

# An Empirical Analysis of Special Industrial Incentive Package and Infrastructural Facilities in Himachal Pradesh

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## Abstract

*Industries in Himachal Pradesh are now producing from traditional to a wide spectrum of high –tech products like computer monitors, magnetic components, high quality precision components, tele-communication equipments, electronics, drugs and pharmaceuticals, processed food, textiles, and spinning products. The contribution of the industrial and manufacturing sector has increased significantly. In this backdrop, present paper, is an attempt to analyze the availability of infrastructural facilities apart from knowing the reason(s) for setting up industrial units in Himachal Pradesh. In the present paper, a sample of 131 industrial units has been selected from different industrial areas of the study state. In order to make the sample representative, proper weightage has been assigned to the units according to their size and product. Primary data is analyzed with the help of factor analysis (Principal Component Analysis) with varimax rotation. Extraction criterion used is Eigen value, should be greater than one.*

## 1.0 Introduction

Industrialization is a comparatively recent phenomenon in Himachal Pradesh. It gained momentum during the last two decades. Monetary and fiscal benefits as incentives and subsidies to industry, provided by the state as well as the central government, and the availability of quality infrastructure with basic amenities, have played a key role in the industrial development of the state. Industries in Himachal Pradesh are now producing from traditional to a wide spectrum of high –tech products like computer monitors, magnetic components, high quality precision components, tele-communication equipments, electronics, drugs and pharmaceuticals, processed food, textiles, and spinning products. The contribution of the industrial and manufacturing sector has increased significantly. In this backdrop, present paper, is an attempt to analyze the availability of infrastructural facilities apart from knowing the reason(s) for setting up industrial units in Himachal Pradesh.

## 2.0 Objectives and Methodology of the Study

Main objectives of the present paper are:

1. To critically evaluate the infrastructural facilities in industrial areas of Himachal Pradesh; and
2. to know the reason(s) for setting up industrial units in Himachal Pradesh.

## 2.1 Hypothesis

1. Poor infrastructural facilities especially transportation, roads and dwelling has escalated the production cost.
2. Industrialization has resulted into improved social infrastructure.
3. Poor power supply and frequent power cuts have affected production.
4. Industrial units have been set up due to special package of incentives.

## 2.2 Research Methodology

In the present paper, a sample of 131 industrial units has been selected from different industrial areas of the study state. In order to make the sample representative, proper weightage has been assigned to the units according to their size and product. Primary data is analyzed with the help of factor analysis (Principal Component Analysis) with varimax rotation. Extraction criterion used is Eigen value, should be greater than one.

## 3.0 Industrial Infrastructural Facilities

The importance of infrastructure for sustained economic development is well recognized and its role in fostering economic growth and enhancing public welfare is more pronounced in developing areas like the area under study. For the growth and development of industry, we require power, roads, transportation, communication, banking, insurance etc. Infrastructure plays an important role in the industrialization of any region. This section is an attempt to analyze the important industrial infrastructural facilities available in the area under study.

### 1. Availability of Adequate Infrastructural Facilities

Infrastructural facilities are a prerequisite to carry out the multifarious activities in any industrial area. There is lack of infrastructural facilities like: quality power supply, water supply, good schools, colleges, roads and other civic amenities. The opinion of respondents regarding adequate infrastructural facilities has been presented in *Table 1*. Majority of respondents either strongly disagrees (42.7 percent) or disagrees (16.0 percent) with the statement and feel that enough infrastructural facilities are not available in the area. The mean score of aggregate responses is 3.63 with negative skewness (-.493) and standard deviation of 1.42612 which indicates that the distribution of respondents is highly skewed towards higher side of the mean and reflects that a large number of respondents either disagree or strongly disagree with the statement. The objective of State Government was to provide good infrastructural facilities to industries but the responses indicate that it had miserably failed in

it. The value of kurtosis is -1.266 and chi-square is highly significant at 1 percent and 5 percent levels on 5-point scale. More than half of the respondents (58.7 percent) feel that adequate infrastructural facilities are not available.

### 2. Elevated Cost Attributable to Poor Infrastructure

Infrastructure is the backbone of industries and also tends to affect the cost of production.. Most of the industries are concentrated in Baddi, Barotiwala and Nalagarh area which is connected through NH 21A (Pinjooore-Manali) highway. Traveling on this road is both time and cost consuming. The state government is making all efforts to provide infrastructure facilities for the new industries being setup but that is inadequate. The perceptions of the respondents regarding high cost due to poor infrastructural facilities are presented in *Table 1*. Majority of respondents either strongly agree (45.8 percent) or agree (19.8 percent) with this statement. Mean score of 2 .18 and positive skewness of .828 strongly supports that responses are skewed towards either agree or strongly agree responses. Standard deviation of 1.36326 and negative value of kurtosis (-.634) also support the findings. Chi-square is also highly significant at 1 percent and 5 percent levels on 5-point scale. Hence, it can be summed up that respondents are not at all happy with the infrastructural facilities and feel that poor infrastructural facilities tend to increase the cost of production.

### 3. Improved Social Infrastructure

Social Infrastructure includes schools, colleges, technical institutes, hospitals, restaurants, hotels, parks, picnic spots etc. and plays a major role in development of an area. Industrial development of an area also affects the development of social infrastructure. The inflow of new industries has proved a booster for the demand of schools and colleges because of inflow of large number of workers and employees. As a result many hospitals, schools and colleges should have been opened. More than two third (67.9 percent) of the respondents feel that social infrastructure has really improved. The mean score of aggregate responses is 2.49 with positive skewness of .746 and standard deviation of 1.52767. Chi-square test of goodness of fit is highly significant. Statistical analysis reflects that the opinion of respondents is concentrated towards agree and strongly agree responses for the statement. Hence, Industrialisation has resulted in improvement of social infrastructure.

### 4. Transportation Facilities

Transportation creates place utility by carrying goods and services from one place to other place.

The transportation of commodities and services is an integral part of Industrialisation.. The perception of respondents regarding adequacy of transportation facility as exhibited in *Table 1 reveals that* two out of five (43.6 percent) respondents either disagree or strongly disagree with the state that there is adequacy of transportation facilities. Mean score of the

aggregate responses is 3.09 with negative skewness of -.044. The value of standard deviation is 1.48249 and kurtosis is -1.427. Chi-square is not significant. Statistical analysis supports that the response of target respondents largely falls between disagree and strongly disagreement scales. Thus it can be concluded that transportation facilities are poor.

**Table 1: Perceptions Regarding Quality of Infrastructural Facilities**

Particulars	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Mean	Std. Deviation	Skewness	Kurtosis	Chi-Square	P value
Availability of adequate Infrastructural facilities	11 (8.4%)	28 (21.4%)	15 (11.5%)	21 (16.0%)	56 (42.7%)	3.6336	1.42616	-.493	-1.266	48.656	.000
Higher cost due to poor infrastructural facilities	60 (45.8%)	26 (19.8%)	18 (13.7%)	15 (11.5%)	12 (9.2%)	2.1832	1.36326	.828	-.634	58.656	.000
Social Infrastructure i.e. hospitals, schools, colleges, etc have improved in the area after 2003	61 (46.6%)	28 (21.4%)	3 (2.3%)	20 (15.3%)	19 (14.5%)	2.2977	1.52767	.746	-1.066	70.336	.000
Adequate transportation facilities	25 (19.1%)	28 (21.4%)	21 (16.0%)	23 (17.6%)	34 (26.0%)	3.0992	1.48249	-.044	-1.427	3.924	.416
Adequate supply of power	21 (16.0%)	36 (27.5%)	17 (13.0%)	35 (26.7%)	22 (16.8%)	3.0076	1.36718	.004	-1.321	11.557	.021
Frequent Power cuts	31 (23.7%)	28 (21.4%)	25 (19.1%)	18 (13.7%)	29 (22.1%)	2.8931	1.47935	.158	-1.364	3.924	.416
Power cuts adversely affect the production	53 (40.5%)	26 (19.8%)	17 (13.0%)	19 (14.5%)	16 (12.2%)	2.3817	1.44360	.599	-1.070	36.595	.000

Source: Primary Probe

**5. Power Supply**

Most of the respondents in the survey have raised the issue of inadequate supply of power. There are frequent power cuts which adversely affect the production and increase its cost. Most of the respondents were of the view that it was very difficult to obtain electricity connection. Even the cost of such connection worked out by HPSEB employees is unreasonably high. The facts are strange as Himachal Pradesh has sufficient hydro power generation potential. Himachal is still power starved and has to purchase power form other states. In the present scenario it is but obvious that Government has failed in meeting the power requirement of industry. The opinion of respondents regarding adequate supply of power to their industrial units is exhibited in *Table 1*. Majority of respondents either disagree (26.7 percent) or strongly disagree (16.8 percent) with the statement. The aggregate mean score is 3.00 with skewness of .004 and value of standard deviation is 1.36718. Chi-square is significant at 5 percent level..

**Frequent Power Cuts:** The responses relating to the statement that power cuts are frequent as depicted in the table 1 reveals that 45.1 percent of the respondents either agree or strongly agree to

the statement that power cuts are frequent in the area under study followed by 43.5 percent of the respondents who either disagree or strongly disagree with this statement. The mean score of aggregate responses is 3.09 with skewness of .158, standard deviation of 1.47935 and kurtosis of -1.364. Value of chi-square is found to be insignificant. Statistical analysis depicts that responses are evenly distributed but concentrated more towards disagreement on five point scale.

**Power Cuts Affects Production:** *Table 1* evinces that three out of five (60.3 percent) respondents either agree or strongly agree with the statement that power cuts adversely affect the production of their industrial unit. The aggregate mean score of the responses for the statement is 2.38 with skewness of .599 and standard deviation of 1.44360. Chi-square is also highly significant at 1 percent and 5 percent levels. Thus, it can be concluded that industrialists are facing the problem of inadequate supply of power which has adversely affected their production. Though the situation of power cuts is not that severe but still it has adversely affected the production in most of the industrial units under study.

**3.1 Factor Analysis of Infrastructural Facilities :**

As indicated by *Table 2*, Kaiser-Meyer-Olkin Measure of Sampling Adequacy of the present study is significant. The

study under consideration significantly satisfies both the tests and supports the applicability of factor analysis in this situation.

**Table 2: KMO and Bartlett's Test**

Kaiser- Meyer –Olkin Measure of Sampling Adequacy.	.540
Bartlett's Test of Sphericity	Approx. Chi-Square 44.930
	df 21
	Sig. ....002

Table 3 reveals the factor pattern and summary of Principal Component Analysis of collected data. A common rule of thumb for dropping the least important factors from the analysis is the K1 rule. The Kaiser rule is to drop all components with Eigen values less than 1.0. For this data, two out of seven components have Eigen values greater than one and these will play the

main role in the analysis. Together they account for 41.347 per cent of variation of the original variables. The first component explains variance 22.76% and the second component has variance of 18.59 % of total variation.

Table 4 contains the rotated factor loadings which show correlations between the variable and the factors.

**The first factor** extracted was the combination of - improved Social Infrastructure, higher cost due to poor infrastructural facilities, adequate transportation facilities and availability of adequate Infrastructural facilities and may be interpreted as *“Adequately improved infrastructure facilities”*

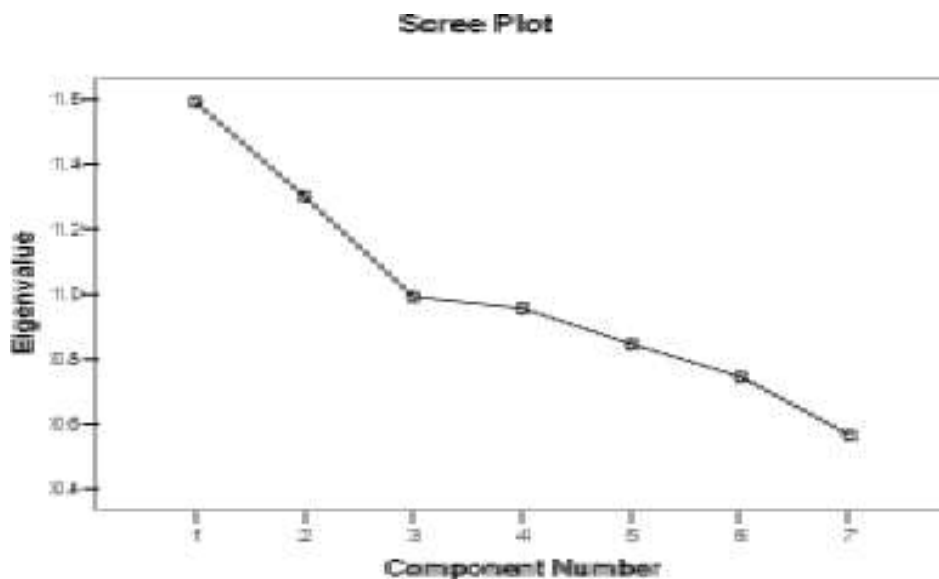
**The second factor** extorted was the combination of - frequent power cuts, adequate supply of power and power cuts adversely affect the production and may be interpreted as *“availability of power”*

**Table 3: Total Variance Explained for Infrastructural Facilities**

Component	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.593	22.756	22.756	1.593	22.756	22.756	1.583	22.610	22.610
2	1.301	18.591	41.347	1.301	18.591	41.347	1.312	18.737	41.347
3	.992	14.171	55.517						
4	.957	13.665	69.182						
5	.846	12.088	81.270						
6	.746	10.652	91.922						
7	.565	8.078	100.000						

**Extraction Method: Principal Component Analysis**

The Kaiser criterion stopped at 2 components, but some researchers might use the scree plot (Figure 1) criterion to stop at 4 or even 2.



**Table 4 : Rotated Component Matrix for Infrastructural Facilities**

Infrastructural facilities	Components	
	F1	F2
Improved Social Infrastructure	-.773	.207
Higher cost due to poor infrastructural facilities	.696	.078
Adequate transportation facilities	.498	-.001
Availability of adequate Infrastructural facilities	-.371	-.223
Frequent Power cuts	.101	-.726
Adequate power supply	-.030	.641
Power cuts adversely affect the production	.324	.525

*Extraction Method: Principal Component Analysis.*

*Rotation Method: Varimax with Kaiser Normalization.*

**4.0 Reasons for Setting up Industrial Units**

In present day scenario, when Himachal Pradesh is competing with other states, it should have become a preferred and favorable destination as it is viewed with assured quality governance and attractive physical environment. But on the other side the state is mountainous with poor infrastructural facility. In order to encourage investment in the state, Central Government granted Industrial Incentives Package in 2003 which proved to be the most important reason for Industrialists to locate their units in Himachal Pradesh.

**1. Due to Special Package of Incentives**

The main objective of the package was to attract industrial investment on massive scale so that employment avenues both in private and the Government sectors could be generated and economy of the State be strengthened. The opinions of respondents regarding setting up units in Himachal Pradesh due to the package of incentive and concessions extended to the state of Himachal Pradesh by Central Government on 7<sup>th</sup> January, 2003 has been shown in *Table 6.7*. More than four fifth (84 percent) of the respondents either agree or strongly agree with this fact that they have set up their units only because of package. Mean score of 1.69 with skewness of 1.85 and standard deviation of 1.07341 justifies that majority responses are concentrated towards agree and strongly agree responses. The value of kurtosis is 3.063 and Chi-square is highly significant at 1 percent and 5 percent level of significance.

Hence, the packages of incentives and concessions have boosted industrialization in the state. So, it can be concluded that package has succeeded in attracting investments towards the state.

**2. Attractive Investment Destination**

The opinion of respondents regarding selecting the location because of an attractive investment destination as presented in *Table 6.7* reveals that responses are evenly distributed between agree and disagreement but is more concentrated towards disagreement on five point scale. Nearly half (48.1 percent) of the respondents either disagree or strongly disagree with this statement followed by 36.6 percent of the respondents who either agree or strongly agree with the statement. The aggregate mean score of responses is 3.31 with negative skewness (-.218) and standard deviation of 1.56934. Chi-square is highly significant at 1 percent and 5 percent level of significance.

**3. Lack of Competition**

Views of the respondents regarding setting up their units in Himachal Pradesh due to lack of competition in the market reveal that. More than half of the respondents (53.7 percent) are of the view that they have not located their industrial unit in the state because of lack of competition in the area. The mean score of responses is 3.27 and are negatively skewed (-.343). The value of standard deviation is 1.50922 and Chi-square is significant at 5 percent level. Statistical analysis reveals that the responses fall between disagreement and strongly disagreement responses. Hence, it can be concluded that industrialist have not set up their units in the area under study due to lack of competition.

**4. Availability of Raw Material**

The views of the respondents for selecting the location due to availability of raw material in the area have been exhibited in *Table 6.7*. Two third (67.1%) of the respondents are of the view that they have not located their units in Himachal Pradesh because of the availability of raw material. The mean score of aggregate responses is 3.8168 with skewness of -.871 and standard deviation is 1.50922. Chi-square is highly significant at 1 percent and 5 percent levels of significance. Statistical analysis reveals that the agreement of respondents is towards disagreement. Hence ,availability of raw material was not the reason for setting up of industrial unit in the area under study.

**Table 5 : Perceptions for Setting up of Industrial Units in Himachal Pradesh**

Particulars	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Mean	Std. Deviation	Skewness	Kurtosis	Chi- P Square	value
Due to Special Package of Incentives	77 (58.8%)	33 (25.2%)	13 (9.9%)	0 (0.0%)	8 (6.1%)	1.6947	1.07341	1.850	3.063	90.405	.000
An attractive destination for investment	24 (18.3%)	24 (18.3%)	20 (15.3%)	13 (9.9%)	50 (38.2%)	3.3130	1.56934	-.218	-1.522	30.107	.000
Lack of competition in the market	27 (20.6%)	17 (13.0%)	17 (13.0%)	33 (25.2%)	37 (28.2%)	3.2748	1.50922	-.343	-1.355	12.702	.013
Availability of raw material in the area	17 (13.0%)	14 (10.7%)	12 (9.2%)	21 (16.0%)	67 (51.1%)	3.8168	1.47701	-.871	-.769	81.176	.000
Availability of cheap labour	5 (3.8%)	13 (9.9%)	21 (16.0%)	34 (26.0%)	58 (44.3%)	3.9695	1.16315	-.923	-.129	65.756	.000
Skilled labour is easily available	5 (3.8%)	24 (18.3%)	15 (11.5%)	32 (24.4%)	55 (42.0%)	3.8244	1.26175	-.689	-.858	55.069	.000
Unskilled labour is easily available	18 (13.7%)	10 (7.6%)	25 (19.1%)	36 (27.5%)	42 (32.1%)	3.5649	1.37057	-.666	-.740	25.832	.000
Own Land	20 (15.3%)	5 (3.8%)	18 (13.7%)	24 (18.3%)	64 (48.9%)	3.8168	1.46130	-.953	-.514	75.908	.000
Adequate Infrastructural Facilities	16 (12.2%)	5 (3.8%)	7 (5.3%)	18 (13.7%)	85 (64.9%)	4.1527	1.39490	-1.469	.641	169.725	.000
Proximity to the market	11 (8.4%)	7 (5.3%)	7 (5.3%)	17 (13.0%)	89 (67.9%)	4.2672	1.28197	-1.649	1.350	190.718	.000
Easy Availability of land	19 (14.5%)	29 (22.1%)	21 (16.0%)	34 (26.0%)	28 (21.4%)	3.1756	1.37830	-.160	-1.269	5.756	.218
Cost of land is comparatively less	20 (15.3%)	13 (9.9%)	13 (9.9%)	31 (23.7%)	54 (41.2%)	3.6565	1.47685	-.741	-.915	45.145	.000

Source: Primary Probe

##### 5. Availability of Cheap Labour

The labour cost is an important element of the production cost and significantly affects the profitability of an industrial enterprise. The summarized responses corresponding to the statement that cheap labour was the reason for setting up the industrial unit as presented in **Table 5**, reveals an overall mean score of 3.96 which indicates that majority of respondents either disagree or strongly disagree with the statement. Two third (70.3%) of respondents have shown their disagreement with the statement. High negative value of skewness (-.923) is also indicating that the responses are concentrated towards disagreement and strongly disagreement responses. Chi-square is highly significant at 1 and 5 percent levels of significance. So, availability of cheap labour has not been found the reason for setting up the units in Himachal Pradesh.

##### 6. Availability of Skilled Manpower

The perception of respondents regarding availability of skilled labour being a reason for setting up the unit is presented in **Table 5**. The mean score of aggregate responses is 3.82 with negative skewness of -.686 and standard deviation of 1.26175. Chi-square has been found to be highly

significant at 1 and 5 percent levels of significance. It is clear from the statistical analysis that majority responses fall between disagree and strongly disagree scales, as two third (66.4%) of the respondents are of the view that skilled labour is not easily available in the area. Hence, availability of skilled manpower has not been the reason for setting up units in the State under study.

##### 7. Availability of Unskilled Labour

The opinion of the respondents regarding the availability of unskilled labour reveals that three-fifth (59.6 percent) of the respondents either disagrees or strongly disagrees with this statement. The mean of responses is 3.56 with negative skewness .666 and standard deviation of 1.37057. Chi-square is highly significant at 1 and 5 percent levels of significance. It is clear from the statistical analysis that the responses are concentrated towards disagree and strongly disagree. Hence, it can be inferred that availability of unskilled labour could not be the reason for setting up of industrial unit in the state.

##### 8. Own Land

Land is the most important input cost in any kind of industry. Nearly seven out ten respondents (67.2

percent) either disagreed or strongly disagreed with the statement that they had their own land for industrial unit. Mean score of 3.81 with negative skewness of -.953 and standard deviation of 1.26175 supports that the majority responses fall between disagree and strongly disagree.. Statistical analysis reveals that vast majority of the industrialists have purchased land for establishing of their industrial units, hence own land has not been found the reason for setting up industrial units.

**9. Adequate Infrastructural Facilities**

Four out of five (78.6 percent) respondents either disagree or strongly disagree with the statement of setting up units due to adequate infrastructural facilities. The mean score of the responses is 4.15 with negative skewness of -1.46. The value of standard deviation is 1.39490 and of kurtosis is .641. Chi-square is highly significant at 1 and 5 percent levels of significance. So, it can be concluded that large number of respondents either disagree or strongly disagree with the statement that adequate infrastructural facilities have not been the reason for setting up the units in the study area.

**10. Proximity to the Market**

The opinion of respondents for the statement that nearness of the market was the reason for setting up the unit. More than four fifth (80.9 percent) of the respondents either disagree or strongly disagree with this statement. The mean score of 4.26 of overall responses depicts that the responses are concentrated towards disagree and strongly disagree responses which is further supported by high negative value of skewness (-1.64). The value of standard deviation is 1.26175.. Therefore it can be inferred that proximity of the market has not been the reason for establishment of industrial units in Himachal Pradesh.

**11. Easy Available Land**

The state Government has earmarked industrial areas and acquired private as well as Government land for selling the same in plots to industrialists. There has been an inordinate delay because of red tapeism for obtaining permission u/s 118 of Himachal Pradesh Land Reforms and Tenancy Act. The views of respondents regarding easy availability of land as the reason for setting up the unit in the area reveals that responses are evenly distributed among agree and disagree responses but are more concentrated towards disagreement response. Nearly half (47.4 percent) of the respondents either disagree or strongly disagree with this statement. Negative skewness value of -.160 and mean of 3.17 supports the concentrations

of responses towards disagreement and strongly disagree on five point scale. Hence it can be concluded that land is not easily available in the area under study.

**12. Low Cost of Land**

Very small percentage (23.7 percent) of respondents either agrees or strongly agrees with the statement that they set up their unit because they had their own land. The cost of land offered to industrialists in the beginning was reasonable. After 2003, within 2-3 years, prices multiplied as open market rates were artificially manipulated and inflated by the real estate dealers. This gave wrong signals to industrialists and some of them diverted their investments to other states offering same incentives. The perception of respondents corresponding to this statement is presented in *Table 5 reveals that* more than two third (64.9 percent) of the respondents strongly disagreed or disagreed with the statement that cost of land is comparatively lower for setting up the unit in the area. The mean score of aggregate responses is 3.65 with negative skewness of -.741 and value of standard deviation is 1.47685. Chi-square is highly significant at 1 and 5 percent levels of significance. Statistical analysis depicts that the low prices of land was not the reason for setting up of industrial units in the area.

**4.1 Factor Analysis of Reasons For Setting Up The Unit**

As indicated by Table 6, Kaiser-Meyer-Olkin Measure of Sampling Adequacy of the present study is significant. The study under concern significantly satisfies both the tests

**Table 6: KMO and Bartlett's Test**

Kaiser- Meyer –Olkin Measure of Sampling Adequacy.	.611
Bartlett's Test of Sphericity	Approx. Chi-Square 317.946
	df 91
	Sig.....000

In this part of study which deals with reasons for setting up of unit In Himachal Pradesh, the factor analysis is best working for the factor that “Lack of competition in the market” and it is least working for the factor “Adequate Infrastructural Facilities”

Since it was difficult to visualize fourteen variables, Principal Component Analysis was used for the data reduction. The Kaiser rule is used to drop components which say that drop all values with Eigen values under 1.0. For this data, five out of fourteen components have Eigen values greater than one and these will play the main role in the analysis. Together they account for (Table 7) 61.483 per cent of variance of the original variables.

The first component explains variance of 17.52 percent of total variation, second component explains variance of

14.68 percent of total variation, third component explains variance of 112.03 percent of total variation, fourth component explains variance of 8.68 percent and the fifth component explains variance of 8.55 percent of total variation.

**Table 7: Total Variance Explained Reasons for Setting up of Unit In Himachal Pradesh**

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	2.453	17.521	17.521	2.453	17.521	17.521	2.132	15.231	15.231
2	2.056	14.684	32.205	2.056	14.684	32.205	1.985	14.177	29.408
3	1.685	12.036	44.241	1.685	12.036	44.241	1.670	11.927	41.336
4	1.215	8.682	52.923	1.215	8.682	52.923	1.437	10.266	51.602
5	1.198	8.559	61.483	1.198	8.559	61.483	1.383	9.881	61.483
6	.978	6.983	68.466						
7	.794	5.672	74.138						
8	.682	4.872	79.010						
9	.644	4.602	83.612						
10	.582	4.159	87.771						
11	.521	3.722	91.493						
12	.471	3.361	94.854						
13	.387	2.766	97.619						
14	.333	2.381	100.000						

Extraction Method: Principal Component Analysis.

**Secree Plot**

The Kaiser criterion stopped at 5 components, but some researchers might use the scree plot criterion to stop at 4 or even 7.

**Figure 2: Secree Plot**

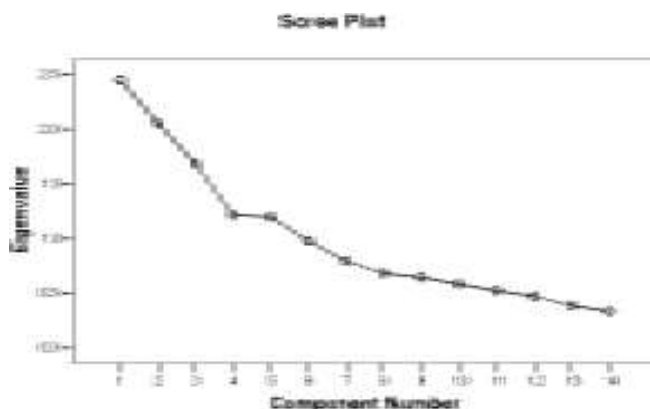


Table 8 contains the rotated factor loadings which are correlations between the variable and the factors. Because they are correlations, possible values range from -1 to +1. **The first factor** extracted was the combination of Skilled

labour is easily available, Availability of cheap labour and Unskilled labour is easily available.

**The second factor** extracted was the combination of Own Land, (Adequate Infrastructural Facilities and Cost of land is comparatively lower than other suited parts of the country.

**The third factor** signifies the combination of You are regretting on your decision of establishing the industrial unit in this area, Nearness of the market and Nearness of residence of the owner.

**The fourth factor** indicates the blend of Lack of competition in the market and Availability of raw material in the area.

**The fifth factor** extracted was a combination of Due to Special Package of Incentives, An attractive destination for investment and Easy Availability of land.

**Table 8 : Rotated Component Matrix for Setting up of Unit in Himachal Pradesh**

Particulars	Components				
	1	2	3	4	5
Skilled labour is easily available	.775	.085	-.002	.083	.097
Availability of cheap labour	.757	-.005	.111	-.167	.214



Unskilled labour is easily available	.596	.137	-.001	.194	-.070
Own Land	-.583	.050	.104	.024	.502
Adequate Infrastructural Facilities	.415	-.046	-.086	.024	-.344
Low cost of land	.015	.834	-.137	.022	.086
Regretting decision of setting up unit in Himachal	-.083	-.681	.290	.176	.311
Nearness of residence of the owner	.111	.642	.182	.043	.111
Nearness of the market	-.068	.585	.035	.174	.530
Lack of competition in the market	-.102	.023	.859	-.002	-.164
Availability of raw material in the area	-.121	.080	-.751	.198	-.038
Due to Special Package of Incentives	-.039	.091	-.030	-.866	.044
An attractive destination for investment	.104	.157	-.368	.710	.031
<u>Easy Availability of land</u>	<u>-.174</u>	<u>-.034</u>	<u>.254</u>	<u>.091</u>	<u>-.724</u>

**Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.**

The first factor may be interpreted as “easy availability of labour”. The second factor may be termed as “accessible land”, the third as “nearness of factors of production”, the fourth as “low competition and available raw material” and the fifth as “attributable to industrial incentives package” Thus, fourteen factors regarding location were classified into five basic factors by applying the factor analysis technique of multivariate analysis.

**5.0 Conclusion**

Infrastructural facilities like power, roads, transportation, communication, banking and insurance are the contributing factors in the development and growth of industries as well as overall development of the area. These facilities are pre-requisites for setting up the industries. The study reveals that the industrial areas under study in Himachal Pradesh lack uninterrupted power and water supply, high quality social infrastructure, roads and other civic amenities. Though Industrialisation has boosted the social sector as many hospitals, educational institutions have come up in the study area, but still more need to be done. Due to bad shape of roads, industrialists as well as transporters are hesitant to come to this place. Similarly, majority of the industrialists are facing the problem of frequent power supply cut. Despite of these hindrances, industrialists are setting up their units in Himachal Pradesh in order to reap the benefits of industrial incentive package. All the sample selected industrialists have put forth the availability of industrial incentive package in the state only reason for setting up their units. One needs to keep the fingers across that what will happen after the expiry of industrial incentive package in Himachal Pradesh.

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