

## Population Effect On Resources Utilization In Patna Division

Amit Kumar Rajan\*

**INTRODUCTION** : Human resources are one of the best resources of the world, because “Men develop and utilize all the natural resources of any country. They help skilled human power for the production of agricultural output, industrial goods, trade transport, etc.”<sup>1</sup> Men utilized several resources of a country such as Land, water, soils, vegetation, Animals, minerals etc.”<sup>2</sup> Thus human resources (Population) are important resources of a geographical study of a country. “Population is the main geographical factors, elements and resources also of a country. It helps the economic and cultural as development of any country.”<sup>3</sup> The primary productive force of human society as a whole, is the workers the working people”.<sup>4</sup> Patna division has only two important resources : “the fertile alluvial plain and large population size and the development of the study region entirely depends upon scientific use of the land and proper development of human resources”.<sup>5</sup> The fertile land of the study area is not suitable for intensive use in the natural form because of the problems of flood, lack of irrigation facilities, lack of other agricultural infrastructure etc, in considerable areas and only limited areas provide ideal condition for varied use of the land. Similarly large population size also faces the problems of poor health, high growth rate, lark dependency on agricultural activities, poor participation in non-agricultural activities, mass people living in rural areas, etc. As such there is needed to take care of these two resources with priority. According to 2011 census Patna division has population of 6, 62,618 nearly 17.02% of the Bihar state. The population share of Patna division is 17.2% of the Bihar State. The total area of this division is about 16,868 sq. kms. In this division Patna district has more population 657, 72,804 (5.56%) among all the district of Patna division (Study region).

\* Dept. Of Geography

**Table: 2.1**  
**N Decennial Variations in Population, 1901-2011**

District	1901-1911	1911-1921	1921-1931	1931-1941	1941-1951	1951-1961	1961-1971	1971-1981	1981-1991	1991-2001	2001-2011
Patna	-0.96	-1.98	17.10	16.14	17.89	16.34	20.90	34.13	19.84	30.41	22.34
Nalanda	-0.96	-1.98	17.10	16.14	17.89	17.36	20.80	25.68	21.73	18.75	21.18
Bhojpur	-4.96	-2.62	9.88	16.81	15.45	16.05	20.46	20.19	20.25	25.12	21.27
Buxar	-4.96	-2.62	9.88	16.81	15.45	20.81	24.83	19.20	24.25	31.10	27.54
Rohtas	-4.96	-2.62	9.88	16.81	15.45	23.27	25.67	23.02	21.76	27.83	20.22
Kaimur (Bhabhau)	-4.96	-2.62	9.88	16.81	15.45	20.81	24.83	19.20	24.25	31.10	27.54

Source: Census of India 2011.

**SPATIAL VARIATION IN POPULATION:-** Analysis of the table 2.1 reveals fluctuations in the decennial growth rate of population of all districts of Patna division. During 1901-11, most of the districts have shown an increase in growth rates of their population the districts of Patna, Nalanda, Bhojpur, Buxar, Rohtas and Kaimur have shown a decrease in their population size all though the decrease has been very normal in case of Patna and Nalanda.

During the decade 1911-21, the population of the state and most of the districts of study region decreased. It is true that very slow growth rate was recorded from 1901 to 1921. From the decade 1921 to 1931 onwards no district in Patna division registered a negative growth rate. During this period population of these districts increased moderately. In this decades Patna and Nalanda districts were recorded high growth rate than other districts. From the decade 1931-41, almost all the districts had started of showing substantial increase in the growth rate of population. In these decades the table explains the equal growth rate in Patna division. During the decade 1941-51 Patna and Nalanda districts registered 17.89% of growth rate while Bhojpur, Buxar, Rohtas and Kaimur registered 15.45% growth rate. During the decade 1951-61.

During the decade 1951-61 Rohtas district registered 23.27%, while Buxar and Kaimur Both 20.81%, Nalanda 17.36%, Patna 16.34% and Bhojpur recorded 16.05% growth rate in the study area. In the decade 1961-71 Rohtas district increased very high 25.67% than Buxar and Kaimur 24.83% (Both), Patna 20.90% Bhojpur 20.46% and Nalanda 20.08% respectively.

From the decade 1971-81 the highest growth rate was found in Patna district (34.13%) while the lowest growth rate was Buxar and Kaimur (19.20%) respectively. It was the period of fast population growth in India and Bihar state. During the decade 1981-91 population

of Patna division, increased between 24.25 (Kaimur) and 19.84 (Patna). From the decade 1991-2001 recorded the growth rate of Buxar and Kaimur (31.10%), Patna (30.41%), Rohtas (27.83%), Bhojpur (25.12%) and Nalanda (18.75%). The lowest growth rate was found in Nalanda district. In the last decade of 2001-2011 Population of Patna division has increased between 27.54% to 20.22%. It is the period of moderate slow growth. The Patna division has recorded differential decennial variation in terms of rural and urban population. In the decade 2001-2011 the rural population increased by 23.90% while the urban population increased by 25.11% because of rural urban migration in Bihar State. District recording high growth in rural population include Kaimur, Buxar, Bhojpur, Rohtas and Nalanda district of the study area. The maximum urban growth rate is found in Patna and minimum growth rate are found in Buxar and Kaimur districts of study area.

**Distribution of Population:**

“The Distribution of Population as the Essential Geographical Expression”.<sup>6</sup>Trewartha States, “...in the science of Geography... the central theme of which is a real differentiation, the Dynamic and Pivotal element is human population... From which all the other elements are observed and from which they all singly and collectively, derive significance and meaning”<sup>7</sup>

The analysis of the table 2.2 reveals the percentage share land and population of each district. The Patna division having comparatively higher percentage of population. Than their land share include Patna having 3.40% land share and 5.56%. Population share, Nalanda having 2.51 lands and 2.77% population,

**Table 2.2  
Distribution of Population**

Sl. No.	District	Area Sq. Km.	% of Total Area	Population 2011	% of Total Population of Bihar
1.	Patna	3202	3.40	5,772,804	5.56
2.	Nalanda	2355	2.51	2,872,523	2.77
3.	Bhojpur	2395	2.54	2,720,155	2.62
4.	Rohats	3881	4.12	2,962,593	2.85
5.	Buxar	1703	1.81	1,707,643	1.65
6.	Kaimur (Bhabhua)	3332	3.54	1,626,900	1.57
	Patna Division	16,868	17.92	176,62,618	17.02

Source: Provisional Population Totals 2011 of Bihar.

**Density of Population:**The table also reveals changes in density of Population from 1991 to 2011 which mainly depends on the rate of population growth and the land utilization pattern. Accordingly the density varies from one area to another. In year 2001 Patna district was most densely populated (1474). Even in the year 1991, this district had the same positions (1130).

**Table 2.3  
Density of Population**

Sl. No.	District	Density of Population Per Sq. Km.			Ranking in 2011
		1991	2001	2011	
1.	Patna	1130	1474	1803	1
2.	Nalanda	848	1007	1220	2
3.	Bhojpur	725	937	1136	3
4.	Rohats	670	823	1003	4
5.	Buxar	498	635	763	5
6.	Kaimur (Bhabhau)	292	383	488	6
	Patna Division	694	877	1069	

Source: Provisional Population Totals 2011 of Bihar.

**Age Group:**“The study of age structure provides idea of working population and dependents of any geographical region.”<sup>8</sup> Childs are the future of a nation. From this point of view the Patna division has comparatively higher percentage of dependents especially up to the age of 14 years. In this age group of 0 to 6year the Patna division has 17.00% population in 2011 Census.

As regards the distribution of population below the age of 5 years there is a spatial variation. Districts having above 17% and less than 18% include Kaimur (17.94%) and Nalanda (17.44%) districts of the study region. Districts having over 17% and less than 16% population below the age of 6 years include Bhojpur (16.80), Buxar (16.80) and Rohtas (16.68%), District has been population below the age of 6 years less than 16% include Patna district 15.69% of the study region.

**Table 2.4  
Population of Child Population (0 to 6 years) 2011**

Sl. No.	District	Person			Male			Female		
		Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
1.	Patna	15.69	18.17	12.47	15.63	18.03	12.54	15.75	18.32	12.39
2.	Nalanda	17.44	17.85	15.27	17.36	17.77	15.24	17.53	17.75	15.30
3.	Bhojpur	16.80	17.11	13.94	16.78	17.09	13.91	16.83	17.13	13.97
4.	Buxar	16.80	17.11	13.94	16.78	17.09	13.91	16.83	17.13	13.97
5.	Rohtas	16.68	17.05	14.22	16.55	16.96	14.13	16.75	17.15	14.32
6.	Kaimur (Bhabhua)	17.94	18.10	13.96	17.75	17.91	13.98	14.14	18.31	13.94
	Patna Division	17.00	18.00	14.00	17.00	17.47	14.00	16.30	18.00	14.00

As regards the distribution of population below the age of 6 years there are spatial variations. Rural urban areas of Patna division have also considerable difference in the share of population below the age of 6 years. Districts of Patna division having over 17% population below the age of 6 years included Patna (18.17%), Kaimur (18.10%), Nalanda (17.85%), Bhojpur (17.11%), Buxar (17.11%), and Bhojpur (17.11%). At the same time in urban areas have higher percentage of child Population are found in Nalanda (15.27%), Rohtas (14.22%), Kaimur (13.96%), Bhojpur (13.94%), Buxar (13.94%). In Patna district 12.47% child population are found. Boys below the age of 6 years over 17% populations include Kaimur (17.75%) and Nalanda (17.36%). Boys having shared in Population over 16% and less than 17% include Bhojpur (16.78%), Buxar (16.78%) and Rohtas (16.55%). In Patna district 15.63% of boys at the age below 6 years are found. In Rural areas the highest percentage of boys is found in Patna district (18.03%) being followed Kaimur (17.91%), Nalanda (17.77%), Bhojpur (17.09%), Buxar (17.09%) and Rohtas (16.96%). In urban areas below 6 years population of male Childs are found highest in Nalanda (15.24%) district, being followed Rohtas (14.13%), Kaimur (13.98%), Bhojpur (13.91%), Buxar (13.91%) and Patna (12.54%).

The table 2.6 reveals population below the age of 6 years. In some districts of Patna division the percentage of female child is better than, the share of male child. The highest percentage has been noted in Nalanda (17.53%), Bhojpur (16.83%), Buxar (16.83%), Rohtas (16.75%), Buxar (16.83%), Rohtas (16.75%), Patna (15.76%) and Kaimur (14.14%).

Population below the age of 6 years in rural areas has relatively higher percentage than the urban areas. At the same time in rural area Patna, Kaimur, Nalanda, Rohtas, Bhojpur and Buxar the percentage of female child are found 18.33%, 18.31%, 17.75%, 17.15%, 17.13%, and 17.13% respectively. The table 2.6 reveals the percentage of child population in urban areas. The highest percentage of female child population has been noted in Nalanda (15.30%) and Rohtas (14.32%), district of the Study region. In Bhojpur (13.97%), Buxar (13.97%), Kaimur (13.94%) and Patna district (12.39%) have been noted relatively less Female child population in Patna division.

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