

## ECONOMIC AND INFRASTRUCTURAL ENVIRONMENT IN HARYANA

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### **ABSTRACT**

*The development of any area, region, state or country is dependent upon the development of its economic and infrastructural indicators. Entrepreneurs always search for an opportunity to invest in generating profitable inflows in the future. The success and prosperity of any business depend to a great extent on the availability or on the level of development of the economic and infrastructural indicators of the environment in which it exists. The present study aims to assess the level of economic and infrastructural development of different districts of Haryana with the composite index based on the optimum combination of twenty two development indicators. The district-wise data on these indicators for the year 2013-14 has been used for obtaining the level of development of all the twenty one districts of the state. The level of development has been estimated separately for the social infrastructural sector and socioeconomic sector. The study found that the Faridabad district is at the top in terms of overall socioeconomic development, whereas Mewat district is lagging behind at the bottom qua this development. The study also revealed that there are widespread disparities in the level of development between the various districts of Haryana. It can be observed from the study that infrastructural facilities of the people are positively associated with the socioeconomic development. Moreover, the infrastructural development and literacy status of the people were found to be positively related with the socioeconomic development. In order to bring out uniform regional development, a potential target of various developing indicators has been estimated in case of low developed districts. These districts require improvement in some of the indicators for enhancing the level of development, thereby encouraging business success and attracting entrepreneurs.*

**KEYWORDS:** *Business, Entrepreneurs, Composite Index, Socio Economic Development, Infrastructural Development, Model Districts, Potential Target*

### **INTRODUCTION**

The prosperity of any state or country is directly proportional to the level of its development. A nation is considered developed, developing or less developed on the basis of its infrastructural facilities, economic environment conducive for investment and effective human resource capital. Various entrepreneurs and budding business investors always look for an opportunity where they could invest profitably and could grow further in future. A nation, state or any region could attract any such investments only if it can provide an environment conducive for investment and risk taking. This again depends upon the economic and infrastructural development, affecting quality of human capital of that area. India is considered as a developing nation and many investors and entrepreneurs are interested in investing in India looking forward for a successful venture or business. However, different states of India have different success opportunities due to

the existing widespread disparities in their developmental levels. Most of the entrepreneurs and businesses are attracted towards Delhi, Maharashtra, Karnataka, Tamil Nadu, Gujarat and Andhra Pradesh. This raises the need to analyze the reasons for such preference by the entrepreneurs or investors and which could be assessed on the basis of the various development indicators. The development of any states could be analysed on the basis of certain economic development indicators such as Gross Domestic Product (GDP), Gross National Product (GNP), GNP per capita, Economic growth, Inequality of wealth, Inflation, Unemployment, Economic structure and demographics. Moreover infrastructural facilities also contribute towards the overall development of the state. The various infrastructural indicators include Communications, Technology, Transportation, Banking and financial services, etc. Thus, based on the various dimensions, economic and infrastructural indicators the development level of any state could be assessed specifically.

Present study is focusing on the economic and infrastructural development of the state of Haryana. It has huge potential for investment and growth. This could provide an insight to the entrepreneurs planning to invest in the state of Haryana. Haryana came into existence on 1st November 1966 as 17<sup>th</sup> state, after the reorganization of the Punjab state on linguistic basis. Before came into being it was backward region. Since its existence, it has shown splendid progress in terms of economic and infrastructural development. Haryana is surrounded Delhi on three sides, a large area of Haryana to her advantage is included in the national capital region about 13 districts. At present, it enjoys one of the most developed states in India. It is now a leading contributor to the country's production of food grains and milk. It is one of the wealthiest states of India and has the third highest per capita income in the country with per capita G.D.P. at Rs.109227 (2011-12).and per capita income of 1.47 Lakh in 2014-15. It is also one of the most economically developed regions in South Asia and its agricultural and manufactured industry has experienced sustained growth since 1970s. The state has emerged as the largest recipient of investment per capita in India. One of the advantages of Haryana lies in its closeness to Delhi which works on extended market for Haryana along with other advantages in the form of exchange and trade. A significant proportion of Haryana falls in the NCR. However, 65.2% of total population of Haryana resides in the villages of Haryana. The percentage of rural population has come down by about 6%, since 2001; total population in Haryana in 2011 increased by about 20% as compared with 2001 and experienced a massive growth in physical infrastructure in the form of roads, health, education etc. For better and the balanced development administration of the state, the total region of territory is divided into 21 districts which increased from 07 in 1966. Haryana is a small state and has an area of just 0.44 lakh sq. kms. According to 2011 census, it has a total population of about 2.53 crore. The State has literacy rate of 76.6 percent. It has sex ratio of 877 females per 1000 males. It ranks 20th in terms of area and 16th in terms of population when compared to other Indian states in the country. Haryana has four Administrative Divisions, comprising of 21 districts. The economic growth of Haryana has been exemplary, since its creation as a separate State. The State economy grew at a growth rate higher than the Indian economy during most of the period. Haryana has an agro based economic structure with non-attractive tax regimes as compared to other northwestern states like Punjab, Delhi, Himachal Pradesh and Chandigarh. Budding investors and startup units are least interested in investing in Haryana as its economic environment is not conducive enough for the investment purpose. Except few districts of Haryana such as Faridabad, Gurugram, Sonapat, Panipat, Panchkula, etc. where businesses are being set up and growing gradually, other districts are way behind in the league. Now the question is whether all the regions of the Haryana state benefited equally in the development process. The present study is intended to investigate the regional development of Haryana in terms of socioeconomic indicators.

## Literature Review

In the existing literature, number of studies tried to measure the regional disparities by the socioeconomic indicator. The prominent work by Narain (1991, 92, 94, 2003&2005) studied for estimating the level of development at district level had so far been made for the states of Orissa, Andhra Pradesh, Kerala, Uttar Pradesh, Maharashtra. Hewas found that disparities among different regions were prominent, but the underdeveloped region did not mean all its indicators were underdeveloped. Singh (2004) examined interstate disparities in rural infrastructure in India and its impact on agricultural development and rural poverty through a cross sectional study of 16 major states. Composite indices of rural economic and social infrastructure had prepared for the selected states for 1980-81, 1990-91 and 2000-01 covering 16 indicators of economic infrastructure and 7 indicators of social infrastructure. The technique of Principal Component Analysis (PCA) was used to prepare the composite index of infrastructure development. The analysis revealed that extreme disparities continue to persist with respect to the availability of economic and social indicators in rural areas at the state level. Economic and social infrastructure was found to have a strong positive effect on agricultural productivity and a strong negative effect on rural poverty. Dubey (2009) examined the intra-state disparities in five states in India; Gujarat, Haryana, Kerala, Orissa and Punjab were used three indicators, consumption, inequality and the incidence of poverty, to examine this issue. These indicators taken together reflected overall well-being of the population as they were the outcome of the interplay of a large set of economic and policy variables. The states chosen for the analysis of intra-state disparities had a relatively homogeneous initial level of poverty in 1973-74, the coefficient of variation (counting the headcount ratio (HCR) being about 20% in 15 major states). Thaker (2009) identified the levels of socioeconomic development of the districts of Gujarat. The development was measured with the help of 57 indicators in the fields of agriculture, industry, human resources and infrastructure. The data considered for the study pertain to the two period's viz. the pre-reform period i.e. 1991 and post-reform period i.e. 2001, using factor analysis technique. Ramphul (2012) investigated pattern of regional disparities in socioeconomic development in India at district level in northern and central region of India on the basis of 43 indicators of agriculture, industrial and infrastructural sector. The study is an effort for evaluating the status of development at the district level separately for the agricultural sector, infrastructural sector and overall socioeconomic sector in the state of Haryana by analyzing the data on economic variables for the year 2013-14. It would be of interest to estimate the status of development at the district level, since there has been growing consensus about the need of district level planning in the country. Under these are following objectives

## Objectives

- To make a comparative analysis of districts of Haryana on the basis of socio-economic and infrastructural indicators.
- To measure the socio- economic and infrastructural performance by composite Index of the different districts of Haryana.
- To identify the relationship between various socio-economic and infrastructural indicators.

## RESEARCH METHODOLOGY

As development is a multi -dimensional process so its impact cannot be fully captured by any single indicator. A number of indicators when analyzed individually do not provide an integrated picture of reality. Hence, there is a need

for building up of a composite index of development based on optimum combination of various development indicators. Some districts have faced situational factors of development unique to it as well as common and environmental factors. The indicators which are common to all the districts have been included in the analysis for evaluating the level of development. Composite indices of development have been obtained for different districts by using the data on the following development indicators.

#### **Social-Infrastructural Development Indicators**

- Population density
- Decadal(%) increase in population
- Literacy rate
- No. of motor vehicle registered
- No. of scholar in colleges
- No. of school govt./non govt.
- No. of hospitals, dispensaries.
- Housing co-operative societies
- Mettle roads per 100sq.kms
- No. of pupils per teacher
- No. of motor vehicles on road

#### **Economic- Development Indicators**

- No. of co-operative societies.
- No, of workers employed in working factories
- No. of shops, commercial establishment and hotels
- Employment in public and private organized sector
- No. of commercial bank
- Haryana value added tax
- Municipal income
- Fund released under districts plan
- (%) of employees to the total
- (%) of working force to the total population
- Per capita deposit of commercial bank

A total of twenty two development indicators has been taken for the analysis. These indicators may not form an all-inclusive list, but these are the major interacting components of economic & infrastructural development. Out of twenty two indicators, eleven indicators are directly related to socioeconomic indicator and eleven are related to infrastructural facilities in the districts.

### Sample Design

The current study is based on the secondary data derived from the statistical abstract of Haryana, haryanastat.com, economic survey reports from the state and official websites of the states. The secondary data has been collected for a year 2013-14. The composite index for infrastructural, socioeconomic performance of the different districts of Haryana state has been calculated on the basis of Wroclaw Taxonomic method which has been explained in detail.

### Data Analysis

The composite index of socioeconomic development is constructed applying Wroclaw Taxonomic Method developed by Florek et al. (1952) and Narain et al. (1991) have also used this statistical method for calculating the Composite index which can include any number of indicators. Let  $[X_{ij}]$  be the data matrix,  $i = 1, 2, n$  (Number of unit) and  $j = 1, 2, k$  (number of indicators).  $[X_{ij}]$  are transformed to  $[Z_{ij}]$  as follows.

$$[Z_{ij}] = \frac{(X_{ij} - \bar{X}_j)}{S_j}$$

$\bar{X}_j$  = mean of the  $j$ th indicator,  $S_j$  = standard deviation of the  $j$ th indicator and  $[Z_{ij}]$  is the matrix of standardized indicators. From  $[Z_{ij}]$ , identify the best value of each indicator, maximum value or minimum value depending upon the direction of the impact of indicator on the macro economic development.

$$P_{ij} = (Z_{ij} - Z_{oj})^2 \text{ and } (C_i) = \sqrt{\sum_{j=1}^k \frac{P_{ij}}{cv_j}}$$

Where  $P_{ij}$  = pattern of development,  $Z_{oj}$  = Best value for indicator, and  $(C.V.)_j$  is the coefficient of variation of the  $j$ th indicator in  $X_{ij}$ .

$$D_i (\text{Composite Index}) = \frac{C_i}{C}$$

Where  $C = (\text{Mean Value of } C_i + 3 * (\text{Standard deviation of } C_i))$

## RESULTS AND DISCUSSIONS

### The Development Level

The composite indices of development have been worked out for different districts in respect of infrastructural sector and over all socioeconomic sectors. The districts have been ranked on the basis of composite indices. The values of composite indices along with the rank of districts are given in Table 1. It may be seen from Table 1 that Infrastructural facilities play a very important role in enhancing the level of development in the state. With respect to these facilities, the district of Faridabad is at the top whereas the district of Mewatis at the lowest rank. The composite indices varied from

0.3963 to 0.9343. In overall socio economic development, the district of Gurgaon is placed at first position and the district of Palwal occupied the last position. The composite indices varied from 0.3748 to 0.9348.

**Table 1. Composite Index (C.I.) and Rank of Districts**

Sr. No.	Districts	Infrastructure		Socio-Economic	
		C.I	Rank	C.I	Rank
1	Ambala	.5848	5	.5960	9
2	Punchkula	.6989	15	.6747	14
3	Yamunanagar	.5778	3	.6901	17
4	Kurukshetra	.6459	10	.6708	12
5	Kaithal	.7158	16	.6797	15
6	Karnal	.6034	7	.5629	5
7	Panipat	.5934	6	.6408	10
8	Sonipat	.5808	4	.5225	4
9	Rohtak	.6065	8	.6800	16
10	Jhajjar	.6259	9	.7134	18
11	Faridabad	.3963	1	.5896	8
12	Palwal	.7471	18	.9348	21
13	Gurgaon	.5404	2	.3748	1
14	Mewat	.9345	21	.8612	20
15	Rewari	.6787	11	.6717	13
16	Mahendergarh	.7389	17	.7141	19
17	Bhiwani	.6978	13	.5053	3
18	Jind	.6807	12	.5884	7
19	Hisar	.6980	14	.4557	2
20	Fatehabad	.7790	19	.6545	11
21	Sirsa	.8491	20	.5637	6

### Different Stages of Development

For the relative comparison of districts with respect to level of development, it appears quite appropriate to assume that the districts having composite indices less than or equal to (mean - D) are having a high level of development. These districts may be classified in the first category of developed districts. Districts having composite indices greater than (Mean + S.D) are low developed districts. These districts might be classified as low developed and fall in the fourth category of the development. In the same way, the district having composite indices between (Mean) and (Mean - S.D) having a high level of development is placed in the second category and the districts having composite indices between (mean) and (Mean + S.D) are lower middle level developed districts. These districts are positioned in the third category. On the basis of above classification, the districts are placed in four stages of development as high, high middle, lower middle and low.

**Table 2: Stages of Development**

Stage of Development	Districts	Population (%)
<b>Infrastructural Development</b>		
High	Faridabad, Gurgaon	13.11
High Middle	Yamunanagar, Sonipat, Ambala, Panipat, Karnal, Rohtak, Jhajjar, Kurukshetra	37.4
Low Middle	Palwal, Mahendergarh, Kaithal, Punchkula, Hisar, Bhiwani, Jind, Rewari	36.4
Low	Mewat, Sirsa, Fatehabad	13.1
<b>Socio-Economic Development</b>		

High	<b>Gurgaon</b> , Hisar, Bhiwani	<b>19.3</b>
High Middle	Sonipat, Karnal, Sirsa, Jind, Faridabad, Ambala	<b>33.6</b>
Low Middle	Panipat, Fatehabad, Kurukshetra, Rewari, Panchkula, Kaithal, Rohtak, Yamunanagar, Jhajjar, Mahendergarh	<b>38.7</b>
Low	<b>Palwal</b> , Mewat	<b>8.4</b>

It may be seen from the Table 2, that with respect to infrastructural development two districts having the population 13.11 percent are found to be highly developed as compared to other districts. Eight districts with population of about 37.4 percent are found to be highly middle level developed. Eight districts are observed to be low middle level developed. These districts cover the population of about 36.4 percent. Three districts having the population of about 13.1 percent are observed low developed. In the overall socioeconomic field, three districts having the population of about 19.3 percent are found to be better developed. Six districts are high, middle level developed. These districts cover the population of about 33.6 percent. Ten districts having the population of about 38.7 percent are found to be low middle level developed. Two districts are observed to be low level developed. These districts cover about 8.4 percent population of the state.

### Inter-Relationship among Different Sector of the Economy

For proper development, it is essential that all the sectors of the economy should flourish together. The association between the level of development of different sectors of the economy and literacy level is worked out and are shown in Table 3 below.

**Table 3: Correlation Coefficient**

Factors	Infrastructural Development	Socio-Economic Development
Infrastructural development	<b>1</b>	<b>0.36</b>
Socio-economic development		<b>1</b>

It may be observed from the above table that the infrastructural development are positively correlated with socio-economic development (+0.36) and highly positively correlated with infrastructural development and socio-economic development.

### Specific Recommendations for each of the low Developed Districts are Given Below

**Meat:** This district is low developed in the infrastructural and socioeconomic sector. The district is observed to be in low category in respect of three indicators. Improvements are required to be made in road transport and medical facilities in the district. Literacy level of the people of the district is very poor. Only 54.08 percent people are literate whereas literacy rate at the state level is about 75.36 percent. Steps should be taken to enhance the level of literacy in the district. Facilities should also be created to enhance the small scale industrial units in the districts.

**Fatehabad:** This is low developed in infrastructural facilities and overall socioeconomic field. The district has low order transport, education and medical facilities. Steps should be taken to popularize the small scale industrial units in the district. Literacy level needs improvement. It should be enhanced by encouraging the educational activities in the district. The present transport and medical facilities require improvement in the district.

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