

## ANALYSIS OF DISTRIBUTION AND CHANGES IN SEX-STRUCTURE OF RANCHI DISTRICT (JHARKHAND)

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### ABSTRACT

In population geography, Sex-Structure is one of the most important factors of population composition and this is studied as Biological composition of any population. Sex is an easily identifiable characteristic. The numerical measurement of sex composition of a population is known as sex ratio. Sex ratio is considered as an important index of economy prevailing in an area and is useful tool for regional analysis. For the study of the Sex-Structure of any population the two important measures are generally adopted as the percentage of males in the population and second, the sex-ratio. The latter is more frequently used in the study of population. Fertility signifies the actual incidence of live births in a population. It is an important demographic determinant of Sex-Structure of a population. The age and sex specific incidence of death has a direct effect on the overall sex structure of a population. Migration is the third important process which may change the sex composition of a population. The meaning of sex-composition or Sex-Structure is to know about the ratio of males and females in any population. It is very necessary for population geographers to know about the sex ratio of any population because balance of any society may be depends upon it's balanced sex ratio. But, there are different reason which are responsible for unbalanced sex ratio such as nature of males and females. Because this nature of males and females are acts sometimes as complementary with each other and sometimes acts opposite against each other. Economy of any region can be understand through the sex ratio of that region. Sex-ratio is one of the most important tool for analysis of regional differences. The sex ratio of the total population at a point of time is known as "The overall sex ratio." The sex-ratio is also shown the socio-economic conditions of any region. It also affects the demographic structure of any region. Sex-ratio is calculated differently in different countries. In India, the sexratio is calculated in terms of number of Females per thousand males. Sex-ratio can be measured from the time of conception to the time of death. This study gives us description and analysis about Sex-Structure and it's distribution and changes in Ranchi district. The distribution and changes of Sex-Structure of Ranchi district affects total population of the district particularly in Rural and Urban areas. The Sex-Structure also influenced the Socio-Economic conditions of the Ranchi district gradually. The purpose of this study is to analyze the distribution and changes in Sex-Structure. The present study is an empirical research conducted in Ranchi district (Jharkhand) which is based on secondary data. In this paper an attempt has been made to throw light on the very important issues of analysing distribution and changes in Sex-Structure.

**Keywords:** - Sex composition, Sex-ratio, Fertility, Birth Rate, Mortality, and Migration.

### 1.0 INTRODUCTION

Sex-structure is one of the most important factor of population composition in population geography. Sex is an easily identifiable characteristics. The data on sex are also easily obtained. The numerical measurement of sex composition of a population is known as sex ratio. Sex ratio is considered as an important index of economy prevailing in an area and is useful tool for regional analysis. "The proportion of the two sexes is fundamental to the geographic analysis of an area because it is not only an important feature of the landscape but it also influences the other demographic elements significantly and as such provides an additional means for analysing the regional landscape" (Trewartha, 1953).

Shyrock (1976, P. 105) observed, "The profound effect of the proportion of the two sexes upon the other demographic elements like population growth, marriage rates, occupational structure has also been well recognised."

Franklin (1956, P. 168) rightly observes that "Sex ratio was an index of economy prevailing in an area and was useful tool for regional analysis." Sex is one such attribute of population, which can be observed from the physical appearance. The data on sex composition are considered to be most reliable. The main problem relating to the data on sex is concerned with some degree of under enumeration, particularly of females. "There are some countries where female children below the age of five years may not be reported due to prevailing high mortality rate among them, while there may, be countries where the young boys may be reported as girls as to save them from evil spirits" (Shyrock, 1976, P. 106).

The two most significant measures are generally adopted for the study of the sex-structure of any population, such as the percentage of males in the population and the sex ratio. But the sex-ratio is more frequently used in the study, of population. Fertility signifies the actual incidence of live births in a population. It is an important demographic determinant of Sex-structure of a population. The age and sex specific incidence of death has a direct effect on the overall sex-structure of a population. Migration is the third important process which may change the composition of a population.

The meaning of sex composition is to know about the ratio of males and females in any population. It is very necessary for population geographers to know about the sex ratio of any population because balance of any society may be depends upon it's balanced sex ratio. But there are different reasons which are reponsible for unbalanced sex ratio such as nature of males and females. Because this nature of males and females are acts sometimes as complementary with each other and sometimes acts oposite against each other. Economy of any region can be understand through the sex ratio of that region. Sex-ratio is one of the most important tool for analysis of regional differences. The sex ratio of the total population at a point of time is known as "the overall sex ratio". Sex-ratio is also shown the socio-economic condition of any region. It also affects the demograhic structure of any region.

Sex ratio is calculated differently in different countries. In India, the sex ratio is calculated in terms of number of Females per thousand males. "Excess of male over female population is the characteristics of urban landscape where males from different parts of the country flow to bring disparity in the sex ratio" (Singh and Kumar, 1970, P. 85).

During the study of sex-structure, sex-ratio can be measured from the time of conception to the time of death. Sex-ratio may be divided into three types on the basis of growth stage or time.

These are such as Primary, Secondary and Tertiary Sex-ratios. The primary sex-ratio considered as the ratio between males and females at the time of conception. The ratio between males and females at the time of birth is known as secondary sex-ratio. It is estimated that more males are born than the females in human beings, throughout the world. There are two basic determinants of secondary sex ratio are such as the differences in the primary sex ratio, and the differences in the prenatal mortality of males and females. The tertiary sex ratio is also known as the ratio between males and females at the time of enumeration. Tertiary sex ratio is the natural sex ratio which is calculated differently in different countries. The demographers and geographers are concerned more with the temporal and regional variations in the tertiary sex ratio. Tertiary sex ratio is calculated by different countries of the world in every census year. There are different formulas are implies in calculation of tertiary sex ratio of different countries. There are different factors which are affecting the sex ratio such as differential birth rate, death rate, migration, careless census and other factors like wars, epidemics, natural calamities etc.

The spatial distribution of population in the world is not ubiquitous. There are highly regional contrast in population distribution giving highly variable densities to the different parts of the earth's surface. These regional disparities in the population distribution and density are either governed or affected by a variety of physical, economic, social, cultural and political factors. Thus, all the factors affecting the distribution and density of population may broadly classified into four major categories: Physical, economic, socio-cultural, and demographic factors. So, distribution and density of sex structure in Ranchi district are shown by Dot method on map and Choropleth map (for density) in this research paper. In this paper changes in the sex structure of Ranchi district are shown by calculation of absolute changes and percentage changes in male and female population of Ranchi district. Thus, distribution and changes in Sex structure of Ranchi district affects total population of the district and it also helps in analysis of Regional differences.

## 1.1 Objectives

1. To analyze the distribution of sex structure in Ranchi district through the analytical methods like Percentage distribution method and dot methods.
2. To analyze the changes in the sex structure of the Ranchi district through analytical method like calculation of and Percentage (in %) changes of male and female population.

## 1.2 Study Area

Ranchi district is situated at central location in the map of Jharkhand state (India). The origin of Ranchi district has ancient and complex account. The present shape of Ranchi district in the political maps of Jharkhand comes into light in 1983. The area under study in Ranchi district ranks 1st in terms of population. The geographical Extent of Ranchi district are spread between Latitude 22034' north to 23043' North and Longitudes 84053'20" East to 85054' east. Geographical Area of Ranchi district is 5097 square kilometre. The tropic of cancer at 23½0 north passes through Ranchi district at Ormanjhi.

The average altitude of Ranchi is 600m above the mean sea level with undulating land features. The total population of Ranchi district is 2,914,253 (29.14 Lakh) where 1,494,937 males and 1,419,316 Females population during census year 2011. In 2011, the population growth rate of

Ranchi district is 24.00 (24%). In terms of population density, Ranchi is the 7th densely populated district in the state with 572 persons per square Kilometer. The sex ratio of this district is 949 Females per thousand males (Census 2011). The percentage of urban population of Ranchi district are 43.14% percent.

During the year 2000 Ranchi which has been the headquarter of Ranchi district, became the capital city of the state. East-West maximum width of the district is above 100 Km. while North-South maximum length of the district is about 130 Km.

At Recent time, Ranchi district is divided into two sub-divisions Ranchi and Bundu, Ranchi district consists of 18 C.D. Blocks (Community Development Blocks) and 303 Panchayats. Under Ranchi Sub-divisions, there are 14 C.D. Blocks and Bundu Sub-Division consists of 4 C.D. blocks. It has 1311 Village and 15 Towns (Census, 2011).It can be seen in Figure 1.1(a) and Figure 1.1(b).

The Ranchi district is bounded by the district of Ramgarh, Hazaribagh and Chatra districts in the North, Khunti district in the South, Latehar, Lohardaga and Gumla district in the west and Saraikela, Kharsawan district and West Bengal state in the East.

## LOCATION MAP

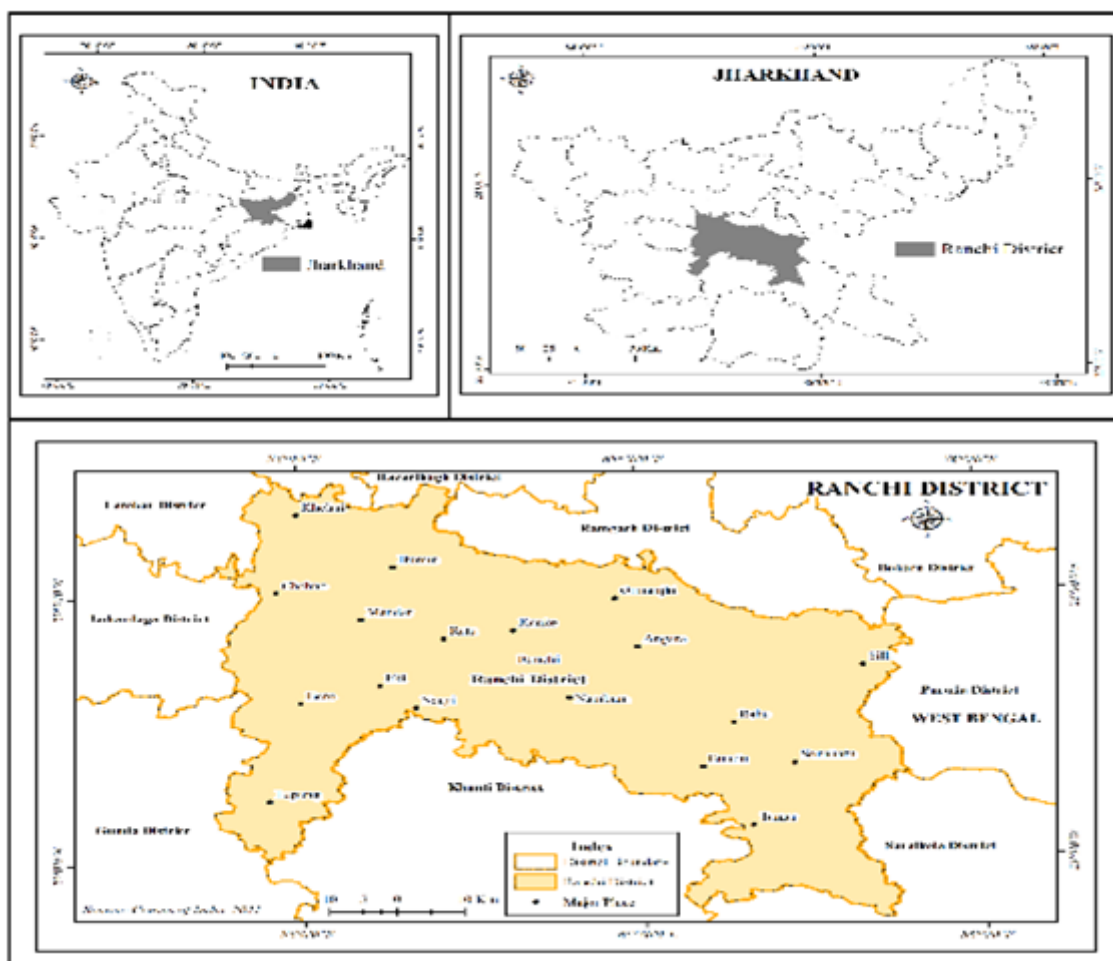


Figure 1.1 (a)

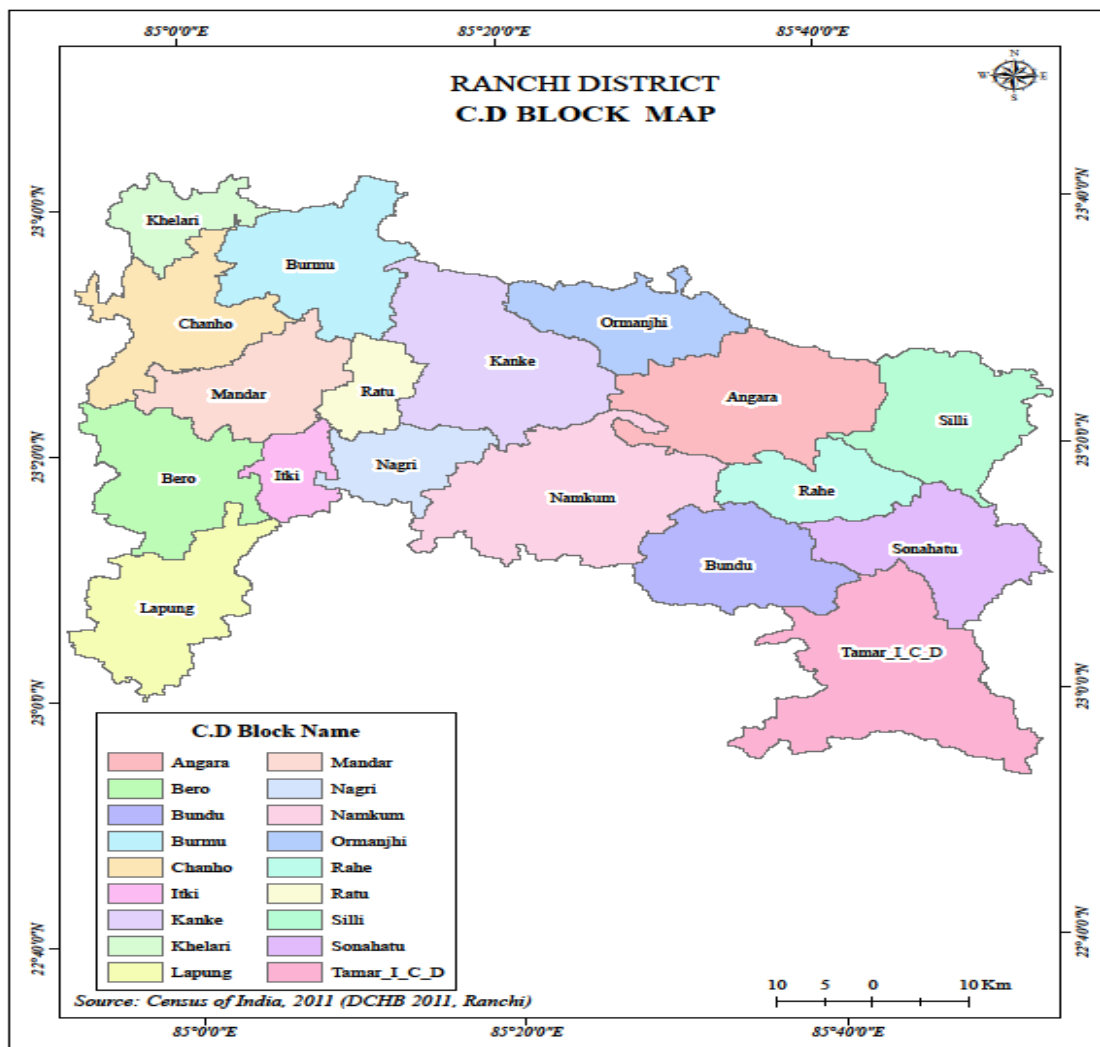


Figure 1.1(b)

## 2.0 METHODOLOGY

The paper attempts to analyze distribution and changes in Sex-structure of Ranchi district. Present study is based on secondary data. It will be calculated and tabulated with the assistance of suitable statistical methods and represented by charts and diagrams.

Finally, this paper would give concrete suggestions which would be beneficial for analyzing distribution and changes in sex-structure. Many types of planning like planning of community institution and services, planning for socio-economic development of any region, manpower supply etc, are guided by the sex structure of the population. Sex-ratio is the most significant tool for analysis of regional differences.

## 2.1 Statistical Methods

The statistical methods used in the research paper are classification of total population of Ranchi district into Male and Female population in absolute numbers at block level. The method of calculation of block wise sex-ratio of Ranchi district which shows the numbers of Females per thousand males in given region are also applied in this paper. The dot method and Percentage distribution method also applied in this research paper for analyzing distribution of male and female population in the map of the district.

The other methods that taken into consideration of this research paper are calculation of Percentage Change (in %) of population of the district for different decades and these changes are also calculated for males and females separately at block level. This method helps for analyzing changes in sex structure of Ranchi districts.

Formula for sex Ratio:

There are different formulae applied for calculation of sex ratio in various countries of the world. In India, the formula applied for calculation of sex ratio is as follows:

Sex Ratio= (Total population of females/ Total population of males)\* 1000

For Dot methods\* assumptions are as follows

Let us assume 1 dot = 2500 Peoples

\*Changes in the sex structure of the Ranchi Districts can be calculated for males and females population. The formula applied for calculation of changes in population is as follows

1. Absolute change= (Population of recent census year- Population of previous census Year)  
 $P_2 - P_1$

2 The formula for obtaining the percentage change in the population size is

Percentage change % =  $[(P_2 - P_1) / P_1] * 100$

Where  $P_1$  and  $P_2$  denote the Population figures of earlier and later points of time.

- A population changes are usually measured by finding out the differences in the population size as obtained from two or more census operations in any country or a part of it. The absolute no. of population change is obtained by subtracting the population of an earlier date from that of the later date.
- The relative change or % change is calculated by dividing the absolute change by the population at an earlier census date.
- It is customary to denote the relative change in the percentage change; in that case the change is multiplied by 100.
- The above same formulas are also applied for male and female population separately.

## 2.2 Brief Discussion

**Population Distribution of Ranchi District, 2011:-**

Table 1.1 reveals that the total Population of Ranchi district in 2011 are 2,914,253 persons and total male population are 1,494,937 persons and 1,419,316 females respectively. The highest population are found in Kanke block as 1,317,499 persons and male-female population are also high in Kanke block as 684,804 persons as males and 632,695 females. The lowest population are found in Itki block in 2011 as 50,058 persons and the lowest male-female population are also found in this block as 25,234 persons as males and 24,824 females in the same decade.

According to Table 1.1, the Block-wise total population, male and female population of Ranchi district are calculated in Percentage in which total population of this district considered as 100. The highest percentage of population are found in Kanke block as 45.20% and the lowest are found in Itki block as 1.71% of total population of the Ranchi district. Thus, according to percentage of population, blocks of Ranchi district are classified into three parts as More than 6% , 6% to 3% and Less than 3% consecutively that shown in the Map Figure 1.1(c) of Ranchi district which represents the percentage distribution of population . According to table 4.5, in 2011, High population distribution (More than 6%) are found in Kanke block while Moderate population distribution (6% to 3%) are found in Burmu, Ormanjhi, Angara, Silli, Namkum, Mandar, Chanho, Bero and Tamar1 respectively. Low population distribution (Less than 3%) are found in Khelari, Rahe, Sonahatu, Ratu, Nagri, Itki, Lapung and Bundu blocks of Ranchi district.

The Population distribution of Ranchi district is also represented by Dot method on the map where 1 Dot=2500 Persons. This dot map scale is also similar for male and female population distribution. It can be seen in Figure 1.1(d).

**RANCHI DISTRICT**

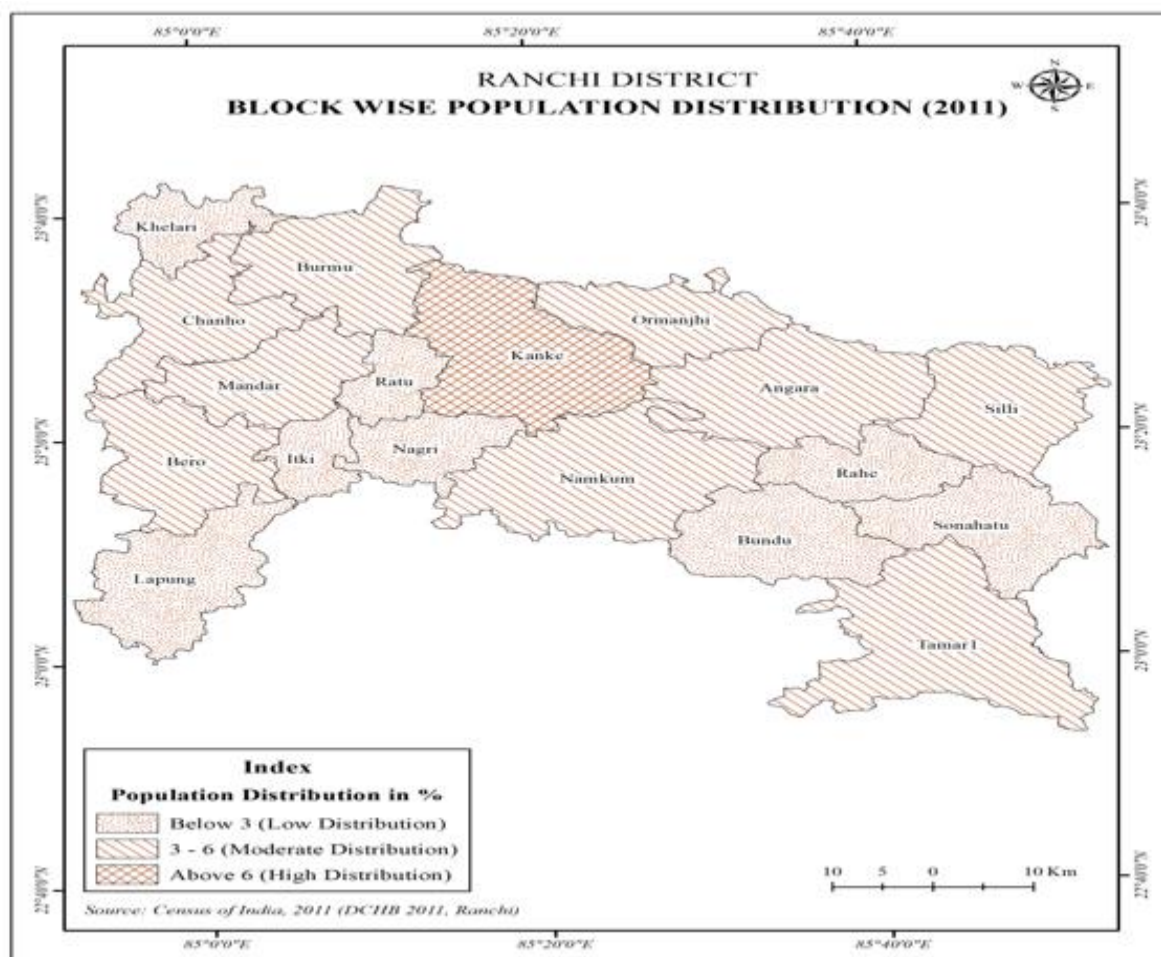
**Table 1.1: Pattern of Population Distribution, 2011**

Name of Blocks	Area (per sq. Km)	Total Pop.	Male Pop.	Female Pop.	Total Pop. (in %)	Male Pop. (in %)	Female Pop. (in %)	Pop. Density ( person/sq.Km)	Male Pop. Density	Female Pop. Density
1.Burmu	319.67	89,889	45,663	44,226	3.08	3.05	3.11	281	143	138
2.Khelari	131.38	78,219	40,553	37,666	2.68	2.71	2.65	595	309	287
3.Kanke	347.11	1,317,499	684,804	632,695	45.20	45.80	44.57	3796	1973	1823
4.Ormanjhi	227.97	94,137	48,416	45,721	3.23	3.23	3.22	413	212	201
5.Angara	398.56	112,759	56,841	55,918	3.86	3.80	3.93	283	143	140
6.Rahe	180.42	53,916	27,334	26,582	1.85	1.82	1.87	299	152	147
7.Silli	289.54	113,798	58,087	55,711	3.90	3.88	3.92	393	201	192
8.Sonahatu	273.12	77,252	39,127	38,125	2.65	2.61	2.68	283	143	140
9.Namkum	415.61	145,841	74,142	71,699	5.00	4.95	5.05	351	178	173
10.Ratu	104.47	76,565	38,785	37,780	2.62	2.59	2.66	733	371	362
11.Nagri	121.93	76,442	38,558	37,884	2.62	2.57	2.66	627	316	311
12.Mandar	238.24	128,585	65,134	63,451	4.41	4.35	4.47	540	273	266

13.Chanho	272.80	107,503	54,283	53,220	3.68	3.63	3.74	394	199	195
14.Bero	290.70	113,090	57,311	55,779	3.88	3.83	3.92	389	197	192
15.Itki	96.86	50,058	25,234	24,824	1.71	1.68	1.74	517	261	256
16.Lapung	300.88	63,053	31,319	31,734	2.16	2.09	2.23	210	104	105
17.Bundu	250.85	82,975	42,273	40,702	2.84	2.82	2.86	331	169	162
18.Tamar I	513.53	132,672	67,073	65,599	4.55	4.48	4.62	258	131	128
<b>Total</b>	5097	2,914,253	1,494,937	1,419,316	100	100	100	572	293	278

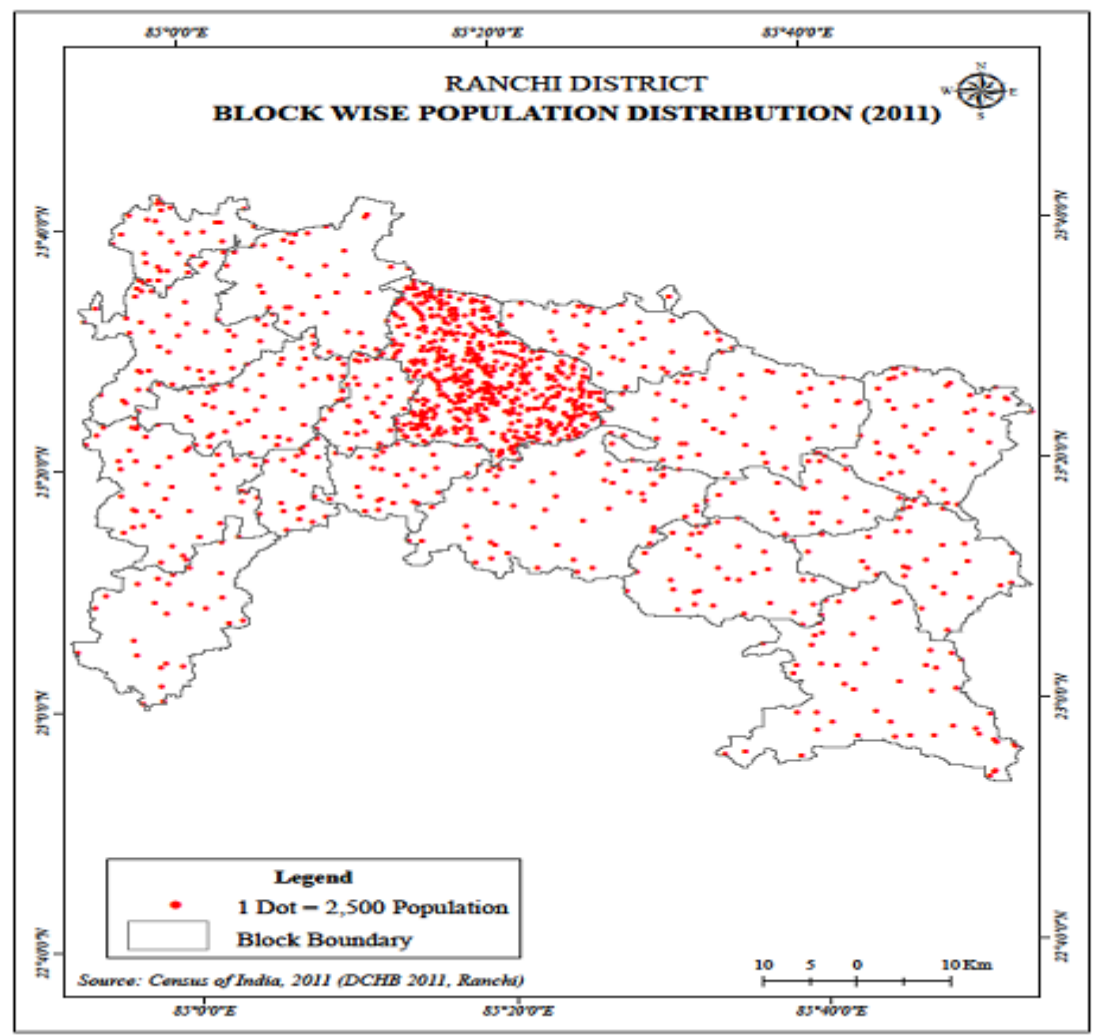
**Source** :-Census of India, 2011(DCHB 2011, Ranchi)

Note:- In Census 2011, there are 18 CD blocks in Ranchi district in which 4 CD blocks are new which are formed by bifurcation of their adjacent blocks named as Khelari, Rahe, Nagri and Itki blocks. In 2001, there were 20 CD blocks existed in Ranchi district and in 2011 census, 6 CD blocks are separated from Ranchi district and formed a new district named as Khunti in Jharkhand and remaining 14 blocks are still existed in this district and 4 new blocks are formed.



**Figure 1.1(c)**





**Figure 1.1(d)**

**Population Change in Ranchi District:-**

There are wide regional variations in the rate of population growth from one block to another block in Ranchi district. In Table 1.2, we can see the block-wise decadal changes in Total population of Ranchi district from 1991 to 2011. The population change or population growth can be classified into three parts as High, Moderate and Low population change or growth for it's clear concepts and consideration. The blocks having more than 20% population change are comes under High population change or population growth, blocks having population change or population growth lies between 15% to 20% are known as areas of Moderate population change and the blocks having Less than 15% population change are comes under the areas of Low population change or population growth. Thus, in every decade of population change such as 1991 to 2011, the above scale are applied for showing high, moderate and low population change or population growth.

**Total Population Change in Ranchi district (1991-2001):-**

During the census year 1991 and 2001, total 20 blocks were existed in Ranchi district. There were 25.79% overall total population change was recorded in Ranchi district during 1991-2001 decades.

#### High Population Change:-

In Table 1.2, During 1991-2001 decades, the blocks which are comes under areas of High population change or population growth having more than 20% population Change or growth. During the period of 1991-2001, the blocks having high population change in Ranchi district are Kanke (38.95%), Namkum (25.09%), Ratu (30.04%), Bero (26.97%), Chanho (31.57%), Mandar (25.20%), Burmu (23.18%), and Ormanjhi (21.82%) blocks respectively.

#### Moderate Population Change:-

During 1991-2001, the blocks having population change lies between 15% to 20% are areas of Moderate population change. The blocks having moderate population change are Angara (16.48%), Silli(15.95%), Murhu(15.93%), Torpa(15.60%), Karra(15.28%), Bundu(16.40%) and Tamar1(15.11%) blocks respectively.

#### Low Population Change:-

In decades 1991 to 2001, the blocks having population change are equal to less than 15% are areas of Low population change. The blocks having low population change or population growth are Lapung (14.41%), Khunti (10.56%), Rania (5.38%), Sonahatu (14.63%) and Erki or Tamar 2(8.76%) blocks respectively.

#### Total Population Change in Ranchi District (2001-2011):-

From table 1.2 it reveals that total 20 blocks were existed in Ranchi district but in recent census of 2011, 6 blocks out of 20 are separated from Ranchi district and formed a new district known as Khunti. So, in 2011 census, there are 14 blocks are exists from previous decade census and 4 new blocks are formed from the bifurcation of their adjacent blocks known as Khelari, Rahe, Nagri and Itki blocks. There are 4.63% overall total population change are recorded during 2001-2011 decades.

#### High Population Change:-

In Table 1.2, During 2001-2011 decades, the blocks which are comes under areas of High population change or population growth having more than 20% population Change or growth. During the period of 2001-2011, the blocks having high population change in Ranchi district are Kanke (28.35%), Namkum (27.48%), Chanho (28.19%), Mandar (30.22%) and Ormanjhi (23.60%) blocks respectively.

#### Moderate Population Change:-

During 2001-2011, the blocks having population change lies between 15% to 20% are areas of Moderate population change. The blocks having moderate population change are Lapung (18.22%), Bundu (15.12%) and Tamar1 (16.26%) blocks respectively.

## Low Population Change:-

In decades 2001 to 2011, the blocks having population change are equal to less than 15% are areas of Low population change. The blocks having low population change or population growth are Angara (9.31%) and Silli (4.01%) blocks. But some blocks having negative population change are found during 2001-2011 decades are Ratu (-39.41%), Bero (-14.13%), Burmu (-38.03%) and Sonahatu (-19.03%) blocks. The main cause behind this negative population change are bifurcation of these blocks for formation of 4 new blocks such as Nagri block formed by bifurcation of Ratu block, Itki block formed by bifurcation of Bero block, Khelari block formed by bifurcation of Burmu block and Rahe block formed by bifurcation of Sonahatu block in 2011 census year.

**Table 1.2: Block-wise Population Change in Ranchi District (1991-2011)**

Name of Blocks	Total Pop. (1991)	Total Pop. (2001)	Total Pop. (2011)	Population Change (%)	
				1991-2001	2001-2011
1.Kanke	738686	1026448	1317499	38.95	28.35
2.Namkum	91451	114397	145841	25.09	27.48
3.Ratu	97179	126376	76565	30.04	-39.41
4.Bero	103733	131713	113090	26.97	-14.13
5.Lapung	46615	53333	63053	14.41	18.22
6.Chanho	63734	83860	107503	31.57	28.19
7.Mandar	78865	98740	128585	25.20	30.22
8.Burmu	117760	145064	89889	23.18	-38.03
9.Ormanjhi	62514	76158	94137	21.82	23.60
10.Angara	88554	103155	112759	16.48	9.31
11.Silli	94347	109402	113798	15.95	4.01
12.Khunti	84033	92913	--	10.56	--
13.Murhu	62696	72686	--	15.93	--
14.Rania	32105	33835	--	5.38	--
15.Torpa	66773	77190	--	15.60	--
16.Karra	78792	90836	--	15.28	--
17.Bundu	61917	72073	82975	16.40	15.12
18.Sonahatu	83231	95411	77252	14.63	-19.03
19.Tamar 1	99132	114115	132672	15.11	16.26
20.Erki(Tamar2)	61931	67359	--	8.76	--
21.Khelari	--	--	78219	--	--
22.Rahe	--	--	53916	--	--
23.Nagri	--	--	76442	--	--
24.Itki	--	--	50058	--	--
<b>Total</b>	2214048	2785064	2914253	25.79	4.63

**Source:-** Census of India(DCHB 1991,2001 and 2011, Ranchi)

Note:- In Census 2011, there are 18 CD blocks in Ranchi district in which 4 CD blocks are new which are formed by bifurcation of their adjacent blocks named as Khelari, Rahe, Nagri and Itki blocks. In 2001, there were 20 CD blocks existed in Ranchi district and in 2011 census, 6

CD blocks are separated from Ranchi district and formed a new district named as Khunti in Jharkhand and remaining 14 blocks are still existed in this district and 4 new blocks are formed.

## Male Population Change in Ranchi District (1991-2001):-

During the census year 1991 and 2001, total 20 blocks were existed in Ranchi district. There were 24.65% overall male population change was recorded in Ranchi district during 1991-2001 decades. It can seen in Table 1.3.

### High Male Population Change:-

In Table 1.3, During 1991-2001 decades, the blocks which are comes under areas of High male population change or population growth having more than 20% male population Change or growth. During the period of 1991-2001, the blocks having high male population change in Ranchi district are Kanke (37.15%), Namkum (23.42%), Ratu (27.86%), Bero (24.86%), Chanho (29.81%), Mandar (23.40%), Burmu (21.34%), and Ormanjhi (20.71%) blocks respectively.

### Moderate Male Population Change:-

During 1991-2001, the blocks having population change lies between 15% to 20% are areas of Moderate population change. The blocks having moderate population change are Angara (15.39%), Silli (15.09%) and Murhu (17.26%) blocks respectively.

### Low Male Population Change:-

In decades 1991 to 2001, the blocks having male population change are equal to less than 15% are areas of Low male population change. The blocks having low male population change or population growth are Lapung (13.79%), Khunti (10.25%), Rania (5.18%), Torpa (13.97%), Karra (13.64%), Bundu (14.67%), Sonahatu (14.19%), Tamar1 (13.75%) and Erki or Tamar2 (9.44%) blocks respectively.

## Male Population Change in Ranchi District (2001-2011):-

From table 1.3 it reveals that total 20 blocks were existed in Ranchi district but in recent census of 2011, 6 blocks out of 20 are separated from Ranchi district and formed a new district known as Khunti. So, in 2011 census, there are 14 blocks are exists from previous decade census and 4 new blocks are formed from the bifurcation of their adjacent blocks known as Khelari, Rahe, Nagri and Itki blocks. There are 4.03% overall male population change are recorded during 2001-2011 decades.

### High Male Population Change:-

In Table 1.3, During 2001-2011 decades, the blocks which are comes under areas of High male population change or population growth having more than 20% male population Change or growth. During the period of 2001-2011, the blocks having high male population change in Ranchi district are Kanke (25.99%), Namkum (25.73%), Chanho (27.0%), Mandar (30.10%) and Ormanjhi (24.04%) blocks respectively.

## Moderate Male Population Change:-

During 2001-2011, the blocks having male population change lies between 15% to 20% are areas of Moderate male population change. The blocks having moderate male population change are Lapung (17.70%) and Tamar1(15.95%) blocks respectively.

## Low Male Population Change:-

In decades 2001 to 2011, the blocks having male population change are equal to less than 15% are areas of Low male population change. The blocks having low male population change or population growth are Angara (9.29%), Bundu (14.82%) and Silli (3.74%) blocks. But some blocks having negative male population change are recorded during 2001-2011 decades are Ratu (-39.62%), Bero (-14.05%), Burmu (-40.05%) and Sonahatu (-18.53%) blocks. The main cause behind this negative male population change are bifurcation of these blocks for formation of 4 new blocks such as Nagri block formed by bifurcation of Ratu block, Itki block formed by bifurcation of Bero block, Khelari block formed by bifurcation of Burmu block and Rahe block formed by bifurcation of Sonahatu block in 2011 census year and their population (male and female) has been also divided between these new blocks.

**Table 1.3: Block-wise Male Population Change in Ranchi District (1991-2011)**

Name of Blocks	Male Pop. (1991)	Male Pop. (2001)	Male Pop. (2011)	Male Pop. Change (%)	
				1991-2001	2001-2011
1.Kanke	396268	543496	684804	37.15	25.99
2.Namkum	47777	58968	74142	23.42	25.73
3.Ratu	50245	64244	38785	27.86	-39.62
4.Bero	53403	66683	57311	24.86	-14.05
5.Lapung	23383	26608	31319	13.79	17.70
6.Chanho	32926	42742	54283	29.81	27.00
7.Mandar	40567	50063	65134	23.40	30.10
8.Burmu	62770	76171	45663	21.34	-40.05
9.Ormanjhi	32334	39031	48416	20.71	24.04
10.Angara	45070	52007	56841	15.39	9.29
11.Silli	48645	55990	58087	15.09	3.74
12.Khunti	42765	47151	--	10.25	--
13.Murhu	31236	36629	--	17.26	--
14.Rania	15941	16767	--	5.18	--
15.Torpa	33627	38327	--	13.97	--
16.Karra	39865	45305	--	13.64	--
17.Bundu	32103	36814	42273	14.67	14.82
18.Sonahatu	42058	48030	39127	14.19	-18.53
19.Tamar 1	50848	57843	67073	13.75	15.95
20.Erki(Tamar2)	31163	34107	--	9.44	--
21.Khelari	--	--	40553	--	--
22.Rahe	--	--	27334	--	--
23.Nagri	--	--	38558	--	--
24.Itki	--	--	25234	--	--

<b>Total</b>	1152736	1436976	1494937	24.65	4.03
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**Source:** - Census of India (DCHB 1991, 2001 and 2011, Ranchi)

Female Population Change in Ranchi District (1991-2001):-

During the census year 1991 and 2001, total 20 blocks were existed in Ranchi district. There were 27.02% overall female population change was recorded in Ranchi district during 1991-2001 decades. It can be seen in Table 1.4.

High Female Population Change:-

In Table 1.4, During 1991-2001 decades, the blocks which are comes under areas of High female population change or population growth having more than 20% female population Change or growth. During the period of 1991-2001, the blocks having high female population change in Ranchi district are Kanke (41.04%), Namkum (26.91%), Ratu (32.38%), Bero (29.20%), Chanho (33.46%), Mandar (27.10%), Burmu (25.28%), and Ormanjhi (23.01%) blocks respectively.

Moderate Female Population Change:-

During 1991-2001, the blocks having female population change lies between 15% to 20% are areas of Moderate female population change. The blocks having moderate female population change are Lapung (15.03%), Angara(17.62%), Silli (16.87%), Torpa (17.24%), Karra (16.96%), Bundu (18.26%), Sonahatu (15.07%) and Tamar1(16.54%) blocks respectively.

Low Female Population Change:-

In decades 1991 to 2001, the blocks having female population change are equal to less than 15% are areas of Low female population change. The blocks having low female population change or population growth are Khunti(10.88%), Murhu(14.61%), Rania(5.59%), and Erki or Tamar2(8.07%) blocks respectively.

Female Population Change in Ranchi District (2001-2011):-

From table 1.4 it reveals that total 20 blocks were existed in Ranchi district in 2001 but in recent census of 2011, 6 blocks out of 20 are separated from Ranchi district and formed a new district known as Khunti. So, in 2011 census, there are 14 blocks are exists from previous decade census and 4 new blocks are formed from the bifurcation of their adjacent blocks known as Khelari, Rahe, Nagri and Itki blocks. There are 5.28% overall female population change are recorded during 2001-2011 decades.

High Female Population Change:-

In Table 1.4, During 2001-2011 decades, the blocks which are comes under areas of High female population change or population growth having more than 20% female population Change or growth. During the period of 2001-2011, the blocks having high female population

change in Ranchi district are Kanke (31.0%), Namkum (29.35%), Chanho (29.43%), Mandar (30.35%) and Ormanjhi (23.14%) blocks respectively.

Moderate Female Population Change:-

During 2001-2011, the blocks having female population change lies between 15% to 20% are areas of Moderate female population change. The blocks having moderate female population change are Lapung (18.74%), Bundu (15.43%) and Tamar1(16.57%) blocks respectively.

Low Female Population Change:-

In decades 2001 to 2011, the blocks having female population change are equal to less than 15% are areas of Low female population change. The blocks having low female population change or population growth are Angara (9.32%) and Silli (4.30%) blocks. But some blocks having negative female population change are recorded during 2001-2011 decades are Ratu (-39.19%), Bero (-14.22%), Burmu (-35.80%) and Sonahatu (-19.53%) blocks. The main cause behind this negative female population change are bifurcation of these blocks for formation of 4 new blocks such as Nagri block formed by bifurcation of Ratu block, Itki block formed by bifurcation of Bero block, Khelari block formed by bifurcation of Burmu block and Rahe block formed by bifurcation of Sonahatu block in 2011 census year and their population (male and female) has been also divided between these new blocks.

**Table 1.4: Block-wise Female Population Change in Ranchi District (1991-2011)**

Name of Blocks	Female Pop. (1991)	Female Pop. (2001)	Female Pop. (2011)	Female Pop. Change (%)	
				1991-2001	2001-2011
1.Kanke	342418	482952	632695	41.04	31.00
2.Namkum	43674	55429	71699	26.91	29.35
3.Ratu	46934	62132	37780	32.38	-39.19
4.Bero	50330	65030	55779	29.20	-14.22
5.Lapung	23232	26725	31734	15.03	18.74
6.Chanho	30808	41118	53220	33.46	29.43
7.Mandar	38298	48677	63451	27.10	30.35
8.Burmu	54990	68893	44226	25.28	-35.80
9.Ormanjhi	30180	37127	45721	23.01	23.14
10.Angara	43484	51148	55918	17.62	9.32
11.Silli	45702	53412	55711	16.87	4.30
12.Khunti	41268	45762	--	10.88	--
13.Murhu	31460	36057	--	14.61	--
14.Rania	16164	17068	--	5.59	--
15.Torpa	33146	38863	--	17.24	--
16.Karra	38927	45531	--	16.96	--
17.Bundu	29814	35259	40702	18.26	15.43
18.Sonahatu	41173	47381	38125	15.07	-19.53
19.Tamar 1	48284	56272	65599	16.54	16.57
20.Erki(Tamar2)	30768	33252	--	8.07	--

21.Khelari	--	--	37666	--	--
22.Rahe	--	--	26582	--	--
23.Nagri	--	--	37884	--	--
24.Itki	--	--	24824	--	--
<b>Total</b>	1061312	1348088	1419316	27.02	5.28

**Source:-** Census of India(DCHB 1991,2001 and 2011, Ranchi)

**Table 1.5: Block-wise Sex-Ratio of Ranchi District (1991-2011)**

Name of Blocks	Sex-Ratio (1991)	Sex-Ratio (2001)	Sex-Ratio (2011)
1.Burmu	876	904	969
2.Kanke	864	889	924
3.Ormanjhi	933	951	944
4.Angara	965	983	984
5.Silli	940	954	959
6.Sonahatu	979	986	974
7.Namkum	914	940	967
8.Ratu	934	967	974
9.Mandar	944	972	974
10.Chanho	936	962	980
11.Bero	942	975	973
12.Lapung	994	1004	1013
13.Karra	976	1005	--
14.Torpa	986	1014	--
15.Rania	1014	1018	--
16.Murhu	1007	984	--
17.Khunti	965	971	--
18.Bundu	929	958	963
19.Erki(Tamar2)	987	975	--
20.Tamar1	950	973	978
21.Khelari	--	--	929
22.Rahe	--	--	972
23.Nagri	--	--	983
24.Itki	--	--	984
<b>Total</b>	921	938	949

**Source: -** Census of India (DCHB 1991, 2001 and 2011, Ranchi)

The above Table 1.5 reveals that the Block-wise Sex-Ratio of Ranchi district from 1991 to 2011. It describes that in census year 1991, the maximum Sex-Ratio was recorded in Rania(1014) and Murhu (1007) blocks and minimum sex-ratio was recorded in Kanke (864) and Burmu (876) blocks. The overall sex-ratio in Ranchi District in 1991 was recorded as 921. In Census year 2001, the maximum sex ratio was recorded in Rania (1018) and Torpa (1014) blocks and minimum sex ratio was recorded in Kanke (889) and Burmu (904) blocks. The overall sex ratio in Ranchi district in census year 2001 was equal to 938. In Census year 2011, the maximum sex ratio was recorded in Lapung (1013), Itki (984) and Angara(984) blocks and



minimum sex ratio was recorded in Kanke (924) and Khelari (929) blocks. The overall sex ratio in Ranchi district in census year 2011 was equal to 949. The overall sex ratio of Ranchi district has been increased from 1991 to 2011 as equal to 921(in 1991), 938(in 2001) and 949(in 2011) respectively.

### 3.0 CONCLUSIONS

By the various data analysis of Ranchi district, we finds that Population distribution are always in favour of males than females in every decades from 1991 to 2011 in Ranchi district because male population are higher than females in every decades. But, the overall population change or population growth in Ranchi district are in favour of females than males in recent decades of 1991-2001 and 2001-2011 and the main cause behind that are socio-economic development, growth in urbanisation, literacy and impact of tribal culture. In every decade from 1991 to 2011, Kanke block have High population distribution and it is also similar for male and female population. There are some blocks which are comes under low population distribution are Rania, Lapung and Itki since 1991 to 2011 decades.

The overall sex ratio of Ranchi district has been increased continuously from 1991(921) to 2011(949). It recorded maximum in Rania (1991 and 2001) and Lapung (2011) blocks and minimum in Kanke block (1991 to 2011). Thus, main reason behind it is improvement in education level, impact of Tribal culture and social status of women in Ranchi district.

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