



# Inter- District Disparities in Social and Economic Infrastructure in Haryana

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**ABSTRACT:-** From 2000 through 2021, the current study looks at regional differences in health, education and communication in Haryana. The study relied on data from the Haryana statistical Abstract, the Reserve Bank of India, and the Chief postmaster General of Haryana, Ambala, as well as the Haryana Department of Technical, Higher, Secondary and Elementary education including 22 districts. The three infrastructure indicators in this study are health, education, and communication. The study's primary results are that communication, health, and education have all improved during the study period. Within the study period, only primary school displays a negative growth.

**KEYWORDS:** Social and Economic, Infrastructure, Disparities, Indicators

## I. INTRODUCTION :-

Infrastructure is the collection of basic facilities that enable households and businesses to function indefinitely. Serving a country, city or other area, including the services and facilities required to run it's economy water supplies, transportation, waste water, solid waste and other infrastructure throughout the country provide a variety of critical services. Infrastructure facilities trade, provide opportunities for undeserved communities, and protects the country from an increasingly unpredictable natural environment. The Indian economy relies heavily on the infrastructure sector. The sector is critical to India's overall development, and the government has placed a high priority on enacting policies that will ensure the country's creation of world- class infrastructure in a timely manner. Power, bridges, dams, roads, and urban infrastructure development are all part of the infrastructure sector.

## History of Infrastructure Development:-

**Before 1700 :-** Prior to 1700, roads and canals we're the primary modes of transportation. Canals were used for irrigation as well as transportation. Ports and lighthouses aided sea navigation. Aqueducts served public fountains and baths in a few advanced cities, but sewers were rare.

**Roads :-** The first roads, such as the Natchez Trace, were tracks that often followed game trails. In 4000 BCE, Ur appears to have built the first paved streets. In 3300 BCE, corduroy roads were constructed in Glastonbury, England, and brick- paved roads were constructed in the Indus Valley Civilization on the Indian subcontinent around the same time.

**Irrigation systems and Canals:-** Mesopotamia, in what is now Iraq and Syria, built the first known canals around 4000 BCE. From around 3300 BCE, the Indus Valley Civilization in India and Pakistan had a sophisticated canal irrigation system. Canals first appeared in Egypt around 2300 BCE, when a canal was built to bypass a cataract on the Nile near Aswan. Large canals for river transportation we're built in ancient China as early as the warring states period ( 481-221 BCE). The grand Canal of China which was completed in 609 BCE and is still the world's longest canal at 1,794 Kilometers, was by far the longest canal ( 1,115 mi.).

## 1700 to 1870

**Roads :-** Turnpike trusts built toll roads as traffic levels in England increased and roads deteriorated, particularly between 1730 to 1770. Later, turnpikes we're built in United States. They were usually built under a government franchise by private companies. In the Early, 9<sup>th</sup> century, river and canals transportation carried many farm foods from the US border between the Appalachian mountains and the Mississippi River, but the shorter road route over the mountains had advantages.



**Canals :-** Canals in the Early stages of the industrial revolution, inland canals preceded in the development of railroads in Europe, particularly in Britain and Ireland, and then in the early United States and Canadian colonies. Over a hundred canals were built in United Kingdom between 1760 to 1820.

**Railways :-** The first railways which were pulled by horses or people, were used in mines or to bypass waterfalls. In 1811, John Blenkinshop designed the first successful and practical railway locomotive, and a line connecting Middleton Colliery and Leeds was built. In 1826, the Liverpool and Manchester Railway opened, which is regarded as the world's first intercity line. Railways spread throughout the United Kingdom and the World in the following years, and for nearly a century, they were the primary mode of land transportation.

**Since 1920:-** Italy was the first country to construct a freeway- like road, the Autostrada dei Laghi, which connected Milan and Como in 1925. The Autobahns in Germany we're the world's first limited access, high speed road network, with the first section connecting Frankfurt am Main and Darmstadt opening in 1935. The Pennsylvania Turnpike, which opened on October 1, 1949 is widely regarded as the first long-term distance rural freeway in the United States. The federal- Aid Highway system in the United States. Between 1960 and 1990, the majority of the system was completed.

## II. REVIEW OF LITERATURE :-

**Ghosh, B. and De, P. ( 1998)** Using OLS regression, researchers looked at the role of physical infrastructure and planning in determining regional income in Indian States since independence. Secondary data was gathered from a variety of sources. Physical infrastructure indicators we're chosen using Principal Component Analysis. In this study, per capita income is used to measure regional development. The study found that over the planning period, States remained in fixed positions in terms of income concentration.

**Bhatia M. S. (1999)** investigated the growth and development of rural infrastructure in India, attempting to determine variations in the availability of such infrastructure facilities as well as the relationship between infrastructure and agricultural development. The study discovered that infrastructural facilities had significantly increased over the study period. The research found a strong link between rural infrastructure and per- hectare yield and output. Infrastructure availability for 68.25 per cent of food grains yield per hectare and 42.10 per cent of output. As a result, States with a low

level of infrastructure can boost their yield and output by improving their infrastructure.

**Zhang, X. and Fan, S. (2002)** investigated the motivational forces behind India's economy's recognized distinction. Regional disparities in the federal economy have shrunk as a result of economic globalization, according to the study. Due to large regional disparities, India adopted concerned policies in the 1990s. The authors used "Barro and Sala-I- Martin" avant- garde growth literature to explain convergence in the study; the results showed that all variables were analytically significant with predicted signs.

**Holakia, R. H. ( 2003)** looked at the trend of regional disparities in per capita income and human development in India from 1981 to 2001. The study relied on secondary data and regression analysis techniques. The study found no significant increase or decrease in PCI disparities, whereas regional disparities in overall human development decreased significantly less, but poverty disparities increased over time.

**Majumder, R. (2005)** examined regional infrastructure availability imbalances at the district level. The author investigated the nature and magnitude of infrastructural and development indices in Indian districts. The research used secondary data and covered a 30- year period from 1971 to 2001. The study made use of correlation and regression techniques. The author discovered that infrastructure availability was a key factor in the region's development. There had been an increase in infrastructure and development during the study period. Regional disparities had become more pronounced.

**Narain P.et.al.( 2009)** investigated Andhra Pradesh's socioeconomic development across districts. For the years 2001- 02, district data was used to analyze the level of development of socioeconomic indicators. The study relied on the composite index. West Godavari, Karimnagar, and East Godavari districts were found to be more developed than other districts in the state in terms of socioeconomic development.

**Das, A. ( 2011)** investigated the relationship between infrastructure parameters and state GDP or industrial production. Secondary data was gathered from CMIE, the Directorate of Economics and statistics, and the central statistical organization. According to the findings, there was a strong and conclusive link between industrial investment and SDP growth. The study also discovered a link between stage growth and two infrastructure indicators ( village electrification and tele density).



**Kaur, A. and Kaur R. ( 2016)** looked at the inter-district disparities in social infrastructure in Punjab for two time periods: pre reform 1981 to 1991 and post- reforms 2001 to 2011. The study involved 12 districts and used secondary data from various issues of the Statistical Abstract of Punjab. The study discovered that during the post reform period, Gurdaspur had the highest number of high schools and middle schools, whereas during the pre reform period, the number of high schools had the highest rank in the same district but the number of middle schools had not grown at all.

**Kaur, A. And Kaur, R. (2018)** attempted to investigate the role of economic and social infrastructure in Punjab's economic development. The impact of social and economic infrastructure on NSDP per capita was studied using multiple regression models. For the NSDP per capita, secondary data sources were used from 2000- 01 to 2015- 16. It was discovered that the economic and health infrastructure indexes had a significant impact on the state's economic development. However, the education infrastructure index had little effect on economic development.

#### **Objectives of this study :-**

- (1) To examine the health and Education sector's growth patterns from 2015 to 2021 in Haryana.
- (2) To investigate the communication growth pattern in Haryana from 2000 to 2021.

### **III. RESEARCH METHODOLOGY :-**

The current study is empirical in nature and relies entirely on secondary data. All 21 districts have been included and taken into account to show inter- district disparities. Secondary data is gathered from a variety of sources to achieve the goals, including :  
Statistical Abstract of Haryana 2015 to 2021.

Central statistical organization.

Economic survey of Haryana.

Directorate Census Handbook, Government of Haryana

National Human Development Reports

Planning Commission of India

Census of India, 2011 etc.

Data from 2000- 01 to 2017- 18 was used to show the growth and development of economic and social infrastructure at the state and district levels.

#### **Growth and trend pattern of Infrastructure in Haryana**

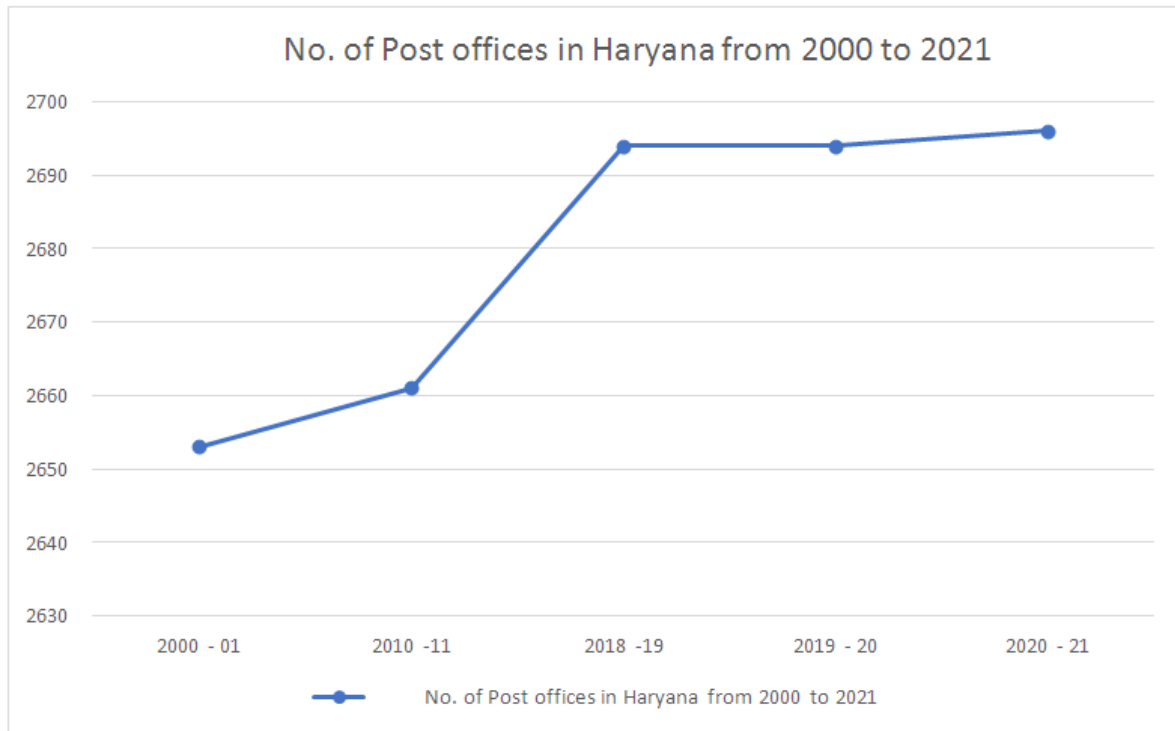
Haryana has a very extensive postal network, with post offices located in all of the state's districts and providing a wide range of services. Communication services ( post cards, letters etc.). Researcher has taken only post offices to know about the communication facilities in Haryana. Growth trend of post offices shows in table 1 and chart

**Table1. No. of Post offices in Haryana**

Year	No. of Post offices
2000 - 01	2653
2010 -11	2661
2018 -19	2694
2019 - 20	2694
2020 - 21	2696

**Source:** Reserve Bank of India and Chief Post Master General, Haryana circle, Ambala.

Table 1 depict the growth trend of post offices in Haryana from 2000 to 2021. No. Of postoffices has continuously shown growth pattern from 2653 to 2696 in 2000-01 to 2020-21. But in 2018-19 and 2019- 2020 shown the constant growth rate it means number of postoffices in 2018-19 and 2019-20 remain equal in numbers.



**Health Infrastructure :** People’s health is recognized as a direct measure of nation's potential, vitality, and Productivity to achieve faster growth, and Haryana is always dedicated to providing superior health services to it’s residents. Hospitals, CHCs and PHCs are examples of health Centres that provide affordable, adequate, and High-quality health care.

**Table 2 Health Infrastructure In Haryana**

Year/ District	Hospitals	CHCs	PHCs	Dispensaries	Sub centers	District's T.B. Centers	Total
2017-18	62	125	499	63	2636	#	3385
2018-19	63	127	511	64	2636	15	3416
2019-20	68	133	536	63	2655	15	3470
Ambala	3	5	22	3	104	1	138
Bhiwani	7	7	29	3	144	2	192
Charkhi Dadri	1	3	15	0	76	0	95
Faridabad	2	4	16	7	58	1	88
Fatehabad	3	6	24	1	137	1	172
Gurugram	5	4	15	3	76	1	104
Hisar	6	9	39	4	200	1	259
Jhajjar	4	6	27	3	126	0	166
Jind	4	8	34	1	171	1	219
Kaithal	3	6	27	0	144	0	180
Karnal	4	7	33	7	151	1	203
Kurukshetra	2	6	22	1	119	1	151
Mahendragarh	2	7	25	0	120	1	155
Nuh	1	4	22	0	138	0	166
Palwal	2	5	20	0	89	0	116
Panchkula	3	2	9	13	51	0	78
Panipat	2	7	20	2	89	0	120
Rewari	2	5	21	0	112	0	140

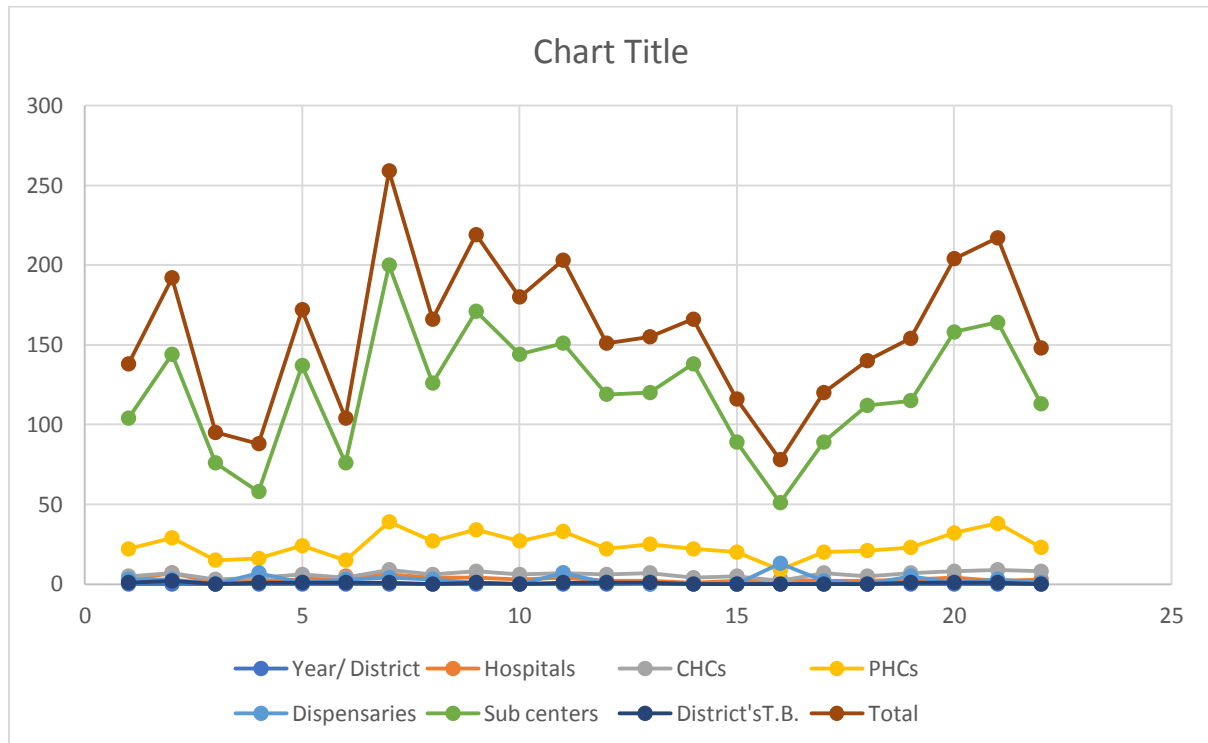


Rohtak	3	7	23	5	115	1	154
Sirsa	4	8	32	1	158	1	204
Sonipat	2	9	38	3	164	1	217
Yamunanagar	3	8	23	1	113	0	148

Source :- Statistical Abstract of Haryana, Various issues.

PHCs :- Primary Health centres

CHCs :- Community Health Centres , P :- Provisional



### Health Infrastructure of Haryana

Table 2 and figure 2 show the health infrastructure in Haryana throughout time. The number of hospitals has grown from 62 in 2017-18 to 68 in 2019-20. From 2017-18 to 2019-20, the number of CHCs and PHCs has been steadily

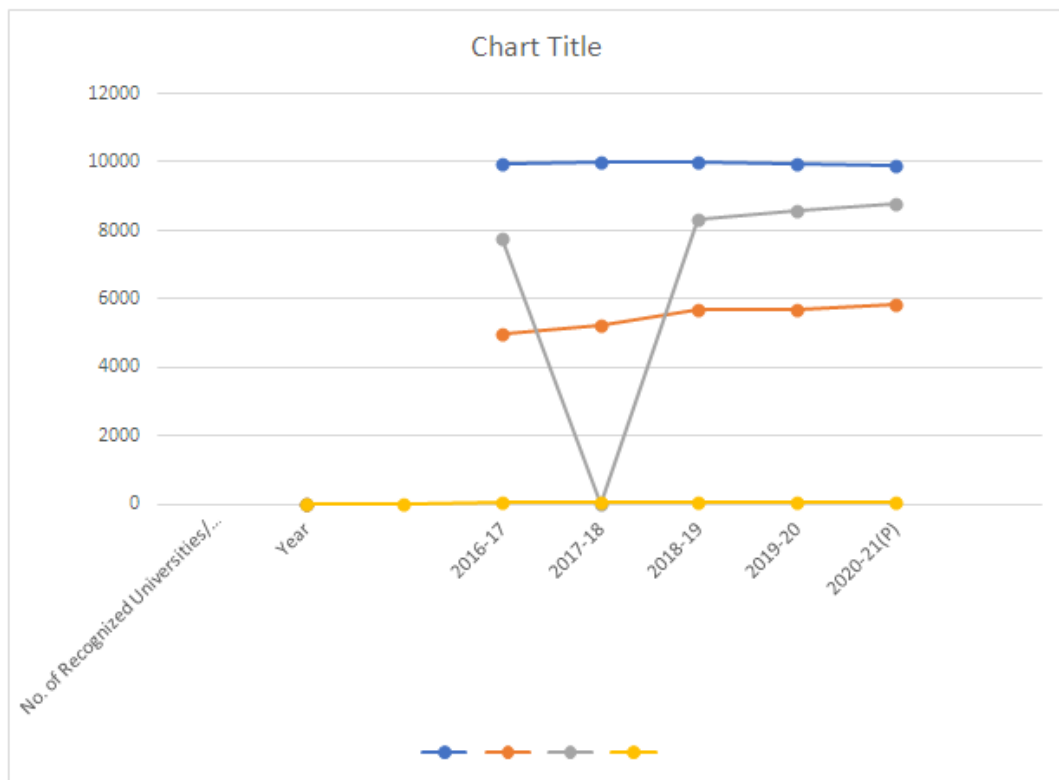
increasing. From 2017-18 to 2018-2019, the number of CHCs increased from 125 to 133, and the number of dispensaries increased from 63 to 64. The number of dispensaries has decreased somewhat from 64 to 63 in 2018-19 to 2019-20.

Table3. No. of Recognized Universities/ colleges/schools in Haryana

Year	No. of Primary schools	No. of Middle schools	No. of Senior sec. Schools	Universities ( All types)
2016-17	9968	4986	7782	43
2017-18	9974	5228	8204**	46
2018-19	9972	5673	8308	55
2019-20	9928	5704	8575	60
2020-21(P)	9895	5833	8782	60

Source :- Department of Technical/ Higher/ Secondary/ Elementary education, Haryana.

\*\* :- Information of all management school is as per U-DISE.



No. of Recognized academic institutions in Haryana

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**Main findings of this study:**

- From 2000-01 to 2018-19, the number of postoffices in Haryana increased from 2653 to 2694. From 2018-19 to 2019-20, the number of postoffices has remained consistent, rising from 2694 to 2694.
- From 2016-17 to 2020-21, the number of primary schools has decreased from 9968 to 9895.
- The number of middle schools has been steadily expanding from 4986 to 5833 in 2016-17 to 2020-21.
- The number of senior secondary schools continues to expand, from 7782 in 2016-17 to 8782 in 2020-21.
- From 2016-17 to 2019-20, the number of universities has increased from 43 to 60. The number of universities in 2019- 20 and 2020-21 remains the same.

- CHCs and PHCs increased in number from 62 to 68, 125 to 134, and 499 to 536 in 2017-18 to 2019-20 respectively.
- In the Bhiwani district, there are the most hospitals. Charkhi Dadri has the smallest number of hospitals.
- Hisar and Sonipat have the most CHCs. In Hisar and Sonipat, there are 9 hospitals.
- In Panchkula, the number of CHCs is the lowest. In Panchkula, there are two hospitals.
- Sonipat has the highest number of PHCs. In Sonipat, there are 38 Hospitals. And Panchkula district has the fewest PHCs. In Panchkula, there are nine PHCs.
- The Panchkula district has the most dispensaries. There are 13 dispensaries in total. There are no dispensaries in Charkhi Dadri, Kaithal, Mahendragarh, Nuh, Palwal, or Rewari. Hisar has the most sub centres.
- Hisar has a total of 200 sub centres. Panchkula has the fewest sub centres. In Panchkula, there are 51 sub centres.
- Bhiwani and Charkhi Dadri have the most District T. B. centres, while Jhajjar, Kaithal, Nuh, Palwal, Panchkula, Panipat, Rewari, and YamunaNagar have the least.



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