

## **POPULATION GROWTH IN PURULIA DISTRICT OF WEST BENGAL: A GEOGRAPHICAL ANALYSIS**

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### ***Abstract***

*In a country or region, how many people live and the total number of people is called total human population of that particular country. The development of a region depends upon human resource of that region Thus it is important to know the dynamics of population. Population growth rate depend on three major factors, these are birth rate, death rate and migration. The country, where birth rate and in-migration is higher than death rate population will increase, on the other hand, where death rate is greater than birth rate and migration the population growth rate will low. Present paper analysed the spatial and temporal pattern of growth rate of population in Purulia district during the period of 1901-2011. The main objective in this paper is to understand the population growth rate of Purulia district, west Bengal. For this study secondary data were used and various statistical and cartographic techniques were used to analyze the obtained data. The study finds that the spatial and temporal variation of growth rate exists in this area.*

*Key words: Decadal growth, rural population, urban population*

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**Introduction:**

India is one of the most populous countries in the world. Though, our country covers only 2.4 per cent of the land area of the world, it is the home of more than 17.64 per cent of the world's population. About three-fourth of our total population is living in rural area, indicating we are basically depending on agriculture and its allied activities. Man is the creator of all wealth and without man, all other resources remain idle, said Karl Marx<sup>1</sup>. Population of a country or region is the total number of people who live in the country. The size of population keeps on changing, it increases or decreases over time and space. The major factors affecting population are Birth, Death and Migration. Birth increases the number of population while Death decreases the number of population. Migration also causes population change. Internal migration does not make any change but international migration makes the regional differences in the size of population. The rapid growth of population is one of the major reasons for different types of problems in a region or country. In Malthus's theory he mentioned that population increases in a geometrical ratio, on the other hand food grain production increases in an arithmetic ratio<sup>2</sup>. The vast population region or countries directly affects lack of resources, shortage of food, water availability, shortage of electricity supply etc. In respect of this point of view, the present study of population growth in Purulia district has been undertaken.

**Objectives:**

The major objectives of this paper are to find out the population growth, rural and urban population growth, decadal growth of different blocks, spatial variation in population in Purulia district of West Bengal, India.

**Database and Methodology:**

The study mostly relies on secondary data collected from District Statistical Department of Purulia, Primary Census Abstract of Purulia and Census Handbook of Purulia District. For the present investigation, District is selected as in general and Blocks in particular. The collected data were analyzed by various statistical and cartographic techniques. The actual growth rate of a specific decade is obtained by dividing the difference between the populations of two decades. In order to assess the population growth, the following formula was used.

$$P_g = \frac{P_a - P_b}{P_b} \times 100$$

Where,  $P_g$  = The population Growth rate

$P_a$  = The population of next year

$P_b$  = The population base year and 100 is the percentage value

### Study Area:

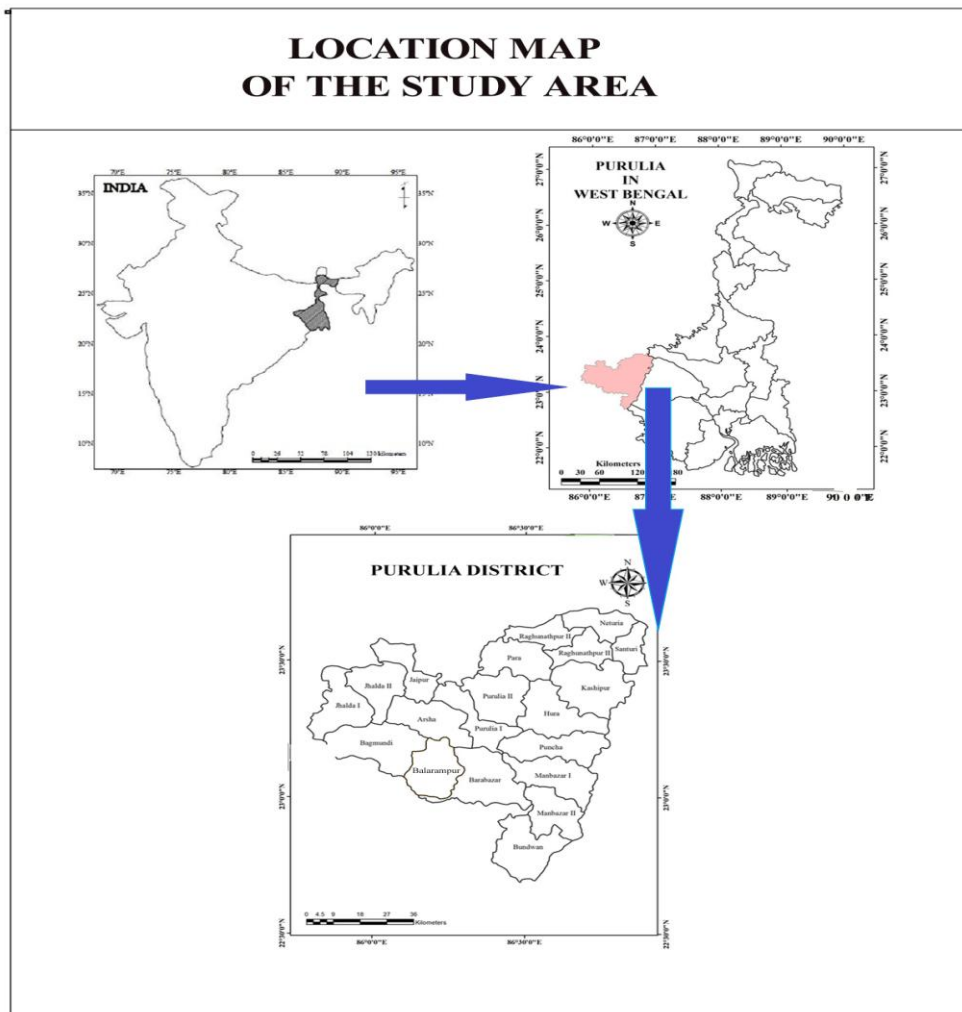
The present study deals with the geographical perspectives of the population growth in Purulia district. Purulia comes as a district of west Bengal in 1956 based on the recommendation of the States Reorganization Committee<sup>3</sup>. There are various opinions about the origin of the name Purulia. Purulia is also called 'Purulya', 'Purulia' and 'Purulha'. Michel Madhusudan called it as 'Purulya'<sup>3</sup>. The word 'Pur' in Sanskrit means city or locality. According to one group, the name has its origin in it. According to another group 'Purul' or 'Poral' is one kind of fruit. Parul is one kind of tree, so the name 'Purulia' may come from it. In west Bengal Purulia is situated in western side with all India importance because of its tropical location. This district is located between 22°42'35" and 23°42'0" north latitude and 85°49'49" and 86°54'37" east longitude. Midnapur, Bankura and Burdwan district of the west Bengal and Dhanbad, Bokaro, Hazaribagh, Ranchi, West Singhbhum district of Jharkhand state bound this district. The total geographical area of the district 6259 sq.kms, at present out of which the urban area is 79.37 sq .kms (1.27 percent) and rural area is 6179.63 sq. kms (98.73 per cent). The district headquarter is situated at Purulia town. There is a four sub-divisions under Purulia district namely Purulia Sadar, Manbazer, Jhalda, Raghunathpur. There are 20 police stations, 20 Community development Blocks, 3 Municipalities. Purulia is a drought prone district. The district has a sub-tropical climate and characterized by high evaporation and low precipitation. Temperature is very high in summer and low in winter-it varies from 2 ° in winter to 35° in summer. The average annual rainfall varies between 1100 to 1500 mm<sup>4</sup>. The main river passing through or bordering the district are Kangsabati, Kumari, Darakeswar, Subarnarekha and Damodar. The natural forests of the district are mostly of mixed type and concentrated mainly on south-western part of the district covering Ajodhya Hill and Panchet hill in the north-east. Cultivation of this district is predominantly mono-crop. Paddy is the main crop of the district. The crops are mostly depending upon rainfall, generally with low fertilizer consumption per unit area. Thus, per hectore Production is also low as compared to other district of west Bengal. on the

view of tourist place , Purulia district is the destination of most travellers from the state and also from another state. The attractive place of the district are Ajodhya hills, Matha and Kuilapal forests, Jaychandi Pahar, Panchakote royal palace, Duarsini hills, Sahab Bandh etc.

Figure 1 Location of the study area

### Growth of Population:

To know the growth of population is important because it has direct connection with utilization of resource. A country or region Birth rate and Death rate is depend up on medical facility ,life style, income, literacy etc. For present study, the growth of population has been taken in to consideration for the last eleven decades that is form 1901 to 2011. The data (table 1) reveals that the trends of general rural and urban growth rate vary from rural to urban area during the time span of 110 years (1901-2011). Here, we seen the urban population growth rate higher than rural



population growth rate, except, during, 1921-1931. But there are remarkable ups and downs in the urban population growth rate is more than rural population growth rate. So, according to Demographic transition theory, Purulia district is on third stage i.e. Late Transition Stage.

During the period of 1901-2011, population growth rates some time increase rapidly and some decades increase slowly. The average population growth rate of the Purulia district during 1901-2011 is 13.03 percent. So, based on this data (table 1), the population growth rate of Purulia district is divided into three Transition phase, these are-

Table 1-Purulia District: Decadal Growth Rate of Population

Sl.No	Decade	Rural population growth(%)	Urban population growth(%)	Total population growth(%)
1	1901-1911	13.70	-	13.70
2	1911-1921	-9.86	-	-5.97
3	1921-1931	16.92	16.41	16.90
4	1931-1941	9.51	53.0	11.94
5	1941-1951	6.84	28.09	7.43
6	1951-1961	16.22	17.9	16.3
7	1961-1971	16.0	43.1	17.85
8	1971-1981	14.7	26.0	15.7
9	1981-1991	19.4	25.9	20.0
10	1991-2001	13.2	21.63	14.0
11	2001-2011	12.1	46.2	15.5

Source: Census of India, 1901-2011

#### **Pre-Transition Equilibrium stage (period of 1901-1951):**

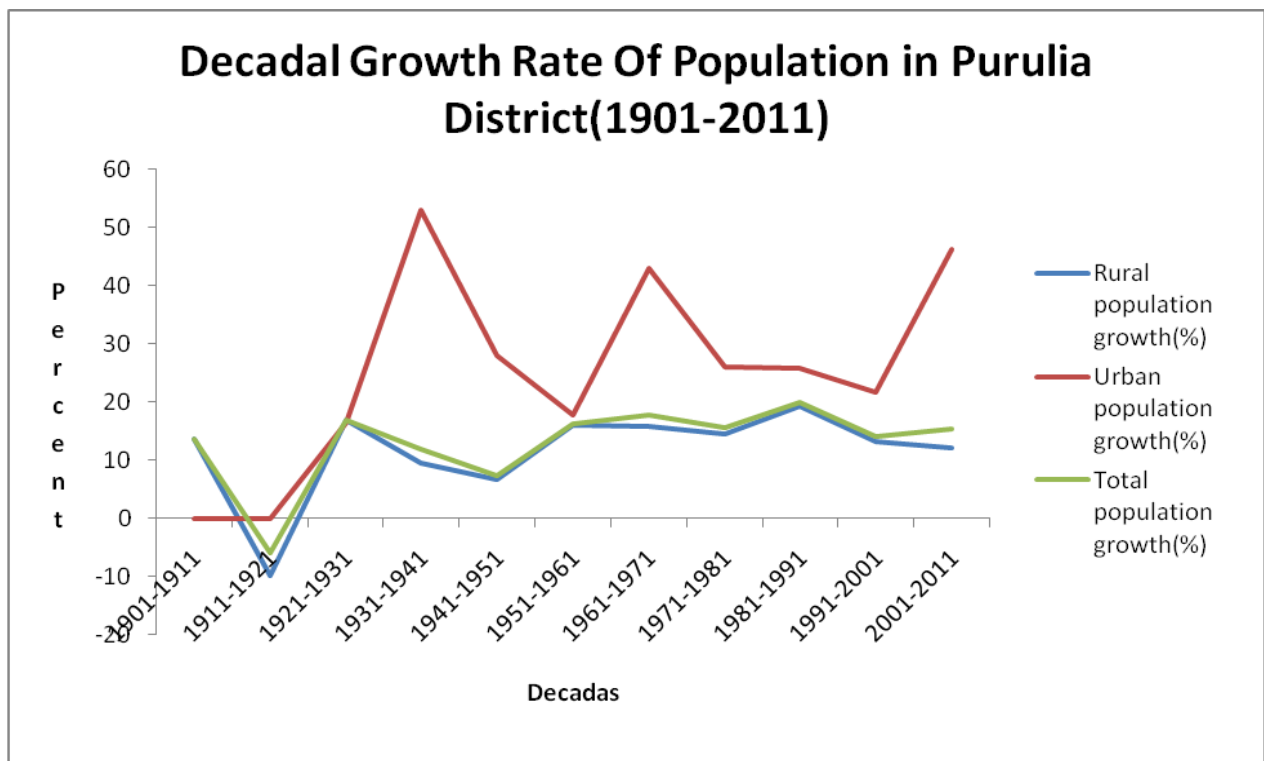
In the period of (1901-1951) birth rate and death rate was high. So, this period may call as Pre-Transition Equilibrium stage. In this phase average population growth rate was 8.8 per cent. The average rural population growth was 7.42 per cent. From 1921 to 1951 the average urban population growth rate 32.5 per cent. In 1921, Purulia district recorded negative population

growth rate -5.97 per cent .As a result of which this year (1921) may call as “Demographic divide” of Purulia district. The high mortality during this period was due to impact of First World War and low availability of medical facilities.

### Early Transition stage (1951-1991):

The characteristic of early transition stage is high birth rate and low death rate. This results increase in population. If we see the time period 1951-1991 ,the population growth rate was highly increased, like that between 1951 -1961 population growth rate was 16.3 per cent and between 1981 to 1991 population growth rate was 20 per cent. In this phase, the overall population increased 17.46 per cent and increase of urban population was 28.22 per cent as well as increase of rural population was 16.58 per cent. The reason for increase in population was gradual decline of mortality rate. The mortality rate declines due to more availability of medical facilities, increase in literacy and an improvement of agricultural activities throughout the district.

Figure – 1 Decadal growth rate of population in Purulia district (1901-2011)



Source: Compiled by authors, 2018

**Late Transition stage (1991-2011):**

Birth rate and death rate is low, it is the characteristics of this stage. The population growth rate decreased than early transition stage. In the period of 1991-2001 the growth rate of population was 14 per cent and in between 2001-2011 growth rates was 15.5 per cent. On the other hand average population growth rate was 14.75 per cent; here rural population growth rate was 12.65 per cent and urban population growth rate was 33.92 per cent. In 1989 birth rate of Purulia district was 28.50 percent and death rate was 10.60 percent (District Annual plan book, 1909-91, PD, WB, P.292). But in the year of 2011 the birth rate was 21.32 percent and death rate was 8.4 per cent<sup>5</sup>. From this, it can be concluded that the growth rate of population through these decades declined, so this period may call as Late Transition stage. The reason behind decline of growth rate of population is socio-economic development of the people of Purulia district.

Table 2- Blocks wise Decadal Growth Rate (2001-2011)

Sl.No	Name Of the Blocks	Total Population(2001)	Total Population(2011)	Decadal Growth(%)
1	Jaipur	111768	133349	19.31
2	Purulia-ii	142707	169488	18.77
3	Para	174620	200621	14.89
4	Ragunathpur-i	99226	113790	14.68
5	Ragunathpur-ii	103786	117060	13.46
6	Neturia	90649	101427	11.89
7	Saturi	69587	78515	12.83
8	Kashipur	187038	200083	6.97
9	Hura	127443	143575	12.66
10	Purulia-i	125318	151188	20.64
11	Puncha	108129	123855	14.54
12	Arsha	123148	154736	19.81
13	Jhalda-i	115748	137143	18.48

14	Jhalda-ii	123714	148156	19.76
15	Bagmundi	112448	135579	20.57
16	Balarampur	118102	137950	16.81
17	Barabazar	146927	170564	16.09
18	Manbazar-i	127601	154071	20.74
19	Manbazar-ii	85253	97164	13.97
20	Bundwan	83694	94929	13.42
21	Jhalda(M)	17872	19544	9.36
22	Ragunathpur(M)	21932	25561	16.55
23	Purulia(M)	113806	121067	6.38

Source: Census of India, 2011

### Spatial Pattern of Population Growth:

Spatial Pattern of Population is the most significant to understand the dynamics of population. Purulia district had 15.5 per cent of growth rate of population during 2001-2011. But, spatial pattern of growth rate varies enormously within the district. The block wise entire district has been classified into three sub-regions. One is High population growth region another is medium population growth region and last one is low population growth region. This classification of sub-region of population growth is based on decadal growth of 2001 to 2011 census.

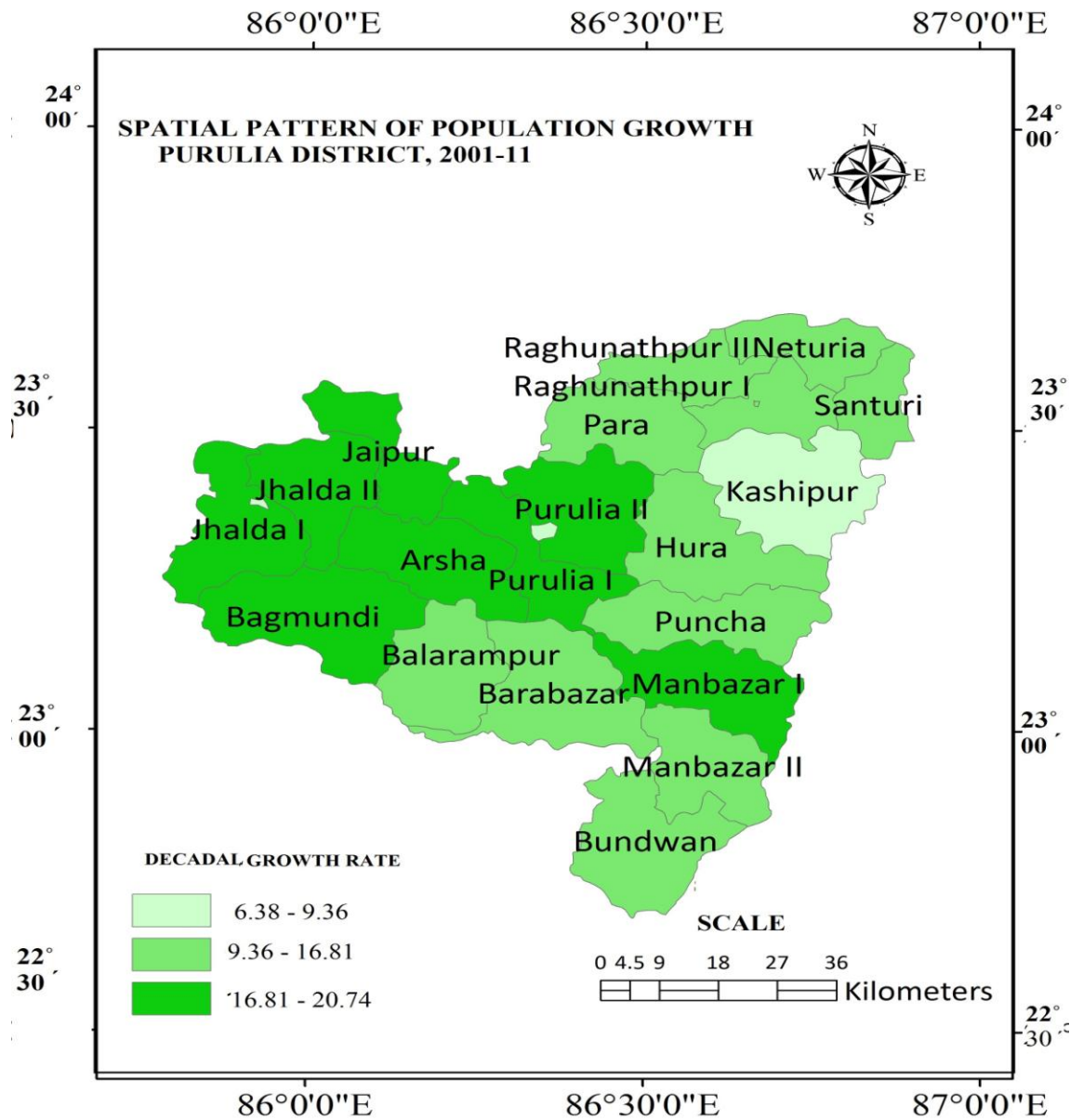
Table 3-Blocks wise Population Growth Rate during 2001-2011

Sl.No	Population growth region	No. of Blocks	Name of The Blocks
1	High Population Growth Region(above 15percent)	11	Jaipur,Purulia-II,Purulia-II,Jhalda-I,Arsha,Jhalda-II,Balarampur,Bagmundi,Barabazar,Majbazar-I,Ragunathpur(M)
2	Medium Population Growth Region(11-15 per cent)	9	Para,Ragunathpur-I,Ragunathpur-II,Neturia,Saturi,Hura,Puncha,Manbazar-II,Bundwan,
3	Low Population Growth Region(below 11 percent)	3	Kashipur,jhalda(M),Purulia(M)

Source: Compiled by authors



Figure -2- Spatial pattern of population growth, 2001-11

**(i) High Population Growth Rate:**

Within the district, the Jaipur (19.31%), Purulia-ii (18.77%), Purulia-i (20.64%), Jhalda-i (18.48%), Jhalda-ii (19.76%), Bagmundi (20.57%), Balarampur (16.81%), Manbazar-i (20.74%) and Raghunathpur-M (16.55%) and Purulia-I (20.64%) were recorded higher growth rate.

**(ii) Medium Population Growth Rate:**

In this sub-region, the blocks are Para(14.89%),Ragunathpur-ii(13.46%),Nituria(11.89%),Saturni(12.83%),Hura(12.66%),Puncha (14.54%), Manbazar-ii(13.97%),Bundwan(13.42%),Ragunathpur-ii(13.46%).These blocks population growth is near to the average growth of Purulia district. Para block had the higher growth of population among others blocks in this sub-region.

**(iii) Low Population Growth Rate:**

In this region two municipal area and one block are situated. These are Purulia-M(6.38%),Jhalda-M(9.36%) and Kashipur (6.97%).The reason of low growth of population is high literacy rate [ Purulia-M(77.10%),Kashipur(64.20%),Jhalda-M(73.10%)],good medical facilities, family planning and low marriage at mature age.

**Conclusion:**

The present study concludes that, in 1921 after the negative growth rate of population it increase gradually. From 1941-1951 it decreases but after that the population growth rate has been tremendously increase between 1981 to 1991.The main reason behind this is that the constant birth rate and decline of death rate form 1991 to2011 the population growth rate decreases slowly and gradually because with death rate ,the birth rate also declines. The highest growth rate has been seen in Manbazar-I(20.74%) and lowest has been seen in Purulia-M(6.38%) during 2001 to 2011.The large size of population concentrated in the following blocks-Jaipur,Purulia-I,Purulia-II,Jhalda-I,Jhalda-II,Arsha,Bagmundi,Balarampur,Barabazar,Manbazar-I,Ragunathpur-M. Para, Nituria, Saturni, Ragunathpur-I,Hura,Puncha,Manbazar-II,Bandwan,Ragunathpur-II are the medium population growth rate region. On the other hand,Low population growth rate can be seen in Purulia Municipality,Jhalda-M and Kashipur.

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