (Ministry of Commerce and Industry, 2011).

1.4.2. Special Packages for Himachal Pradesh and Uttarakhand:

New Industrial policy and other concessions for the States of Himachal Pradesh and Uttarakhand were introduced by the Department of Industrial Policy & Promotion (DIPP) on 7th January, 2003. Details of incentives/concessions provided for industrial development in the States are:

- 100% excise duty exemption on outright basis to new industrial units and the existing units on their substantial expansion on or after 07.01.2003. The "sunset clause" introduced by the Department of Revenue, Ministry of Finance, in 2004 restricting the benefit of excise duty exemption only to such industrial units in these States as are set up or expanded on or before 31.03.2007 was further extended till 31st March, 2010 (Ministry of Commerce and Industry, 2010).

- 100% income tax exemption for an initial period of five years and thereafter 30% for companies and 25% for other than companies for a further period of five years under Section 80-C of Income Tax Act, 1961 would be allowed. The scheme is valid till 31st March, 2013.

- A subsidy @ 15% for investment in plant & machinery subject to a maximum limit of Rs.30 lakh provided to all new as well as existing units on substantial expansion under the Central Capital Investment Subsidy Scheme, 2003 notified by this Department. The scheme is valid till 6th January, 2013.

- The financing pattern of Integrated Infrastructure Development Centres (IIDC) being implemented by Ministry of Micro, Small & Medium Enterprises between the Centre and these States changed from 2:3 to 4:1.

- The funding pattern between Government of India and both these States changed from 50:50 to 90:10 under Deen Dayal Hathkargha Protsahan Yojana of Ministry of Textiles. The Ministry extended its package of incentives, as notified for North-Eastern States to the States of Uttarakhand and Himachal Pradesh also.

- Ministry of Food Processing Industries to include Uttarakhand in difficult area category States. The state of Himachal Pradesh is already included in this category.

- Ministry of Micro, Small & Medium Enterprises has provided relaxation for the States of Himachal Pradesh and Uttarakhand under Pradhan Mantri Rozgar Yojana (PMRY) with respect to age by 5 years (i.e. 18-40 years from 18-35 years) and enhanced subsidy @ 15% of the project cost subject to a ceiling of Rs. 15,000/- per entrepreneur as against the maximum limit of Rs. 12,500/- per entrepreneur in other States.

- In order to utilise local resources in an environment friendly manner, certain polluting industries and those not utilising local resources are excluded from the purview of proposed concessions. In addition, the Doon Valley Notification dated 01.02.1989 continues to operate in the Doon Valley Area and the industries notified under it excluded from the proposed concessions, in the Doon Valley Area of the State of Uttarakhand.

- Himachal Pradesh State Industrial Development Corporation Ltd. (HPSIDC) and State Industrial and Infrastructure Development Corporation of Uttarakhand Ltd. (SIDCUL) are the Nodal Agencies for routing the disbursal of subsidy for Himachal Pradesh and Uttarakhand (Ministry of Commerce and Industry, 2011).

1.4.3. Status of Implementation/Achievement of the Package So Far:

According to the Annual Report 2010-2011 of the Ministry of Commerce and Industry, Department of Industrial Policy and Promotion, Government of India, the total investments in the States of J&K, Himachal Pradesh and Uttarakhand have been to the tune of Rs. 1989 crore, Rs. 10104 crore and Rs. 23,905 crore respectively since the inception of the Scheme which have resulted in an employment generation of 59621, 95618 and 161610 persons respectively. The total number of industrial units set up in these States are 8091, 7606 and 16012 respectively (upto September, 2010 for J&K, upto December, 2010 for HP and upto March, 2010 for Uttarakhand).

1.5. TYPE AND METHOD:

Both secondary and primary data was analysed to test the various hypotheses relating to the above mentioned objectives of the study. The Secondary data included various reports and publications of both the Central and the State governments. The major source of data used in the study was the Annual Survey of Industries, the Census of India, Plan documents, Economic Surveys etc. The secondary data was supplemented by the primary data.

The primary data was collected through field surveys of industrial units. Field survey provided valuable insights regarding factors influencing location decisions. For impact assessment, a quasi-experimental evaluation design was adopted and attempts made to employ a mix of before & after and with & without methods. The evaluation methodology relates primarily to before- and after- method. However, control samples were selected to study some aspects of the impact in with- and without- framework.

The ideal – but impossible – study of a government program would borrow a time machine from H.G. Wells or some other science fiction writer, go back in time and eliminate the program but make no other direct intervention, and then compare the outcomes in this induced alternative world without the program to the outcomes in the original world with the program. Absent a time machine, the next best alternative is to evaluate the programme by comparing relevant economic outcomes in these target areas to the areas that were not chosen for these incentives (the control group).

The qualitative notes were used to supplement quantitative information. The qualitative notes covered the various aspects such as the implementation mechanism, constraints faced by the study team and the suggestions for improvement based on field observations. Some of these are presented in the form of boxes in the report.

1.6. SELECTION OF THE STUDY AREA

Purposive sampling technique was used to select the districts for field survey. Two districts each from the industrially backward beneficiary or special category

states (Himachal Pradesh, Uttarakhand and Jammu & Kashmir) were selected to represent 'induced' growth centres. Further two districts each from the States in the control group (non-beneficiary bordering States which were not covered under the Special Industrial Package viz. Punjab, Haryana and Uttar Pradesh) were selected to represent 'spontaneous' growth centres (where industry developed without the benefit of incentives).

The defined methodology for the study requires the selection of two districts from each selected State, one that has been successful in attracting industry and the other which has been less successful. For the analysis of the degree of success of districts in attracting industry, there may be several indicators of industrialisation viz. the number of factories in the district, the number of industrial workers, the amount of industrial investment etc. Since the district-wise data was available for the number of factories and the number of industrial workers, therefore a composite index of industrial development in the district was developed as an indicator of industrialisation for the selection of the districts for the survey.

Composite District Industrial Development Index: $\{(F_i/F)*100 + (W_i/W)*100\}1/2$

where,

Fi = Number of industrial units in the District

F = Total number of industrial units in the State

Wi = Number of industrial workers in the District

W = Total number of industrial workers in the State

However, it must be pointed out that though this composite index is suitable for the selection and comparison of districts within one state, this index is certainly not an appropriate indicator for making inter-state comparisons due to the nature of this index. Thus this index has been devised to serve the limited and specific purpose only.

The composite district industrial development index was therefore calculated for each state independently and the districts in a state were then ranked in terms of the composite index. The best performing district, ranked 1st, was selected for the

survey as the district most successful in attracting industry. However, the selection of the less successful district was not as simple and straightforward as the selection of the best performing district due to the fact that among the worst performing districts some districts had no factories at all while others had very few factories thereby making the required sample selection very difficult. Therefore, instead of choosing the district lowest in terms of composite index, a modified criterion for selecting the less successful district for the survey had to be devised. Thus considering the minimum sample size of 20 firms from each district and assuming a 50% no-response rate of firms, it was decided to select the worst performing district in terms of composite index but with at least some factories so that a representative sample may be drawn from the selected district.

Districts Selected for the Survey:

S.N.	State	Most Industrialised District	Less Industrialised District
1	Jammu & Kashmir	Jammu	Rajauri
2	Himachal Pradesh	Solan	Bilaspur
3	Uttarakhand	Haridwar	Nainital
4	Haryana	Faridabad	Kaithal
5	Punjab	Ludhiana	Tarn Taran
6	Uttar Pradesh	Gautam Budh Nagar	Kannauj

To select the firms stratified random sampling was used to ensure selection of firms operating at different scales of production and to select certain new firms which are eligible and some old firms which are not eligible for the fiscal incentives.

The major instrument used for the study included the structured questionnaire/schedule that was prepared to generate primary information required for meeting the objectives of the Evaluation Study. The tentative instruments of inquiry were constructed on the basis of the review of literature and tested through a pilot study after approval from the Socio-Economic Division of the Planning

Commission, Government of India.

The pilot study was conducted in Sirmour district of Himachal Pradesh. During the pilot study the questionnaire was tested and modified accordingly. The size of the questionnaire was significantly shortened through merging and rewording of certain questions. During the pilot study, it was observed that there are significant drawbacks in data management system of state industries departments and its agencies with obvious adverse implications for the successful implementation of the Package of Special Category States.

The executives at top levels in a firm with responsibility for a firm's major decisions were considered to be appropriate subjects. The firms participating in the study will nominate their candidates/ subjects. Some firms may provide multiple candidate names to participate in the study. As a result for some firms there may be multiple respondents. However, certain firms may decline to participate and some may not respond to the request.

The field experience of the pilot study revealed that certain firms decline to participate, some may not respond to the request and some may only provide partial information. Thus it was concluded that for the successful conduct of the study a 50% non-response rate may be assumed and twice as many firms as the required sample should be identified to ensure that a sample as close as possible to the desired sample (i.e. 20 per district) is obtained.

Chapter 2

LITERATURE REVIEW

The World Development Report 2009, 'Reshaping Economic Geography' highlights the fact that the world is not flat. Development is neither smooth nor linear – at any geographical scale. Growth comes earlier to some places than to others. Globalisation and liberalisation may rearrange production within countries, leaving people concentrated in places no longer favoured by markets. Geographic differences in economic activities encourage migration from lagging areas, concentrating people – including the poor – in leading areas. But geographic unevenness in living standards, by creating or deepening divisions within countries, can also lead to conflicts, slowing social and economic development (World Bank, 2009).

Both first- and second-nature geography are major determinants of production structure, trade and income. First-nature is the physical geography of coasts, mountains, and endowments of natural resources, and second-nature is the geography of distance between economic agents (Overman, Redding and Venables, 2003).

The increase in spatial inequality with development often arises from spatial concentration in the development of manufacturing, and this is seen most clearly in data for large countries including India. There are many reasons for variations in the prosperity of countries and regions. Some factors are truly exogenous – first nature geography – and others are a function of political and institutional history. The threshold effect in establishing new industries is very important (Venables, 2006).

A widespread perception all over the country is that disparities among States, and regions within States, between urban and rural areas, and between various sections of the community, have been steadily increasing in the past few years and that the gains of the rapid growth witnessed in this period have not reached all parts of the country and all sections of the people in an equitable manner. That this perception is well founded is borne by available statistics on a number of indicators. The widening income differentials between more developed and relatively poorer States is a matter of serious concern. Thus the objective of the Eleventh Five Year

Plan (2007-2012) is 'faster and more inclusive growth' (Planning Commission, 2008).

Throughout the world, governments offer tax breaks and other incentives to attract capital and disperse economic developments to lagging regions. In developed countries like the United States and Great Britain, the spatially targeted tax breaks imbedded in enterprise zones remain one of the few major urban initiatives. In less-developed countries, incentives are typically designed to steer industrial migration away from congested, core cities to outlying, peripheral areas (Guimaraes, 1996).

These fiscal incentives, also known as tax expenditures, are indirect government expenditures, or foregone revenues due to reductions in tax liabilities, for the purpose of achieving economic goals in specific regions or sectors. Fiscal incentives are measured as the difference between a set of reference taxes and actual tax revenues that increases the resource availability for production units (firms). If a firm is located in a State that offers incentives specific to its own industry, then there is a greater likelihood that the firm will use these incentives to offset production costs. Thus, higher incentive amounts would translate into lower production costs (Lall and Yepes, 2004).

Fiscal policy often faces a trade-off between equity and efficiency. Some policy options tend to promote growth and efficiency, while others tend to reduce inequality. The decision of whether to pursue a pro-efficiency or pro-equity approach is made harder by the presence of strong arguments in favour of both. Economic theory implies that fiscal policy is not only a solution to regional inequality, but can be a cause of it as well. This occurs when governments favour certain regions over others, allowing the former to accumulate wealth more rapidly. Once this has occurred, reverting to a policy stance that is merely neutral may not be sufficient to level incomes and welfare. Active redistribution to poorer regions, plus a progressive investment profile that prioritises deprived regions, may be called for (Faguet and Shami, 2008).

In the recent years, the role of the State as industrial owner and industrial location regulator has been substantially curtailed under the regime of liberalization and structural reforms. The effects of policy-related factors that influence agglomeration are on the decline. Transport infrastructure improvement may play a key role in efforts to reduce regional and social disparities and strengthening the

country's economic and social cohesion (Kathuria et al, 2005).

The strategy for inclusive growth in the Eleventh Plan aims at achieving a particular type of growth process which will meet the objectives of inclusiveness and sustainability. A package of fiscal and other incentives has been in place since 1997 aimed at facilitating industrial development of the States of the North East Region (NER). During the Tenth Plan, similar schemes were notified for Jammu and Kashmir (J&K), Himachal Pradesh and Uttarakhand. While the responses in the NER and the valley in J&K have not been significant, there is evidence that these incentives have stimulated industrial investment in Jammu, Himachal Pradesh and Uttarakhand. However, there are complaints from other States, particularly the adjoining ones, of flight of capital induced by excise duty exemptions. Because of the distortions induced by excise duty exemptions in particular, consideration needs to be given to replacing the incentives, fully or partly, by an accelerated programme of infrastructure improvement (Planning Commission, 2008).

Thavarja (1972) studied the regional imbalances and public investment in India during the period 1860-1947 and concluded that the lopsidedness of the industrial development was accentuated by the uneven distribution of public investment over the different regions. The unimpressive industrial development in the South could partly be explained by the diffusion of even the relatively small amount of public investment over a vast area. The North Eastern region, which received a relatively large share of the investment in railways, reached a greater degree of industrialisation as compared to the other regions. In the case of Punjab, where there was a concentration of investment in irrigation as well as the means of transport and communication there was considerable progress in agriculture and trade but the growth of industries was somewhat insignificant as compared to the prosperity in agriculture and trade.

The importance, influence and evidence of taxes on the location of firms continue to be a controversial research area. There is a lack of consensus as the results of academic literature on the issue are still mixed.

Carlton (1983, p. 447) found that tax variables usually have a very small and always statistically insignificant impact on locational choice. Netzer (1991) and Rubin & Zorn (1985) have found that even if tax incentives were to be effective in firm

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location decisions, they merely provide incentives for firms to relocate from one area to another, but do not result in any new increase in employment.

Ramachandran, K. (1985) studied the appropriateness of incentives for small enterprise location in less developed areas in three countries India, Japan and Britain. He concluded that the location factors are not static; rather they are dynamic and tend to vary in terms of socio-economic variables. Since entrepreneur mobility is a function of both economic and non-economic factors, efforts to grow entrepreneurship from within the regions are likely to be more long term and sustained.

Tulasidhar and Rao (1986) in the study on sales tax incentives in the Indian context show both employment and output loss due to tax incentives, albeit in a partial equilibrium framework. The authors concluded that sales tax incentive, whichever way it is designed is not the most appropriate instrument to raise the level of investment or affect its spread to backward areas. If the entire new investment would have been made even in the absence of incentives, the incentives scheme can be treated as totally redundant and the entire tax benefit to industry under the scheme can be considered as tax expenditure. Conversely, if the new investment is entirely due to incentives there can be no redundancy as the tax benefit accrued under the scheme would not have gone to the exchequer otherwise.

Financial incentives have been criticised as ineffective because it places regions in direct competition with each other and does not generate real economic growth (Wasylenko, 1988).

Paranjape, J. (1988) in his study attempted to analyse the factors inducing location in industrially backward regions in the case of Maharashtra and Gujarat. It concluded that direct government intervention is a necessary condition for diverting industry from industrially developed areas to industrially backward regions, but it is unlikely to be a sufficient one. Factors which are likely to be equally, or more, important in location decisions are availability of transport and communications, water and power, services and social amenities. The formulation of an effective industrial location policy requires identification of factors determining industrial location. Using correlation analysis, the author concludes that a combination of factors is necessary to induce industrial development in a region; industrial location

is not influenced by any single factor. The field survey analysis have revealed that although deglomerating factors such as exorbitant land prices, soaring costs of production and labour disputes in the centres of industrial over-concentration have been forcing entrepreneurs to seek alternative locations, in reality it is government fiscal incentives which have catalysed the process of industrial dispersal.

Bartik (1991), based on his comprehensive survey of the econometric literature, summarizing studies using data from the United States, found that the tax elasticity of business activity is in the range of –1.0 to –3.0 for intrastate business location decisions. This means that, holding public services constant, if a local government in a state were to reduce its taxes by 1 percent, in the long run, it could expect to see an increase in its business activity (investment and employment) anywhere in the range between 10 to 30 percent. This was found to be higher than for interstate location decisions, which is reasonable to expect, because traditional factors (such as transport costs, raw material availability, size of, and proximity to the market) that affect firm location are likely to be different across states and hence more important in their decisions. Further, across locations (such as within a state) where traditional factors are constant, tax incentives are likely to play an important role in influencing firm location.

Tax abatement, which is simply a waiver of taxes which would otherwise be due, is one of the tools the government uses in attempts to lure firms to a region. It is believed to be inexpensive, yet effective when luring new businesses. However, tax abatement has been characterised as inefficient, inequitable, and politically controversial (Sharp and Elkins, 1991).

Investors may avoid locations that offer financial incentives as evidence of a region's non-competitiveness. Limited survey information reveals that fiscal variables matter little regarding business location. However, business executives often lobby hard for fiscal incentives. One can understand that attitude as firms have no incentives to forego such direct and indirect subsidies, even if they do not affect location decisions to a significant degree (Wasylenko, 1991).

If the value of the incentives exceeds the expected revenue, such occurrences have been called the winner's curse. That is, the cost of promoting the region and the financial incentives offer to the new plant would result in a net loss to

the region (Roger, 1994).

While the early industrial location literature often dismissed tax and other incentives, some recent evidence suggests that under certain conditions they can be effective. Guimaraes, Paulo et al. used nested logit to estimate the influence of industrial incentives on the location of manufacturing plants in Puerto Rico. The study indicated that the regional incentive policy reallocated relatively few of the green-field investments from the congested core to the periphery of the island (Guimaraes, Paulo et al., 1996).

Fisher, P.S. and Alan H. Peters (1998) in its study of industrial incentives in USA used the hypothetical firm method to measure the value of competitive incentives. They constructed financial statements for hypothetical firms. The model then measured the net returns on a new plant investment, after all taxes and incentives. To the extent that tax and incentive competition results in a redistribution of jobs, their research lent little support to the argument that this redistribution has beneficial effects for the nation as a whole. Neither did they say that it is clearly harmful.

Rajaraman et al (1999), based on data from Madhya Pradesh, finds that fiscal incentives have a statistically insignificant impact on large and medium investment in Madhya Pradesh. Conversely, the study finds that abundant power was an important factor attracting investment into the state during the eighties, highlighting the importance of infrastructure in firm location decisions.

Morisset and Pirnia (2000) from an overview of literature observed that tax incentives neither make up for serious deficiencies in a country's investment environment nor generate the desired externalities. Long term strategies to improve human and physical infrastructure – and, where necessary, to streamline government policies and procedures – are more likely than incentives to attract genuine long-term investments. But more recent evidence has shown that when other factors are more or less equal, fiscal incentives in one location may have significant effect on investors' location choices. However, even if tax incentives were effective, the costs might outweigh the benefits. Tax incentives are not only likely to have a negative direct effect on fiscal revenues but also frequently create significant opportunities for illicit behaviour by tax administrators and companies. This issue has

become more crucial in emerging economies, which face more severe budgetary constraints and corruption than industrial countries do.

Hubert, F. and Nigel Pain (2002) investigated the impact of fiscal instruments (such as corporation taxes, investment in infrastructure and other forms of development grants and subsidies) on the location of FDI in Europe by undertaking an econometric study of the determinants of location choice by German companies in the European Union over a period from 1980 to 1996. Pro-active fiscal policies are one of the main channels through which governments can try and influence location choice. The paper finds significant positive impact of fiscal incentives on location decisions.

Devereux, Griffith and Simpson (2003) examined the determinants of new plant locations in United Kingdom, in particular whether discretionary government grants influence the location of new plants, and how effective these incentives are in the presence of agglomeration and urbanisation externalities. Fiscal incentives in the form of grants are found to have some effect in attracting plants to specific geographic areas eligible for such aid. The researchers used the conditional Logit models to analyse the location choice decisions.

Fiscal incentives constitute an economic policy instrument for modifying market-determined outcomes. The provision of fiscal incentives is not a costless exercise. The subsidies need to be financed through taxation and the tax exemptions incur loss of tax revenue to the government. Further since markets in the economy are linked the effect of fiscal incentives to some states will affect the other states. On account of interdependence among markets fiscal incentives may induce a number of efficiency losses. Macroeconomic effects need to be factored in specifying the government budget constraint and the cost of financing the fiscal incentives. The cost of fiscal incentives may be defined as the unrecovered budgetary costs and the potential government revenue that is foregone (Srivastava, Rao, Chakraborty & Rangamannar, 2003).

Rosende, M. and Ricardo Wyllie (2004) econometrically investigated the determinants of industrial agglomeration in Rio de Janeiro, Brazil in the year 2001 and concluded that the local incentive policies pertaining to tax exemptions and technical support for micro and small firms did not have any important effect on

industrial agglomeration.

Lall and Yepes (2004) analysed the role of public infrastructure investments and fiscal incentives in influencing the location and performance of industrial activity in Brazil. They estimated a spatial profit function for industrial activity in Brazil that explicitly incorporates infrastructure improvements and fiscal incentives in the cost structure of individual firms. They used firm level data from the 2001 Annual Industrial Survey along with regional data at the micro-region level and find that there are considerable cost savings from being located in areas with relatively lower transport costs to reach large markets. In comparison, fiscal incentives have modest effects in terms of influencing firm level costs. Their analysis found that improvement in transport infrastructure linking firms to large markets has the most important external impact on firm-level costs. In contrast, fiscal policies, measured as the level of tax expenditures at the state level, have produced mixed results on economic performance. There is considerable variation in the impact of incentives across sectors and firm sizes.

Large and sustained differences in economic performance across regions of developing countries have long provided motivation for fiscal incentives designed to encourage firm entry in lagging areas. Empirical evidence in support of these policies, however, has been weak at best. Carvalho, A. et al. (2006) studied the fiscal incentive policy in Brazil using the secondary micro level data over the years 1993-2001. The analysis found that fiscal incentive policy had been successful in inducing entry into lagging regions.

Faguet and Shami (2008) studied the theoretical and empirical links between fiscal policy and spatial inequality, with focus on Latin American countries. They explored the relation between fiscal policies and spatial inequalities in three case studies: Mexico, Brazil and Argentina. They focussed on the potential of fiscal policy to redistribute resources in a way that ameliorates inequality. Fiscal policy makes use of two tools to attempt to minimise spatial differences in income and welfare: taxes and public expenditure. Taxes, as long as they are progressive, take resources away from the rich and place them in the government pool. These taxes are used by government to either provide subsidies – including direct cash transfers – or provide citizens with public goods and services. While taxes and subsidies lead to a direct

redistribution, public spending is both a direct and indirect way of reducing spatial inequality. The direct effect of public investment is through building human capital and improving the quality of living. The indirect effect is to create an environment conducive to private investment. Such an environment can promote job creation, and help bring economic improvement to a region, thus narrowing the gap between regions.

The World Development Report 2009 (World Bank, 2009) analysed the policy framework for economic integration which includes:

- Institutions (spatially blind policies): The term is used to categorise policies that are not explicitly designed with spatial considerations, but that have effects and outcomes that may vary across locations. These include such national policies as the income tax system, inter-governmental fiscal relations, and governance of land and housing markets, as well as education, health care, basic water and sanitation and other government initiatives.

- Infrastructure (Spatially connective policies): The term is used as shorthand to include all investments that connect places and provide basic business services, such as public transportation and utilities. These include developing inter-regional highways and railroads to promote trade in goods – and improving information and communication technologies to increase the flow of information and ideas.

- Incentives (Spatially focused policies): The term is used to include spatially targeted measures to stimulate economic growth in lagging areas. These include investment subsidies, tax rebates, location regulations, local infrastructure development, and targeted investment climate reforms, such as special regulations for export processing zones.

These instruments for integration – institutions, infrastructure, and incentives – span the range between universal and geographical targeted policies. Each of these categories can include taxes, public spending, and regulations. In deciding among the integration options, governments have to consider the fiscal and opportunity costs of these instruments. The experience of developed and developing countries shows that without these supporting institutions and infrastructure, incentives have been unsuccessful and expensive. The World Development Report

2009 specifically mentions that only a few countries face the triple challenge of economic distance, high population density and internal division. It recommends that in countries like India, which face divisions caused by ethno-linguistic or religious heterogeneity, spatially focussed incentives may need to complement institutions and infrastructure to encourage economic production in lagging areas (World Bank, 2009).

The United Nations Industrial Development Organisation (UNIDO, 2009) in its Industrial Development Report 2009 points out that most of the evidence on the economic impact of agglomeration has been drawn from advanced industrialized countries and a few middle-income countries. This means that there is a reasonably clear view of the impact of industrial concentration on manufacturing performance in more advanced economies, but it is difficult to see how much of this evidence carries over to lower-income settings. The report concludes that the role of geography in industrial development differs from country to country and that policies designed to exploit agglomerations therefore will also need to be tailor-made to individual circumstances.

Chapter 3

INTRA-STATE DISPARITIES IN INDUSTRIALISATION

The study analysed the secondary data district-wise related to the industrialisation in the six states included in the study. It was observed that there are inequalities in level of industrialisation not only among the states but also within the states themselves. The package to Special Category States (Jammu & Kashmir, Himachal Pradesh and Uttarakhand) has led to industrialisation of these states but these states are still far behind other neighbouring states included in the study (Haryana, Punjab and Uttar Pradesh) as the control group or the non-beneficiary states. Industrialisation in each of these States was analysed district-wise which revealed high degrees of intra-state regional inequalities. The maps of each of the states included in the study were drawn to show the spatial distribution of number of factories and industrial workers district-wise using quantum GIS software. The correlation and other statistical calculations were made using SPSS 17. The analysis also used the Gini Coefficients and Lorenz Curves that were calculated and drawn with the help of Wessa, P. (2012), Free Statistics Software, Office for Research Development and Education, version 1.1.23-r7, URL http://www.wessa.net/

3.1 INTRA-STATE INDUSTRIALISATION IN JAMMU AND KASHMIR:

The district-wise data for Jammu & Kashmir was based on the number of SSI units registered with the Directorate of Industries and Commerce, Jammu & Kashmir. The table reveals that Jammu district was the most successful district in attracting industries with 10015 numbers of units employing 64558 numbers of workers accounting for 19.84% of the total number of units and 27.72% of the industrial workers in the State. Thus Jammu district was the most successful district in attracting industries. However, it must be pointed out that since the formation of Samba district a large number of industries located in Bari Brahmana and Birpur industrial areas now come in Samba district as per revenue records but for the administrative purpose these industrial areas are still under the jurisdiction of District Industries Centre, Jammu. Consequently, in the present study these industrial areas considered as part of Jammu district and included in the survey. The secondary data also revealed that almost all the medium and large scale industries in Jammu and Kashmir are located in Jammu, Samba and Kathua districts.

Among the least industrialised districts, it was observed that the lowest ranks were occupied by Ramban, Kishtwar and Reasi districts with no industries at all. When the data was analysed rank-wise upwards from Shopian, Ganderbal, Bandipra, Kulgam and Samba, it was observed that all these districts had number of SSI units less than 30. Kargil and Leh had 639 and 937 units respectively. Rajauri district ranked 12th in terms of composite index, with 1360 number of SSI units was selected for the survey as the district less successful in attracting industries.

*Table 3.1: District-Wise Industrialisation in Jammu & Kashmir (Year 2007-08)*

S. N.	District	No. of SSI Units			No. of Workers			Workers per Unit	Index	Overall Rank
		No.	%	Rank	No.	%	Rank			
1	Jammu	10015	19.84	1	64558	27.72	1	6.4	23.78	1
2	Srinagar	9368	18.56	2	45565	19.56	2	4.9	19.06	2
3	Budgam	3798	7.53	7	26047	11.18	3	6.9	9.35	3
4	Kathua	4824	9.56	3	18342	7.87	4	3.8	8.72	4
5	Anantnag	4003	7.93	4	17409	7.47	5	4.3	7.70	5
6	Baramulla	3944	7.81	5	16255	6.98	6	4.1	7.40	6
7	Udhampur	3859	7.65	6	10369	4.45	8	2.7	6.05	7
8	Pulwama	2577	5.11	8	12070	5.18	7	4.7	5.14	8
9	Kupwara	1686	3.34	10	5780	2.48	9	3.4	2.91	9
10	Doda	1702	3.37	9	4169	1.79	10	2.4	2.58	10
11	Poonch	1627	3.22	11	3588	1.54	11	2.2	2.38	11
12	Rajouri	1360	2.69	12	3573	1.53	12	2.6	2.11	12
13	Leh	937	1.86	13	2598	1.12	13	2.8	1.49	13
14	Kargil	639	1.27	14	1679	0.72	14	2.6	0.99	14
15	Samba	27	0.05	16	493	0.21	15	18.3	0.13	15
16	Kulgam	28	0.06	15	130	0.06	16	4.6	0.06	16
17	Bandipora	26	0.05	17	114	0.05	17	4.4	0.05	17
18	Ganderbal	25	0.05	18	98	0.04	18	3.9	0.05	18
19	Shopian	25	0.05	19	78	0.03	19	3.1	0.04	19
20	Reasi	0	0.00	20	0	0.00	20	-	0.00	20
21	Kishtawar	0	0.00	21	0	0.00	21	-	0.00	21
22	Ramban	0	0.00	22	0	0.00	22	-	0.00	22
	Total (J & K)	50470	100		232915	100		4.6		

Source: The Digest of Statistics 2007-2008, Government of Jammu & Kashmir, Department of Economics and Statistics, p. 233.

Jammu and Srinagar districts together accounted for 38.4% of the number of factories in the state. However, the lowest ranked eight states together accounted for only 0.26% of the number of factories. Other districts with significant industries were Budgam and Kathua. Similarly, in terms of the number of workers while Jammu and

Srinagar together accounted for 47.28% of the industrial workers, the lowest ranked eight states together accounted for only 0.39% of the total industrial workers. In terms of the workers per unit Samba district had the highest ratio at 18.3 workers per unit, followed by Budgam at 6.9, Jammu at 6.4 and Srinagar at 4.9.

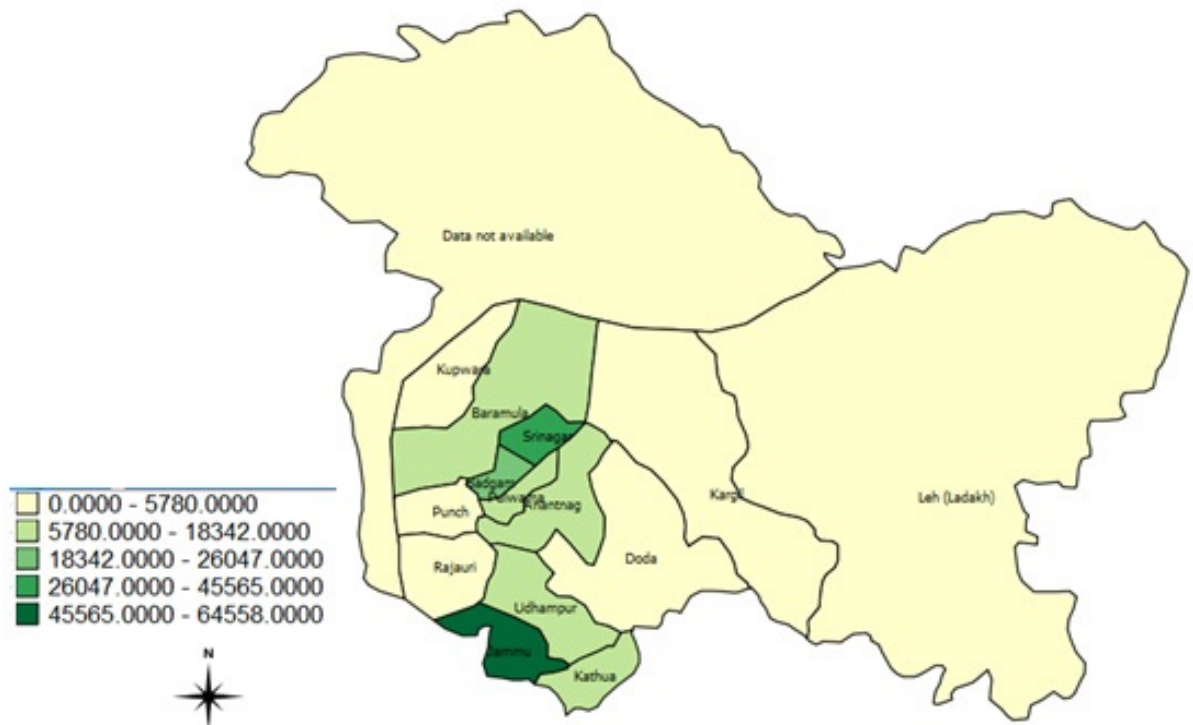***Map 3.1: Spatial Distribution of Factories in Jammu & Kashmir***
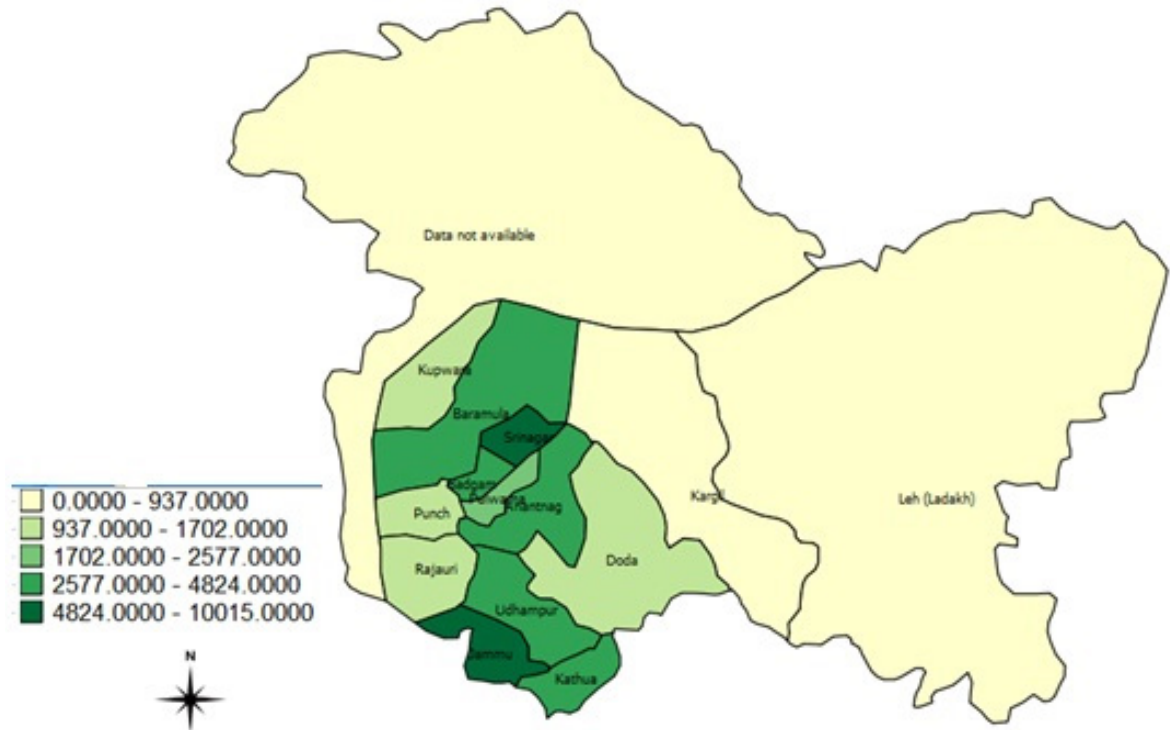
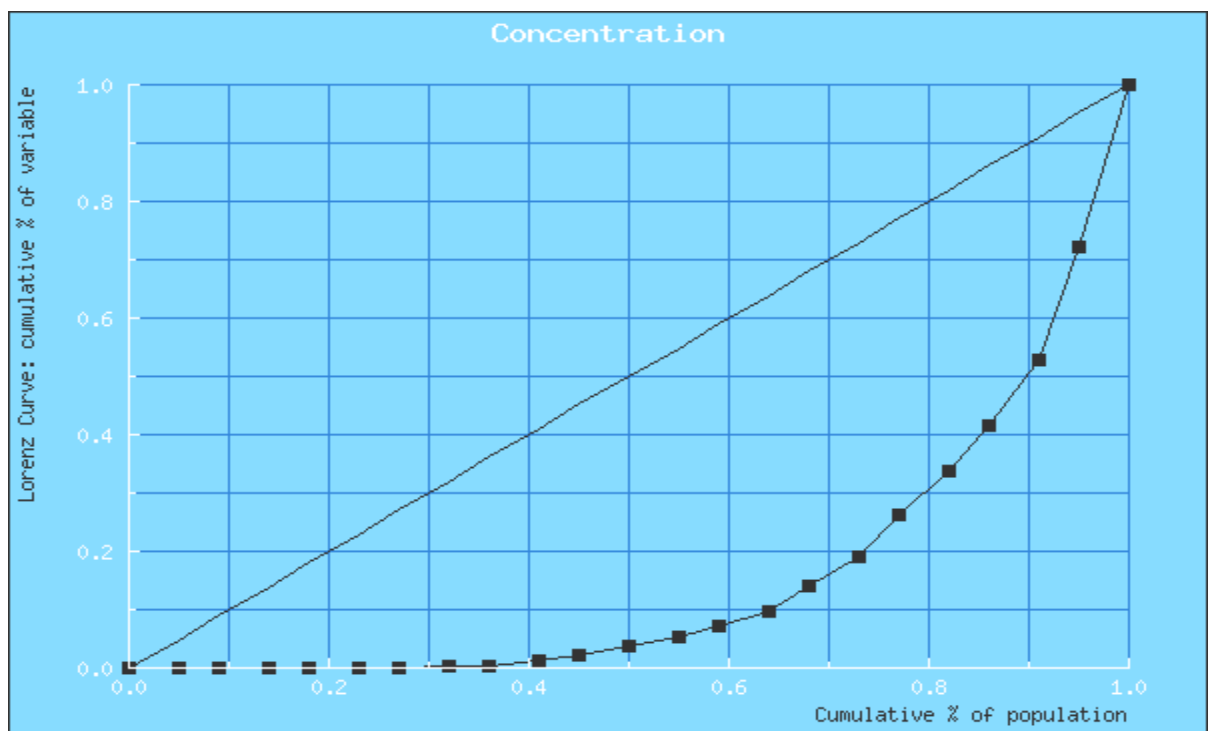**Lorenz Curve of the Distribution of Factories in Jammu & Kashmir:**
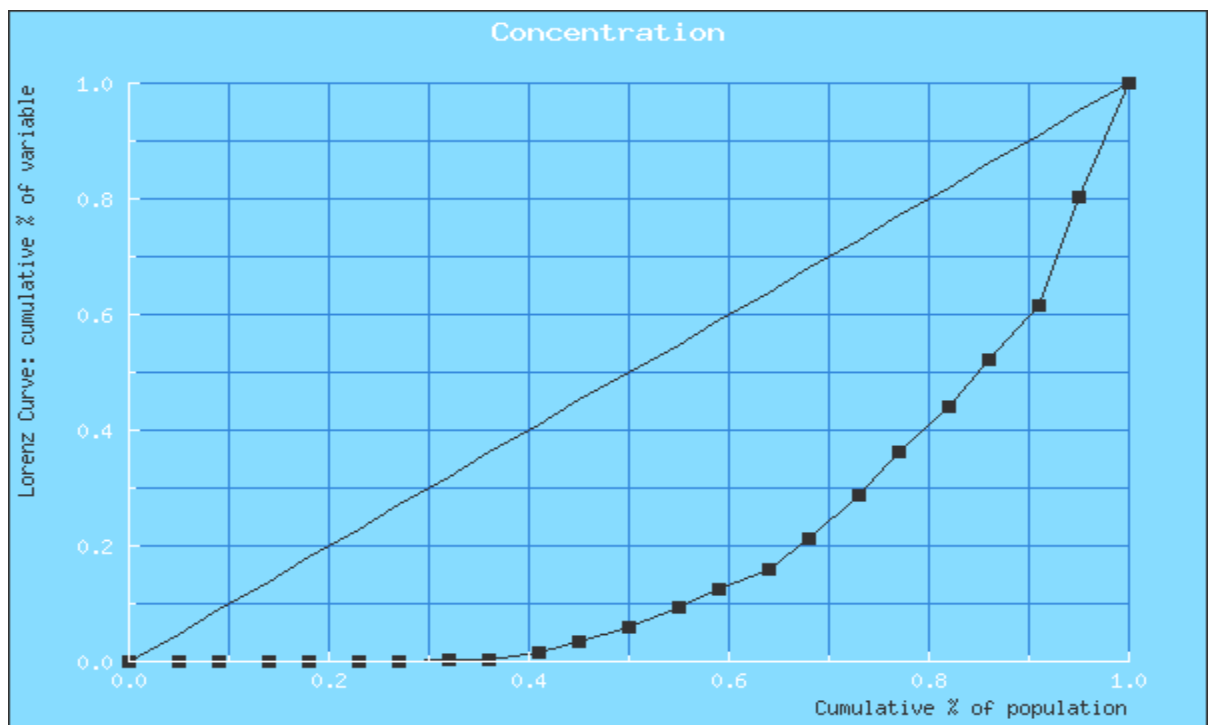
Gini Coefficient of the district-wise distribution of number of factories in Jammu & Kashmir was 0.614862; Concentration coefficient was 0.644141; while the Herfindahl index was 0.114004.

Map 3.2: Spatial Distribution of Workers in Jammu & Kashmir

Lorenz Curve of the Distribution of Workers in Jammu & Kashmir:

Gini Coefficient of the district-wise distribution of number of workers in Jammu & Kashmir was 0.691362; Concentration coefficient was 0.724284; while the Herfindahl index was 0.150519.

From the above analysis of regional industrial inequality in Jammu & Kashmir represented in terms of indices and Lorenz curve, it was revealed that there is a very high degree of inequality in terms of industrialisation of the state and this inequality is more marked when viewed in terms of the distribution of workers than the distribution of factories. This reflects low employment of labour per unit in the industrial units located in the less industrialised districts.

Correlation: Karl Pearson Correlation coefficient between the number of factories and the number of workers district-wise was calculated to be 0.965 which is significant at the 0.01 level (2-tailed). Spearman's rank correlation coefficient between these variables was greater and calculated to be 0.984 which is significant at the 0.01 level (2-tailed).

3.2   INTRA-STATE INDUSTRIALISATION IN HIMACHAL PRADESH:

According to the District-wise number of factories and the number of workers data in Himachal Pradesh for the year 2008, supplied by the Himachal Pradesh Chief Inspector of Factories, Solan district has the highest number of factories (1511) as well as the number of workers (1,30,731) accounting for 45% of the total number of factories and 67.38% of the total number of workers in the State. Thus from Himachal Pradesh Solan district has been chosen for the survey as the district most successful in attracting industries with the highest composite district industries development index of 56.20% in Himachal Pradesh. The intra-state disparity in industrialisation in Himachal Pradesh is reflected in the fact that Solan and Sirmour district together account for 82.92 per cent of the factory workers. Solan, Sirmour and Kangra districts together account for 68.96% of the total number of factories. However, a careful look at the list of factories located in these districts reveals that even within these districts the industries are located mostly in the areas near the inter-state borders.

However, the analysis of less successful districts in attracting industry in Himachal Pradesh, it was noticed that 'Lahaul Spiti' district had no factory and no factory worker at all. The inhospitable terrain and climate coupled with excessive

snowfall mostly explains the absence of industries in the district. Due to similar reason the Kinnaur districts also has negligible industrialisation reflected in the meagre number of 4 factories (rank 11) employing 882 workers (rank 10) with the composite district industries development index of 0.28% (rank 11). Another interesting fact reflected in the above table is that while in terms of the number of industrial workers Hamirpur was ranked the second lowest among all districts (rank 11) it was ranked quite high at 4th position as per the number of factories. Thus the composite index giving weight to both these indicators, ranked Hamirpur at 7th position. Another district among less successful districts was Chamba with only 73 factories. Bilaspur district ranked 9th in terms of the composite index with 92 number of factories was selected for the survey as the district less successful in attracting industries.

Table 3.2: District-Wise Industrialisation in Himachal Pradesh (Year 2008)

| Sr. No.	District	No. of Factories			No. of Workers			Workers per Unit	Index (%)	Overall Rank
		No.	%	Rank	No.	%	Rank			
1	Solan	1511	45.01	1	130731	67.38	1	86.5	56.20	1
2	Sirmour	387	11.53	3	30144	15.54	2	77.9	13.54	2
3	Kangra	417	12.42	2	6535	3.37	4	15.7	7.89	3
4	Una	168	5.00	7	8407	4.33	3	50.0	4.67	4
5	Shimla	167	4.97	8	6259	3.23	5	37.5	4.10	5
6	Mandi	170	5.07	6	3465	1.79	7	20.4	3.43	6
7	Hamirpur	192	5.72	4	672	0.35	11	3.5	3.04	7
8	Kullu	176	5.24	5	1413	0.73	9	8.0	2.99	8
9	Bilaspur	92	2.74	9	4052	2.09	6	44.0	2.42	9
10	Chamba	73	2.18	10	1459	0.75	8	20.0	1.47	10
11	Kinnaur	4	0.12	11	882	0.44	10	220.5	0.28	11
12	Lahaul Spiti	-	-	-	-	-	-		-	
	TOTAL (Himachal)	3357	100		194019	100		57.8	57.8	

Source: Directorate of Economics and Statistics, 'District in Figures', Government of Himachal Pradesh, Table 13.1, p. 21.

The map showing spatial distribution of factories in Himachal Pradesh highlights that most of the industrial units in the state were located within few kilometres from the inter-state borders with Punjab and Haryana. The Parwanoo-Baddi-Nalagarh industrial areas in Solan district account for the majority of the industrial units set up in the state with Kala Amb and Paonta Sahib industrial area in Sirmour district being left far behind.

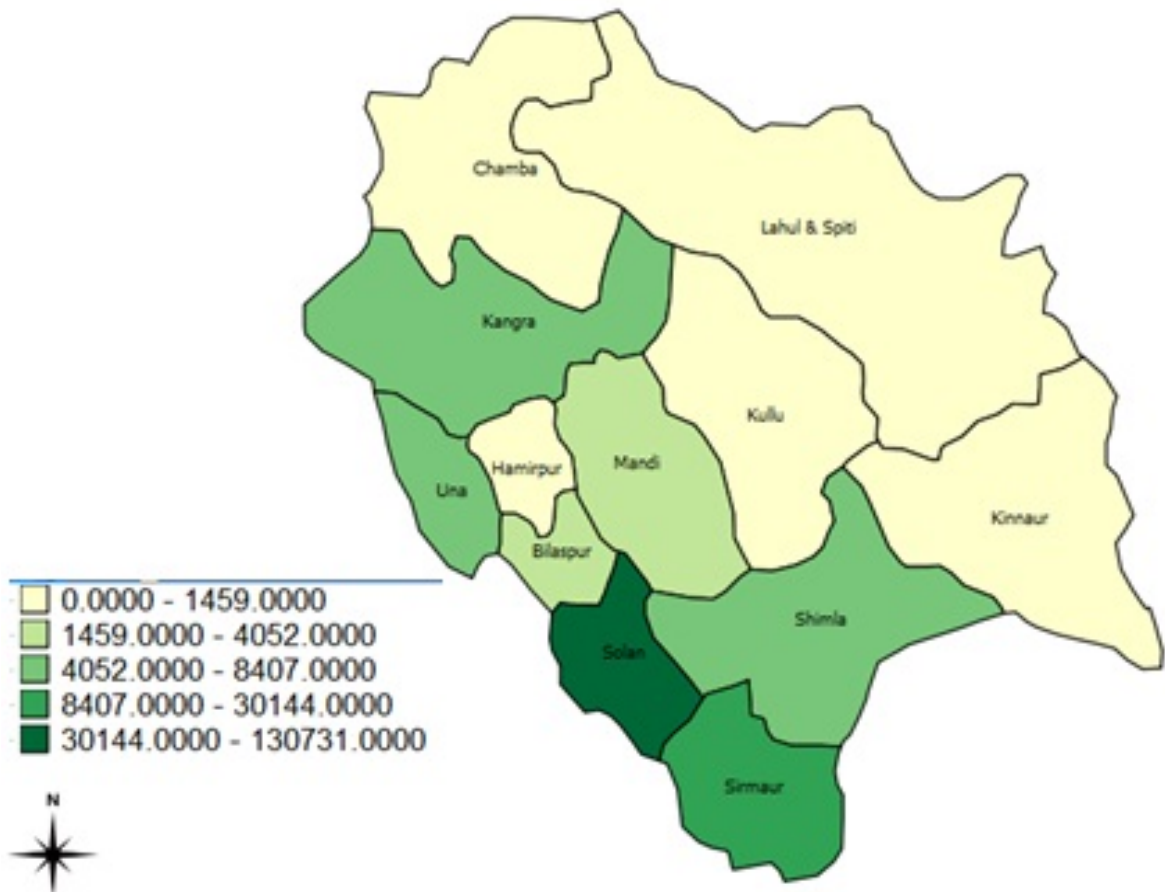*Map 3.3: Spatial Distribution of Factories in Himachal Pradesh*
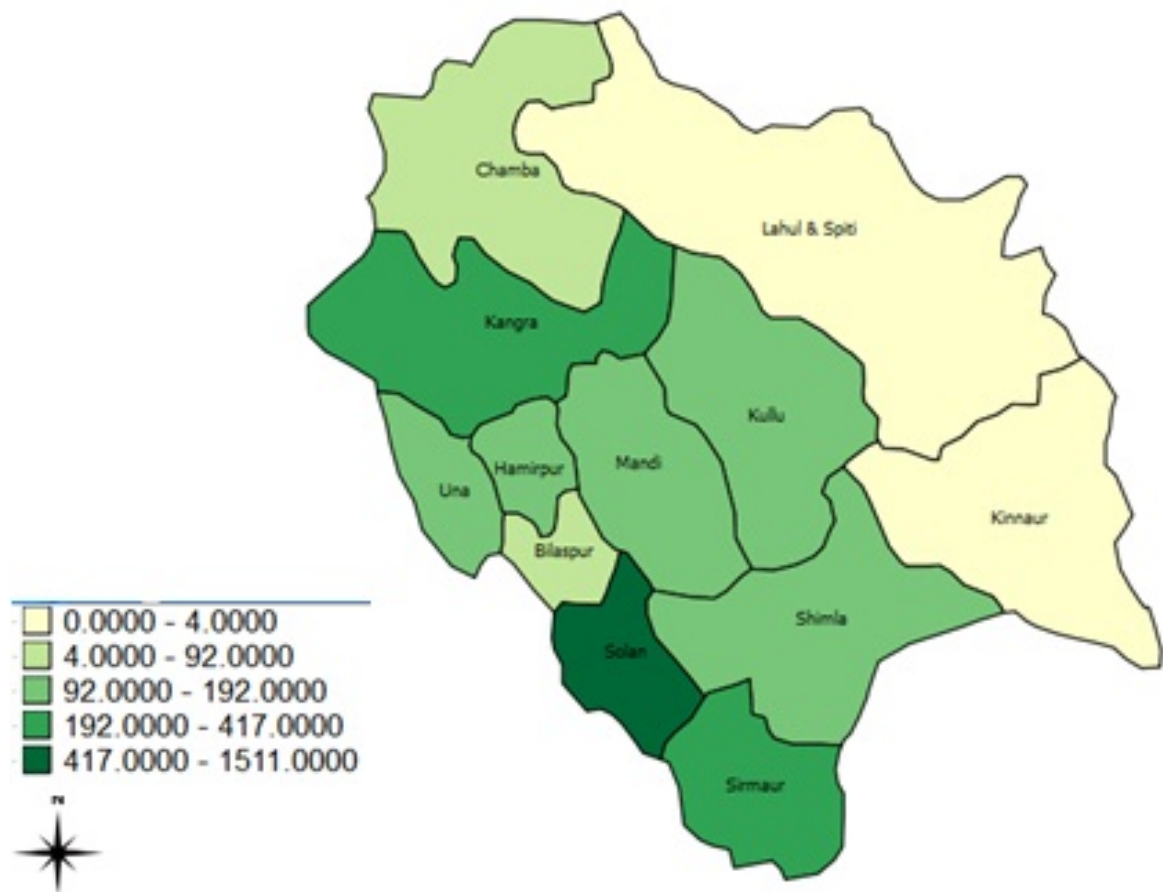
Lorenz Curve of the Distribution of Factories in Himachal Pradesh:
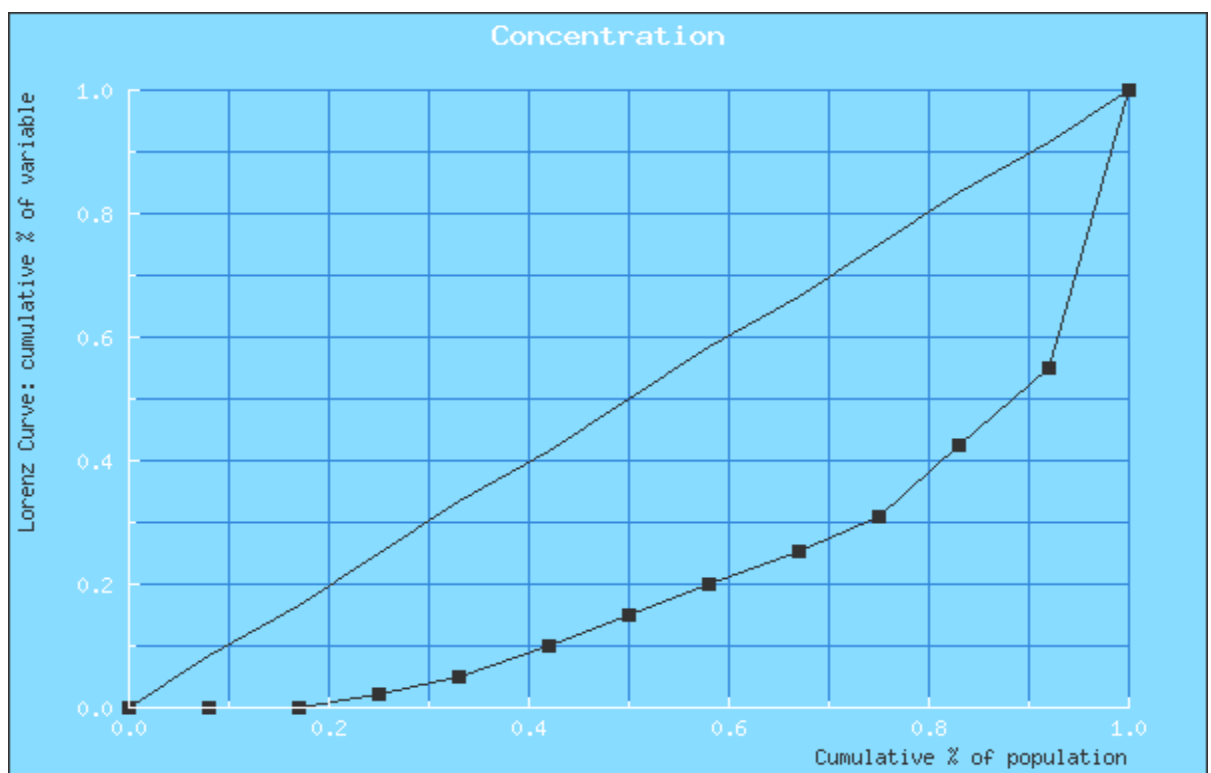
Gini Coefficient of the district-wise distribution of number of factories in Himachal Pradesh was 0.572560; Concentration coefficient was 0.624611; while the Herfindahl index was 0.246103.

Map 3.4: Spatial Distribution of Workers in Himachal Pradesh

Gini Coefficient of the district-wise distribution of number of workers in Himachal Pradesh was 0.771643; Concentration coefficient was 0.841792; while the Herfindahl index was 0.483102.

The above analysis of regional inequality indices in Himachal Pradesh revealed that the industrial inequality within the state is greater when viewed in terms of the distribution of workers than the distribution of factories. This reflects low employment of labour per unit in the industrial units located in the less industrialised districts. In Solan the workers per unit was 86.5 while in case of Sirmour district it was 77.9 workers per unit.

Lorenz Curve of the Distribution of Workers in Himachal Pradesh:
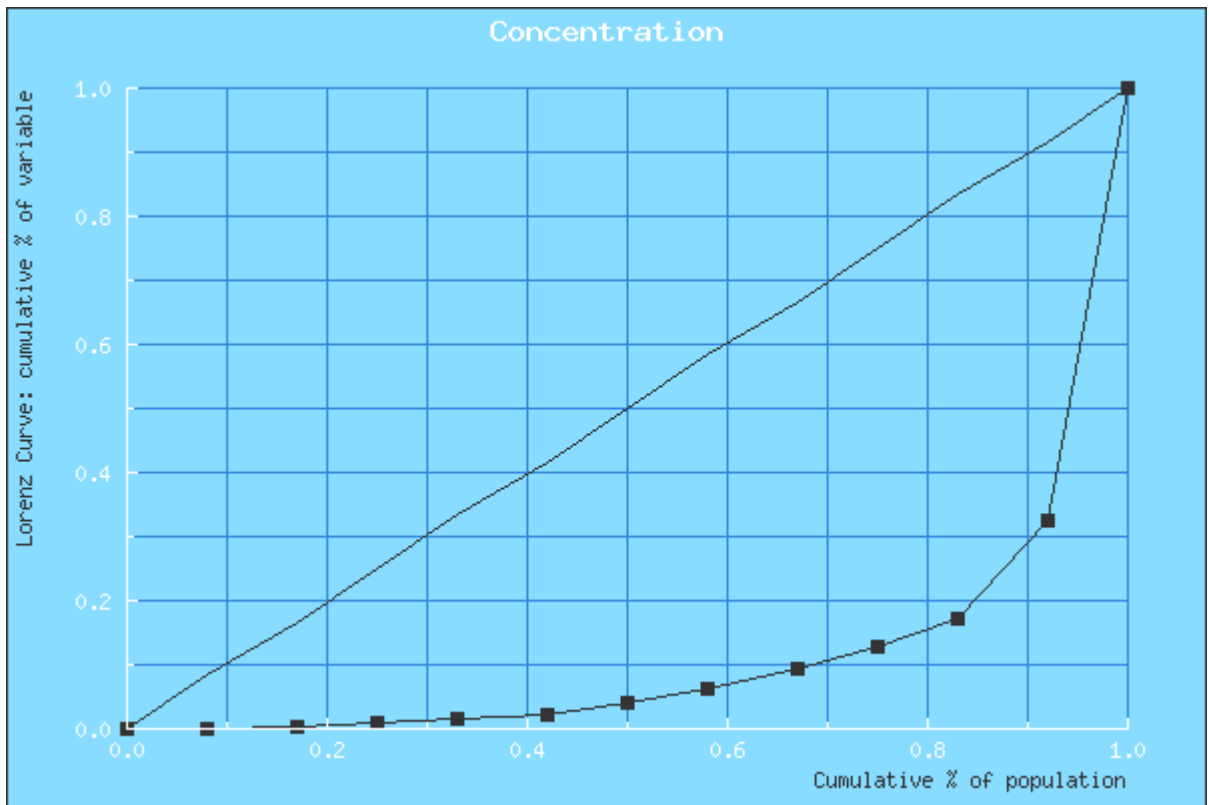
Correlation: Karl Pearson Correlation coefficient between the number of factories and the number of workers district-wise was calculated to be 0.972 which is significant at the 0.01 level (2-tailed). Spearman's rank correlation coefficient between these variables was less and calculated to be 0.615 which is significant at the 0.05 level (2-tailed).

3.3   INTRA-STATE INDUSTRIALISATION IN UTTARAKHAND:

According to the District-wise number of units registered and the employment data in Uttarakhand upto the year 2010, calculated from the district-wise data accessed from the website of the Directorate of Industries, Government of Uttarakhand, Haridwar district had the highest number of registered units (3554) as well as the number of workers (77457) accounting for 17.19% of the total number of units and more significantly 40.31% of the total number of workers in the state. Thus from Uttarakhand, Haridwar district was chosen for the survey as the district most successful in attracting industries with the highest composite district industries development index. The intra-state disparity in industrialisation in Uttarakhand is

reflected in the fact that Haridwar, Udham Singh Nagar and Dehradun districts together account for 45.18% of the registered units in the state and more importantly 84.69% of the total industrial workers in the state.
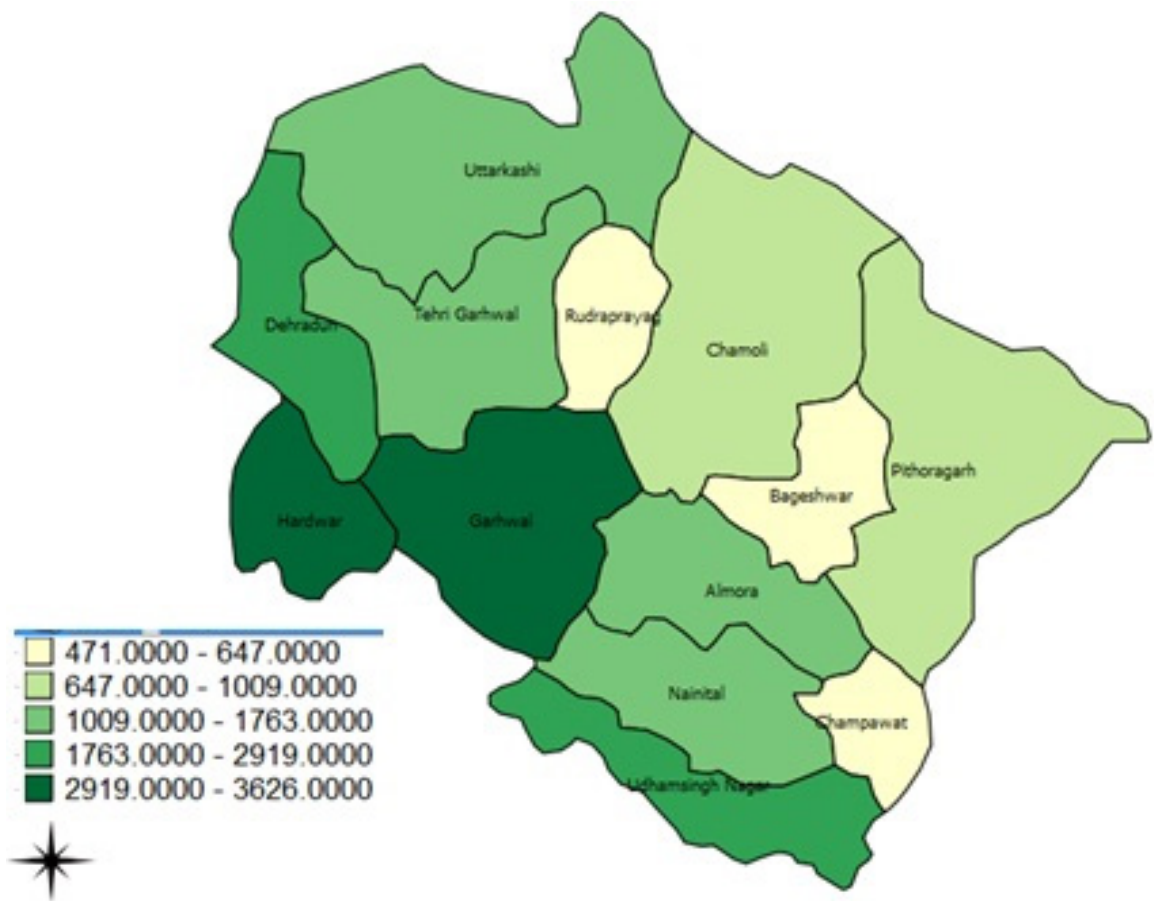
Table 3.3: District-Wise Industrialisation in Uttarakhand (2010)

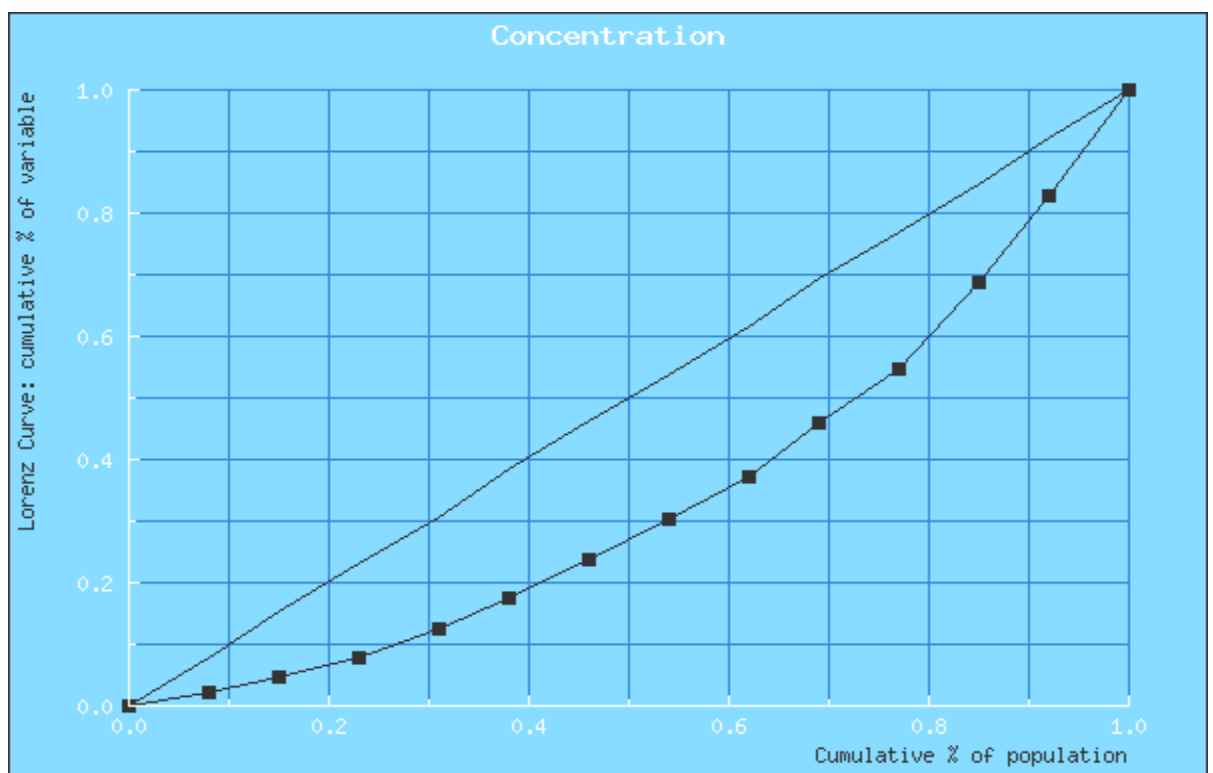| Sr. No.	District	No. of Units Registered			No. of Workers			Workers per Unit	Index (%)	Overall Rank
		No.	%	Rank	No.	%	Rank			
1	Haridwar	3554	17.19	1	77457	40.31	1	21.8	28.75	1
2	Udham Singh Nagar	2869	13.87	3	56592	29.45	2	19.7	21.66	2
3	Dehradun	2919	14.12	2	28692	14.93	3	9.8	14.52	3
4	Pauri Garhwal	1863	9.01	4	5001	2.60	5	2.7	5.81	4
5	Tehri Garhwal	1763	8.53	5	4310	2.24	6	2.4	5.38	5
6	Nainital	1300	6.29	8	7020	3.65	4	5.4	4.97	6
7	Uttarakashi	1373	6.64	7	2486	1.29	7	1.8	3.97	7
8	Almora	1411	6.82	6	2114	1.10	9	1.5	3.96	8
9	Pithoragarh	972	4.70	10	2368	1.23	8	2.4	2.97	9
10	Chamoli	1009	4.88	9	2001	1.04	10	2.0	2.96	10
11	Rudraprayag	647	3.13	11	1485	0.77	12	2.3	1.95	11
12	Bageshwar	527	2.55	12	1586	0.83	11	3.0	1.69	12
13	Chamapawat	471	2.28	13	1043	0.54	13	2.2	1.41	13
	TOTAL (Uttarakhand)	20678	100		192155	100		9.3	100	

Source: Calculated from the district-wise data accessed from the website of the Directorate of Industries, Government of Uttarakhand.

During the analysis of the less successful districts it was observed that in Champawat, Bageshwar and Rudraprayag districts, the number of registered units was less than 1000. The perusal of the district-wise list of all the registered units in the state accessed from the website revealed that although Chamoli, Almora and Rudraprayag districts had significant number of registered units, but almost all these units were micro units with very little investments and low employment. Selecting these districts would have been inappropriate for the present study. Thus, Nainital district with 1300 number of registered units was selected for the survey, as the district less successful in attracting industries, so that firms across different scales of production could be included in the sample to make it more meaningful and representative. From the data related to the number of workers per unit in the table it is noted that only Haridwar and Udham Singh Nagar districts had average number of workers above 20 while in all the other districts this figure was in single digit only.

*Map 3.5: Spatial Distribution of Factories in Uttarakhand*

Legend:
- 471.0000 - 647.0000
- 647.0000 - 1009.0000
- 1009.0000 - 1763.0000
- 1763.0000 - 2919.0000
- 2919.0000 - 3626.0000

Lorenz Curve of the Distribution of Factories in Uttarakhand:

The Gini Coefficient of the district-wise distribution of number of factories in Uttarakhand was 0.324671; Concentration coefficient was 0.351726; while the Herfindahl index was 0.103861.

Map 3.6: Spatial Distribution of Workers in Uttarakhand
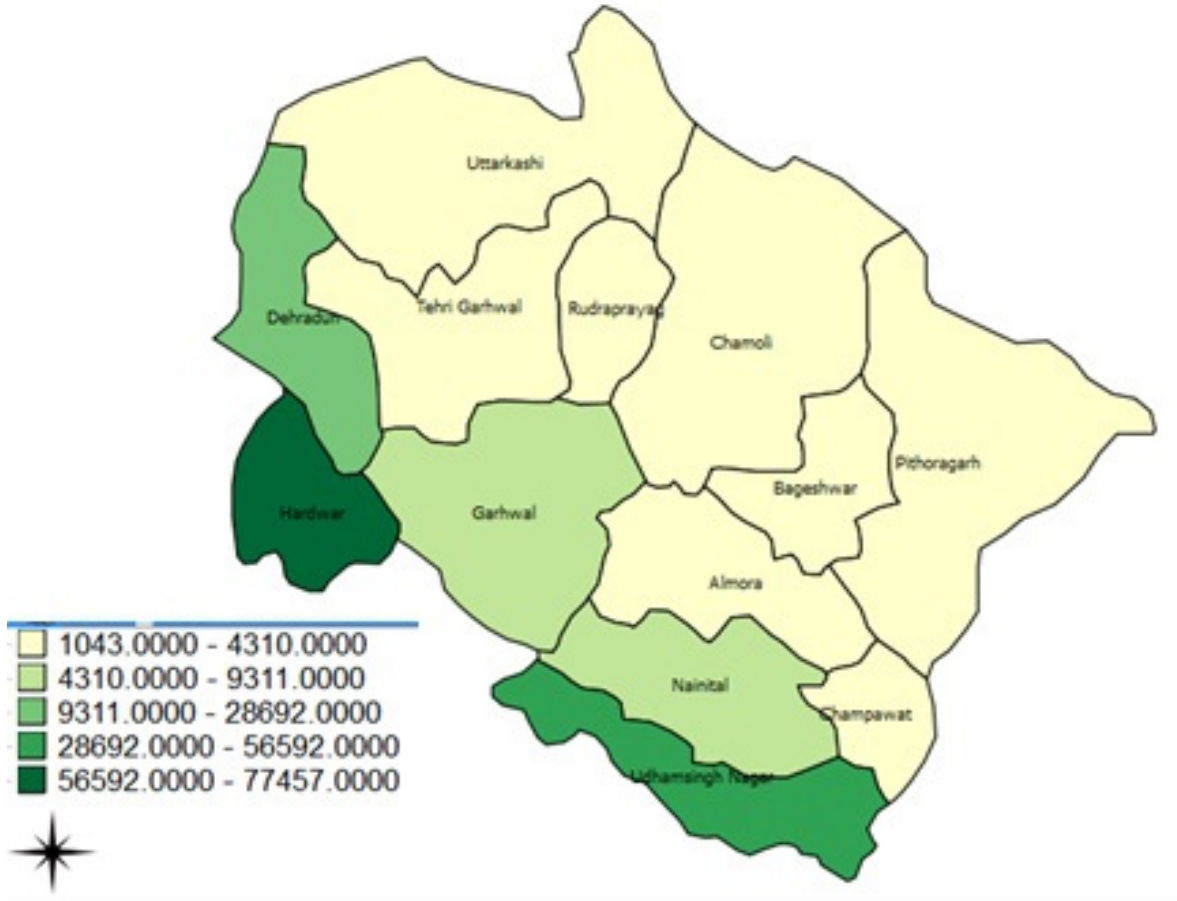
Gini Coefficient of the district-wise distribution of number of workers in Uttarakhand was 0.692723; Concentration coefficient was 0.750450; while the Herfindahl index was 0.274741.

The above analysis of regional inequality indices in Uttarakhand revealed that the industrial inequality within the state is much greater when viewed in terms of the distribution of workers than the distribution of factories. This reflects low employment of labour per unit in the industrial units located in the less industrialised districts and more importantly much larger level of employment of labour per industrial unit in the relatively more industrialised districts.

Lorenz Curve of the Distribution of Workers in Uttarakhand:
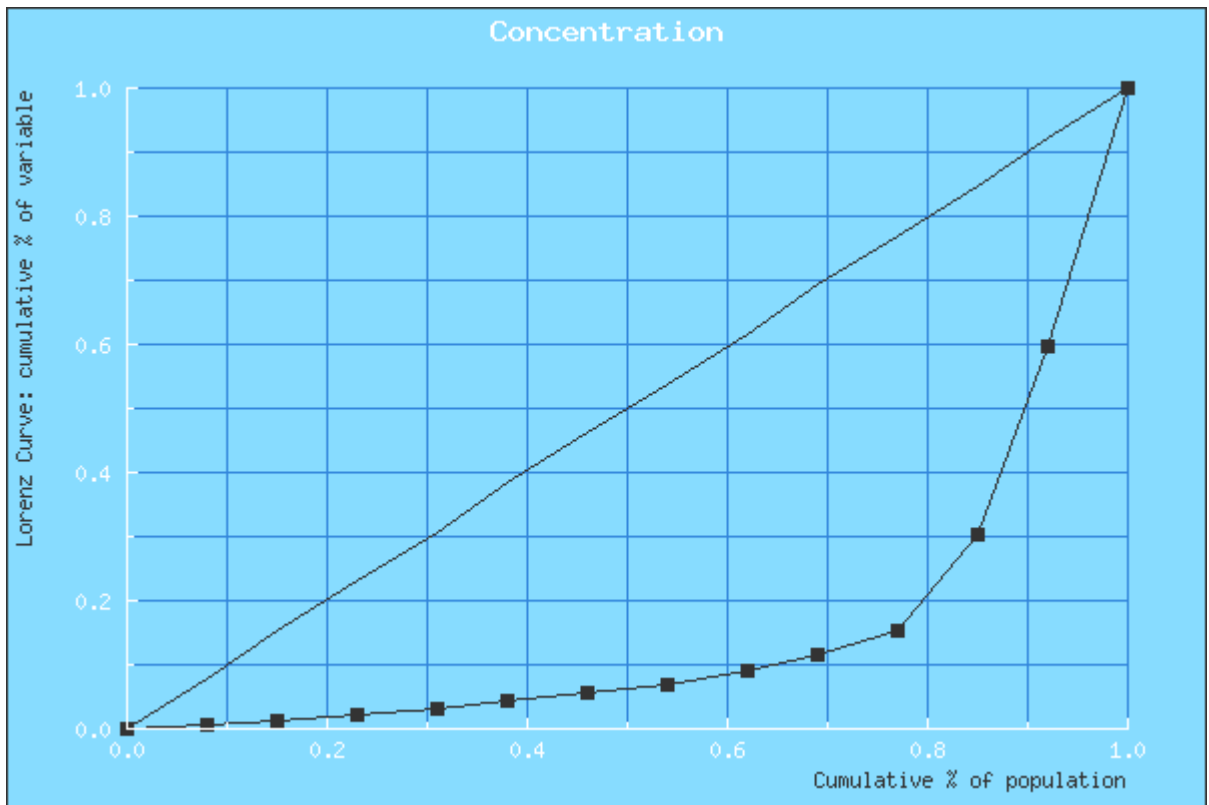
Correlation: Karl Pearson Correlation coefficient between the number of factories and the number of workers district-wise was calculated to be 0.878 which is significant at the 0.01 level (2-tailed). Spearman's rank correlation coefficient between these variables was higher and calculated to be 0.901 which is significant at the 0.01 level (2-tailed).

3.4 INTRA-STATE INDUSTRIALISATION IN HARYANA:

The analysis of district-wise data for Haryana reveals that while in terms of the number of factories Faridabad was ranked first with 26.13% of the total number of factories in the State, in terms of the number of factory workers Faridabad (28.27%) came second after Gurgaon which accounted for 30.77% of the factory workers in the state. The composite district industrial development index gives Faridabad district the first rank followed by Gurgaon and accordingly Faridabad was chosen as the district successful in attracting industry in Haryana.

A cursory analysis of the table also reveals that there is glaring intra-state disparity within Haryana with Faridabad and Gurgaon together accounting for 42.8% of the number of factories and more importantly 59.04% of the total factory workers

in Haryana state. A plausible explanation could be the location of these districts near Delhi which is undoubtedly the largest market in North India.
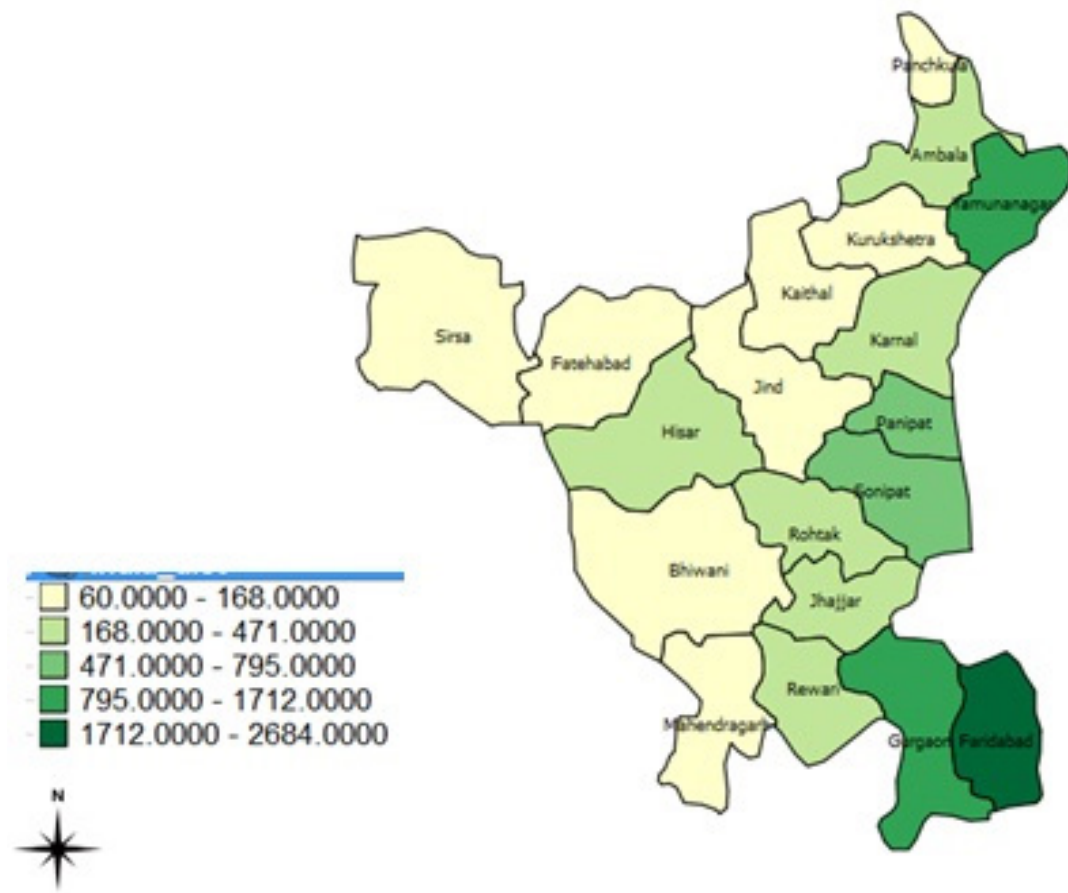
If we analyse the table from lowest ranks, one would be surprised to observe that even in Haryana there are districts with little or no industrialisation as Palwal had nil number of factories and factory workers and Mewat district had only 2 numbers of factories employing 100 workers only. Mahendragarh was somewhat better with 60 numbers of factories and ranked 19th in terms of the Composite index. Kaithal ranked 18th in terms of the Composite index with 124 numbers of factories was chosen for the survey as the district less successful in attracting industry. In terms of workers per unit Gurgaon had the highest ratio at 133.2 workers per unit. Faridabad had 78.1 workers per unit.

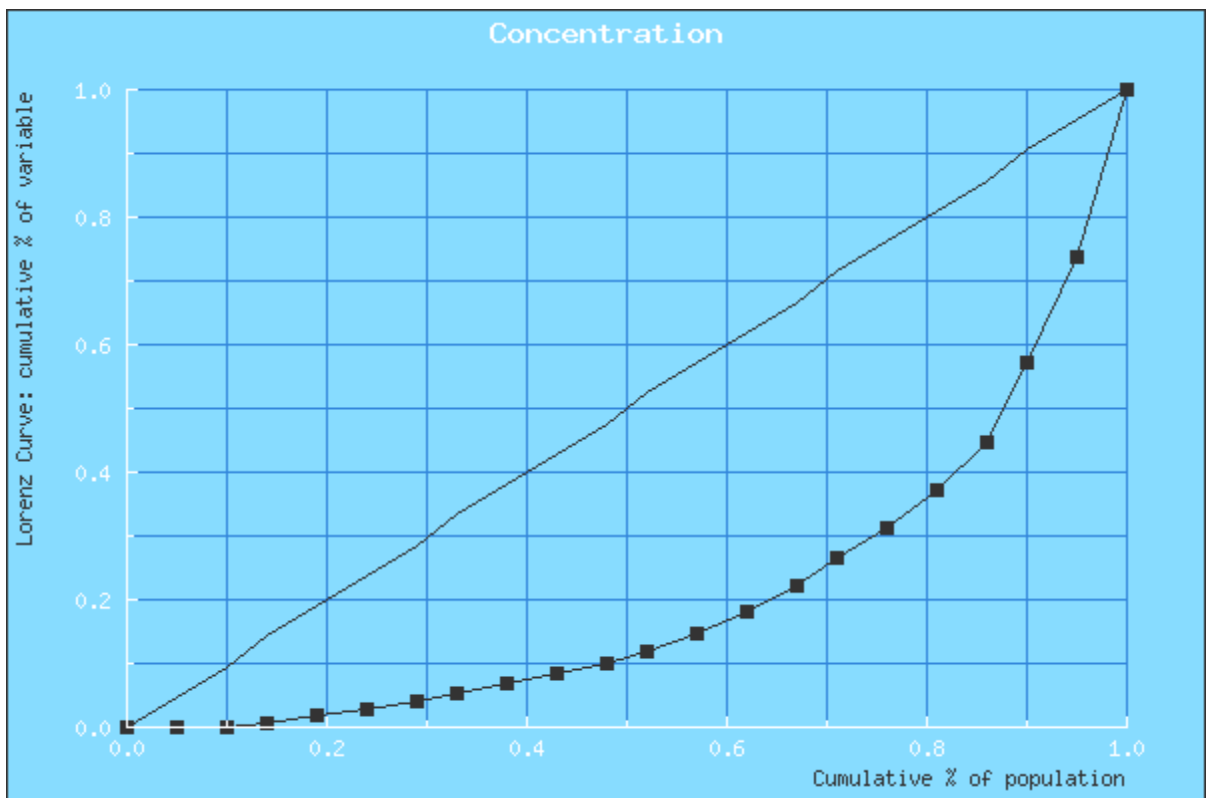*Table 3.4: District-Wise Industrialisation in Haryana (Year 2009-2010)*

S. N.	District	No. of Factories			No. of Workers			Workers per Unit	Index (%)	Overall Rank
		No.	%	Rank	No.	%	Rank			
1	Faridabad	2684	26.13	1	209606	28.27	2	78.1	27.20	1
2	Gurgaon	1712	16.67	2	228110	30.77	1	133.2	23.72	2
3	Yamunanagar	1275	12.41	3	40714	5.49	4	31.9	8.95	3
4	Panipat	795	7.74	4	45170	6.09	3	56.8	6.92	4
5	Sonipat	602	5.86	5	36712	4.95	5	61.0	5.41	5
6	Karnal	467	4.55	7	28410	3.83	6	60.8	4.19	6
7	Jhajjar	471	4.58	6	24823	3.35	7	52.7	3.97	7
8	Ambala	414	4.03	8	15093	2.04	10	36.5	3.03	8
9	Rohtak	294	2.86	10	17079	2.30	9	58.1	2.58	9
10	Hisar	346	3.37	9	12540	1.69	13	36.2	2.53	10
11	Rewari	187	1.82	11	23295	3.14	8	124.6	2.48	11
12	Jind	160	1.56	12	13145	1.77	11	82.2	1.67	12
13	Panchkula	154	1.50	13	12047	1.62	14	78.2	1.56	13
14	Bhiwani	116	1.13	18	12984	1.75	12	111.9	1.44	14
15	Kurukshetra	168	1.64	12	3908	0.53	17	23.3	1.08	15
16	Sirsa	123	1.20	16	6857	0.92	15	55.7	1.06	16
17	Fatehabad	119	1.16	17	3853	0.52	18	32.4	0.84	17
18	**Kaithal**	124	1.21	15	2715	0.37	19	21.9	0.79	18
19	Mahendragarh	60	0.58	19	4250	0.57	16	70.8	0.58	19
20	Mewat	2	0.02	20	100	0.01	20	50.0	0.02	20
21	*Palwal*	*0*	*0.00*	*21*	*0*	*0.00*	*21*	*-*	*0.00*	*21*
	Haryana (Total)	10273	100		741411	100		72.2	100	

Map 3.7: Spatial Distribution of Factories in Haryana

Legend:
- 60.0000 – 168.0000
- 168.0000 – 471.0000
- 471.0000 – 795.0000
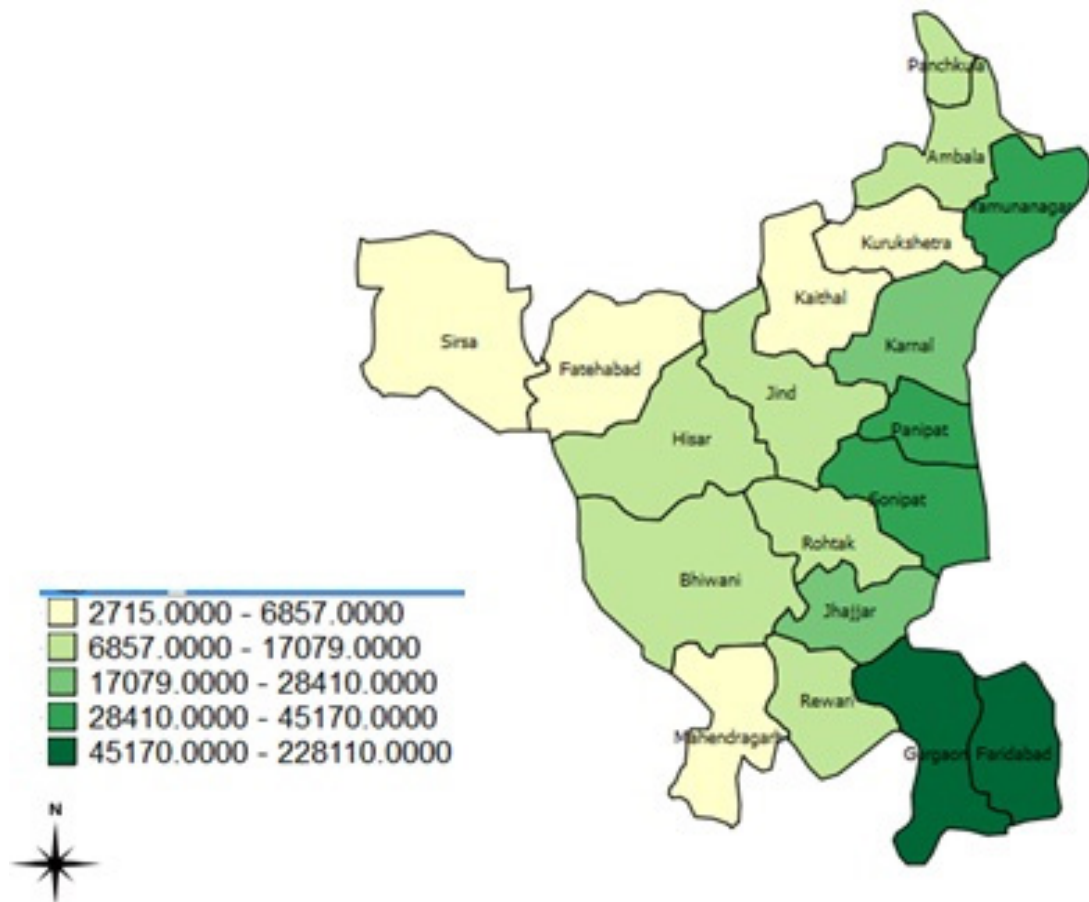- 795.0000 – 1712.0000
- 1712.0000 – 2684.0000

Lorenz Curve of the Distribution of Factories in Haryana:

Gini Coefficient of the district-wise distribution of number of factories in Haryana was 0.593243; Concentration coefficient was 0.622905; while the Herfindahl index was 0.130257.

Map 3.8: Spatial Distribution of Workers in Haryana

Gini Coefficient of the district-wise distribution of number of workers in Haryana was 0.667805; Concentration coefficient was 0.701195; while the Herfindahl index was 0.189646.

The above analysis of regional inequality indices in Haryana revealed that as in the case of Special Category States, the industrial inequality in Haryana was also more marked when viewed in terms of the distribution of workers than the distribution of factories. This may be explained by the greater level of employment per industrial unit in case of relatively more industrialised districts. The spatial distribution shows that industrialisation in Haryana was only along a specific geographical area towards eastern Haryana along Faridabad-Gurgaon-Sonipat-Panipat-Karnal-Yamunangar.

Lorenz Curve of the Distribution of Workers in Haryana:
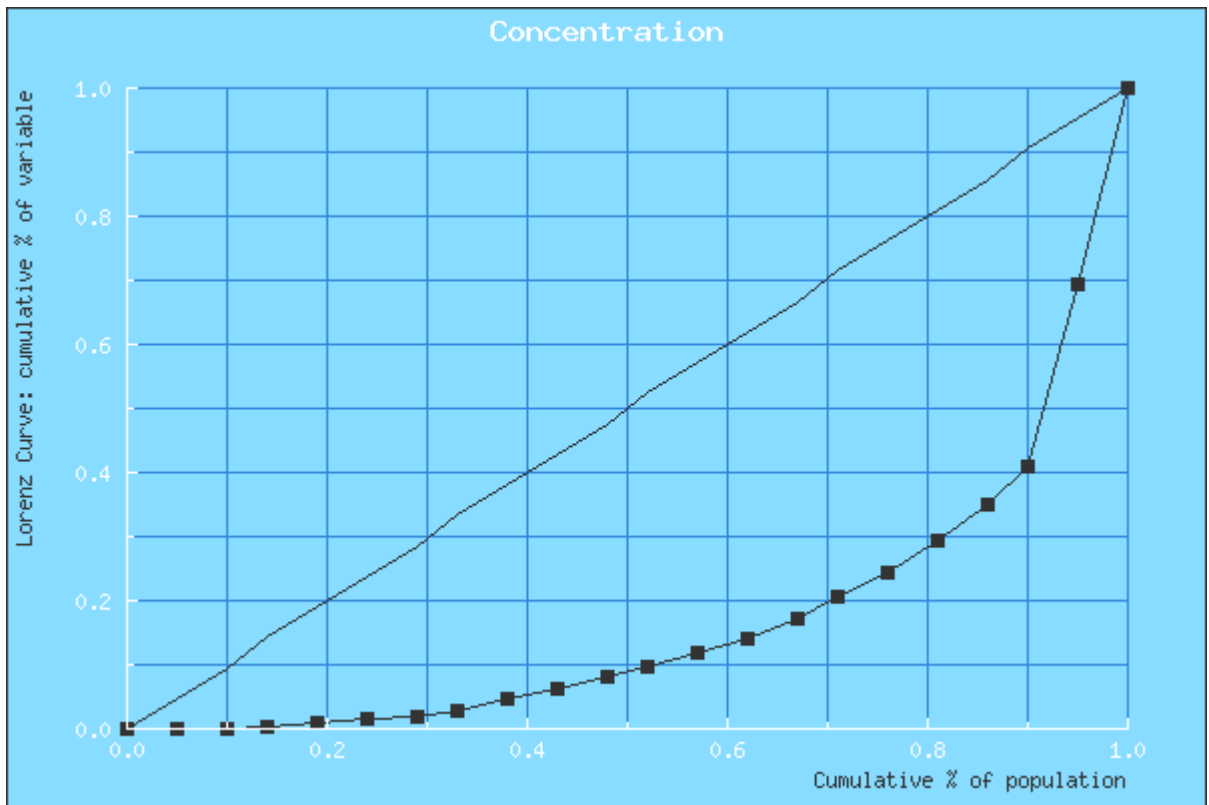
Correlation: Karl Pearson Correlation coefficient between the number of factories and the number of workers district-wise was calculated to be 0.913 which is significant at the 0.01 level (2-tailed). Spearman's rank correlation coefficient between these variables was slightly higher and calculated to be 0.917 which is significant at the 0.01 level (2-tailed).

3.5   INTRA-STATE INDUSTRIALISATION DISPARITIES IN PUNJAB:

In Punjab Ludhiana district was the clear leader in terms of industrialisation with 38509 numbers of factories employing 388545 workers accounting for 23.64% of factories and 33.38% of the workers in the state. Therefore Ludhiana district was taken for the survey. If one takes a cursory glance at the above table, it will be noted that as compared to other states Punjab has a much broader and widespread industrial base with less regional disparities, though concentration of industries is clearly visible in the districts of Ludhiana, Jalandhar and Amritsar which together account for 53.29% of the number of factories and 56.12% of factory workers in the state.
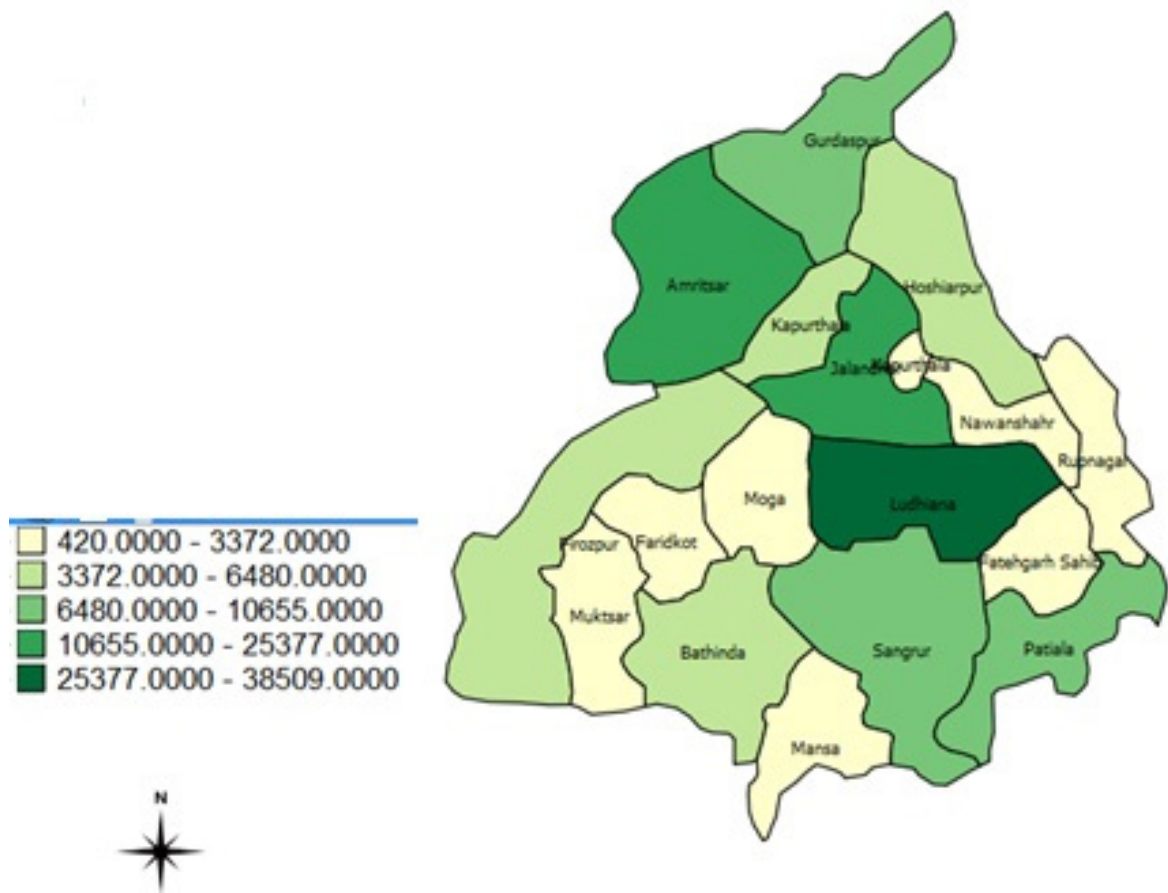
The analysis of least successful district in terms of industrialisation reveals that the lowest rank in terms of the number of factories is occupied by district Barnala while in terms of the number of workers the lowest rank goes to Tarn Taran. According to the composite index of industrialisation, Tarn Taran district is ranked the last and therefore Tarn Taran district (with 1837 number of factories) was chosen for the survey as the district less successful in attracting industry. In terms of workers per unit the ratio was generally low in Punjab with even Ludhiana having the ratio of 10.1 and Jalandhar 6.3 workers per unit. This figure is quite low as compared to that of Gurgaon and Faridabad in Haryana and indicates that industrialisation in Punjab is basically driven by micro and small enterprises.

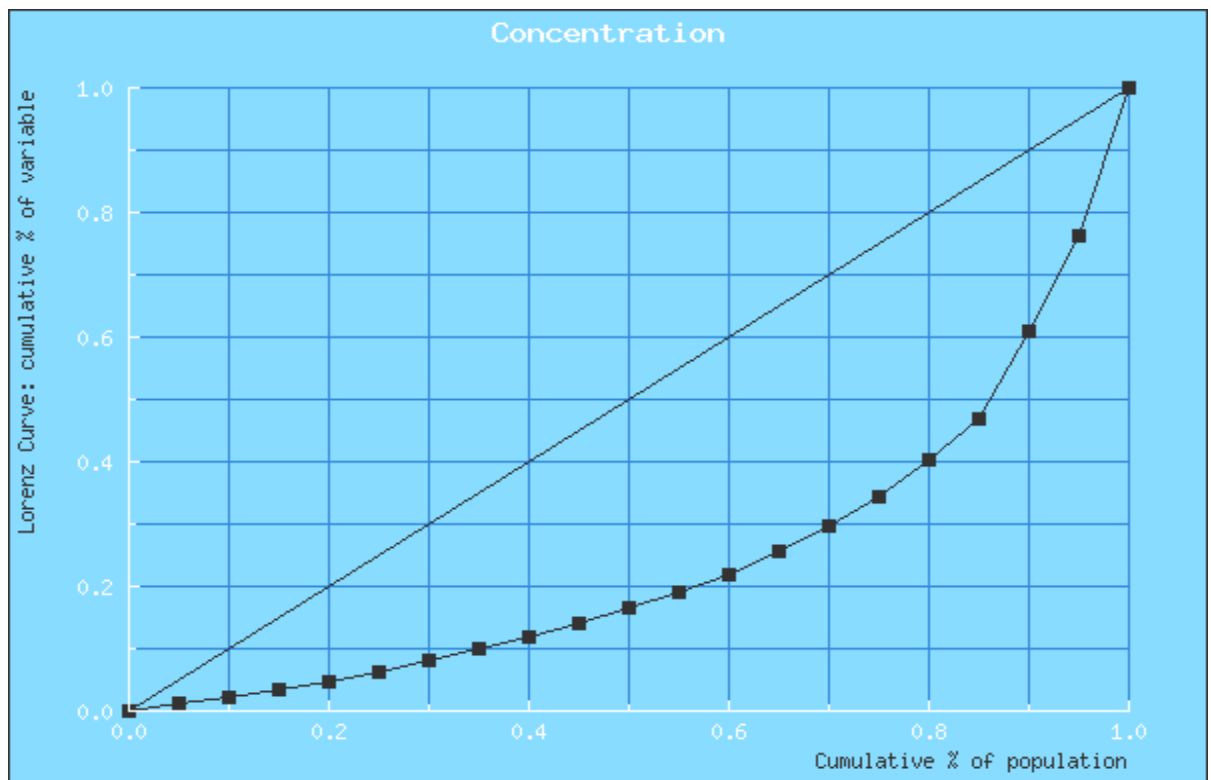*Table 3.5: District-Wise Industrialisation in Punjab (Year 2008-2009)*

S. N.	District	No. of Industrial Units			No. of Workers			Workers per Unit	Index	Overall Rank
		No.	%	Rank	No.	%	Rank			
1	Ludhiana	38509	23.64	1	388545	33.38	1	10.1	28.51	1
2	Jalandhar	22924	14.07	3	144029	12.37	2	6.3	13.22	2
3	Amritsar	25377	15.58	2	120746	10.37	3	4.8	12.97	3
4	Sangrur	10655	6.54	4	60977	5.24	5	5.7	5.89	4
5	Gurdaspur	9449	5.80	5	59802	5.14	6	6.3	5.47	5
6	Patiala	7868	4.83	6	54459	4.68	7	6.9	4.75	6
7	S. A. S. Nagar	6132	3.76	8	65938	5.66	4	10.8	4.71	7
8	Hoshiarpur	6480	3.98	7	41755	3.59	8	6.4	3.78	8
9	Kapurthala	4204	2.58	11	37597	3.23	9	8.9	2.90	9
10	Bathinda	4225	2.59	10	30200	2.59	10	7.1	2.59	10
11	Ferozepur	4354	2.67	9	20949	1.80	13	4.8	2.24	11
12	Moga	3283	2.01	13	22957	1.97	11	7.0	1.99	12
13	Mukatsar	3372	2.07	12	20273	1.74	14	6.0	1.91	13
14	Fatehgarh Sahib	3098	1.90	14	21246	1.83	12	6.9	1.86	14
15	Ropar	2820	1.73	15	14992	1.29	16	5.3	1.51	15
16	Barnala	1795	1.10	20	19463	1.67	15	10.8	1.39	16
17	Nawan shahar	2389	1.47	16	13735	1.18	18	5.7	1.32	17
18	Faridkot	2190	1.34	17	13781	1.18	17	6.3	1.26	18
19	Mansa	1971	1.21	18	7144	0.61	19	3.6	0.91	19
20	Tarn Taran	1837	1.13	19	5544	0.48	20	3.0	0.80	20
	Total (Punjab)	162932	100		1164132	100		7.1	100	

Source: Data calculated from information accessed online from Department of Industries and Commerce website: http://pbindustries.gov.in/Districtwise.htm

Map 3.9: Spatial Distribution of Factories in Punjab

Legend:
- 420.0000 - 3372.0000
- 3372.0000 - 6480.0000
- 6480.0000 - 10655.0000
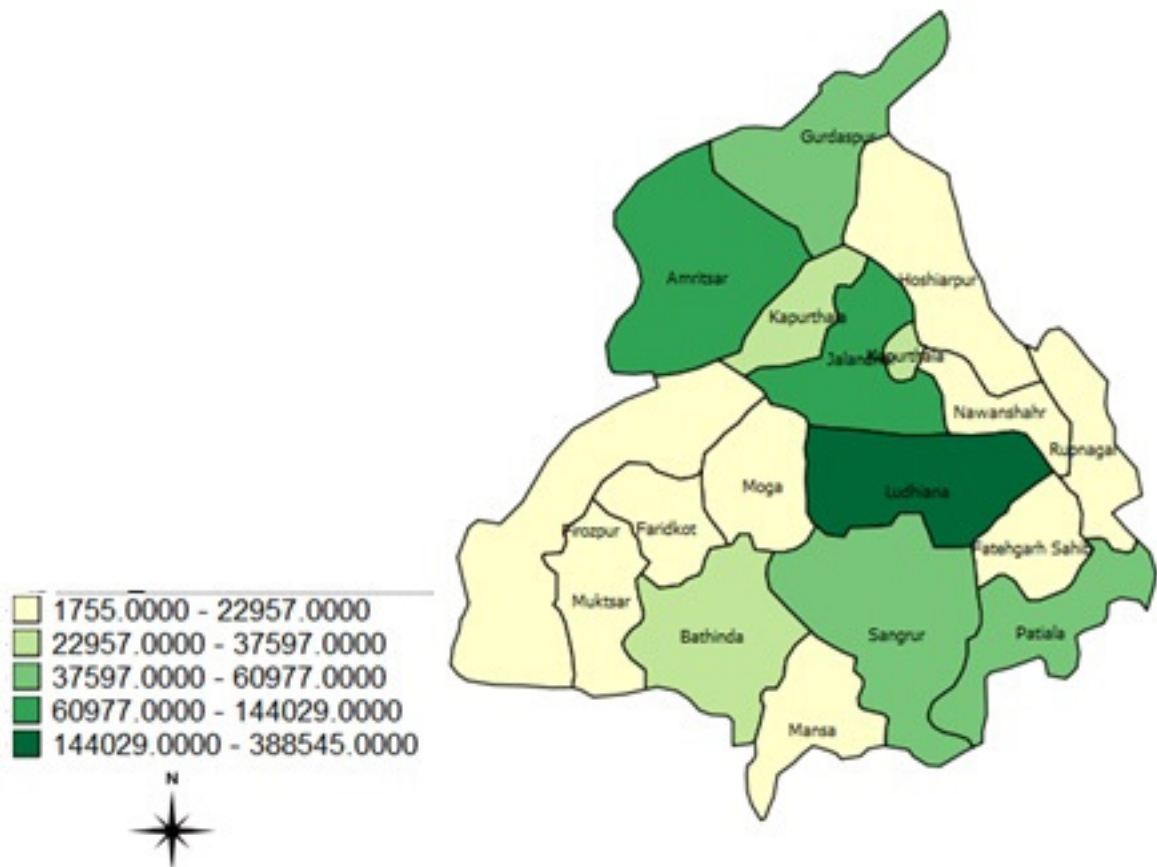- 10655.0000 - 25377.0000
- 25377.0000 - 38509.0000

Lorenz Curve of the Distribution of Factories in Punjab:

Gini Coefficient of the district-wise distribution of number of factories in Punjab was 0.517413; Concentration coefficient was 0.544646; while the Herfindahl index was 0.117224.

*Map 3.10: Spatial Distribution of Workers in Punjab*

Gini Coefficient of the district-wise distribution of number of workers in Punjab was 0.565047; Concentration coefficient was 0.594786; while the Herfindahl index was 0.153380.

The above analysis of regional inequality indices in Punjab revealed that as in the case of Special Category States, the industrial inequality in Punjab was also more marked when viewed in terms of the distribution of workers than the distribution of factories. However, when compared to other neighbouring industrialised state of Haryana, the inequalities were much less.

Correlation: Karl Pearson Correlation coefficient between the number of factories and the number of workers district-wise was calculated to be 0.943 which is

significant at the 0.01 level (2-tailed). Spearman's rank correlation coefficient between these variables was slightly lower and calculated to be 0.935 which is significant at the 0.01 level (2-tailed).

Lorenz Curve of the Distribution of Workers in Punjab:
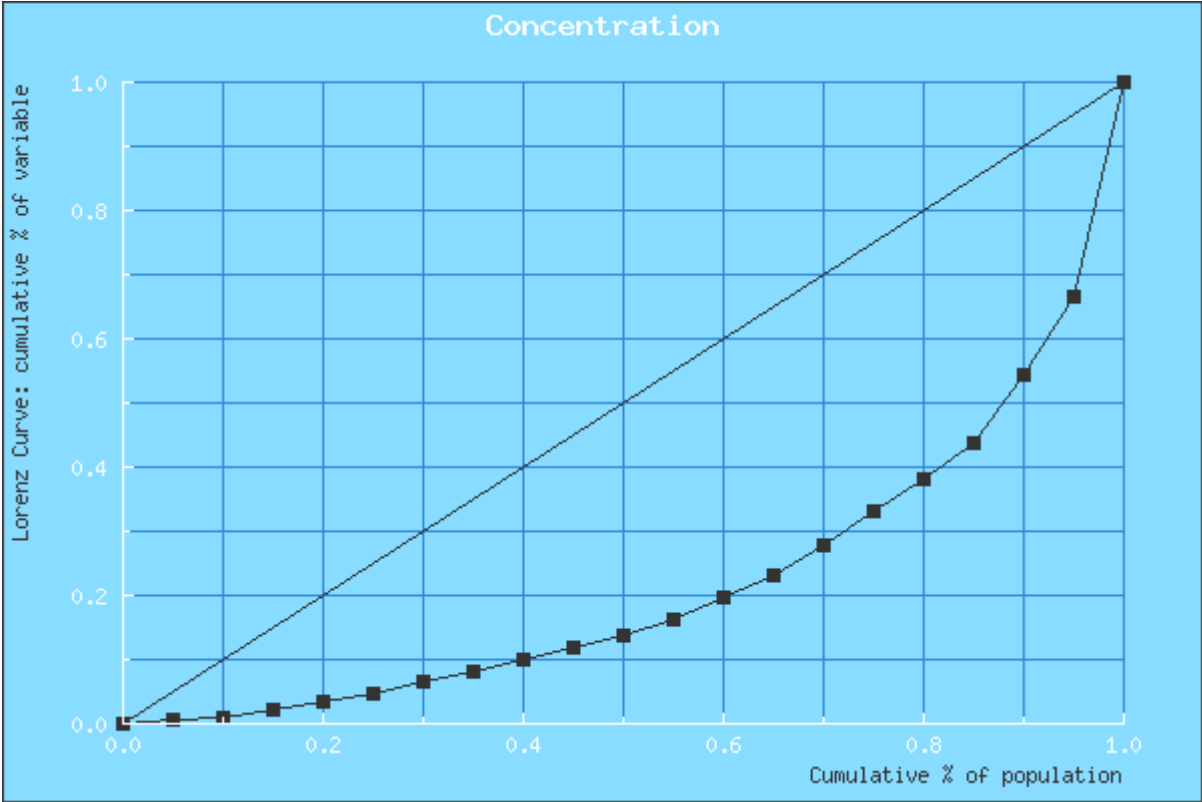
3.6   INTRA-STATE INDUSTRIALISATION IN UTTAR PRADESH:

Uttar Pradesh is divided into 71 districts but its top five industrialised districts viz. Gautam Budh Nagar, Ghaziabad, Kanpur Nagar, Agra and Moradabad together account for 46.93% of the total number of factories in the state and 49.49% of the total number of factory workers. Gautam Budh Nagar is the clear leader in industrialisation with 17.93% of the number of factories and 21.12% of the number of factory workers in the state. Thus Gautam Budh Nagar was selected for the survey as the most industrialised district in Uttar Pradesh. While Gautam Budh Nagar (popularly known as Noida) has been recently developed industrial centre benefiting from the proximity to Delhi, other districts like Kanpur and Agra had been traditional industrial centres. The number of workers per unit in Gautam Budh Nagar was 72.0 workers per unit, Kanpur at 49.8 while in case of Moradabad it was 109.

Table 3.6: District-Wise Industrialisation in Uttar Pradesh (Year 2008-2009)

S. N.	District	No. of Factories			No. of Workers			Workers per Unit	Index (%)	Overall Rank
		No.	%	Rank	No.	%	Rank			
1	Gautam Buddh Nagar	1874	17.93	1	134853	21.12	1	72.0	19.53	1
2	Ghaziabad	1254	12.00	2	59053	9.25	2	47.1	10.62	2
3	Kanpur Nagar	942	9.01	3	46884	7.34	3	49.8	8.18	3
4	Agra	513	4.91	4	40095	6.28	4	78.2	5.59	4
5	Moradabad	322	3.08	8	35111	5.50	5	109.0	4.29	5
6	Meerut	445	4.26	5	17231	2.70	7	38.7	3.48	6
7	Muzaffar nagar	374	3.58	6	15695	2.46	10	42.0	3.02	7
8	Bijnor	185	1.77	12	26214	4.11	6	141.7	2.94	8
9	Lucknow	349	3.34	7	14542	2.28	11	41.7	2.81	9
10	Firozabad	278	2.66	9	16079	2.52	9	57.8	2.59	10
11	Bulandshahr	266	2.55	10	11442	1.79	15	43.0	2.17	11
12	Bareilly	232	2.22	11	13055	2.04	12	56.3	2.13	12
13	Saharanpur	178	1.70	14	12363	1.94	14	69.5	1.82	13
14	Jyotibafule Nagar	92	0.88	27	16469	2.58	8	179.0	1.73	14
15	Aligarh	180	1.72	13	10019	1.57	18	55.7	1.65	15
16	Allahbad	146	1.40	17	10718	1.68	16	73.4	1.54	16
17	Mathura	161	1.54	15	8823	1.38	19	54.8	1.46	17
18	Kheri	112	1.07	21	10602	1.66	17	94.7	1.37	18
19	Rampur	119	1.14	20	8639	1.35	20	72.6	1.25	19
20	Gorakhpur	131	1.25	18	7807	1.22	21	59.6	1.24	20
21	Varanasi	158	1.51	16	4386	0.69	29	27.8	1.10	21
22	Sonbhadra	12	0.11	58	12773	2.00	13	1064.4	1.06	22
23	Shahjahanpur	111	1.06	22	6263	0.98	23	56.4	1.02	23
24	Unnao	101	0.97	25	6763	1.06	22	67.0	1.01	24
25	Kanpur Dehat	111	1.06	23	5840	0.91	25	52.6	0.99	25
26	Barabanki	79	0.76	31	6193	0.97	24	78.4	0.86	26
27	Sitapur	87	0.83	28	5610	0.88	26	64.5	0.86	27
28	Chandauli	120	1.15	19	2683	0.42	38	22.4	0.78	28
29	**Kannauj**	107	1.02	24	3442	0.54	34	32.2	0.78	29
30	Pilibhit	66	0.63	37	5333	0.84	27	80.8	0.73	30
31	Jhansi	80	0.77	30	4094	0.64	30	51.2	0.70	31
32	Hathras	94	0.90	26	2901	0.45	36	30.9	0.68	32
33	St. Ravidas Nagar	74	0.71	32	3962	0.62	31	53.5	0.66	33
34	Sultanpur	47	0.45	41	4625	0.72	28	98.4	0.59	34
35	Jaunpur	74	0.71	33	2606	0.41	40	35.2	0.56	35
36	Raebareli	50	0.48	40	3464	0.54	33	69.3	0.51	36

S. N.	District	No. of Factories			No. of Workers			Workers	Index	Overall
37	Fatehpur	72	0.69	34	1911	0.30	44	26.5	0.49	37
38	Mainpuri	70	0.67	35	1995	0.31	43	28.5	0.49	38
39	Bagapat	43	0.41	42	3290	0.52	35	76.5	0.46	39
40	Faizabad	69	0.66	36	1692	0.26	45	24.5	0.46	40
41	Etawah	58	0.56	39	2309	0.36	42	39.8	0.46	41
42	Mirzapur	81	0.78	29	879	0.14	57	10.9	0.46	42
43	Farrukhabad	63	0.60	38	1688	0.26	46	26.8	0.43	43
44	Bahraich	40	0.38	43	2473	0.39	41	61.8	0.39	44
45	Kushi Nagar	11	0.11	60	3520	0.55	32	320.0	0.33	45
46	Badaun	23	0.22	50	2760	0.43	37	120.0	0.33	46
47	Ghazipur	39	0.37	44	1638	0.26	48	42.0	0.31	47
48	Balrampur	17	0.16	57	2611	0.41	39	153.6	0.29	48
49	Hardoi	36	0.34	45	1363	0.21	51	37.9	0.28	49
50	Ambedkar Nagar	33	0.32	46	1340	0.21	52	40.6	0.26	50
51	Mau	32	0.31	47	1182	0.19	53	36.9	0.25	51
52	Deoria	23	0.22	51	1681	0.26	47	73.1	0.24	52
53	Jalaun	24	0.23	49	1376	0.22	50	57.3	0.22	53
54	Azamgarh	30	0.29	48	838	0.13	58	27.9	0.21	54
55	Etah	22	0.21	52	1070	0.17	55	48.6	0.19	55
56	Maharajganj	18	0.17	54	1096	0.17	54	60.9	0.17	56
57	Basti	5	0.05	66	1392	0.22	49	278.4	0.13	57
58	Gonda	10	0.10	61	991	0.16	56	99.1	0.13	58
59	Auraiya	19	0.18	53	251	0.04	62	13.2	0.11	59
60	Hamirpur	12	0.11	59	631	0.10	59	52.6	0.11	60
61	Mahoba	18	0.17	55	153	0.02	66	8.5	0.10	61
62	Pratapgarh	18	0.17	56	147	0.02	67	8.2	0.10	62
63	Ballia	10	0.10	62	592	0.09	60	59.2	0.09	63
64	Kaushambi	9	0.09	63	251	0.04	63	27.9	0.06	64
65	Santkabir Nagar	8	0.08	64	308	0.05	61	38.5	0.06	65
66	Lalitpur	7	0.07	65	191	0.03	65	27.3	0.05	66
67	Chitrakoot	2	0.02	68	209	0.03	64	104.5	0.03	67
68	Banda	4	0.04	67	71	0.01	68	17.8	0.02	68
69	Kanshiram Nagar	0	0.00	69	0	0.00	69	-	0.00	69
70	Shrawasti	0	0.00	70	0	0.00	70	-	0.00	70
71	Sidarth Nagar	0	0.00	71	0	0.00	71	-	0.00	71
	Total (Uttar Pradesh)	10450	100		638531	100		61.1	100	

Source: Government of Uttar Pradesh (2010), 'Statistical Abstract 2009: Uttar Pradesh', Economics and Statistics Division, State Planning Institute, Uttar Pradesh, pp. 324-329.

*Map 3.11: Spatial Distribution of Factories in Uttar Pradesh*
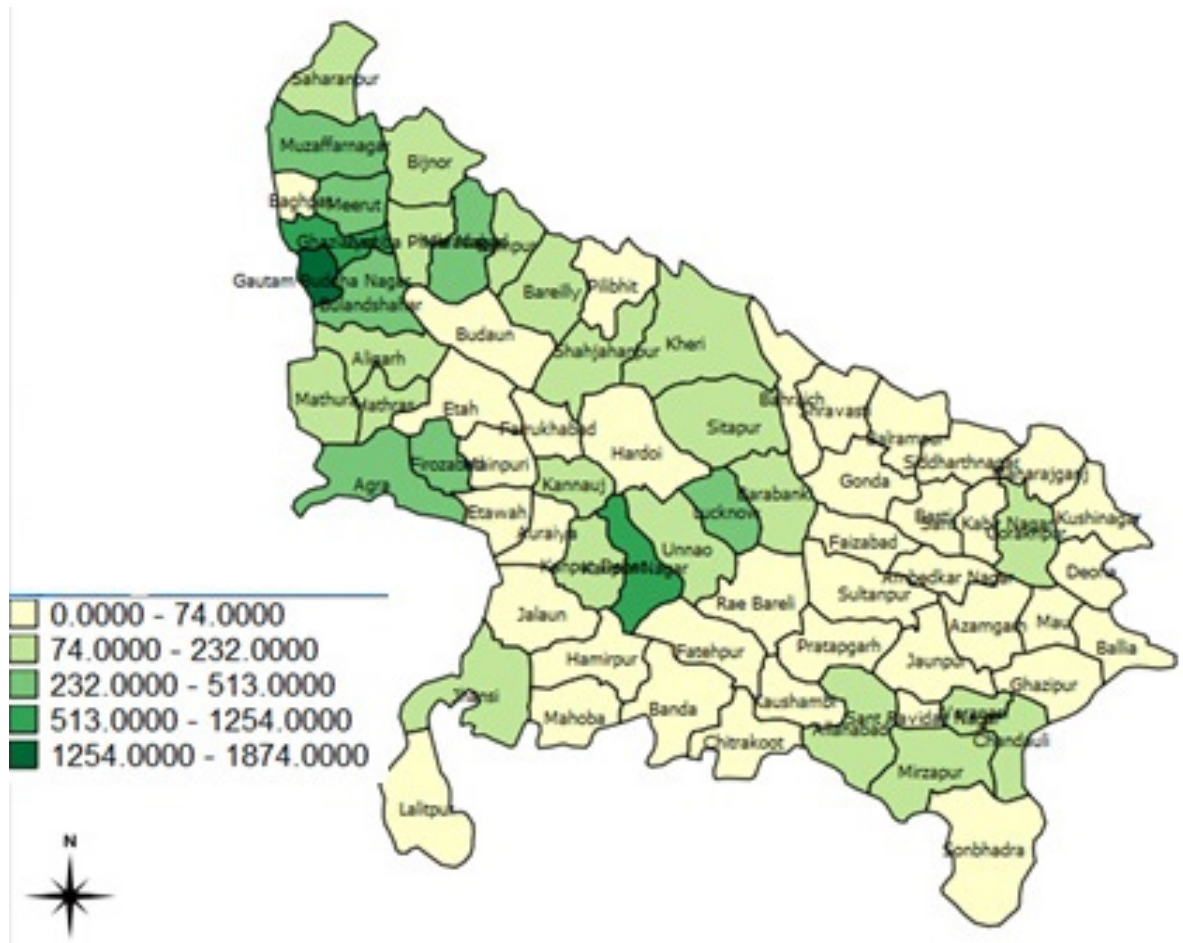
Lorenz Curve of the Distribution of Factories in Uttar Pradesh:
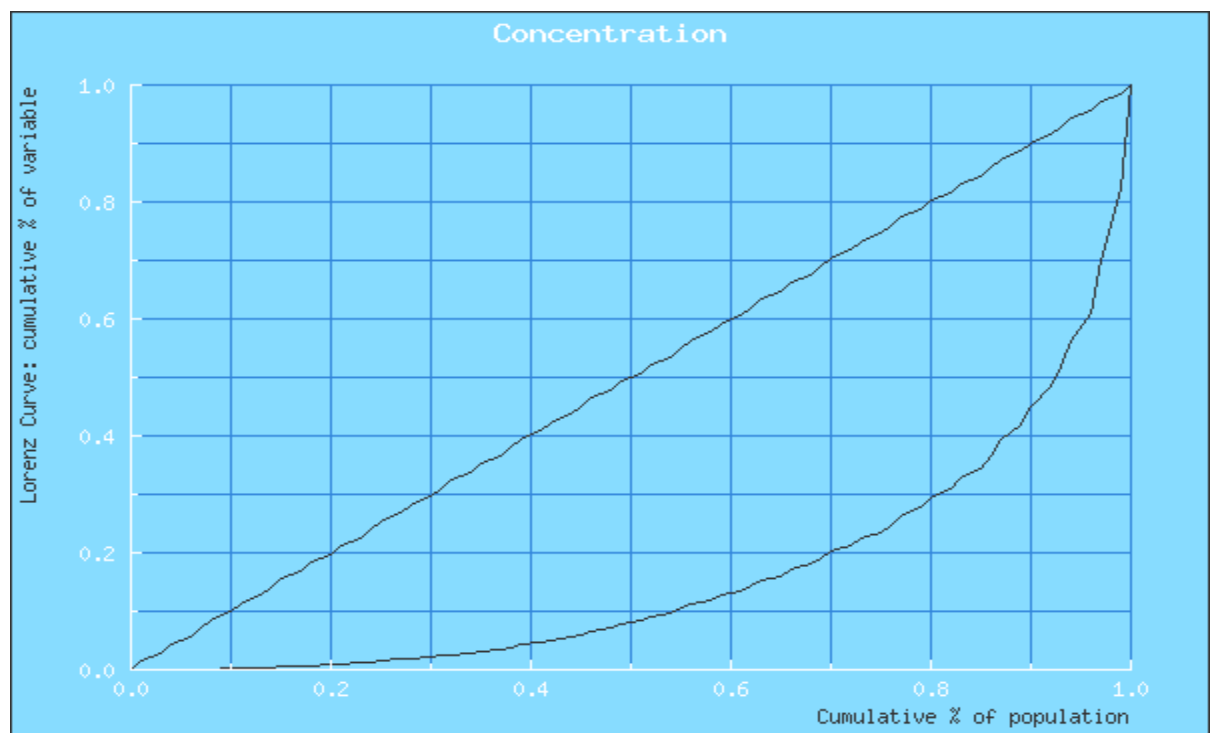
However, among the least industrialised districts it was observed that the lowest ranks were occupied by Sidarth Nagar, Shrawasti and Kanshiram Nagar with no industries at all. When the data was analysed rank-wise upwards from 71 to rank 30, it was observed that all these districts had number of factories much less than 100 with Pilibhit at rank 30 having only 66 factories. Thus **Kannauj** district at rank 29 with 107 numbers of factories was selected for the survey as the district less successful in attracting industries.

Gini Coefficient of the district-wise distribution of number of factories in Uttar Pradesh was 0.678075; Concentration coefficient was 0.687762; while the Herfindahl index was 0.067539.

Map 3.12: Spatial Distribution of Workers in Uttar Pradesh
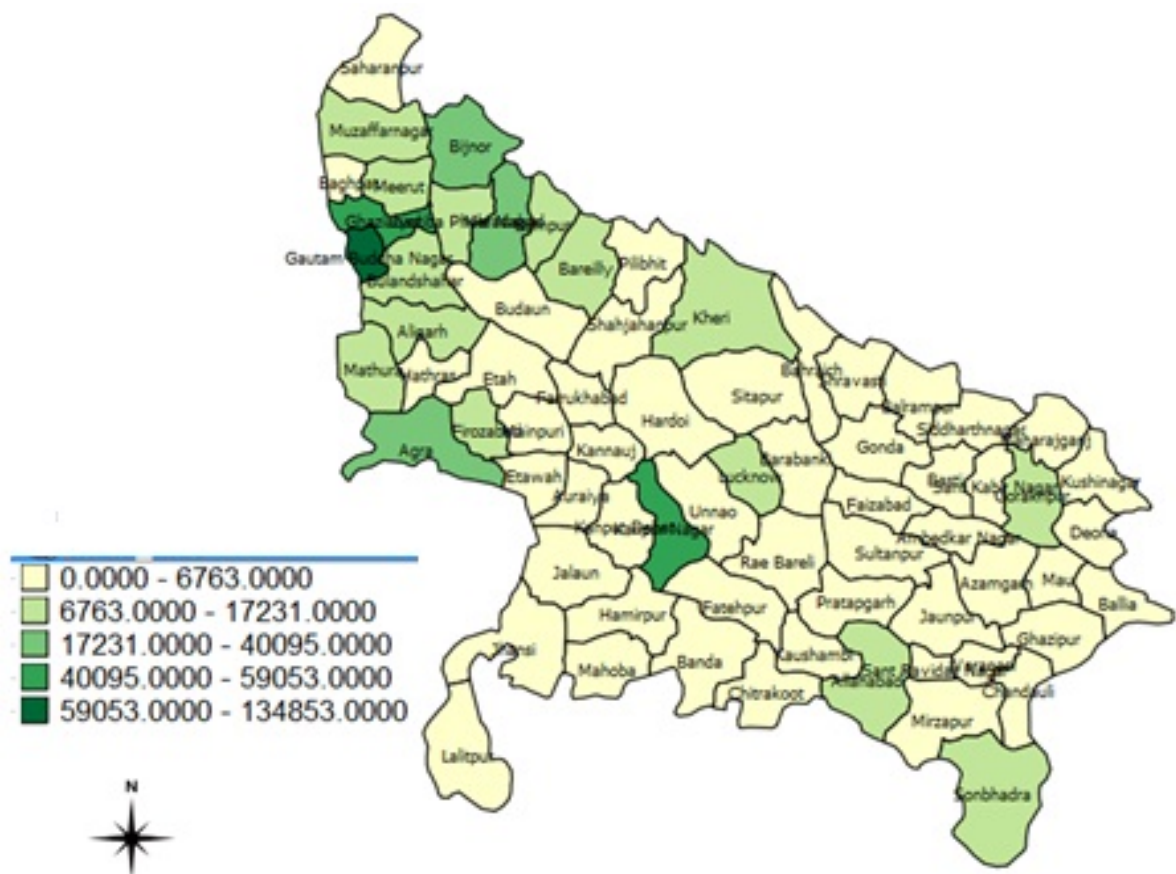
Gini Coefficient of the district-wise distribution of number of workers in Uttar Pradesh was 0.699884; Concentration coefficient was 0.709882; while the Herfindahl index was 0.074219.

Lorenz Curve of the Distribution of Workers in Uttar Pradesh:
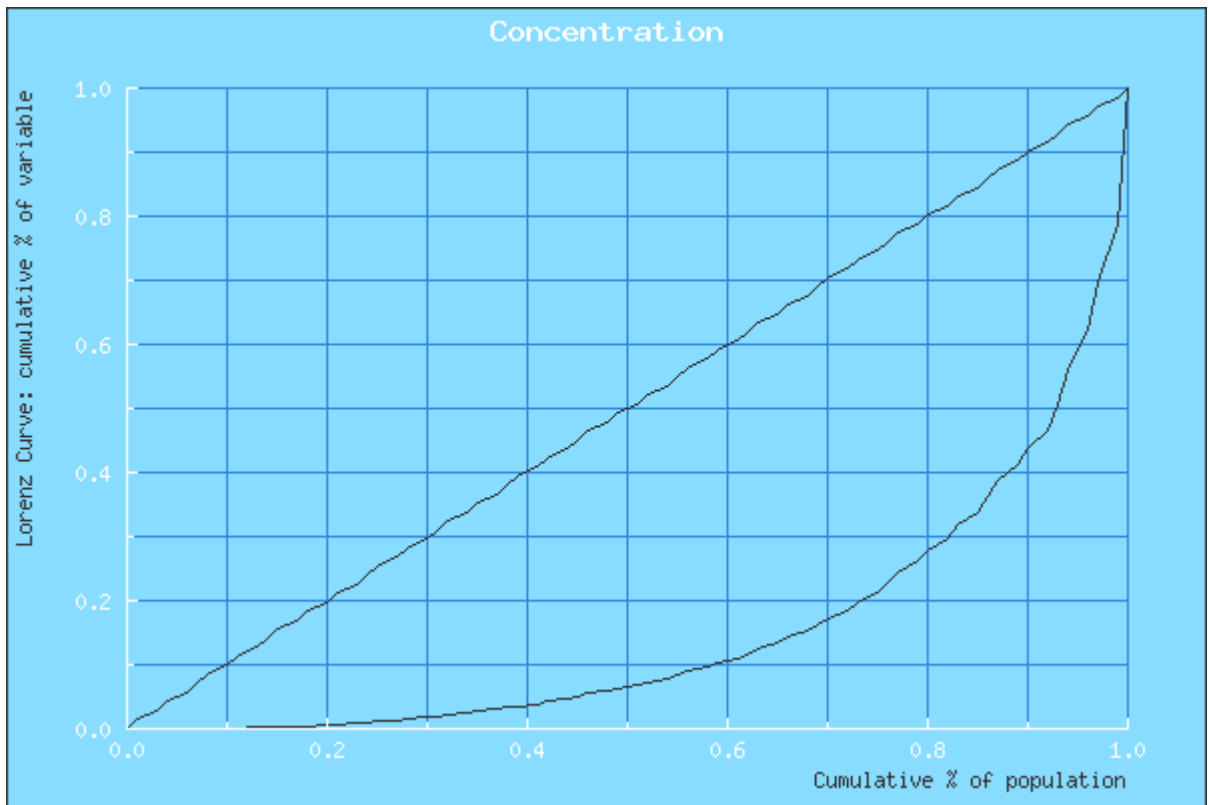
The above analysis of regional inequality indices in Uttar Pradesh revealed that as in the case of Special Category States, the industrial inequality in Uttar Pradesh was more marked when viewed in terms of the distribution of workers than the distribution of factories. However, the differences in indices were much less. However, Uttar Pradesh has the most inequality among the non-special category states i.e. Haryana, Punjab and Uttar Pradesh.

Correlation: Karl Pearson Correlation coefficient between the number of factories and the number of workers district-wise was calculated to be 0.958 which is significant at the 0.01 level (2-tailed). Spearman's rank correlation coefficient between these variables was lower and calculated to be 0.880 which is significant at the 0.01 level (2-tailed).

Chapter 4

INTER-STATE COMPARISON OF INDUSTRIALISATION

The study area has been divided into the Special Category States or the Beneficiary States (viz. Jammu & Kashmir, Himachal Pradesh and Uttarakhand) and the Control Group or the Other Neighbouring States (viz. Haryana, Punjab and Uttar Pradesh). The analysis of the secondary data primarily taken from the various issues of the Annual Survey of Industries was done with a view to derive the impact of the Package to Special Category States. The data has been analysed for a period of 11 years beginning from 1998-1999 to 2008-2009. For the purpose of analysis the time-series data is divided into two periods: Pre-Package Period (1998-2003) and the Package Period (2003-2009).

The impact assessment of the Special Package is based on quasi-experimental evaluation design using a mix of before & after and with and without methods. The Pre-Package- Period and Package-Period analysis relates to before- and after- method. The difference in average growth rates in variables in case of special category states during the package-period from that of the pre-package period should give the impact assessment in a before- and after- framework. However, during data analysis it was found that definite impact of trade cycle was present in almost all the variables. The pre-package period saw definite recessionary trends in all the variables while the package-period had recovery in most of the variables. These trends had nothing to do with package, but were clearly attributable to the trade cycle. Thus it was necessary to remove this impact of trade cycle from the difference in the package-period and pre-package period growths and for this an adjustment factor estimated as the average of the difference in growth rate during these periods in case of the control group states was deducted to arrive at the impact of package in before- and after- framework. On the other hand, the comparison of the Special Category States with the Other Neighbouring States or the control group states during the package-period relates to the impact assessment in a with- and without- framework. The average of annual growth in variables of the three control group states during the package period has been taken as the adjustment factor to be deducted from annual growth rate in case of special category states to arrive at the impact of the package in a with- and without- framework.

4.1 NUMBER OF FACTORIES:

The most common indicator for the level of industrialisation is the number of factories in an area. As in any demographic study, the absolute population is the most important variable in any analysis, for any industrialisation study the number of factories is the most crucial variable. The table showing time-series data on the number of factories in the states under study and the corresponding data for All India highlights the much higher growth in the number of factories in all the three special category states with the highest growth in the Package Period recorded by Uttarakhand at the annual growth rate of 27.79% followed by Himachal Pradesh recording the growth at 25.70% per annum. Jammu & Kashmir also recorded a significant growth of 15.15% per annum during the Package Period.

Table 4.1: Number of Factories

Year	J & K	H.P.	U.K.	Haryana	Punjab	U.P.	All India
1998-1999	351	428	713	3,786	7,003	10,508	131,706
1999-2000	393	508	616	4,296	6,910	10,303	131,558
2000-2001	356	507	744	4,448	7,137	9,635	131,268
2001-2002	348	500	698	4,437	7,249	9,157	128,549
2002-2003	340	509	715	4,437	6,987	8,980	127,957
2003-2004	342	530	679	4,265	6,853	9,237	129,074
2004-2005	424	653	752	4,339	7,575	9,582	136,353
2005-2006	519	808	900	4,304	8,332	10,503	140,160
2006-2007	618	851	1,150	4,410	9,256	10,688	144,710
2007-2008	672	1,160	1,474	4,707	10,178	10,717	146,385
2008-2009	649	1,294	1,907	4,450	10,065	10,935	155,321
Annual Growth (1998-2003)	-0.63	3.79	0.06	3.44	-0.05	-2.91	-0.57
Annual Growth (2003-2009)	15.15	25.70	27.79	0.05	7.34	3.63	3.56
Difference in Growth in the Pre Package & Package Period	15.77	21.92	27.73	-3.39	7.39	6.54	4.13
Growth Due to Package (Before and After Frame)	**12.26**	**18.41**	**24.22**	Adjustment Factor: 3.51			
Growth Due to Package (With & without Frame)	**11.48**	**22.03**	**24.12**	Adjustment Factor: 3.67			

In comparison, during the same period the growth rate in other neighbouring (control group) states was low, varying from the insignificant growth of 0.05% in

Haryana, 3.63% in Uttar Pradesh and a satisfactory growth of 7.34% in Punjab. The corresponding figure for All India during the period was 3.56%. The faster growth in the Special Category States in comparison to the other neighbouring states during the Package period clearly indicates the positive impact of the package.

If we observe the Pre-Package and Post-Package data for impact evaluation in before- and after- framework, it was found that the performance of all the six states under study as well as All India figures during pre-package period were unsatisfactory and the growth rate in the number of factories was negative for All India, Punjab, Uttar Pradesh and Jammu & Kashmir. Uttarakhand had recorded a negligible positive growth rate. Only Himachal Pradesh and Haryana recorded significant positive growth rates of 3.79 and 3.44 percent respectively. However, it is worthwhile to point out that Haryana recorded a low growth rate of only 0.05 percent during the Package period which may be indicative of some kind of relocation of industries from the state to the special category states.

Annual Growth Rate of Number of Factories
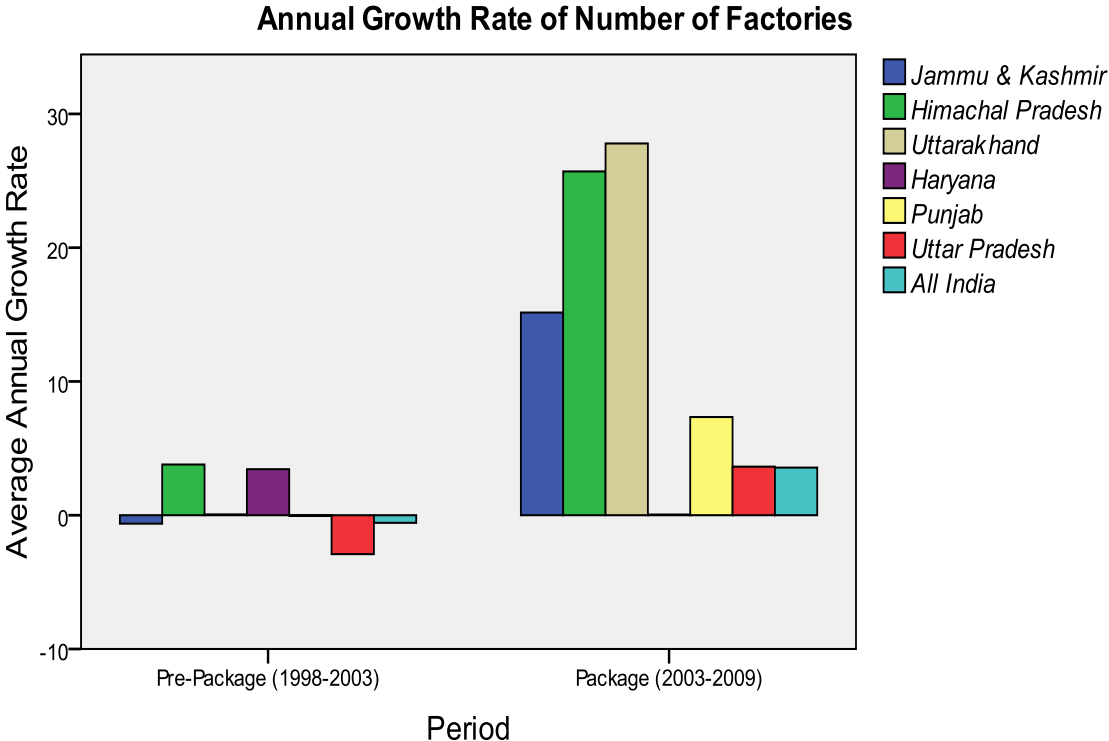
The pre-package and package period growth rates calculated in the table are represented by the bar diagram which clearly reflects the positive impact of the package on special category states with their corresponding bars shooting much above other neighbouring states.
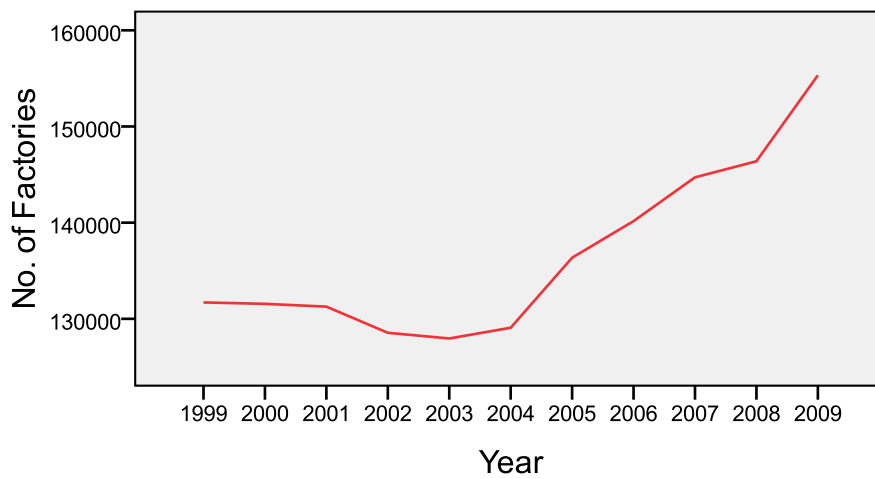
No. of Factories: Special Category States
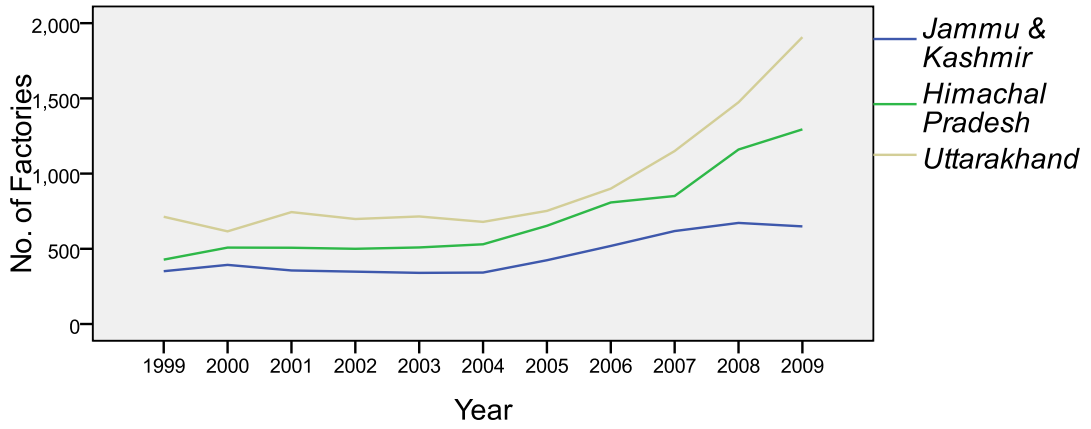
No. of Factories: Other States
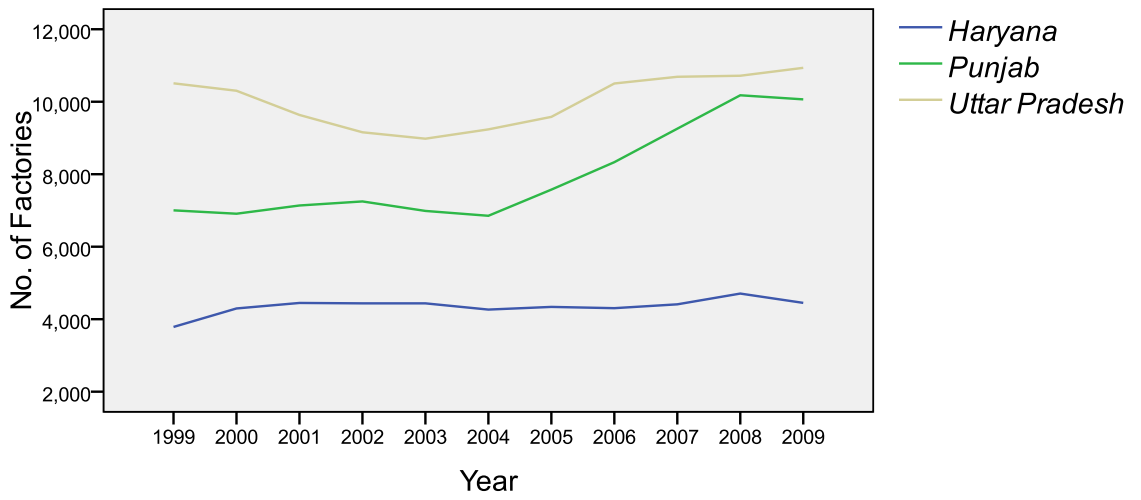
No. of Factories: All India

The time series data pertaining to the states in the study are plotted in a graph category-wise. The first graph corresponds to the special category states, the second to the other states and the third to the All India. The major increase in Special Category States started from the year 2004-2005 though the package had started in 2002 for J&K and 2003 for Himachal Pradesh and Uttarakhand respectively. This may be explained by the gestation period of the industrial investment proposals and the time taken in the procedural formalities for setting up industries.

The growth due to package in a before- and after- frame in the number of factories was estimated to be highest in case of Uttarakhand at 24.22% per annum followed by 18.41% for Himachal Pradesh and 12.26% for Jammu & Kashmir. However, in the estimation of impact of package in a with- and without framework it was found that the growth rates attributable to the package in case of Uttarakhand and Himachal Pradesh were much closer with Uttarakhand at 24.12%, closely followed by Himachal Pradesh at 22.03% and Jammu & Kashmir at 11.48%. Thus it may be concluded that there was definite positive and significant impact of the package in the special category states in terms of increase in the number of factories.

4.2 FIXED CAPITAL:

The data pertaining to the fixed capital gives the real impact of the package in the special category states as this is more crucial variable than the number of factories. The comparison of the growth rate of the fixed capital in the pre-package reveals similar growth rates in the special category as well as the other states which are in conformity with the general low All India trend with the exception of Uttar Pradesh which shows negative growth. Surprisingly the highest growth among the states under study in this period was seen in case of Jammu & Kashmir at 11 percent.

In the Package period keeping in view the overall positive sentiments the growth rate for all the states show much better performance with the growth in other states hovering around the All India average of 23%. However, Uttarakhand has outshined all the states with the average annual growth rate of 162 percent which is nearly double the growth rate of Himachal Pradesh (85%) and much higher than 91% in Jammu & Kashmir. Uttarakhand clearly seems to have far outperformed

Himachal Pradesh and Jammu & Kashmir in terms of most of the indicators.

Table 4.2: Fixed Capital (in Rs. Lakhs)

| Year	J & K	H.P.	U.K.	Haryana	Punjab	U.P.	All India
1998-99	24,536	287,331	159,168	1,112,285	842,513	5,142,156	39,115,145
1999-00	29,307	321,001	135,860	1,316,705	1,007,595	3,772,531	40,186,473
2000-01	33,860	340,581	188,394	1,398,028	849,312	3,477,513	39,960,422
2001-02	36,401	411,358	196,584	1,437,671	841,874	3,021,410	43,196,013
2002-03	37,863	358,278	204,586	1,410,886	1,119,761	2,847,631	44,475,938
2003-04	38,189	571,383	218,176	1,513,413	925,642	2,992,605	47,333,140
2004-05	78,445	594,781	287,679	1,662,464	1,071,349	3,152,999	51,306,925
2005-06	116,996	829,821	419,984	1,852,399	1,392,579	3,763,086	60,694,028
2006-07	163,314	828,197	949,313	2,237,053	1,836,524	4,499,515	71,513,139
2007-08	247,275	2,000,292	1,297,142	2,886,838	2,178,348	5,845,002	84,513,209
2008-09	243,669	2,189,156	2,189,841	3,706,457	2,648,036	6,267,696	105,596,614
Annual Growth (1998-2003)	11	5	6	5	7	-9	3
Annual Growth (2003-2009)	91	85	162	27	23	20	23
Difference in Growth in the Pre Package & Package Period	80	80	156	22	16	29	20
Growth Due to Package (Before and After Frame)	**57**	**58**	**134**	Adjustment Factor: 22.29			
Growth Due to Package (With & without Frame)	**67**	**62**	**138**	Adjustment Factor: 23.29			

Annual Growth Rate of Fixed Capital
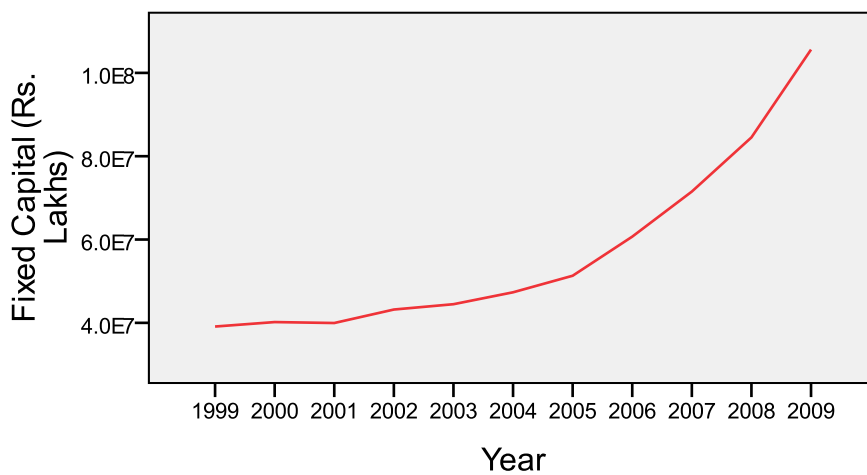
53
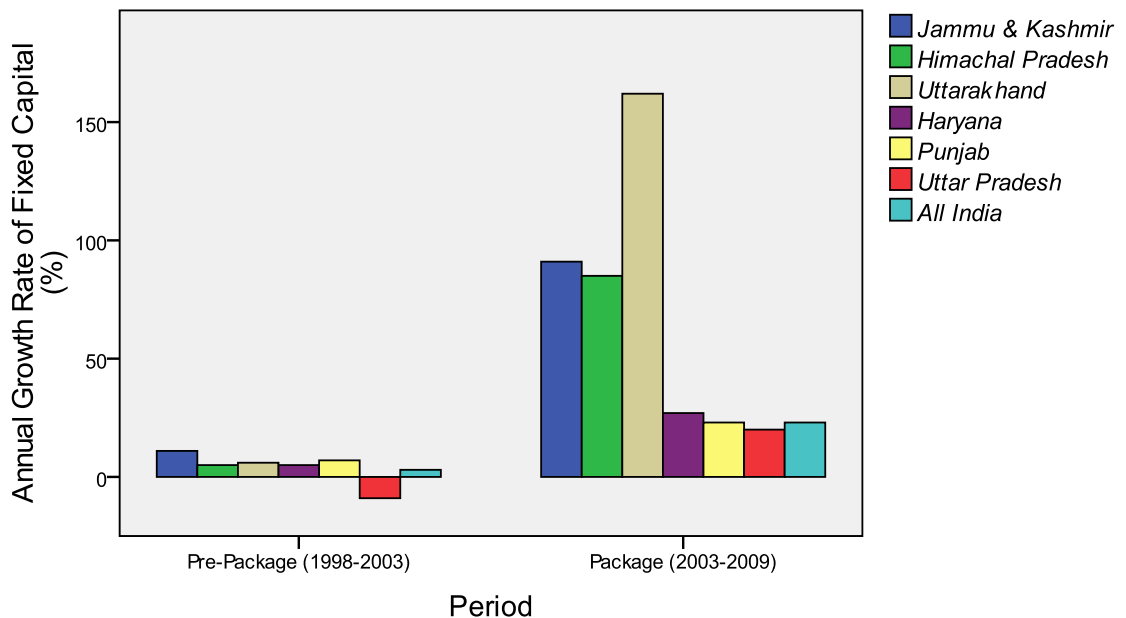
Fixed Capital: Special Category States
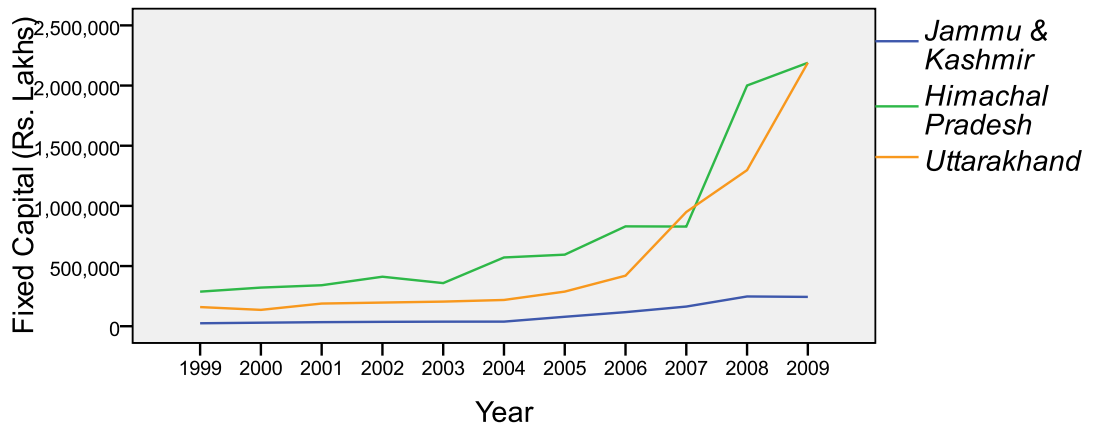
Fixed Capital: Other States
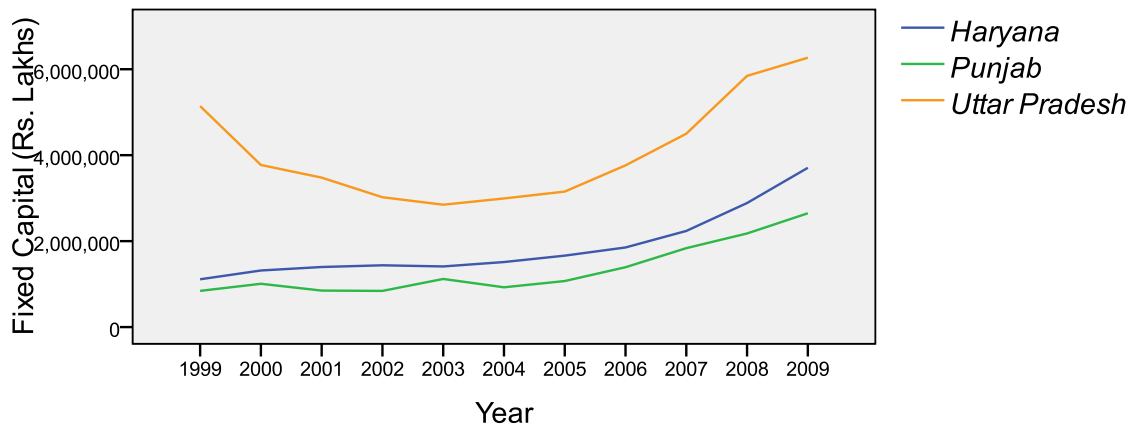
Fixed Capital: All India

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The bar diagram clearly shows the excellent performance of Uttarakhand. It was noted that although in terms of the growth in the number of factories the performance of Himachal Pradesh and Uttarakhand was equivalent and comparable, but in terms of the fixed capital Uttarakhand has shown almost double growth. This reflects the fact that Uttarakhand has been more successful in attracting medium and large industries than its counterpart Himachal Pradesh. More importantly Uttarakhand seems to be fast catching up with Punjab. Obviously there are reasons enough for Punjab and Haryana to oppose the package to Special Category States.

The data in the table and the graph shows a spurt in fixed capital for Himachal Pradesh in the year 2007-2008 while for Uttarakhand there was a sharp increase in the year 2008-2009 perhaps owing to the coming into operation of the SIDCUL areas. However, for the other states the graph does not show any such sharp increase.

The impact assessment of the package to special category states in a before and after framework reveals the outstanding growth of 134% per annum in case of Uttarakhand, as compared to 28% for Himachal Pradesh and 57% in case of Jammu & Kashmir attributable to the impact of the package. In the with- and without-framework the growth explained by the package was higher for all the special category states at 138% for Uttarakhand, 62% for Himachal Pradesh and 67% for Jammu & Kashmir.

4.3   INVESTED CAPITAL:

The data pertaining to invested capital follows the trend as in the case of fixed capital. The Pre-Package period growth rates were similarly low for all the states following the All India sentiments of the time. In the Package period the invested capital in the Special Category States grew sharply at annual growth rate of 139% for Uttarakhand, 85% for Himachal Pradesh and 84% for Jammu & Kashmir. Uttarakhand which was much below Himachal Pradesh in terms of industrialisation has fast overtaken Himachal Pradesh. This also reflects the fact that Uttarakhand after separation from Uttar Pradesh has shown much better performance and it supports the opinion that smaller states are much better performers. The performance of the other states in the Package Period was also better with the All India growth rate of 23 percent.

If we compare the invested capital in Jammu & Kashmir with other Special Category States, it is noted that Jammu & Kashmir is at present far behind Uttarakhand and Himachal Pradesh despite the grant of package. Perhaps the unique problems in J&K are responsible for this trend.

Table 4.3: Invested Capital (in Rs. Lakhs)

| Year	J & K	H.P.	U.K.	Haryana	Punjab	U.P.	All India
1998-99	47,677	367,187	251,183	1,744,983	1,404,612	6,457,333	53,706,813
1999-00	58,504	414,971	218,796	2,146,941	1,784,341	5,085,709	56,663,430
2000-01	56,383	457,664	354,554	2,187,358	1,500,810	4,901,000	57,179,940
2001-02	62,118	516,647	369,411	2,156,012	1,498,125	4,423,859	60,591,285
2002-03	66,281	471,373	372,276	2,192,630	1,859,939	4,399,806	63,747,308
2003-04	66,566	697,916	416,974	2,411,266	1,660,452	4,761,440	67,959,853
2004-05	130,430	741,391	529,600	2,649,303	1,925,187	5,160,776	75,941,770
2005-06	192,497	1,084,540	728,706	2,987,200	2,373,166	5,941,232	90,157,861
2006-07	282,050	1,087,592	1,340,560	3,703,862	3,232,458	7,048,591	107,150,382
2007-08	404,752	2,447,573	1,867,732	4,785,642	3,998,676	9,195,910	128,012,553
2008-09	398,911	2,874,252	3,469,272	6,133,423	4,612,258	9,423,178	153,517,773
Annual Growth (1998-2003)	8	6	10	5	6	-6	4
Annual Growth (2003-2009)	84	85	139	30	25	19	23
Difference in Growth in the Pre Package & Package Period	76	79	129	25	18	25	20
Growth Due to Package (Before and After Frame)	**53**	**56**	**106**	Adjustment Factor: 22.80			
Growth Due to Package (With & without Frame)	**59**	**60**	**114**	Adjustment Factor: 24.55			

As in the case of fixed capital, Uttarakhand outshines all the other states in the bar diagram. The performance of Jammua & Kashmir and Himachal Pradesh are similar, though the base level in J&K is quite low. Since the performance of all the three other neighbouring states is identical, the difference in growth rates between the special category states and the other states may be attributed to the impact of Special Packege.

The package to special category state in a before- and after- framework explained 106% growth in case of Uttarakhand, 56% in case of Himachal Pradesh and 53% in case of Jammu & Kashmir. In the with- and without- framework the

package explained higher growth in all these states viz. 114% in case of Uttarakhand, 60% in case of Himachal Pradesh and 59% in case of Jammu & Kashmir. Thus the impact of the package resulted in significant growth of invested capital in special category states, which could indicate its success.

Annual Growth Rate of Invested Capital
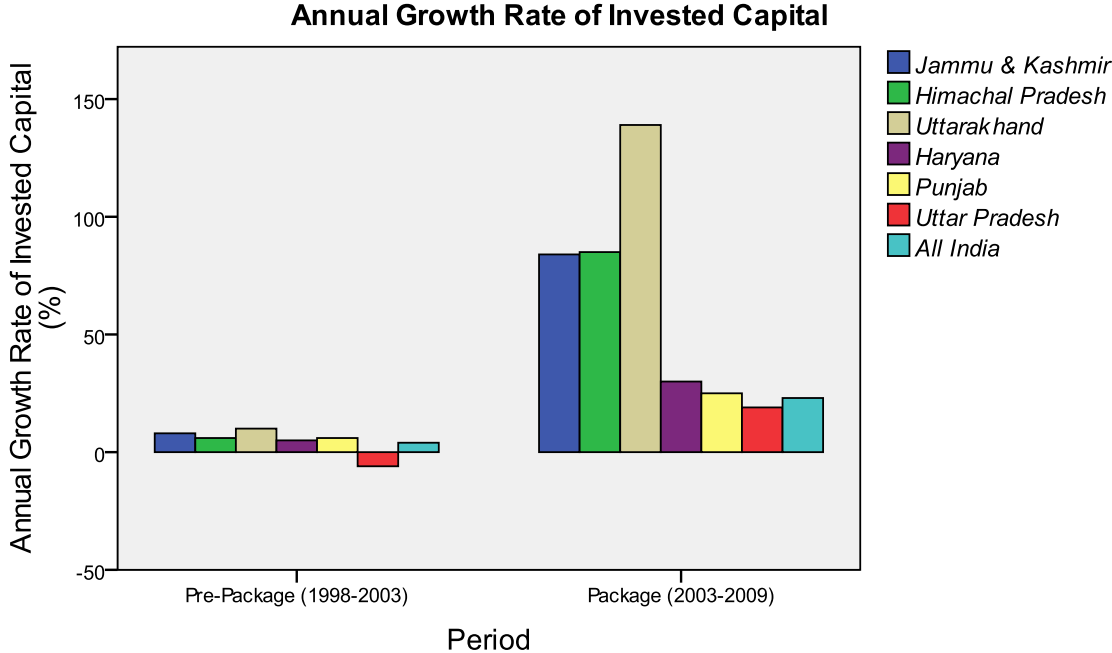
In the graph below, the invested capital in Himachal Pradesh in the year 2007-2008 and in Uttarakhand in the year 2008-2009 has shown drastic increases overtaking Himachal Pradesh. Compared to this there was near stagnation for UP in the year 2008-2009.

Invested Capital: Special Category States

Invested Capital: Other States

Invested Capital: All India
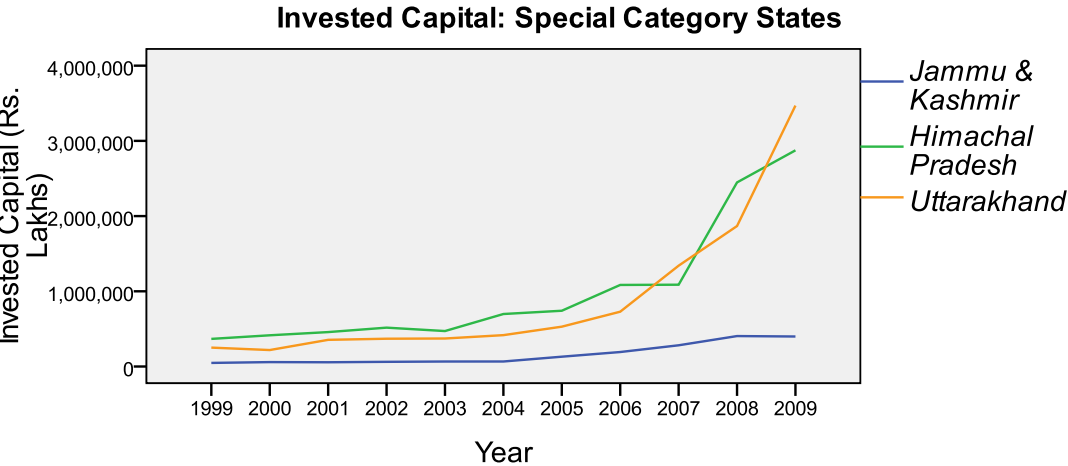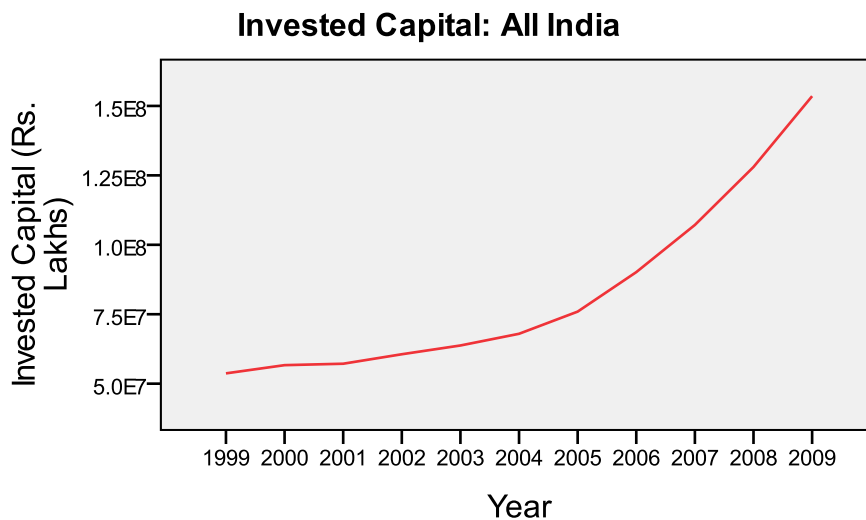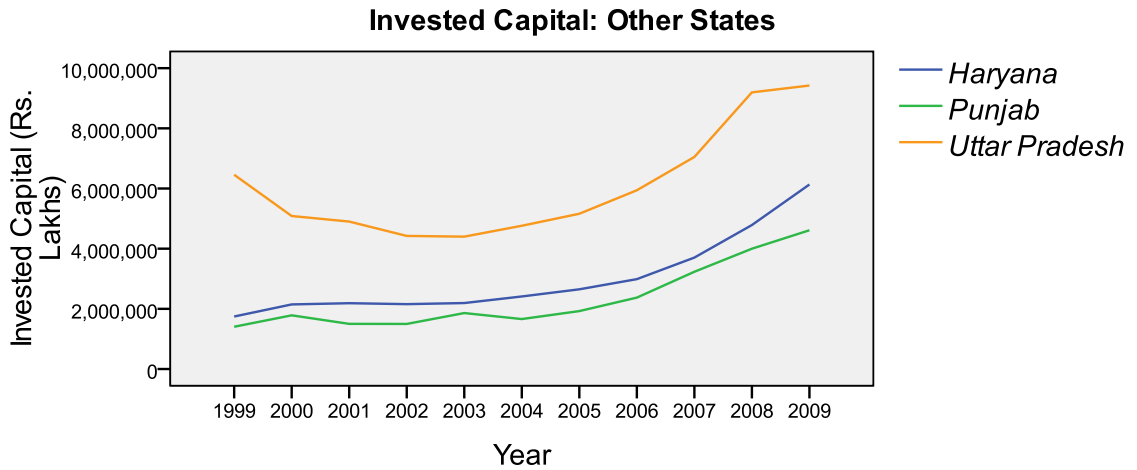
4.4 NUMBER OF INDUSTRIAL WORKERS:

One of the professed objectives of the industrialisation is employment generation. The data on the number of industrial workers reveals exceptionally high growth rate of 87% in Uttarakhand during the package periond. Himachal Pradesh performed less impressively with a growth rate of 39% followed by only 22% growth in Jammu & Kashmir. However, if we compare the data of Uttarakhand with that of Punjab or Haryana it revealed the striking fact that although Uttarakhand is fast catching up with Punjab in terms of fixed and invested capital, it is still far behind in terms of number of industrial workers.

In the pre-package period, the number of industrial workers had witnessed decline in All India figures as well as Uttarakhand, Haryana and Uttar Pradesh. For Himachal Pradesh there was near stagnation.
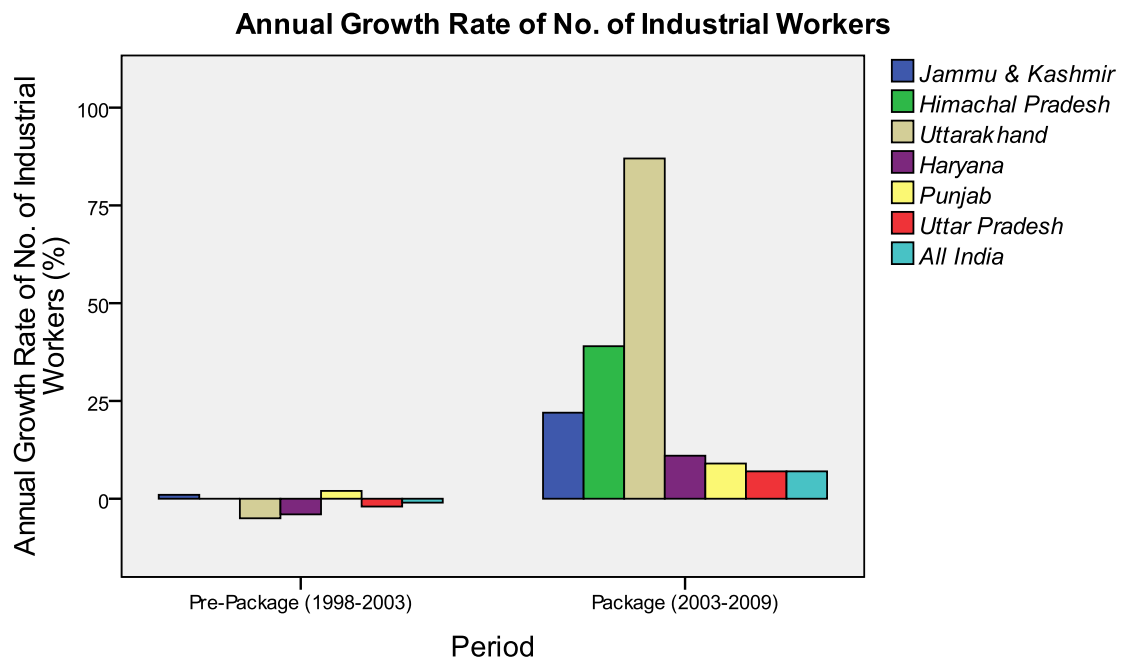
Table 4.4: No. of Industrial Workers

| Year	J & K	H.P.	U.K.	Haryana	Punjab	U.P.	All India
1998-99	19,091	25,493	36,670	275,650	253,213	455,816	6,364,464
1999-00	20,187	31,015	26,743	215,094	265,261	428,913	6,280,659
2000-01	18,371	29,788	28,704	217,532	278,303	401,676	6,135,238
2001-02	19,162	26,518	27,317	208,062	271,845	382,821	5,957,848
2002-03	19,636	25,375	27,815	223,831	276,677	409,116	6,161,493
2003-04	21,993	27,636	27,592	234,824	264,597	439,267	6,086,908
2004-05	24,557	33,750	35,349	268,557	309,820	453,007	6,599,298
2005-06	32,287	42,614	53,601	305,740	350,747	500,540	7,136,097
2006-07	37,936	52,260	71,115	331,865	402,588	533,794	7,880,536
2007-08	42,219	72,095	97,687	400,895	435,386	589,695	8,198,110
2008-09	45,033	84,497	172,861	377,322	431,568	574,874	8,776,745
Annual Growth (1998-2003)	1	0	-5	-4	2	-2	-1
Annual Growth (2003-2009)	22	39	87	11	9	7	7
Difference in Growth in the Pre Package & Package Period	21	39	92	15	7	9	8
Growth Due to Package (Before and After Frame)	**10**	**28**	**81**	Adjustment Factor: 10.49			
Growth Due to Package (With & without Frame)	**12**	**30**	**78**	Adjustment Factor: 9.17			

The impact of the package to special category states explained 81% growth in number of industrial workers in Uttarakhand, 28% in Himachal Pradesh and 10% in Jammu & Kashmir in a before- and after- framework. In terms of with- and without framework, the package explained 78% growth in Uttarakhand, 30% in Himachal Pradesh and 12% in Jammu & Kashmir.

Although the data related to the number of industrial workers highlights the success of the package in generating huge employment opportunities in Special Category States, but the qualitative observations and the information gathered from the survey indicate that most of the industrial workers in the special category states are migrant workers from other states. Thus from the point of view of significant employment generation, significant benefits have been filtered away to the other states.

The bar diagram of the growth rate of number of industrial workers shows that less impressive growth in respect of Jammu & Kashmir and Himachal Pradesh in the Package period. However, as in the case of other indicators the performance of Uttarakhand was highly impressive. Although the number of factories in Haryana was stagnant during the package period, but the fixed and invested capital as well as the number of industrial workers has shown significant growth. Uttar Pradesh, though the largest in size has been the poorest performer in terms of most of the indicators.
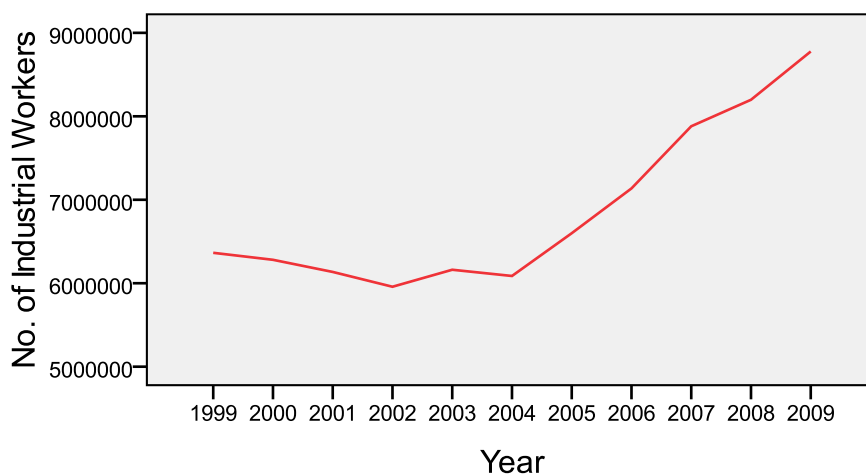
Annual Growth Rate of No. of Industrial Workers

No. of Industrial Workers: Special Category States
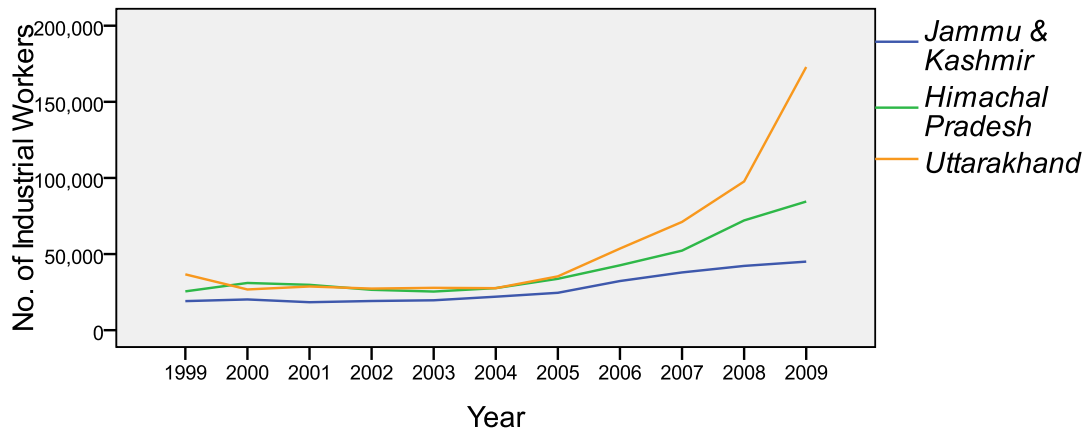
No. of Industrial Workers: Other States
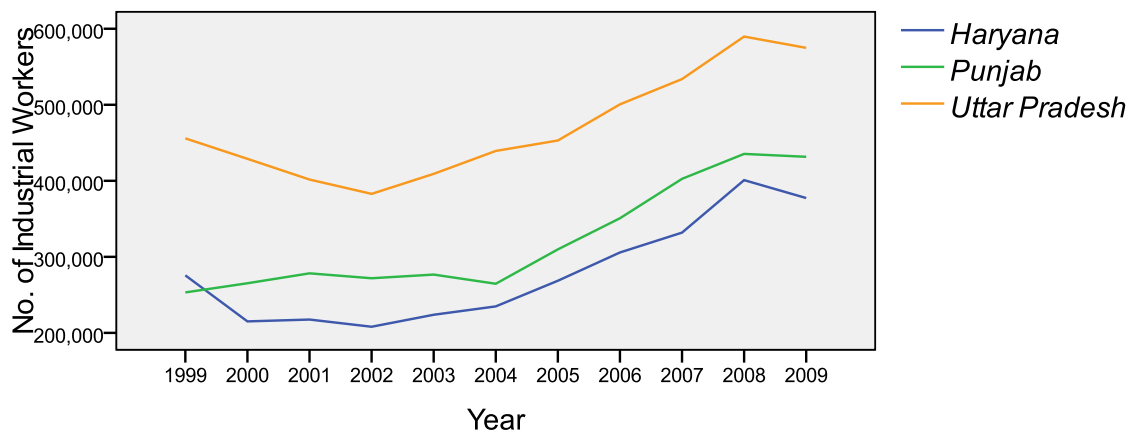
No. of Industrial Workers: All India

The graph for the Special Category States shows very fast rise in number of industrial workers in Uttarakhand in the year 2008-2009. For Himachal Pradesh and Jammu & Kashmir there was steady rise in the curves. In contrast, in the same year,

there were declines in the number of industrial workers in all the three other neighbouring states viz. Haryana, Punjab and Uttar Pradesh as shown in the graph for other states with all the three curves dipping at the end for the year 2008-09. Uttarakhand and Himachal Pradesh were at similar levels in terms of number of industrial workers till 2004-2005. However, Uttarakhand has since then moved up very fast.
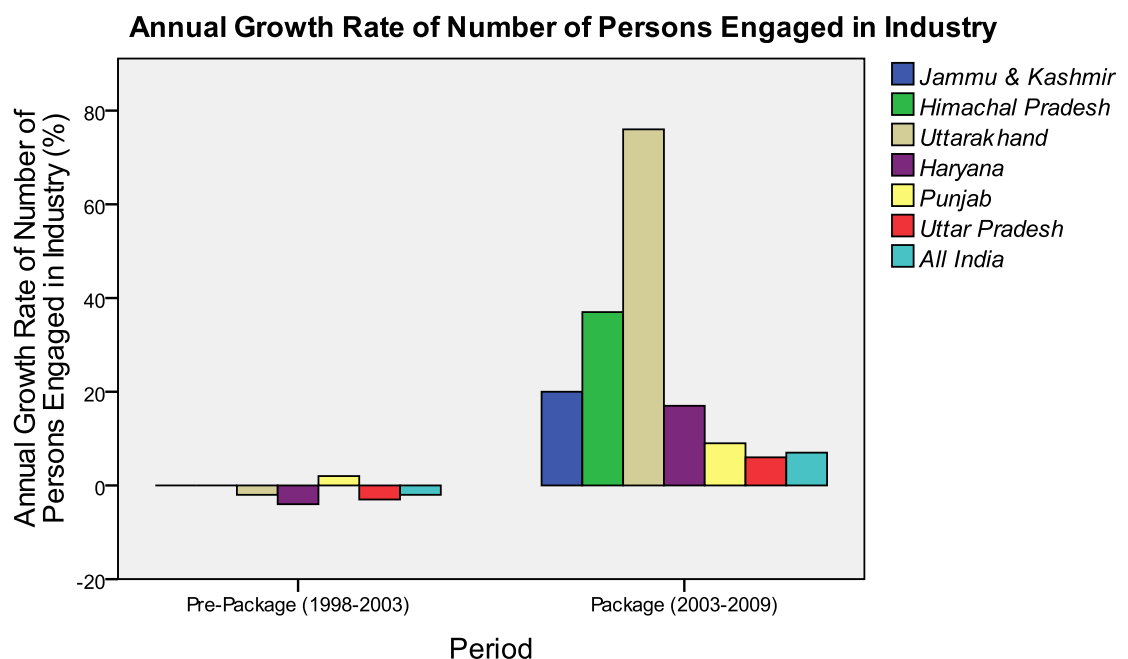
4.5   TOTAL PERSONS ENGAGED IN INDUSTRY:

The data on total persons engaged in industry broadly follows the trend of the total number of industrial workrers. The Pre-Package period performance for all the states was either negative or negligible with the exception of Punjab which recorded a positive annual growth of 2%. During the Package period, the performance of Special Category States improved drastically with Uttarakhand recording a growth of 76% per annum.

Table 4.5: Total Persons Engaged in Industry

Year	J & K	H.P.	U.K.	Haryana	Punjab	U.P.	All India
1998-99	24,753	33,664	46,303	376,585	322,274	621,155	8,588,581
1999-00	26,311	40,152	34,336	298,501	338,647	571,719	8,172,836
2000-01	23,216	39,368	43,132	300,882	358,558	539,739	7,987,780
2001-02	24,473	36,263	40,880	287,253	348,668	513,190	7,750,366
2002-03	24,881	34,023	41,485	299,765	351,102	542,160	7,935,948
2003-04	26,952	36,753	41,561	318,266	336,397	569,603	7,870,081
2004-05	31,090	44,287	51,762	354,861	391,081	587,702	8,453,624
2005-06	40,609	56,838	71,097	396,155	439,246	648,449	9,111,680
2006-07	47,721	67,752	95,061	426,717	507,463	695,199	10,328,434
2007-08	52,664	95,612	129,585	509,617	550,351	751,165	10,452,535
2008-09	54,581	110,242	229,727	607,527	544,776	738,644	11,327,485
Annual Growth (1998-2003)	0	0	-2	-4	2	-3	-2
Annual Growth (2003-2009)	20	37	76	17	9	6	7
Difference in Growth in the Pre Package & Package Period	20	37	78	21	7	9	9
Growth Due to Package (Before and After Frame)	**7**	**25**	**65**	Adjustment Factor: 12.39			
Growth Due to Package (With & without Frame)	**9**	**27**	**65**	Adjustment Factor: 10.78			

It is worthwhile to note that during this period Haryana performed brilliantly recording an annual average growth rate of 17% nearly as good as that of Jammu & Kashmir which recorded 20% growth. Himachal Pradesh also recorded a significant growth of 37% but its achievements pale in comparison to that of Uttarakhand.

The pre-package and package-period growth rates reveal that all the states performed much better in the package-period due to factors beyond the package. As in the case of almost all the indicators, the performance of Uttar Pradesh was below the All India average.

Annual Growth Rate of Number of Persons Engaged in Industry


The bar diagram representing the annual growth rate of number of persons engaged in industry mimics the pattern of the bar diagram of the annual growth rate of number of industrial workers. Uttarakhand stands out as the best performer during the Package period with the sharpest rise in the year 2008-09 as shown in the graph for Special Category States. Haryana overtook Punjab in the total number of persons engaged in industry with exceptional growth in the year 2008-09.

The impact of the package to special category states explained 65% increase per annum in total persons engaged in industry in before- and after- framework, followed by 25% for Himachal Pradesh and only 7% for Jammu & Kashmir. In a with- and without- framework, the package explained the growth of 65% in case of Uttarakhand (similar as in before- and afte- framework), followed by 27% for Himachal Pradesh and 9 percent for Jammu & Kashmir.

The graph for the All India data indicates a typical trade cycle with the economy moving from the low points of depression in pre-package period towards recovery, though erratic, in the Package period.
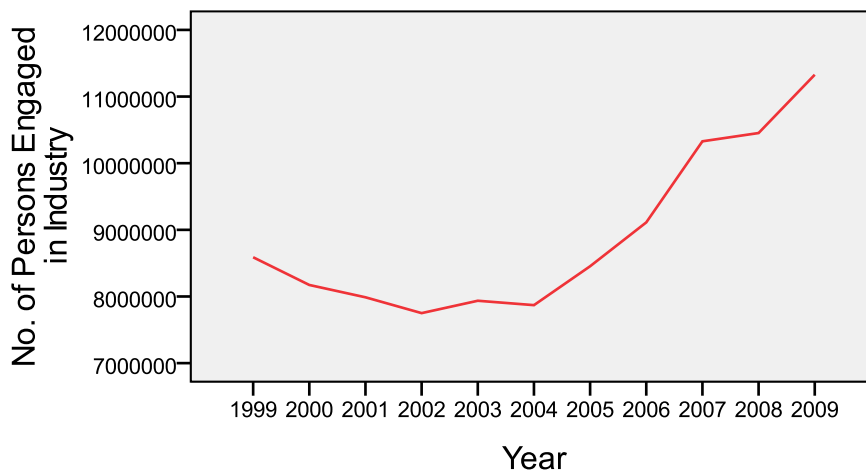
Total Persons Engaged in Industry: Special Category States
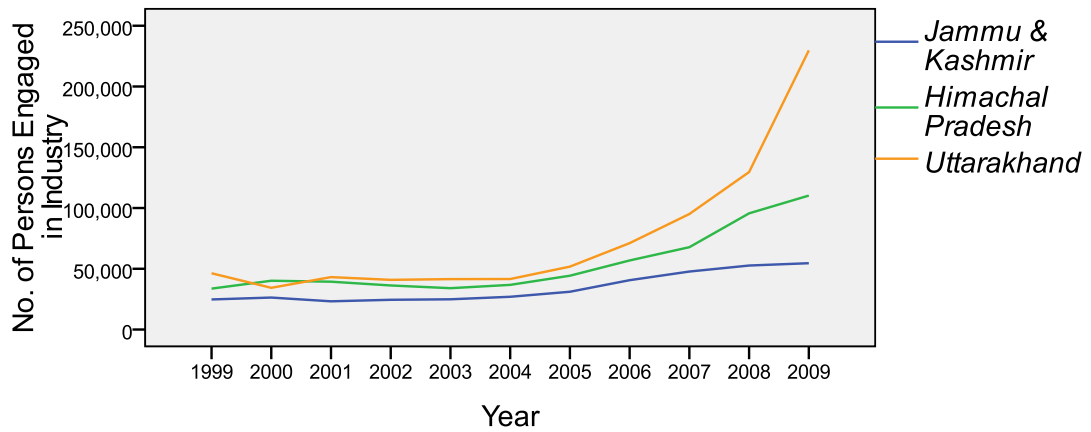
Total Persons Engaged in Industry: Other States
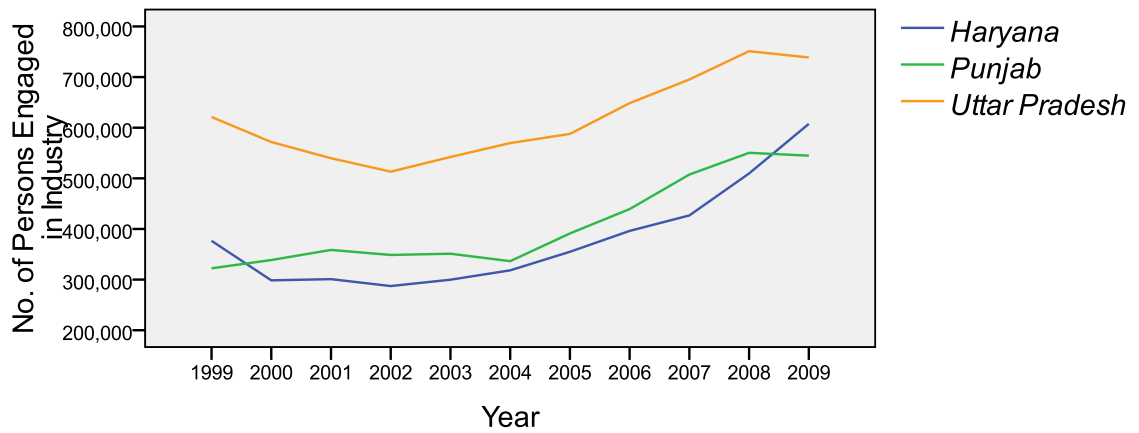
Total Persons Engaged in Industry: All India

4.6   WAGES TO WORKERS:

The amounts of wages spent on workers indicates the purchasing power that goes into the hands of the industrial workers. This more aptly represents the socio-economic impact of industrialisation. Himachal Pradesh and Uttarakhand were at same level in 1998-99 in terms of wages to workers. But if we compare the levels in the year 2008-09 the wages to workers in Uttarakhand were more than 3.5 times that of Himachal Pradesh. This shows the unequal impact of the package to the Special Catogory States.

Table 4.6: Wages to Workers (in Rs. Lakhs)

Year	J & K	H.P.	U.K.	Haryana	Punjab	U.P.	All India
1998-99	6,602	11,210	11,770	111,448	78,019	179,374	2,482,648
1999-00	7,576	9,900	11,391	97,434	91,657	165,974	2,630,427
2000-01	7,099	11,077	24,185	101,886	98,648	160,458	2,767,074
2001-02	7,470	10,522	21,125	100,857	103,691	162,385	2,743,824
2002-03	7,671	10,751	23,126	120,040	110,957	187,238	2,968,905
2003-04	8,562	12,261	23,868	130,860	113,546	196,285	3,047,777
2004-05	9,787	15,103	28,077	145,656	130,533	209,416	3,363,505
2005-06	12,912	19,499	34,958	166,550	155,386	241,421	3,766,366
2006-07	15,617	24,415	49,438	192,388	185,167	279,073	4,429,135
2007-08	19,402	39,593	70,785	253,746	216,337	324,673	5,103,023
2008-09	21,500	51,202	179,307	273,749	231,594	359,075	5,977,184
Annual Growth (1998-2003)	3	-1	19	2	8	1	4
Annual Growth (2003-2009)	30	63	113	21	18	15	17
Difference in Growth in the Pre Package & Package Period	27	64	93	20	10	14	13
Growth Due to Package (Before and After Frame)	**12**	**49**	**79**	Adjustment Factor: 14.63			
Growth Due to Package (With & without Frame)	**12**	**44**	**94**	Adjustment Factor: 18.25			

In terms of the growth rates, Uttarakhand recorded a higher rate even in the pre-package period at 19%. During the package period the growth was 113% per annum while Himachal recorded a growth of 63%. J&K recorded a growth of only 30% which is quite unimpressive in view of the fact that Haryana, Punjab and even

UP recorded the growth rates of 21, 18 and 15 percent during the period without any package.

The package to special category states explained 79% annual increase in wage to workers in Uttarakhand in before- and after- framework, followed by 49% in case of Himachal Pradesh but only 12 percent in Jammu & Kashmir. In the with- and without- framework the package explained 94% annual growth in wage to workers in Uttarakhand followed by 44% in Himachal Pradesh and 12% in Jammu & Kashmir.

Annual Growth Rate of Total Wages to Workers
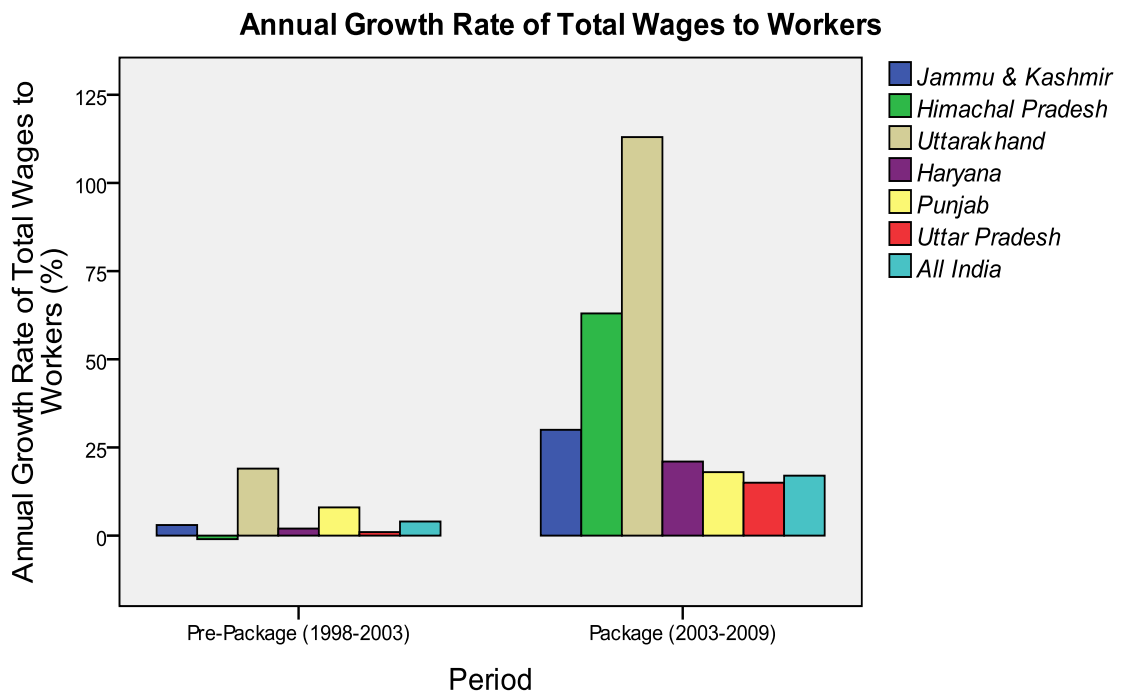
The bar diagram of the growth rate of total wages to workes is on the identical patterns with Uttarakhand as the lone supreme performer in both the periods. The graph of total wages to workers in respect of special category states reveals a steep rise for Uttarakhand in the year 2008-09. Himachal Pradesh seems to be left gasping at the sight of Uttarakhand moving far ahead of it in industrialisation. It seems that Uttarakhand is fast emerging as a new role model for development in the hill states replacing Himachal Pradesh.

Despite the huge size of Uttar Pradesh, most of the indicators and even the absolute figures for it leave one depressed. This state needs to improve significantly for making the India 2020 vision a reality.
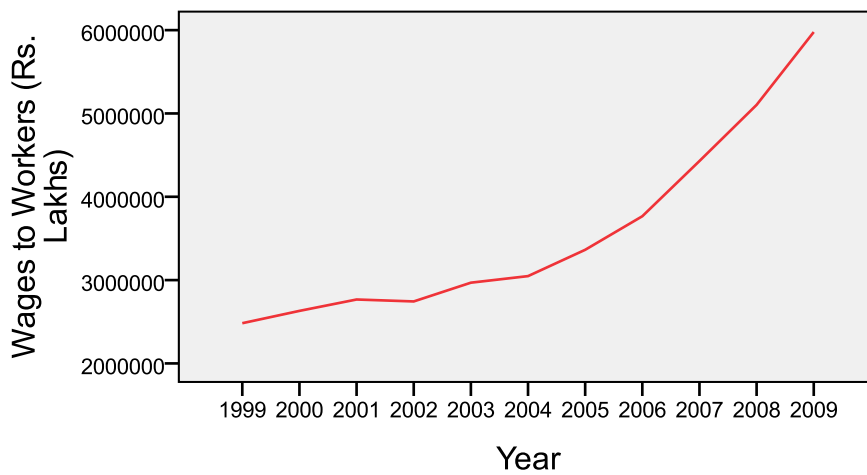
Wages to Workers: Special Category States
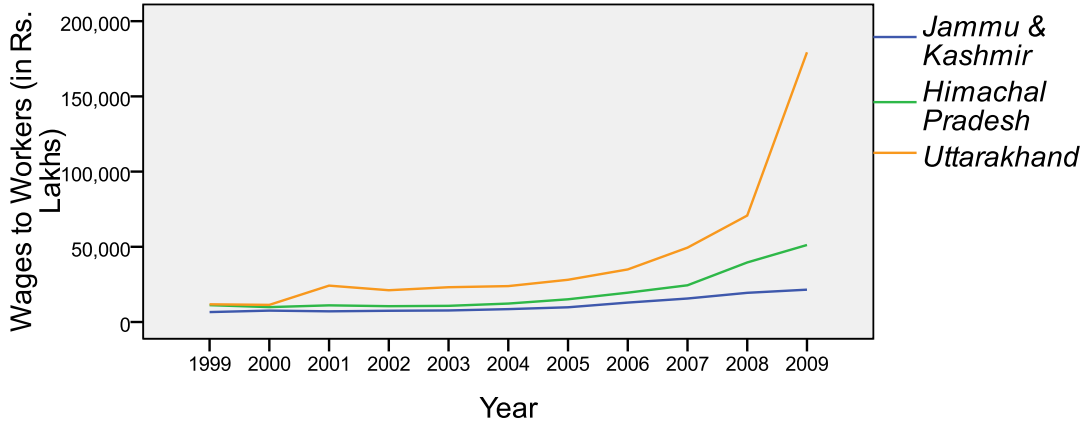
Wages to Workers: Other States
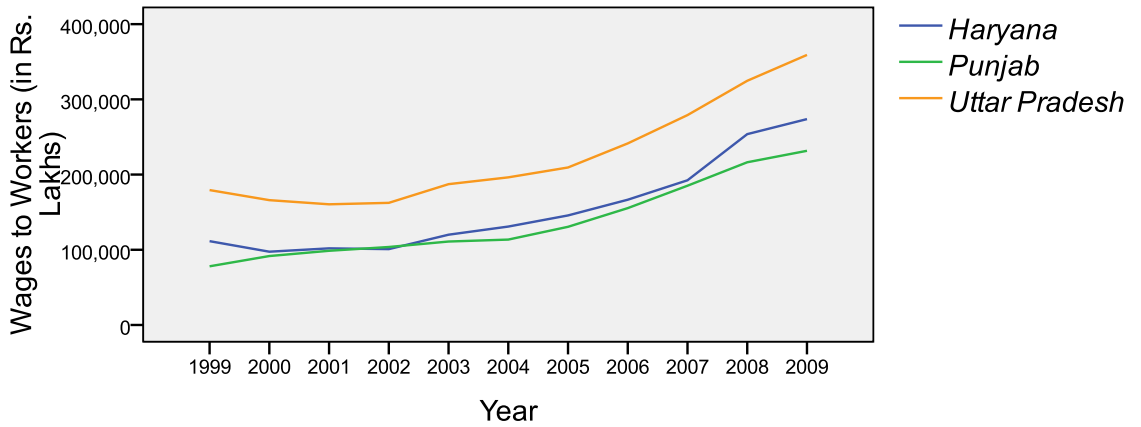
Wages to Workers: All India

4.7   TOTAL EMOLUMENTS:

The amounts of total emoluments indicates the purchasing power that goes into the hands of the persons engaged in industries. This more aptly represents the socio-economic impact of industrialisation. Himachal Pradesh and Uttarakhand were at same level in 1998-99 in terms of total emoluments. But if we compare the levels in the year 2008-09 the emoluments in Uttarakhand were more than 3.3 times that of Himachal Pradesh. This shows the unequal impact of the package to the Special Catogory States.

Table 4.7: Total Emoluments (in Rs. Lakhs)

Year	J & K	H.P.	U.K.	Haryana	Punjab	U.P.	All India
1998-99	11,754	18,899	20,468	208,536	132,861	335,092	4,462,585
1999-00	11,455	19,817	18,791	203,289	155,770	318,270	4,784,351
2000-01	10,578	22,320	53,211	215,948	166,622	312,611	5,071,873
2001-02	11,525	22,723	43,496	221,208	171,289	313,219	5,105,957
2002-03	12,108	22,785	45,035	242,043	182,847	360,871	5,515,801
2003-04	12,897	28,170	46,881	288,636	188,288	374,754	5,833,675
2004-05	18,920	33,024	53,950	312,879	215,155	415,176	6,440,594
2005-06	21,187	51,765	66,962	361,896	257,412	485,517	7,400,280
2006-07	27,290	63,773	96,382	417,805	312,042	588,973	8,875,099
2007-08	33,417	100,197	135,239	548,442	376,561	684,339	10,544,284
2008-09	46,279	151,271	508,452	725,083	477,191	915,919	15,233,620
Annual Growth (1998-2003)	1	4	24	3	8	2	5
Annual Growth (2003-2009)	47	94	172	33	27	26	29
Difference in Growth in the Pre Package & Package Period	46	90	147	30	19	24	25
Growth Due to Package (Before and After Frame)	22	65	123	Adjustment Factor: 24.48			
Growth Due to Package (With & without Frame)	18	65	143	Adjustment Factor: 28.58			

If we compare the pre-package period total emoluments with the package-period emoluments, there was sharp increase for all the states. This trend is commensurate with the trade cycle pattern for the data during this period. Uttarakhand far outperformed all the other states in both the pre-package and

package-period recording 172% growth per annum followed by 94% growth in case of Himachal Pradesh. Jammu & Kashmir recorded the growth of 47% per annum which in comparison to the all India average of 29% is not that impressive.
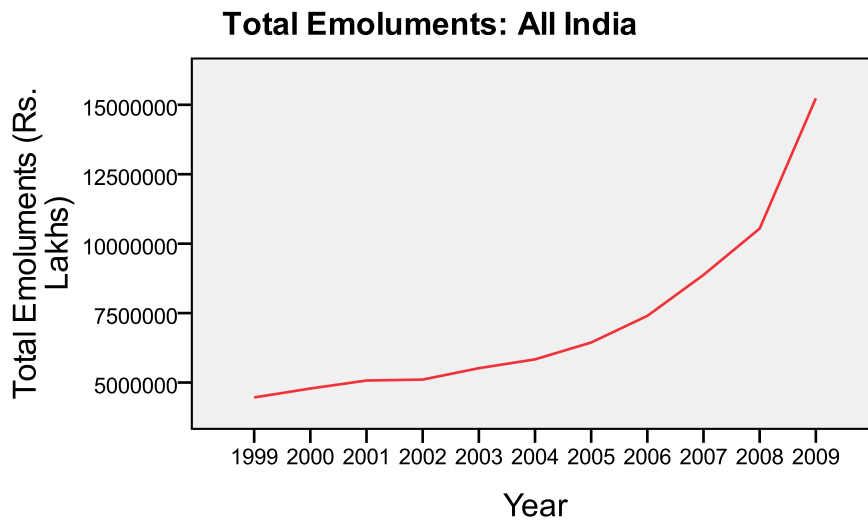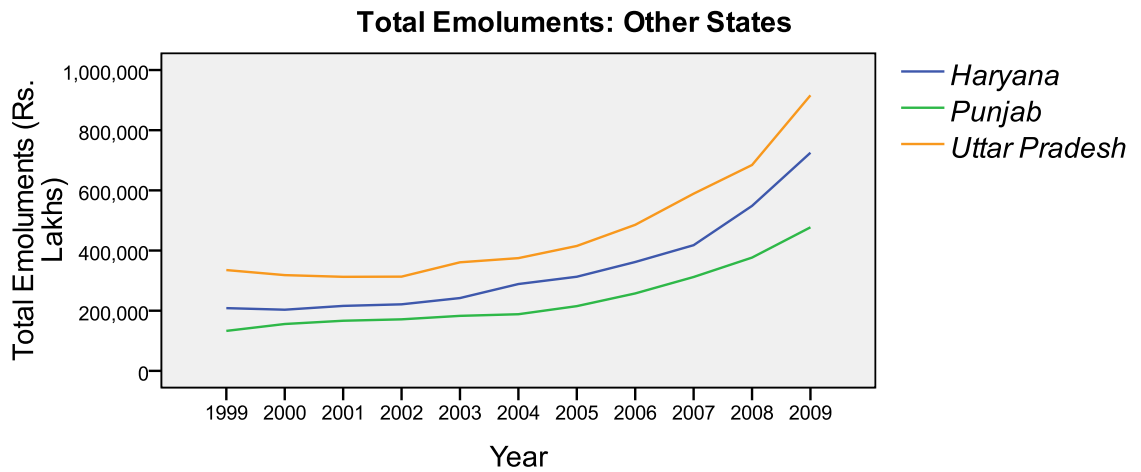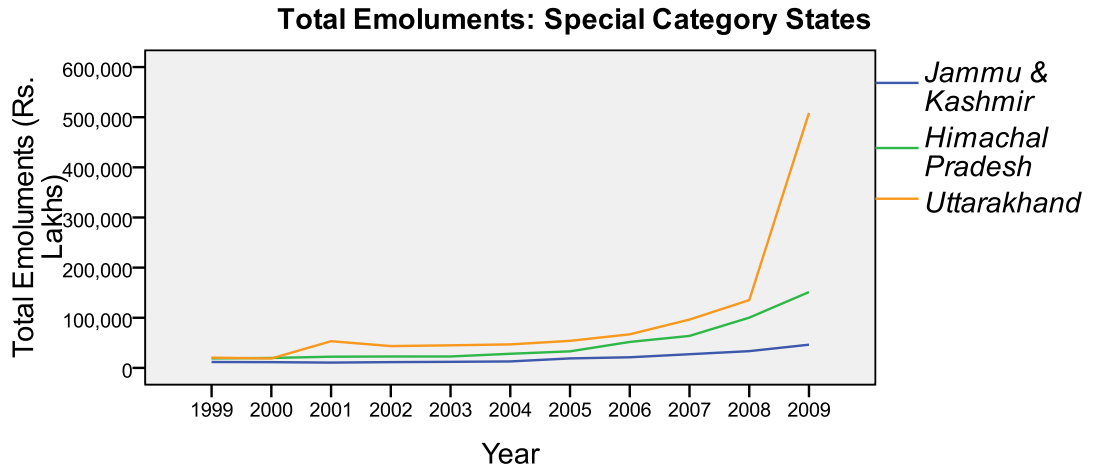
The package to special category states explained 123% annual growth in total emoluments in Uttarakhand in a before- and after- framework followed by 65% in case of Himachal Pradesh and only 22% in case of Jammu & Kashmir. In terms of with- and without framework, the package explained 143% annual average growth in total emoluments in Uttarakhand followed by 65% in Himachal Pradesh and only 18% in case of Jammu & Kashmir.

The bar diagram of the average annual growth rates shows a very high tower in respect of Uttarakhand followd by Himachal Pradesh during the package-period. Since Uttarakhand had been performing much better than other states even in the pre-package period, it seems that since the formation of the separate state of Uttarakhand the untapped potential was unleashed leading to high growth even in the absence of the package and really spectacular growth during the package period.

Annual Growth Rate of Total Emoluments
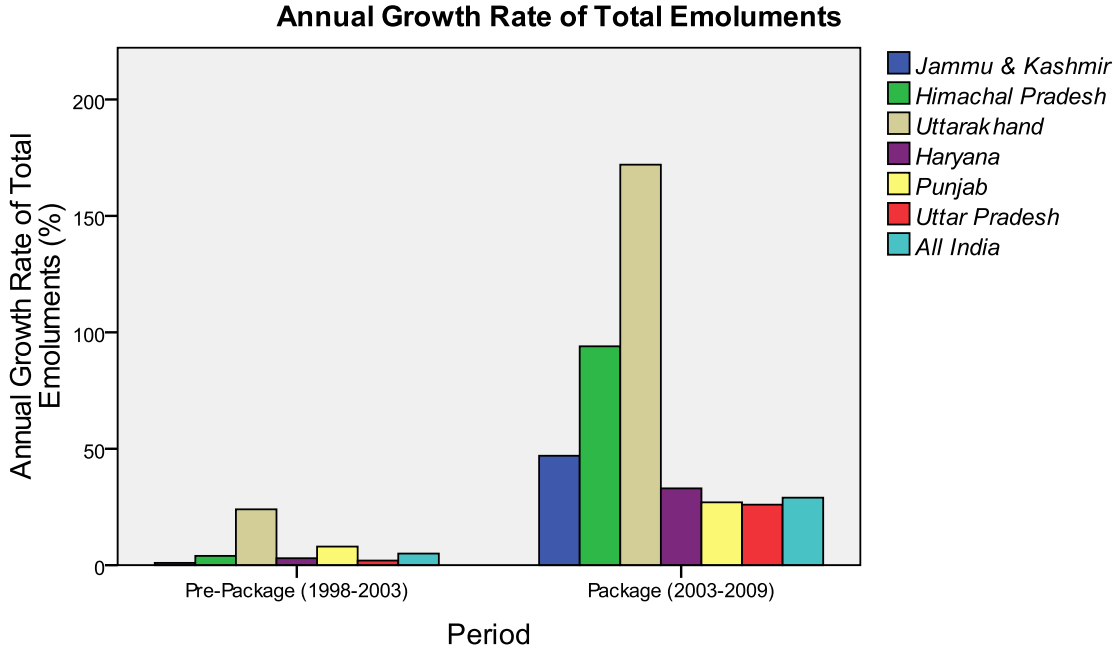
The graph shows that Uttarakhand and Himachal Pradesh were at the same level until the year 2008 and it was in the year 2008-2009 that Uttarakhand leaped

much ahead of Himachal Pradesh with a spectacular growth shown in the graph.

Total Emoluments: Special Category States

Total Emoluments: Other States

Total Emoluments: All India

4.8   NET VALUE ADDED:

The net value added may be treated as the most significant indicator of the level of industrialisation in a state. Here it must be pointed out that Uttarakhand has the highest net value added among all the states in the year 2008-09 at Rs. 2,843,285 Lakh taking over Uttar Pradesh at Rs. 2,413,888 Lakh and Haryana Rs. 2,035,386 Lakh. Even more surprising is the fact that even Himachal Pradesh has net value added at Rs. 1,333,237 Lakh which is greater than that of Punjab at Rs. 1,256,840 Lakh. Since the net value added is one of the best possible indicators of industrialisation, though it ignores the population and area parameters of the state, it reflects that Uttarakhand and Himachal Pradesh have reached quite high levels of industrialisation in terms of net value added. If these figures are sustainable, then the objective of the package to the special category states seems to have been fulfilled. Naturally once the lagging states attain the level of industrialisation in the other neighbouring states there may be no justification of extending the package for further period.

Table 4.8: Net Value Added (in Rs. Lakhs)

Year	J & K	H.P.	U.K.	Haryana	Punjab	U.P.	All India
1998-99	15,220	87,395	51,734	546,899	498,800	1,046,697	14,546,105
1999-00	21,260	112,132	51,781	650,151	559,388	1,022,958	15,497,442
2000-01	15,947	130,789	96,136	557,054	430,080	957,702	14,362,141
2001-02	16,237	128,547	82,468	651,278	542,928	1,000,649	14,430,212
2002-03	18,116	143,162	133,457	765,728	548,490	1,136,484	17,234,004
2003-04	18,771	174,991	151,438	914,334	531,406	1,264,899	20,293,276
2004-05	57,597	218,516	194,801	1,169,560	580,741	1,429,776	25,990,686
2005-06	101,110	569,280	345,668	1,358,920	661,710	1,642,591	31,186,419
2006-07	176,630	709,902	497,901	1,530,711	1,042,899	2,282,767	39,572,526
2007-08	274,702	1,125,555	831,520	1,827,000	1,416,746	2,574,292	48,159,268
2008-09	320,759	1,333,237	2,843,285	2,035,386	1,256,840	2,413,888	52,776,558
Annual Growth (1998-2003)	4	13	32	8	2	2	4
Annual Growth (2003-2009)	278	139	338	28	22	19	34
Difference in Growth in the Pre Package & Package Period	275	126	307	20	20	17	31
Growth Due to Package (Before and After Frame)	256	107	288	Adjustment Factor: 18.73			
Growth Due to Package (With & without Frame)	256	116	316	Adjustment Factor: 22.63			

However, it needs to be observed whether the net value added figures are based on the alleged manipulation and over-reporting of value addition in the Special Category States by the firms to gain excess-benefit illegitimately by availing the excise duty concessions over and above the actual value addition in the state. The analysis of net value added as percentage of output would clear the situation.

The qualitative observations and information gathered during the field survey of the special category states reveals that a number of factories set up in the Special Category states hardly have any actual production in these states. The only purpose of setting up these temporary units is to avoid taxes and availing fiscal incentives. Several such cases have been caught by the government authorities and often reported in the media. During the survey, the study team requested the managers/owners for permission to take photographs of the plant, but most often the requests were turned down on the pretext that as per the rules of their organization, photography is strictly prohibited.

The annual growth rates of the net value added was unexpectedly sharp in case of Uttarakhand at 338% per annum and Jammu & Kashmir at 278% per annum. Himachal Pradesh registered a growth of 139% per annum. However for the neighbouring states Haryana, Punjab and Uttar Pradesh the growth rate of net value added was 28%, 22% and 19% respectively which were even below the All India average of 34%. Considering the package incentives to the special category states it seems that some of the value added from Haryana, Punjab and Uttar Pradesh might indeed have moved out to special category states.

The package to the special category states in terms of before- and after framework explained very sharp annual increase in net valued addded in Uttarakhand at 288% followed by 256% in case of Jammu & Kashmir and 107% in case of Himachal Pradesh. Here Jammu & Kashmir has overtaken Himachal Pradesh. Similarly in terms of with- and without- framework the package explained 316 annual growth in net value added in Uttarakhand followed by 256% in Jammu & Kashmir and 116% in Himachal Pradesh.

The bar diagram highlights the best performance by Uttarakhand which was quite appreciably matched by Jammu & Kashmir during the package period. The performance of Himachal Pradesh was by comparison lacklustre.
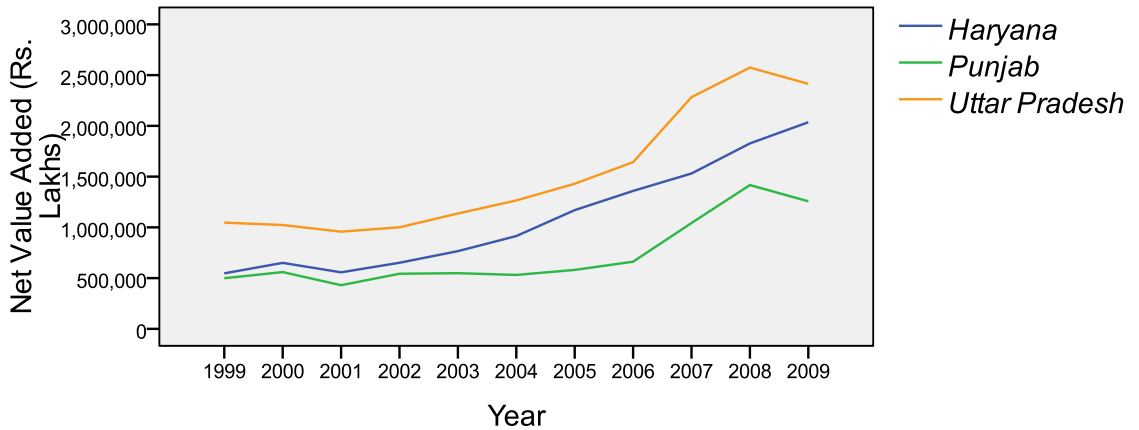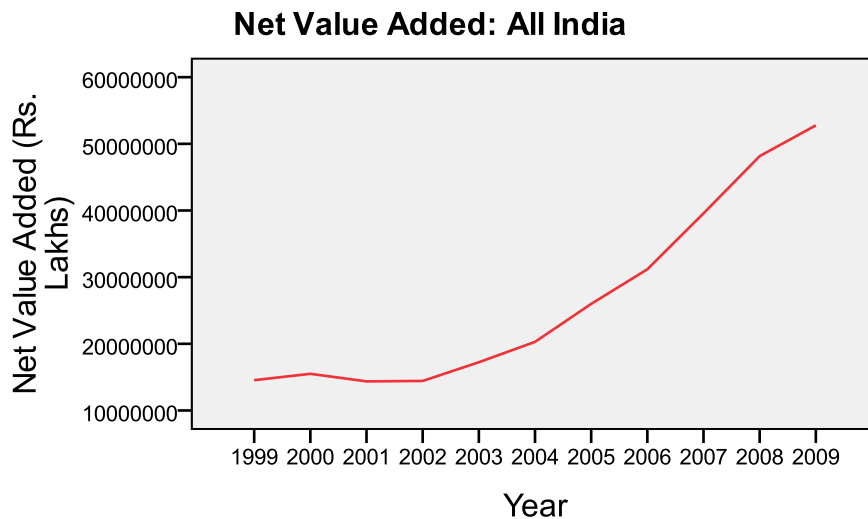
Annual Growth Rate of Net Value Added
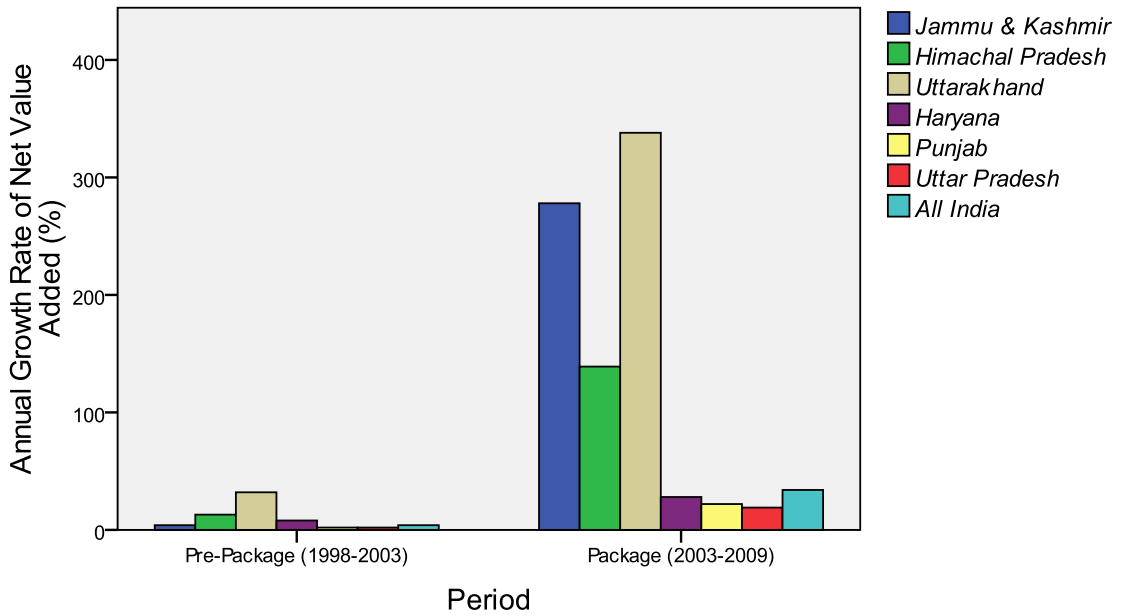
Net Value Added: Special Category States
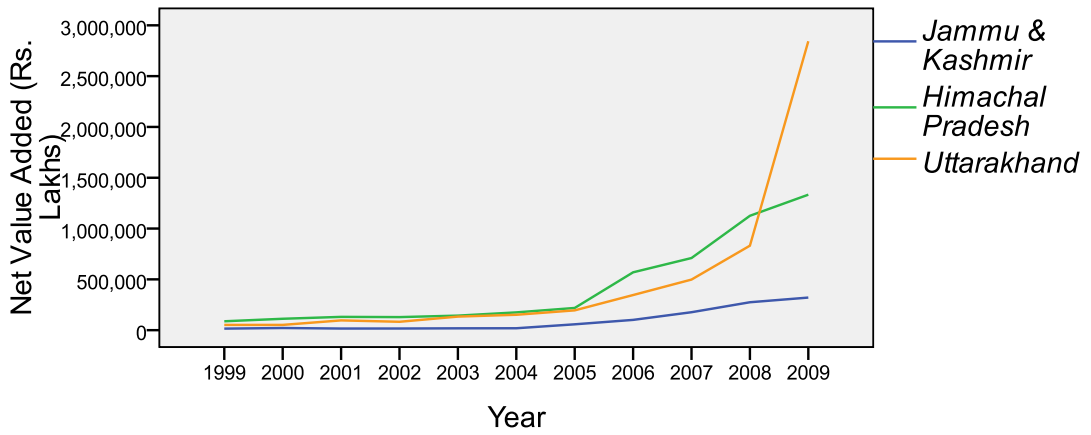
Net Value Added: Other States

Net Value Added: All India

The graph show that Himachal Pradesh was much better than Uttarakhand in terms of net value added upto the year 2007-08. However, in the year 2008-09 Uttarakhand saw a really steep increase in net value added with a more than 3 times increase in just one year. In contrast, in the same year, Uttar Pradesh and Punjab saw declines in net value added shown by the dipping graph.
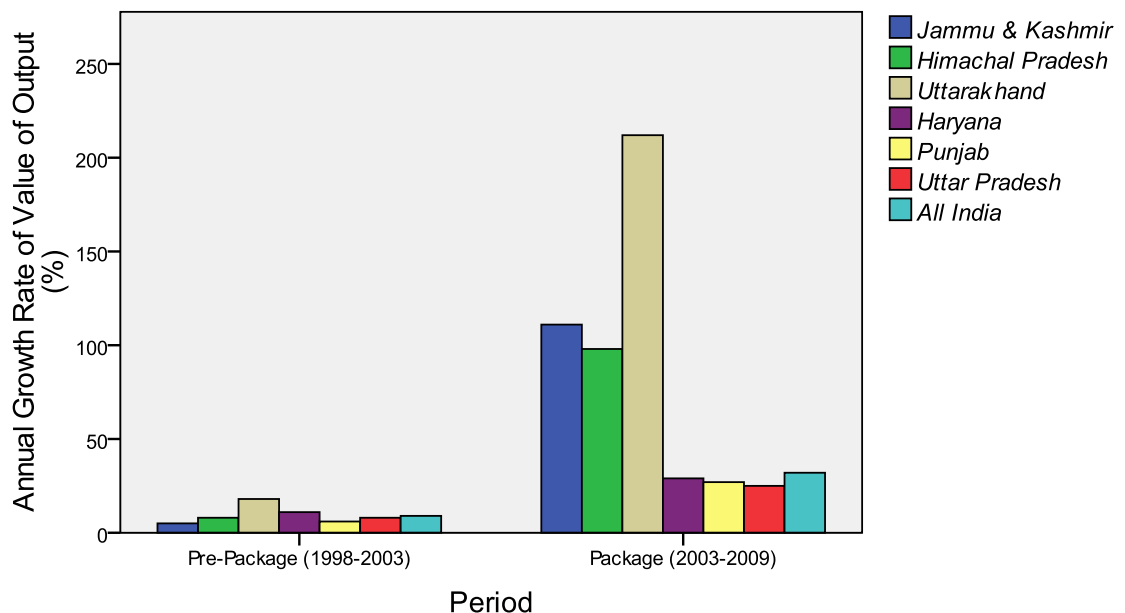
4.9   VALUE OF OUTPUT:

The figures of value of output are in contrast to net value added and the comparison of the data reveals some kind of manipulation of net value added data to illegitimately avail of the fiscal incentives. Though Uttarakhand had overtaken all the states under study in terms of net value added, but in terms of value of output Uttarakhand was behind Haryana, Punjab and Uttar Pradesh. Interestingly Uttar Pradesh had more than double the output of Uttarakhand. Similarly, Himachal Pradesh had more net value added than Punjab, but when seen in terms of value of output Punjab had more than double the value of output than Himachal Pradesh. These contradictory results are hard to explain by any economic logic or theory and the only plausible explanation seems to be rampant misuse of the fiscal incentives granted to the Special Category States.

In comparison to the growth rates of net value added, the growth rates of value of output seem to be decent. Uttarakhand recorded a growth rate of 212% during the package period, followed by 111% for Jammu & Kashmir and 98% for Himachal Pradesh.

Table 4.9: Value of Output (in Rs. Lakhs)

| Year	J & K	H.P.	U.K.	Haryana	Punjab	U.P.	All India
1998-1999	141,734	431,210	318,117	3,386,536	3,067,137	5,811,990	78,377,081
1999-2000	164,584	529,917	314,162	4,445,636	3,817,561	6,104,692	89,793,835
2000-2001	134,272	648,156	488,441	4,467,504	3,501,849	6,485,418	92,690,185
2001-2002	154,879	607,227	521,444	4,555,990	3,802,610	6,703,704	96,245,663
2002-2003	175,631	611,899	603,559	5,261,740	4,057,079	8,052,063	113,056,111
2003-2004	199,618	870,779	724,881	6,196,141	4,393,197	9,340,067	128,738,002
2004-2005	396,342	917,408	1,007,348	7,571,944	5,304,591	10,913,874	167,256,142
2005-2006	699,467	1,790,771	1,558,012	8,579,899	5,943,945	11,886,143	190,835,548
2006-2007	1,157,433	2,158,438	2,161,728	10,244,621	7,749,046	16,587,655	240,854,764
2007-2008	1,623,015	3,300,801	3,306,679	12,488,415	9,616,285	19,381,502	277,570,904
2008-2009	1,349,375	4,227,948	8,292,360	14,433,596	10,551,352	20,046,266	327,279,786
Annual Growth (1998-2003)	5	8	18	11	6	8	9
Annual Growth (2003-2009)	111	98	212	29	27	25	32
Difference in Growth in the Pre Package & Package Period	107	90	194	18	20	17	23
Growth Due to Package (Before and After Frame)	**88**	**72**	**176**	Adjustment Factor: 18.44			
Growth Due to Package (With & without Frame)	**85**	**72**	**185**	Adjustment Factor: 26.85			

**Annual Growth Rate of Value of Output**

75

The bar diagram reflect that in terms of growth rate of value of output Uttarakhand again is an outstanding performer and Jammu & Kashmir has again overtaken Himachal Pradesh in terms of growth rate. The performance of all the three states in the control group viz. Haryana, Punjab and Uttar Pradesh is below the national average.

The package explained 176% annual growth in value of output in before- and after- framework in Uttarakhand followed by 88% in Jammu & Kashmir and 72% in Himachal Pradesh. In terms of with- and without- framework the package explained 185% annual growth in value of output in Uttarakhand followed by 85% in Jammu & Kashmir and 72% in Himachal Pradesh.

As in almost all the figures for the year 2008-09 in case of Uttarakhand, there is a very sharp increase in the graph.

Value of Output: Special Category States

Value of Output: Other States

Value of Output: All India
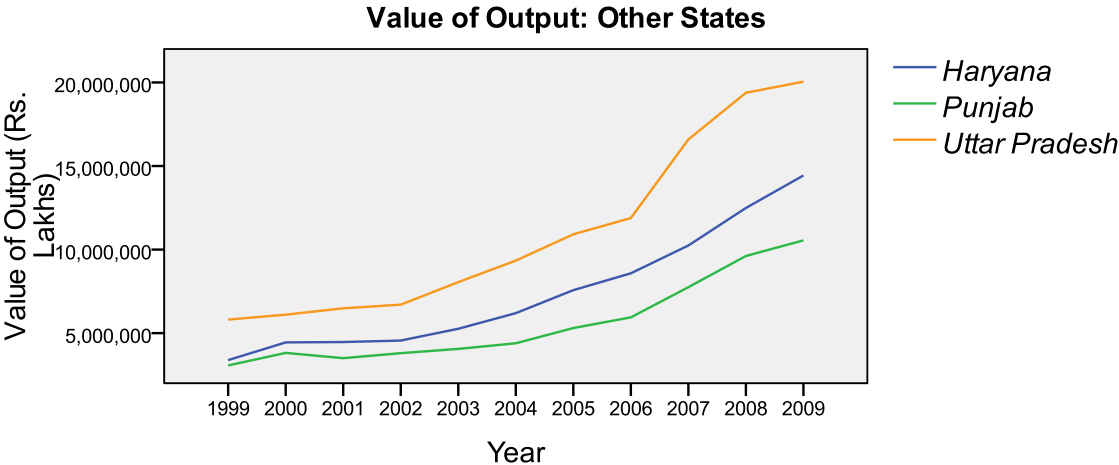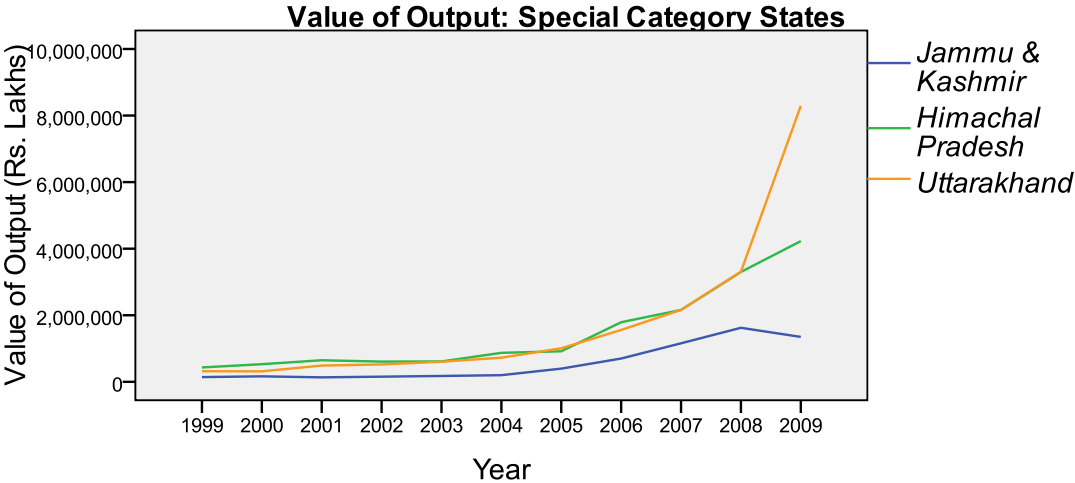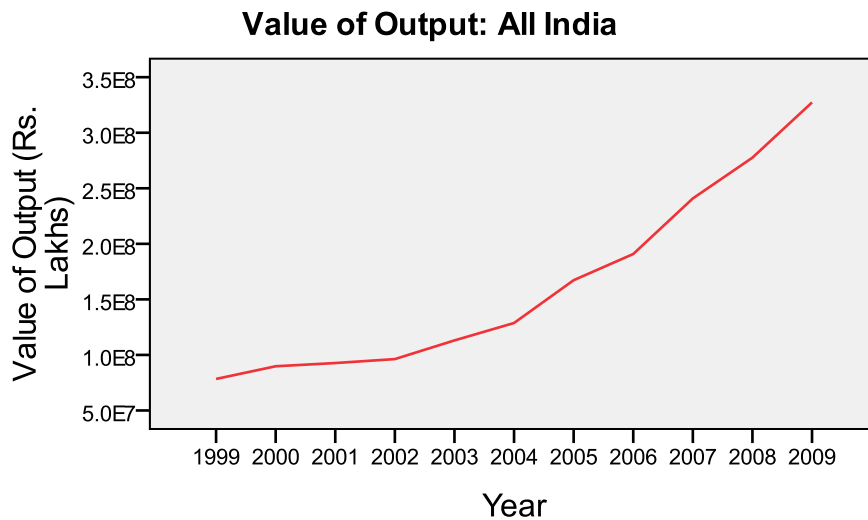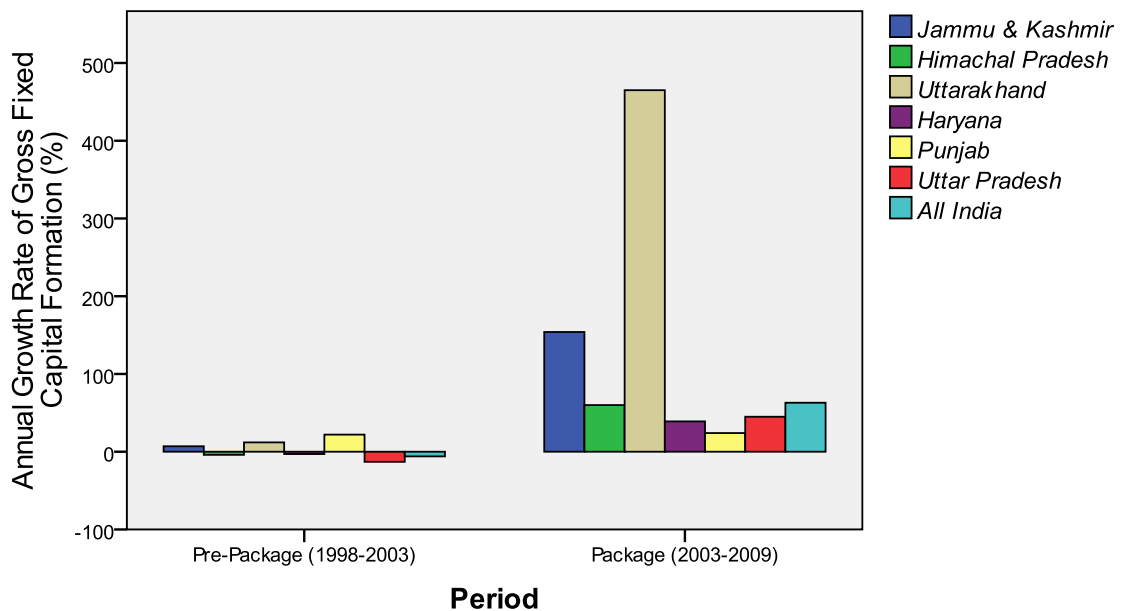

4.10 GROSS FIXED CAPITAL FORMATION:

Uttarakhand has gross fixed capital formation almost 4.8 time that of Himachal Pradesh in the year 2008-09. It is surprising in view of the fact that in the year 1998-99 it was the other way round and Himachal Pradesh had 3.4 times gross fixed capital formation. For Himachal Pradesh the figures show drastic fluctuations. For Uttarakhand the gross fixed capital formation is even greater than that for Punjab. Uttarakhand recorded 465% per annum growth while J&K recorded 154% growth. However, Himachal Pradesh recorded a growth rate of only 60% per annum which is even below the All India average of 63 percent. Other neighbouring states of Haryana, Punjab and Uttar Pradesh also recorded growth much below the national average. Uttarakhand seems to be the major beneficiary in view of the package specially the capital subsidy in this particular context.

In before- and after- framework, the package to special category states explained 419% annual increase in gross fixed capital formation in Uttarakhand, 113% in Jammu & Kashmir and only 31% in Himachal Pradesh. Similarly in terms of with- and without framework the package explained 429% annual increase in Uttarakhand, 118% in Jammu & Kashmir and only 24% in Himachal Pradesh. The figures indicate that Himachal Pradesh has lagged far behind Uttarakhand in almost all the indicators while in certain crucial variables even Jammu & Kashmir is moving faster than Himachal Pradesh.
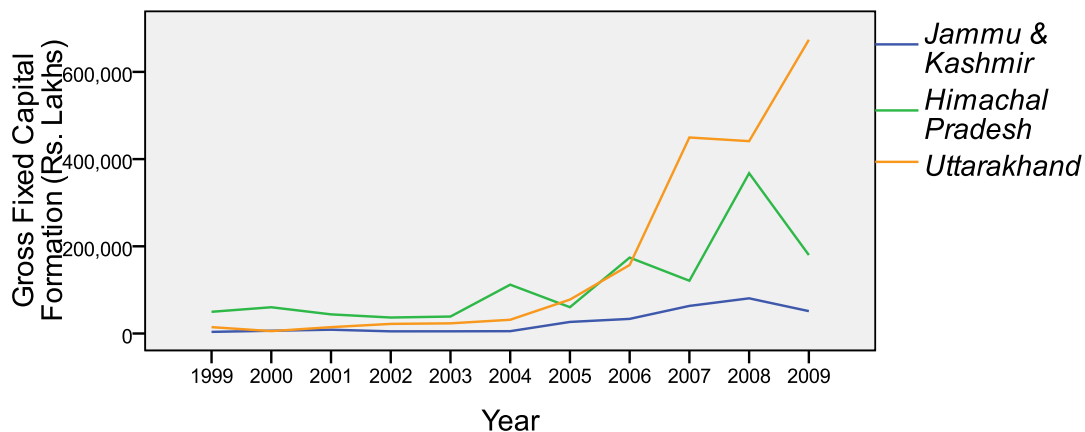
Table 4.10: Gross Fixed Capital Formation (in Rs. Lakhs)

| Year	J & K	H.P.	U.K.	Haryana	Punjab	U.P.	All India
1998-1999	3,737	49,775	14,592	303,318	113,480	815,327	6,907,081
1999-2000	6,295	60,191	5,442	312,095	124,014	354,122	4,867,882
2000-2001	8,669	43,879	14,570	239,306	99,399	307,076	4,687,927
2001-2002	4,948	36,640	22,028	215,850	97,817	362,851	7,015,145
2002-2003	5,020	38,874	23,292	259,422	236,616	296,900	4,745,424
2003-2004	5,316	111,981	31,486	202,738	119,714	496,002	5,753,380
2004-2005	26,515	60,308	77,726	366,041	216,443	513,637	7,525,046
2005-2006	33,518	174,099	157,092	431,504	322,930	913,831	12,607,674
2006-2007	63,271	121,024	449,566	525,174	434,598	981,016	14,432,500
2007-2008	80,668	367,642	441,121	733,673	466,081	1,303,665	17,779,098
2008-2009	51,311	179,940	673,613	866,919	581,302	1,092,533	22,594,701
Annual Growth (1998-2003)	7	-4	12	-3	22	-13	-6
Annual Growth (2003-2009)	154	60	465	39	24	45	63
Difference in Growth in the Pre Package & Package Period	147	65	453	42	3	57	69
Growth Due to Package (Before and After Frame)	**113**	**31**	**419**	Adjustment Factor: 33.96			
Growth Due to Package (With & without Frame)	**118**	**24**	**429**	Adjustment Factor: 35.99			

Annual Growth Rate of Gross Fixed Capital Formation

Gross Fixed Capital Formation: Special Category States

Gross Fixed Capital Formation: Other States
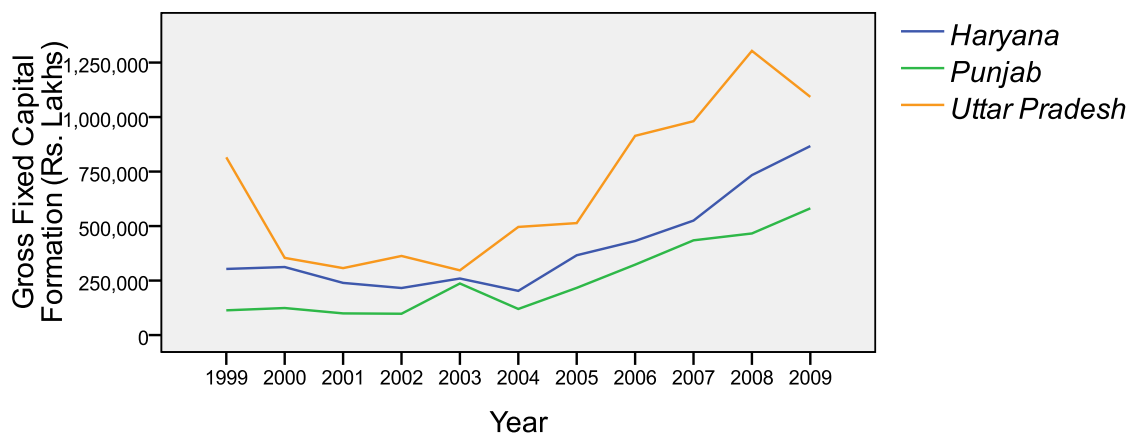
Gross Fixed Capital Formation: All India
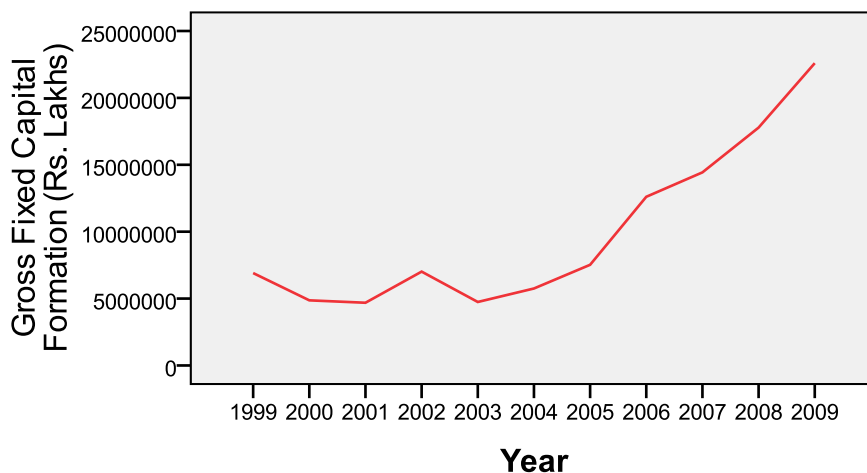
The bar diagram indicates the overarching tower for Uttarakhand followed by J&K. However, the bar for Himachal Pradesh is quite below, even lower than the All India level. It seems that Himachal Pradesh has failed to attract capital despite the package incentives or it is Uttarakhand which had been more attractive to the

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investors thereby accumulating most of the investments. The graph for Himachal Pradesh clearly shows drastic fluctuations while Uttarakhand had exceptional growth during two years 2006-07 and 2008-09.

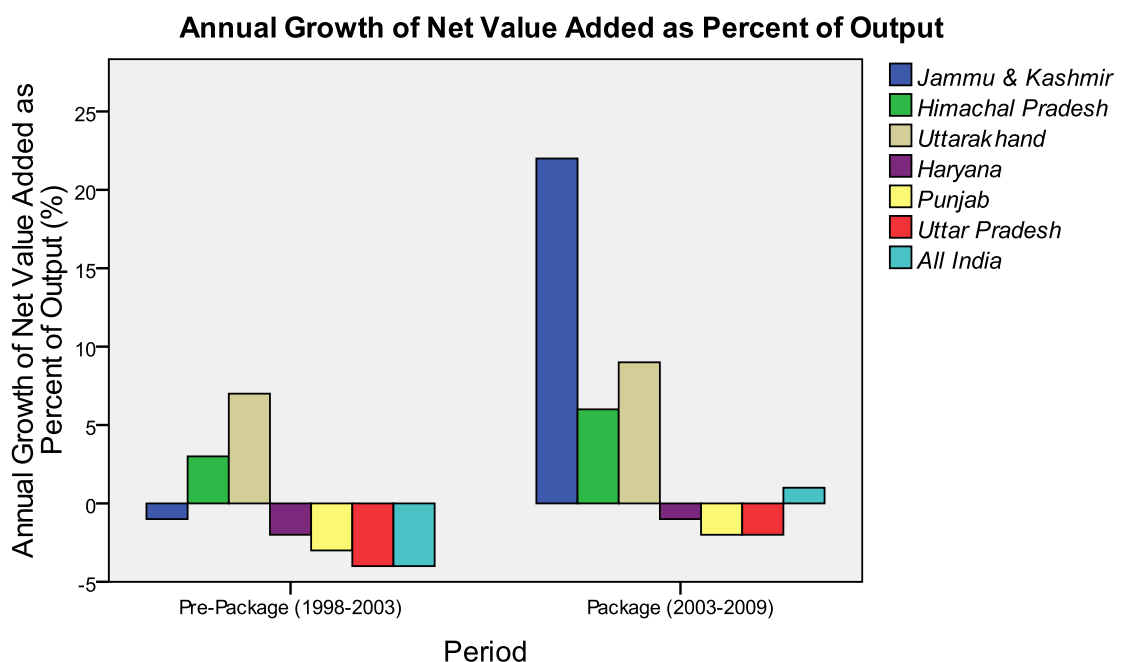## 4.11 NET VALUE ADDED AS A PERCENT OF OUTPUT:

The net value added as a percent of output was calculated from the data taken from Annual Survey of Industries to explain the unrealistically high net value added in the Special Category States. If we see the data in the Pre-Package period the net value as a percent of output hovered around the national average with the exception of J&K which had the ratio at 10.74%. However, during the package period there was sharp increase in the ratios to 34.29% for Uttarakhand and 31.53% for Himachal Pradesh and 23.77% for J&K while there were declines in the ratios for the control group states with percentage of only 11.91% for Punjab, 12.04% for UP and 14.10 for Haryana much below the All India average of 16.13%.

Table 4.11: Net Value Added as Percent of Output

| Year	J & K	H.P.	U.K.	Haryana	Punjab	U.P.	All India
1998-1999	10.74	20.27	16.26	16.15	16.26	18.01	18.56
1999-2000	12.92	21.16	16.48	14.62	14.65	16.76	17.26
2000-2001	11.88	20.18	19.68	12.47	12.28	14.77	15.49
2001-2002	10.48	21.17	15.82	14.29	14.28	14.93	14.99
2002-2003	10.31	23.40	22.11	14.55	13.52	14.11	15.24
2003-2004	9.40	20.10	20.89	14.76	12.10	13.54	15.76
2004-2005	14.53	23.82	19.34	15.45	10.95	13.10	15.54
2005-2006	14.46	31.79	22.19	15.84	11.13	13.82	16.34
2006-2007	15.26	32.89	23.03	14.94	13.46	13.76	16.43
2007-2008	16.93	34.10	25.15	14.63	14.73	13.28	17.35
2008-2009	23.77	31.53	34.29	14.10	11.91	12.04	16.13
Annual Change (1998-2003)	-1	3	7	-2	-3	-4	-4
Annual Change (2003-2009)	22	6	9	-1	-2	-2	1
Difference in Growth in the Pre Package & Package Period	23	3	2	1	1	2	5
Change Due to Package (Before and After Frame)	**21**	**1**	**0**	Adjustment Factor: 1.58			
Change Due to Package (With & without Frame)	**23**	**7**	**11**	Adjustment Factor: -1.65			

The net value added as percentage of output in the before- and after-framework saw no change in case of Uttarakhand due to impact of the package while there was increase of 1% per annum in case of Himachal Pradesh. However, in case of Jammu & Kashmir there was a sharp increase of 21%. In terms of with- and without- framework, however, the net value added as percentage of output in case of Uttarakhand due to the impact of package had an increase of 11% per annum. This increase in case of Jammu & Kashmir was highest at 23% per annum while in case of Himachal Pradesh it was 7%. Clearly some shift of net value added to the special category states merely for tax benefit purpose seems to be inevitable.

The bar diagram shows that for all the three control group states of Haryana, Punjab and UP there was negative change in the ratios. The sharpest increase in the ratio was in the case of J&K at 22% followed by Uttarakhand at 9% and 6% for Himachal Pradesh. During the pre-package period except HP and UK all the other states had shown declines in the ratio. Jammu & Kashmir which had the lowest ratio in the pre-package period among all the states rose sharply upwards to overtake other neighbouring states of the control group in package period which had shown negative growth.

Annual Growth of Net Value Added as Percent of Output

In terms of the graph the net value added as percentage of output shows fluctuating trend for Himachal Pradesh which has been overtaken by Uttarakhand in the year 2008-09. The graph of Jammu & Kashmir was the lowest in the pre-

package years rose sharply above the other states in the control group. This rising trend is clearly attributable to the package to special category states and perhaps instead of industrialisation, it reflects the rampant misuse of the fiscal incentives.

Net Value Added as Percent of Output
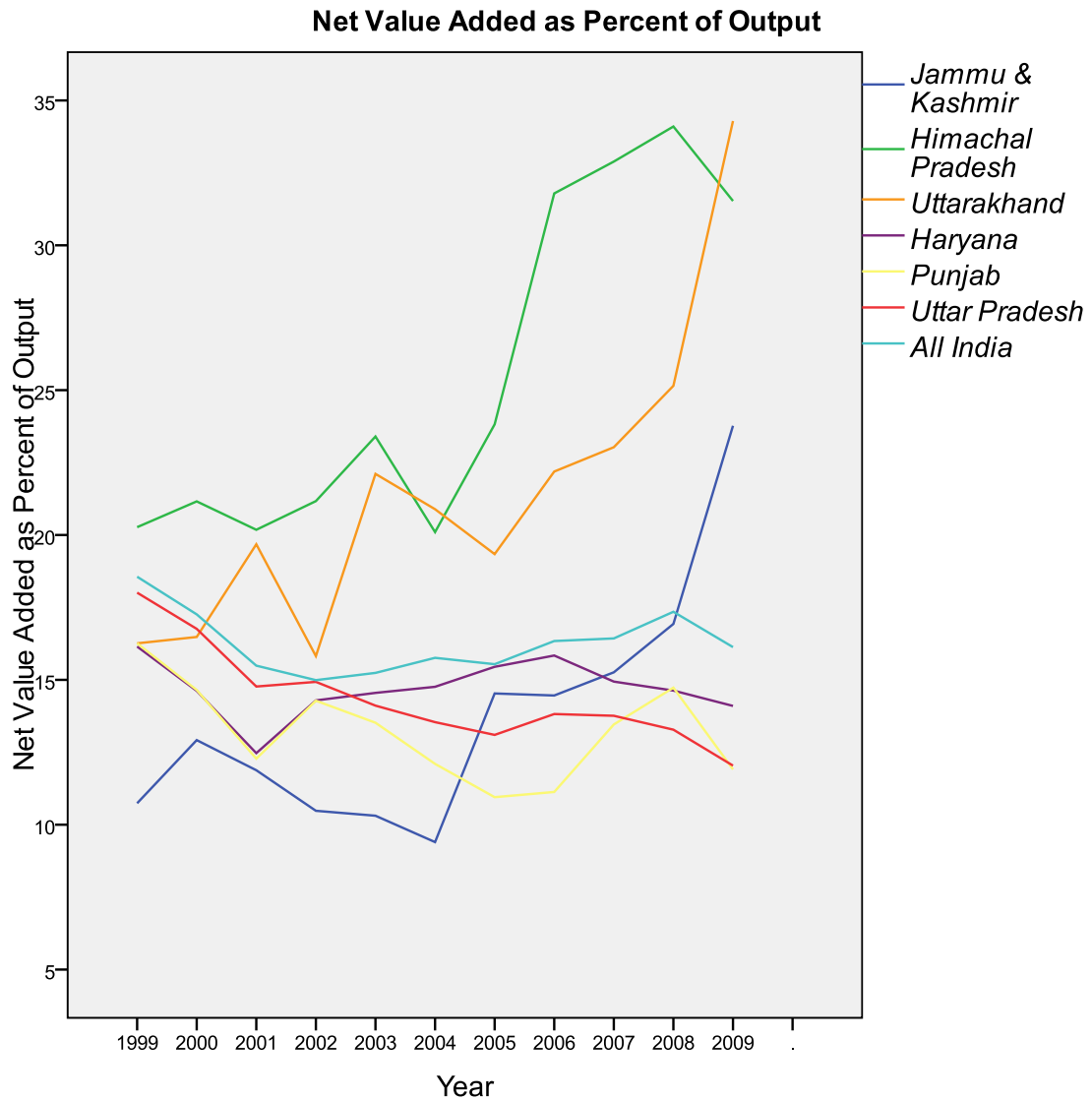
4.12   AVERAGE ANNUAL WAGE PER WORKER:

The data on average annual wage per worker calculated from the Annual Survey of Industries data reveals the inter-state disparities. In comparison to the other industrial data the trend here is quite different. Surprisingly, the package to the special category states does not seem to have any significant impact on the average annual wages per worker. The annual growth rate of the wages for the special category states did not show any appreciable increase. In fact for Uttarakhand the growth rate during the pre-package period was 32% but during the package period it came down sharply to 4% per annum. The growth rate for HP increased from a

negative figure of - 1% in the pre-package period to 7% during the package period just equivalent to the All India average. On the other hand for J&K the increase was from 3% during the pre-package period to 4% during the package period, much below the All India average. All the neighbouring states viz. Haryana, Punjab and Uttar Pradesh had increase at 6% per annum during the package period, below the national average.

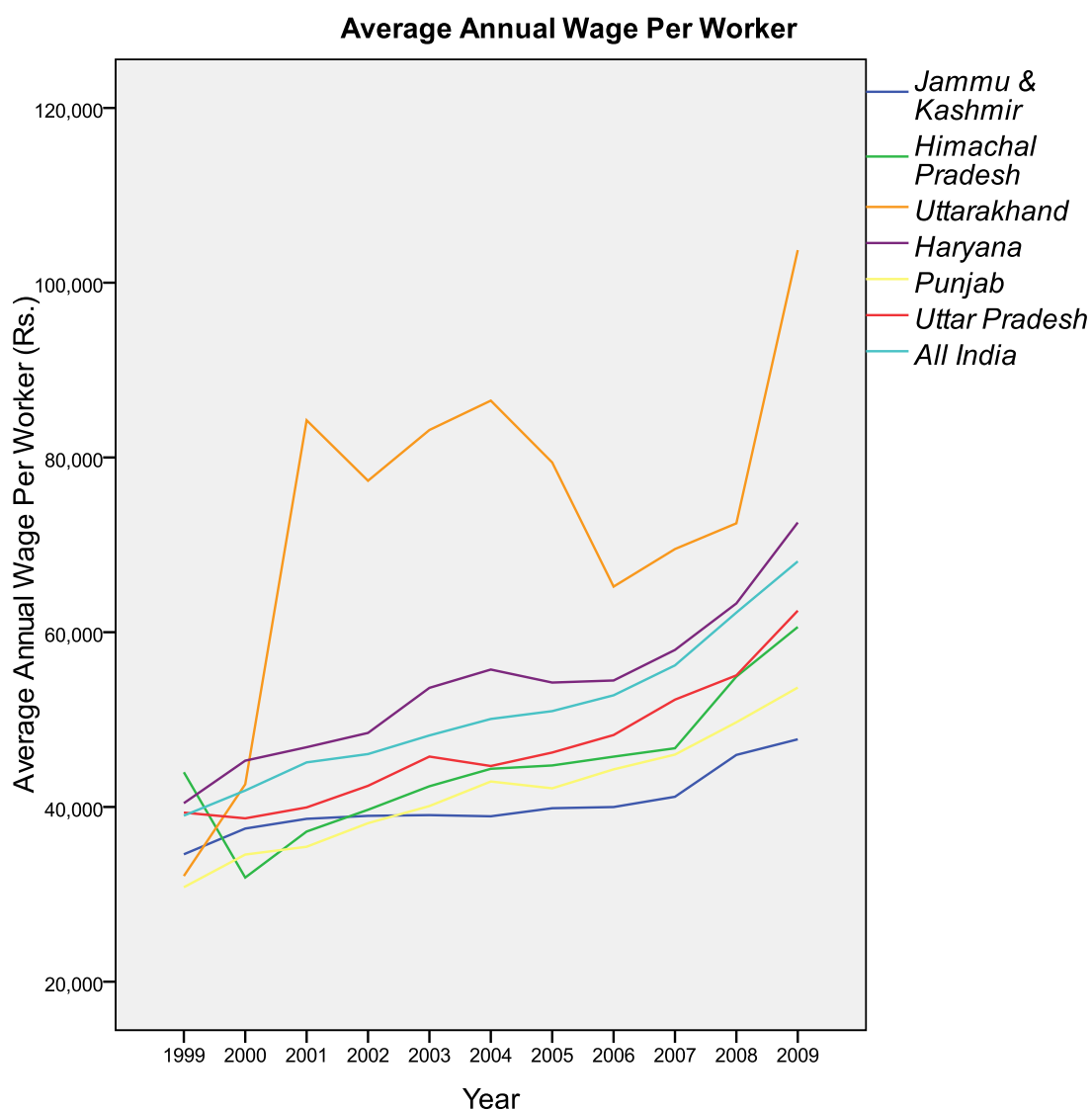*Table 4.12: Average Annual Wage per Worker (in Rs.)*

Year	J & K	H.P.	U.K.	Haryana	Punjab	U.P.	All India
1998-1999	34,582	43,973	32,097	40,431	30,812	39,352	39,008
1999-2000	37,529	31,920	42,594	45,298	34,554	38,696	41,881
2000-2001	38,642	37,186	84,257	46,837	35,446	39,947	45,101
2001-2002	38,983	39,679	77,333	48,474	38,143	42,418	46,054
2002-2003	39,066	42,368	83,142	53,630	40,103	45,766	48,185
2003-2004	38,931	44,366	86,503	55,727	42,913	44,685	50,071
2004-2005	39,854	44,750	79,428	54,237	42,132	46,228	50,968
2005-2006	39,991	45,757	65,219	54,474	44,301	48,232	52,779
2006-2007	41,167	46,718	69,518	57,972	45,994	52,281	56,203
2007-2008	45,956	54,918	72,461	63,295	49,689	55,058	62,246
2008-2009	47,743	60,596	103,729	72,551	53,663	62,462	68,103
Annual Growth (1998-2003)	3	-1	32	7	6	3	5
Annual Growth (2003-2009)	4	7	4	6	6	6	7
Difference in Growth in the Pre Package & Package Period	1	8	-28	-1	0	3	2
Change Due to Package (Before and After Frame)	1	7	-28	Adjustment Factor: 0.59			
Change Due to Package (With & without Frame)	-2	1	-2	Adjustment Factor: 5.87			

The change in average annual wage per worker in the before- and after-framework reflected surprising results with a sharp decline in growth rate in the package period in case of Uttarakhand, leading to negative impact of the package to special category states of -28% per annum. However, in case of Himachal Pradesh there was an increase of 7% per annum while in case of Jammu & Kashmir there

was an increase of 1% per annum. However, analysis in terms of the with- and without- framework, there was a decline at -2% per annum in case of Uttarakhand as well as Jammu & Kashmir. However, in case of Himachal Pradesh there was an increase of 1% per annum. Thus it seems that the package to special category states has not benefited the workers employed in the industry as there were declines in average wage per worker in the special category states except in case of Himachal Pradesh. Perhaps there was downward correction in wage per worker in case of Uttarakhand which had seen drastic increases in the previous few years.

Annual Growth Rate of Wage Per Worker
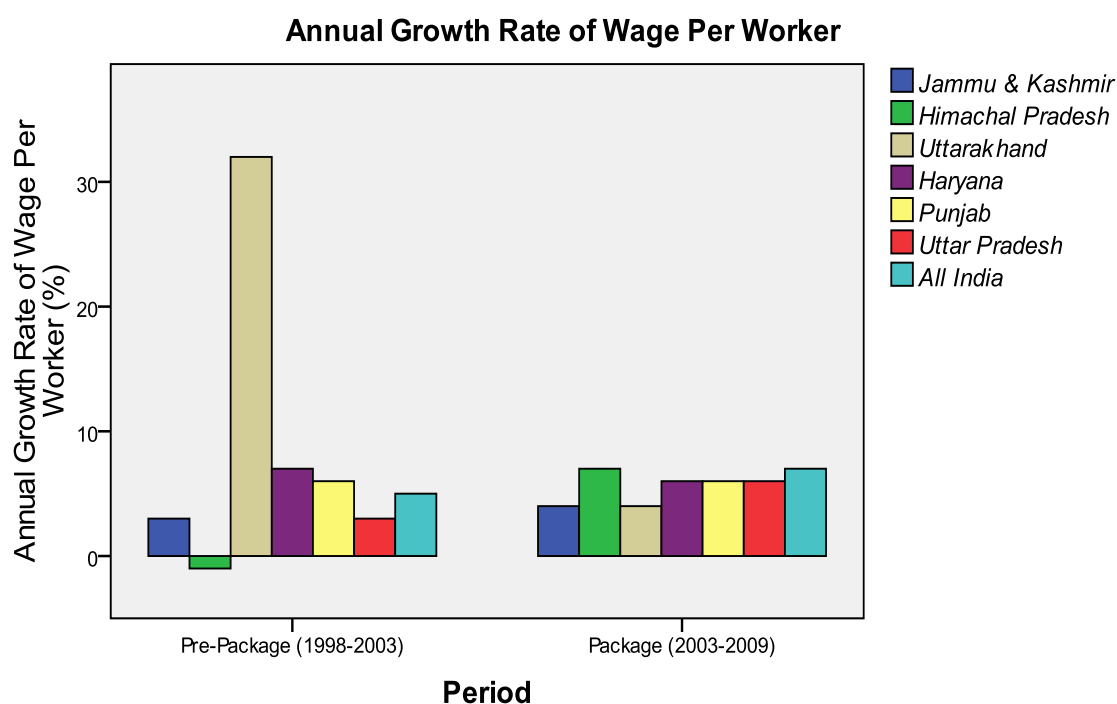
The bar diagram clearly shows that there seems to be no specific trend which may be attributable to the impact of the package on the average annual wage per worker. Uttarakhand had much higher wage rate per worker even in the pre-package period owing to sharp increase in the year 2000-01 which is clearly shown in the graph. During the package period in fact there were dips in the graph for Uttarakhand, but still during the year 2008-09, Uttarakhand had the highest wage rate per worker followed by Haryana and then UP. The lowest wage rates were in J&K. The graphs on wage rate per worker also do not seem to show any sharp cyclical trend like some other variables have shown in the study. The growth rates in both the periods are more or less similar.

Average Annual Wage Per Worker

4.13 AVERAGE ANNUAL EMOLUMENTS PER EMPLOYEE

The average annual emoluments per employee were calculated from the Annual Survey of Industries data. Similar to the annual wage per worker, there seems to be no particular trend which may be specifically attributable to the impact of the package to special category states. In the year 2002-03, before the grant of the package, Uttarakhand had the highest emoluments per worker at Rs. 108557 followed by Haryana at Rs. 80744, HP at Rs. 66969. The lowest figure was for J&K.

More or less similar trend prevailed during the package period with Uttarakhand having the highest emoluments in the year 2008-09 at Rs. 221329 followed by Himachal Pradesh at Rs. 137217. J&K had the lowest emoluments per employee at Rs. 84790. Although during the package period HP has overtaken Haryana and Uttar Pradesh in terms of emoluments, but this cannot be attributed to

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the impact of the special package but the mere fact that Haryana, Punjab and UP during the package period had shown growth even below the All India average while UK and HP had rates just little above the national average.

Table 4.13: Average Annual Emoluments Per Employee (in Rs.)

Year	J & K	H.P.	U.K.	Haryana	Punjab	U.P.	All India
1998-1999	47485	56140	44204	55376	41226	53947	51960
1999-2000	43537	49355	54727	68103	45998	55669	58540
2000-2001	45563	56696	123368	71772	46470	57919	63495
2001-2002	47093	62662	106399	77008	49127	61034	65880
2002-2003	48664	66969	108557	80744	52078	66562	69504
2003-2004	47852	76647	112800	90690	55972	65792	74125
2004-2005	60856	74568	104227	88169	55015	70644	76187
2005-2006	52173	91075	94184	91352	58603	74874	81218
2006-2007	57187	94127	101390	97911	61491	84720	85929
2007-2008	63453	104795	104363	107618	68422	91104	100878
2008-2009	84790	137217	221329	119350	87594	124000	134484
Annual Growth (1998-2003)	0	4	29	9	5	5	7
Annual Growth (2003-2009)	12	17	17	8	11	14	16
Difference in Growth in the Pre Package & Package Period	12	14	-12	-1	6	10	9
Change Due to Package (Before and After Frame)	**7**	**9**	**-17**	Adjustment Factor: 4.87			
Change Due to Package (With & without Frame)	**1**	**6**	**6**	Adjustment Factor: 11.24			

Though the wage rate per employee did not show any significant cyclical trend, the emoluments per employee in the two periods show cyclical trends. In the first period the average all India growth was only 7% per annum which increased to 16% per annum. The bar diagram shows exceptional increase in case of Uttarakhand in the pre-package period, perhaps it was due to unleashing of the vast untapped potential after the formation of the separate state. In the package period the bars of all the states are at around similar levels.

The graph for all the states shows more or less similar trend except Uttarakhand which had shown two periods of sharp increase in the years 2000-01

and 2008-09 intervened by declining and fluctuating period.
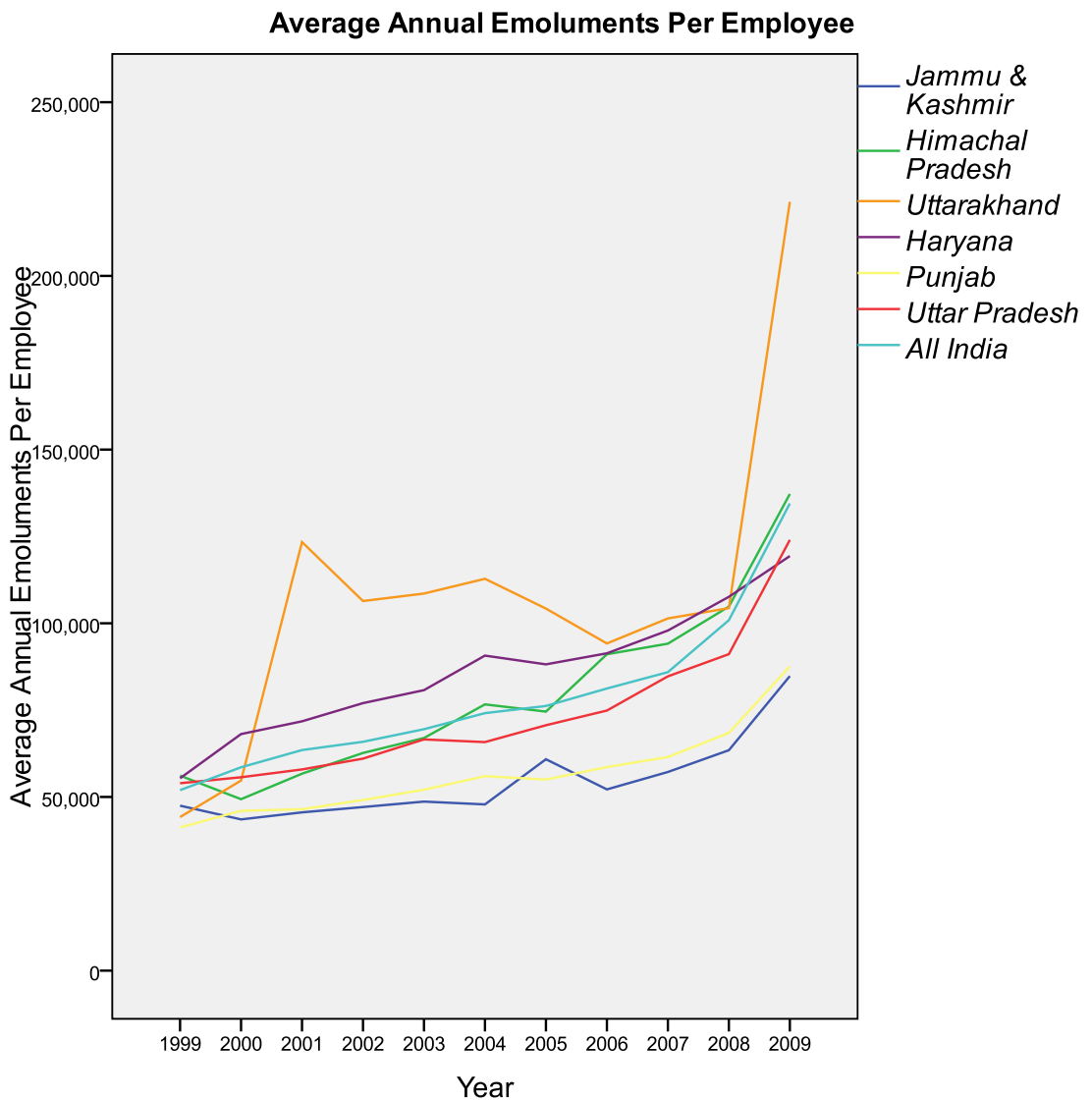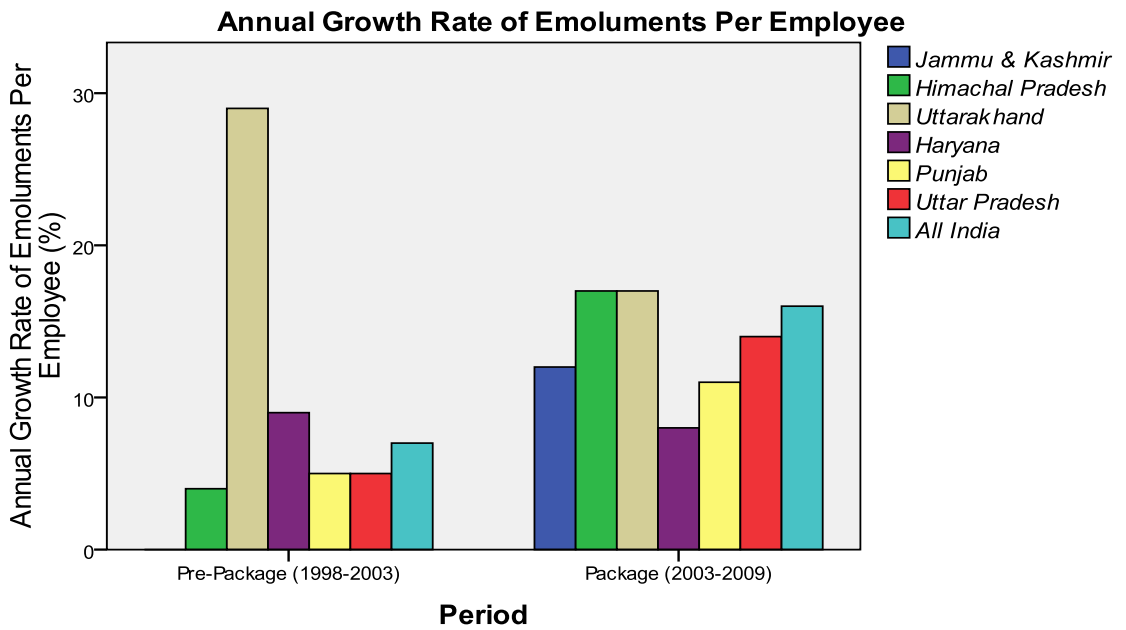
Annual Growth Rate of Emoluments Per Employee

Average Annual Emoluments Per Employee

The impact of the package to special category states in terms of before- and after- framework on the emoluments per employee reflect trends similar to that of wage per worker. While there was a decline at -17% per annum in case of Uttarakhand, Himachal Pradesh saw an increase at 9% per annum and Jammu & Kashmir at 7% per annum. In terms of the with- and without framework, however, all the three states in the special category experienced increases with Uttarakhand and Himachal Pradesh at 6% per annum while Jammu & Kashmir saw increase only at 1% per annum.
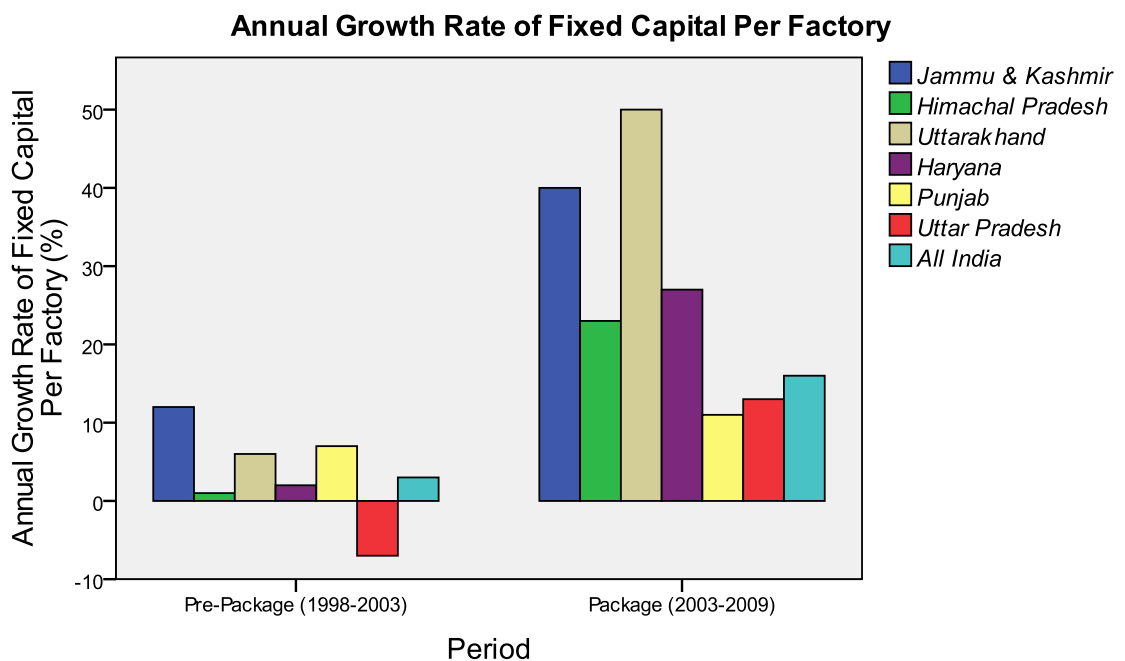
4.14 FIXED CAPITAL PER FACTORY:

The fixed capital per factory was estimated from the data taken from the Annual Survey of Industries. The fixed capital per factory data highlights the fact that capital subsidy has led to high ratios of fixed capital per factory in the special category states.

Table 4.14: Fixed Capital Per Factory (Rs. Lakhs)

| Year	J & K	H.P.	U.K.	Haryana	Punjab	U.P.	All India
1998-1999	70	671	223	294	120	489	297
1999-2000	75	632	221	306	146	366	305
2000-2001	95	672	253	314	119	361	304
2001-2002	105	823	282	324	116	330	336
2002-2003	111	704	286	318	160	317	348
2003-2004	112	1078	321	355	135	324	367
2004-2005	185	911	383	383	141	329	376
2005-2006	225	1027	467	430	167	358	433
2006-2007	264	973	825	507	198	421	494
2007-2008	368	1724	880	613	214	545	577
2008-2009	375	1692	1148	833	263	573	680
Annual Growth (1998-2003)	12	1	6	2	7	-7	3
Annual Growth (2003-2009)	40	23	50	27	11	13	16
Difference in Growth in the Pre Package & Package Period	28	22	45	25	4	20	13
Change Due to Package (Before and After Frame)	**11**	**6**	**28**	Adjustment Factor: 16.63			
Change Due to Package (With & without Frame)	**22**	**6**	**33**	Adjustment Factor: 17.05			

Unlike all other indicators, in respect of fixed capital per factory it is Himachal Pradesh which is still the leader with average fixed capital of Rs. 1692 lakh in the year 2008-09 followed by Uttarakhand at Rs. 1148 lakh. However, in terms of increase in fixed capital per factory, Uttarakhand had more than double the growth rate than HP. The growth rate for UK was 50% per annum compared to only 23% for HP. Haryana also had growth rate above HP at 27% during the package-period. Even J&K had much more growth at 40% per annum in the package-period.

The impact of the package in before and after framework was estimated to result in 28% annual increase in fixed capital per factory in case of Uttarakhand, followed by 11% in case of Jammu & Kashmir and 6% in Himachal Pradesh. In terms of with- and without- framework, the impact of package was estimated to result in 33% per annum increase in fixed capital per factory in case of Uttarakhand, 22% in case of Jammu & Kashmir and 6% in case of Himachal Pradesh. Himachal Pradesh has once again lagged behind not only Uttarakhand but also Jammu & Kashmir in terms of increase. However, in absolute terms Himachal Pradesh is still at the top.

Annual Growth Rate of Fixed Capital Per Factory

The bar diagram shows that the lowest growth rate of fixed capital per factory was in case of Punjab which also had the lowest fixed capital per factory. The impact of the special package is clearly evident with the higher bars for Special category states. The cyclical trend is also visible as the pre-package period clearly shows the

downside of the trade cycle and the package period representing the recovery phase of the cycle. The graphs show fluctuating trends for HP and UK though for other states there was slow and steady upward trend. The graph for HP is much higher than all the other states. This may be explained by the various fiscal incentives over time for the state like capital subsidy that the state has availed over time.

Fixed Capital Per Factory
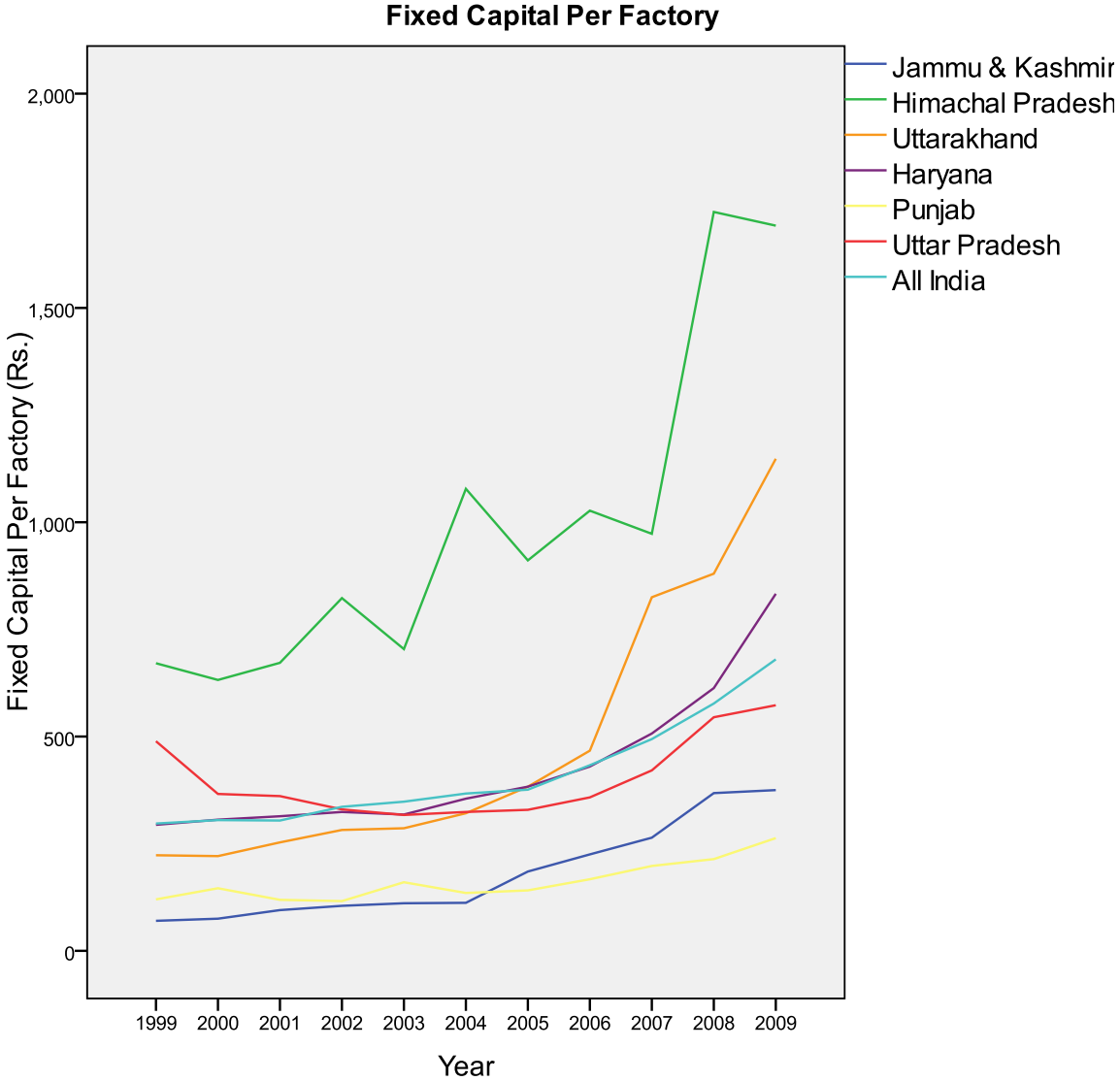
4.15 CAPITAL OUTPUT RATIO:

The capital output ratios, calculated from Annual Survey of Industries data, for both pre-package and package-periods show no cyclical trend and more importantly no impact of the special package. Surprisingly the annual rates of change for all the states for both the periods were negative with the sole exception of J&K during the pre-package period which had positive increase at 5% per annum. The highest capital output ratio was for HP at 0.52 followed by UP at 0.31. The lowest was for

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J&K at 0.18. The average all India ratio was 0.32.

Table 4.15: Capital Output Ratio

Year	J & K	H.P.	U.K.	Haryana	Punjab	U.P.	All India
1998-1999	0.17	0.67	0.50	0.33	0.27	0.88	0.50
1999-2000	0.18	0.61	0.43	0.30	0.26	0.62	0.45
2000-2001	0.25	0.53	0.39	0.31	0.24	0.54	0.43
2001-2002	0.24	0.68	0.38	0.32	0.22	0.45	0.45
2002-2003	0.22	0.59	0.34	0.27	0.28	0.35	0.39
2003-2004	0.19	0.66	0.30	0.24	0.21	0.32	0.37
2004-2005	0.20	0.65	0.29	0.22	0.20	0.29	0.31
2005-2006	0.17	0.46	0.27	0.22	0.23	0.32	0.32
2006-2007	0.14	0.38	0.44	0.22	0.24	0.27	0.30
2007-2008	0.15	0.61	0.39	0.23	0.23	0.30	0.30
2008-2009	0.18	0.52	0.26	0.26	0.25	0.31	0.32
Annual Change (1998-2003)	5	-2	-6	-4	0	-12	-4
Annual Change (2003-2009)	-3	-2	-4	-1	-2	-2	-3
Difference in Growth in the Pre Package & Package Period	-8	0	3	3	-2	10	1
Change Due to Package (Before and After Frame)	**-11**	**-3**	**-1**	Adjustment Factor: 3.81			
Change Due to Package (With & without Frame)	**-1**	**-1**	**-2**	Adjustment Factor: -1.38			

The impact of the package to special category states in both before- and after as well as with- and without- frameworks shows negative trend in capital output ratios. In terms of before- and after- framework there was decline at -2% per annum in case of Uttarakhand, -3% in Himachal Pradesh and 11% in case of Jammu & Kashmir. In terms of with- and without- framework the declines were at -2% in Uttarakhand, -1% in Himachal Pradesh as well as Jammu & Kashmir.

The bar diagrams of the annual change have all but one bar in the negative territory representing decline in capital output ratio across all the states. The pre-package and package-period bars also have similar trend thereby ruling out any impact of the package of special category states.

The graphs show similar downward trend for all the states with slight yearly

fluctuations. Uttarakhand had once overtaken HP in the year 2006-07 in terms of capital output ratio but thereafter there was sharp declining trend for Uttarakhand.

Annual Change in Capital Output Ratio

Capital Output Ratio
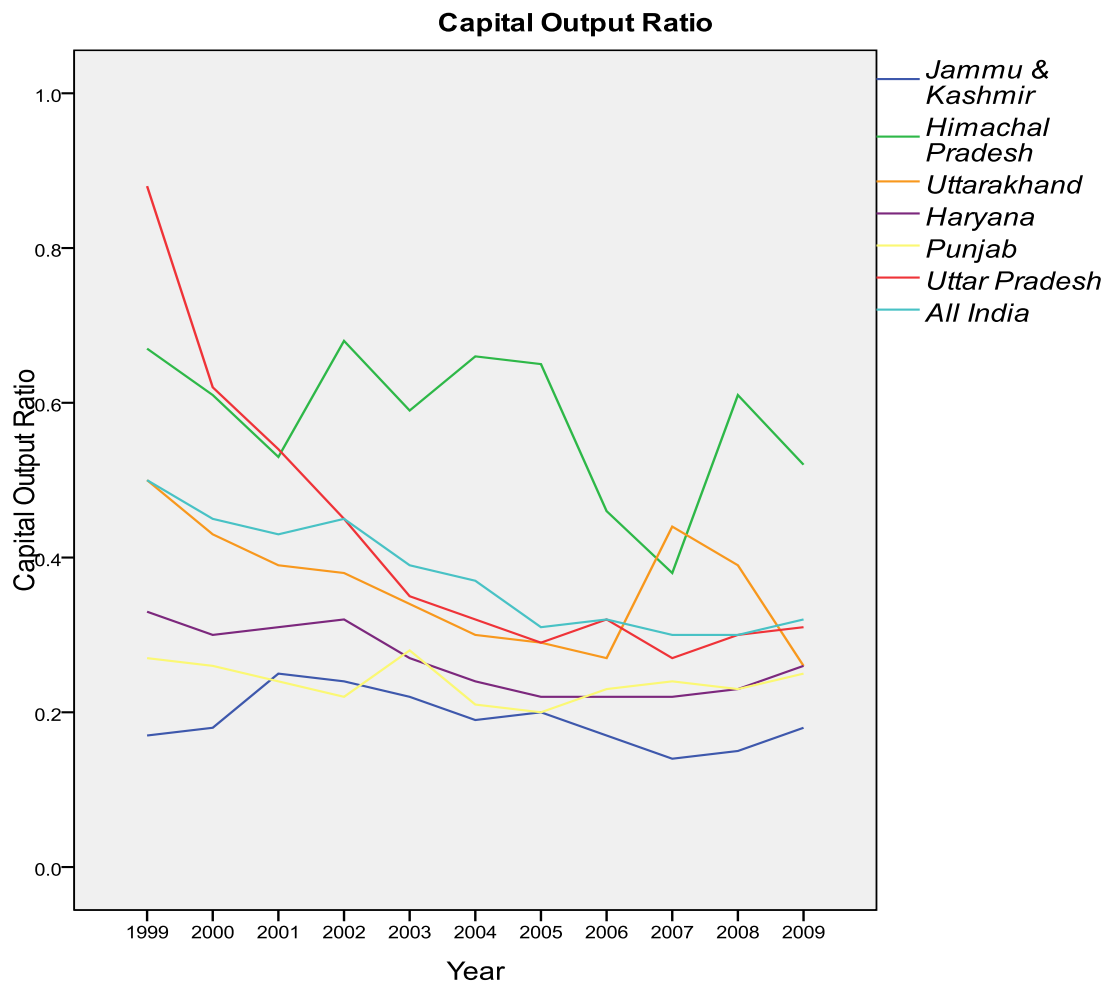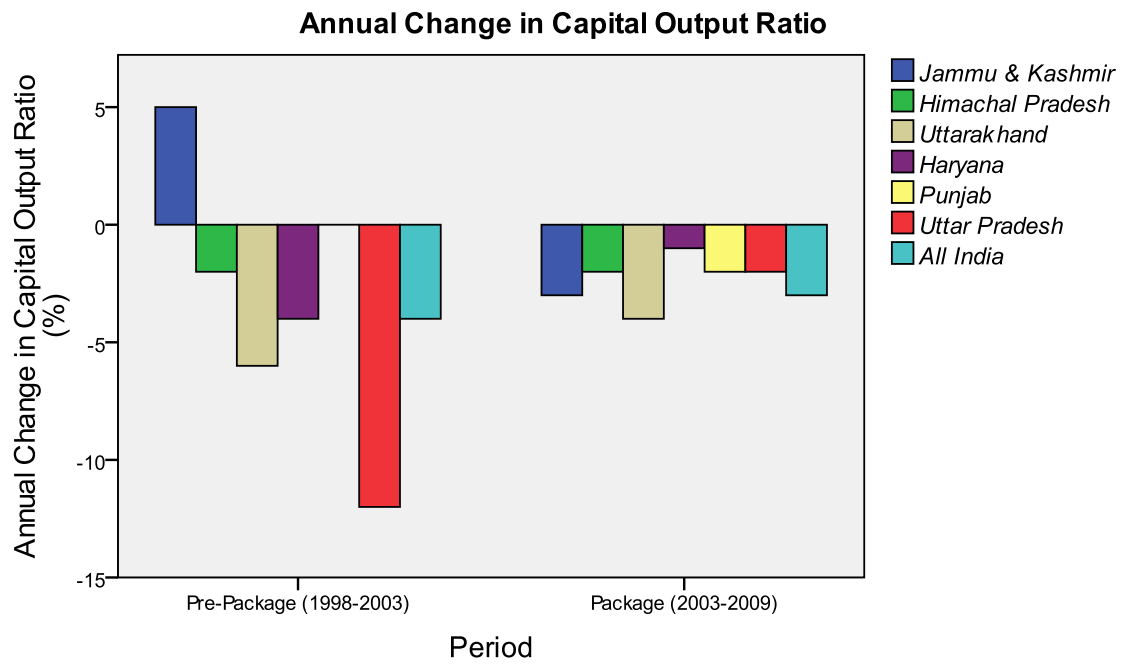
4.16 AVERAGE NUMBER OF WORKERS PER FACTORY:

The average number of workers per factory were the highest for Uttarakhand at 91 followed by Haryana at 85, J&K at 69 and HP at 65. The analysis of the pre-package and package-period data and the comparison of the beneficiary and the control group reveals no significant impact of the special package on the average number of workers. Uttarakhand had an increase at the rate of 22 percent per annum during the package period followed by Haryana at 11 percent. HP and J&K had unimpressive increase of 5% and 3% respectively during the package period. Surprisingly the lowest number of workers per factory was in Punjab at 43.

During the pre-package period the average number of workers declined for Himachal Pradesh, Uttarakhand and Haryana and even the other states had very low rates of increase. The All India data was nearly constant.

During the package period, Uttarakhand and Haryana showed appreciable increases at 22 and 11 percent respectively but Uttarakhand being a special category state and Haryana a non-beneficiary control group state. Thus it is doubtful whether the increase in case of Uttarakhand can be attributed solely to the Special package. The average number of workers per factory indicates the average size of the firms and it is argued by some that instead of the capital per factory, it is the number of workers per factory that should be emphasised in development policy.

Table 4.16: Average Number of Workers Per Factory

Year	J & K	H.P.	U.K.	Haryana	Punjab	U.P.	All India
1998-1999	54	60	51	73	36	43	48
1999-2000	51	61	43	50	38	42	48
2000-2001	52	59	39	49	39	42	47
2001-2002	55	53	39	47	38	42	46
2002-2003	58	50	39	50	40	46	48
2003-2004	64	52	41	55	39	48	47
2004-2005	58	52	47	62	41	47	48
2005-2006	62	53	60	71	42	48	51
2006-2007	61	61	62	75	43	50	54
2007-2008	63	62	66	85	43	55	56
2008-2009	69	65	91	85	43	53	57
Annual Change (1998-2003)	1	-3	-5	-6	2	1	0
Annual Change (2003-2009)	3	5	22	11	1	3	3
Difference in Growth in the Pre Package & Package Period	2	8	27	17	-1	2	3
Change Due to Package (Before and After Frame)	-4	2	21	Adjustment Factor: 6.18			
Change Due to Package (With & without Frame)	-2	0	17	Adjustment Factor: 5.10			

The impact of package in before- and after framework show annual increase in number of workers per factory at 21% in case of Uttarakhand and 2% in Himachal Pradesh while a decline at -4% per annum in Jammu & Kashmir. In with- and without framework, there was an increase at 17% per annum in the number of workers per factory in case of Uttarakhand while in case of Himachal Pradesh there was no change. However, in case of Jammu & Kashmir there was decline at -2%. The impact of package seems to have differential impact on special category states which raises apprehension whether these changes can indeed be attributed to the package, especially change in respect of Uttarakhand. This requires further analysis.

The bar diagram reflects matching peformance by Uttarakhand and Haryana. The rates of change in case of HP and J&K were quite low by comparison at 5% and 3% respectively. Punjab had even lower rate at 1% only. The graphs of the workers per factory over a period of time reveals definite cyclical trends. Almost all the

industrial indicators for Uttarakhand have been noted to be highly positive and significant thereby indicating not only the success of the special package but also justifying in some way, the creation of smaller states.

Annual Growth in Number of Workers Per Factory

**Average Number of Workers Per Factory**

95
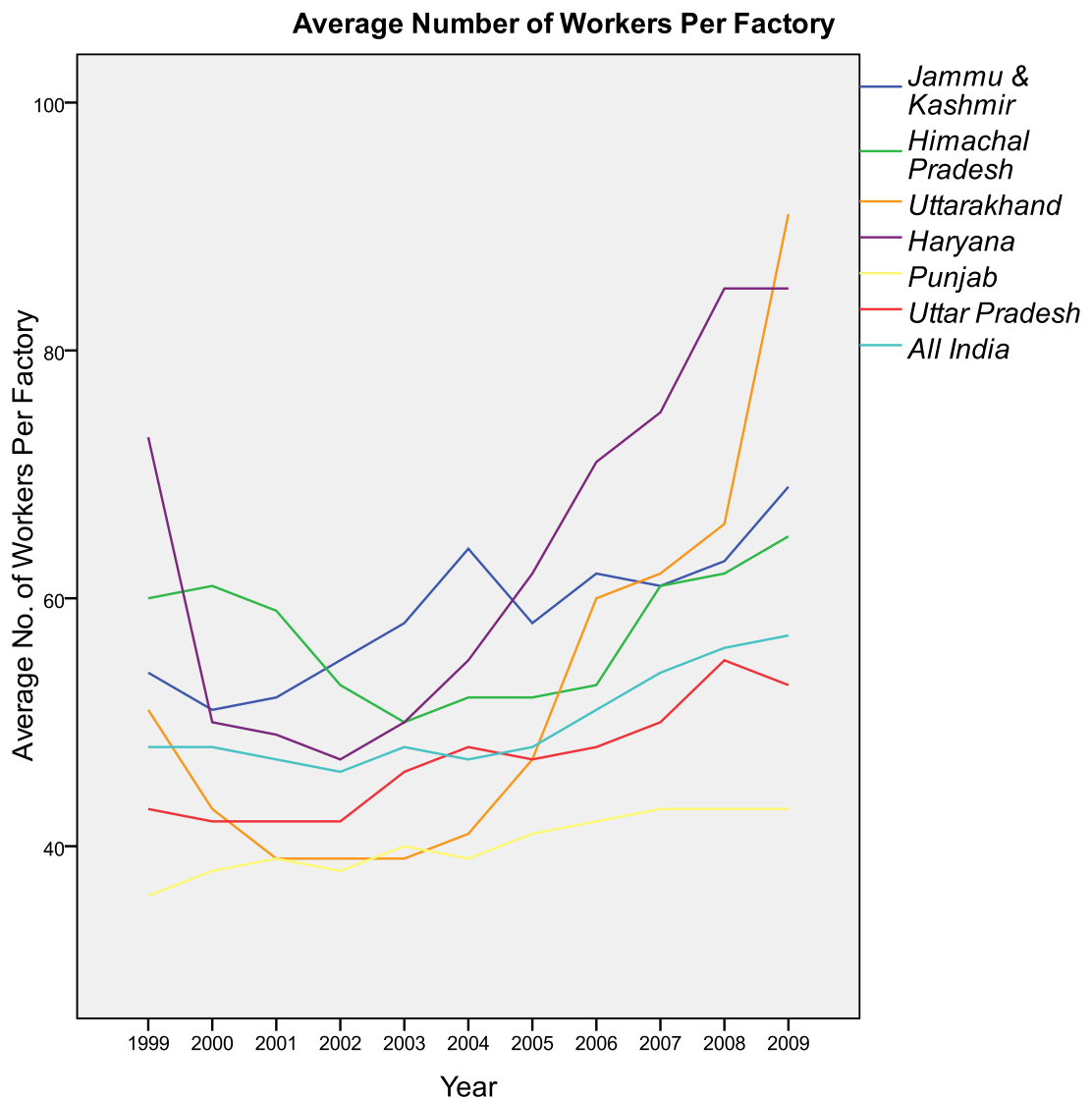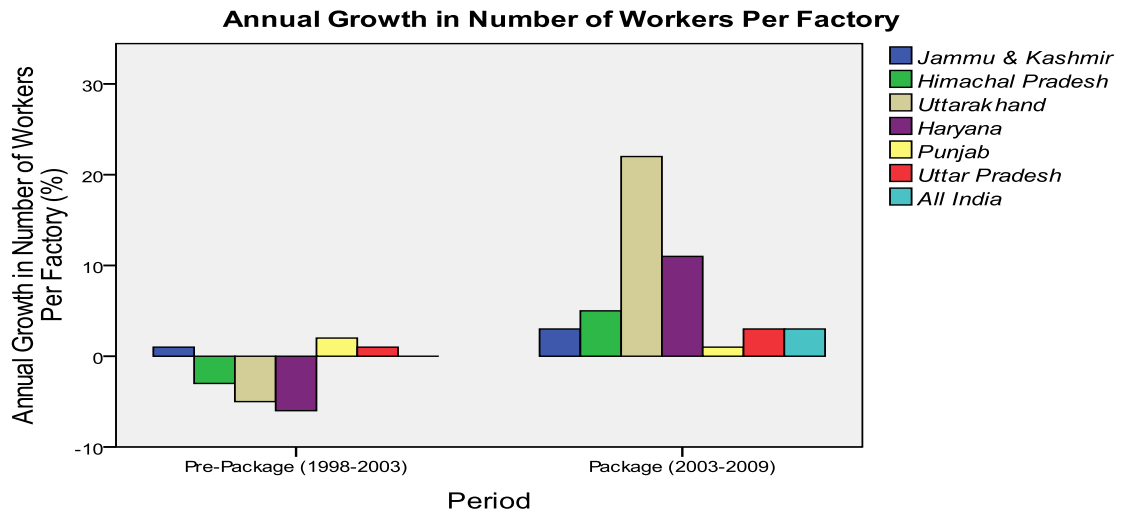
4.17 CAPITAL LABOUR RATIO:

The capital labour ratio was calculated from the Annual Survey of Industries data. It indicates the capital intensity of the industries in the states. The highest capital labour ratio is in respect of Himachal Pradesh at Rs. 25.91 lakh per worker followed by Uttarakhand at only Rs. 12.67 lakh per worker. However, J&K had the ratio at only Rs. 5.41 lakh per worker. All the neighbouring states had ratios much below the All India average of Rs. 12.03 lakh per worker. Perhaps the high capital labour ratios in special category states may be attributed to the capital investment subsidy.

The increase in capital labour ratio was almost similar for all the states with the exception of J&K which was the leader at 30 percent per annum followed by HP at 14%, Uttarakhand at 12% against the national average of 11%. The ratios in Haryana, Punjab and Uttar Pradesh increased at annual rate of 9 percent.

Table 4.17: Capital Labour Ratio (in Rs. Lakh Per Worker)

Year	J & K	H.P.	U.K.	Haryana	Punjab	U.P.	All India
1998-1999	1.29	11.27	4.34	4.04	3.33	11.28	6.15
1999-2000	1.45	10.35	5.08	6.12	3.80	8.80	6.40
2000-2001	1.84	11.43	6.56	6.43	3.05	8.66	6.51
2001-2002	1.90	15.51	7.20	6.91	3.10	7.89	7.25
2002-2003	1.93	14.12	7.36	6.30	4.05	6.96	7.22
2003-2004	1.74	20.68	7.91	6.44	3.50	6.81	7.78
2004-2005	3.19	17.62	8.14	6.19	3.46	6.96	7.77
2005-2006	3.62	19.47	7.84	6.06	3.97	7.52	8.51
2006-2007	4.30	15.85	13.35	6.74	4.56	8.43	9.07
2007-2008	5.86	27.75	13.28	7.20	5.00	9.91	10.31
2008-2009	5.41	25.91	12.67	9.82	6.14	10.90	12.03
Annual Change (1998-2003)	10	5	14	11	4	-8	3
Annual Change (2003-2009)	30	14	12	9	9	9	11
Difference in Growth in the Pre Package & Package Period	20	9	-2	-2	4	17	8
Change Due to Package (Before and After Frame)	14	2	-8	Adjustment Factor: 6.48			
Change Due to Package (With & without Frame)	21	5	3	Adjustment Factor: 9.12			

Annual Growth of Capital Labour Ratio

Capital Labour Ratio
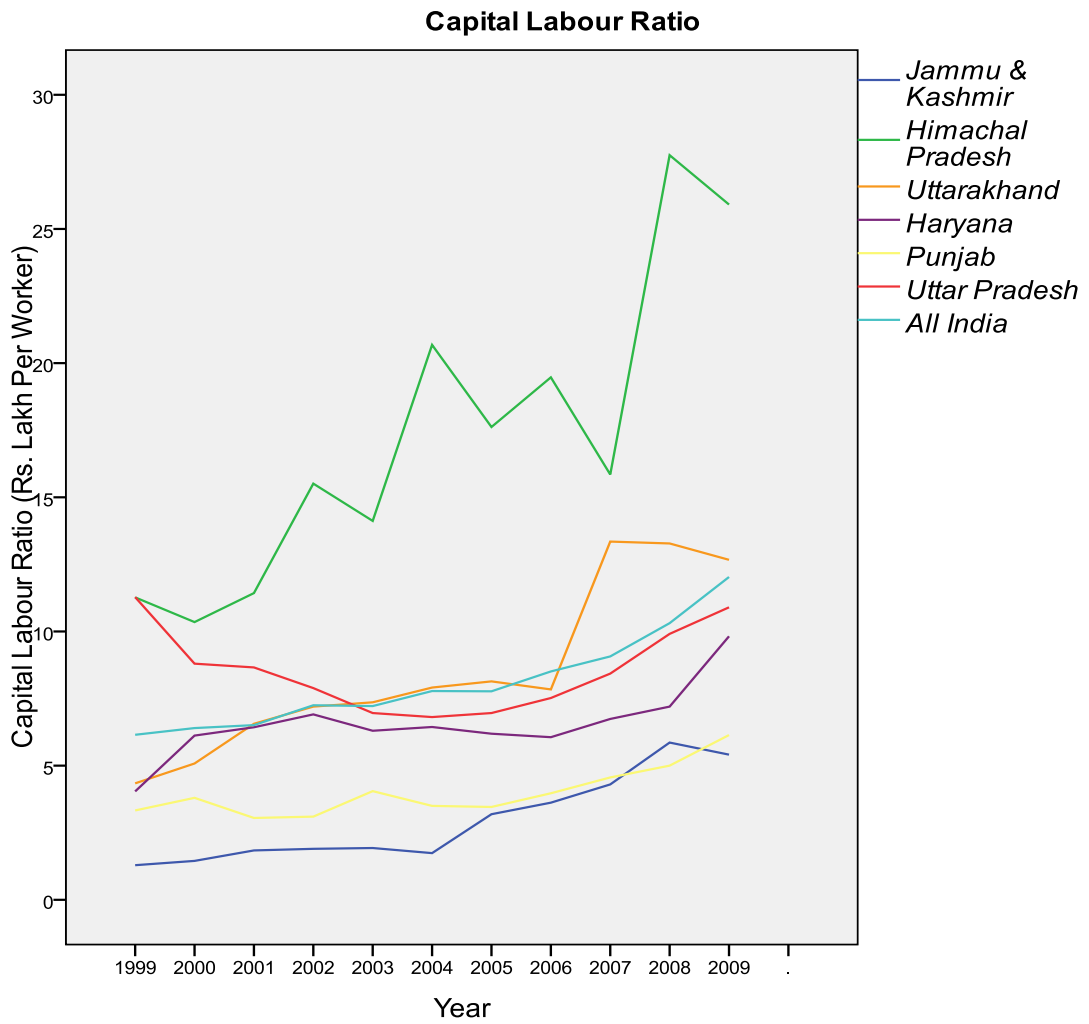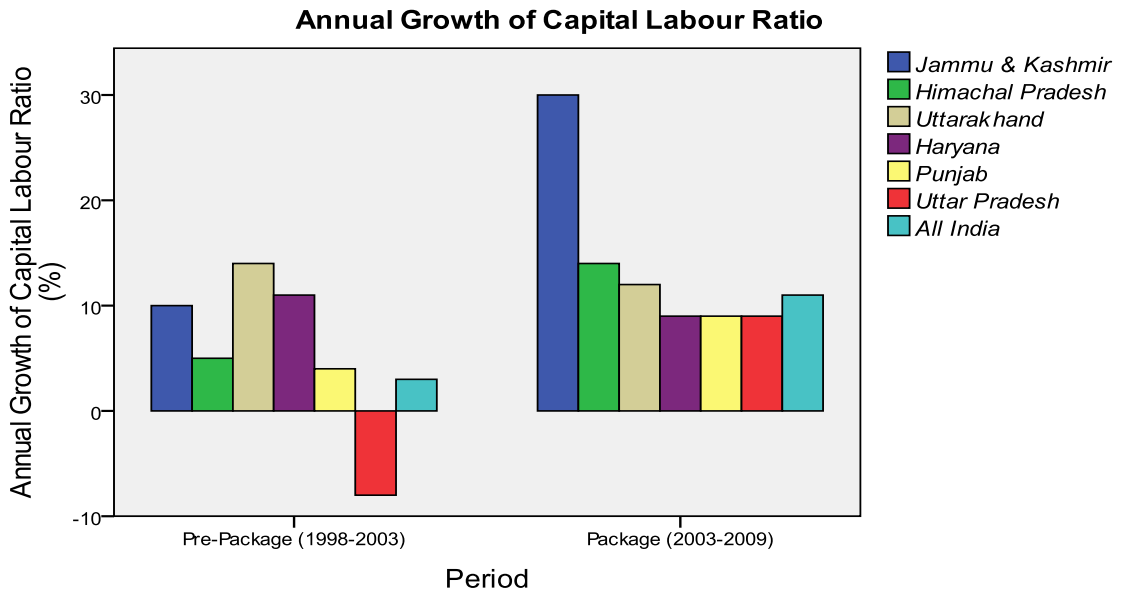
The bar diagram of the change in capital labour ratios show that the bar for J&K stands out towering over all other states which are broadly at similar levels. It

comes out that there is only some impact of the special package on the capital labour ratio. Moreover there is no significant difference in the annual change during pre-package and package periods.

The graphs of the capital labour ratios show erratic trend for HP though throughout it has the highest ratio. The ratios for all the states show yearly fluctuations. Jammu & Kashmir has almost consistently maintained the lowest ratio closely followed by Punjab.

The impact of the package in terms of before- and after framework on capital labour ratio shows decline at -8% per annum in case of Uttarakhand, while in case of Himachal Pradesh there was increase at 2% per annum and much higher increase at 14% per annum in case of Jammu & Kashmir. But in terms of with- and without framework, the impact of package shows increase in capital output ratio even in case of Uttarakhand at 3% per annum, 5% in case of Himachal Pradesh and much higher increase at 21% per annum in case of Jammu & Kashmir.

Chapter 5

SAMPLE SURVEY OF INDUSTRIES

The primary study consisted of a sample survey in the Special Category States or the Beneficiary States viz. Jammu & Kashmir, Himachal Pradesh and Uttarakhand; and the Control Group or the Non-Beneficiary Neighbouring States viz. Haryana, Punjab and Uttarakhand. The selected sample districts were Jammu and Rajauri from Jammu & Kashmir; Solan and Bilaspur from Himachal Pradesh; Haridwar and Nainital from Uttarakhand; Faridabad and Kaithal from Haryana; Ludhiana and Tarn Taran from Punjab; and Gautam Budh Nagar and Kannauj from Uttar Pradesh. The desired sample respondents from each district consisted of 20 units. However, the field team encountered very low response rates in the highly industrialised districts of Gautam Budh Nagar (NOIDA) and Faridabad, both districts in the vicinity of Delhi. The potential respondents in the control group often argued that the study assigned related only to the Special Category States and that their state was not explicitly mentioned in the study. Thus the response rates were somewhat below the desired levels in the control group. The response rate in the Special Category States was a lot better and the desired sample response was almost fully achieved. Consequently the Special Category State or the Beneficiary States constituted 57% of the total survey respondents while 43% of the survey respondents were from the Control Group or the Non-Beneficiary States. The total survey respondents were 207.

Table 5.1: Respondents of the Survey – By Category of the State

State Category	Survey Respondents	% of Survey Respondents
Special Category State (Beneficiary State)	118	57.0
Control Group or Non-Beneficiary State	89	43.0
Total	207	100.0

Similarly, the survey respondents by category of the district show that 55.1% of the respondents were from the less industrialised districts while 44.9% of the survey respondents were from the most industrialised district. This was also due to low response rates to the survey in the highly developed industrialised districts.

Table 5.2 Respondents of the Survey – By Category of the District

District Category	Survey Respondents	% of Survey Respondents
Most Industrialised District	93	44.9
Less Industrialised District	114	55.1
Total	207	100.0

The respondents of the survey by state and district reveal that the desired survey response rates were fully attained in Jammu and Rajauri districts in Jammu & Kashmir; Solan district in Himachal Pradesh; Nainital district in Uttarakhand; Ludhiana and Tarn Taran districts in Punjab; and Kannauj district in Uttar Pradesh. However, in the Bilaspur district in Himachal Pradesh and Haridwar district in Uttarakhand the actual survey responses were just one short of the desired number. This was due to rejection of the incomplete questionnaires in these districts. In Faridabad and Noida the potential respondents hardly cooperated with the field team and the response rates were very low. In Kaithal district also there was low response rate.

Table 5.3: Respondents of the Survey – By State & District

State	District	Survey Respondents	Survey Respondents	% Survey Respondents
Jammu & Kashmir	Jammu	20	40	19.3
	Rajauri	20		
Himachal Pradesh	Solan	20	39	18.8
	Bilaspur	19		
Uttarakhand	Haridwar	19	39	18.8
	Nainital	20		
Haryana	Faridabad	8	23	11.1
	Kaithal	15		
Punjab	Ludhiana	20	40	19.3
	Tarn Taran	20		
Uttar Pradesh	Gautam Budh Nagar	6	26	12.6
	Kannauj	20		
Total			207	100.0

Table 5.4: Survey Respondents by Category of State/ District and Scale of Manufacturing

State	Scale of Manufacturing			
	Micro Enterprise	**Small Enterprise**	**Medium Enterprise**	**Large Enterprise**
Special Category State (Beneficiary States)	39.8%	36.4%	12.7%	11.0%
Control Group or Non-Beneficiary State	36.0%	51.7%	5.6%	6.7%
Most Industrialised District	16.1%	46.2%	18.3%	19.4%
Less Industrialised District	56.1%	40.4%	2.6%	0.9%
Total	38.2%	43.0%	9.7%	9.2%

The data on Survey respondents by the scale of manufacturing according to the investment in Plant and Machinery reveals that 38.16% of the respondent organisations were micro enterprises (upto ₹ 25 Lakhs), 43.0% were small enterprises (₹ 25 Lakhs to ₹ 5 Crore). Medium enterprises (₹ 5 Crore to ₹ 10 Crore) constituted 9.66% of the respondents and large enterprises (Above ₹ 10 Crore) constituted 9.18% of the respondent organisations.

Scale of Manufacturing
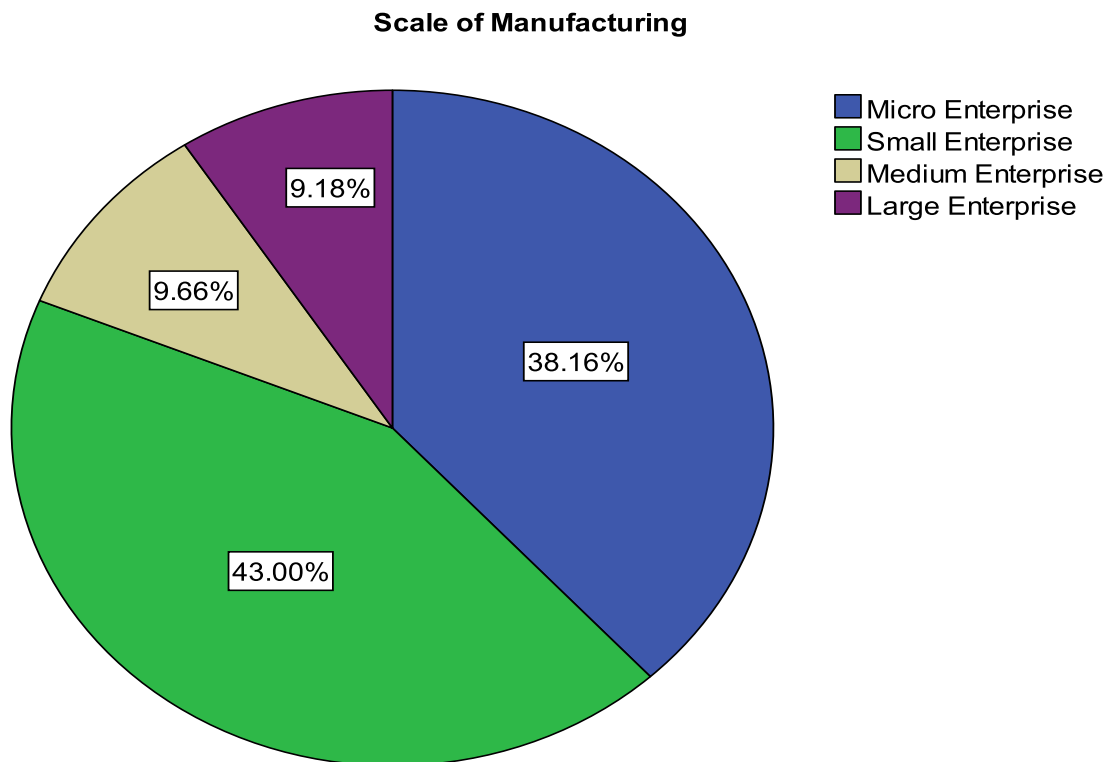
The respondent organisation by category of the state reveals that medium and large enterprises' response rate was greater in the Special Category States as compared to the control group states. In terms of the category of the district, there were hardly any medium and large enterprises in the less industrialised districts which could be included in the survey. Consequently, in the less industrialised districts the respondent organisations were predominantly micro and small enterprises. This also reflects the nature of industrialisation in these less industrialised districts. It must be emphasised that this trend prevails in these districts irrespective of the category of the state, whether special category or non-category state.

The table representing respondent organisations by scale of manufacturing reveals that Jammu & Kashmir had the largest percentage of responses from the medium and large enterprises which were based in Jammu district. The lowest response was from Uttar Pradesh as Kannauj district did not have any medium/large enterprise and the potential respondents from Gautam Budh Nagar district were very uncooperative. The majority of the respondent organisations from Haryana were small enterprises.

Table 5.5: Survey Respondents by State and Scale of Manufacturing

State	Scale of Manufacturing			
	Micro Enterprise	**Small Enterprise**	**Medium Enterprise**	**Large Enterprise**
Jammu & Kashmir	52.5%	17.5%	17.5%	12.5%
Himachal Pradesh	28.2%	51.3%	10.3%	10.3%
Uttarakhand	38.5%	41.0%	10.3%	10.3%
Haryana	4.3%	73.9%	8.7%	13.0%
Punjab	35.0%	52.5%	7.5%	5.0%
Uttar Pradesh	65.4%	30.8%	.0%	3.8%
Total	38.2%	43.0%	9.7%	9.2%

Profile of the Respondents:

The profile of the respondents of the survey greatly impacts the findings of any survey. Since the nature of the present survey specifically pertains to the decisions and opinions of the decision making persons in the industrial organisation,

it was decided to stress that the survey questionnaires were filled by the decision makers in the organisation. The owners were the predominant respondents constituting 55.1% of the total respondents followed by top management at 34.8%. Middle level management contributed 10.1% of the responses.

Table 5.6: Designation/Status of Survey Respondents:

Status of Respondents	Number of Respondents	% of Respondents
Owner	114	55.1
Top Management	72	34.8
Middle Level Management	21	10.1
Total	207	100.0

Respondent's Status
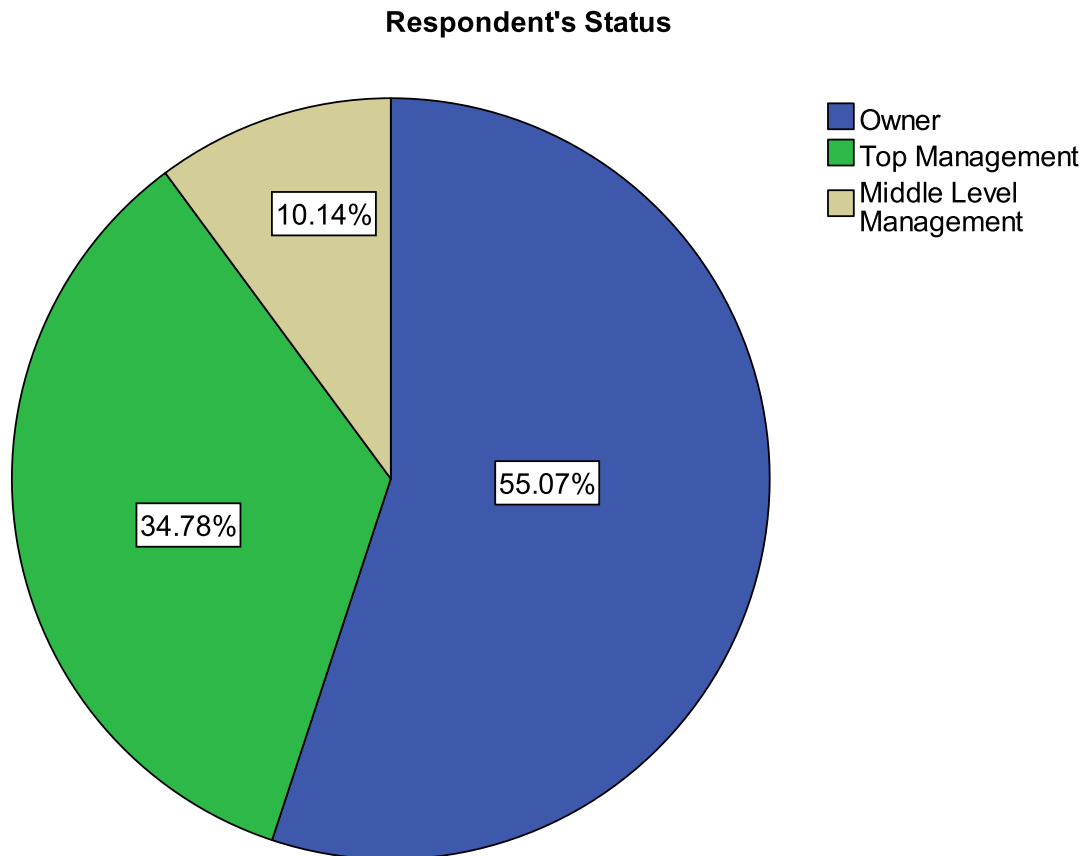
Table 5.7: Sex of the Survey Respondents:

Sex of Respondents	Number of Respondents	% of Respondents
Male	205	99
Female	2	1.0
Total	207	100.0

The sex profile of the survey respondents shows that only 1% of the respondents were females reflecting the near absence of females in terms of ownership and top management in industries.
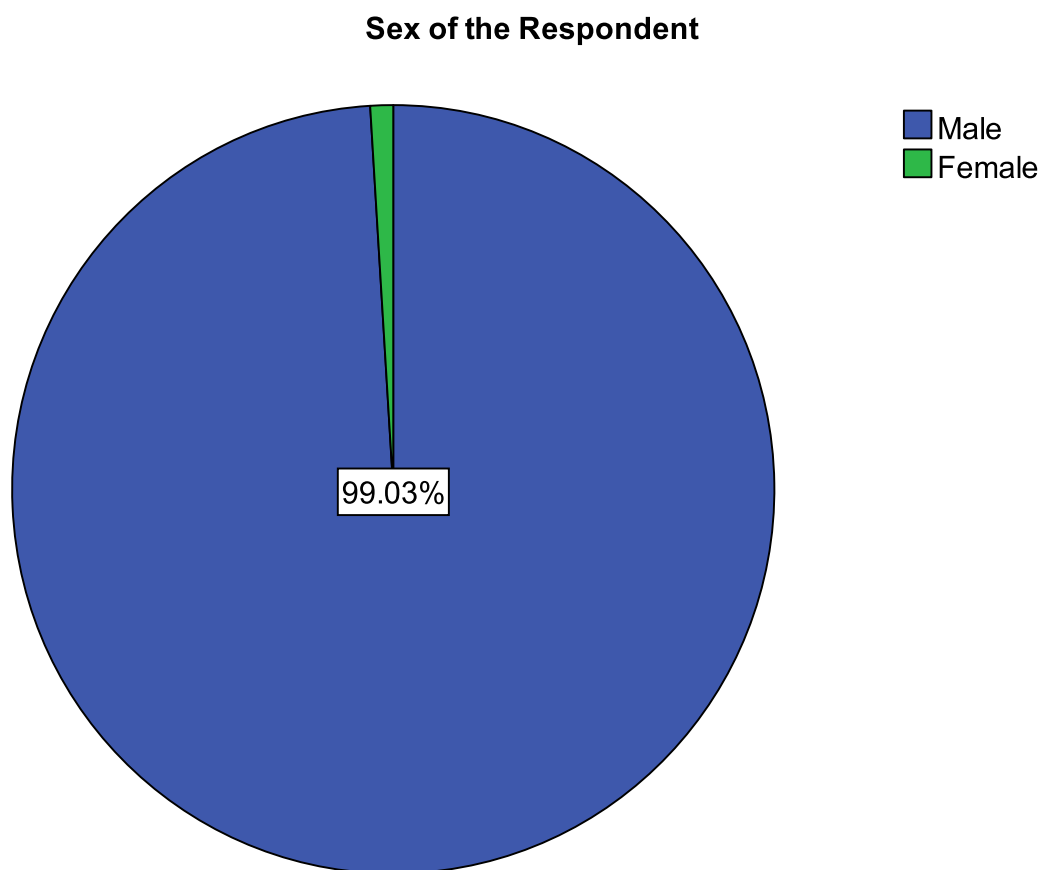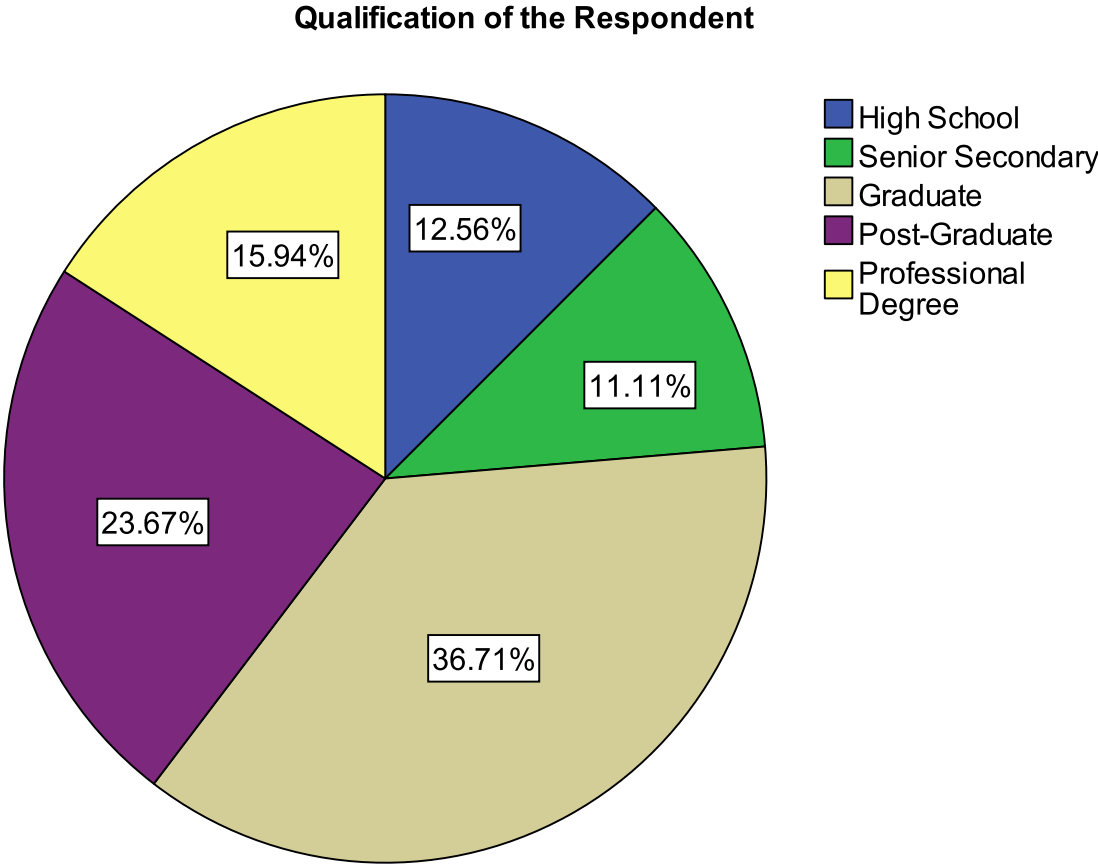
Sex of the Respondent

Table 5.8: Qualification Status of Respondents by State and District Category

State	Qualification of the Respondents				
	High School	**Senior Secondary**	**Graduate**	**Post-Graduate**	**Professional Degree**
Special Category (Beneficiary States)	13.6%	7.6%	31.4%	25.4%	22.0%
Control Group or Non-Beneficiary State	11.2%	15.7%	43.8%	21.3%	7.9%
Most Industrialised District	3.2%	5.4%	37.6%	28.0%	25.8%
Less Industrialised District	20.2%	15.8%	36.0%	20.2%	7.9%
Total Average	12.6%	11.1%	36.7%	23.7%	15.9%

The qualification status of the survey respondents reveals that 36.7% of the respondents were graduates, 23.7% were post-graduate and 15.9% had professional degree. However, 12.6% and 11.1% of the respondents had done only High School and Senior Secondary School respectively.

Qualification of the Respondent

The analysis of the data by category of the State does not show any disadvantage in the case of special category states. In fact the special category states had greater percentage of respondents with professional degree. The analysis of the data with respect to status of the district shows that a very large percentage of the respondents in the less industrialised districts had qualified only High School (20.2%) while 15.8% had qualified only Senior Secondary School as compared to 3.2% and 5.4% respectively for the Most Industrialised districts. On the other hand only 7.9% of the respondents had professional degree in less industrialised districts as compared to 25.8% in the most industrialised districts reflecting less proportion of enterprises being run by professionals in less industrialised districts.

Table 5.9: Location of the Plant

Location	Respondent Organisations	Percentage
Urban	44	21.3
Rural	45	21.7
Industrial Area/Estate	116	56.0
Other	2	1.0
Total	207	100.0

Location of the Plant

Urban
Rural
Industrial Area/Estate
Other

0.97%
21.26%
56.04%
21.74%
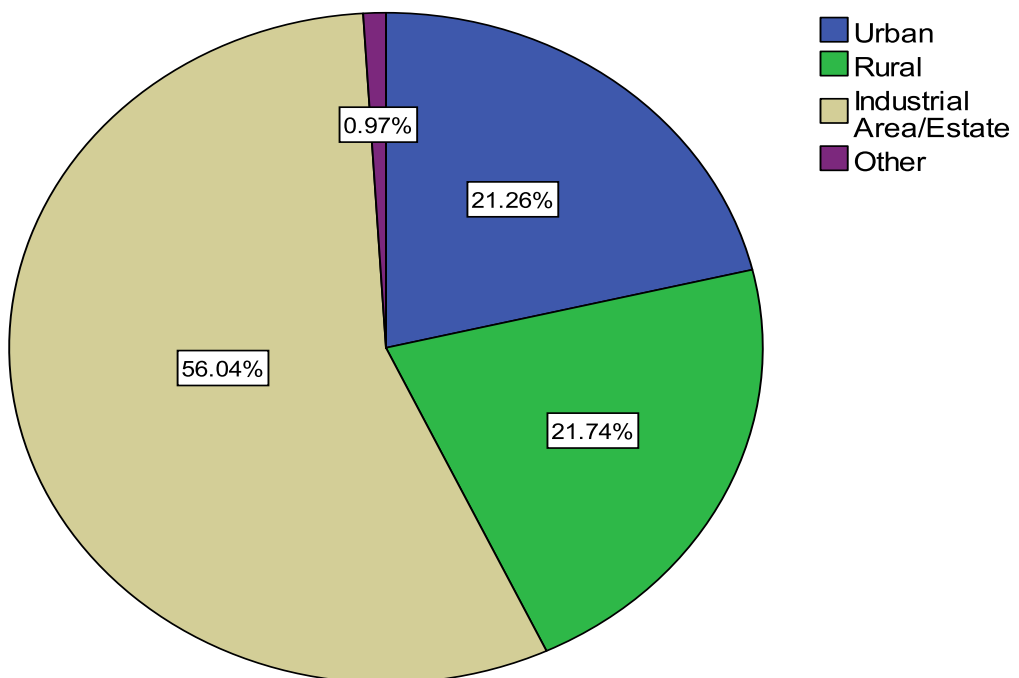
The industrial area/estate contributed 56.04% of the respondent organisations in the survey. 21.3% of the respondent organisations had their plants located in urban areas, 21.7% in rural areas.

> **Closure of Units in Old Industrial Areas:**
>
> The survey study observed that a large number of units established in industrial areas in various states have closed down or have failed to even begin production. A large number of industrial plots are being used merely for residential purpose and some even as tourist hotels/rest houses defeating the very purpose of establishing the industrial areas. Several plots have been sub-let at much higher prices. The administrators of these industrial areas/estates must enforce the terms and conditions of allotment of these industrial plots and in case of violation, re-allot these plots to other investors so that the industries actually flourish in the areas. The fate and story of these industrial areas was similar in Jammu and Rajauri in J & K; Bilaspur in Himachal Pradesh; Bhimtal in Nainital; and Kannauj in Uttar Pradesh.

Table 5.10: State of Origin of Owner/ Major Investor/Shareholder in the Survey

State of Location	State of Origin of the Owner/ Major Investor/Shareholder (%)						
	J & K	HP	Uttarakhand	Haryana	Punjab	UP	Other
J & K	67.5%	-	-	-	5%	5%	22.5%
H.P.	-	30.8%	2.6%	10.3%	12.8%	5.1%	38.5%
Uttarakhand	-	2.6%	51.3%	5.1%	-	12.8%	28.2%
Haryana	-	4.3%	-	73.9%	-	4.3%	17.4%
Punjab	-	-	-	-	90.0%	2.5%	7.5%
Uttar Pradesh	-	-	-	-	7.7%	80.8%	11.5%

The state of origin of the owner/ major investor/shareholder in the sample survey reveals that in the control group states (non-beneficiary states) a high percentage of the investors were from the home state. The investor from the home state accounted for 90.0% in Punjab, 80.8% in Uttar Pradesh and 73.9% in Haryana. However, in the special category states the home state investors accounted for a comparatively much lower share with 30.8% in Himachal Pradesh, 51.3% in Uttarakhand and 67.5% in Jammu & Kashmir. Thus it can be inferred that due to the impact of package, the special category states have been successful in attracting

industrial investors from other states. However, the survey data also highlights the fact that the industrial investments in special category states are coming from all over India and not just from the neighbouring Haryana, Punjab and Uttar Pradesh.

Table 5.11: Type of Legal Organisation

State Category	Type of Legal Organisation			
	Individual Proprietorship	**Partnership**	**Private Limited Company**	**Public Limited Company**
Special Category State (Beneficiary State)	44.1%	22.0%	23.7%	10.2%
Control Group or Non-Beneficiary State	41.6%	37.1%	18.0%	3.4%
Most Industrialised District	25.8%	30.1%	31.2%	12.9%
Less Industrialised District	57.0%	27.2%	13.2%	2.6%
Total	43.0%	28.5%	21.3%	7.2%

The respondent organisations were predominantly individual proprietorship constituting 43% of the respondents followed by 28.3% partnership, 21.3% private limited companies and 7.2% public limited companies. In the less industrialised districts the predominant 57% of the respondents were individual proprietorships as compared to 25.8% in case of most industrialised districts.
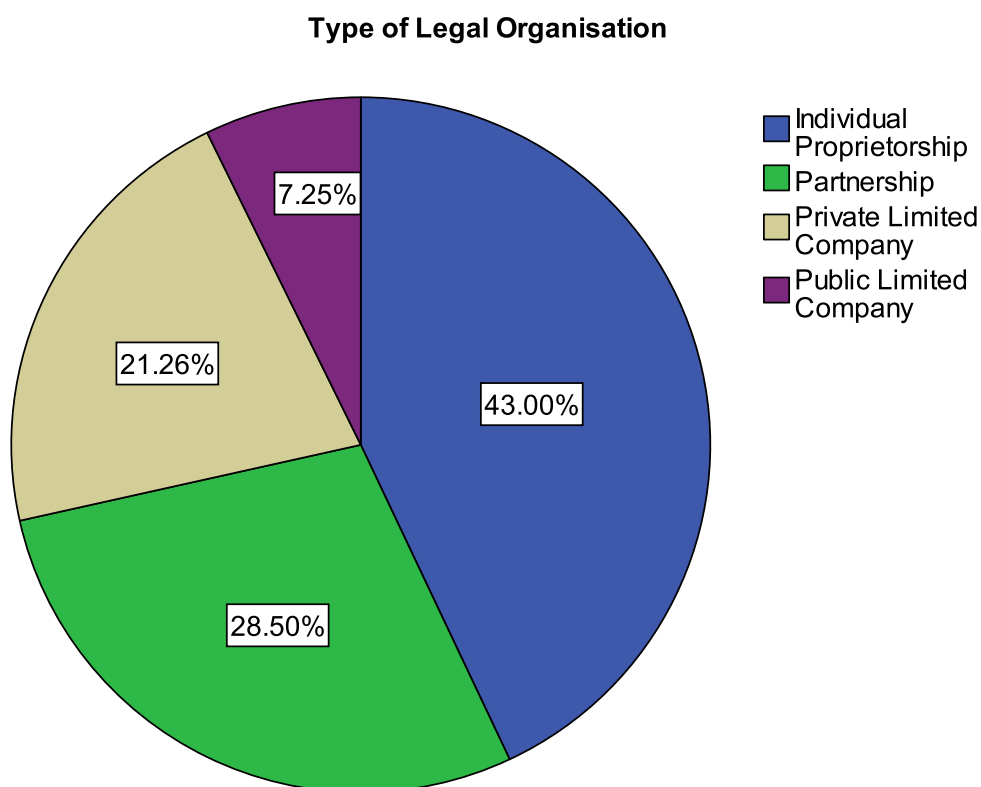
Type of Legal Organisation

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Table 5.12: State Category and Sex Preference for Employment

State Category	Sex Preference for Employment		
	Males	**Females**	**Both Gender on Merit**
Special Category State (Beneficiary State)	58.5%	0.8%	40.7%
Control Group or Non-Beneficiary State	74.2%	0.0%	25.8%
Most Industrialised District	48.4%	0.0%	51.6%
Less Industrialised District	78.9%	0.9%	20.2%
Total	65.2%	0.5%	34.3%

The sex preference of the organisations reveals that there was hardly any exclusive preference for female. However, 34.3% of the respondent organisations reported employing both gender on merit with the ratio higher in case of special category states at 40.7% in comparison to control group states at 25.8%. Similarly the most industrialised districts had higher ratio at 51.6% in comparison to 20.2% in case of less industrialised districts.
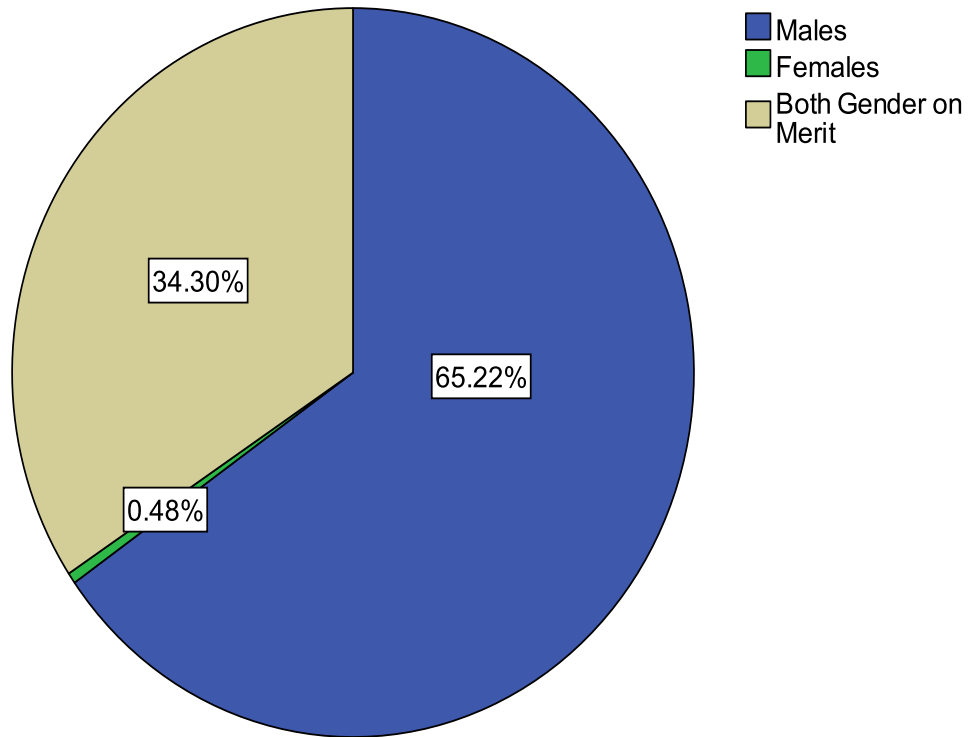
Sex Preference for Employment

Table 5.13: Difficulty in Finding Local Employees

Category	Difficulty in Finding Local Employees	
	NO	**YES**
Special Category State (Beneficiary State)	44.1%	55.9%
Control Group or Non-Beneficiary State	57.3%	42.7%
Most Industrialised District	51.6%	48.4%
Less Industrialised District	48.2%	51.8%
Total	49.8%	50.2%

Almost 50% of the organisations reported difficulty in finding local employees. Greater percentage of respondents in the special category states (55.9%) reported difficulty in finding local employees as compared to 42.7% in case of the control group states. The condition of employment of bonafide residents in the special category states thus seems to be difficult to implement in reality.

Difficulty in Finding Local Employees

Legend:
- No (blue)
- Yes (green)

50.24% | 49.76%
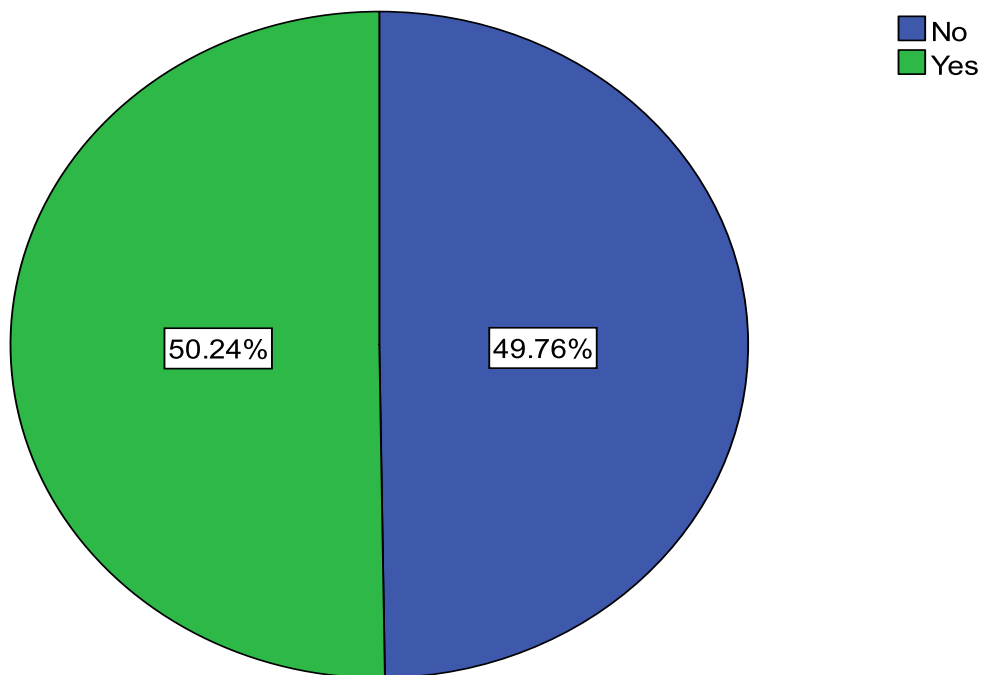
Open Violation of the Conditions of Employment of Bonafide Residents:

The Special Category States Jammu & Kashmir, Himachal Pradesh and Uttarakhand have prescribed the condition of ensuring at least minimum employment to the bonafide residents of the State. However, this condition is often violated by most of the industrial units in all these states, though on several occasions it was observed that these units often manipulate the employment data to show more employment of bonafide residents. They admit that they have to manipulate their records to comply with the conditions laid down by the state governments. This fact has been highly reported in the local media and is widely accepted. There is hardly any enforcement mechanism regarding implementation of this condition. However, the reasons for non-employment of bonafide residents range from the official version of non-availability to lack of skills and training in the residents to their reluctance and inability to do hard work. The industrialists maintain that the local people are not able to do hard physical labour work and have high tendency of absenteeism. Moreover, the local labour is also lacking in skills and training. They also have fears that the local labour may indulge in unionism which will harm the business interests. There is a clear preference towards employing migrant labour from Bihar, Uttar Pradesh etc.

Table 5.14: Difficulty in Finding Unskilled Workers

Category	Difficulty in Finding Unskilled Workers	
	NO	**YES**
Special Category State (Beneficiary State)	66.1%	33.9%
Control Group or Non-Beneficiary State	66.3%	33.7%
Most Industrialised District	73.1%	26.9%
Less Industrialised District	60.5%	39.5%
Total	66.2%	33.8%

Difficulty in Finding Unskilled Worker
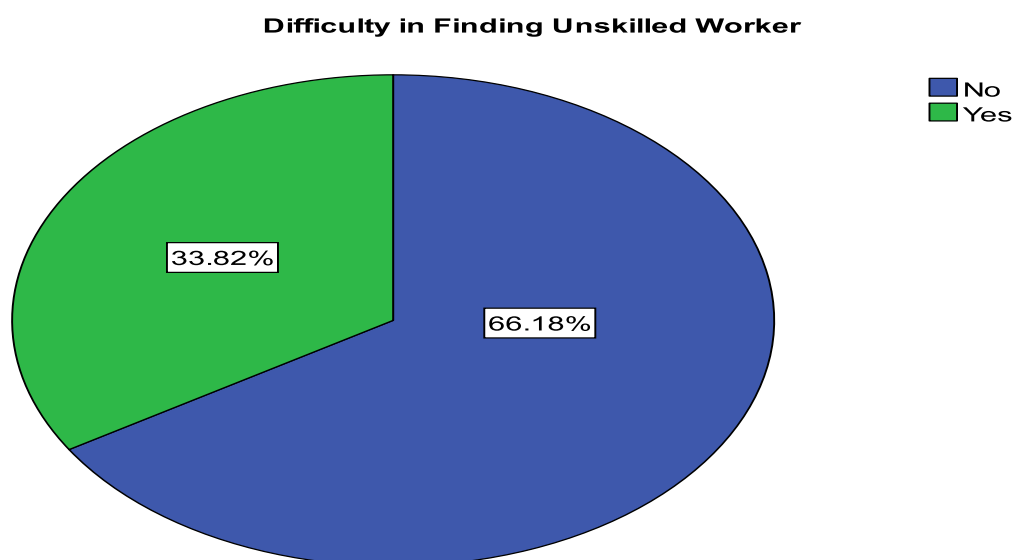
Impact of MNREGS:

Mahatma Gandhi National Rural Employment Guarantee Scheme has been successful in the rural areas in generating wage employment and also in raising the wage rates prevalent in the market. In fact, earlier the minimum wages were only given on paper and in reality the wages paid were much less. However, NREGS has drastically changed the situation. But for the industrialists this has resulted in the problem of non-availability of labour, both skilled and unskilled and increase in the wage rates. The survey confirmed the general media reports that most of the unskilled labour in Punjab, Haryana, Himachal Pradesh, Uttarakhand and Jammu & Kashmir comes from Uttar Pradesh and Bihar. But the success of MNREGS and the improved development scenario in Bihar were reported as the major cause of the scarcity of labour in these states leading to the reverse migration of the labour to their own native states.

The above table indicates that 33.8% of the respondents reported difficulty in finding unskilled labour. The ratio was almost around this average in both the special category as well as the control group states. In this context it was also observed that the industries in the selected survey states with the exception of Uttar Pradesh depended on the migrant labour from Bihar and Uttar Pradesh. Consequently the level of difficulty in all the states was almost similar.

Table 5.15: Difficulty in Finding Skilled Workers

| Category	Difficulty in Finding Skilled Workers	
	NO	**YES**
Special Category State (Beneficiary State)	38.1%	61.9%
Control Group or Non-Beneficiary State	53.9%	46.1%
Most Industrialised District	34.4%	65.6%
Less Industrialised District	53.5%	46.5%
Total	44.9%	55.1%

Difficulty in Finding Skilled Worker
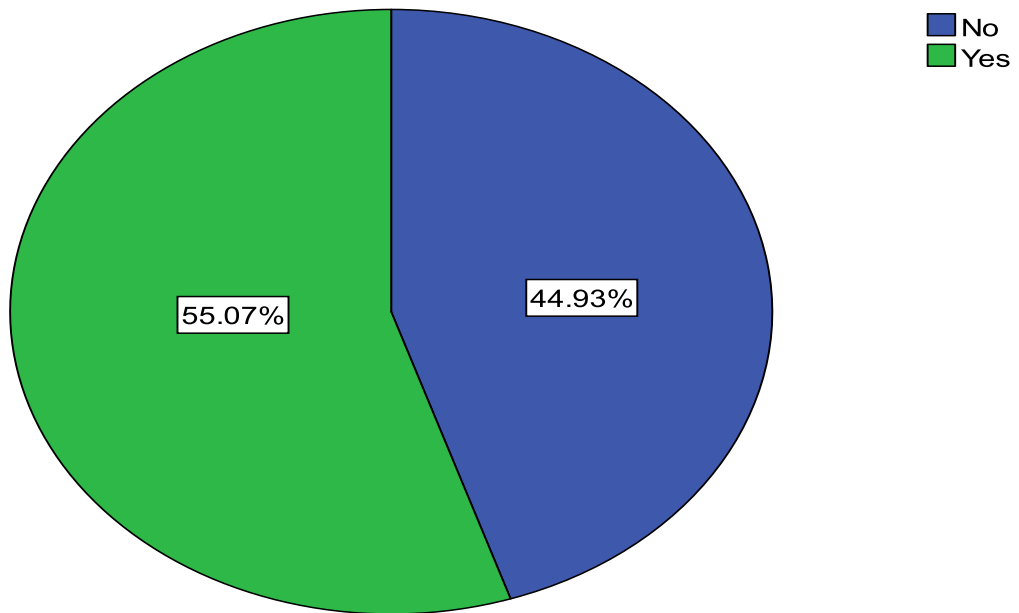
In the survey 55.1% of the respondents reported difficulty in finding skilled workers. This difficulty was reported more in case of special category states with the

ratio at 61.9% in contrast to 46.1% in case of the control group. The analysis according to district category shows that the difficulty was more in case of most industrialised districts with 65.6% as compared to 46.5% in case of less industrialised districts.

Table 5.16: Difficulty in Finding Technical Supervisors

Category	Difficulty in Finding Technical Supervisors	
	NO	**YES**
Special Category State (Beneficiary State)	67.8%	32.2%
Control Group or Non-Beneficiary State	88.8%	11.2%
Most Industrialised District	59.1%	40.9%
Less Industrialised District	91.2%	8.8%
Total	76.8%	23.2%

**Difficulty in Finding Technical Supervisors**
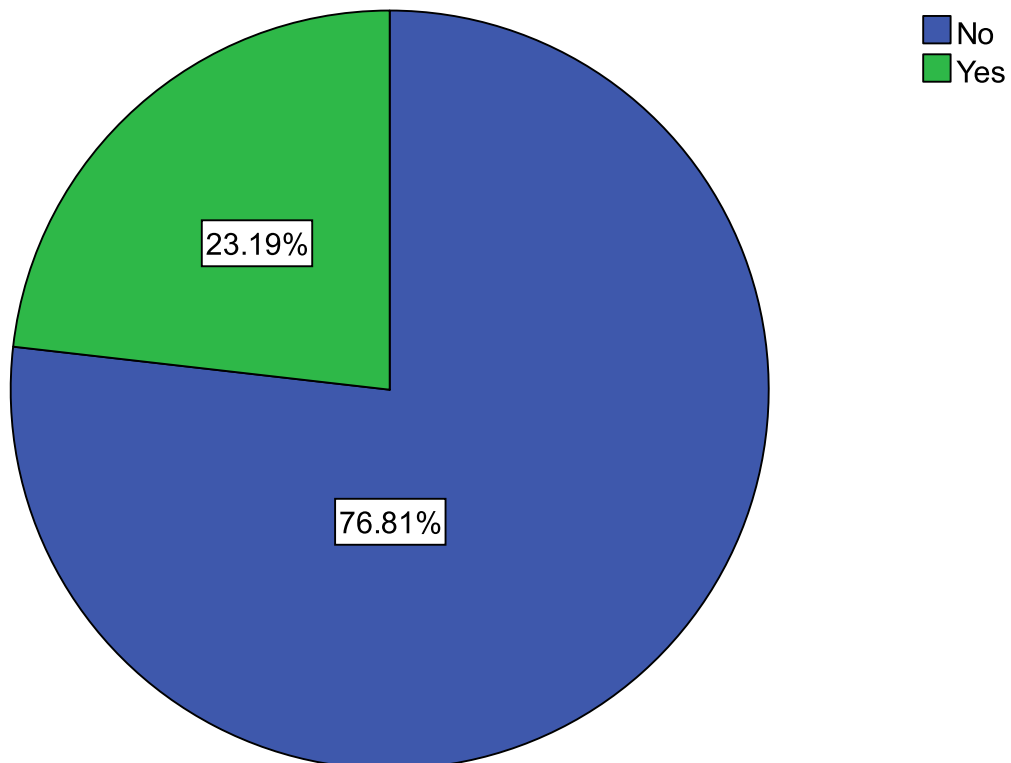
Only 23.2% respondents reported difficulty in finding technical supervisors. However, in the special category states there was more difficulty with 32.2% responses while in the control group the response was only 11.2%. The most industrialised districts reported the maximum frequency with 40.9% while in case of

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less industrialised districts it was only 8.8%. Perhaps due to the nature of industrialisation the less industrialised districts require less technical supervisors.

Table 5.17: Difficulty in Finding Administrative/ Managerial Personnel

Category	Difficulty in Finding Administrative/ Managerial Personnel	
	NO	YES
Special Category State (Beneficiary State)	88.1%	11.9%
Control Group or Non-Beneficiary State	97.8%	2.2%
Most Industrialised District	91.4%	8.6%
Less Industrialised District	93.0%	7.0%
Total	92.3%	7.7%

Difficulty in Finding Administrative/Managerial Personnel
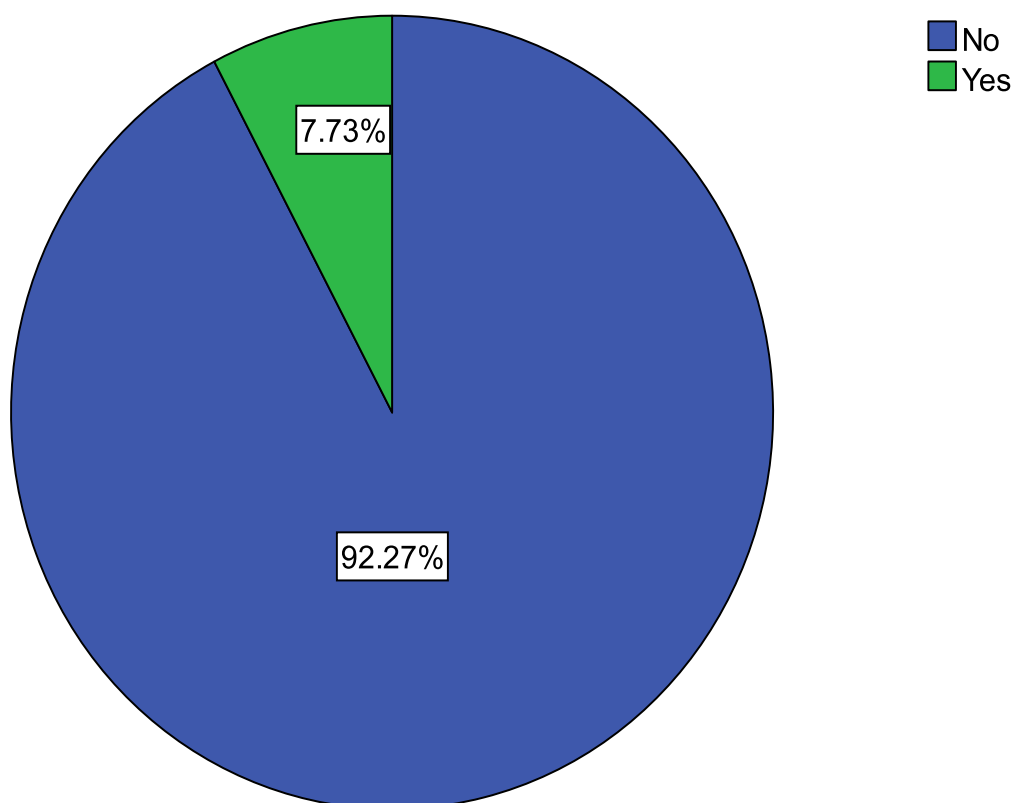
Only 7.7 percent of the respondent had difficulty in finding administrative/ managerial personnel. The probable explanation could be that the firms need less number of administrative or managerial personnel and more importantly there is a huge army of educated unemployed in these states. Perhaps there is greater preference for desk-jobs among the youth.

Table 5.18: Payment of Staff Insurance

Category	Payment of Staff Insurance	
	NO	**YES**
Special Category State (Beneficiary State)	49.2%	50.8%
Control Group or Non-Beneficiary State	53.9%	46.1%
Most Industrialised District	23.7%	76.3%
Less Industrialised District	73.7%	26.3%
Total	51.2%	48.8%

In the survey 48.8% of the respondent organisations reported payment of staff social insurance and the percentage was 50.8% for the special category states and 46.1% for the control group. However, if we analyse by the district category, the percentage for the most industrialised district was calculated at 76.3% while for the less industrialised districts it was only 26.3%.

Whether Staff Insurance Paid
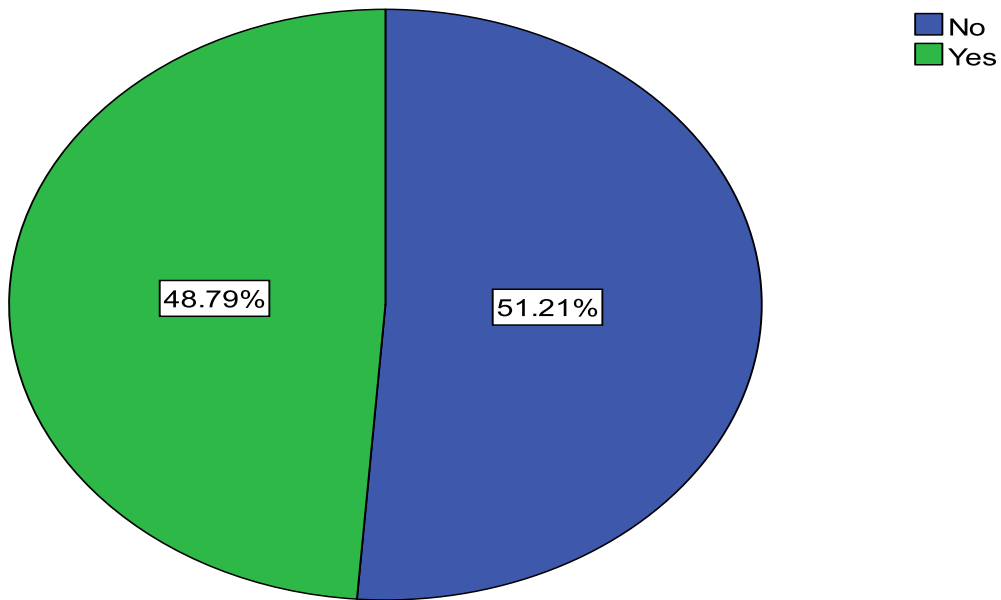
Violation of Safety, Security and Pollution Control Norms:

It was observed that in most of the industrial units the appropriate fire safety and other security and safety measures were lacking or were inadequate. Despite little knowledge and experience of environmental science, the field workers observed several industrial units openly releasing the pollutants in the air and water. One need not be a great scientist to feel the suffocation and irritation in the eyes in and around these units. The workers there also (anonymously) admitted having similar problem for a few initial hours daily when they come for duty and the body gets used to it during the day. Of course the senior administrative and managerial personnel have their offices air-conditioned thereby minimising the negative impact on them and perhaps also making them insensitive and ignorant to the threat they are posing to the environment and the people. Obviously these units must be having the required certifications and permissions from the concerned government departments, but in reality there were rampant violations and obviously this is not possible without the connivance of the government machinery. How much of the risk to the employees and the nearby residents can indeed be insured is a question wide open.

Table 5.19: Annual Percent Turnover of Employees

Category	Annual % Turnover of Employees	
	Mean	Std. Deviation
Special Category State (Beneficiary State)	25.60	31.350
Control Group or Non-Beneficiary State	25.35	44.286
Most Industrialised District	15.74	17.534
Less Industrialised District	33.45	46.396
Total	25.49	37.363

The mean annual percent turnover of the employees (i.e. the percent of employees who were changed during the last year) was estimated to be 25.49% with standard deviation of 37.363. This frequent change of employees reflects labour problem which has been recently aggravated due to less availability of migrant labour. The mean for special category states and the control group states were similar with values of 25.60 and 25.35 respectively. However, there was vast difference in the standard deviation with values of 31.350 for the special category states and 44.286 for the control group. When the data was analysed by district

category, the mean of the annual percent employee turnover was found to be much higher at 33.45% with SD of 46.396 for less industrialised districts as compared to 15.74 with SD of 17.534 for the most industrialised districts. It points to the problem of labour availability which is greater in the case of micro and small enterprises which reported greater difficulty in finding suitable employees and admitted very low retention rates of their employees.

Histogram

Mean =25.49
Std. Dev. =37.363
N =207

*(Histogram of Annual Percent Turnover of Employees, Frequency on Y-axis)*

It was observed that several industrial units preferred to employ temporary workers through contractors and they usually did not maintain records of the employees working through contractors. Therefore the figures reported in the employee turnover in the survey mostly do not contain the change of employees through contractors. The actual employee turnover thus would have been much larger. It was also found that the administrative, management and technical employees were mostly employed directly by the firms.

Simultaneous 95% Confidence Intervals for Means
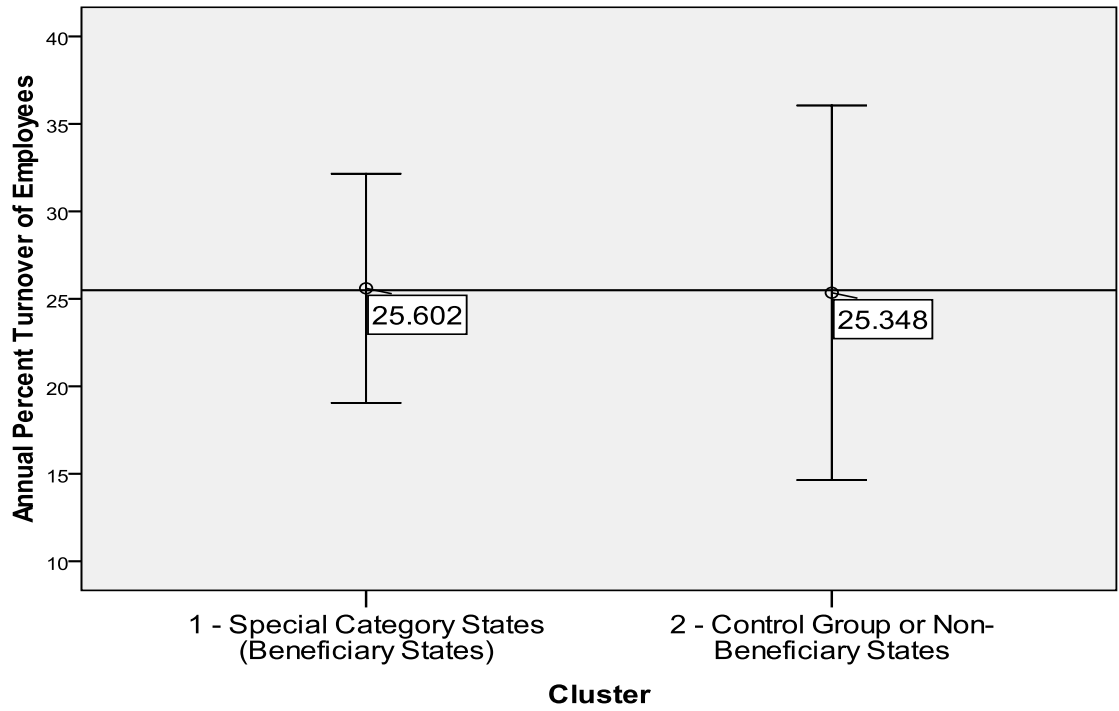
Reference Line is the Overall Mean = 25

Simultaneous 95% Confidence Intervals for Means

Reference Line is the Overall Mean = 25

121
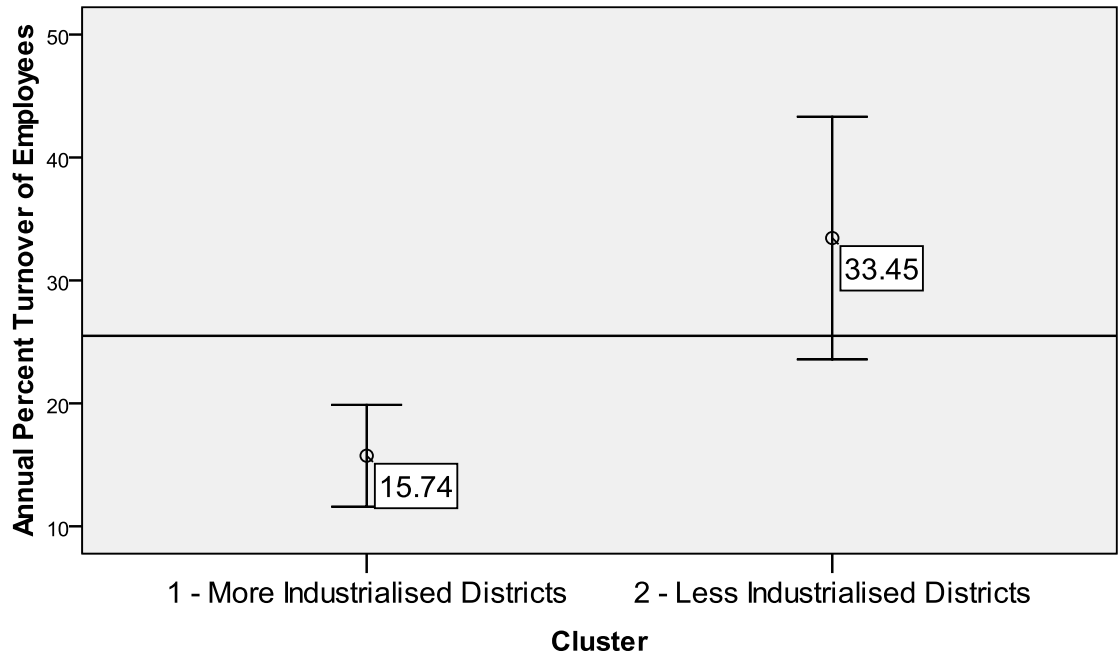
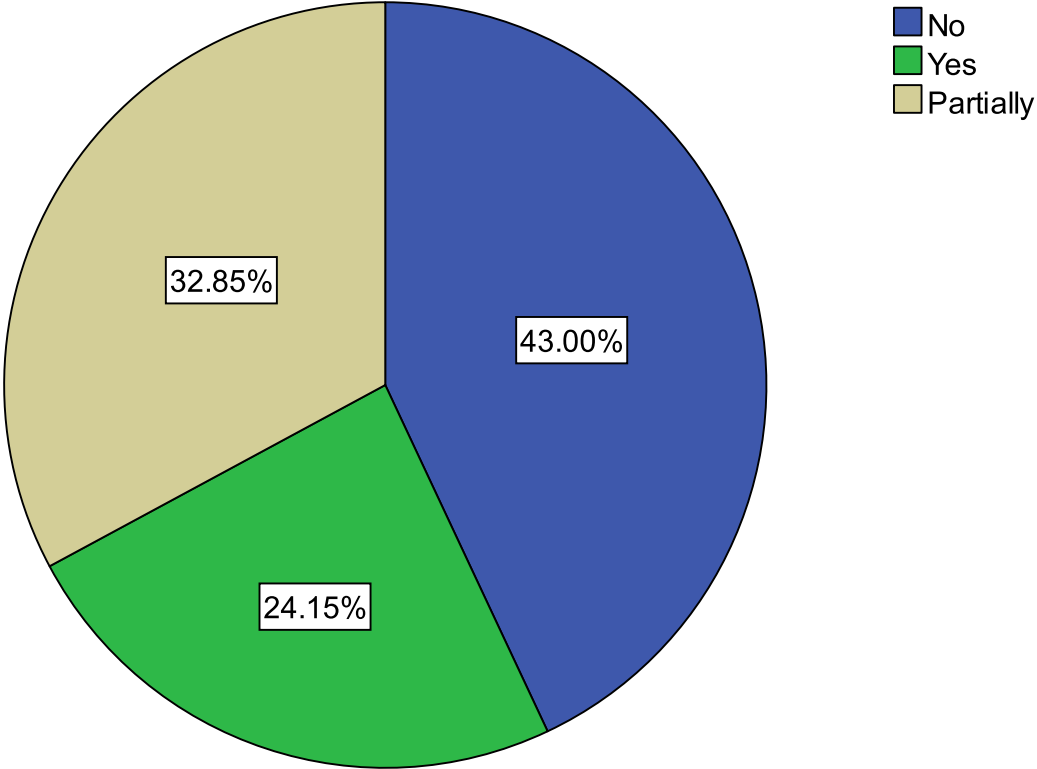*Table 5.20: Does the Education Match Needs of the Industry?*

Category	Does the Education Match Needs of the Industry?		
	NO	**YES**	**PARTIALLY**
Special Category State (Beneficiary State)	31.4%	33.1%	35.6%
Control Group or Non-Beneficiary State	58.4%	12.4%	29.2%
Most Industrialised District	22.6%	35.5%	41.9%
Less Industrialised District	59.6%	14.9%	25.4%
Total	43.0%	24.2%	32.9%

Only 24.2% of the survey respondents felt that the education received in our academic and technical institutions match with the needs of the industry while 32.9% felt that it only match partially. A large percentage of the respondents (43%) reported in the negative. 31.4% of the survey respondents in the special category states and a large 58.4% of the respondents in the control group opined that the education does not match needs of the industry. One would be surprised at the results that less industrialised districts reported greater percentage of respondents who opined that the education does not match needs of the industry with the ratio at 59.6% as

compared to only 22.6% in case of the most industrialised district. This is mainly because the predominant unskilled labour hardly has any education and the respondents argue that had they been educated, they would not have agreed to do physical labour work. On the other hand technically sophisticated industries feel that they have to train their workers on their own. The education received in our academic and more importantly in technical institutions hardly matches their needs. It just facilitates the training that they impart to their employees. Moreover the industry is hardly involved in developing the curriculum in the industrial training institutes, which is very important for ensuring the success of package to special category states and for industrialisation in general. The educational qualifications of the employees reveal that there is low qualification of the employees in most of the industries, though the qualifications are also relevant to the nature of the industry and the product. For example in the pharma sector the qualification of the average employee are much higher.

Does the Education Match Needs of the Industry?

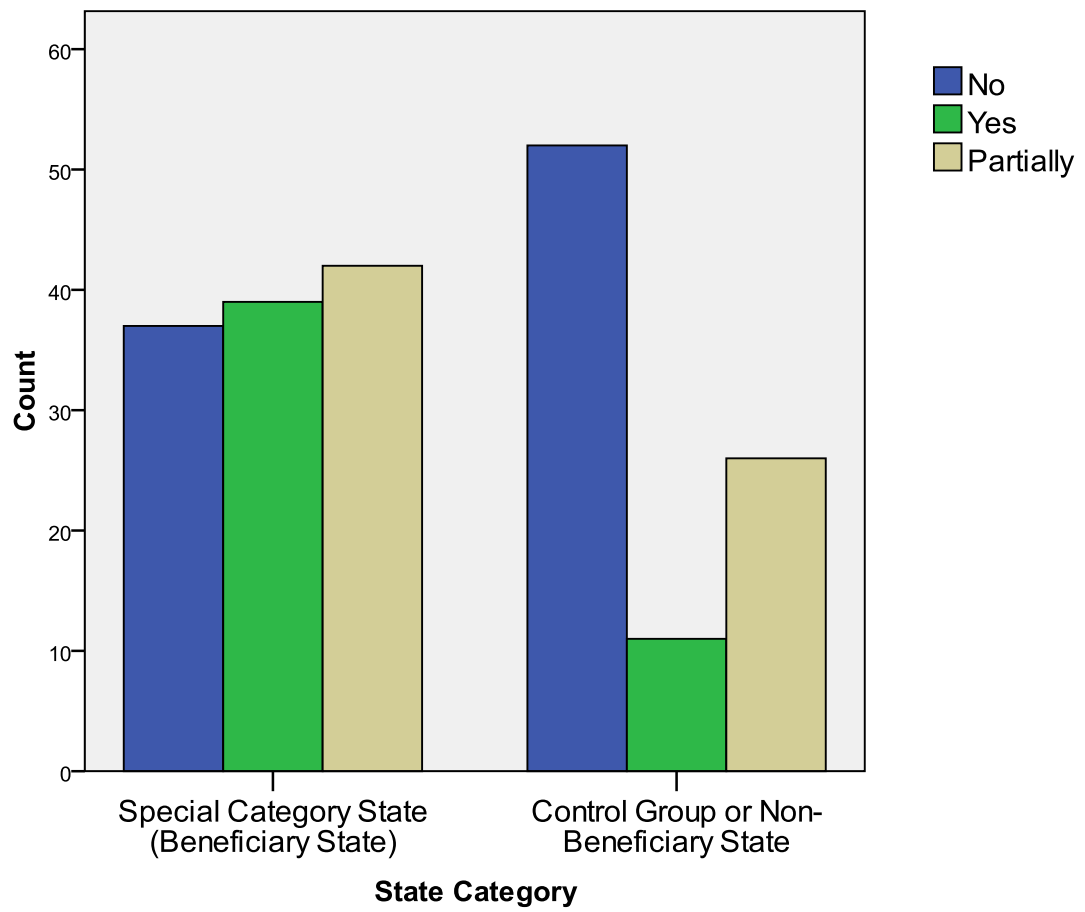**Does the Education Match Needs of the Industry?**

Table 5.21: Training of Workers by Industries

Category	Training of Workers by Industries	
	NO	**YES**
Special Category State (Beneficiary State)	21.2%	78.8%
Control Group or Non-Beneficiary State	48.3%	51.7%
Most Industrialised District	15.1%	84.9%
Less Industrialised District	47.4%	52.6%
Total	32.9%	67.1%

A very large percentage of the respondent organisation at 67.1% reported that they train their workers. This figure was higher for the special category states at 78.8% as compared to 51.7% for the control group. The figure for the most industrialised districts was higher at 84.9% as compared to 52.6% for the less industrialised districts. Though most of the respondents reported that they train their workers but majority of the training was given on the job. This reflects the need for formal training at the level of the industries.
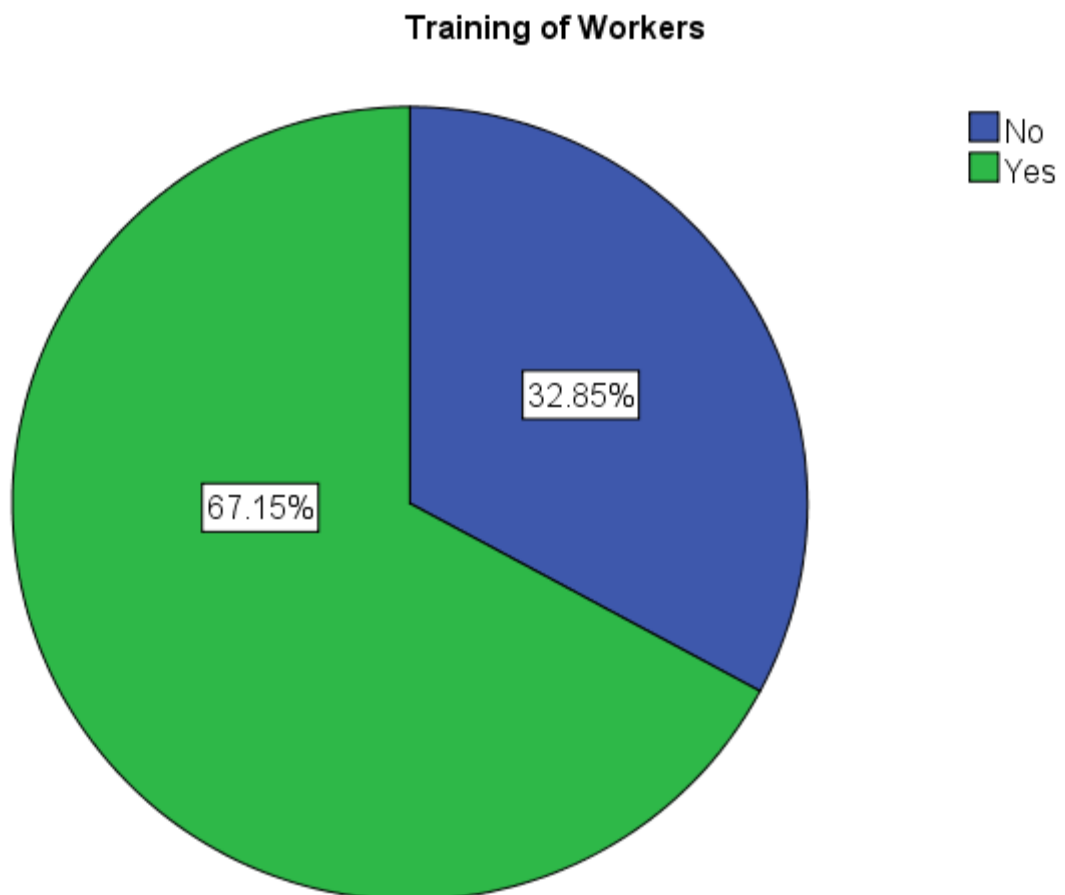
Training of Workers

Training of Workers

Table 5.22: Yearly Training Budget

Category	Yearly Training Budget	
	NO	**YES**
Special Category State (Beneficiary State)	79.7%	20.3%
Control Group or Non-Beneficiary State	89.9%	10.1%
Most Industrialised District	72.0%	28.0%
Less Industrialised District	93.9%	6.1%
Total	84.1%	15.9%

Only 15.9% of the respondent organisations reported having yearly training budget. In the special category states this ratio was higher at 20.3% in comparison to 10.1% in case of the control group states. For the most industrialised districts the ratio was 28.0% in comparison to only 6.1% in the less industrialised districts. This reflects the fact that the training of employees in most of the industrial organisations is mostly on-the job training only for which there is no specific need of any budget. Very few industries, mostly medium and large enterprises, have proper training policies and specific budgetary provisions for training.
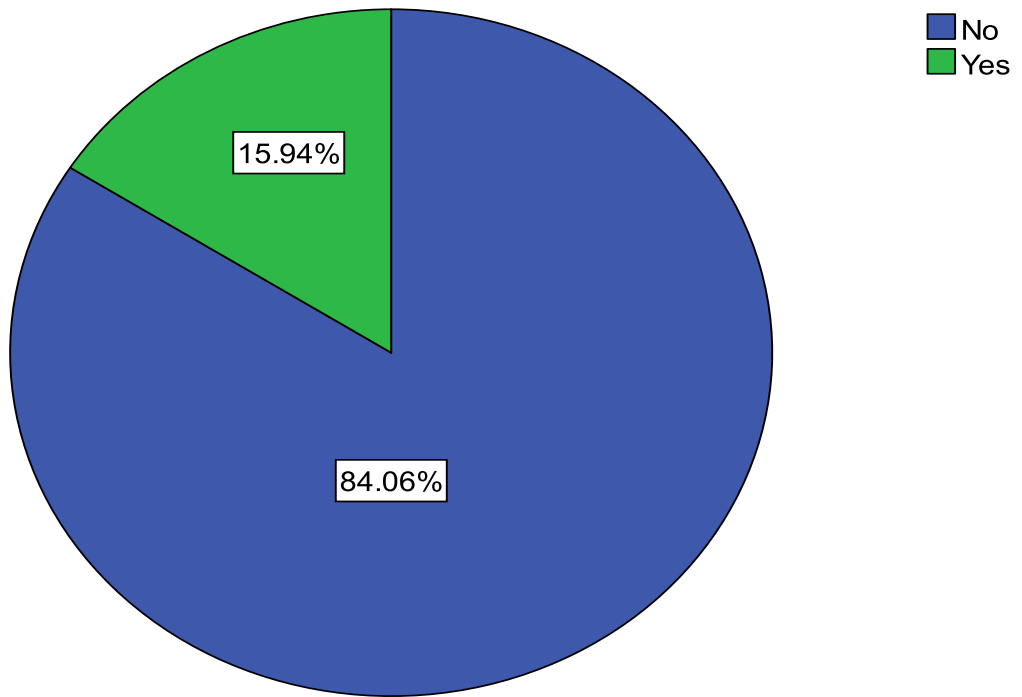
Yearly Training Budget

No
Yes

15.94%

84.06%

Table 5.23: Regular Training Needs Assessment

Category	Regular Training Needs Assessment	
	NO	**YES**
Special Category State (Beneficiary State)	65.3%	34.7%
Control Group or Non-Beneficiary State	59.6%	40.4%
Most Industrialised District	43.0%	57.0%
Less Industrialised District	78.9%	21.1%
Total	62.8%	37.2%

The 37.2% of the respondent organisations reported making regular training needs assessment. This ratio was higher in the control group states at 40.4% as compared to 34.7% in case of special category states. For the most industrialised districts the ratio was 57% in comparison to 21.1% in the less industrialised districts. The lack of training needs assessment reflects the aspect often ignored in the industrial management. The industries must realise that they must be pro-active in development and up-gradation of the skills of their employees.

Training Interns or Exploitation of Workers by Large Companies

During the field work it was observed that some of the large and reputed industrial organisations in the special category states have been recruiting a large number of male as well as female rural youth from hill areas for training for a few years and they are paid stipends during their training period. This indeed seems to be great from the point of view of corporate social responsibility – training and employing local youth. However, it was reported that some of the industries are using this policy as a strategy for cost-minimisation and reducing their wage and salary bill. These industries use the youth for a period of 2-3 years, use their services at very low rates in the name of stipend to the trainees. However, on completion of training the youth is awarded a certificate of training but left unemployed as his/her position is taken over by another unemployed youth ready and willing to be exploited. The rural youth is left in a dilemma – he/she can neither go back to village to revert back to agriculture as occupation, nor can he/she sustain in the urban areas without alternative employment.
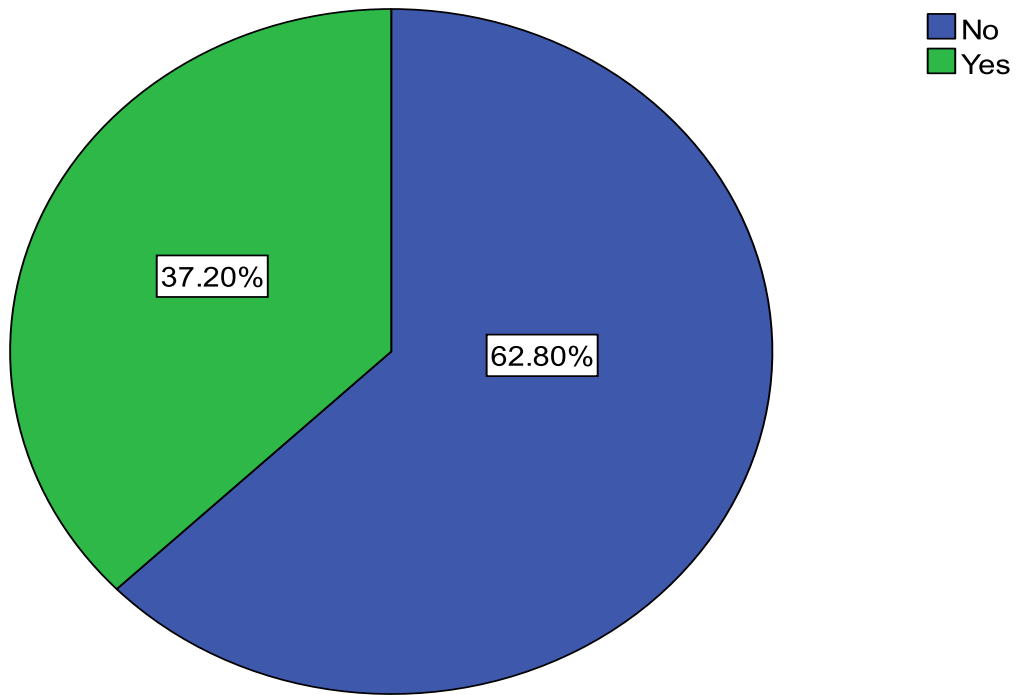
Regular Training Needs Assessment

Table 5.24: Research & Development

Category	Research & Development	
	NO	**YES**
Special Category State (Beneficiary State)	74.6%	25.4%
Control Group or Non-Beneficiary State	88.8%	11.2%
Most Industrialised District	66.7%	33.3%
Less Industrialised District	92.1%	7.9%
Total	80.7%	19.3%

Only 19.3% of the industrial organisations in the survey reported investments in research and development. The figure was 25.4% in case of the special category states and 11.2% in case of the control group. Among the most industrialised districts the ratio was 33.3% in comparison to only 7.9% in the less industrialised districts.
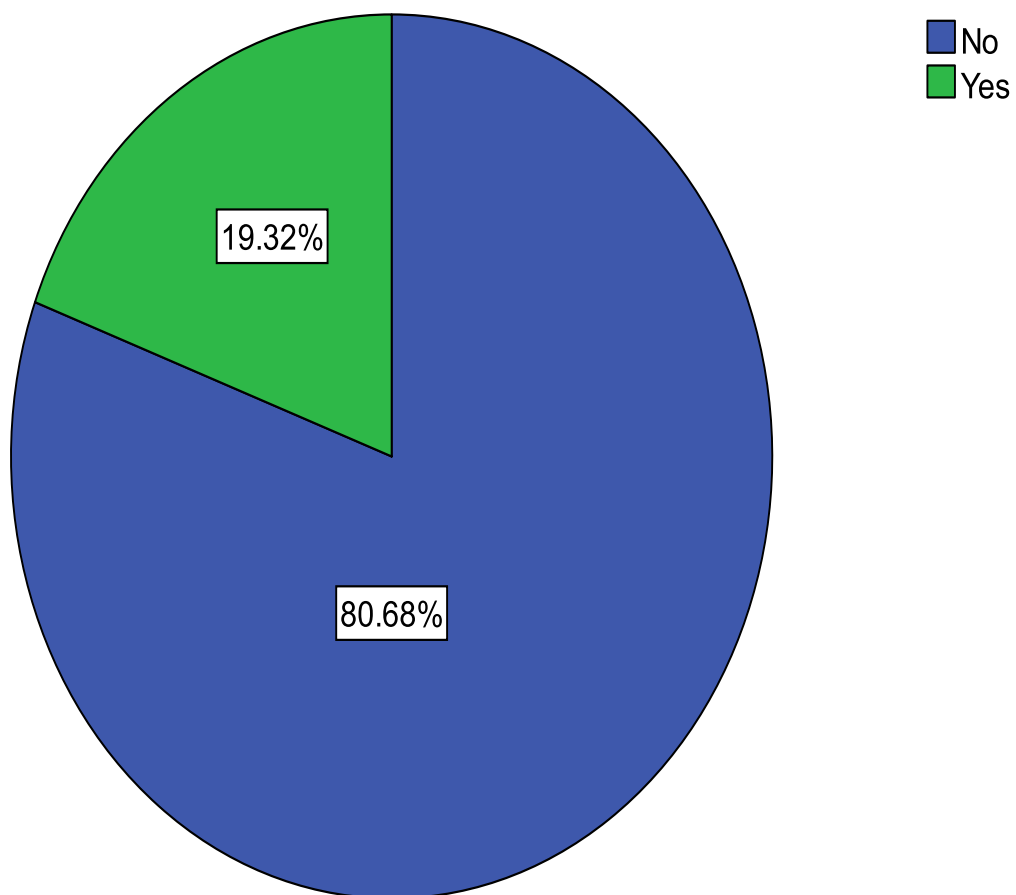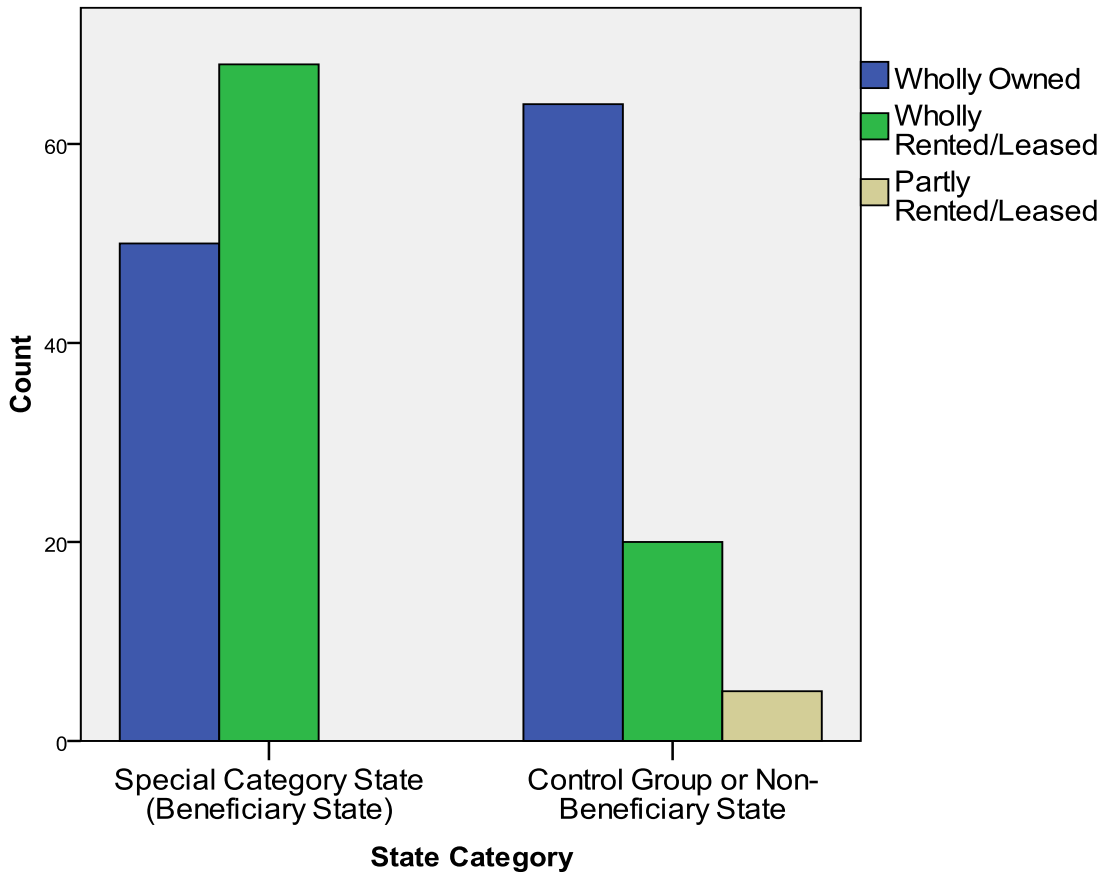
Research & Development

Table 5.25: Tenure of Land and Building

Category	Tenure of Land and Building		
	Wholly Owned	Wholly Leased/ Rented	Partly Rented/ Leased
Special Category State (Beneficiary State)	42.4%	57.6%	.0%
Control Group or Non-Beneficiary State	71.9%	22.5%	5.6%
Most Industrialised District	51.6%	45.2%	3.2%
Less Industrialised District	57.9%	40.4%	1.8%
Total	55.1%	42.5%	2.4%

In the survey 42.5% of the respondent organisations reported that the tenure of land and building occupied by the industries was wholly leased or rented while 55.1% wholly owned the land and building. The tenure of land was mostly wholly leased in the case of industries set up in the industrial area/ estate. The ratio was high in case of special category states at 57.6% in comparison to 22.5% in case of the control group. In the special category states a number of industrial units are also operating in the buildings/shed rented from private owners. It is apprehended that these units mostly have no intentions to permanently operate in the special category states and that they will flee to other states once their incentives are fully availed and their period is over.

Tenure of Land & Building

Legend: Wholly Owned, Wholly Rented/Leased, Partly Rented/Leased

Tenure of Land & Building

55.07%

42.51%

2.42%

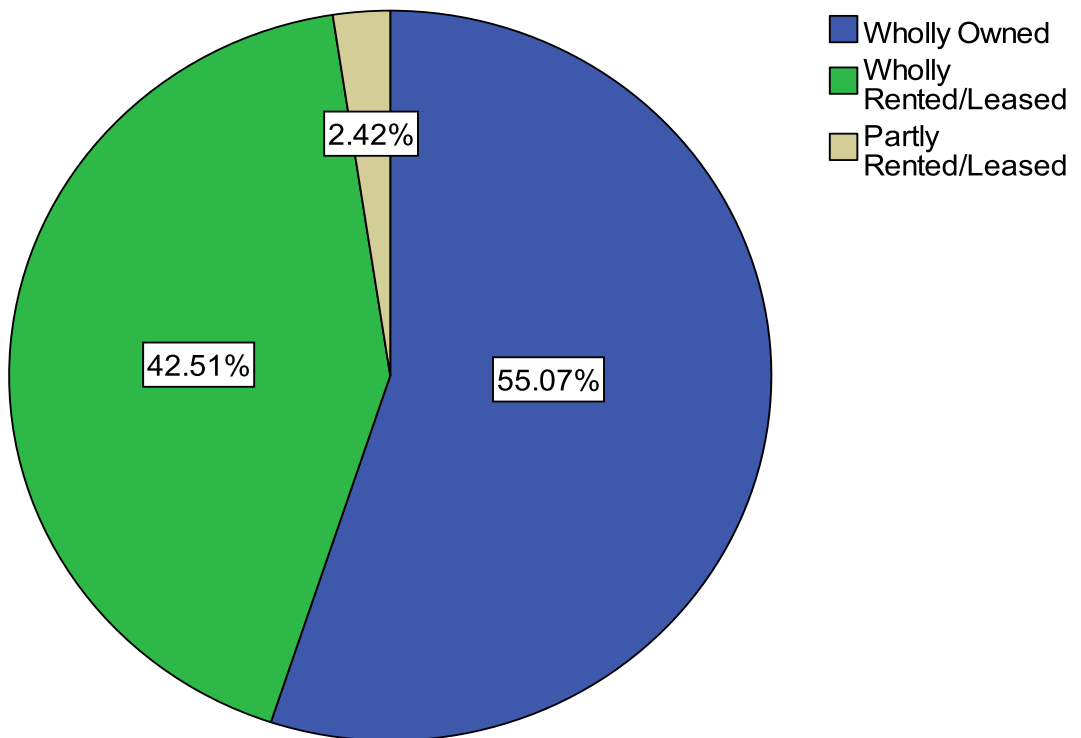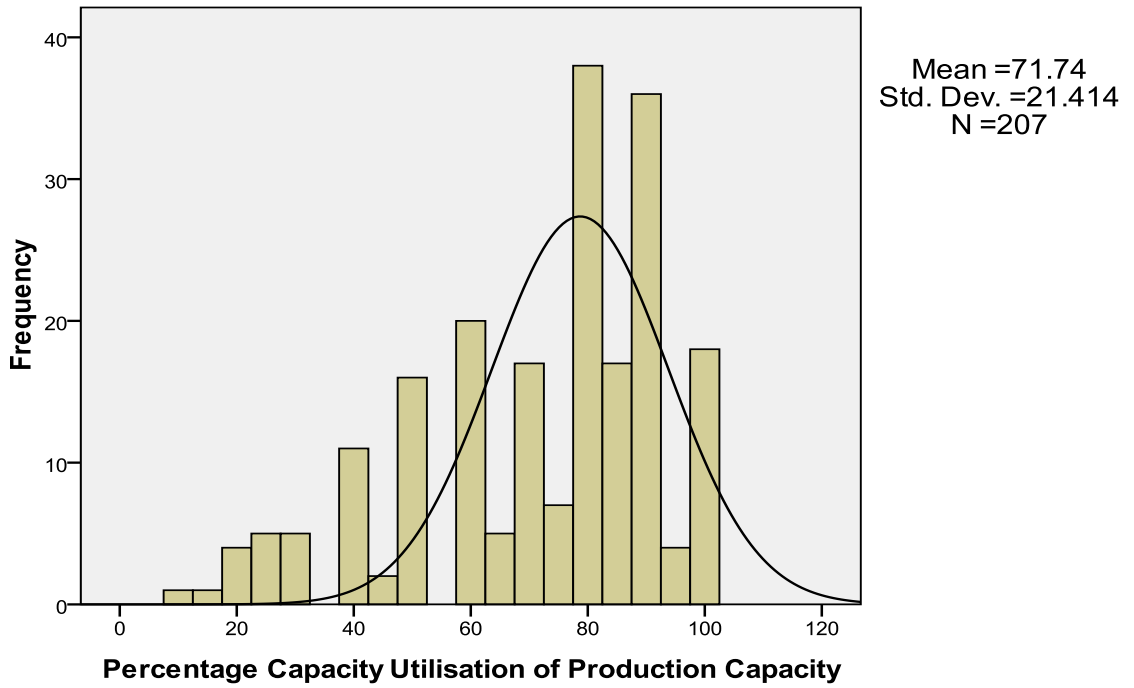**Legend:** Wholly Owned, Wholly Rented/Leased, Partly Rented/Leased

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Table 5.26: Percentage Capacity Utilisation of Production Capacity

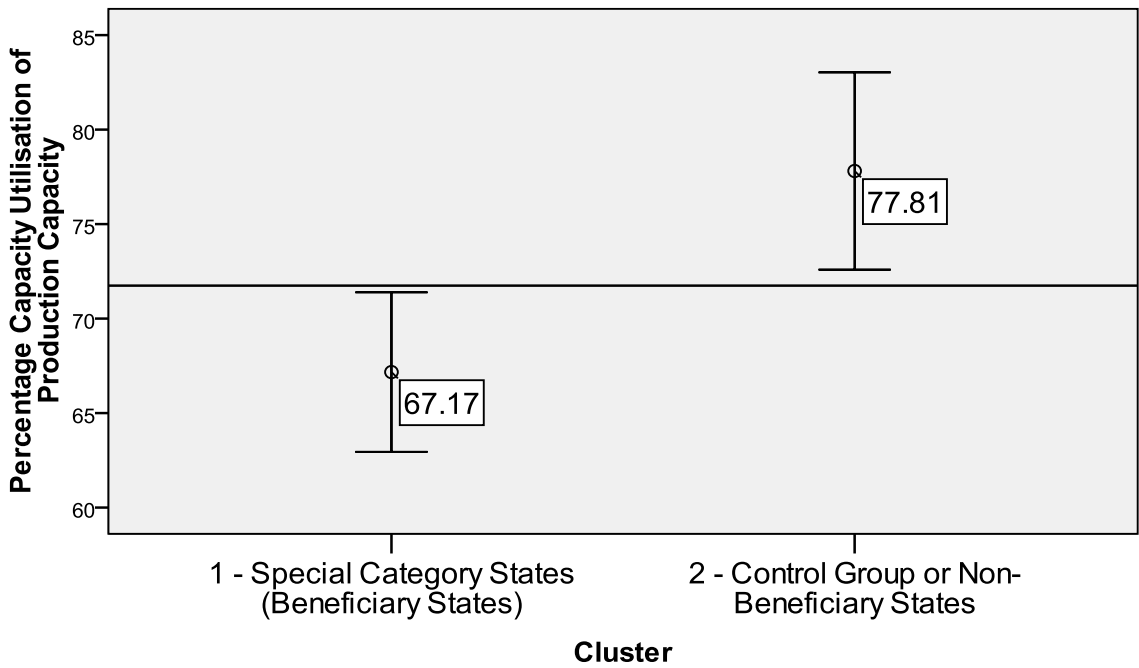| Category	Percentage Capacity Utilisation of Production Capacity	
	Mean	**Std. Deviation**
Special Category State (Beneficiary State)	67.17	20.190
Control Group or Non-Beneficiary State	77.81	21.591
Most Industrialised District	78.46	15.328
Less Industrialised District	66.26	24.025
Total	71.74	21.414

The percentage utilisation of production capacity for the entire survey respondents was estimated to have the mean of 71.74% with standard deviation of 21.414. It was found that the special category states had lower capacity utilisation at 67.17% with SD of 20.190 while the control group states had capacity utilisation at 77.81% with SD of 21.591. The most industrialised districts had greater capacity utilisation at 78.46% with SD of 15.328 in comparison to 66.26% in case of less industrialised districts with SD of 24.025. In case of industries like the perfume industry in Kannauj and wax candle industry in Nainital (Uttarakhand) which are largely labour intensive, these figures have little relevance. Most of these respondent organisations were operating at scales just 20-30% of their earlier scales of production.

Histogram

Mean =71.74
Std. Dev. =21.414
N =207

Percentage Capacity Utilisation of Production Capacity

Simultaneous 95% Confidence Intervals for Means

77.81

67.17

1 - Special Category States
(Beneficiary States)

2 - Control Group or Non-
Beneficiary States

Cluster

Reference Line is the Overall Mean = 72

Simultaneous 95% Confidence Intervals for Means
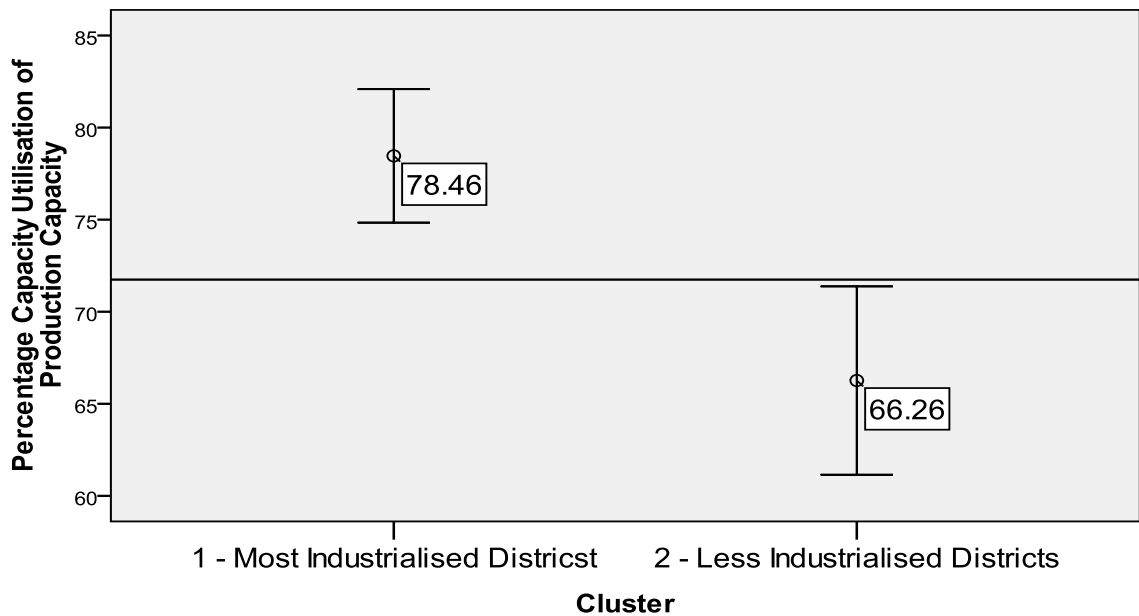
Reference Line is the Overall Mean = 72

**Perfume Industry in Kannauj, Uttar Pradesh:**

The perfume industry in Kannauj has been world famous but in recent years it has been facing grave crisis. The traditional perfume industry was based on non-chemical natural processes which is eco-friendly. Commonly called Attar Industry, the low-cost chemical based perfumes led to its decline in the traditional consumer perfume segment but due to its nature-based production and being edible the attar industry survived on the support of Pan Masala and Gutka industry. However, in the recent years, the Pan Masala and Gutka industry has been facing severe restriction on packaging material as well as on the very existence of these products. The availability of the main base sandal oil has also been restricted due to non-availability of sandal wood and restrictions on the import of sandal wood. Most of the sandal wood refineries have faced closure in recent years and very few of them are working, that too for very short durations in the year. The large players in the perfume industry have diversified into the new fledging business of cold-stores in Kannauj as potato crop in the area is quite good. However, a lot of other perfume producers are facing grave crisis. The foreign exchange earnings by the perfume industry have also declined in the face of severe challenges facing them.

Table 5.27: Exports

Category	Exports	
	NO	**YES**
Special Category State (Beneficiary State)	85.6%	14.4%
Control Group or Non-Beneficiary State	79.8%	20.2%
Most Industrialised District	78.5%	21.5%
Less Industrialised District	86.8%	13.2%
Total	83.1%	16.9%

Only 16.9% of the respondent organisation reported exporting their products. The percentage for special category states was only 14.4% in comparison to 20.2% for the control group states. This indicates that the package has not been able to make any impact of encouraging exports from the special category states. In fact there are no special incentives for exports from these states. Among the less industrialised districts only 13.2% of the respondents reported exports in comparison to 21.5% in case of the most industrialised districts.

Exports
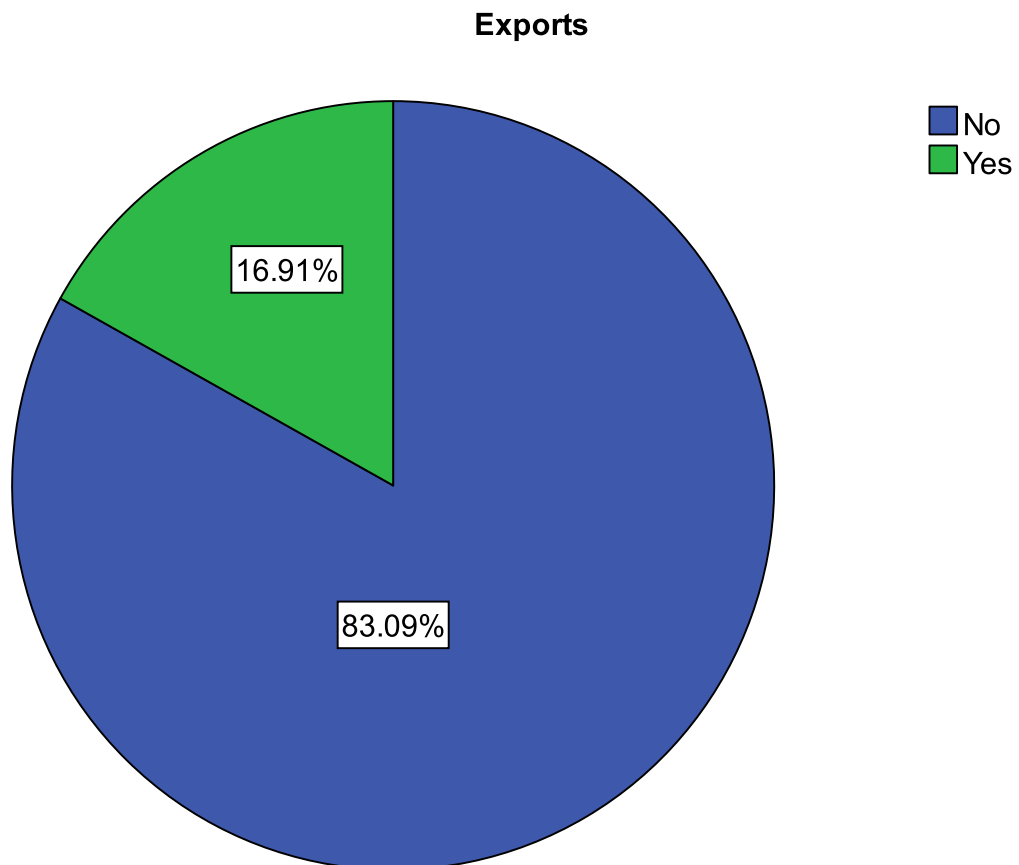
Wax Candle Industry in Nainital, Uttarakhand:

The wax candle industry in Nainital has been the major traditional industry in Nainital which has highly suitable climate for the sector and also suitable traditional skilled labour required for the industry. Keeping in view the delicate handwork involved in candle industry, the women are predominantly employed in the sector. However, the candle manufacturing sector has seen a drastic decline in the last few years and the number of registered manufacturers which was around 60 has drastically come down to around 4-5 and they are also facing risks for survival. However, learning from some other markets they have started acting as a cartel to minimise their costs and to ensure survival. The major problem they are facing is the high price of wax which has seen drastic increases in the decontrolled regime. The major demand of the candle industry is to have some government controlled quota system for them to ensure low-cost supply of the wax for manufacturing as was prevalent in the pre-reform period. The candle industry is also facing stiff competition from the candle imports from China which though poor in quality are attractively packaged and very low in prices. This has shaken the traditional industry and awakened them of the need for proper packaging of the candles. However, keeping the low volumes and absence of any packaging industry in the vicinity, their items are still sold wrapped in newspaper or just packed in some unattractive boxes. Thus the high valued candles loose the consumer attraction. There is urgent need to sort out the problem of packaging of candles in consultation with the candle industry which being very small scale, cannot solve the packaging problem on their own. Another problem of candle industry is that there is no separate industrial area in Nainital town where candle manufacturers can safely operate. Therefore the candle manufacturing work has to be done in the residential areas leading to high risk as wax is highly inflammable. Despite fire safety measures, the risk is great in residential areas as there is congestion and related problems. The candle industry's demand of the package for their industry seems genuine especially keeping in view the vast employment generating by this traditional sector especially for the weaker women.

Table 5.28: Whether Other State was considered for Investment

Category	Whether Other State was considered for Investment	
	NO	**YES**
Special Category State (Beneficiary State)	73.7%	26.3%
Control Group or Non-Beneficiary State	78.7%	21.3%
Most Industrialised District	68.8%	31.2%
Less Industrialised District	81.6%	18.4%
Total	75.8%	24.2%

Only 24.2% of the respondents reported having considered any other state for industrial investment. The figure was higher in case of respondents from the special category states at 26.3% in comparison to 21.3% for the control group states as a number of respondents in the special category states have come from other states. The figure for the most industrialised district was high at 31.2% against 18.4% for the less industrialised district.
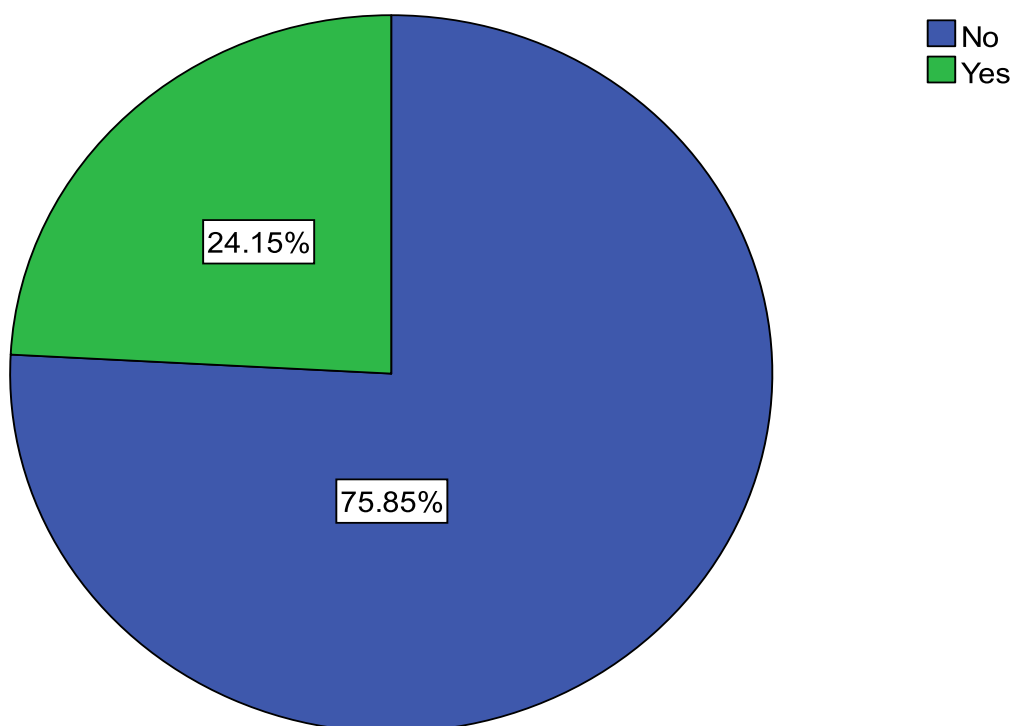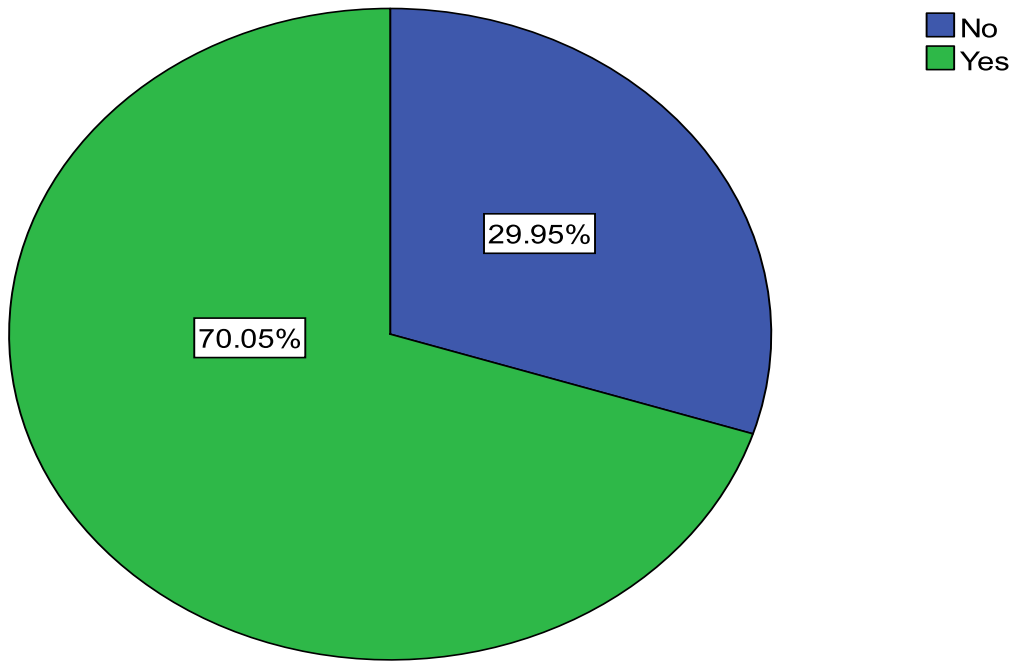
Whether Other State was Considered for Investment

Table 5.29: Awareness of Package to Special Category States

Category	Awareness of Package to Special Category States	
	NO	**YES**
Special Category State (Beneficiary State)	18.6%	81.4%
Control Group or Non-Beneficiary State	44.9%	55.1%
Most Industrialised District	17.2%	82.8%
Less Industrialised District	40.4%	59.6%
Total	30.0%	70.0%

The survey found that 70% of the total respondents were aware of the package to special category states. The ratio was greater for the special category states at 81.4% in comparison to 55.1% for the control group. Obviously this is on expected lines as the non-beneficiaries are comparatively less interested in what is offered in other states except the enterprising few who are willing to invest outside for better gains. The awareness was high in the most industrialised districts at 82.8% in comparison to 59.6% for the less industrialised districts. However, a large proportion of respondents in Rajauri district in J & K, a few in Bilaspur in Himachal Pradesh were not aware of these incentives.

Awareness of Package to Special Category States

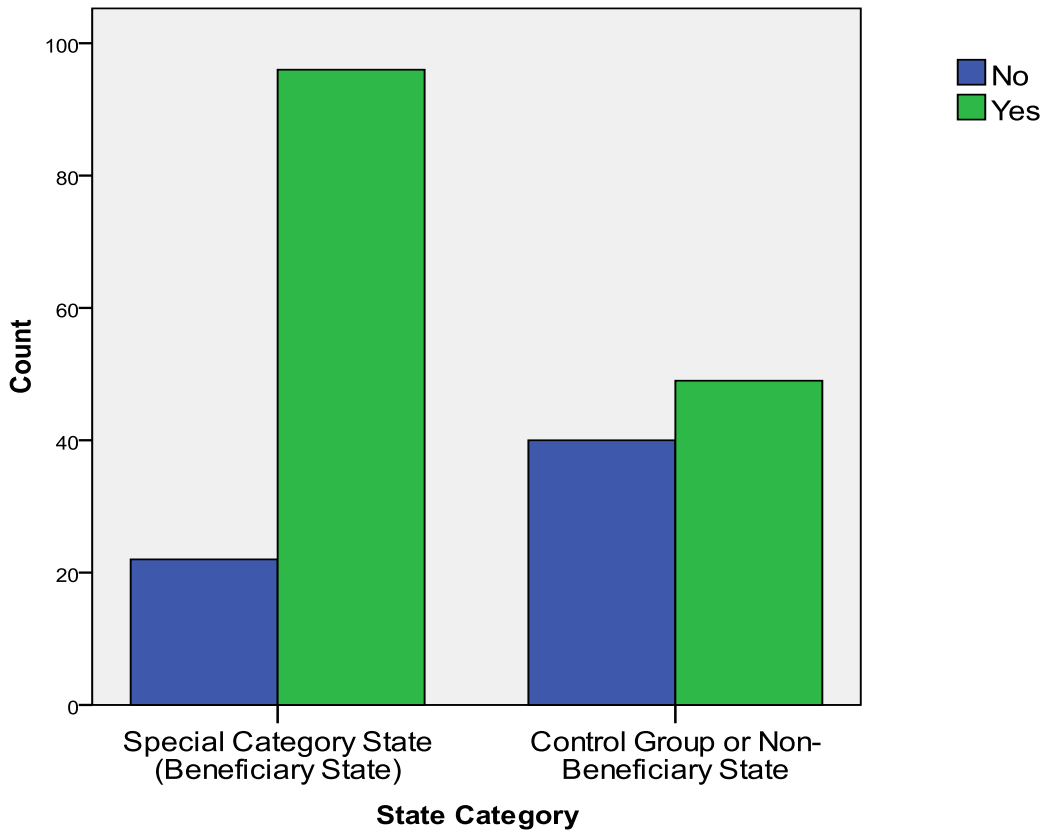**Awareness of Package to Special Category States**

Table 5.30: Understanding of the Package to Special Category States

Category	Level of Understanding of the Package				
	Very Good	Fairly Good	Not Very Good	Not At All Good	Reliance on Advisors
Special Category State (Beneficiary State)	36.4%	37.3%	9.3%	16.1%	.8%
Control Group or Non-Beneficiary State	19.1%	27.0%	11.2%	33.7%	9.0%
Most Industrialised District	29.0%	48.4%	10.8%	8.6%	3.2%
Less Industrialised District	28.9%	20.2%	9.6%	36.0%	5.3%
Total	29.0%	32.9%	10.1%	23.7%	4.3%
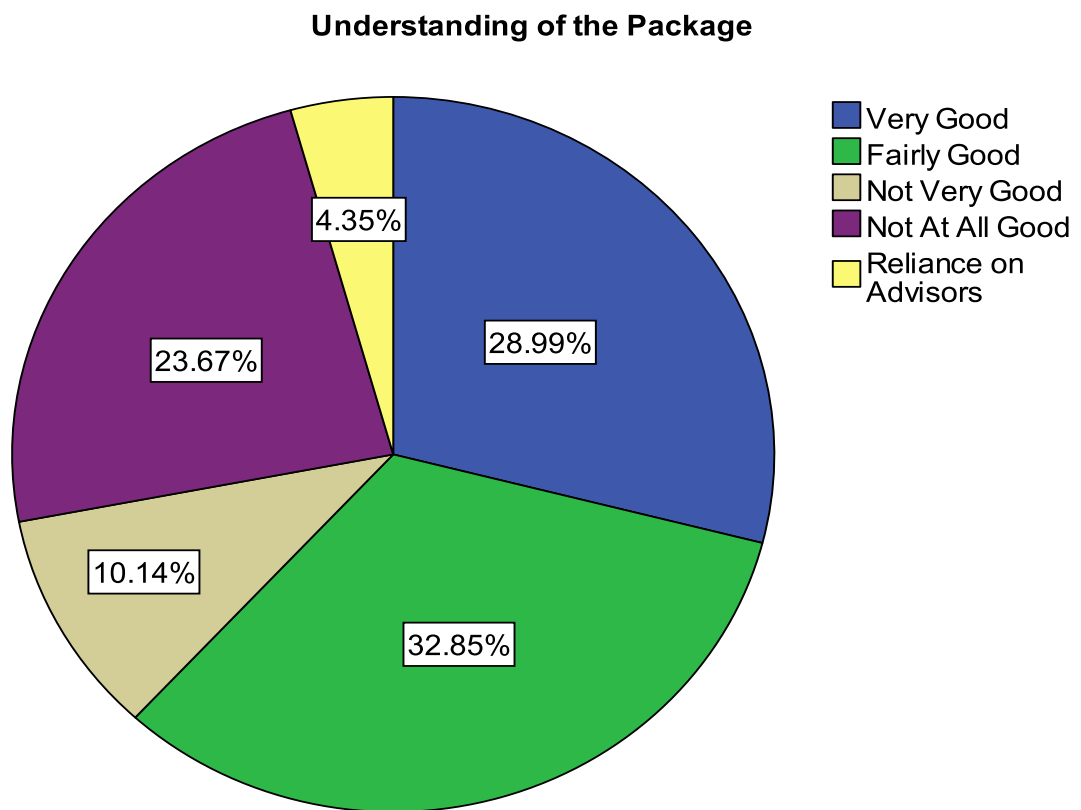
Understanding of the Package

Most of the respondents' self-assessment of their understanding of the scheme was only fairly good reported by 32.9% of the respondents and only 29% reported it as 'very good'. This clearly reflects confusions in the implementation and interpretation of the scheme and drawbacks in the publicity of the scheme. A large number of respondents, mostly micro-enterprises, reported their understanding as 'not at all good' constituting 23.7% of the total respondents, 10.1% as not very good and 4.3% reported that they rely on their advisors. The understanding of the scheme was a lot

better in case of special category states than the control group states, which is natural and expected from the beneficiaries. However, even in the special category states 16.1% reported their understanding as 'not at all good' which is really unfortunate and indicates the failure of publicity of the scheme to the industrialists. Thus a lot more effort should have been put in generating awareness at least among the industrialists in these states.

Understanding of the Package to Special Category States
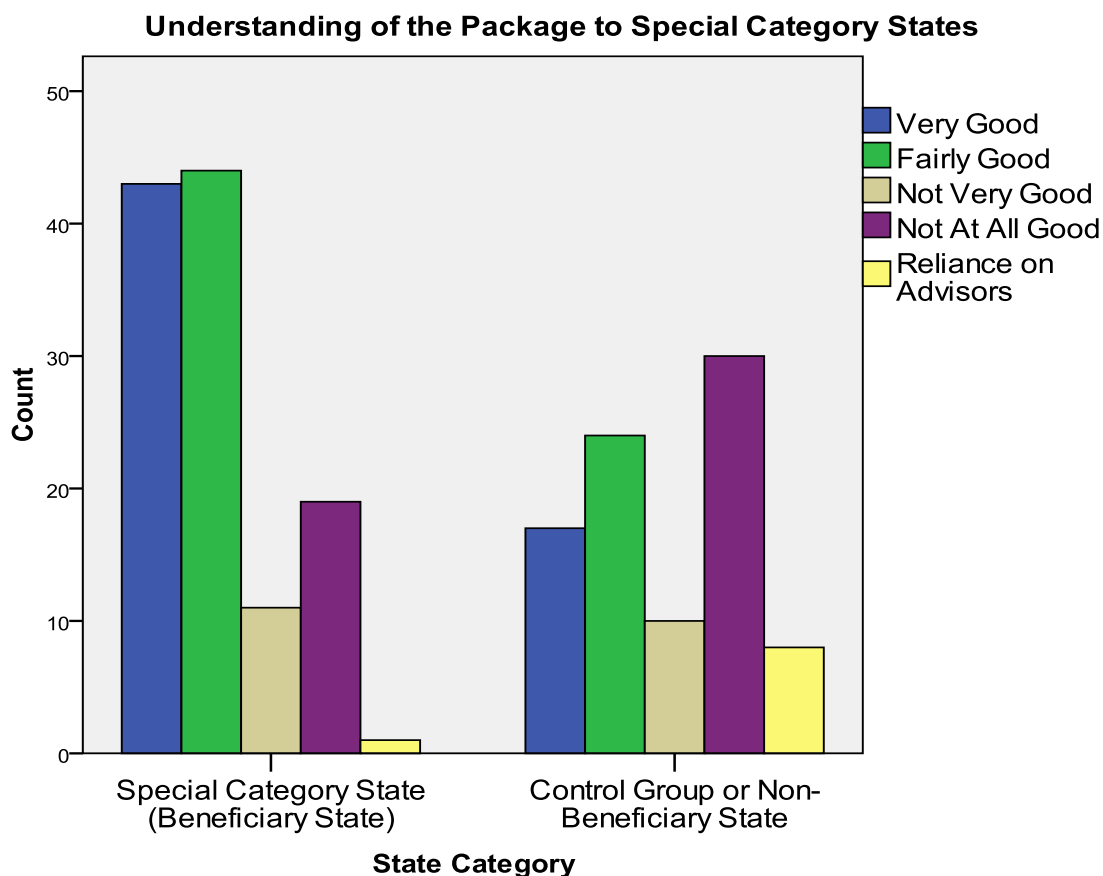
Table 5.31: Opposition to Industrialisation

Category	Media	Resident Groups	NGO	Politician	Bureaucrat	Other	No Opposition
Special Category State	4.2%	2.5%	3.4%	10.2%	11.0%	4.2%	64.4%
Control Group States	7.9%	2.2%	9.0%	10.1%	4.5%	6.7%	59.6%
Most Industrialised District	6.5%	4.3%	11.8%	12.9%	9.7%	2.2%	52.7%
Less Industrialised District	5.3%	0.9%	0.9%	7.9%	7.0%	7.9%	70.2%
Total	5.8%	2.4%	5.8%	10.1%	8.2%	5.3%	62.3%

Opposition to Industrialisation
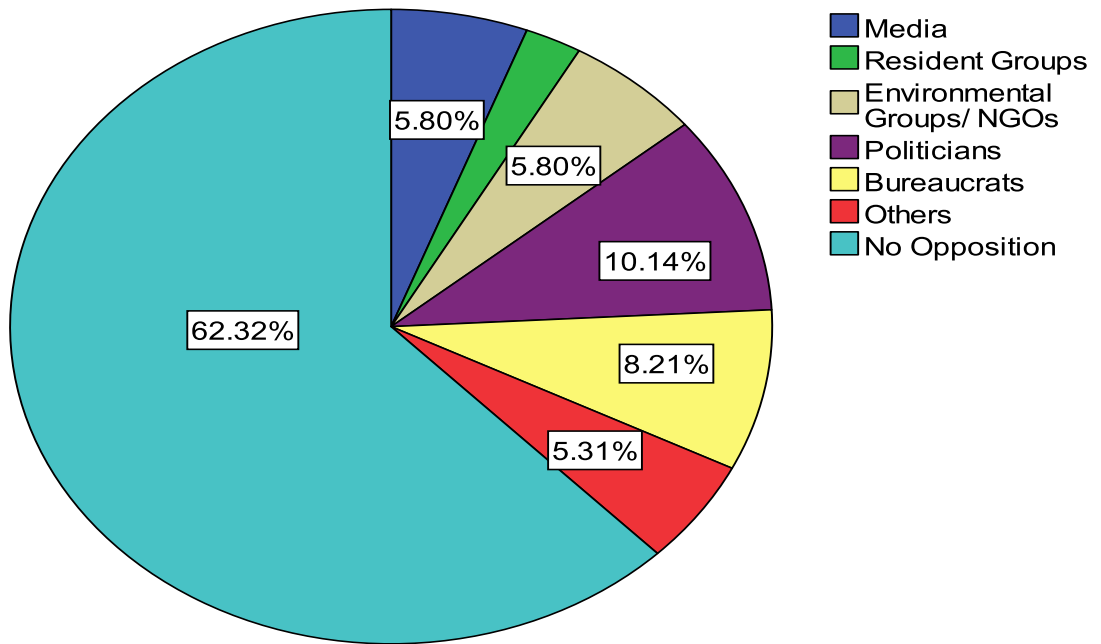
Majority of the respondents (62.3%) felt that there is no opposition to the industries in their states. The ratio was 64.4% in the special category states while it was 59.6% in the control group. In the most industrialised districts this ratio was 52.7% while in case of less industrialised districts it was 62.3%. The respondents felt that politicians (10.1%) and bureaucrats (8.2%) were the most likely to oppose industrialisation. In the special category states the bureaucracy was more likely to

oppose industrialisation with the ratio at 11.0% in comparison to 4.5% in the control group. Perhaps this reflects the industrialists' frustration with the system and mechanism of implementation of the incentive schemes.

Table 5.32: Performance of the State in Attracting Industrial Investment

Category	Performance of the State in Attracting Industrial Investment		
	Below Average	Average	Above Average
Special Category State (Beneficiary State)	31.4%	47.5%	21.2%
Control Group or Non-Beneficiary State	48.3%	36.0%	15.7%
Most Industrialised District	39.8%	44.1%	16.1%
Less Industrialised District	37.7%	41.2%	21.1%
Total	38.6%	42.5%	18.8%

Performance of the State in Attracting Industrial Investment
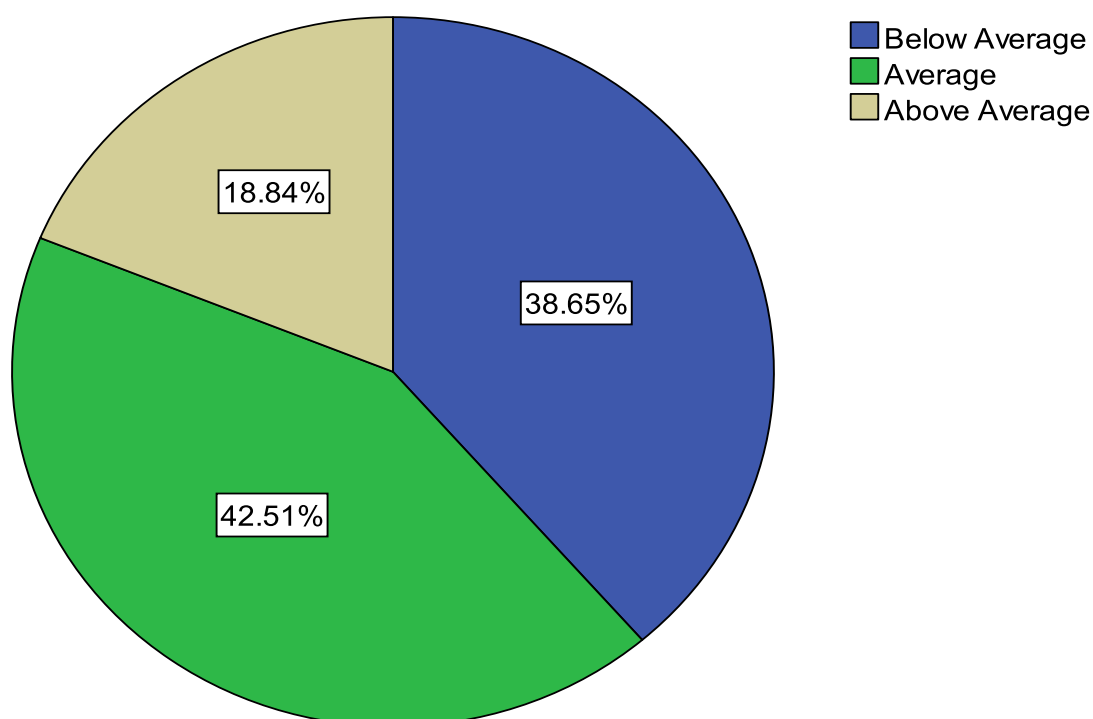
The 18.8% of the survey respondents reported the performance of their state in attracting industrial investment as above average, 42.5% as average and 38.6% as below average. Overall the assessment of industrialisation in the special category states was better than that of the control group states which is clearly attributable to the package to these states.
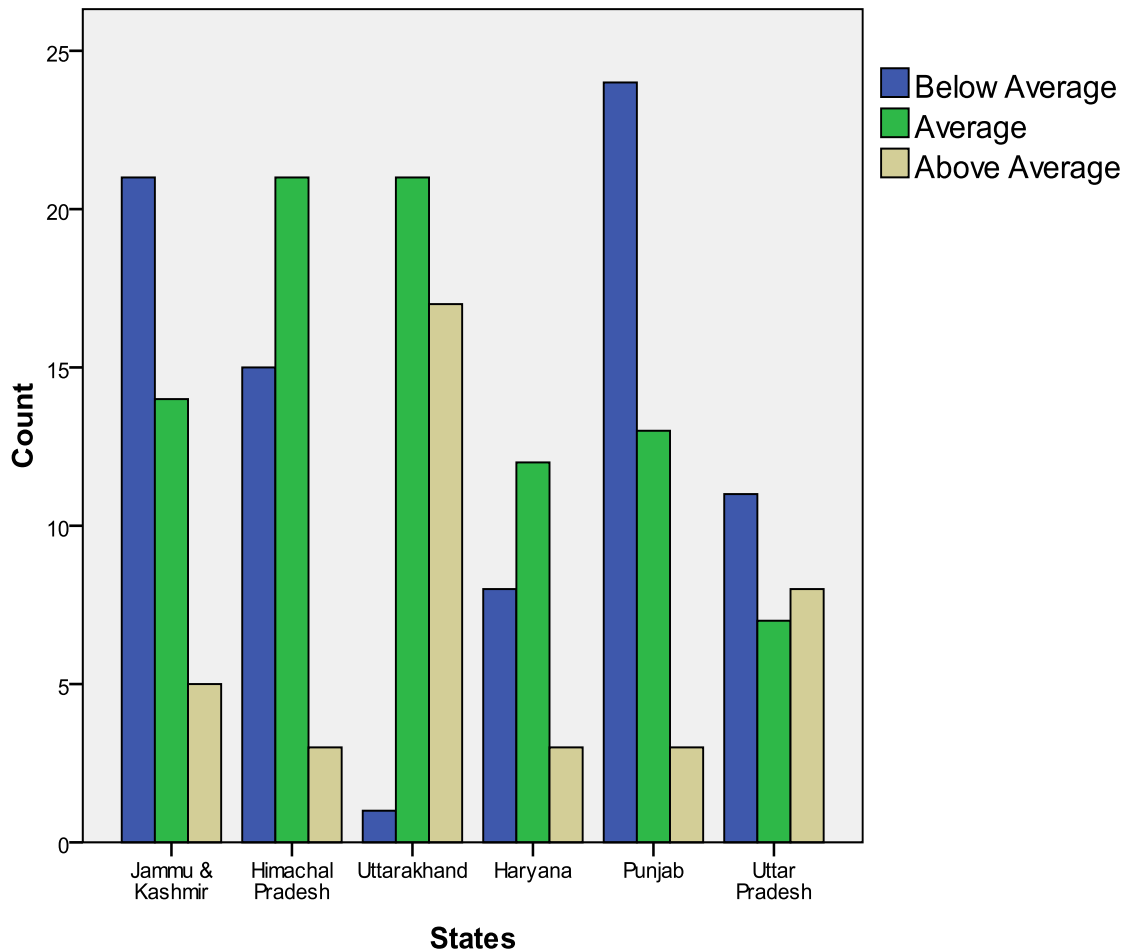
Table 5.33: State-wise Performance in Attracting Industrial Investment

Performance	J & K	H.P.	U.K.	Haryana	Punjab	U.P.
Below Average	52.5%	38.5%	2.6%	34.8%	60.0%	42.3%
Average	35.0%	53.8%	53.8%	52.2%	32.5%	26.9%
Above Average	12.5%	7.7%	43.6%	13.0%	7.5%	30.8%

The assessment of the performance in attracting industrial investment was the best in case of Uttarakhand with only 2.6% of the respondents marking it as below average, 43.6% assessed it as above average and 53.8% as average. This was followed by Uttar Pradesh where 30.8% of the respondents classified the performance as above average, which was predominantly by the respondents of Gautam Budh Nagar (Noida). However, this assessment masks the grave regional inequalities in Uttar Pradesh in terms of industrialisation. The lowest assessments were in case of Punjab at 60% and J&K at 52.5% reported as below average. This shows that Himachal Pradesh and Jammu & Kashmir have not benefited to the extent expected by the industrialists from the special package. The outstanding performer has undoubtedly been Uttarakhand.

Performance of the State in Attracting Industrial Investment

SIDCUL – Made A Big Difference:

State Industrial and Infrastructure Development Corporation of Uttarakhand Ltd. (SIDCUL) has made a big difference to the industrial scenario in Uttarakhand and its success is largely responsible for overtaking its neighbouring hill state of Himachal Pradesh in industrialisation at a startling speed. The SIDUL has been highly successful in attracting almost all the major industrial players from North India and several industries from all over India as well. The SIDCUL areas are at present managed very efficiently and it needs to be seen whether this excellent management is sustained in the future. This will determine whether these industries will retain their operations in the state after their incentive period of ten years is over or they will move over to other locations.

Table 5.34: Number of Days required for starting a Business in the State

Category	Number of Days Required to Start a Business in the State	
	Mean	Standard Deviation
Special Category State (Beneficiary State)	245.20	165.634
Control Group or Non-Beneficiary State	278.83	197.115
Most Industrialised District	255.44	161.347
Less Industrialised District	271.66	201.961
Total	264.37	184.569

The table indicates that the number of days required to start a business reported by the survey respondents had a mean of 264.37 days with standard deviation of 184.569 which indicates a very high degree of variation among the responses. The time taken in the special category states was comparatively less at mean of 245.20 days with SD of 165.634 which may be attributed to the establishment of single window clearance authority.

Histogram

Mean =264.37
Std. Dev. =184.569
N =207

Number of Days Required to Start a Business in
the State
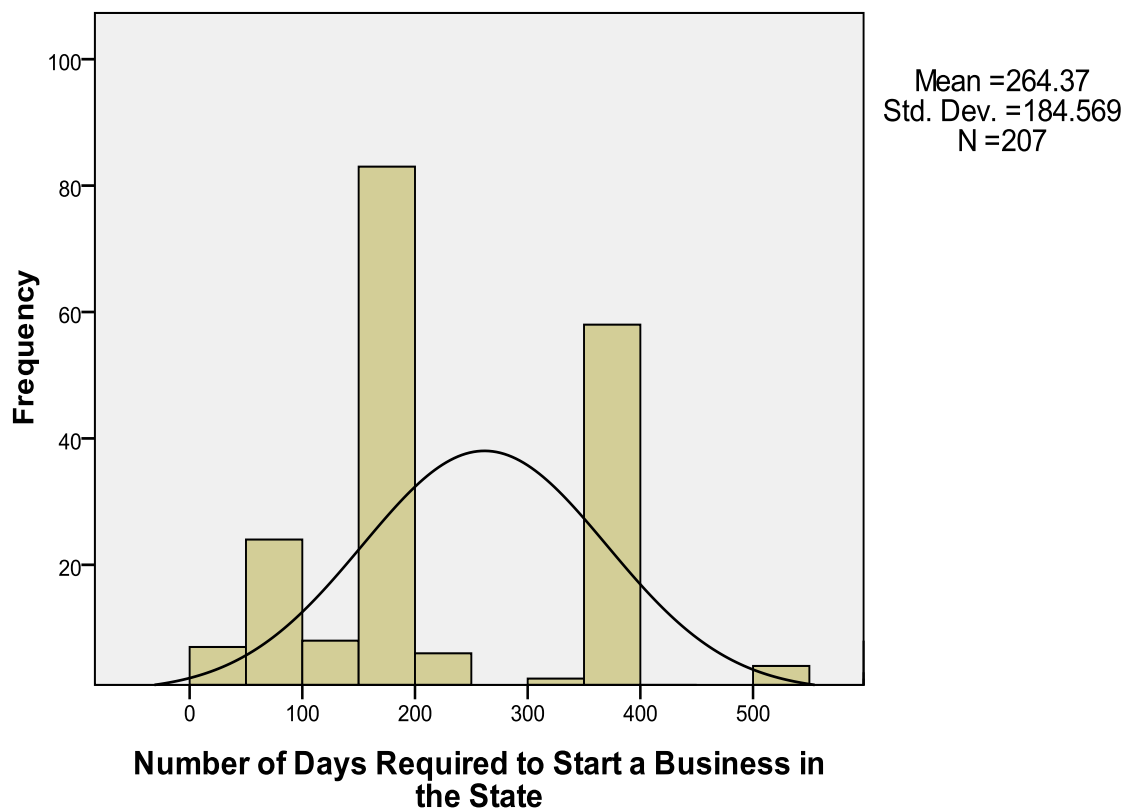
Simultaneous 95% Confidence Intervals for Means
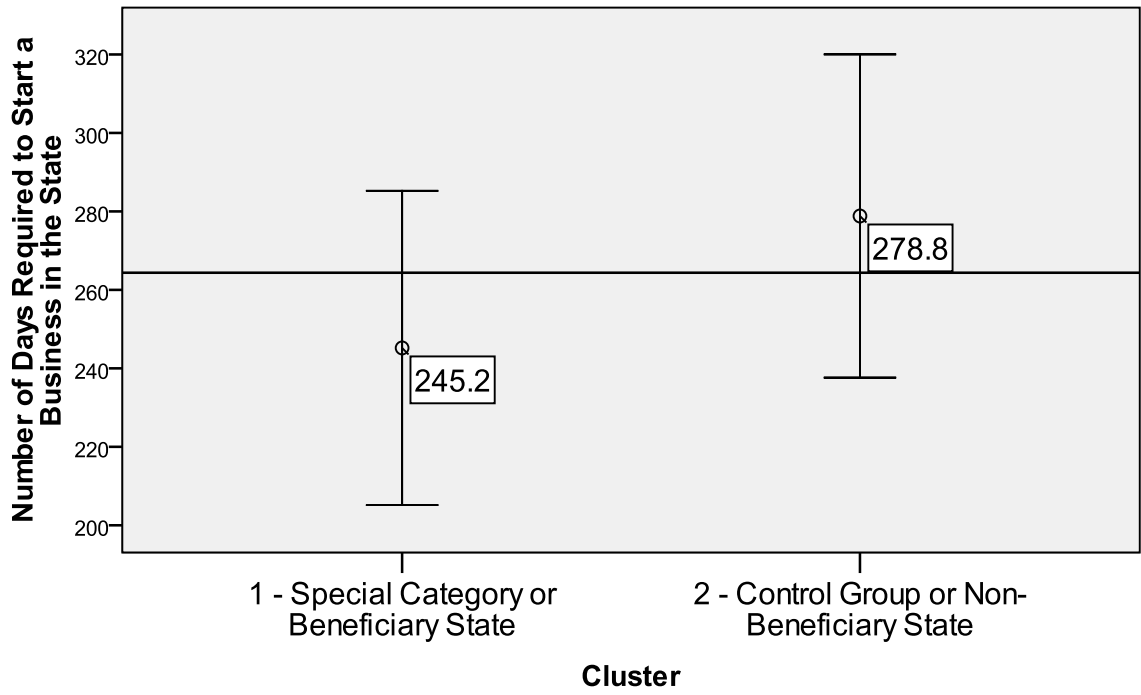
Reference Line is the Overall Mean = 264

Simultaneous 95% Confidence Intervals for Means
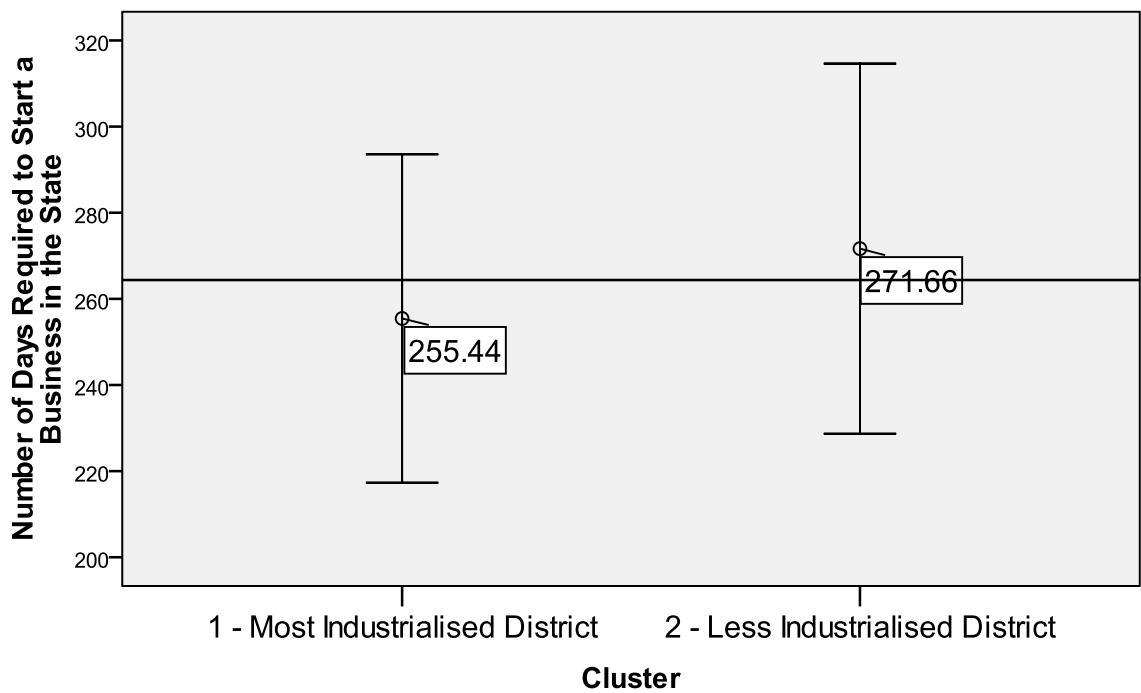
Reference Line is the Overall Mean = 264

Table 5.35: Future Expansion Plans

Category	Expanding This Year	Expanding in 1-3 Years	Expanding in 3-5 Years	Unsure of Expansion	No Expansion Plans
Special Category State (Beneficiary State)	12.7%	31.4%	11.0%	28.0%	16.9%
Control Group or Non-Beneficiary State	7.9%	14.6%	6.7%	30.3%	40.4%
Most Industrialised District	11.8%	16.1%	14.0%	29.0%	29.0%
Less Industrialised District	9.6%	30.7%	5.3%	28.9%	25.4%
Total	10.6%	24.2%	9.2%	29.0%	27.1%
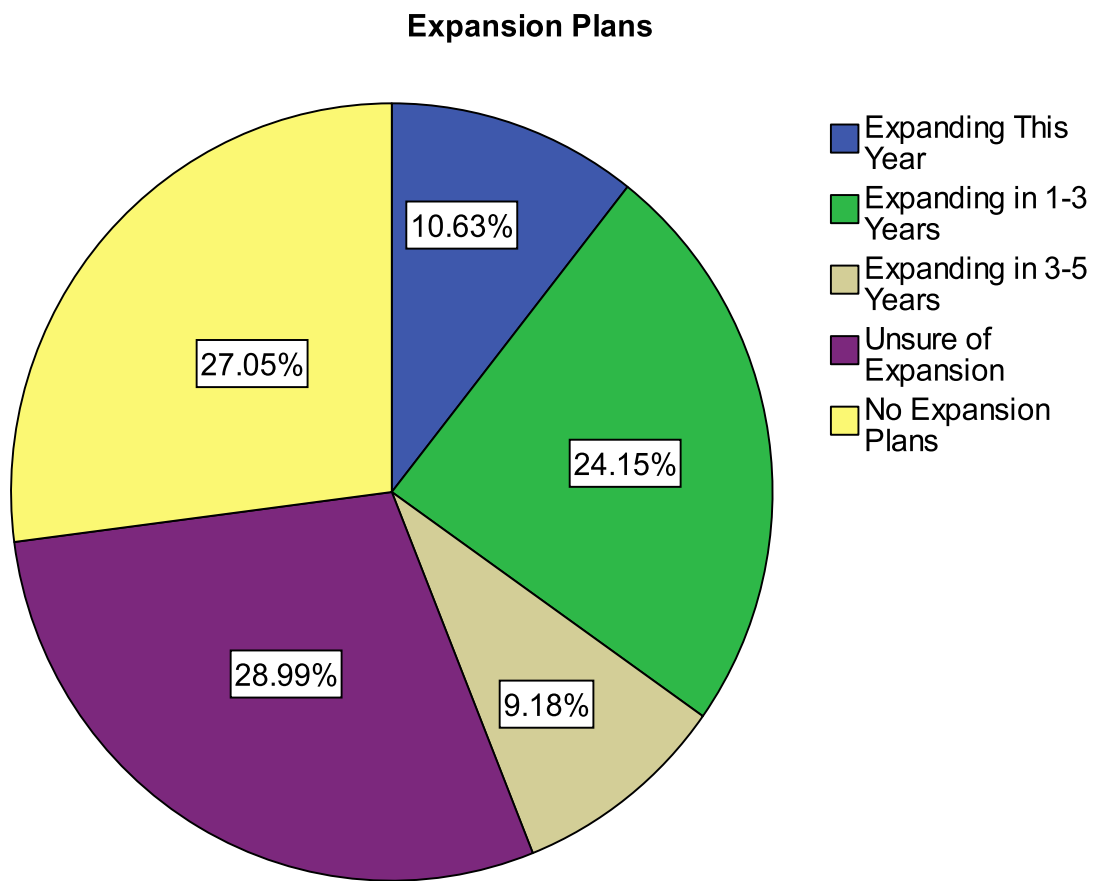
Expansion Plans

Only 44% of the respondents in the survey reported definite expansion plans. 29% of the respondents were unsure of expansion plans while another 27.1% of the respondents had no expansion plans. The uncertainty in the special category states at 28% may be attributed to the uncertainty regarding continuation of the special package.

Table 5.36: Satisfaction with Government Interface with Private Sector

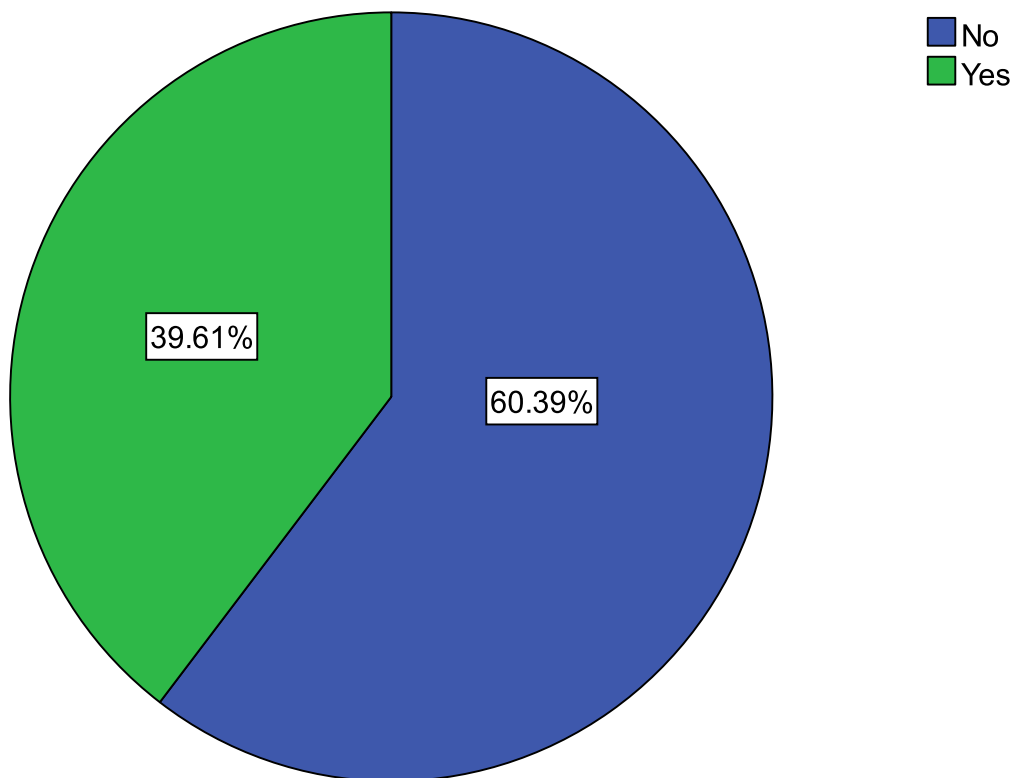| Category	Satisfaction with Government Interface with Private Sector	
	NO	YES
Special Category State (Beneficiary State)	48.3%	51.7%
Control Group or Non-Beneficiary State	76.4%	23.6%
Most Industrialised District	50.5%	49.5%
Less Industrialised District	68.4%	31.6%
Total	60.4%	39.6%

Satisfaction with Government Interface with Private Sector

Only 39.6% of the respondents were satisfied with the government's interface with the private sector which was greater in the special category states at 51.7% in comparison to only 23.6% in the control group states. This may perhaps be attributed to better administration in these states and also the incentive schemes for which awareness campaigns may be held by the government industry department. Whether one attributes it to Anna effect or the frustration with the prevailing corruption, the respondents were very vocal in their resentment with the system. A large number of respondents named the various officials from several departments, both low level to high ranking officials, who openly demand bribes or commissions or

speed money or chai-pani. The officials dealing with subsidies allegedly often asked for their share in the incentives which ranged even upto 50% of the value of the incentives. Most of the respondents argued that 10-15% commission in the incentives was normal and their cases moved only after these payments were made. It seems that despite more than 20 years of liberalisation the industry is yet to be freed from the shackles of bureaucracy and consequent corruption.

Lack of Basic Infrastructure in Industrial Areas:

The basic infrastructure in even the best industrial areas in the special category states of Himachal Pradesh and Jammu & Kashmir was grossly lacking with the exception of SIDCUL areas in Uttarakhand. Parwanoo-Baddi-Nalagarh area of Himachal Pradesh which was the engine of industrial growth in Himachal Pradesh is very deficient in terms of basic infrastructure and perhaps this explains why Himachal Pradesh has recently lagged far behind Uttarakhand in industrialisation. There also seems to be growth of slums in these areas of Himachal Pradesh with its consequent associated problems like crime, drug abuse, HIV/AIDS etc. Even the offices of the District Industries Centre in some of the surveyed districts were in really bad shape and their photographs are not even suitable to be published in a government assigned report.

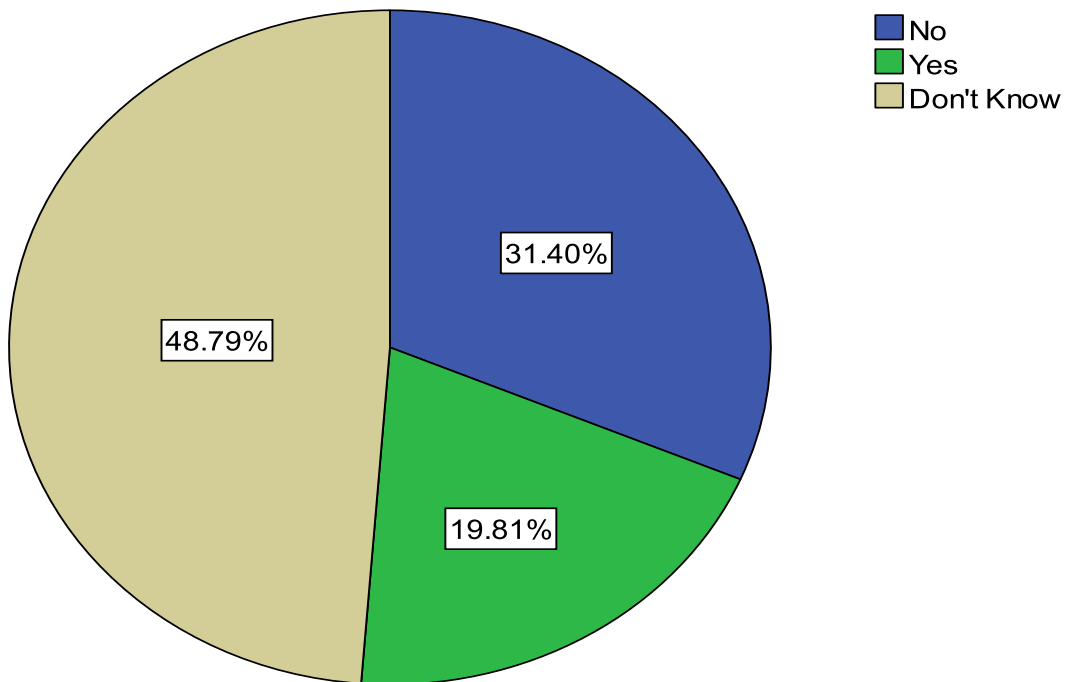The above pictures are just a reminder of the true situation in some of the best industrial areas in the special category states. What can be the situation in less industrialised areas is best left to sheer imagination. Urgent remedial measures need to be taken to improve this situation in the special category states and such factors explain the underperformance of these states in industrialisation despite the grant of the package.

Table 5.37: Whether Incentives were factored in Investment's Net Present Value Calculations at Inception

Category	Whether Incentives were factored in Investment's Net Present Value Calculations at Inception		
	NO	**YES**	**DON'T KNOW**
Special Category State (Beneficiary State)	37.3%	27.1%	35.6%
Control Group or Non-Beneficiary State	23.6%	10.1%	66.3%
Most Industrialised District	22.6%	24.7%	52.7%
Less Industrialised District	38.6%	15.8%	45.6%
Total	31.4%	19.8%	48.8%

Whether Incentives were Factored in Investment's Net Present Value Calculations at Inception

Only 19.8% of the respondents reported that incentives were factored in investment's net present value calculations at inception of their factories. Significantly 48.8% of the respondents did not know whether these were included or not. 31.4% of the respondents admitted that investment's net present value calculations were not factored in the incentives. This reflects the reality that in case of micro and small units the project reports and NPV calculations are mostly done by some CA or the project reports are just duplicated/ copied from some other factory. The small investor is often unaware of the calculations made in the project report.

Table 5.38: Whether Profits were up to Expectations in the Last Five Years

Category	Whether Profits were up to Expectations in the Last Five Years	
	NO	YES
Special Category State (Beneficiary State)	33.9%	66.1%
Control Group or Non-Beneficiary State	49.4%	50.6%
Most Industrialised District	37.6%	62.4%
Less Industrialised District	43.0%	57.0%
Total	40.6%	59.4%

Whether Profits were upto Expectations in the Last Five Years
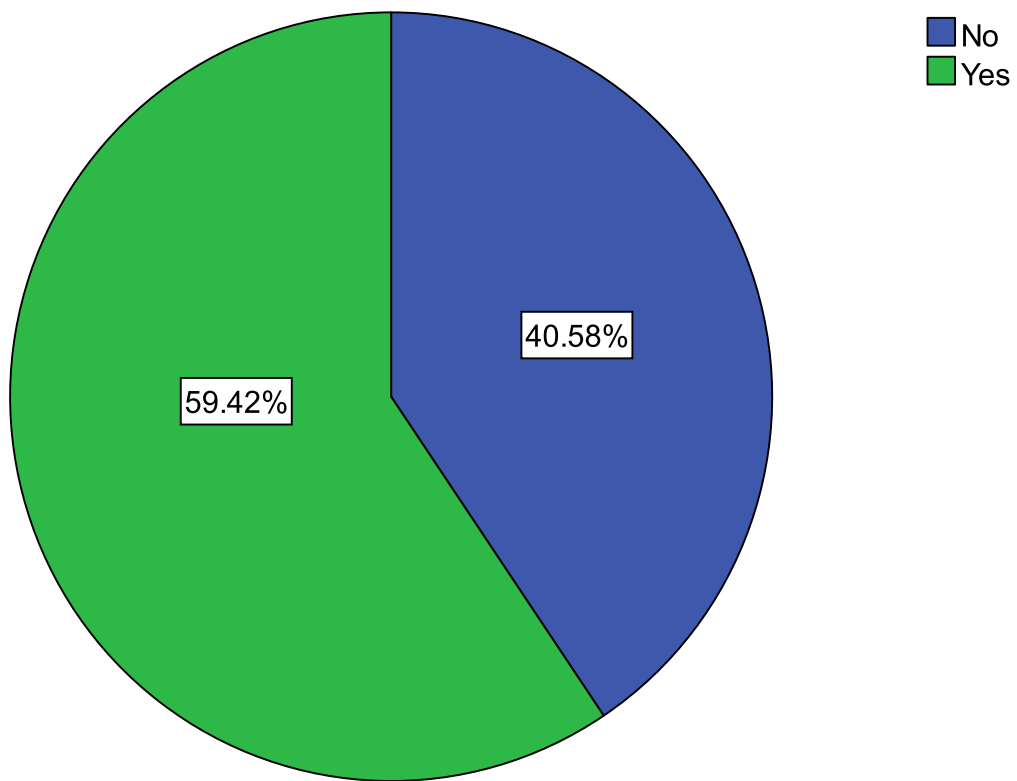
The data reveals that only 59.4% of the respondents reported that profits were up to their expectations in the last five years. The ratio at 66.1% in case of special category states was higher than 50.6% in case of the control group states. Similarly the ratio was 62.4% in the most industrialised districts as compared to 57.0% for the less industrialised districts. The higher ratio in special category states may indeed be attributed to the package to these states.

Whether Profits were upto Expectations in the Last Five Years
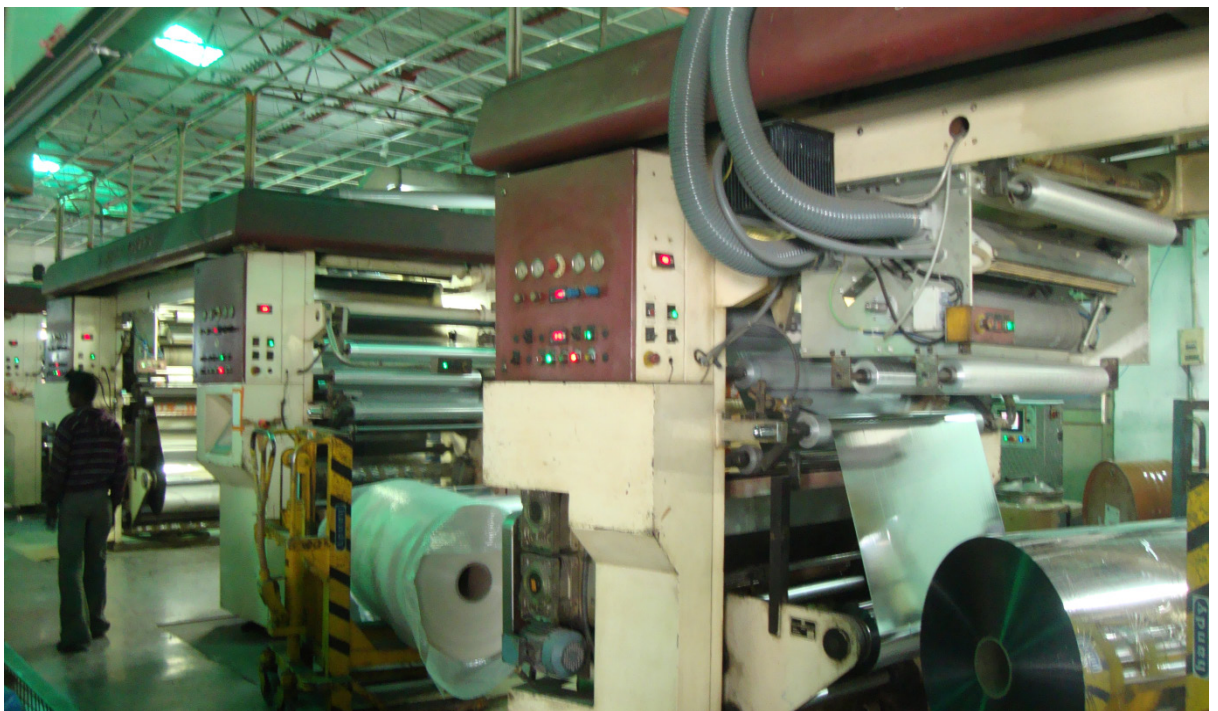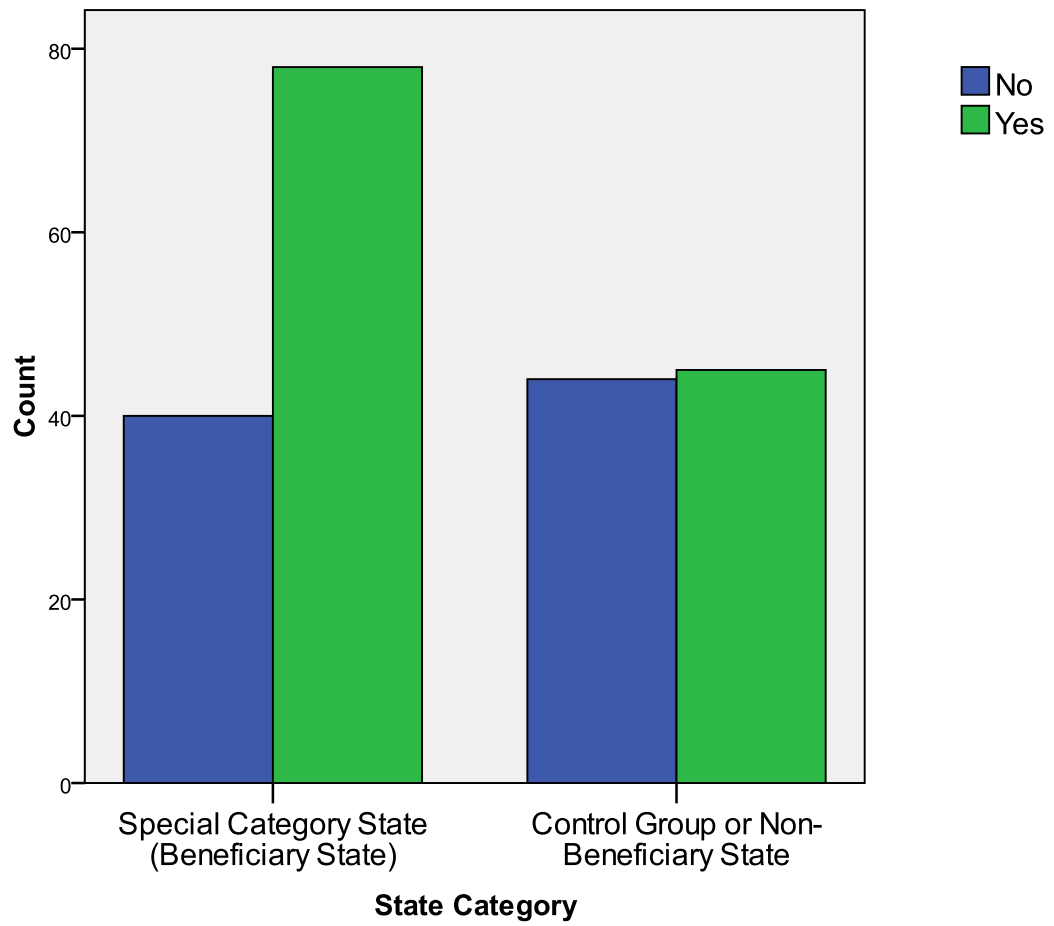
Table 5.39: Whether like to be contacted by Govt. for further Investment

Category	Whether like to be contacted by Govt. for further Investment	
	NO	YES
Special Category State (Beneficiary State)	33.1%	66.9%
Control Group or Non-Beneficiary State	33.7%	66.3%
Most Industrialised District	35.5%	64.5%
Less Industrialised District	31.6%	68.4%
Total	33.3%	66.7%

Whether like to be contacted by Govt. for further Investment
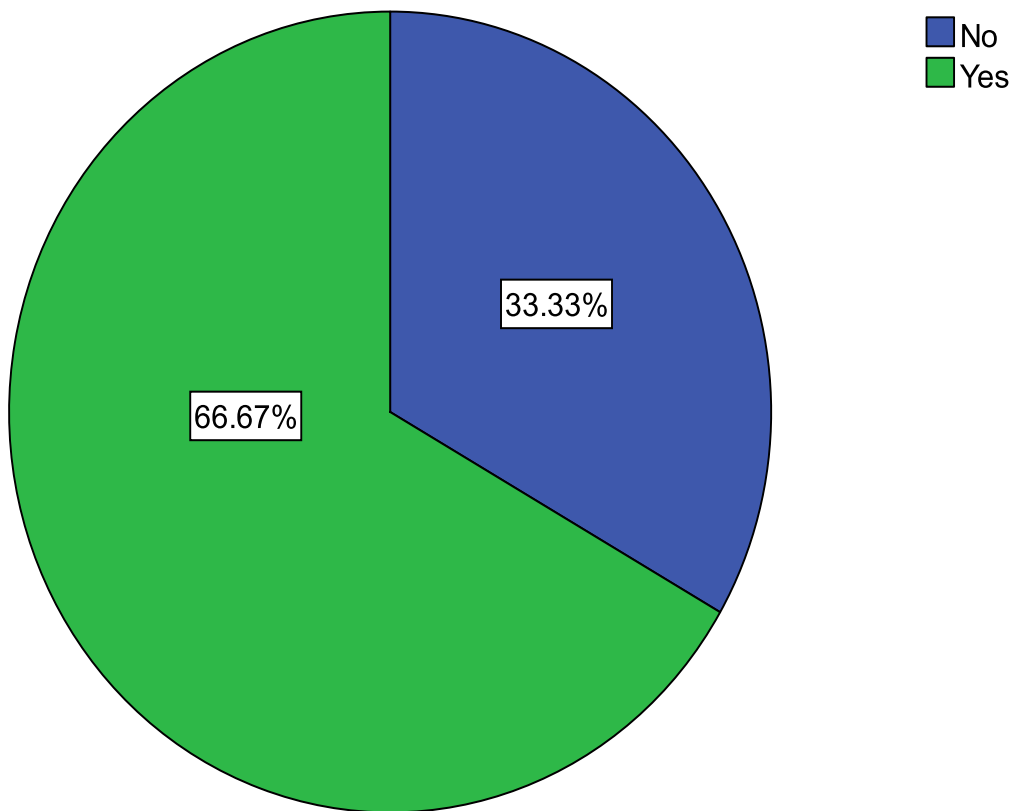
A very high percentage of respondents at 66.7% desired to be contacted by the government for making further investments. This high ratio was observed across all the states and across all the districts. This shows that private industrialists feel that the government must take proactive measures for encouraging industrial investments. The media stories on the proactive role of Gujarat government were often quoted by the respondents.

Table 5.40: Applied for the Incentives under Special Package

Special Category States	Applied for the Incentives under Special Package	
	NO	**YES**
Most Industrialised District	27.1%	72.9%
Less Industrialised District	66.1%	33.9%
Total	46.6%	53.4%

Applied for the Incentives under Special Package
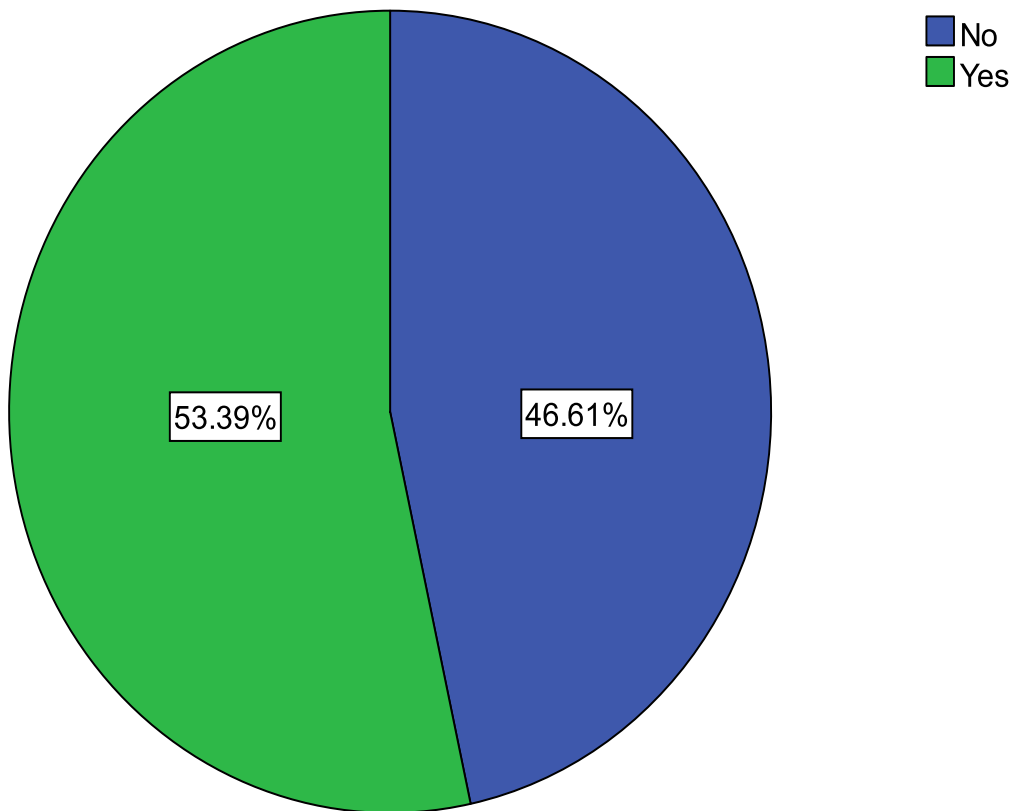
The 53.4% of the respondents in the special category states reported that they had applied for the incentives under the special package. This ratio was higher in case of the most industrialised districts in special category states at 72.9% as compared to only 33.9% in the less industrialised districts. This difference in terms of the districts may partly be explained by the lack of knowledge or incomplete knowledge in the less developed districts or that the area may not fall under the notified areas for the application of the package. The interaction with some respondents revealed that several respondents were not aware of the applicability of the package in case of substantial expansion by the older units.

Table 5.41: Received the Incentives under Special Package

Special Category States	Received the Incentives under Special Package	
	NO	YES
Most Industrialised District	45.8%	54.2%
Less Industrialised District	74.6%	25.4%
Total	60.2%	39.8%

Got the Incentives under Special Package
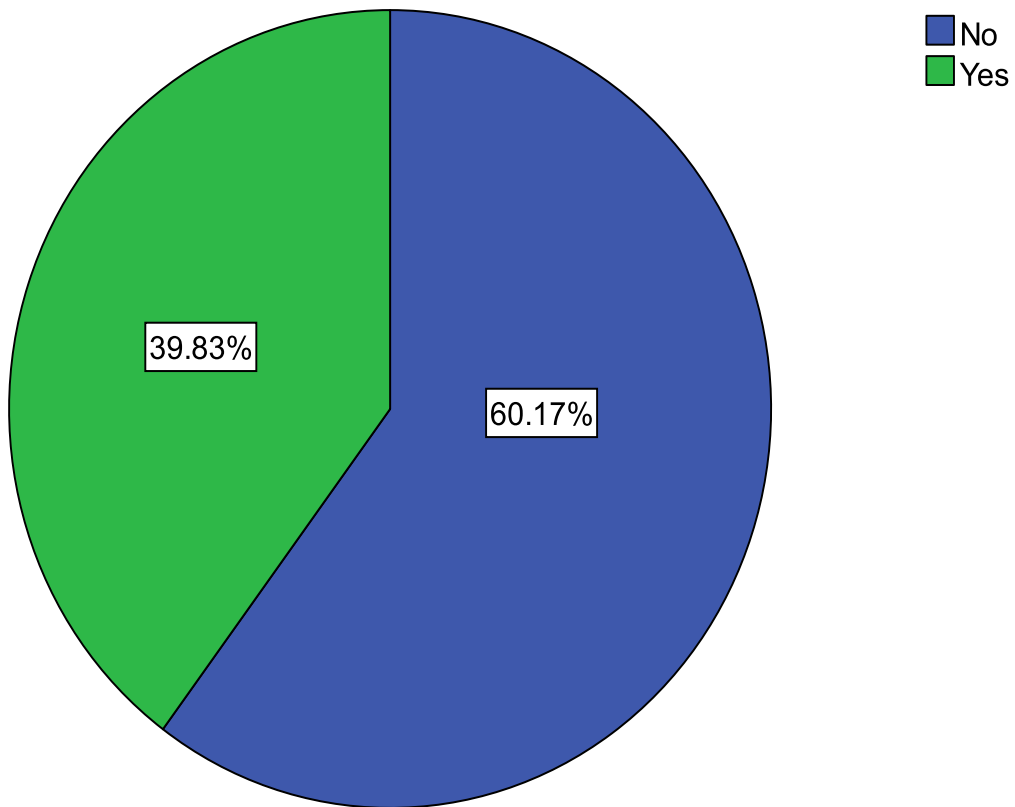
The survey in the special category states found that only 39.8 percent of the respondents actually received the incentives under the special package. Several respondents pointed out that their cases were pending with the department for fairly long time and that they have not even received any communication in this regard. It was argued that this undue bureaucratic delay in the sanction and disbursement of incentives often defeats the very purpose of these incentives and leaves the entrepreneurs frustrated. Some of the respondents informed that since their cases were rejected by the department, they have filed their cases in the high court.

ANALYSIS OF STATEMENTS – SPECIAL CATEGORY STATES

The questionnaire contained 15 statements regarding package to special category states and the five point Likert scaling was used to evaluate their responses. However, the respondents in the control group were asked to answer only two of these statements viz. statement 6 and 14 which will be analysed in the later part. This was due to non-applicability of the other statements to the control group states. Here the statement responses are analysed for the special category states only.

Statement 1: Without Investment Incentives I would not have invested anywhere.

Special Category States	Disagree	Strongly Disagree	No Opinion	Agree	Strongly Agree
Most Industrialised District	25.4%	13.6%	6.8%	32.2%	22.0%
Less Industrialised District	13.6%	39.0%	1.7%	32.2%	13.6%
Total	19.5%	26.3%	4.2%	32.2%	17.8%
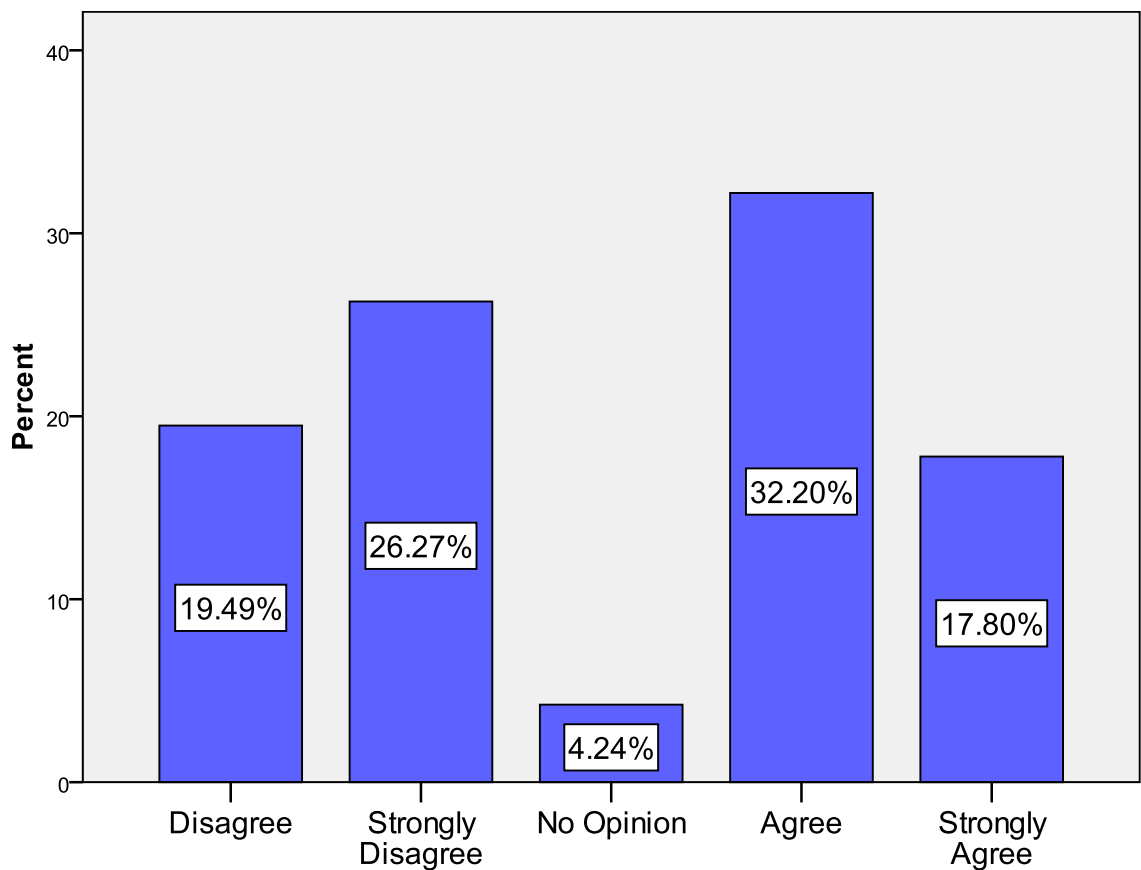
Without Investment Incentives I would not have invested anywhere

The above statement signifies that the investment in the special category state was induced exclusively or mainly by the investment incentives granted under the special package. A very large percentage of the respondents agree with the statement – 17.8% strongly agree while another 32.2% agreed. The response was much higher in the most industrialised districts of the special category states wherein 22% strongly agree. However, a significant number of respondents disagreed with the statement – 19.5% disagree and 26.3% strongly disagree. The high affirmative response to the statement shows that the package had the intended encouraging impact on industrial investments.

Statement 2: The Incentives had some influence on my decision on what business to invest in.

Special Category States	Disagree	Strongly Disagree	No Opinion	Agree	Strongly Agree
Most Industrialised District	18.6%	6.8%	8.5%	49.2%	16.9%
Less Industrialised District	25.4%	35.6%	6.8%	23.7%	8.5%
Total	22.0%	21.2%	7.6%	36.4%	12.7%
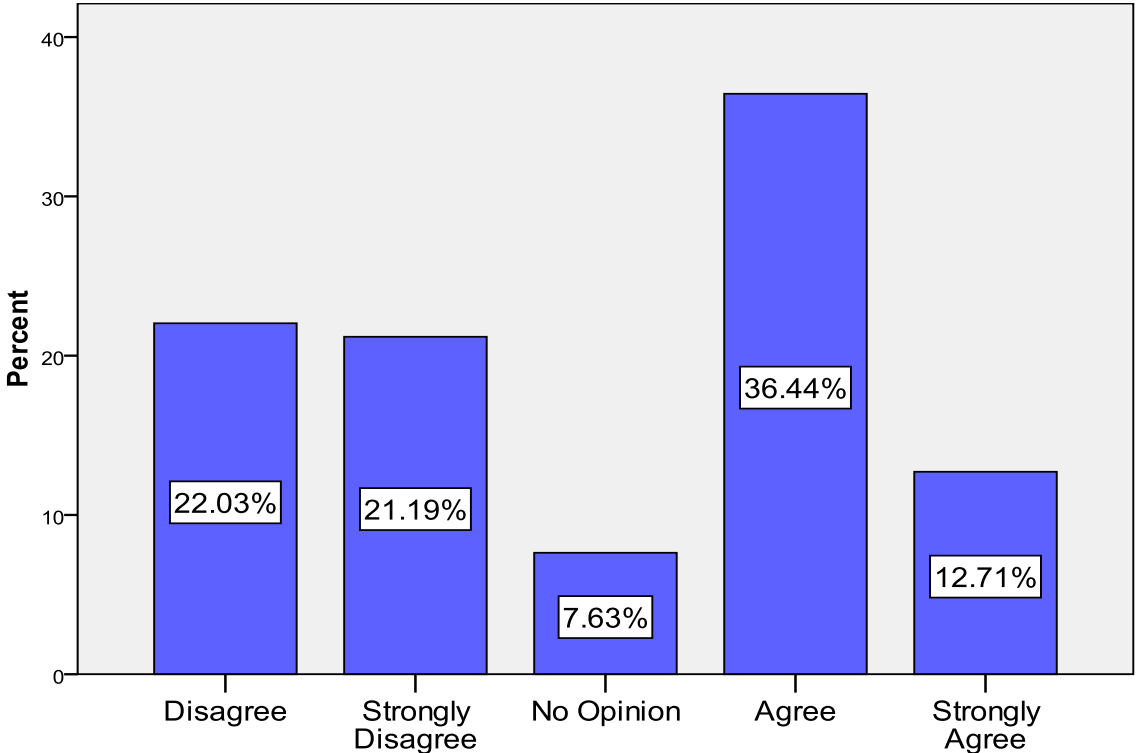
The Incentives had some influence on my decision on what business to invest in.

A very large percentage of the respondents agreed with the above statement – 36.4% agreed and 12.7% strongly agreed signifying that the entrepreneurs must select those products for which the fiscal incentives are granted as these incentives were not offered on certain items. However 22.0% disagree and 21.2% strongly disagreed with the statement while 7.6% did not give their opinion. If we compare the above statement by district category, the most industrialised district had a very high affirmative response – 49.2% agreed and 16.9% strongly agreed.

Statement 3: The incentives influenced my decision as to where to invest.

Special Category States	Disagree	Strongly Disagree	No Opinion	Agree	Strongly Agree
Most Industrialised District	11.9%	1.7%	5.1%	50.8%	30.5%
Less Industrialised District	16.9%	37.3%	5.1%	28.8%	11.9%
Total	14.4%	19.5%	5.1%	39.8%	21.2%
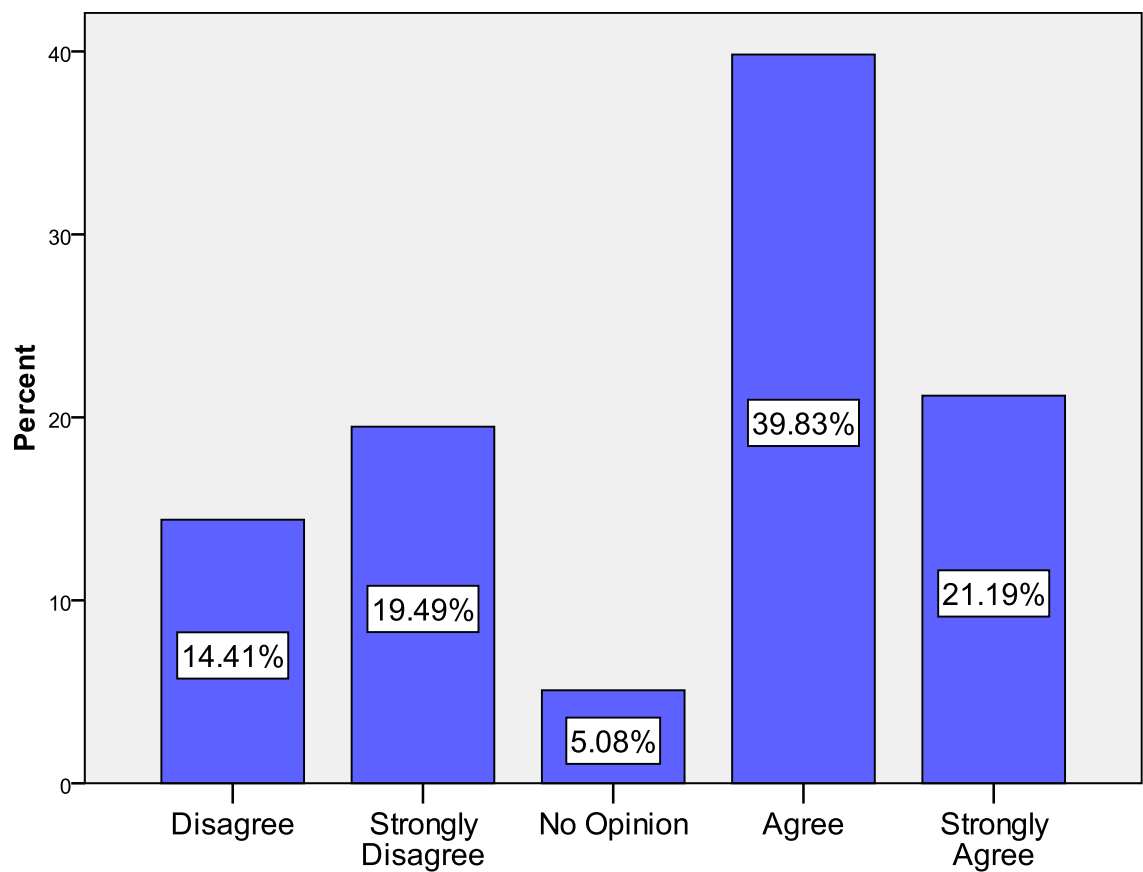
The incentives influenced my decision as to where to invest.

This statement was highly supported and it signifies that the location of the factory was influenced by the incentives thereby implying the success of the package

to special category states. 39.8% of the respondents agreed and 21.2% of the respondents strongly agreed with the statement thus indicating a total of 61% affirmative response. In the most industrialised districts this affirmative response at 81.3% was even higher – 50.8% respondents agreed and 30.5% strongly agreed.

Statement 4: The incentives were a nice bonus, but none of my investment plans were altered.

Special Category States	Disagree	Strongly Disagree	No Opinion	Agree	Strongly Agree
Most Industrialised District	28.8%	3.4%	16.9%	42.4%	8.5%
Less Industrialised District	27.1%	33.9%	3.4%	27.1%	8.5%
Total	28.0%	18.6%	10.2%	34.7%	8.5%
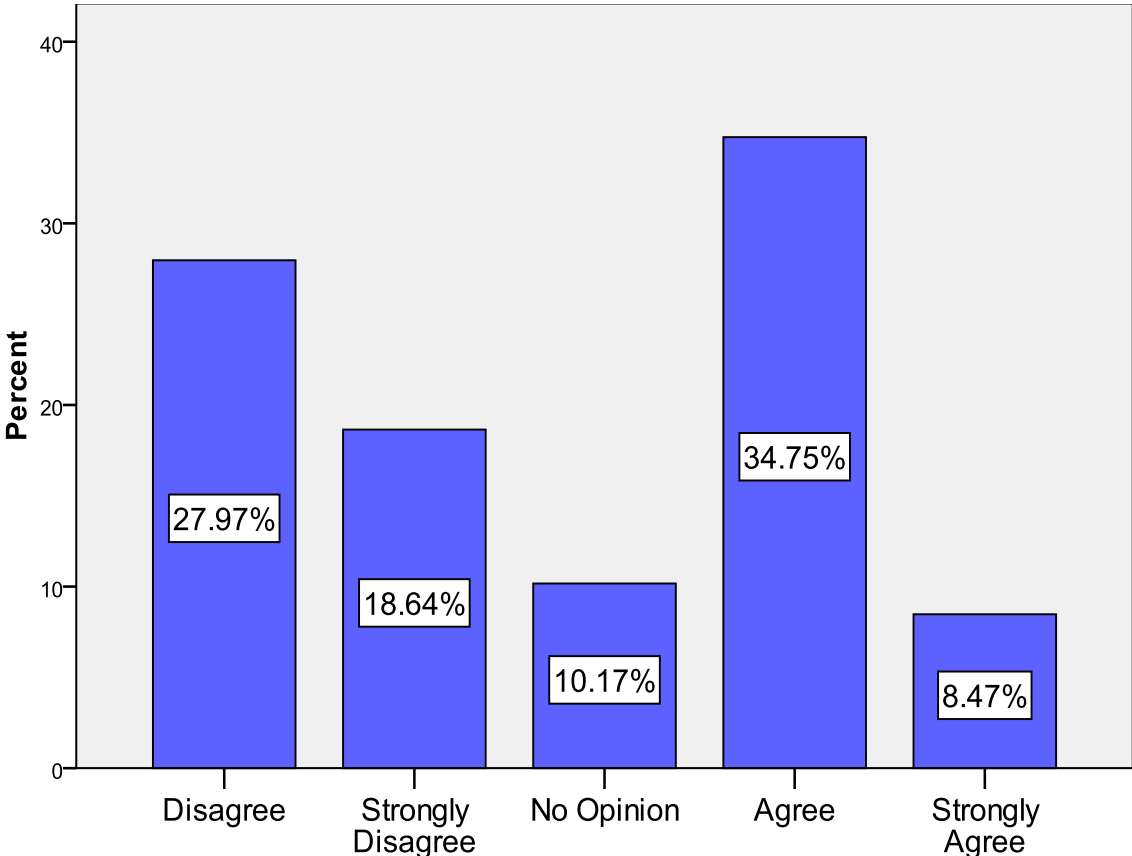
The incentives were a nice bonus, but none of my investment plans were altered.

This statement signifies that the investment plans consider several factors in addition to the incentives – tax exemptions and subsidies. However, the question is whether the incentives were able to significantly influence the investment plans or

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not. The response was 34.7% agreed and 8.5% strongly agreed indicating that the incentives did impact their balance sheets and were a nice bonus. However a large proportion also disagrees with the statement. It was pointed out by some respondents that the incentives are not worth the value as it wastes their time, energy and money due to time-consuming bureaucratic procedures and rampant corruption.

Statement 5: Incentives significantly increase firm's competitiveness.

Special Category States	Disagree	Strongly Disagree	No Opinion	Agree	Strongly Agree
Most Industrialised District	5.1%	.0%	3.4%	50.8%	40.7%
Less Industrialised District	6.8%	5.1%	3.4%	42.4%	42.4%
Total	5.9%	2.5%	3.4%	46.6%	41.5%
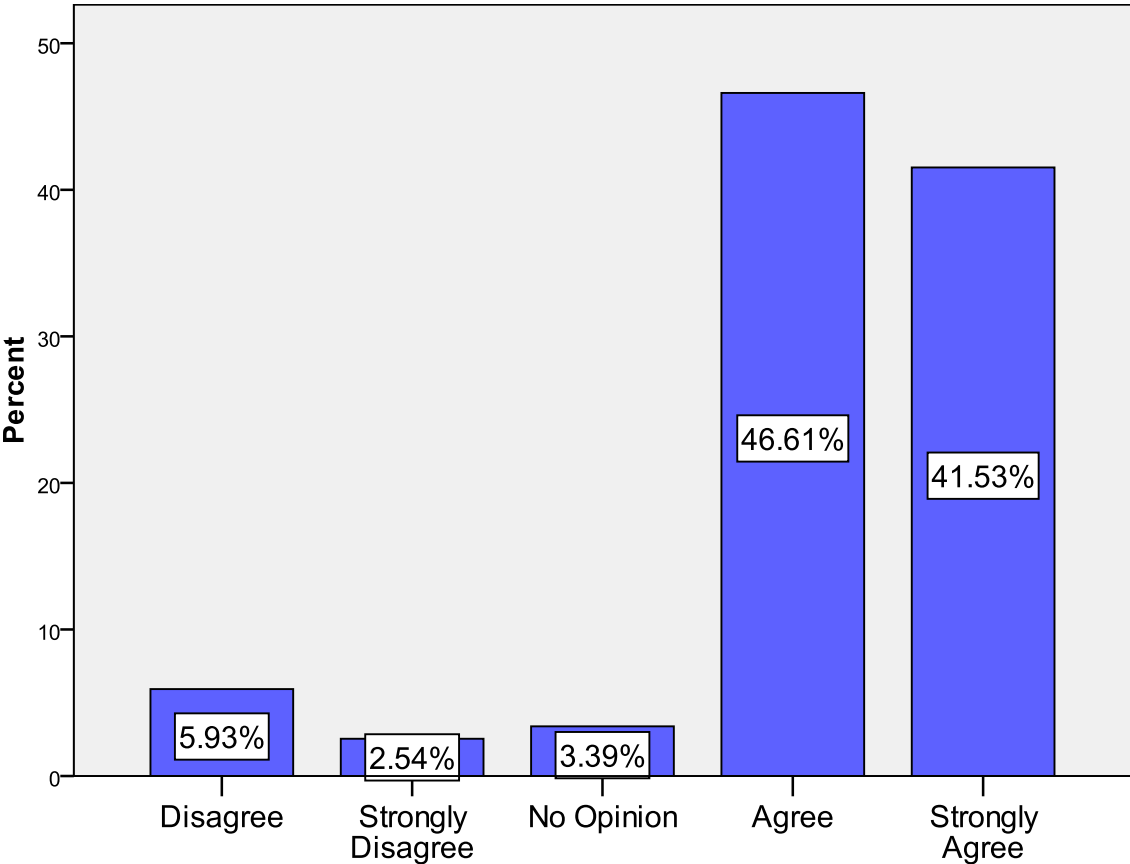
Incentives significantly increase firm's competitiveness.

More than 88% of the respondents in the special category states supported the statement that the incentives significantly increase firm's competitiveness – 46.6% agreed and 41.5% strongly agreed with the statement. Thus these results verified

that the package to special category states was indeed attractive and increases firm's competitiveness. In case of the most industrialised districts in the special category states the affirmative response was even higher at 91.5% - as 50.8% respondents agreed and 40.7% strongly agreed with the statement.

Statement 6: Investment location is simply my place of origin/residence.

Special Category States	Disagree	Strongly Disagree	No Opinion	Agree	Strongly Agree
Most Industrialised District (Special Category States)	49.2%	10.2%	15.3%	16.9%	8.5%
Less Industrialised District (Special Category States)	20.3%	5.1%	1.7%	20.3%	52.5%
Total (Special Category or Beneficiary States)	34.7%	7.6%	8.5%	18.6%	30.5%
Control Group or the Non-Beneficiary States	7.9%	2.2%	1.1%	37.1%	51.7%

Investment location is simply my place of origin/residence.
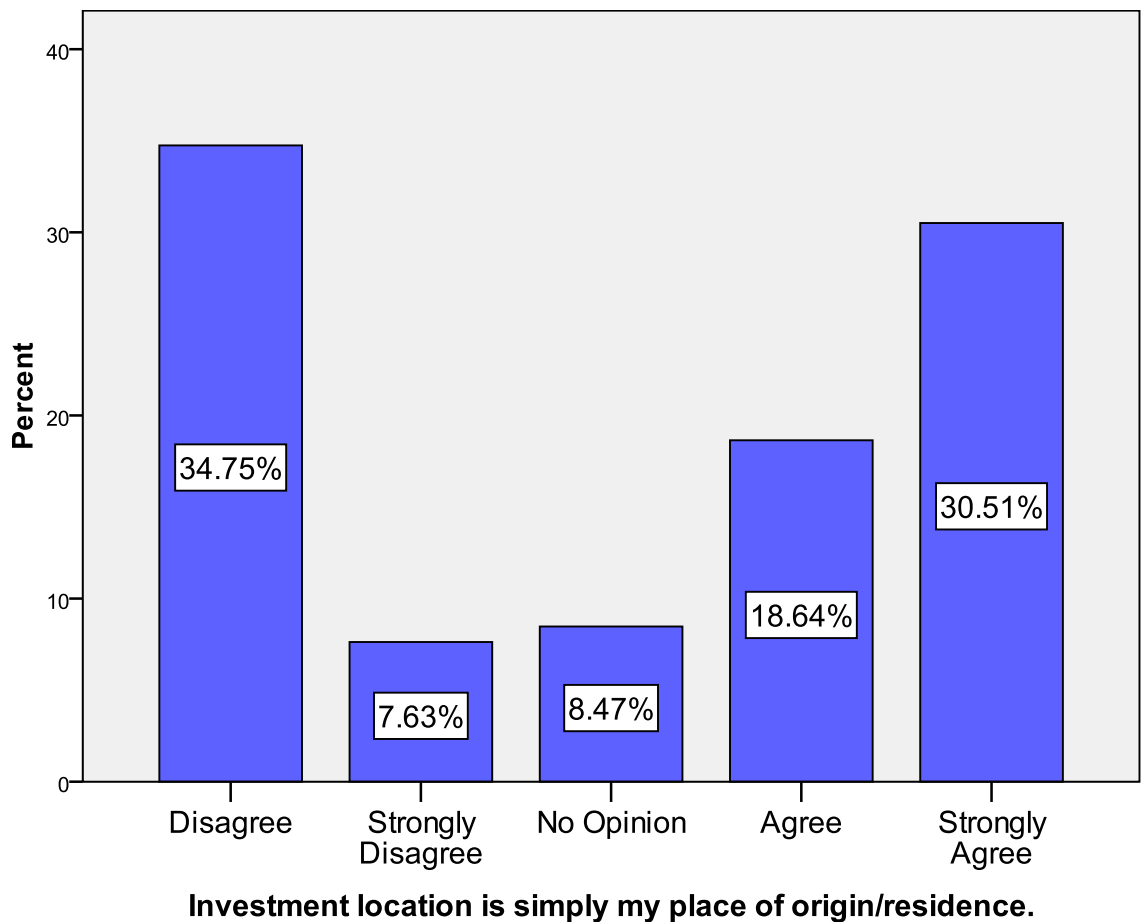
The above statement highlights the fact that it is natural in the Indian traditions

for any entrepreneur to favour his/her place of origin/ residence for making investments. Thus despite the modern and complex location theories and models, this natural preference still remains in large parts of India, more specifically for investments based on individual proprietorship, partnership as well as private limited company types of organisations. In the special category states 49.1% of the respondents supported this statement – 18.6% agreed and 30.5% strongly agreed. However, in contrast, 88.8% of the respondents in the control group states supported this statement – 37.1% agreed and 51.7% strongly agreed. This in turn implies that a fairly large percentage of investors in the special category states have moved in from other states for making industrial investments. If the special category states data was analysed in terms of district, only 25.4% of the respondents supported the statement in the most industrialised districts as compared to 72.8% of the respondents in the less industrialised district. This indirectly implies that in the most industrialised districts most of the investors are from outside the state.

Statement 7: The Special package is complex and hard to understand.

Special Category States	Disagree	Strongly Disagree	No Opinion	Agree	Strongly Agree
Most Industrialised District	55.9%	10.2%	6.8%	23.7%	3.4%
Less Industrialised District	37.3%	8.5%	15.3%	22.0%	16.9%
Total	46.6%	9.3%	11.0%	22.9%	10.2%

The majority of the respondents in the special category states did not support the above statement, thereby signifying that the package was not complex and hard to understand. However, those who supported the statement – 22.9% agreed and 10.2% strongly agreed – it was probably due to lack of awareness and knowledge of the special package and not specifically its complexity. This reflects the failure of the concerned authorities to publicise the package to the industries. One can just imagine the level of awareness and knowledge of the special package among the common man in these states (they could be potential entrepreneurs and investors) when even the entrepreneurs already operating industries in these states have such low level of awareness and knowledge about the package. Perhaps the bureaucratic supremacy and unbridled corruption thrives on such ignorance.
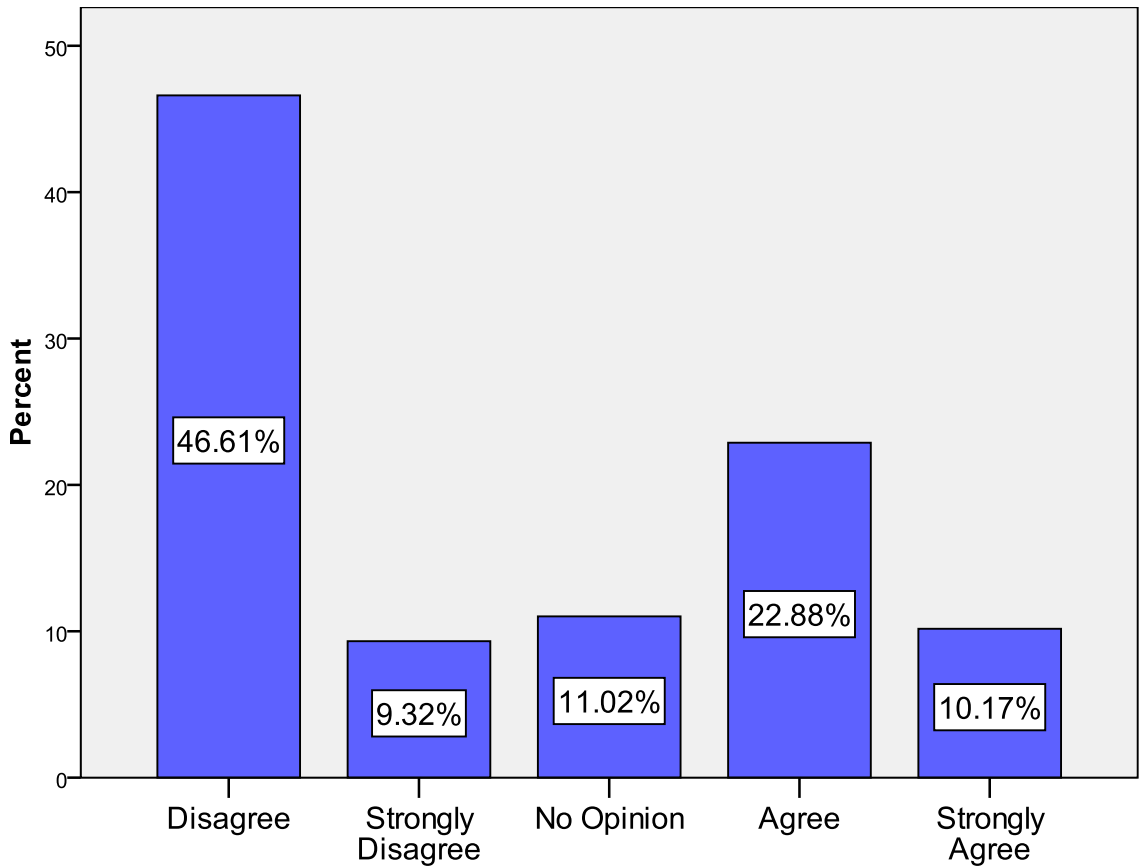
The Special package is complex and hard to understand.

Statement 8: The incentives are managed in a subjective and inconsistent way by the government officials.

Special Category States	Disagree	Strongly Disagree	No Opinion	Agree	Strongly Agree
Most Industrialised District	30.5%	3.4%	16.9%	44.1%	5.1%
Less Industrialised District	18.6%	5.1%	18.6%	28.8%	28.8%
Total	24.6%	4.2%	17.8%	36.4%	16.9%

The above statement reflects the subjective and inconsistent manner in which the unscrupulous officials of the industry & other departments interpret and implement the package thereby trying to maximise their personal benefits. A very high percentage of the respondents at 53.3% supported this statement – 36.4% agreed and 16.9% strongly agreed. It also needs to be pointed out that a very high 17.8% of the respondents did not give their opinion on this statement in the questionnaire. While saying 'no comments' often their expressions revealed their opinion. Some quipped "Isko Rehne do please". These high figures indicate to a

great degree the reasons behind the unexplainable delay in the settlement of the incentive claims of the industries, which was reported by several respondents during the survey.
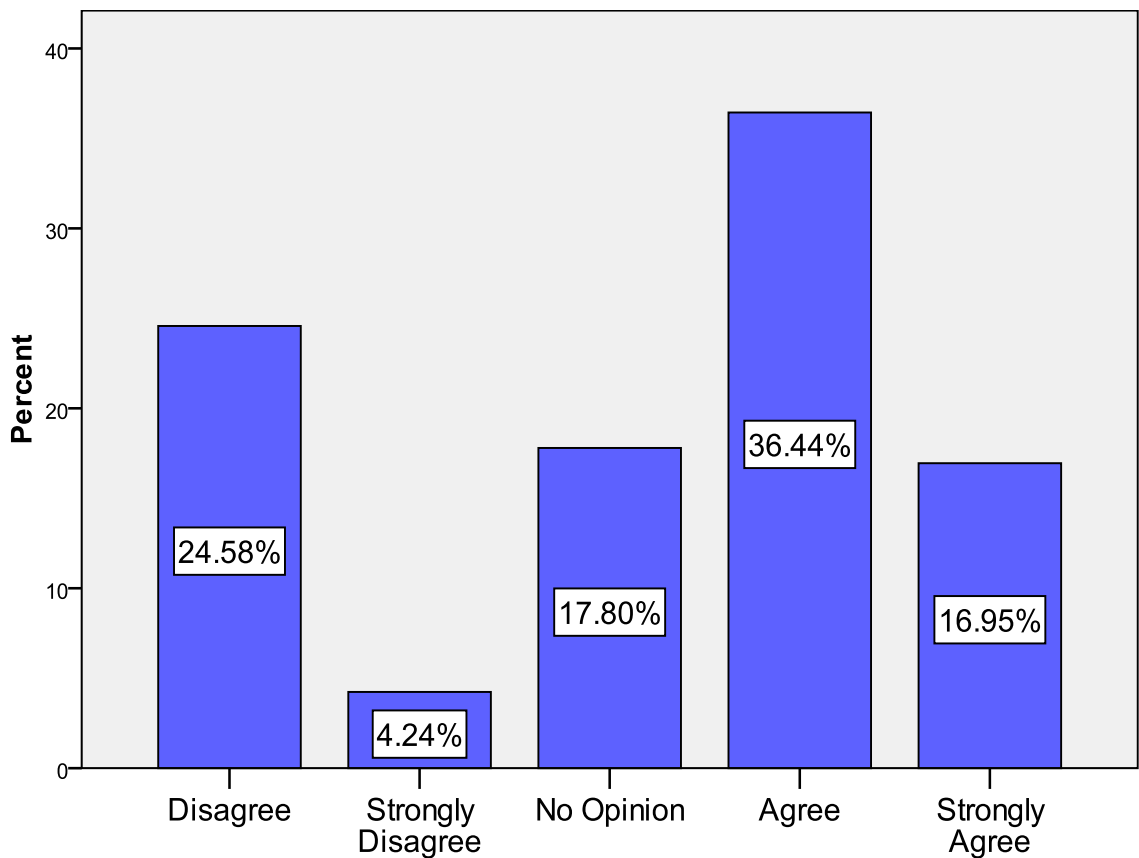
The incentives are managed in a subjective and inconsistent way by the government officials.

Statement 9: The government officials dealing with implementation of Special Package have low level of expertise.

Special Category States	Disagree	Strongly Disagree	No Opinion	Agree	Strongly Agree
Most Industrialised District	49.2%	13.6%	10.2%	22.0%	5.1%
Less Industrialised District	35.6%	23.7%	18.6%	11.9%	10.2%
Total	42.4%	18.6%	14.4%	16.9%	7.6%

Most of the responded were of the opinion that the government officials dealing with the implementation of the special package had enough expertise and it was only to manipulate and harass the entrepreneurs to extract the maximum commissions that they sometimes feigned ignorance or confusions regarding

interpretation of some provisions of the scheme. Thus majority of the respondents did not support the above statement – 42.4% disagreed and 18.6% strongly disagreed.

The government officials dealing with implementation of Special Package have low level of expertise.
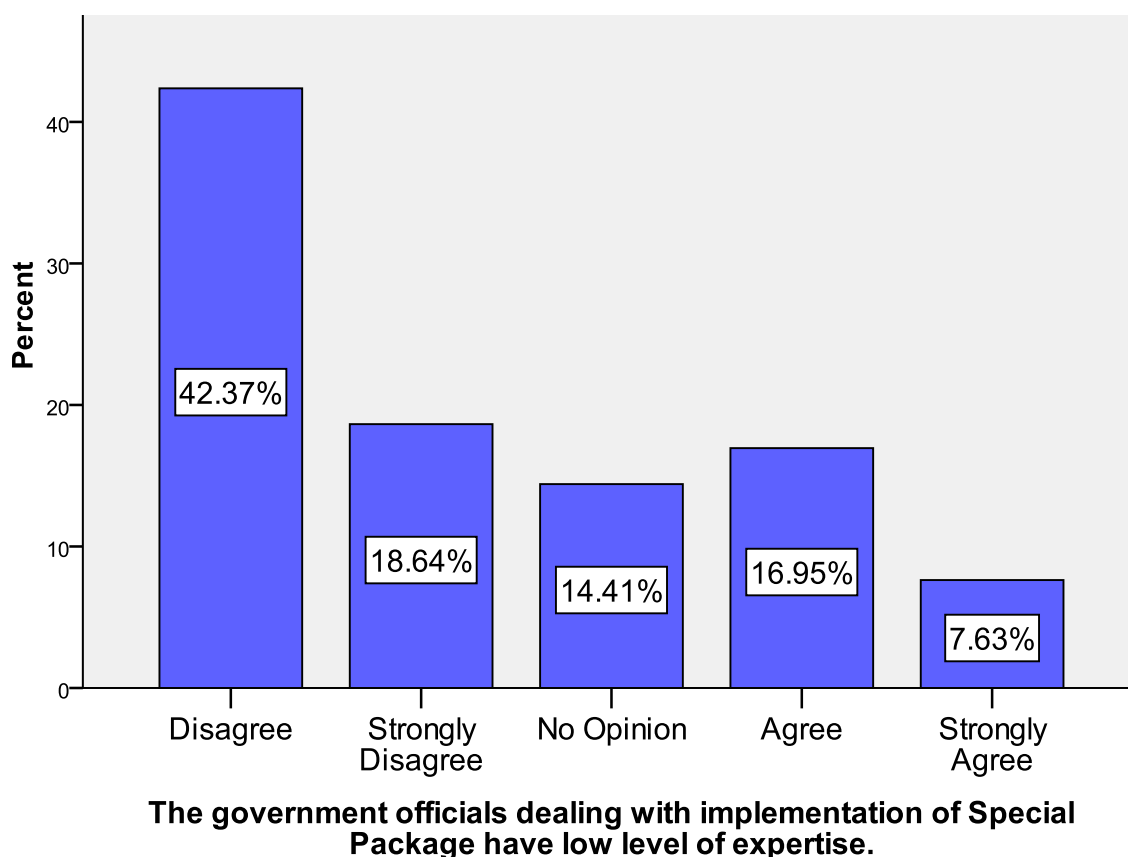
Statement 10: The firms have to make undocumented extra payments or bribes for getting incentives.

Special Category States	Disagree	Strongly Disagree	No Opinion	Agree	Strongly Agree
Most Industrialised District	16.9%	3.4%	16.9%	40.7%	22.0%
Less Industrialised District	20.3%	8.5%	13.6%	25.4%	32.2%
Total	18.6%	5.9%	15.3%	33.1%	27.1%

Majority of the respondents (60.2%) supported the statement – 33.1% agreed and 27.1% strongly agreed. A very high percentage of 15.3% of the respondents did not give their opinion. This highlights the fact often widely reported in the media that huge amounts of money are paid as commissions etc. leading to lot of leakage of incentives. Obviously without the connivance of the government machinery the misuse of incentives is not at all possible.
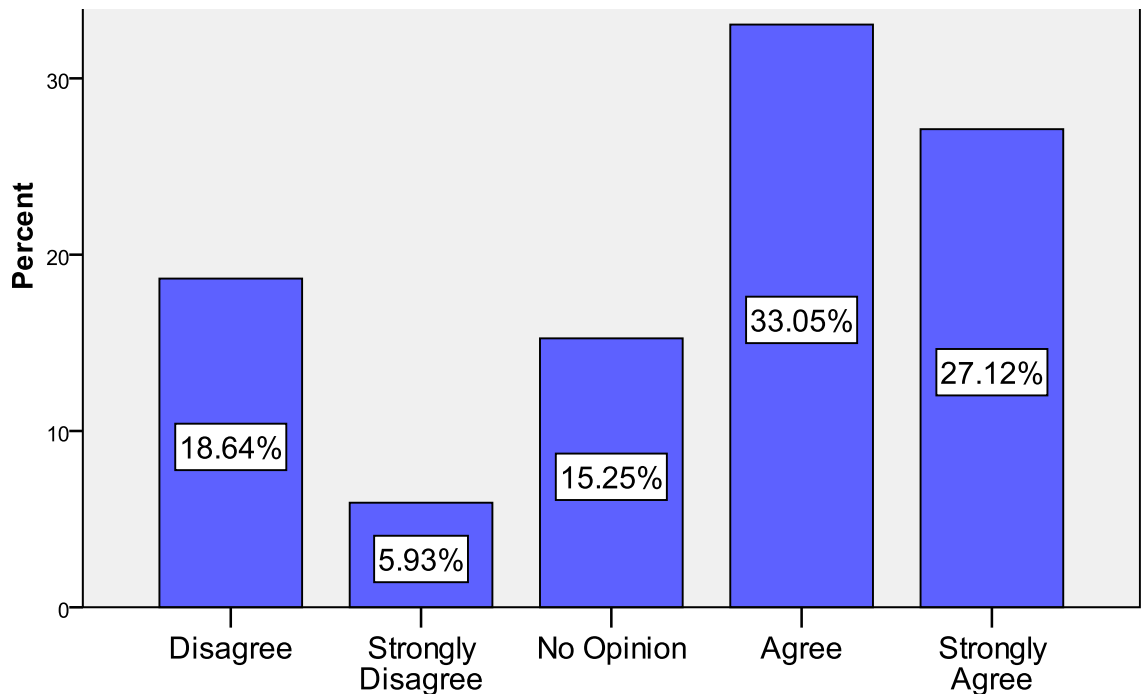
The firms have to make undocumented extra payments or bribes for getting incentives.

Lakhanpur Border Check-post – Gateway of Jammu & Kashmir or A Nightmare for Industries:

The industrialists in Jammu and Kashmir ranging from micro enterprises to large enterprises all unanimously expressed great displeasure and harassment met at the hands of government officials at the Lakhanpur border check post which is the major entry point to the state of Jammu & Kashmir. The toll is collected under different heads i.e. additional toll, ad-valorem tax and basic toll. Additional toll is levied on weight and ad-valorem tax is charged on value of goods and the basic toll is charged on vehicles whether heavy or light in nature. Exemption is granted to certain types of goods under the policy to promote the industrial activities encouraging the manufacture of goods in the J&K state. However, the respondents informed that the clearances at the Lakhanpur border cause not only undue delay in their consignments but it was also alleged that things could not move without paying hefty bribes and commissions. In fact, the respondents agreed that there is rampant tax evasion and avoidance at Lakhanpur border by undervaluing and un-declaring taxable goods at the border check post but they argued that it is possible only with the connivance of the dishonest, corrupt and incompetent officials posted at Lakhanpur border.

Statement 11: The burden of compliance for availing industrial package incentives is very high.

Special Category States	Disagree	Strongly Disagree	No Opinion	Agree	Strongly Agree
Most Industrialised District	18.6%	1.7%	11.9%	55.9%	11.9%
Less Industrialised District	33.9%	5.1%	11.9%	22.0%	27.1%
Total	26.3%	3.4%	11.9%	39.0%	19.5%

The above statement signifies the fact that there are a lot of formalities and paper work for an industrial organisation to avail the benefits of the package incentives. This statement was supported hugely by 58.5% of the respondents – 39% agreed and 19.5% strongly agreed with the statement. However, it must also be remembered that despite so much formalities, a large number of illegitimate cases also manage to get these incentives. The formalities, though must be minimum to reduce compliance cost, these should have been fine-tuned to filter-out unjustified and fake claims. There could have been greater use of e-governance in the management and implementation of the package incentives.
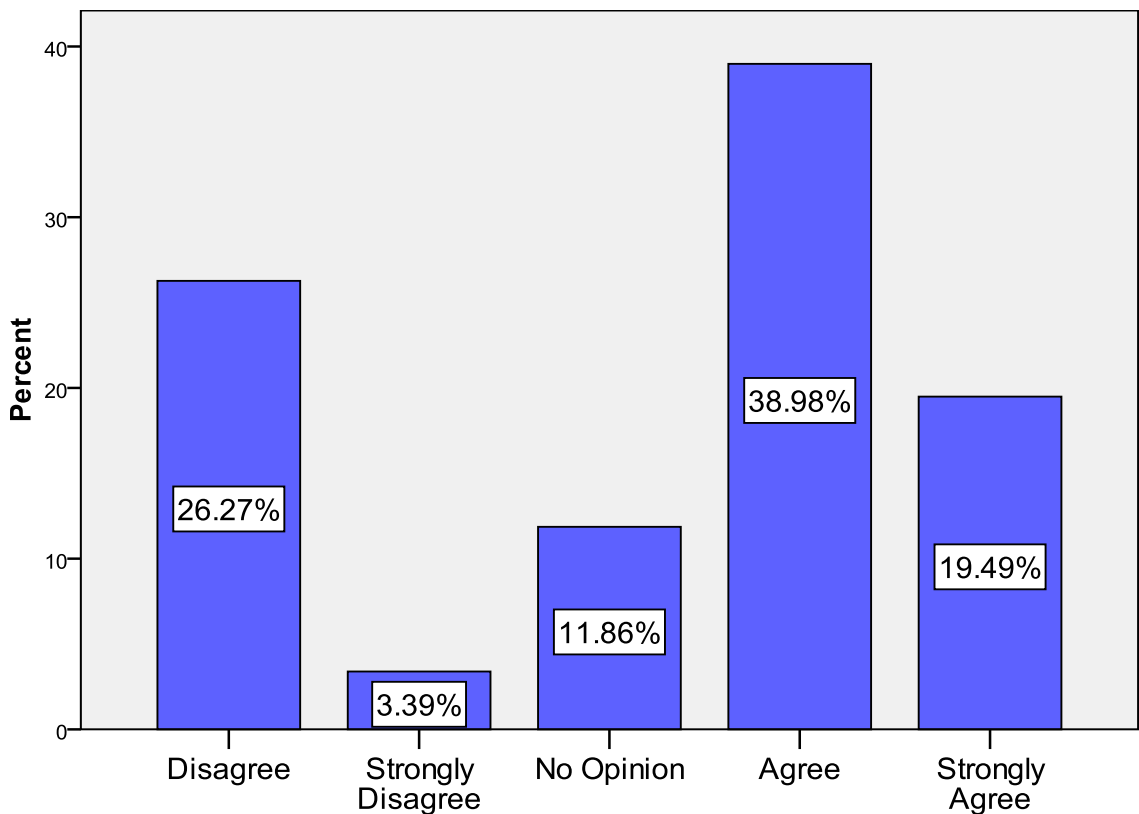
The burden of compliance for availing industrial package incentives is very high.

Statement 12: The firms have to engage consultants/ middlemen to receive the incentives.

Special Category States	Disagree	Strongly Disagree	No Opinion	Agree	Strongly Agree
Most Industrialised District	40.7%	5.1%	8.5%	40.7%	5.1%
Less Industrialised District	30.5%	18.6%	10.2%	30.5%	10.2%
Total	35.6%	11.9%	9.3%	35.6%	7.6%
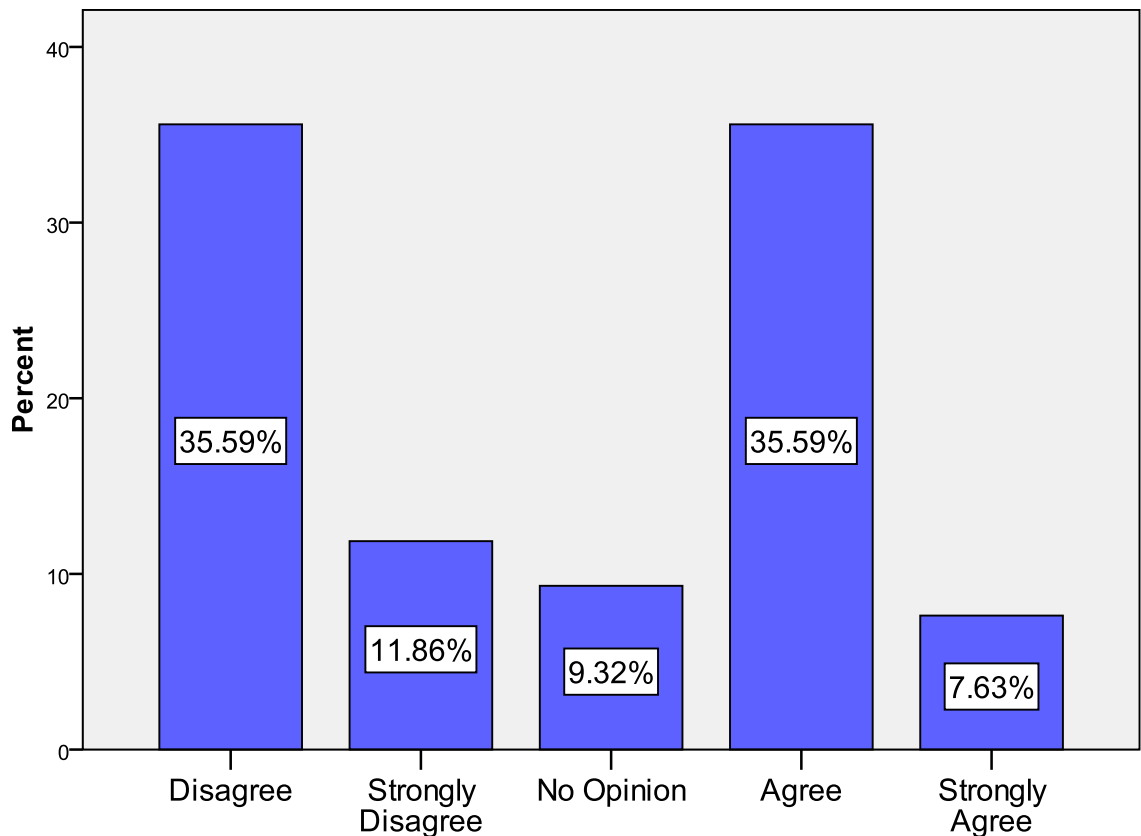
The firms have to engage consultants/ middlemen to receive the incentives.

A large number of respondents (43.3%) supported the above statement that the industrial organisations have to engage consultants/ middlemen to receive the incentives of the package. This was especially true for the entrepreneurs who come from other states to the special category states and do not have any direct connections and links in the government departments. A number of CAs, lawyers, consultants etc. have been performing this so called liaison service for the industries and making fairly good money. The research team during their visits to some of the DIC offices in the special category states had the first-hand experience of being

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contacted by these middlemen who contact any person visiting these offices with the offers. In one of the offices the research team also met a lawyer who had left practice and was running a fledging business of middlemen for the industrialists from the neighbouring states and had easy access to all the officers and even the office files. Some of the respondents had an interesting comment: "There is no need for any middlemen and the officers straightway ask for money themselves. They have no hesitation at all." Naturally the industrialists save on the commission/ share of the middlemen and direct links are generated.

Statement 13: The special package has helped in the industrialisation of the state.

Special Category States	Disagree	Strongly Disagree	No Opinion	Agree	Strongly Agree
Most Industrialised District	3.4%	0	1.7%	49.2%	45.8%
Less Industrialised District	11.9%	0	5.1%	40.7%	42.4%
Total	7.6%	0	3.4%	44.9%	44.1%
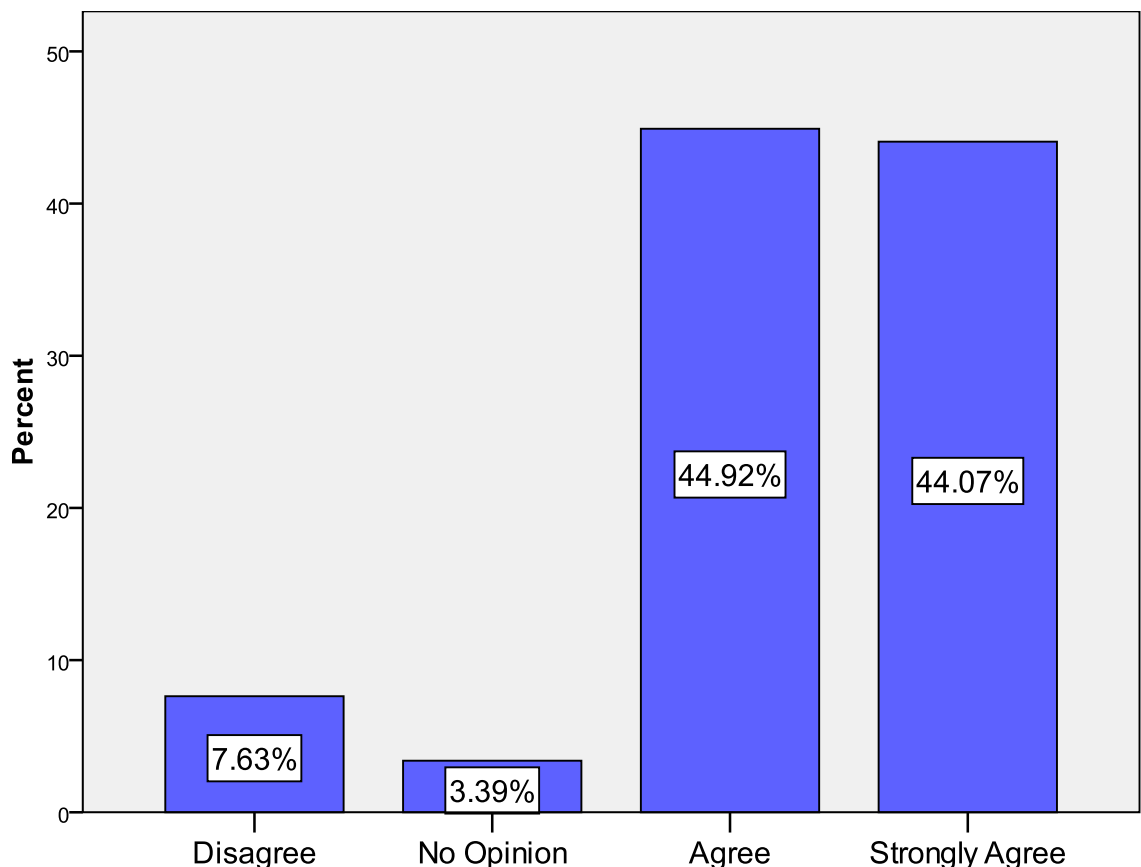
The Special Package has helped in the industrialisation of the State.

This statement received the highest support of 89% respondents – 44.9% agreed and 44.1% strongly agreed with the statement. More importantly in the most industrialised districts in the special category states 95% of the respondents supported the statement – 49.2% agreed and 445.8% strongly agreed. This highlights the fact that the package has been highly successful in inducing industrialisation in the special category states.

Statement 14: Some of the Firms benefit unfairly from incentives.

Special Category States	Disagree	Strongly Disagree	No Opinion	Agree	Strongly Agree
Most Industrialised District (Special Category States)	16.9%	3.4%	23.7%	49.2%	6.8%
Less Industrialised District (Special Category States)	16.9%	.0%	25.4%	23.7%	33.9%
Total (Special Category or Beneficiary States)	16.9%	1.7%	24.6%	36.4%	20.3%
Control Group or the Non-Beneficiary States	7.9%	.0%	20.2%	56.2%	15.7%
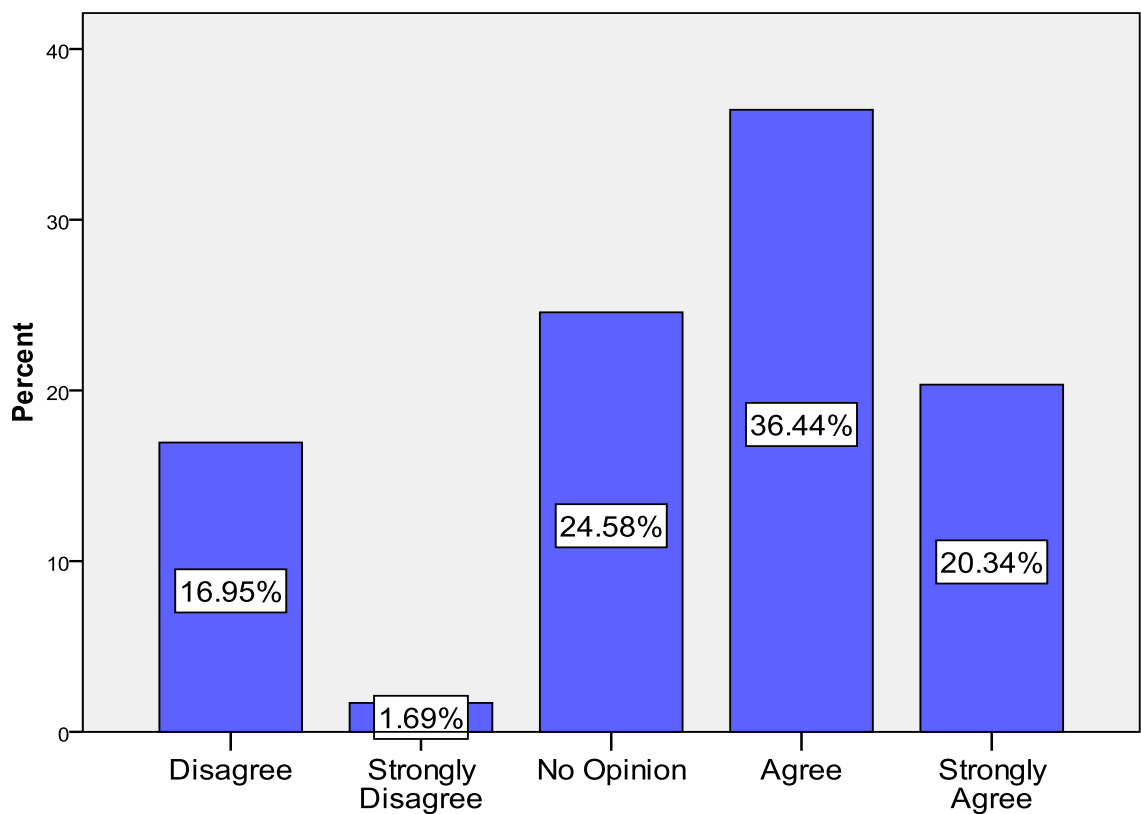
Some of the firms benefit unfairly from incentives.

Misuse of Incentives:

It was reported that some unscrupulous elements find innovative ways of misusing the various incentives granted for encouraging industrialisation in the special category states. The most badly administered and misused subsidy was freight or transport subsidy. The stories that were often quoted include the mentioning of Registration numbers of cars, jeeps, and even two-wheelers in the freight subsidy cases some of which were later caught during audit. One of the respondents told that a large number of DIC office employees were facing vigilance inquiries regarding various scams related to freight subsidies and therefore were reluctant to deal with fresh freight subsidy cases. As a result even genuine freight subsidy cases were pending for several years. One of the respondents also informed that several industrialists make multiple balance sheets for their companies for the same year, to unduly benefit from the various incentives and the CAs duly authenticate these manipulated papers. It is also alleged that several companies with multiple plants show more of their value addition and income from the plants in special category states to illegitimately avail more of the incentives. Some of them have set up merely packaging and assembling units in the special category states to avail the incentives. These facts were reported during the field work but the facts could hardly be verified as most of the industrialists had strict policies regarding visit to inside of the plants. To our surprise, the field investigators in one case, in peaceful Himachal Pradesh, were even threatened by some of the industrialists and their staff-members for entering in the factory and on production of the gate-entry pass by the investigators, the security members on duty were reprimanded for allowing the field investigator inside the factory. In another case, the security staff in one of the reputed factory in Uttarakhand informed the investigators that the manager was not available for the survey. The field investigators took a couple of pictures of the factory from the outside i.e. from the road, for the purpose of record. However, within a few minutes they were surrounded and threatened by the manager and staff and forced to delete those pictures from the camera. Their sensitivity, secrecy and attitude truly reflect that definitely something undesirable might be happening in those factories.

A very large number of respondents (56.7% in the special category states – 36.4% agree and 20.3% strongly agree; and 71.9% in the control group states – 56.2% agree and 15.7% strongly agree) supported the statement that some of the firms benefit unfairly from incentives. Interestingly a very large percentage of the respondents opted for 'No Opinion' – 24.6% in the special category states and 20.2% in the control group states. Such high degree of support for this statement highlights the fact that there is indeed some misuse of these incentives.

Statement 15: The special package has led to deterioration in environmental quality.

Special Category States	Disagree	Strongly Disagree	No Opinion	Agree	Strongly Agree
Most Industrialised District	52.5%	3.4%	16.9%	23.7%	3.4%
Less Industrialised District	55.9%	6.8%	10.2%	22.0%	5.1%
Total	54.2%	5.1%	13.6%	22.9%	4.2%
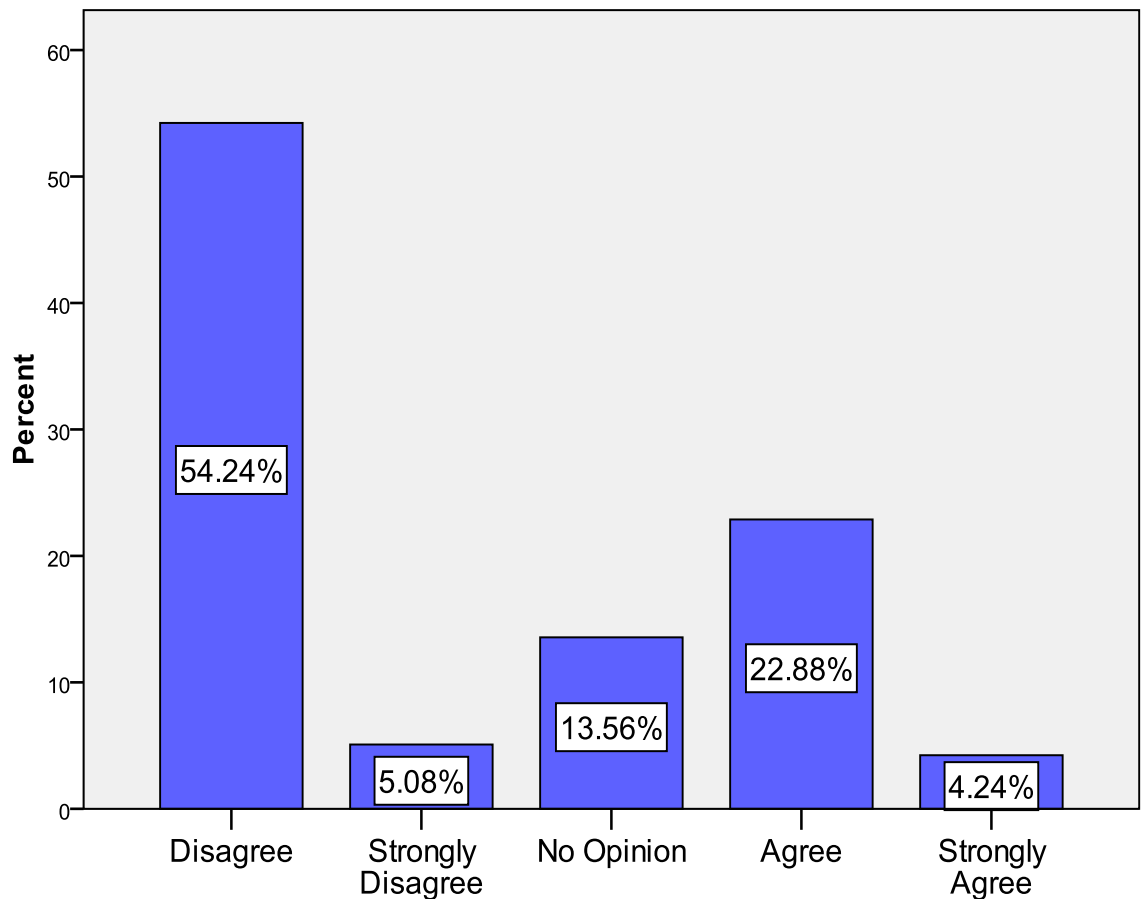
The special package has led to deterioration in environmental quality.

Majority of the respondents at 54.2% disagreed with the statement. However it needs to be emphasised that only 5.1% strongly disagreed. There seems to be less conviction and more compulsion in their opinion on this statement as they were indeed expected not to oppose industrialisation by openly supporting the environmental cause. It was argued that industrialisation has just begun significantly in these states and no major untoward incident has yet been reported in the media except some 'minor' cases.

REDUNDANCY RATE:

The study sought to generate an approximate 'redundancy' figure for the investments made by the firms in the sample that were receiving the fiscal incentives. Redundancy is when tax incentives are provided to a company to generate an investment, but the investment would have been made anyway, even without the incentives offered. Such redundancies result in a windfall gain for the company concerned, and are effectively a subsidy by the government.

One way of estimating the redundancy rate of the fiscal incentives is by simply referring to answer provided to a question in our survey questionnaire "Without Investment Incentives I would not have invested anywhere." The proportion of enterprises in the special category states that selected "disagree" or "strongly disagree" provide a redundancy measure.

The survey results reveal that 19.5% of the respondents disagreed with the statement while 26.3% strongly disagreed with the statement. Thus the redundancy rate was estimated to be quite high at 45.8% in the special category states. This redundancy results in a high tax subsidy for investment in special category states, and the higher the return made on (or profits derived from) these investments, the more tax income the budget forgoes.

Chapter 6
LOCATION FACTORS AND PRINCIPAL COMPONENTS ANALYSIS

INDUSTRIAL LOCATION FACTORS:

The questionnaire contained questions of location factors wherein the respondents were requested to indicate the importance of the factors in influencing their industrial location decision and also rate the quality of the location or competitiveness factors in the area/state in which they are located. The questionnaire used in the study included 71 location factors, finalised through review of literature and pilot study, which were divided into 14 critical factors. The actual level of importance and performance rating of each critical factor is represented by the average of measurement item ratings for that factor. The mean importance and the mean performance/ quality rating of these critical location factors were estimated. The correlation coefficient (Karl Pearson) between the importance and the performance rating of the critical factors were also calculated.

Table 6.1: Critical Industrial Location Factors – Importance and Performance

Industrial Location Factor	Mean Importance	Mean Performance Rating	Correlation Coefficient (Karl Pearson)	Significance (2-tailed)
Raw Materials	4.25	3.16	.157*	0.024
Incentives and Tax Structure	3.80	2.34	.195**	0.005
Government Attitude	3.76	2.46	-0.089	0.203
Human Resources	3.68	3.14	0.049	0.48
Markets	3.62	3.00	.155*	0.026
Industrial Site	3.60	2.60	-0.035	0.617
Economic Factors	3.59	3.14	0.082	0.238
Political Factors	3.57	3.36	0.13	0.062
Community	3.44	3.52	.452**	0
Social Infrastructure	3.40	2.76	-0.039	0.574
Utilities	3.38	3.03	.300**	0
Government Regulations	3.21	2.97	-0.05	0.471
Transportation	3.19	2.71	0.02	0.776
Climate	3.14	3.32	0.073	0.299

*. Correlation is significant at the 0.05 level (2-tailed).

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

In terms of mean importance raw material was rated as the most important factor with the mean score of 4.25 out of the maximum possible score of 5. Incentives and tax structure was rated as the second most important critical factor by the respondents followed by government attitude, human resources and market respectively. Surprisingly transport and utilities were rated much lower in terms of importance in the critical factors. Climate was given the least importance in industrial location decision making.

There was significant correlation between the importance and performance rating of community at 0.452, utilities at 0.300, incentives and tax structure at 0.195, raw material at 0.157 and markets at 0.155. There was negative but insignificant correlation between the importance and performance of the critical factors government attitude, industrial site, social-infrastructure and government regulations.

Industrial Location Factors: Importance
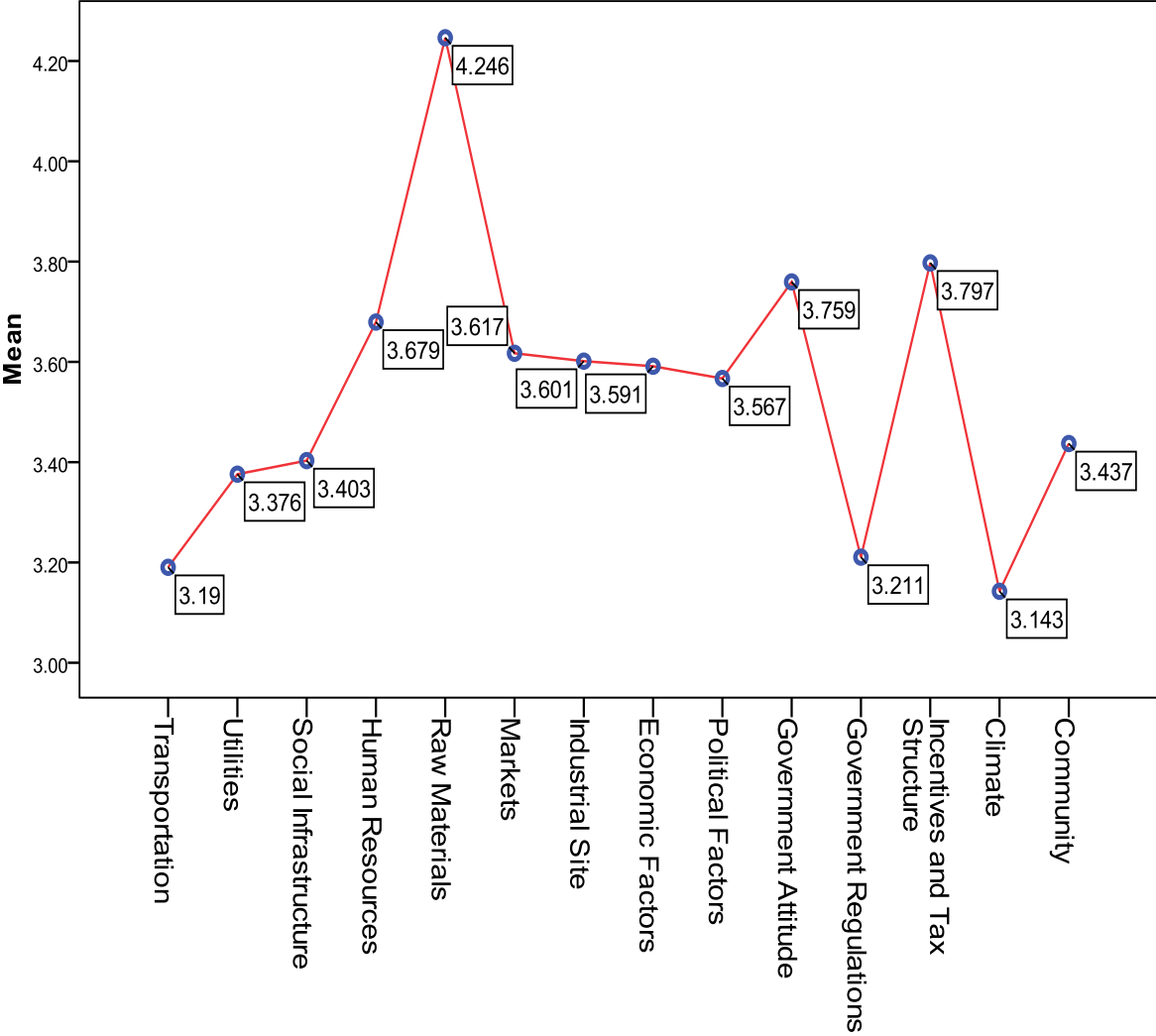
The performance/ quality rating was the lowest in case of incentives and tax

structure at only 2.338 which was perhaps because of lack of incentives in the case of three control group states and also due to non-applicability of the package incentives in case of some of the respondents from the special category states. The rating in case of government attitude was the second lowest at 2.455 reflecting the frustration with the corruption and lack of transparency and efficiency in governance and lack of support from the government departments. Then there was the problem of industrial site rated at 2.604. Transportation and social infrastructure were also reported to be low at 2.709 and 2.76 respectively. The best performance was in case of community at 3.52 followed by political factors at 3.357.

Industrial Location Factors: Performance/Quality Rating
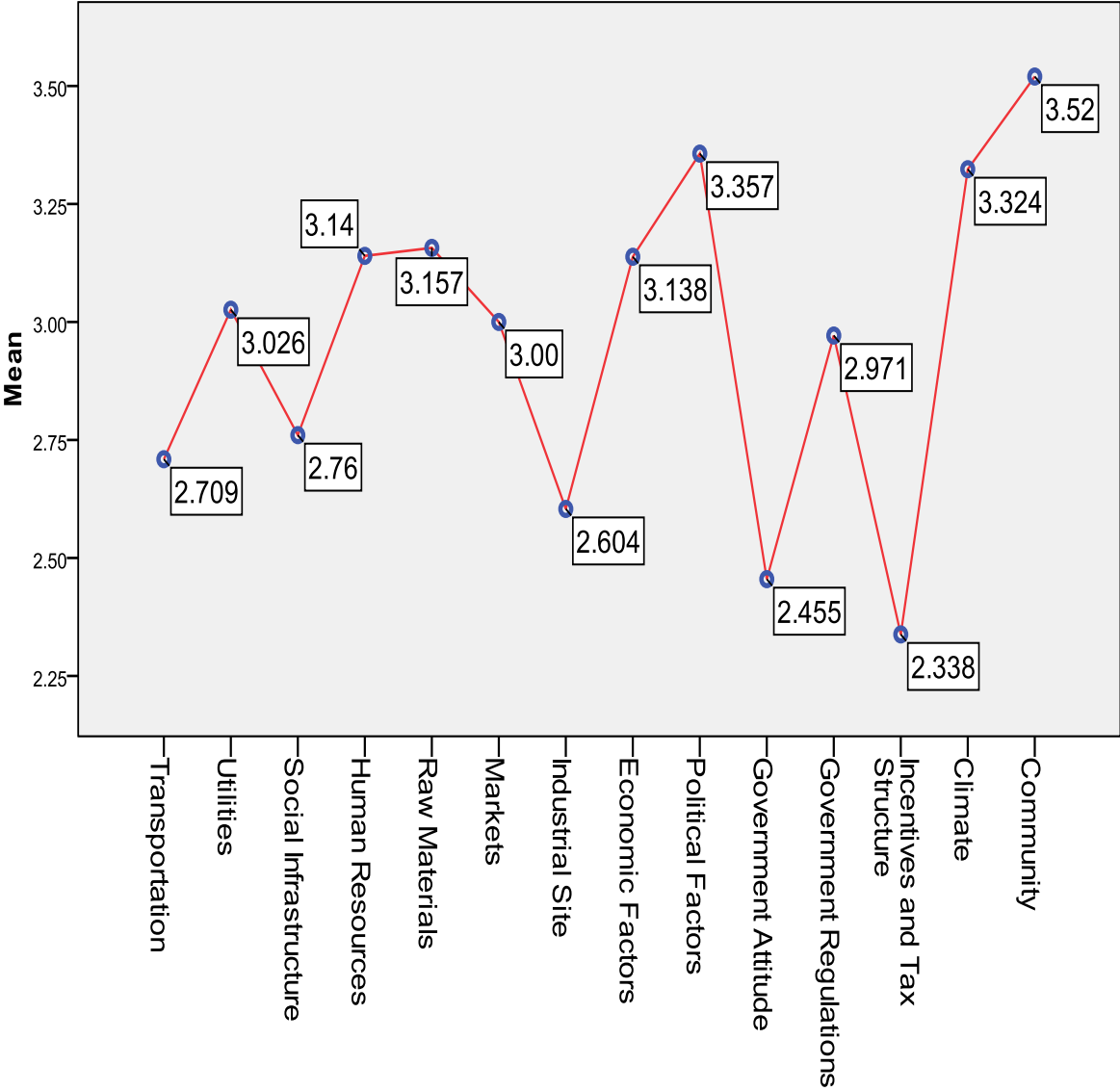
Table 6.2: State-wise Importance of Critical Location Factors

Critical Factors	J & K	H.P.	Uttara	Haryana	Punjab	UP	Total
Transportation	3.63	3.32	3.38	3.23	2.40	3.21	3.19
Utilities	3.73	3.62	3.51	3.50	2.49	3.51	3.38
Social Infrastructure	3.77	3.64	3.58	3.49	2.37	3.74	3.40
Human Resources	3.78	3.68	3.68	3.94	3.55	3.48	3.68
Raw Materials	4.36	4.04	3.97	4.46	4.38	4.40	4.25
Markets	3.67	3.56	3.44	3.87	3.67	3.60	3.62
Industrial Site	3.95	3.57	3.61	3.40	3.34	3.68	3.60
Economic Factors	3.86	3.56	3.49	3.95	3.29	3.52	3.59
Political Factors	3.83	3.45	3.43	3.39	3.90	3.19	3.57
Government Attitude	4.22	3.95	3.74	3.90	2.75	4.22	3.76
Government Regulations	3.42	3.48	3.09	3.29	3.14	2.69	3.21
Incentives and Tax	4.19	4.04	3.94	3.97	2.63	4.24	3.80
Climate	3.53	3.10	3.36	3.41	2.45	3.13	3.14
Community	3.78	3.41	3.44	3.68	2.83	3.67	3.44

Importance of Critical Location Factors: Special Category States

Critical Industrial Location Factor

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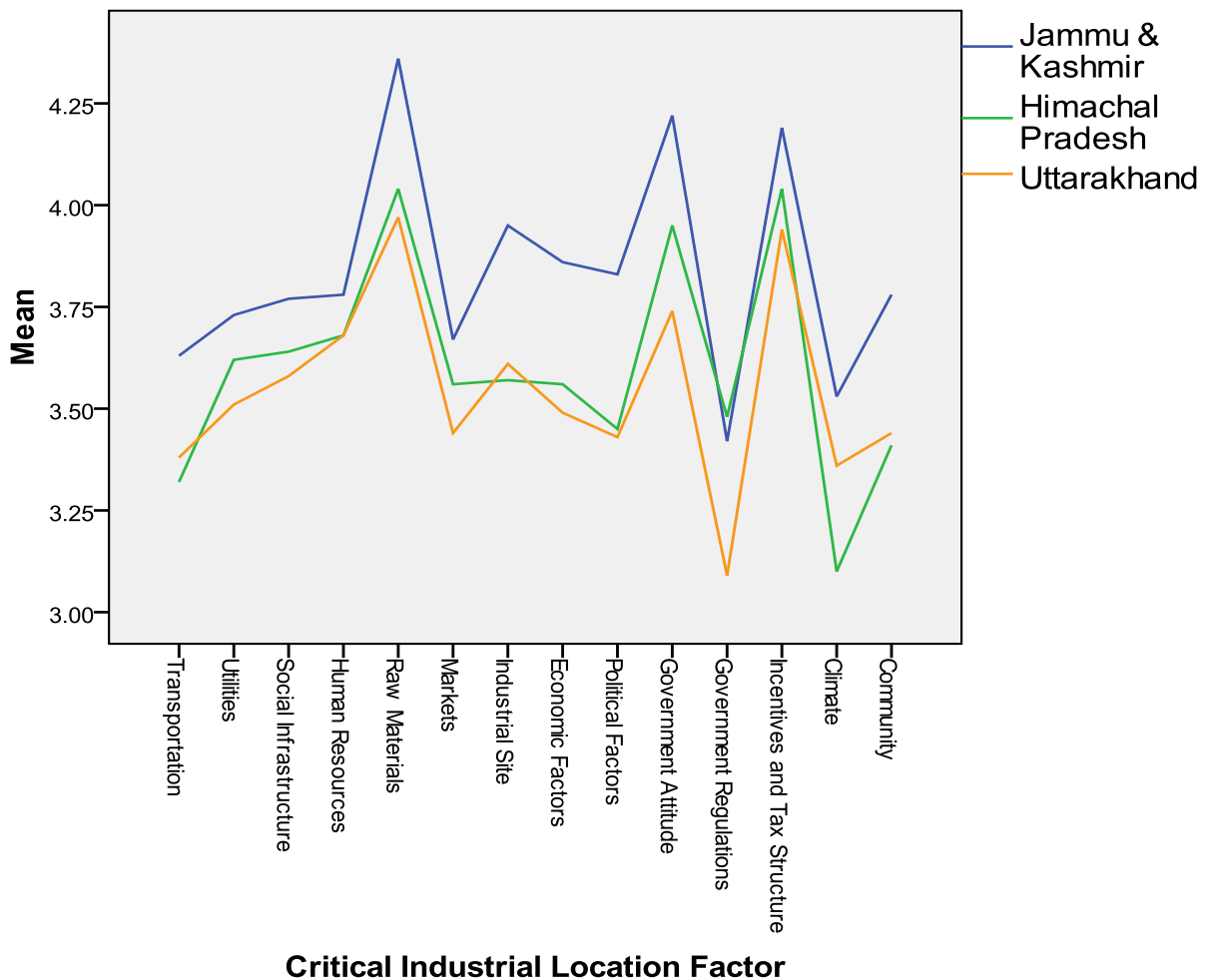
Importance of Critical Location Factors: Control Group States
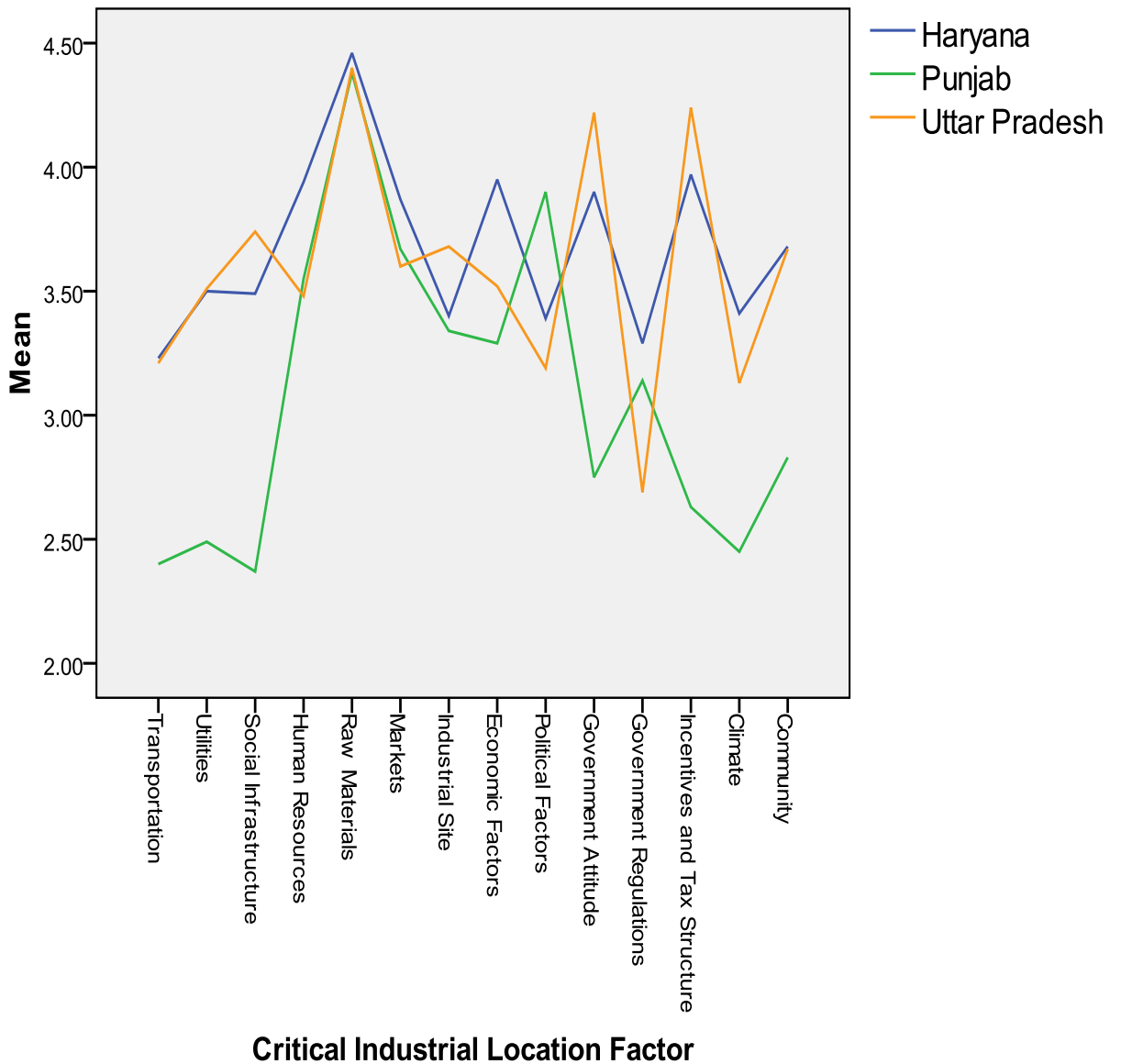
State-wise Importance of Critical Location Factors: It was found that irrespective of the state categories the respondents across all the survey states reported highest importance to raw materials. With the exception of Punjab, incentives and tax and government attitude were also ranked very high in terms of importance by all the states in the survey. This reflects the importance of the role of government whether as regulator and facilitator or as promoter of industrialisation. However, in terms of their assessment of quality of these factors, there was extreme dissatisfaction with the role of the government, especially its implementing agencies at the field levels.

Industrial Location Factors without Aggregation: During the analysis of the critical industrial location factors, a limitation of the aggregation and categorisation of

a variety of 71 factors into only 14 critical factors was observed. Thus a separate analysis of all the 71 factors individually was also conducted and it was observed that the importance of the individual location factors differed from that reflected in the critical factors, which is the problem of any aggregation.

The first and the third rank, out of a total of 71 location factors, in terms of importance of location factor was occupied by the availability of raw material (4.32) and closeness of the raw material (4.16) which is commensurate with the first rank in terms of aggregation in the critical factor occupied by the category 'raw materials'. The second rank in terms of importance was occupied by the availability of skilled labour (4.17) and its performance rating was very low at 0.28.

Table 6.3: Industrial Location Factors without Aggregation (Top Ten Factors) – Importance and Quality Rating

Industrial Location Sub-Factors (Top Ten)	Mean Importance	Mean Performance Rating	Correlation Coefficient (Karl Pearson)	Significance (2-tailed)
Availability of Raw Material	4.3285	3.2464	.141[*]	.042
Availability of Skilled Labour	4.1739	2.8502	-.057	.417
Closeness to Raw Material	4.1643	3.0676	.167[*]	.016
Availability and Low Cost of Electric Power	4.0821	2.7729	.227[**]	.001
Availability of Banks	4.0676	3.6280	.001	.986
Availability and Quality of Highways	4.0483	3.1063	.073	.295
Availability of Unskilled Labour	4.0435	2.9227	-.090	.197
Freedom from Corruption	4.0338	2.1643	.077	.267
Nearness to Family	4.0048	3.6618	.626[**]	.000
Medical Facility	3.9952	2.8647	-.199[**]	.004

* Correlation is significant at the 0.05 level (2-tailed).

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

The fourth most important factor in the study was found to be availability and low cost of electric power (4.08). However, its quality rating was quite low at 0.277 reflecting frequent long electricity cuts and poor quality of electricity supply. In fact, electricity was quoted by most of the respondents as the most important advantage/

disadvantage of their location. Some respondents reported that the electricity supply was for only few hours daily. How can one expect industrialisation without electricity? The correlation between the importance and the quality rating for electricity was estimated to be significant at 0.227. Banks were at fifth rank followed by the availability and quality of highways at the sixth rank. Availability of unskilled labour was ranked seventh in importance. The correlation between importance and performance rating in respect of both skilled labour and unskilled labour was estimated to be negative. Freedom from corruption was also highly rated by the respondents at eighth rank. Nearness to family (home proximity) is an important factor in all over India probably because of the influence of strong cultural factors and was ranked ninth out of 71 factors. Interestingly, the correlation between the importance and quality rating of the 'nearness to family' location factor was estimated to be very high and significant at 0.626. The tenth most important factor was medical facilities. The correlation between its importance and performance rating was estimated to be negative. The above analysis implies that probably the factors that are not adequately available tend to be more important, such as the high importance of transport, power and other infrastructure.

PRINCIPAL COMPONENTS ANALYSIS:

The large number of industrial location factors made data analysis more difficult and complicated. The Principal Component Analysis is used to overcome this obstacle by grouping together variables that are highly correlated into principal components and as a result, bring a simplification to analysis. Thus the PCA technique was applied to the question concerning importance of location factors where data, derived from the use of Likert scales, was suited to data reduction. The PCA was conducted on the critical industrial location factors to summarise the data and investigate the relationship between the different location factors.

The Principal Component Analysis (PCA) is a data reduction technique used to reduce a large number of variables to a smaller set of underlying factors that summarise the essential information contained in the variables with a minimum loss of information. Principal component analysis is normally conducted in a sequence of steps, with somewhat subjective decisions being made at many of these steps.

Table 6.4: Correlation Matrix

	Transportation	Utilities	Social Infrastructure	Human Resources	Raw Materials	Markets	Industrial Site	Economic Factors	Political Factors	Government Attitude	Government Regulations	Incentives and Tax Structure	Climate	Community
Transportation	1.000	.671	.680	.381	.111	.242	.369	.420	.073	.587	.245	.576	.412	.462
Utilities	.671	1.000	.756	.283	.020	.227	.408	.409	.030	.642	.237	.689	.467	.440
Social Infrastructure	.680	.756	1.000	.377	.159	.246	.423	.483	.083	.708	.182	.736	.480	.569
Human Resources	.381	.283	.377	1.000	.315	.426	.327	.381	.275	.407	.332	.319	.296	.329
Raw Materials	.111	.020	.159	.315	1.000	.437	.349	.411	.293	.233	-.003	.174	.214	.301
Markets	.242	.227	.246	.426	.437	1.000	.414	.405	.259	.293	.260	.269	.218	.340
Industrial Site	.369	.408	.423	.327	.349	.414	1.000	.461	.296	.461	.149	.420	.250	.361
Economic Factors	.420	.409	.483	.381	.411	.405	.461	1.000	.387	.563	.195	.499	.353	.481
Political Factors	.073	.030	.083	.275	.293	.259	.296	.387	1.000	.243	.373	.096	.301	.242
Government Attitude	.587	.642	.708	.407	.233	.293	.461	.563	.243	1.000	.306	.819	.549	.587
Government Regulations	.245	.237	.182	.332	-.003	.260	.149	.195	.373	.306	1.000	.144	.271	.168
Incentives and Tax Structure	.576	.689	.736	.319	.174	.269	.420	.499	.096	.819	.144	1.000	.514	.583
Climate	.412	.467	.480	.296	.214	.218	.250	.353	.301	.549	.271	.514	1.000	.514
Community	.462	.440	.569	.329	.301	.340	.361	.481	.242	.587	.168	.583	.514	1.000

Correlation Matrix: The Principal Component Analysis (PCA) was applied using a correlation matrix. Numerous significant linear correlations existed among the critical location factors. Due to the high correlation among independent variables, a principal component analysis was conducted to overcome the multicollinearity problem and to reduce data redundancy.

Initial Extraction of the Factors/ Components: Factor extraction was used to determine grouping of the factors. In the principal component analysis, factors were extracted using the Eigenvalue technique. In Principal Component Analysis, the number of components extracted is equal to the number of variables being analysed. Because 14 critical location factors are analysed in the present study, 14 components will be extracted.

Table 6.5: Communalities

Critical Factors	Initial	Extraction
Transportation	1.000	.633
Utilities	1.000	.761
Social Infrastructure	1.000	.798
Human Resources	1.000	.448
Raw Materials	1.000	.724
Markets	1.000	.529
Industrial Site	1.000	.491
Economic Factors	1.000	.591
Political Factors	1.000	.627
Government Attitude	1.000	.764
Government Regulations	1.000	.805
Incentives and Tax Structure	1.000	.783
Climate	1.000	.472
Community	1.000	.540
Extraction Method: Principal Component Analysis.		

The extration was the highest for government regulation at .805 followed by social infrastructure at .798 and incentives and tax structure at .783.

The decision about which principal components to retain depends on the percentage of the variance accounted for by the variable, the absolute variance

accounted for by each principal component, and whether the component can be meaningfully interpreted.

Table 6.6: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.018	42.985	42.985	6.018	42.985	42.985	4.733		
2	1.794	12.815	55.800	1.794	12.815	55.800	2.565		
3	1.153	8.238	64.038	1.153	8.238	64.038	1.667		
4	.882	6.298	70.336						
5	.718	5.126	75.462						
6	.580	4.146	79.608						
7	.517	3.691	83.299						
8	.469	3.348	86.648						
9	.453	3.234	89.881						
10	.419	2.990	92.871						
11	.346	2.469	95.340						
12	.295	2.106	97.447						
13	.206	1.474	98.921						
14	.151	1.079	100.000						
Extraction Method: Principal Component Analysis.									

From the Principal Component Analysis, the principal components with eigenvalue greater than 1 were selected. Only the first three components displayed eigenvalues greater than 1, and the results of a scree test also suggested that only the first three components were meaningful. Therefore, only the first three components were retained for rotation and these three components accounted for more than 64% of the total variance. The remaining components were considered less significant. According to the "percentage of variance accounted for" criterion, this suggests that it may be appropriate to retain three components.

The scree plot shows that there are several large breaks in the data following components 1, 2 and 3, and then the line begins to flatten out beginning with component 4. The last large break appears after component 3, suggesting that only components 1-3 account for meaningful variance. This indicates that only these first three components should be retained and interpreted. It can be noticed how it is almost possible to draw a straight line through components 4-14. The components

that along a semi-straight line such as this are typically assumed to be measuring only trivial variance (components 4-14 constitute the "scree" of the scree plot).
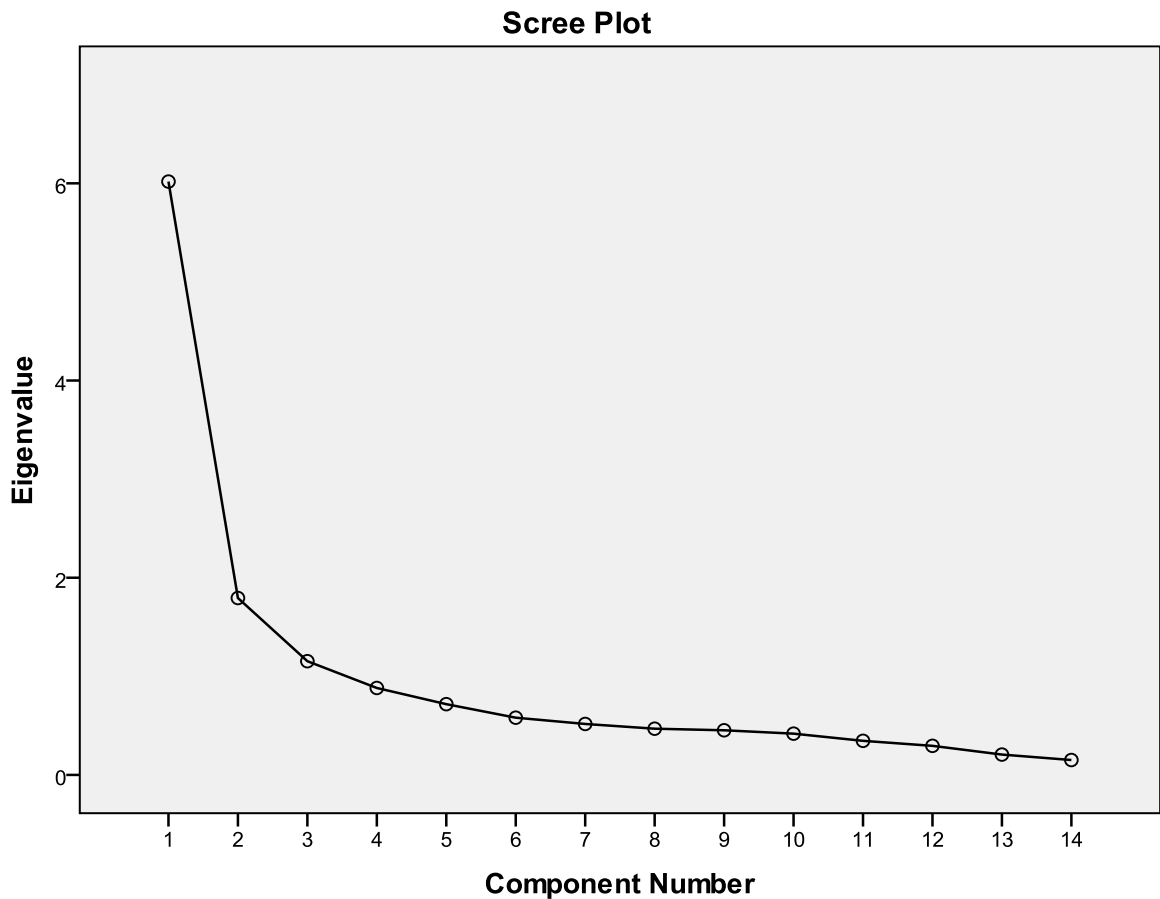
Scree Plot

Thus, the results from the eigenvalue-one criterion, the variance accounted for criterion, and the scree plot have converged in suggesting that a three-component solution may be appropriate. There are no factorially complex items i.e. items with meaningful loadings for more than one component. Thus the solution is fairly clean.

Factor Patterns and Factor Loadings: After extracting the initial components, an unrotated factor pattern matrix was created. The rows of this matrix represent the variables/factors being analysed, and the columns represent the retained components. The entries in the matrix are factor loadings. A factor loading is a general term for a coefficient that appears in a factor pattern matrix or a factor structure matrix. The positive or negative symbol indicates the value of eigenvector that loads on variable observed.

Table 6.7: Component Matrix[a]

	Component		
	1	**2**	**3**
Transportation	.731	-.309	.058
Utilities	.752	-.438	.058
Social Infrastructure	.818	-.353	-.062
Human Resources	.573	.317	.140
Raw Materials	.387	.593	-.472
Markets	.509	.500	-.139
Industrial Site	.619	.225	-.238
Economic Factors	.710	.248	-.161
Political Factors	.359	.614	.347
Government Attitude	.858	-.167	.035
Government Regulations	.373	.237	.781
Incentives and Tax Structure	.815	-.323	-.115
Climate	.655	-.051	.201
Community	.726	-.009	-.116
Extraction Method: Principal Component Analysis.			
a. 3 components extracted.			

Rotation: Ideally, one would like to review the correlations between the variables and the components and use this information to interpret the components; that is, to determine what construct seems to be measured by component 1, what seems to be measured by component 2, and so forth. Unfortunately, when more than one component has been retained in an analysis, the interpretation of an unrotated factor pattern is usually quite difficult. To make interpretation easier, we performed an operation called a rotation. To facilitate easier interpretation of principal components, factor rotation methods were developed. A rotation is a linear transformation that is performed on the factor solution for the purpose of making the solution easier to interpret.

This research study uses varimax orthogonal rotation method developed by Kaiser. Varimax rotation transformed the components into factors that were more clearly interpretable. A varimax rotation is an orthogonal rotation, meaning that it results in uncorrelated components. Varimax rotation tends to maximise the variance of a column of the factor pattern matrix.

Table 6.8: Rotated Component Matrix[a]

	Component		
	1	2	3
Transportation	**.780**	.094	.126
Utilities	**.869**	.011	.077
Social Infrastructure	**.877**	.165	.029
Human Resources	.303	.425	.419
Raw Materials	-.003	**.850**	-.041
Markets	.149	**.670**	.240
Industrial Site	.393	**.576**	.069
Economic Factors	.455	**.595**	.171
Political Factors	-.040	.431	**.663**
Government Attitude	**.807**	.267	.203
Government Regulations	.179	-.056	**.877**
Incentives and Tax Structure	**.859**	.212	-.004
Climate	**.574**	.169	.338
Community	**.610**	.395	.104
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.			
a. Rotation converged in 5 iterations.			

Interpreting the Rotated Solution:

Interpreting a rotated solution means determining just what is measured by each of the retained components. This involves identifying the variables that demonstrate high loadings for a given component, and determining what these variables have in common. Usually a brief name is assigned to each retained component that describes its content. The factor description captures the underlying nature of the factors and aids interpretation.

In interpreting the rotated factor pattern, an item was said to load on a given component if the factor loading was 0.50 or greater for that component, and was less than 0.5 for the other. Using these criteria, the rotated factor pattern shows that seven items displayed meaningful loadings for First Principal Component (PC1). These items are: social infrastructure, utilities, incentives and tax structure, government attitude, transportation, community and climate. The first Principal Component (PC1) accounts for 42.985% of the total variance in the data in terms of extraction sums of squared loadings (33.810% in terms of rotation sum of squared loadings). The First Principal Component (PC1) is labelled "Infrastructure and Investment Incentives".

Table 6.9: **Principal Component Analysis - Summary Statistics**
(Rotation sums of squared loadings)

Principal Component	Decision Variable	Eigenvalues	Variance (%)
PC1	Social Infrastructure	.877	33.810%
	Utilities	.869	
	Incentives and Tax Structure	.859	
	Government Attitude	.807	
	Transportation	.780	
	Community	.610	
	Climate	.574	
PC2	Raw Materials	.850	18.319%
	Markets	.670	
	Economic Factors	.595	
	Industrial Site	.576	
PC3	Government Regulations	.877	11.908%
	Political Factors	.663	
Total Variance Explained by the three Principal Components			**64.038%**

Component Plot in Rotated Space

The Second Principal Component (PC2) displayed large loadings for four items viz. raw materials, markets, economic factors and industrial site. The second Principal Component (PC2) accounts for 12.815% of the total variance in the data in terms of extraction sums of squared loadings (18.319% in terms of rotation sum of squared loadings). The Second Principal Component (PC2) is labelled "Economic".

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The third Principal Component (PC3) displayed large loadings for two items viz. government regulations and political factors. The third Principal Component (PC3) accounts for 8.238% of the variance in the data in terms of extraction sums of squared loadings (11.908% in terms of rotation sums of squared loadings). The Third Principal Component (PC3) is labelled "Administrative and Political". The first three principal components together accounted for 64.038% of the total variance in the data.

Creating Factor Score (or Component Score): Once the analysis is complete, it is often desirable to assign scores to each factor/variable to indicate where that factor/variable stands on the retained components. These component scores could be used either as predictor variables or as criterion variables in subsequent analyses. In principal component analysis, a factor score (or component score) is a linear composite of the optimally-weighted observed variables.

Table 6.10: Component Score Coefficient Matrix

	Component		
	1	2	3
Transportation	.196	-.092	.004
Utilities	.239	-.142	-.026
Social Infrastructure	.222	-.049	-.091
Human Resources	-.018	.109	.207
Raw Materials	-.127	.477	-.191
Markets	-.083	.302	.040
Industrial Site	.017	.245	-.094
Economic Factors	.022	.227	-.027
Political Factors	-.140	.118	.422
Government Attitude	.170	-.015	.027
Government Regulations	-.023	-.225	.655
Incentives and Tax Structure	.213	-.014	-.124
Climate	.106	-.059	.169
Community	.104	.105	-.054
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.			

The Principal Components Analysis tries to re-express the data as a sum of uncorrelated components. The location factors generated from PCA results become the new independent variables for further regression analysis. PCA produced three rotated factors, which represented 64% of all variance in the original 14 independent variables.

Chapter 7

MAJOR FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

MAJOR FINDINGS OF THE STUDY

The major findings of the study are as under:

Intra-state Inequality:

1. The package to Special Category States (Jammu & Kashmir, Himachal Pradesh and Uttarakhand) has led to industrialisation of these states but these states are still far behind other neighbouring states included in the study (Haryana, Punjab and Uttar Pradesh) as the control group or the non-beneficiary states.

2. There are inequalities in level of industrialisation not only among the states but also within the states themselves. Industrialisation in each of these States revealed high degrees of intra-state regional inequalities.

3. Gini Coefficient of the district-wise distribution of number of factories in Jammu & Kashmir was 0.614862; Himachal Pradesh was 0.572560; Uttarakhand was 0.324671; Haryana was 0.593243; Punjab was 0.517413; Uttar Pradesh was 0.678075.

4. Gini Coefficient of the district-wise distribution of number of workers in Jammu & Kashmir was 0.691362; Himachal Pradesh was 0.771643; Uttarakhand was 0.692723; Haryana was 0.667805; Punjab was 0.565047; Uttar Pradesh was 0.699884. Thus Uttar Pradesh has the highest inequality among the states under study.

Time Series Data Analysis:

5. There was definite impact of trade cycle in almost all the variables. The pre-package period (1998-2003) saw definite recessionary trends in all the variables while the package-period (2003-2009) had recovery in most of the variables. These trends had nothing to do with package, but were clearly attributable to the trade cycle.

6. There was definite positive and significant impact of the package, both in with- and without framework as well as before- and after framework, in the special category states in terms of increase in the number of factories, fixed capital, invested capital, number of industrial workers, total persons engaged in industry, wages to workers, total emoluments, net value added, value of output and gross fixed capital formation.

7. Uttarakhand which was much below Himachal Pradesh in terms of industrialisation has fast overtaken Himachal Pradesh. Uttarakhand after separation from Uttar Pradesh has shown much better performance and it supports the opinion that smaller states are much better performers. Since Uttarakhand had been performing much better than other states even in the pre-package period, it seems that since the formation of the separate state of Uttarakhand the untapped potential was unleashed leading to high growth even in the absence of the package and really spectacular growth during the package period. Himachal Pradesh seems to be left gasping at the sight of Uttarakhand moving far ahead of it in industrialisation. It seems that Uttarakhand is fast emerging as a new role model for development in the hill states replacing Himachal Pradesh. The figures indicate that Himachal Pradesh has lagged far behind Uttarakhand in almost all the indicators while in certain crucial variables even Jammu & Kashmir is moving faster than Himachal Pradesh. It seems that Himachal Pradesh has failed to attract capital despite the package incentives or it is Uttarakhand which had been more attractive to the investors thereby accumulating most of the investments. It must also be noted that Jammu & Kashmir is at present far behind Uttarakhand and Himachal Pradesh despite the grant of package. Perhaps the unique problems in J&K are responsible for this trend.

8. Although the data related to the number of industrial workers highlights the success of the package in generating huge employment opportunities in Special Category States, but the qualitative observations and the information gathered from the survey indicate that most of the industrial workers in the special category states are migrant workers from other states. Thus from the point of view of significant employment generation, significant benefits have been filtered away to other states.

9. The net value added may be treated as the most significant indicator of the level of industrialisation in a state. Here it must be pointed out that Uttarakhand has the highest net value added among all the states in the year 2008-09 at Rs. 2,843,285 Lakh taking over Uttar Pradesh at Rs. 2,413,888 Lakh and Haryana Rs. 2,035,386 Lakh. Even more surprising is the fact that even Himachal Pradesh has net value added at Rs. 1,333,237 Lakh which is greater than that of Punjab at Rs. 1,256,840 Lakh. Since the net value added is one of the best possible indicators of industrialisation, though it ignores the population and area parameters of the state, it reflects that Uttarakhand and Himachal Pradesh have reached quite high levels of industrialisation in terms of net value added. If these figures are sustainable, then the objective of the package to the special category states seems to have been fulfilled.

10. The figures of value of output are in contrast to net value added and the comparison of the data reveals some kind of manipulation of net value added data to illegitimately avail of the fiscal incentives. Though Uttarakhand had overtaken all the states under study in terms of net value added, but in terms of value of output Uttarakhand was behind Haryana, Punjab and Uttar Pradesh. Interestingly Uttar Pradesh had more than double the output of Uttarakhand. Similarly, Himachal Pradesh had more net value added than Punjab, but when seen in terms of value of output Punjab had more than double the value of output than Himachal Pradesh.

11. The net value as a percent of output was estimated at 34.29% for Uttarakhand, 31.53% for Himachal Pradesh and 23.77% for J&K while among the control group states the ratio was 11.91% for Punjab, 12.04% for UP and 14.10 for Haryana against the All India average of 16.13%. This reflects rampant misuse of the fiscal incentives. These figures reflect the alleged manipulation and over-reporting of value addition in the Special Category States by the firms to gain excess-benefit illegitimately by availing the excise duty concessions over and above the actual value addition in the state.

Sample Survey of Industries:

12. The actual sample survey responses consist of 57% respondents from the Special Category State or the Beneficiary States and 43% respondents from the Control Group or the Non-Beneficiary States.

13. The data on Survey respondents by the scale of manufacturing according to the investment in Plant and Machinery reveals that 38.16% of the respondent organisations were micro enterprises (upto Rs 25 Lakhs), 43.0% were small enterprises (Rs 25 Lakhs to Rs 5 Crore). Medium enterprises (Rs 5 Crore to Rs 10 Crore) constituted 9.66% of the respondents and large enterprises (Above Rs 10 Crore) constituted 9.18% of the respondent organisations.

14. The profile of the respondents of the survey greatly impacts the findings of any survey. Keeping in view the nature of the present survey that specifically pertains to the decisions and opinions of the decision making persons in the industrial organisation, the owners were the predominant respondents constituting 55.1% of the total respondents followed by top management at 34.8%. Middle level management contributed 10.1% of the responses.

15. The sex profile of the survey respondents shows that only 1% of the respondents were females reflecting the near absence of females in terms of ownership and top management in industries.

16. **Status of Industrial Areas:** A large number of units established in industrial areas in special category states have closed down or have failed to even begin production. A large number of industrial plots are being used merely for residential purpose and some even as tourist hotels/rest houses defeating the very purpose of establishing the industrial areas. Several plots have been sub-let at much higher prices. The administrators of these industrial areas/estates must enforce the terms and conditions of allotment of these industrial plots and in case of violation, re-allot these plots to other investors so that the industries actually flourish in the areas. The basic infrastructure in even the best industrial areas in the special category states of Himachal Pradesh and Jammu & Kashmir was grossly lacking with the exception of SIDCUL areas in Uttarakhand.

17. The state of origin of the owner/ major investor/shareholder in the sample survey reveals that in the control group states (non-beneficiary states) a very high percentage of the investors were from the home state. The investor from the home state accounted for 90.0% in Punjab, 80.8% in Uttar Pradesh and 73.9% in Haryana. However, in the special category states the home state investors accounted for a comparatively much lower share with 30.8% in Himachal Pradesh, 51.3% in Uttarakhand and 67.5% in Jammu & Kashmir. Thus it can be inferred that due to the impact of package, the special category states have been successful in attracting industrial investors from other states. However, the survey data also highlights the fact that the industrial investments in special category states are coming from all over India and not just from the neighbouring states viz. Haryana, Punjab and Uttar Pradesh.

18. Almost 50% of the organisations reported difficulty in finding local employees. Greater percentage of respondents in the special category states (55.9%) reported difficulty in finding local employees as compared to 42.7% in case of the control group states. The condition of ensuring at least minimum employment to the bonafide residents in the special category states thus seems to be difficult to implement in reality. This condition is often violated by most of the industrial units, though on several occasions it was observed that firms often manipulate the employment data to show more employment of bonafide residents. There is hardly any enforcement mechanism regarding implementation of this condition. The reasons cited for non-employment of bonafide residents range from the official version of non-availability to lack of skills and training in the residents to the reluctance and inability to do hard work and high tendency of absenteeism. It is also feared that the local labour may indulge in unionism which will harm the business interests. There is a clear preference towards employing migrant labour from Bihar, Uttar Pradesh etc.

19. Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) has been successful in the rural areas in generating wage employment and also in raising the wage rates prevalent in the market. However, for the industrialists this has resulted in the problem of non-availability of labour and increase in the wage rates. The survey confirmed the general reports that most of the unskilled labour in Punjab, Haryana, Himachal Pradesh, Uttarakhand and Jammu &

Kashmir comes from Uttar Pradesh and Bihar. But the success of MGNREGS and the improved development scenario in Bihar and Uttar Pradesh were reported as the major cause of the scarcity of labour in these states leading to the reverse migration of the labour to their own native states.

20. The 33.8% of the respondents reported difficulty in finding unskilled labour. The ratio was almost around this average in both the special category as well as the control group states. Similarly 55.1% of the respondents reported difficulty in finding skilled workers. This difficulty was reported more in case of special category states with the ratio at 61.9% in contrast to 46.1% in case of the control group.

21. The mean annual percent turnover of the employees (i.e. the percent of employees who were changed during the last year) was estimated to be 25.49% with standard deviation of 37.363. This frequent change of employees reflects labour problem which has been recently aggravated due to less availability of migrant labour. The micro and small enterprises reported greater difficulty in finding suitable employees and admitted very low retention rates of their employees.

22. It was observed that several industrial units preferred to employ temporary workers through contractors and they usually did not maintain records of the employees working through contractors.

23. Only 24.2% of the survey respondents felt that the education received in our academic and technical institutions match with the needs of the industry while 32.9% felt that it only match partially. The education received in our academic and more importantly in technical institutions hardly matches their needs. It just facilitates the training that they impart to their employees. Moreover the industry is hardly involved in developing the curriculum in the industrial training institutes, which is very important for ensuring the success of package to special category states and for industrialisation in general.

24. Though most of the respondents reported that they train their workers but majority of the training was given on the job. This reflects the need for formal training at the level of the industries. Only 15.9% of the respondent organisations

reported having yearly training budget. Very few industries, mostly medium and large enterprises, have proper training policies and specific budgetary provisions for training. The 37.2% of the respondent organisations reported making regular training needs assessment. The industries must realise that they must be pro-active in development and up-gradation of the skills of their employees.

25. Only 19.3% of the industrial organisations in the survey reported investments in research and development.

26. It was found that the special category states had lower capacity utilisation at 67.17% with SD of 20.190 while the control group states had capacity utilisation at 77.81% with SD of 21.591.

27. Only 16.9% of the respondent organisation reported exporting their products. The percentage for special category states was only 14.4% in comparison to 20.2% for the control group states. This indicates that the package has not been able to make any impact on encouraging exports from the special category states. In fact there are no special incentives for exports from these states.

28. Only 24.2% of the respondents reported having considered any other state for industrial investment. The figure was higher in case of respondents from the special category states at 26.3% in comparison to 21.3% for the control group states.

29. The survey found that 70% of the total respondents were aware of the package to special category states. The ratio was greater for the special category states at 81.4% in comparison to 55.1% for the control group. Obviously this is on expected lines as the non-beneficiaries are comparatively less interested in what is offered in other states except the enterprising few who are willing to invest outside for better gains.

30. Most of the respondents' self-assessment of their understanding of the scheme was only fairly good reported by 32.9% of the respondents and only 29% reported it as 'very good'. Thus, there was lack of awareness and knowledge of the special package which reflects the failure of the concerned authorities to publicise the package to the industries. One can just imagine the level of awareness and knowledge of the special package among the common man in

these states (they could be potential entrepreneurs and investors) when even the entrepreneurs already operating industries in these states have such low level of awareness and knowledge about the package. However, the majority of the respondents in the special category states felt that the special package was not complex or hard to understand. Most of the respondents were of the opinion that the government officials dealing with the implementation of the special package had enough expertise and it was only to manipulate and harass the entrepreneurs to extract the maximum commissions that they sometimes feigned ignorance or confusions regarding interpretation of some provisions of the scheme. A substantial proportion of the firms not receiving the package incentives believe that the information on tax incentives is not adequately communicated to the business community. Perhaps the bureaucratic supremacy and unbridled corruption thrives on such ignorance.

31. Majority of the respondents (62.3%) felt that there is no opposition to the industries in their states. The ratio was 64.4% in the special category states while it was 59.6% in the control group. In the special category states the bureaucracy was more likely to oppose industrialisation. Perhaps this reflects the industrialists' frustration with the system and mechanism of implementation of the incentive schemes.

32. The 18.8% of the survey respondents reported the performance of their state in attracting industrial investment as above average, 42.5% as average and 38.6% as below average. Overall the assessment of industrialisation in the special category states was better than that of the control group states which is clearly attributable to the package to these states. The figures show that Himachal Pradesh and Jammu & Kashmir have not benefited to the extent expected by the industrialists from the special package. The outstanding performer has undoubtedly been Uttarakhand.

33. **SIDCUL – Made A Big Difference:** State Industrial and Infrastructure Development Corporation of Uttarakhand Ltd. (SIDCUL) has made a big difference to the industrial scenario in Uttarakhand and its success is largely responsible for overtaking its neighbouring hill state of Himachal Pradesh in industrialisation at a startling speed. The SIDUL has been highly successful in

attracting almost all the major industrial players from North India and several industries from all over India as well. The SIDCUL areas are at present managed very efficiently and it needs to be seen whether this excellent management is sustained in the future. This will determine whether these industries will retain their operations in the state after their incentive period of ten years is over or they will move over to other locations.

34. Only 44% of the respondents in the survey reported definite expansion plans. 29% of the respondents were unsure of expansion plans while another 27.1% of the respondents had no expansion plans. The uncertainty in the special category states at 28% may be attributed to the uncertainty regarding continuation of the special package.

35. Only 39.6% of the respondents were satisfied with the government's interface with the private sector which was greater in the special category states at 51.7% in comparison to only 23.6% in the control group states. This may perhaps be attributed to better administration in these states and also the incentive schemes for which awareness campaigns may be held by the government industry department.

36. Only 19.8% of the respondents reported that incentives were factored in investment's net present value calculations at inception of their factories. Significantly 48.8% of the respondents did not know whether these were included or not. 31.4% of the respondents admitted that investment's net present value calculations were not factored in the incentives. This reflects the reality that in case of micro and small units the project reports and NPV calculations are mostly done by some CA or the project reports are just duplicated/ copied from some other factory. The small investor is often unaware of the calculations made in the project report.

37. The data reveals that only 59.4% of the respondents reported that profits were up to their expectations in the last five years. The ratio at 66.1% in case of special category states was higher than 50.6% in case of the control group states. The higher ratio in special category states may indeed be attributed to the package to these states.

38. A very high percentage of respondents at 66.7% desired to be contacted by the government for making further investments. This high ratio was observed across all the states and across all the districts. This shows that private industrialists feel that the government must take proactive measures for encouraging industrial investments.

39. The 53.4% of the respondents in the special category states reported that they had applied for the incentives under the special package. It was perceived by some interviewees that there are many companies which know that they are technically eligible to receive the package incentives, but they do not apply for them, either because they are repelled by the application procedures, or are not sufficiently confident that they will actually obtain the incentives once they apply for them.

40. The survey in the special category states found that only 39.8 percent of the respondents actually received the incentives under the special package. Several respondents pointed out that their cases were pending with the department for fairly long time and that they have not even received any communication in this regard. It was argued that this undue bureaucratic delay in the sanction and disbursement of incentives often defeats the very purpose of these incentives and leaves the entrepreneurs frustrated. Some of the respondents informed that since their cases were rejected by the department, they have filed their cases in the high court.

41. Some firms believe that package incentives are not really important to them, and hence they are not interested in pursuing them. Their primary objective is to generate a profit, and often the profit in the first few years of operating is negative or negligible. As a consequence, the payable corporate income tax is inconsiderable, and consequently an income tax holiday holds relatively little attraction. Thus a tax exemption is of little utility, even before considering the costs to be incurred in obtaining the incentives. Further, in order to obtain the income tax incentives, they must expend time, effort and money on the application procedure, which may cost more than the total tax bill they should pay, even without the incentive.

42. Some firms also remarked that the package incentive regime is based on the 'application-approval' mechanism that is vulnerable to graft, and firms applying for package incentives are just like "beggars" who must pay for what they beg. There is a strong feeling that the incentives are managed in a subjective and inconsistent way by the unscrupulous government officials thereby trying to maximise their personal benefits. A very high percentage of the respondents at 53.3% supported this statement. Majority of the respondents (60.2%) supported the statement that the firms have to make undocumented extra payments or bribes for getting incentives. A large number of respondents (43.3%) supported the statement that the industrial organisations have to engage consultants/middlemen to receive the incentives of the package. This was especially true for the entrepreneurs who come from other states to the special category states and do not have any direct connections and links in the government departments. A number of CAs, lawyers, consultants etc. have been performing this so called liaison service for the industries and making fairly good money. Whether one attributes it to Anna effect or the frustration with the prevailing corruption, the respondents were very vocal in their resentment with the system. A large number of respondents named the various officials from several departments, both low level to high ranking officials, who openly demand bribes or commissions or speed money or chai-pani. The officials dealing with subsidies allegedly often asked for their share in the incentives which ranged even upto 50% of the value of the incentives. Most of the respondents argued that 10-15% commission in the incentives was normal and their cases moved only after these payments were made. It seems that despite more than 20 years of liberalisation the industry is yet to be freed from the shackles of bureaucracy and consequent corruption. The constraints presented by the bureaucratic inefficiencies within the system are the major reasons why investors failed to reach expectations. These increased overheads and associated costs and directly reduced investor returns. To a certain extent this is not new information to the government. However, it is yet another example of the investment environment being made less attractive by the actions of the government departments and therefore the responsibility of government itself.

43. A very large percentage of the respondents agree with the statement "Without Investment Incentives I would not have invested anywhere." 17.8% strongly agreed while another 32.2% agreed. The high affirmative response signifies that the investment in the special category states was induced exclusively or mainly by the investment incentives granted under the package.

44. A very large percentage of the respondents agree with the statement "The incentives influenced my decision as to where to invest." 39.8% of the respondents agreed and 21.2% of the respondents strongly agreed. It signifies that the location of the factory was influenced by the incentives thereby implying the success of the package to special category states.

45. More than 88% of the respondents in the special category states supported the statement that the incentives significantly increase firm's competitiveness – 46.6% agreed and 41.5% strongly agreed. This verified that the package to special category states was indeed attractive and increased firms' competitiveness.

46. In the special category states 49.1% of the respondents supported the statement "Investment location is simply my place of origin/residence." 18.6% of the respondents agreed and 30.5% strongly agreed. However, in contrast, 88.8% of the respondents in the control group states supported this statement – 37.1% agreed and 51.7% strongly agreed. The results highlight the fact that it is natural in the Indian traditions for any entrepreneur to favour his/her place of origin/ residence for making investments. Thus despite the modern and complex location theories and models, this natural preference still remains in large parts of India. The difference in the figures of special category and other states implies that a fairly large percentage of investors in the special category states have moved in from other states for making industrial investments.

47. The statement "The burden of compliance for availing industrial package incentives is very high" was supported hugely by 58.5% of the respondents. This signifies the fact that there are a lot of formalities and paper work for an industrial organisation to avail the benefits of the package incentives. However, it must also be remembered that despite so much formalities, a large number of illegitimate cases also manage to get these incentives. The formalities, though must be minimum to reduce compliance cost, these should have been fine-tuned to filter-

out unjustified and fake claims. There could have been greater use of e-governance in the management and implementation of the package incentives.

48. The statement "The special package has helped in the industrialisation of the state." received the highest support of 89% respondents. This highlights the fact that the package has been highly successful in inducing industrialisation in the special category states.

49. Majority of the respondents at 54.2% disagreed with the statement, "The special package has led to deterioration in environmental quality." There seems to be less conviction and more compulsion in their opinion on this statement as they were indeed expected not to oppose industrialisation by openly supporting the environmental cause.

50. Several MSME respondents have surprisingly reported that the large firms see small firms as rivals competing for the same limited market. Cooperation with other industrial enterprises is seen as inappropriate. A significant proportion of the respondents have reported absence of industry associations or lack of cooperation from the association if they existed.

51. This study has shown that the package to special category states has succeeded in stimulating new enterprises and in encouraging the growth of existing enterprises. The survey revealed that a significant proportion of the respondents intend to invest and expand production in near future. Thus the scope for industrial expansion is promising. The existing investors are a major source of new investments and play a major role in creating awareness about the investment opportunities in the special category states. In addition, existing investors with an investment performing above expectations are more likely to further expand the investment and more often expected to create additional jobs in the special category states. Thus, the expansion of existing production capacities is the most promising investment opportunity. However, it was reported that the government's industrial agencies preferred investments in Greenfield ventures.

52. **Distortions:** A very large number of respondents (56.7% in the special category states; and 71.9% in the control group states) supported the statement that some

of the firms benefit unfairly from incentives. Interestingly a very large percentage of the respondents opted for 'No Opinion' – 24.6% in the special category states and 20.2% in the control group states. Such high degree of support for this statement highlights the fact that there is indeed some misuse of these incentives. During the course of study, it was reported that the package has created certain distortions which may also be counter-productive. Certain existing companies deliberately establish new satellite business entities, rather than investing in expanding their existing business entity, specifically in order to maximise their exposure to fiscal incentives. The strategy of registering a new company, simply to replace an older firm that had its fiscal incentives expire, primarily in order to (quite legitimately) qualify for new incentives is highly prevalent. The very high figure of value added as percentage of output for special category states reveals the practice of booking the profits of one company that is not eligible for fiscal incentives through a company that does not enjoy the incentives, in order to reduce the overall amount of tax to be paid (so-called transfer pricing). The package incentives also favour new firms over more well-established firms of the same kind or in the same location, which also seems rather unfair. A new business registration is, after all, just a piece of paper, and attaching an incentive to it is entirely ex ante in approach, rather than ex post.

53. Within the administrative system, however, there were some positive indicators of success. Governments can take some satisfaction that the Single Window Clearance Authority (SWCA) in Himachal Pradesh is widely perceived to be of benefit to the industry and needs to be replicated in other states. However, even SWCA needs several reforms to make it more effective, and there is much more work to be done.

54. **Infrastructure:** Industries complained about the excessively high cost of transportation and poor quality of transport infrastructure and inadequate railway network. In some areas, the existing highway infrastructure has proved to be incapable of coping with the additional traffic. Elsewhere, a complete new road infrastructure had to be provided in order to open up the sites for development. In some cases, this resulted in substantial delays to the development, which eroded the value of the package incentive benefits. The high cost and reliability of electricity and other utilities are contributing to high operational cost and impeding

industrialisation and competitiveness. This would discourage investments.

55. **Importance of Critical Location Factors:** In terms of mean importance raw material was rated as the most important factor with the mean score of 4.25 out of the maximum possible score of 5. Incentives and tax structure (3.80) was rated as the second most important critical factor by the respondents followed by government attitude, human resources and market respectively. Surprisingly transport and utilities were rated much lower in terms of importance in the critical factors. Climate was given the least importance in industrial location decision making.

56. **Individual Location Factors:** During the analysis of the critical industrial location factors, a limitation of the aggregation and categorisation of a variety of 71 factors into only 14 critical factors was observed. Thus a separate analysis of all the 71 factors individually was also conducted and it was observed that the importance of the individual location factors differed from that reflected in the critical factors, which is the problem of any aggregation. The first and the third rank, out of a total of 71 location factors, in terms of importance of location factor was occupied by the availability of raw material (4.32) and closeness of the raw material (4.16) which is commensurate with the first rank in terms of aggregation in the critical factor occupied by the category 'raw materials'. The second rank in terms of importance was occupied by the availability of skilled labour (4.17). The fourth most important factor in the study was found to be availability and low cost of electric power (4.08). Banks were at fifth rank followed by the availability and quality of highways at the sixth rank. Availability of unskilled labour was ranked seventh in importance. Freedom from corruption was also highly rated by the respondents at eighth rank. Nearness to family (home proximity) is an important factor in all over India probably because of the influence of strong cultural factors and was ranked ninth out of 71 factors. The tenth most important factor was medical facilities. The above analysis implies that probably the factors that are not adequately available tend to be more important, such as the high importance of transport, power and other infrastructure.

57. **Redundancy Rate:** The study sought to generate an approximate 'redundancy' figure for the investments made by the firms in the sample that were receiving the fiscal incentives. Redundancy is when tax incentives are provided to a company to generate an investment, but the investment would have been made anyway,

even without the incentives offered. Such redundancies result in a windfall gain for the company concerned, and are effectively a subsidy by the government. Thus the redundancy rate was estimated to be quite high at 45.8% in the special category states.

58. **Principal Components Analysis (PCA):** The large number of industrial location factors made data analysis more difficult and complicated. The Principal Component Analysis is used to overcome this obstacle by grouping together variables that are highly correlated into principal components and as a result, bring a simplification to analysis. Thus the PCA technique was applied to the question concerning importance of location factors where data, derived from the use of Likert scales, was suited to data reduction. The rotated factor pattern shows that seven items displayed meaningful loadings for First Principal Component (PC1). These items are: social infrastructure, utilities, incentives and tax structure, government attitude, transportation, community and climate. The first Principal Component (PC1) accounts for 42.985% of the total variance in the data in terms of extraction sums of squared loadings (33.810% in terms of rotation sum of squared loadings). The First Principal Component (PC1) is labelled "Infrastructure and Investment Incentives". The Second Principal Component (PC2) displayed large loadings for four items viz. raw materials, markets, economic factors and industrial site. The second Principal Component (PC2) accounts for 12.815% of the total variance in the data in terms of extraction sums of squared loadings (18.319% in terms of rotation sum of squared loadings). The Second Principal Component (PC2) is labelled "Economic". The third Principal Component (PC3) displayed large loadings for two items viz. government regulations and political factors. The third Principal Component (PC3) accounts for 8.238% of the variance in the data in terms of extraction sums of squared loadings (11.908% in terms of rotation sums of squared loadings). The Third Principal Component (PC3) is labelled "Administrative and Political". The first three principal components together accounted for 64.038% of the total variance in the data.

59. **The Politics of Package:** The discretionary incentives lend themselves to political intervention. In India, a politics of package has emerged. A large number of critics have entered the political process to end or limit subsidies. The

existence of multiple critiques of incentives means that there has been scope for unusual alliances bridging the usual left/right divides. Given the political realities and competition for investment and job creation, it is impractical and idealistic to have voluntary agreement among states on the package to special category states. However, the study team believes that states need to shed the narrow regional agendas and work from national perspectives. Exceptional leadership is essential for achieving the professed national objectives.

LIMITATIONS OF THE STUDY:

There were five possible alternative methods of evaluating the impact of package of special category states viz. Econometric models; Surveys of people making location and investment decisions; Hypothetical firm models looking at the effect of spatial tax differentials on a firm's income; General equilibrium models; and Case studies of particular incentives. In the present study the survey method was used to test the influence of package incentives on industrial location. Consequently the validity of the present study findings is limited due to the methodology which relied heavily on the survey technique.

1. The sample size is relatively small in terms of representing all companies in these states. Moreover, the samples are not representative of the populations as the proportion of non-respondents is very high. Thus interpretation and generalisation of the results should be made with care.

2. At their best, surveys provide direct information about the actual location decisions made by executives. However, it is often difficult, if not impossible, to identify, find and interview the persons that were involved in all the steps of the decision making process of location selection, particularly in large firms and old firms. The persons may have left the firm or the senior management personnel may not be accessible for the survey. Consequently, the persons actually completing the questionnaire may give the highest ranking to the factors that they believe should be important rather than the factors that actually motivated the location decision.

3. In several cases more than one person was responsible for making the location choice. This situation would require that more than one person be identified and

participate in filling out the survey, a more costly and time-consuming task. However, the present study considered only a single response from each firm.

4. For location decisions made far in the past, the memory of what affected location choices has faded, and responses are guesses based on what is perceived to be important to the firm's current operation.

5. Another flaw is the information problem. After receiving the incentive, the firm is not in a situation where it has to decide what it would have done without the incentive, which is the question asked, usually a number of years later. The respondent may not have such information if he has never seriously considered the no-incentive option. His answer may be nothing more than an educated guess.

6. Answers to the survey questions may be influenced by a firm's desire to sway development policy in its favour. Firms may use surveys to lobby for lower tax rates or tax exemptions or for extension of the package incentives. Executives may have a direct interest in saying that incentives are important, even if they were not, and that the package biased their decision to choose the special category states over others.

7. The sample includes only those firms that did locate in the area under consideration. The capital of these established investors is already sunk into projects. Their ranking of the importance of different factors to their firms, given that they are already conducting business, may substantially differ from those of a potential investor. The latter has not committed any resources, may be unfamiliar with the location being considered, and has greater decision-making choice in considering an investment decision and evaluating competing locations.

8. While the survey ranks the importance of various locational factors, they do not provide a precise measure of the impact of each location factor. Moreover, the location factors are loosely defined.

9. The survey does not make a distinction between the locational problems of selecting a region and selecting a plant site.

10. The environmental consequences of investment incentives are unclear and

substantially under-researched. The frequency with which incentives have gone to projects harming the environment is not considered in the present study. Similarly there are reports that the fertile agricultural lands in plain areas of special category states have been diverted to industries causing economic hardships to the farmers and sometimes this is done even without adequate compensation to the farmers. This also requires further investigation.

11. Measuring the impact of the package on a local economy is rendered difficult by economic white noise – the other local factors that influence growth. Moreover, impact evaluations need to establish some sort of comparative control economy in order to measure the effect of incentives precisely. But choosing a control – in the best of the worlds, the control economy would be identical to the economy receiving the incentives, except that the control would not receive the incentive – is itself fraught with practical methodological and political difficulties.

CONCLUSIONS

During the course of the study the package for special category states has received both praise and criticism. Supporters firmly believe that new factories would not have been established in the special category states without the package incentives. The detractors, on the other hand, view the package as being too expensive in terms of the cost to the public purse of each new job created. Other critics focus on the relocation of industries from the neighbouring states. Whatever the problems or constraints, the package has made a positive contribution to the industrialisation in special category states. However, the sites should be capable of becoming high quality locations if the impact of the measures is to continue beyond the duration of the package. If this is not the case it is possible that, once benefits are no longer available, the industries in some locations will collapse to such an extent that the industrial plots and sheds will become unlettable or unsaleable.

The present study has provided insights into critical location factors that influence strategic decisions of firms in deciding to locate their manufacturing plants based on a sample study. Infrastructure has a positive crowding-in effect on industrial development. In fact, lack of cost-competitive infrastructure is one of the most critical factors constraining the competitiveness in special category states.

Our study tends to concur with other literature on the topic, which suggests that the effectiveness of these kinds of incentives is sub-optimal. The tax incentives are often not the most cost-effective, nor do they generate the greatest return for the economy, relative to the tax revenue foregone. In our sample, we found a high redundancy rate. However, this is not to argue that the package incentives should not be used to promote and favourably influence investment activity as a short-term palliative to alleviate market weaknesses. Rather, the package incentives need to be designed and implemented with care and in a manner that will ensure their positive impact will considerably exceed the costs and limit any potential negative side-effects.

It would be odd if the package incentives were found to be economically efficient when economic efficiency is not their only, or even their prime objective. The regional incentives should be judged primarily on the basis of the achievement of non-efficiency objectives, such as those promoting regional balance and fairness. The need for the government intervention stems from the failure of the market mechanism to equitably distribute the economic benefits amongst different regions of the country.

While the package could be well designed, it was often changed and implemented so inconsistently that it contributed to an unpredictable and risky business environment. Moreover, a complex cocktail of different and overlapping incentives can make the business environment appear unduly opaque, and therefore be counter-productive by increasing the degree of real and perceived risk. In addition, there is excessive government red-tape and long delays in provision of government services. These problems are often compounded by lack of clarity in laws and regulations. International best practices suggest that the package incentive regime should be designed as simply and clearly as possible. It should be rule-based and not reliant on discretionary decisions and its implementation should be equitable and transparent.

RECOMMENDATIONS

On the basis of the observations, findings and conclusions of the present study, the following recommendations have been proposed:

1. Providing good quality pre-investment services to investors is important. It is important to secure potential investors' trust at an early stage. Investment services and facilitation can help investors' fast-track implementation of their investment and ultimately contribute to the satisfaction level of the investor with the industrial location. The most important post-investment services and after-care that could help investors expand in the special category states once they are established mainly include incentive-related support, such as obtaining subsidies, duty exemptions and other fiscal incentives. Thus, there is need to set up a Single Window Clearance Authority (SWCA) in each state which perspective investors can approach for inquiries about investing in a state; at the same time – once they have decided to invest in a state – this Single Window can be the venue to obtain all the necessary approvals and documents, and undergo the necessary procedures for opening such business in the state. The image of the Single Window/ District Industries Centre and the Industry department as a helping hand rather an administrative clearinghouse must be developed and nurtured.

2. It is argued that the incentives have more effect on business decisions-making if they are paid sooner rather than later, in part because firms use large discount rates when factoring-in future benefits. Up-front subsidies may have more of an incentive effect, but are more vulnerable to rent-seeking by investors. It is suggested that incentives should be paid for performance as it occurs. It reduces rent-seeking and obviates the need to use clawbacks when commitments by investors are not fulfilled.

3. The government must draw up an explicit contract with a company receiving package incentives. The contracts must specify explicit goals and performance requirements that the investor must satisfy. This may include such factors as the number of employees that must be hired to receive the incentives, the wages and benefits that must be paid, etc. These particular requirements should not violate WTO agreements. The contract should also ban relocation of a facility for a

specified period of time as well as specify the date by which the company should have fulfilled its performance requirements. Monitoring and disclosure requirements must be built into the subsidy agreement. Penalties for breach of contract should be substantial, including claw-backs provisions that stipulate the return of incentives awarded if conditions are not met. Even better is for incentives to be back-loaded whenever possible – that is, subsidies should only be paid when a firm reaches its performance goals.

4. **Skill Development:** Concern was expressed by a number of respondents about the skill gap – skill shortages and skill mismatches. The local population may lack the skills required by employers moving into an area. However, given the high literacy and education in Himachal Pradesh and Uttarakhand, the local populations in these states are adaptable and ready to learn new skills. The firms on their part may sponsor either one or two centres or some students through fellowship in the technical institutes and get them trained according to their requirement. This may partially solve the problem of unavailability of technical manpower. It is suggested that more number of Industrial Training Institutes (ITIs) be opened and the course curriculum of ITIs should be redesigned and continuously updated to meet the changing requirement of the industry. Industry associations may be involved in developing course curriculum and in-plant training be made compulsory part of course curriculum. The stakeholders (government and the private sector) should develop a manpower needs plan. The plan should identify the current and future skill deficiencies in the state and should be used as the basis for developing training initiatives. Skill development and training are indeed an important component of ensuring the success of package incentives. Thus the package incentives should also include a budget aimed at developing the skill levels of the labour force.

5. **Good Governance:** Good governance is the most important factor facilitating investment into a state. One complaint disclosed in the interviews/surveys of entrepreneurs is the need to "pay" to get things done. Aside from the fact that it is a sad reality, this shows a glaring defect in how to conduct business in India. The perception of high levels of corruption in a state discourages investment. This is a fundamental issue that needs to be addressed by the government. The government needs to work on lowering the cost of doing business. Strategic

measures should be introduced to weed out corruption and bribery where they exist. More transparency should be brought in sanctioning and disbursement of the package incentives. At the same time steps should be taken to improve working conditions and remuneration of public service officials. Greater use of IT interface should be ensured thereby minimising chances of corruption and ensure time-bound settlement of claims and subsidies.

6. A simpler application procedure would also reduce the costs of implementing the incentives. Moreover, in the specific case of tax-related incentives, they can work effectively if the underlying tax regime itself is also relatively well-designed, administered and enforced.

7. **Resource Mapping:** The most critical element for any investment is the availability of the raw material resources. It is recommended that a full resource map in respect of special category states be developed to include minerals, forestry, fishery and agricultural resources. This resource map should be made available to all potential investors. The resource map should also be a primary component of the infrastructure plan and any market access opportunities.

8. **Research & Development:** The strengthening of the relationship between the private sector and research institutions should be pursued. The survey findings reveal that in general, the large firms do have funds to partake in R&D activities, with MSMEs in general excluded from R&D funding or lagging in technology transfer. Thus MSMEs should be granted preferential treatment in technology incentives and support which should be included in the package.

9. **Infrastructure Development:** Lack of adequate physical infrastructure like transport system, roads, ports, airports etc., adversely affect the competitiveness and productivity of industry. Uninterrupted power supply is a necessary condition for operation of the industries as power fluctuations lead to breakage of entire systems. Many of the respondents to the survey have shown their dissatisfaction with the existing availability and quality of infrastructure. It is important that the government should prepare a time bound plan to upgrade physical infrastructure to ensure long term competitiveness and sustained development of industries. Adoption of Private-Public-Partnership (PPP) model can facilitate faster and cost effective development of infrastructure. Grants or Soft loans on a significant scale

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may be provided to the Special Category States for integrated development of basic infrastructure. 'Infrastructure planning' at the national and local level should be integrated with urban or rural planning. Multi-sectoral collaboration, coordination with line agencies, stakeholders, and infrastructure facility providers is essential from the very early stage of planning.

10. The government should provide incentives for investors to develop the infrastructure associated with their production facilities including captive electricity generation and utilising non-conventional energy sources. Such incentives could be a grant or subsidy or tax exemption for a given time period.

11. The survey found that very few of the industries had pollution control and treatment facilities. Thus facilities for treatment of industrial effluent and emissions can be planned as part of the infrastructure network. Industrialists should then utilise the shared facilities for clean production and would not necessarily incur the high expenses of incorporating the expensive equipment in the project costs.

12. **Quality Standards and Certification:** Quality standards and systems are critical for ensuring the quality of industrial products. Government needs to promote implementation of standards and certification. Incentives may be given to small scale enterprises for getting quality system certification. Special cells at regional/state level need to be created that would work as facilitating centres for implementation of standards and getting certification.

13. The special category states should ensure that all industrialists have unhindered access to land. The necessary amendments in the relevant Acts must be made by the state governments.

14. There is need for regular government interface with industry as purely government initiatives could have unintended implications that could frustrate economic growth and industrial development. Governments, contrary to popular beliefs, very often lack the financial resources, the technical know-how and management/administrative capabilities to effectively address all the conditions necessary for industrialisation. The government has a responsibility to define policies in consultation with the key stakeholders of the economy. Efforts should

be made to address the specific concerns raised by firms about government implementation of policy, bureaucratic burden and uncertainty.

15. The traditional industries in the special category states should also be encouraged through the package. The melas/ exhibitions may be organised for the promotion of traditional industries like candle industry in Nainital (Uttarakhand) and the traditional handicrafts industry in Himachal Pradesh. The Ministry of Micro, Small & Medium Enterprises, Government of India, must establish more Development Centres in the special category states. The government must also build the necessary analysis capacity to be able to fill the information need of industries in special category states.

16. **Labour Reforms:** Despite lower real (productivity adjusted) wages received by contract workers, they cannot contribute much to the industry's long-term performance. Hence, labour reforms, aimed at more flexibility are widely considered among the industrialists as an essential step. This will encourage firms to employ and retain more permanent workers. This is also expected to increase overall employment in the industry through higher labour intensity.

17. Most of the factors that influence industrial development are under the domain of other line ministries. Therefore, the planning machinery at the state level may be strengthened with the coordination of the involved departments and agencies of the state governments.

18. The study reveals huge regional disparities in industrialisation in the special category states and that the positive impact of the package is restricted to a very narrow regional area mostly the areas bordering neighbouring states. Thus, it is recommended that the package incentives, if extended, must notify the interior areas of special category states for the benefits. Selecting the right location in special category states for industrial development is the most important if the industrialisation is to be sustainable beyond the lifetime of the initiative.

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