Impact of Industrialisation on Socio-Economic Development of Himachal Pradesh

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Abstract: Since industrialization is crucial to socioeconomic growth, it is seen as the foundation of both developed and developing nations. In Himachal Pradesh, special incentives and packages are occasionally provided to encourage business development and mould the industrial infrastructure. Around 16% of the state's GDP is contributed by the pharmaceutical, horticulture, agro, food/fruit processing, textile, tourism, light engineering, cement, hydro-energy, and other industries. The goal of the current study is to investigate how industrialization has impacted Himachal Pradesh's socioeconomic development. For this objective, 27 variables related to the socio-economic effects of industrialization were rated on a five-point scale and then subjected to descriptive statistical analysis and factor analysis. Eight significant components were found by factor analysis among the twenty-seven variables, including self-sustaining development, umbrella benefits, commuting factor, structural change, facilitators, professionalism, convenience, and equipment development. The investigation showed that industrialization, by encouraging self-sufficiency, plays a significant influence in socioeconomic advancement. An upgraded infrastructure, a steady supply of consumer and intermediate goods, industrial goods, and public amenities could serve as proof of this. Additionally, as a sector of an economy grew, complex equipment was adopted not just by major farmers but also by small farmers and businesses.

Key Words: Socio-economic growth, Self-sustaining development, Umbrella benefits, Industrialisation.

1.INTRODUCTION

Both developed and emerging economies are seen to be supported by industrialization. The main force behind social development and riches is industrialization. Job creation and improved ties between the industrial and service sectors, as well as between rural and urban economies and the consumer, intermediate, and capital goods industries, are two benefits of industrial expansion.[1] The economic prosperity of undeveloped, developing, and industrialised nations depends on industrial progress. Early industrialization took place in Europe and North America throughout the 18th and 19th centuries, and later in other parts of the world. The breakthroughs of the nineteenth century enabled the mass manufacture of consumer goods, and the ensuing manufacturing activities facilitated the growth of the banking, communications, and transportation industries. In the latter half of the 20th century, industrialization spread rapidly to other parts of the world, notably Asia. The Industrial Revolution brought about unprecedented rise in wealth and financial well-being. An expanded middle class emerged as a result of rising consumer demand for new goods and services and an increase in the number of businesses created to provide it.

In the case of India, industrialization may be divided into two periods: 1947–1980, during which the government steadily increased its control over various economic sectors, and 1980–1997, during which very few measures of liberalisation were put into place. After 1991, the liberalisation process was concentrated and underwent a significant change in personality. Throughout the post-independence era, systematic industrial planning carried out under several five-year plans contributed to the construction of a significant number of heavy and medium firms. The industrial strategy's primary goals were to diversify the economy and address regional imbalances.[3]

The majority of the economic activity of Himachal Pradesh is concentrated on the agricultural, horticultural, and associated industries. Unique incentives and packages are occasionally provided to support entrepreneurs and mould the industrial infrastructure. Various industries, including those in the pharmaceutical, horticultural, agro, food/fruit processing, textile, tourism, light engineering, cement, and hydro-energy sectors, account for around 16

percent of the state's GDP. The most recent knowledge-based businesses, such as biotechnology, electronics, and information technology, also have a tonne of space for expansion. In the context of Himachal Pradesh's industrialization, MSMEs are also seen as being synonymous with industrialization. As of March 31, 2020, there were 56,968 SSIs and big and medium-sized firms registered, with a total investment of Rs. 56104.63 crore and 4, 71, 445 employees.[4]

Numerous studies have been conducted by experts to examine the various facets of India's industrialization. While Neves (2022) observed that the changes in the local economic system are likely to be generally positive in comparison to the time before the installation and operation of Açu (PIC), they may also be causing a greater reliance on external and large-scale economic scenarios as well as the growth of trade and human services with little to no positive effects on the local population, who are historically rural and agricultural. According to Ahmed et al. (2022), environmental degradation has been the main cause of industrialization's worry in recent years because of the severe effects of climate change. According to LI Yong (2022), the COVID-19 pandemic has a large but asymmetric effect on manufacturing enterprises. The socio-economic impact of the pandemic has varied widely between regions and nations, suggesting profound underlying inequalities in their resistance to severe occurrences. Small and medium-sized businesses have been disproportionately impacted by the shock when compared to large businesses. Elfaki, et al. (2021) discovered that, over the long term, financial development and industrialisation (as shown by domestic lending to the private sector) had a favourable impact on economic growth. Money supply and financial development both have a detrimental effect on economic growth. Additionally, trade openness has a detrimental effect on economic expansion. Economic development has been proven to be positively correlated with energy usage. In his analysis, Kapparashetty (2020) described how the lockout significantly impacted the industrial sector, which contributes close to 20% of GDP. The author came to the final conclusion that with more than half of the world's population under lockdown and nations fighting to control the rapidly escalating health crisis, the pandemic's economic effects are starting to show up in the form of muted growth projections and

unemployment levels not seen since World War II. After decades of suffering from a lack of enthusiasm in achieving industrial growth and social security, Trabulsi (2019) discovered that economic and social problems in the Arab nations might be solved via the development of industry. According to Panda (2018), following the agricultural sector, Micro, Small, and Medium Enterprises (MSME) offer a wide range of opportunities for self-employment as well as employment and contribute significantly to overall industrial activity in our nation. According to Nahata & Hashim (2017), both the central and state governments must launch sustained and ongoing EoDB activities in order to achieve the goals of "Make in India." Sutikno (2017) made the point that although Gresik's industrialization has benefited those living nearby, it has not yet had a substantial influence on the community there. Singh and Bhagat (2015) noted that changes in unemployment and poverty levels, for example, are the combined effects of a variety of factors, with globalisation playing a major role. They also noted that macro-level country characteristics and specific state-level variables have an impact on the quality of life both directly and indirectly through development processes. According to Chaudhuri (2015), foreign capital did not take advantage of liberalisation to create businesses dependent on imports; as a result, demand-pull strategies must be combined with other government programmes like funding accessibility and technical improvement. According to Audi and Mohammed (2014), inadequate government policies, inadequate funding, subpar infrastructure, and a lack of money are the main causes of Nigeria's regressive industrialisation. According to Chaudhuri (2013), the government may aid in the growth of IT-related businesses, which are now reliant on imports, by regulating MNCs and encouraging domestic initiatives. According to Kusena (2012), industrialization disrupts socio-cultural norms since its activities obstruct sacred sites, promote immortality, and bring forth new diseases.

Similar to Vasudeva (2011), who noted that Himachal Pradesh's industrial strategy needs to embrace a strategic, market-driven, people-centered approach to bamboo production and usage. According to Premakumara (2008), economic development is directly impacted by infrastructural development. However, in order to support economic growth in Karnataka, the expansion of the electricity industry

must be given significant priority. According to research provided by Kamalakannan (2006), rural industrialization is crucial for the growth of both agriculture and urban industries, as well as for creating low-cost job options in rural regions and increasing peoples' actual incomes. Singh (2006) backed up the idea that tiny and micro businesses couldn't continue for lack of market backing. Therefore, a proper institutional market mechanism for the goods produced by these businesses has to be created. Bheemappa (2002) investigated how the creation and use of different technologies for rural industrialisation would differ depending on the product, the rate at which skill requirements were recovered, the economics of scale, etc. According to the study's findings, rural craftsmen need to be organised and given updated technology based on their current instruments and expertise.

It has been observed from surveyed literature that quite substantial work has been done on problem and prospectus of industrialization, institutional linkage for micro enterprises development, financial problems, rural industrialization, innovation in industrialization etc. but there is lack of study to extract out the socio-economic and environmental issues and challenges of industrialisation with regard to a hilly state like Himachal Pradesh. Hence, the present study will take a note of the above observations, therefore an attempt has been made to study the socio-economic impact of industrialization in Himachal Pradesh. Hence, pertaining to the research gap following objectives have been framed to reach at findings and conclusions:

- To examine the perspectives of many stakeholders on the socio-economic effects of industrialization in Himachal Pradesh.

- T draws attention to the numerous issues that dealt with industrialization in Himachal Pradesh.

2. METHODOLOY

The primary goal of the current study was to examine "Industrialization and its Impact on Socio-Economic Development of Himachal Pradesh." The current study's focus is only the state of Himachal Pradesh, including the sample districts of Solan, Sirmour and Kangra. A sample of 600 respondents, drawn from these three districts using a combination of random and non-random sampling (Table-1), where each district was constructed as one stratum and the state's whole geographic region was split into twelve strata at stage 1. Purposive sampling was used to choose three districts Solan, Sirmour and Kangra, from among these twelve strata because they had the greatest concentration of large, medium and small scale enterprises; At stage 2, two industrial zones with a sufficient number of businesses have been chosen from each district that was initially chosen. Thus, six administrative blocks—Dharampur, Nalagarh, Paonta Sahib, Nahan, Indora and Nagrota Bagwan were chosen from these three sampled districts; in stage 3, two industrial areas from each administrative block were chosen based on which had the highest proportion of industries. 100 responders were therefore picked from each of the identified industrial zones. People living in the adjacent villages of the industrial region make up the majority of these respondents, and at stage 4, convenience sampling was used to capture the replies of 50 respondents from each chosen industrial area. 600 responders in all were chosen as a result. Equal representation was given while choosing respondents to ensure that the sample was representative while taking into account their demographics.

Table-1: Selection of Sample

Sr. No.	District	Block	Industrial Area	No. of Respondents
1.	Solan	Dharampur	1st Area	50
			2nd Area	50
		Nalagarh	1st Area	50
			2nd Area	50
2.	Sirmour	Paonta Sahib	1st Area	50
			2nd Area	50
		Nahan	1st Area	50
			2nd Area	50
3.	Kangra	Indora	1st Area	50
			2nd Area	50

			1st Area	50
		Nagrota Bagwan	2nd Area	50
Total	3	6	12	600

Note: - Data collected through questionnaire.

Both primary and secondary sources have been used to assemble the necessary data. Secondary data was gathered from published and unpublished documents from Himachal Pradesh Directorate of Industries, Directorate of Economics and Statistics, Directorate of Planning, the Directorate of Animal Husbandry, Directorate of Land Reforms, Directorate of Horticulture, and other departments. A well-designed schedule with a number of questions about socioeconomic development and challenges of industrialization in the state was used to personally gather the respondents' primary data. The sample consists of respondents having different socio-economic characteristics. (Table-2)

Table-2: Socio-Economic Profile of the Respondents

Gender	Frequency	Percentage
Male	352	58.7
Female	248	41.3
Total	600	100.0
Age		
Below 25 Years	149	24.8
26 to 40 Years	240	40.0
41-60 Years	145	24.2
Above 60 Years	66	11.0
Total	600	100.0
Educational Qualification		
Illiterate	23	3.8
Below Matric	74	12.3
Secondary	169	28.2
Graduate	229	38.2
Above Graduation	105	17.5
Total	600	100.0
Residential Background		
Rural	314	52.3
Urban	231	38.5
Semi-Urban	55	9.2
Total	600	100.0

Note: - Data collected through questionnaire.

A pilot study was conducted to assess the validity and reliability of the research instrument's schedule, as well as to look for any potential flaws. Cronbach's Alpha, KMO, and Bartlett's Examine were used to test the instrument's reliability, sample suitability, and sphericity on 75 respondents. (Tables 3 and 4) In order to confirm the validity of the study's findings, the internal reliability of the results was examined using Cronbach's Alpha as part of the data analysis. Cronbach's Alpha, in other words, aids in determining whether or not respondents' scores on one barometer are correlated with their scores on the other. The dependability and internal consistency of a set of variables that have been combined to create a single scale are measured by Cronbach's Alpha.

Table-3: Reliability Statistics

Cronbach's Alpha	No. of Items
0.878	27

Source: Data collected through questionnaire.

Table-4: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.831
Bartlett's Test of Sphericity	Approx. Chi-Square	7196.919
	Df	351
	Sig.	0.000

Note: - Data collected through questionnaire.

The range of Cronbach's Alpha values is 0 to 1, with a value of 0 signifying no internal reliability and a value of 1 signifying complete internal reliability. According to the findings, the questionnaire generally has a high level of reliability, as evidenced by its Cronbach's Alpha score of .878, which is higher than the permitted bottom limit of 0.70. The KMO sample adequacy statistic shows how much of the variance in our variables may be a common variance. A score of 0.831 for the KMO indicator suggests that factor analysis is suitable. Based on this number, it can be concluded that 83.10 percent of the sample contains no errors, while the remaining 16.90 percent of the sample contains errors with a chance of occurrence. The variables are suitable for further analysis since Bartlett's Test of Sphericity's significance value is 0.000. These two tests verified the validity and reliability of the variables used in statistical analysis. To arrive at findings and conclusions, the statistical and mathematical tools percentage, arithmetic mean, standard deviation, and factor analysis were employed.

3. RESULTS

With the aid of twenty seven factors, which were rated on a five-point scale of (5) Strongly Agree, (4) Agree, (3) Neutral, (2) Disagree, and (1) Strongly Disagree, socio-economic effects of industrialization have been examined. Descriptive statistical methods and factor analysis have been used to analyse the responses provided by respondents in order to pinpoint the key elements that best illustrate how industrialisation has affected the socioeconomic well-being of people in Himachal Pradesh. The complete outcomes of the analysis are shown as follows: -

3.1 Factor Analysis

To examine the socioeconomic effects of industrialization in Himachal Pradesh, factor analysis has been used. The assertions about the socioeconomic effects of industrialization are among the items included in the factor analysis. On a five point Likert scale (with 1 denoting very little agreement and 5 denoting very great agreement), the targeted respondents were asked to rate their degree of agreement with each statement about perceived socioeconomic concerns and obstacles. Its goal was to locate underlying crucial elements that correlated with a group of measured variables. Communalities are shown in Table 5 as a crucial component of factor analysis. Communalities indicate the amount of variance in each variable that is accounted for. Initial communalities are estimates of the variance in each variable accounted for by all components or factors. The communality measures the percentage of variance in a given variable which is explained by all the factors jointly and may be interpreted as the reliability of the indicator.

Table-5: Communalities

Sr. No.	Statements	Initial	Extraction
1	Industrialization provide guidelines for modernization in infrastructure	1.000	0.698
2	Road services	1.000	0.614
3	Transport services	1.000	0.730
4	Railway lines development	1.000	0.825
5	Airlines services	1.000	0.843
6	Mobile, postage, telephone	1.000	0.571
7	Urbanization development	1.000	0.695
8	Insurance services	1.000	0.687
9	Hospital, P.H.C, C.H.C, medical shops	1.000	0.615
10	Professional and technical institution	1.000	0.629
11	Private houses, Govt. accommodations, Govt. buildings	1.000	0.594
12	Parking services	1.000	0.627
13	Hotels and Restaurants	1.000	0.680
14	Parks and picnic spots	1.000	0.673
15	Shopping malls	1.000	0.701
16	Consumers and industrial goods	1.000	0.697
17	Capital and intermediary goods	1.000	0.737
18	Industrialization is helpful for developing agriculture sector	1.000	0.582
19	Increases consumption of local agricultural crops	1.000	0.745
20	Establishment of agro based industries and people using local agricultural products	1.000	0.725
21	Commercial crops which increase agricultural income and better marketing facilities	1.000	0.706
22	Farmers get fair prices for their crops	1.000	0.588

23	Farmers using modern cultivation techniques	1.000	0.781
24	Irrigation facility developed that increased cropping intensity	1.000	0.609
25	Agricultural productivity increased after industrial development	1.000	0.763
26	Disguised unemployment reduced in the agriculture sector	1.000	0.603
27	Occupational shift like agriculture to industry/services	1.000	0.639

Note: - Data collected through questionnaire.

Table-6 explains the variance in terms of eigenvalues. Eigenvalues represent the total amount of variance that can be explained by a given principal component. Eigenvalues are also used to condense the variance in a correlation matrix. The factor with the largest eigenvalue has the most variance and so on. Factors having a low eigenvalue contribute little to the explanation of variances in the variables and may be ignored as redundant with more important factors. As shown in below Table-6, eight factors have been extracted from all the twenty seven variables that are impacting socio-

economic life of people after industrialization. These eight components have Eigen values larger than one and account for 67.989 percent of the total variance. The table also shows that the first to sixth factors accounted for 26.720 percent, 9.757 percent, 7.564 percent, 5.851 percent, 5.680 percent, 4.815 percent, 3.886 percent and 3.717 percent of the variation, respectively. The remaining variables have Eigen values less than one and a very low proportion of variance, indicating that they are not significant for further study.

Table-6: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.214	26.720	26.720	7.214	26.720	26.720
2	2.634	9.757	36.476	2.634	9.757	36.476
3	2.042	7.564	44.040	2.042	7.564	44.040
4	1.580	5.851	49.891	1.580	5.851	49.891
5	1.534	5.680	55.571	1.534	5.680	55.571
6	1.300	4.815	60.386	1.300	4.815	60.386
7	1.049	3.886	64.272	1.049	3.886	64.272
8	1.004	3.717	67.989	1.004	3.717	67.989
9	0.872	3.229	71.217			
10	0.803	2.972	74.190			
11	0.699	2.588	76.778			
12	0.670	2.482	79.260			
13	0.591	2.189	81.449			
14	0.548	2.031	83.480			
15	0.534	1.977	85.457			
16	0.500	1.852	87.309			
17	0.471	1.744	89.053			
18	0.434	1.606	90.660			
19	0.397	1.469	92.129			
20	0.357	1.322	93.451			
21	0.339	1.256	94.707			
22	0.325	1.202	95.909			
23	0.305	1.131	97.041			
24	0.254	0.942	97.983			
25	0.216	0.799	98.782			
26	0.205	0.758	99.539			
27	0.124	0.461	100.000			

Note: - Data collected through questionnaire.

Principal Component Analysis use Scree plots to graphically represent the parts or components that account for the majority of the data variability. The scree plot is only used to retain those variables or elements that are on a steep curve prior to the first point at which the flat line trend starts. The Eigen values of each variable are graphically shown beneath

the scree plot. Figure 1 displays the Eigen values of all the factors influencing people's socioeconomic well-being after industrialization. It demonstrates that six of the seventeen factors account for the majority of variability as they are on a steep curve, while the other factors' Eigen values of less than one cause the curve to flatten as they account for only a small portion of

the variability. In this study the factor analysis has been conducted on 27 different variables. Below Scree plot shows that eight factors out of those 27 variables explain most of the variability because the graphical line becomes more straightens after 8th factor. Remaining of the variables that makes the almost straight line explains a very small portion of the variability and hence they are insignificant.
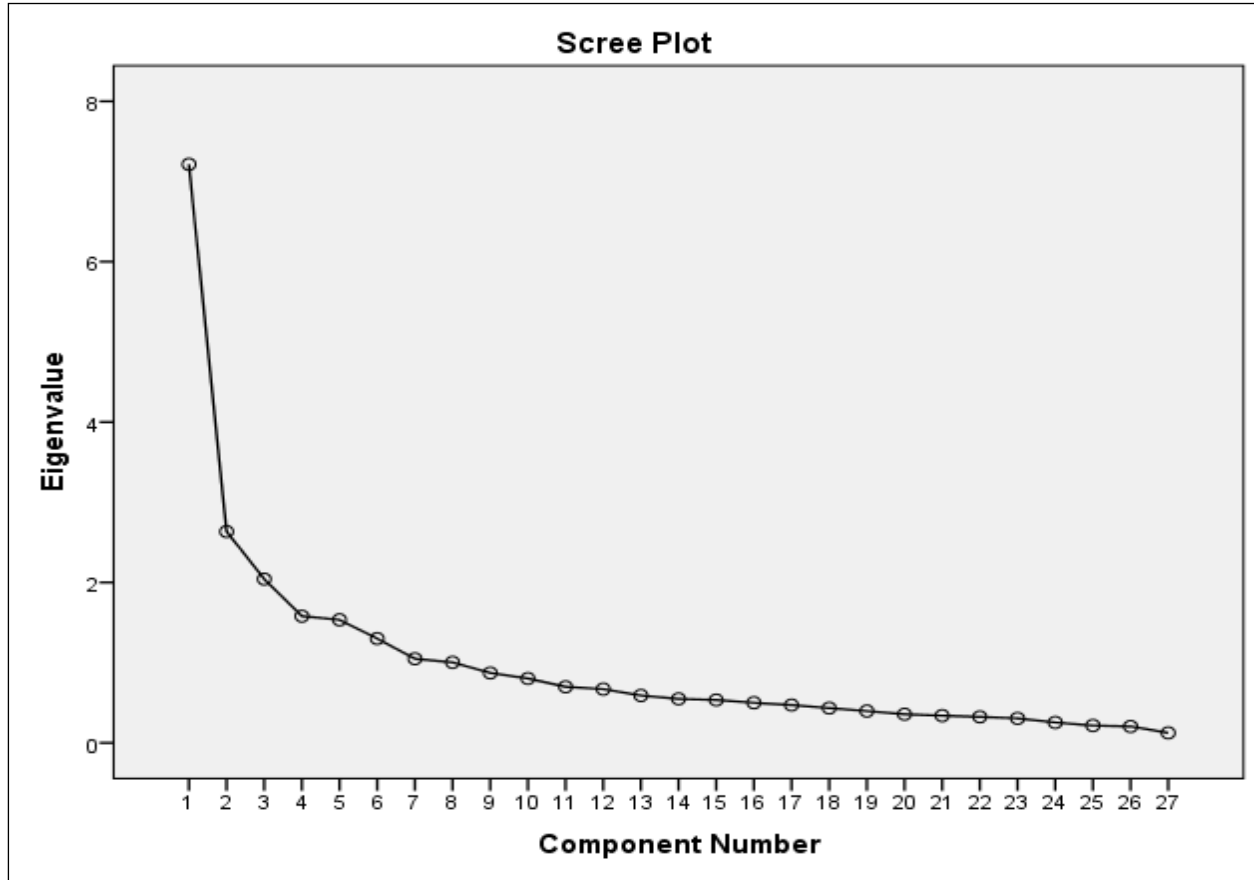

Figure-1: Scree Plot

In addition, principal component analysis has been used to find the set of variables that could synthesise the majority of the information contained in the original variables. Table-7 elucidates the component matrix of the key statements socio-economic impact of industrialisation in Himachal Pradesh. Because, it does not provide a clear image of the impact of the components indicated, it is rotated as shown in Table-8.

Table-7: Component Matrix

Sr. No.	Statement	Component							
		1	2	3	4	5	6	7	8
1	Capital and intermediary goods	.757	-.106	-.015	-.109	.205	-.028	.020	-.312
2	Parking services	.737	-.009	-.137	.160	-.036	-.013	.178	-.074
3	Insurance services	.673	-.060	-.122	.375	.096	.130	.206	-.082
4	Consumers and industrial goods	.668	-.262	-.002	-.036	.267	-.298	-.116	-.090
5	Establishment of agro based industries and people using local agricultural products	.658	.202	-.089	-.366	-.080	.030	-.042	-.317
6	Parks and picnic spots	.644	.114	-.075	.182	-.380	-.122	-.024	-.216
7	Hotels and Restaurants	.627	.028	-.049	.249	-.425	-.171	.034	.100
8	Road services	.623	-.247	-.184	-.108	.338	.049	.023	.048
9	Increases consumption of local agricultural crops	.614	.192	-.176	-.229	-.119	.219	-.380	.202
10	Railway lines development	.602	-.244	.338	-.390	-.302	.202	-.033	.063
11	Industrialization is helpful for developing agriculture sector	.574	-.125	.401	.153	.203	.002	-.096	-.039
12	Urbanization development	.567	-.219	-.270	.311	.161	.165	.235	.216

13	Hospital, P.H.C, C.H.C, medical shops	.563	.096	-.167	.279	-.399	.066	.036	.138
14	Airlines services	.546	-.266	.373	-.393	-.318	.278	-.047	.010
15	Industrialization provide guidelines for modernization in infrastruture	.541	-.278	-.316	-.005	.331	-.235	-.174	.182
16	Transport services	.511	-.149	-.367	-.252	.293	.301	-.197	.181
17	Private houses, Govt. accommodations, Govt. buildings	.484	-.087	.399	.338	.029	.078	.192	.187
18	Agricultural productivity increased after industrial development	.353	.681	-.019	-.159	.282	-.140	.224	-.002
19	Disguised unemployment reduced in the agriculture sector	.258	.674	.056	.090	.015	-.018	-.046	.262
20	Commercial crops which increase agricultural income and better marketing facilities	.271	.625	-.131	-.237	.102	-.034	.222	-.327
21	Occupational shift like agriculture to industry/services	.265	.604	-.032	.154	-.105	.031	-.345	.221
22	Farmers get fair prices for their crops	.323	.466	.372	-.054	.077	-.302	-.147	.083
23	Professional and technical institution	.335	-.084	.567	.251	.033	.181	-.058	-.296
24	Mobile, postage, telephone	.027	.259	-.477	.090	-.136	.437	.119	-.210
25	Irrigation facility developed that increased cropping intensity	.042	.238	.427	.303	.392	.211	-.261	-.104
26	Shopping malls	.443	-.205	-.011	-.140	-.198	-.629	.077	.049
27	Farmers using modern cultivation techniques	.157	.159	.358	-.356	.124	.139	.551	.370

Note: - Data collected through questionnaire.

Rotated Component Matrix which has been applied in the study which clubbed the different variables under prime 8 factors which adjudge the impact of industrialisation on the socio-economic development of the study area. All of these 8 extracted factors have significant factor loadings. Table 8 shows the factor loading for each variable on the extracted factor after rotation. The goal of rotation is to attain an optimal simple structure which attempts to have each variable load on as few factors as possible, but maximize the number of high loadings on each variable. Each loading factor represents the partial correlation between the variable and the rotated factor. These correlations can help us to interpret the extracted factors. As each factor have either large or small loadings of any particular variable. So to identify each variable with a single factor having a high factor loading, varimax rotation has been used.

Table-8: Rotated Component Matrix

Sr. No.	Statements	Component							
		1	2	3	4	5	6	7	8
1	Industrialization provide guidelines for modernization in infrastruture	.766	.164	-.031	.052	-.038	-.054	.261	-.091
2	Transport services	.764	-.011	.271	.130	.020	-.095	-.217	.004
3	Road services	.725	.161	.154	-.067	.121	.092	.051	.091
4	Consumers and industrial goods	.610	.222	.133	-.056	.164	.215	.413	-.106
5	Urbanization development	.580	.506	-.079	-.052	-.102	.089	-.156	.227
6	Capital and intermediary goods	.544	.282	.273	-.098	.421	.281	.129	-.067
7	Hotels and Restaurants	.103	.747	.191	.195	.012	.003	.187	-.039
8	Hospital, P.H.C, C.H.C, medical shops	.124	.710	.168	.243	-.022	-.030	-.086	-.013
9	Parks and picnic spots	.084	.680	.229	.131	.260	.088	.098	-.220
10	Parking services	.404	.602	.121	.024	.250	.137	.026	.062
11	Insurance services	.435	.600	-.031	-.033	.139	.304	-.129	.086
12	Airlines services	.123	.176	.858	-.064	-.008	.170	.081	.142
13	Railway lines development	.174	.218	.825	-.020	.008	.131	.144	.166
14	Occupational shift like agriculture to industry/services	-.010	.180	.006	.760	.092	.052	-.082	-.108
15	Disguised unemployment reduced in the agriculture sector	-.037	.155	-.081	.691	.234	.062	-.027	.189
16	Farmers get fair prices for their crops	-.044	.030	.069	.519	.287	.258	.392	.089
17	Increases consumption of local agricultural crops	.421	.193	.483	.507	.084	-.079	-.115	-.114
18	Commercial crops which increase agricultural income and better marketing facilities	.001	.060	-.016	.229	.794	-.037	-.111	.075
19	Agricultural productivity increased after industrial development	.133	.042	-.134	.444	.660	.036	.054	.298
20	Establishment of agro based industries and people using local agricultural products	.292	.227	.464	.120	.587	.013	.020	-.116
21	Professional and technical institution	-.053	.173	.239	-.076	.038	.728	.042	-.021
22	Irrigation facility developed that increased cropping intensity	.003	-.200	-.123	.275	.007	.683	-.102	-.034
23	Industrialization is helpful for developing agriculture sector	.314	.205	.209	.066	.023	.577	.233	.069
24	Private houses, Govt. accommodations, Govt. buildings	.133	.417	.093	.065	-.135	.486	.121	.346
25	Shopping malls	.186	.372	.143	-.074	.119	-.197	.670	-.026
26	Mobile, postage, telephone	.010	.208	-.051	.025	.236	-.186	-.649	-.113
27	Farmers using modern cultivation techniques	-.010	-.077	.218	.061	.161	.020	.062	.832

Note: - Data collected through questionnaire.

3.2 Descriptive Results

The study's descriptive findings about the socio-economic effects of industrialization in Himachal Pradesh are presented in this part. The variables have a very low impact when the mean value is less than 1.5, a low impact when the mean value is between 1.5 and 2.5, a moderate impact when the mean value is between 2.5 and 3.5, a high impact when the mean value is between 3.5 and 4.5, and a very high impact when the mean value is over 4.5. The findings of the descriptive analysis are shown in Table-9 below.

Table-9: Descriptive Statistics

Sr. No.	Statement	Mean	Std. Dev.
1	Industrialization provide guidelines for modernization in infrastructure.	3.7533	1.11410
2	Road services	3.5633	1.12015
3	Transport services	3.8867	1.15153
4	Railway lines development	2.4817	1.44793
5	Airlines services	2.5883	1.43374
6	Mobile, postage, telephone	3.4917	1.06544
7	Urbanization development	3.3000	1.18842
8	Insurance services	3.0183	1.32826
9	Hospital, P.H.C, C.H.C, medical shops	3.6067	1.17228
10	Professional and technical institution	3.0783	1.52624
11	Private houses, Govt. accommodations, Govt. buildings	3.0900	1.50411
12	Parking services	2.8683	1.47353
13	Hotels and Restaurants	3.2500	1.33934
14	Parks and picnic spots	2.9817	1.48155
15	Shopping malls	3.1467	1.56714
16	Consumers and industrial goods	3.1433	1.16119
17	Capital and intermediary goods	3.1500	1.23965
18	Industrialization is helpful for developing agriculture sector	3.1867	1.43710
19	Increases consumption of local agricultural crops	3.4800	1.22424
20	Establishment of agro based industries and people using local agricultural products	3.0383	1.43071
21	Commercial crops which increase agricultural income and better marketing facilities	3.0800	1.20804
22	Farmers get fair prices for their crops	3.1617	1.32733
23	Farmers using modern cultivation techniques	3.0983	1.29155
24	Irrigation facility developed that increased cropping intensity	3.1000	1.22985
25	Agricultural productivity increased after industrial development	3.1450	1.32170
26	Disguised unemployment reduced in the agriculture sector	3.3250	1.10215
27	Occupational shift like agriculture to industry/services	3.3767	1.09550

Note: - Data collected through questionnaire.

As shown in the above table, the variable of quick reaction has the highest impact level with the mean value of 3.75 and standard deviation of 1.114. All the other remaining variables i.e. consumer and industrial goods, transport services, road services, urbanisation development, capital and intermediary goods have the mean values of 3.14, 3.88, 3.56, 3.30 and 3.15 respectively. All these mean values are between 2.5-3.5 and 3.5-4.5 class intervals which show either moderate or higher impact on industrialisation on socio-economic development. In second factor i.e. Umbrella benefit, the variable of analyzing socio-economic development have the highest impact with the mean value of 3.25 and standard deviation of 1.33, which means most of respondents witnessing development of service sector in vicinity to industrialisation. All the other variables such as hospital (P.H.C&C.H.C, medical shops), parks and picnic areas, parking services and insurance services have the mean values of 3.60, 2.98, 2.86 and 3.01respectively. All of the variables have mean values between 2.5-3.5 which shows the moderate impact but the standard deviation of these variables are fairly high in comparison to their mean values which suggests that there are differences among the assessments of responses about the impact of all the five variables on socioeconomic factor and the highest assessment of responses can be shifted to the next level of 2.5-4.5 mean value and presents a high impact.

In the third factor i.e. commuting factor has two variables named airlines services and railway lines development which notices mean value of 2.48 and 2.58 respectively. But the standard deviation of both of these variables is also high as compare to mean value so these variables can also be shifted to the next level of mean value having high impact. It signifies

that industrialisation was the primary driver of urbanisation, which eventually expects the development of railway and airline infrastructure. In the fourth factor named facilitators, the variable of occupational shift like agriculture to industry/services have the highest mean value of 3.38 which shows high impact, other one is disguised unemployment reduced in the agriculture sector and farmers get fair prices for their crops with mean value 3.32 and 3.16, the last variable is increases consumption of local agricultural crops having 3.48 mean value. All the variables under this factor show high impact. Accordingly, when the industrial sector develops, new opportunities for its advancement emerge, resulting in grass-root changes in all aspects and people benefiting.

Next factor of corporate image includes three variables. mean value of first two variable i.e. commercial crops which increase agricultural income and better marketing facilities & agricultural productivity increased after industrial development is 3.08 and 3.10 which shows the moderate impact and the other one is Establishment of agro based industries and people using local agricultural products having the mean value of 3.04 which also shows moderate impact. Factor of professionalism includes four variables with mean value of 3.08, 3.10, 3.18 and 3.09 which also shows the high impact. The next factor of convenience contains two variables i.e. shopping mall amenities and facilities of mobile, postage, telephone having mean value of 3.14 and 3.49 with standard deviation of 1.567 and 1.065 showing high and moderate impact respectively. The last factor shown load on farmers using modern cultivation techniques which has mean value 3.09 and standard deviation 1.29 showing is either high or moderate respectively.

4. DISCUSSION

In the further analysis an attempt has been made to explain those 8 factors which have been emerged as significant contributors in the study.

- Self-sustaining Development

Industrialization, which the industrial revolution centred on, has constantly increased levels of output and employment, resulting in unparalleled economic increases. Promoting the growth of the industrial sector may therefore be a key to attaining long-term development. Precisely, industrialisation contributes to self-sustaining growth by ensuring the supply of consumer and intermediate products, industrial goods, and providing facilities for the general public through urbanisation. According to Table 8, industrialization has a significant impact on self-sustaining development, with a factor loading of 0.766 meaning that it provides guidance for infrastructure modernisation. The following variables are also loaded under this factor: Consumer and industrial goods (0.610 factor loading), transport services (0.764 factor loading), road services (0.725 factor loading), urbanisation development (0.580 factor loading), capital and intermediary goods (0.580 factor loading), and so forth (0.544 factor loading). As the factor loadings of the different variables are greater than 0.50 which ensures that factor analysis has a practical significance to the analysed data. But as the sample size increases even the lower value of factor loading is acceptable. The preceding analysis demonstrates that the self-sustaining development factor has a substantial impact on socioeconomic development in the context of industrialization.

- Umbrella Benefits

Any country's industrialization has a direct impact on the progression and success of the three sectors of the economy, namely primary, secondary, and tertiary. Here, industrialization contributes to socioeconomic development through a variety of services such as health and welfare, tourism, leisure and recreation activities, and retailing and sales of commodities to the public. The detailed exploration of the services available in industrial can be defined through Umbrella benefit in the back ground of industrialisation. It was discovered that a significant variable under this factor had the greatest factor loading of 0.747. Furthermore, the additional variables loaded under this factor include hotels and restaurants (0.747 factor loading), hospital, P.H.C&C.H.C, medical shops (0.710 factor loading), parks and picnic areas (0.680 factor loading), parking services (0.602 factor loading), and insurance services (0.602 factor loading) (0.600 factor loading). The inference stated that as industrialisation progressed, the demand for the aforementioned items increased, creating greater opportunities for businesses and eventually, the service sector, as demonstrated by this factor.

- Commuting Factor

The growth of railways and airlines has also benefited from large-scale urbanisation. The density of the railway network is intimately tied to the development

of agriculture and industry. The careful examination of the change in commuting factor is emerged as a key variable under this factor with highest factor loading of 0.858. Other variables which are loaded under this factor are importance of railway lines development (0.825 factor loading). It denotes that industrialisation was the primary driver of urbanisation, which eventually led to the development of railway and airline infrastructure.

• Structural Shift

Socio-economic development is an endeavour to reform or change society, namely the transition from traditional agricultural to contemporary industrial civilizations. Earlier people used to make a livelihood in the agricultural as farmers and farm labourers, with barely enough money to fulfil their own and their families' needs. Although, as industrialization progresses, people's ways of life and livelihoods change dramatically, indicating a structural shift. It was discovered that a significant variable under this factor had the greatest factor loading of 0.760, followed by disguised unemployment reduced in the agriculture sector (0.691 factor loading), farmers get fair prices for their crops (0.519 factor loading), and finally it came with the variable namely Increases consumption of local agricultural crops (0.507 factor loading). According to the aforementioned research, when the industrial sector develops, new opportunities for its advancement emerge, resulting in grass-root changes in all aspects and people benefiting.

• Facilitators

Over the years, the agricultural transformation through creation of forward and backward linkages with Agro-industry has been emerging as an important option to overcome from the increasing challenges of creating employment opportunities for increasing labour force and sustaining the livelihood of households in rural areas. It is also worth noting that the first variable loaded under this factor is if the commercial crops boost farm revenue and better marketing facilities, with a factor loading of 0.794; imply that investors most likely got the same results they predicted. Similarly, agricultural productivity increased following industrial growth (0.660 factor loading), which was followed by the establishment of agro-based firms and the consumption of local agricultural commodities (0.587 factor loading). As a result of the preceding debate, it is clear that areas near industries have a demand for agricultural products and are

engaged for their livelihood, both implicitly and overtly.

• Professionalism

In any economy, industrialization and the use of new tools&equipments may result in the formation of specialists in a certain area or field. Whether in industry, educational and technical institutions, or any other field, experts' services have been utilized. That is why this factor is termed as professionalism. Further, this thing facilitated the entire sector in economy. It is also clear that the higher the load given by four variables is loaded under this factor. They are 'professional and technical institution' (factor loading 0.728) and 'irrigation facility developed that increased cropping intensity' (factor loading 0.683), followed by 'industrialization is beneficial for developing agriculture sector' (factor loading 0.577) with private houses, government accommodations, and government buildings (factor loading 0.486). Thus, it can be stated that industrialisation introduced commercial features into all sectors, including agriculture, government, education, and institutions.

• Convenience

The second last component is packed with shopping mall amenities (factor loading 0.670). Including mobile, postal and telephone (factor loading 0.649). It suggests that industrialisation aided urbanisation, which in turn enabled access to basic necessities such as shopping malls, postage, telephone, and other services.

• Development of Equipment's

The final component indicates that industrialization aids in socioeconomic development. However, only one variable is loaded under this factor, namely Farmers utilising contemporary farming techniques with factor loading 0.832. The expansion of an economy's industry led to the use of sophisticated equipment not only by major farmers, but also by marginal farmers and businesses.

In a nutshell, most developed nations witnessed socio-economic development through industrialization. The present study brings out the significance of various factors that are used as bench marks of socio-economic development. Factor analysis has been used to extract the eight significant factors out of the twenty seven variables. The analysis revealed that industrialisation has a significant role in socio-economic development through self-sustaining development. This might be

evident through modernised infrastructure, sustainability in the supply of consumer and intermediate products, industrial goods, and providing facilities for the general public in urbanization, etc. One step forward, the above discussion also highlighted umbrella benefits through industrialisation for the stakeholders by the way of facilities such as hotels and restaurants; hospitals; P.H.C. & C.H.C; medical shops; parks and picnic areas; parking services; and insurance services. Further, the development of industrialisation is also indicative of progressive road, rail and air services. Everywhere, even over the world, participants are watching the structural shift in their livelihood, standard of living, and income. This is evident from the reduction in the burden on agriculture sector and discovering the new avenues for livelihood through professionalism and other means. Furthermore, industrialisation facilitates agriculture with modern equipment, increased productivity and new markets for farm products. Industrialisation also aided urbanisation, which in turn enabled access to basic necessities such as shopping malls, postage, telephones, and other services. Finally, the expansion of an economy's industry led to the use of sophisticated equipment not only by major farmers but also by marginal farmers and businesses.

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