THE DEMOGRAPHIC APPROACH TO STUDY OF SEX RATIO IN MAHARASHTRA STATE, INDIA

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ABSTRACT

The study of population characteristics is important for a population policy and for various planning. This population feature mainly studies various factors such as population density, population distribution, population growth, literacy and sex ratio etc. Sex ratio is considered to be one of the most important factor in population characteristics. Birth rate and mortality rate are the main factors affecting on sex ratio as well as male migration. Also, the girl birth date is considered to be the most important factor. The higher the proportion of girl birthdays, which time maximum sex ratio and If the boy's birth rate is high, then the proportion of sex ratio is less in such areas. This research article depend on secondary data, this data for research is taken from Indian Census 1901 to 2011 census. The main objective of this research paper is to study from a geographical point of view where the sex ratio in Maharashtra is higher or lower. In short, the main objective of this research is Geographical Study Temporal variation of sex ratio in Maharashtra State.

KEY WORDS: *Demographic Approach, Maharashtra State, Decadal Variation, Sex Ratio*

INTRODUCTION

The study of demographic characteristics is an important feature of a geography function because the characteristics of this population largely depend on the goals and policy of the government. Therefore, it is the first duty to study the population. Population characteristics mainly include population distribution, literacy, population density, population growth and sex ratio. Sex ratio is one of the most important characteristics of the population, on which the government's new goal, policy depends on various factors such as educational, marriage and health. The sex ratio is a factor in human resource development and it is indirectly understood from the economic development of a geographical region. In a nutshell, the study of the sex ratio can be used to understand the health status of a geographical region, the employment status, and the social status. If the economic situation of a family is not good then the birth rate is higher in such a family because the more the family has, the more financial contribution there is, the higher the proportion of sex ratio, the more male migrate to urban areas for employment. In this case, the rate of sex ratio is higher in the original place. Socio-economic factors have a major impact on the sex ratio. If the family's financial situation is not good, then the birth rate in the family is higher. Because of higher the number of children in the family, the higher the financial contribution, the higher the birth rate, the higher the sex ratio. At the same time, the sex ratio is considered as an indicator of human development. In short, this factor is known as a factor of economic development, so the sex ratio is considered to be a human resource. The sex ratio is a component of human resource development as well as economic development, the geographical distribution of district wise sex ratio in the state of Maharashtra has been studied. The study was conducted during the census years 1901 to 2011.

STUDY AREA

Maharashtra State was formed on 1st May 1960. It extends from 15° 45' to 20° 6' north range and 70° 36' to 80° 54' east longitude (Map no 1). The entire geographical place is 3, 07,713 sq. Km. Maharashtra ranks third with recognize to region. The relative location of Maharashtra state is Chhattisgarh in the East, Andhra Pradesh in the Southwest, Karnataka in the South and Goa in the Southwest, Madhya Pradesh in the North. Maharashtra state has 36 districts and 355 Taluka and 63663 villages under 6 subdivisions. According to 2011 census state has 35 districts and newly adds Palghar (total Districts are 36). According to 2011 census the sex ratio is 925 and population

density is 365 per sq.km and current population is   124,862,220.

Map no 1: Location Map Maharashtra State
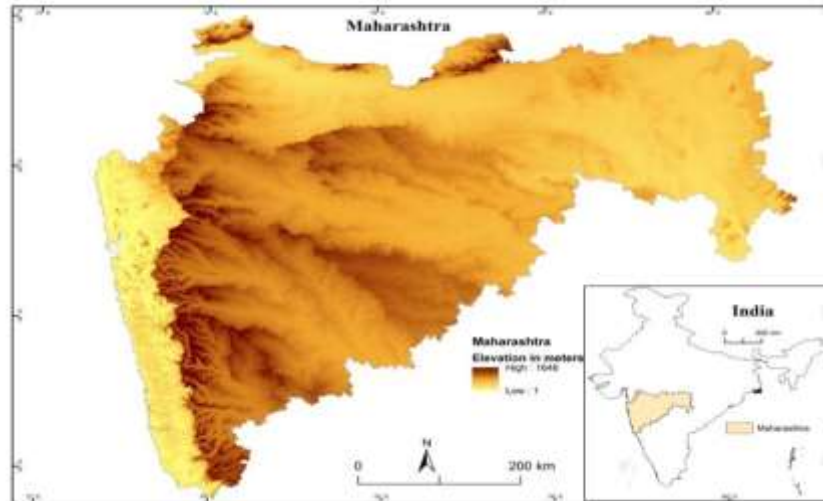
AMIS AND OBJECTIVE

The main objective of this present research work is to assess Temporal Variation of Sex Ratio in Maharashtra state during 1901 to 2011 census periods. The study of sex ratio has been in the district wise of Maharashtra state. The study of these sex ratio is done only demographic approach.

DATA BASE AND METHODOLOGY

This present study depends on secondary data sources using various research papers, reference books. The data for the study has been collected from the Indian census from 1901 to 2011 (Indian Census Handbook). For present study data regarding sex ratio, the ratio has been collected at a district-wise level for the year 1901 to 2011census periods in district wise. In this research paper, cartography methods have been used to differentiate between sex receivers, mainly bar graph element. The calculated Variation of sex ratio in Maharashtra State each census periods. The statistical data is compressed to the core of the study. The sex ratio population, as well as the district-level exponential ratio, is calculate with the help of the following formula: Sex Ratio = Number of Male/ Number of Females X 1000.

RESULTS AND DISCUSSION

It is important for me to study the demographics. Population studies now come in various forms of planning or policies in the government. The study of population makes it possible to formulate new goals and policies in various fields such as military education, health, industry, transport, employment, agriculture and production. Population characteristics mainly study various factors such as population distribution, literacy, growth rate, population density and sex ratio. One of the characteristics of this population is the study of sex ratio. This study has been done in the context of the geographical distribution of the state of Maharashtra.

TEMPORAL ANALYSIS OF SEX RATIO IN MAHARASHTRA STATE

Table No. 1 and Graph Numbers 01and 02 show the proportion of sex ratio in the State of Maharashtra during the census years from 1901 to 2011 and also in Graph Number 02 showing the Decadal Variation the census years. From this it is clear that in the state of Maharashtra, the proportion of sex ratio is decreasing with each census year. The proportion seems to have increased this year after 1911 census year but 1921 census year again you see it decreased. In short, it is clear that in the state of Maharashtra, the rate of segregation is more or less the same. In short, 1921, 1931, 1951, 1971, 1991 this census periods negative rate of sex ratio. Also in the year 1941, 1981 2018 census periods, however, you can see the positive change. At the same time, the census of 1911 shows a negative year, the year 1921 shows a -16, and the year 2001 a -12 shows a negative sex ratio changed.
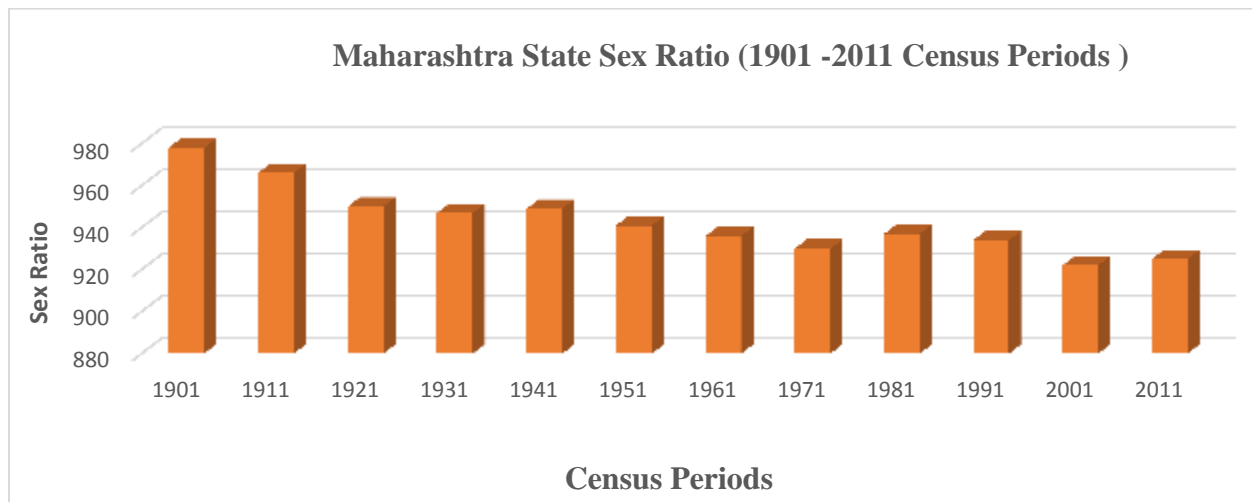
Table 1. Temporal Analysis of Sex Ratio in Maharashtra State

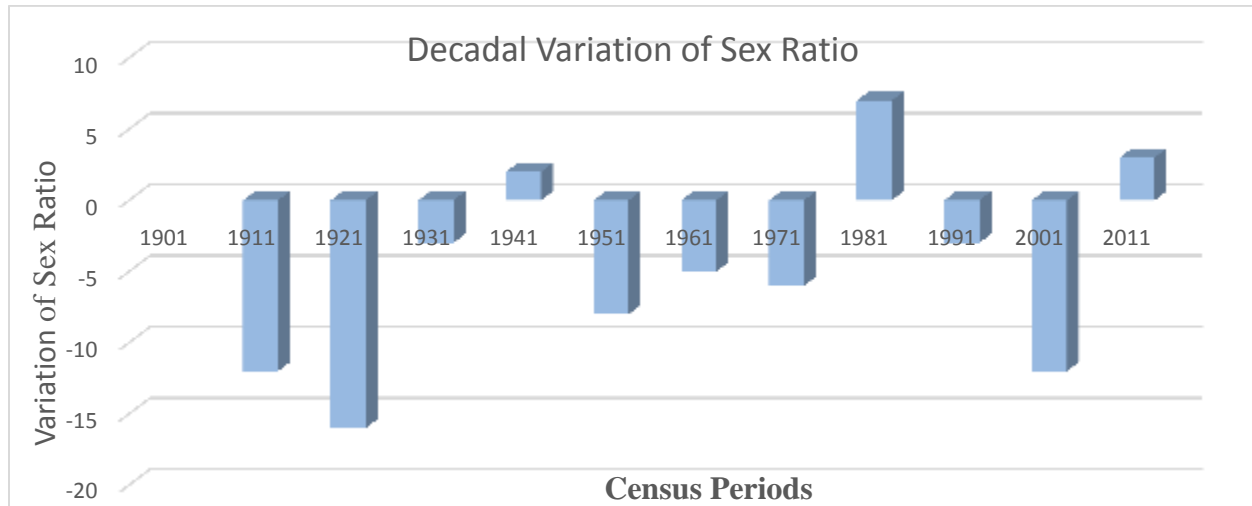| Census Years	Sex Ratio in Maharashtra State	Decadal Variation
1901	978	
1911	966	-12
1921	950	-16
1931	947	-3
1941	949	2
1951	941	-8
1961	936	-5
1971	930	-6
1981	937	7
1991	934	-3
2001	922	-12
2011	925	3

Sources: Census Reports (Government of India 1901 to2011)

Graph no 01: Temporal analysis of sex ratio in Maharashtra State

Graph no 02: Decadal Variation of Sex Ratio

TEMPORAL ANALYSIS OF SEX RATIO IN MAHARASHTRA STATE (DISTRICT WISE)

Table 2 shows the proportion of sex ratio in the state of Maharashtra between 1901 and 2011 in the district wise. According to the 1901 census, Ratnagiri district had the highest number of sex recipients, followed by Sindhudurg, Satara, Ahmednagar and Bhandara, Gondia and Chandrapur districts. The number of sex Jesus in these districts was more than a thousand. The lowest sex ratio meanwhile Osmanabad Latur Nandurbar Dhule Jalgaon Wardha Amravati Washim Mumbai districts had the lowest sex ratio, the general sex ratio was between 980 and 950. 1911 census year the highest proportion of sex is in Sindhudurg, Ratnagiri, Satara, Raigad, Gadchiroli, Bhandara, Gondia and Chandrapur District. The proportion of sex in this district is more than a thousand. On the other hand, in the same census year,

the lowest sex is in Nandurbar, Dhule, Jalgaon, Buldhana, Akole, Amravati, Wardha, and Nagpur, but the lowest sex is in Mumbai and Mumbai sub-urban sex ratio is 570. The main reason for the highest sex ratio in this area may be that the district has a high proportion of tribal people, so the social and economic status can be said to be there. In areas where the situation is not good today, the joke may have gone out of town for employment. This may be an important reason for today, then another social reason may be here. Social stability is good here, so girls are preferred. In Mumbai and Mumbai Sub Urban Region, the proportion of sex ratio is very low as the number of males coming from outstations for employment is high, so there is a large number of males involved in various occupations. In general, the sex rate in these districts was higher before in 1951, but in 1951, the rate of sex in the area was decreasing.

Table 2. Temporal analysis of Sex Ratio in Maharashtra State (1901 to 2011 Census)

Sr.No.	State/District Name	Sex-ratio since (Number of females per 1000 males)											
		1901	1911	1921	1931	1941	1951	1961	1971	1981	1991	2001	2011
	MAHARASHTI	978	966	950	947	949	941	936	930	937	934	922	925
1	Nandurbar	980	978	976	969	969	973	975	968	982	975	977	972
2	Dhule	980	978	976	969	969	968	961	948	954	945	944	941
3	Jalgaon	975	983	971	968	970	971	957	948	950	940	933	922
4	Buldana	992	985	979	971	972	981	959	954	957	953	946	928
5	Akola	968	968	958	952	957	953	926	931	939	934	938	942
6	Washim	968	968	958	952	957	971	956	957	963	946	939	926
7	Amravati	960	959	953	939	946	958	933	931	936	936	938	947
8	Wardha	987	983	973	975	978	983	964	949	948	939	935	946
9	Nagpur	991	981	967	953	955	956	929	922	924	922	932	948
10	Bhandara	1071	1038	1024	1017	1010	1005	993	984	989	980	981	984
11	Gondiya	1071	1038	1024	1017	1010	1004	1000	989	1004	995	1005	996
12	Gadchiroli	1023	1005	1004	990	989	1000	998	986	981	976	976	975
13	Chandrapur	1023	1005	1004	990	989	994	979	963	959	948	948	959
14	Yavatmal	988	980	968	966	978	989	972	961	958	951	942	947
15	Nanded	1004	995	981	966	965	983	970	955	960	945	942	937
16	Hingoli	996	992	978	963	960	989	975	968	966	952	953	935
17	Parbhani	996	993	978	963	960	974	969	954	968	954	958	940
18	Jalna	998	989	988	966	957	976	970	959	970	958	951	929
19	Aurangabad	998	988	991	967	957	974	955	935	936	922	925	917
20	Nashik	974	984	960	963	953	956	946	940	937	940	927	931
21	Thane	939	947	937	935	940	920	919	894	883	879	858	880
22	Mumbai (Suburb	652	570	561	592	616	712	744	769	801	831	822	857
23	Mumbai	652	570	561	592	616	574	626	670	729	791	777	838
24	Raigarh	1000	1023	1028	1009	1036	1040	1058	1056	1046	1010	976	955
25	Pune	979	977	957	952	948	939	944	933	937	933	919	910
26	Ahmadnagar	1005	983	978	971	969	971	962	956	959	949	940	934
27	Bid	985	980	963	949	941	957	969	954	965	944	936	912
28	Latur	980	965	940	943	941	947	950	942	959	942	935	924
29	Osmanabad	980	964	939	942	942	948	948	947	958	937	932	920
30	Solapur	985	967	943	934	942	945	936	933	942	934	935	932
31	Satara	1031	1025	1030	1006	1035	1051	1047	1037	1061	1029	995	986
32	Ratnagiri	1119	1164	1187	1129	1158	1239	1264	1263	1258	1205	1136	1123
33	Sindhudurg	1111	1154	1174	1119	1148	1200	1194	1213	1205	1137	1079	1037
34	Kolhapur	975	967	946	952	968	964	961	953	962	961	949	953
35	Sangli	984	952	942	950	954	968	957	949	967	958	957	964

Sources: Census Reports of Government of India (1901 to2011)

In 1951, you can see that the proportion of sex ratio has decreased in all these districts but in Ratnagiri and Sindhudurg districts the sex ratio is more than one thousand and in other districts the proportion of sex ratio is less than one thousand. Table 3 shows the change in sex ratio thinking from 1901 to 1911. The highest negative change in sex ratio was observed in Gondia district from 1901 to 1951, followed by Bhandardara, Nagpur, Chandrapur, Gadchiroli, Parbhani, Jalna and Nanded. However, in some districts, positive changes have taken place, mainly in Wasim and Yavatmal. At the same time, there has been a qualitative change during this period, but in the tehsils with less negative changes, mainly in the districts of Nandurbar, Jalgaon, Amravati, Wardha and Solapur, there has been less negative change. However, the most positive change is in Ratnagiri Sindhudurg, Mumbai, Raigad, Satara districts. Out of these, the sex ratio has increased to 120 in Ratnagiri district. After that the positive change in Mumbai Suburban Raigad, Satara and Sindhudurg district. Also you can see the biggest negative change in the negative tehsil of sex

ratio in between 1961 to 2011 in the district of Ratnagiri, Sindhudurg and Raigad. More than 100 negative changes have taken place here during this period. On the contrary, the positive change in the same period is seen in the districts of Amravati, Mumbai, Suburban, Mumbai and Sangli, that most of these positives happened in Mumbai and Mumbai suburban districts. Also in the research from 1901 to 2011, the most positive sex is seen in Mumbai Suburban Area Mumbai, while in the rest of the districts, negative sex ratio is also seen. From this it is clear that the declining average sex segregation in all the districts of Maharashtra shows that the socio-economic situation in Maharashtra is having negative effect. The proportion of se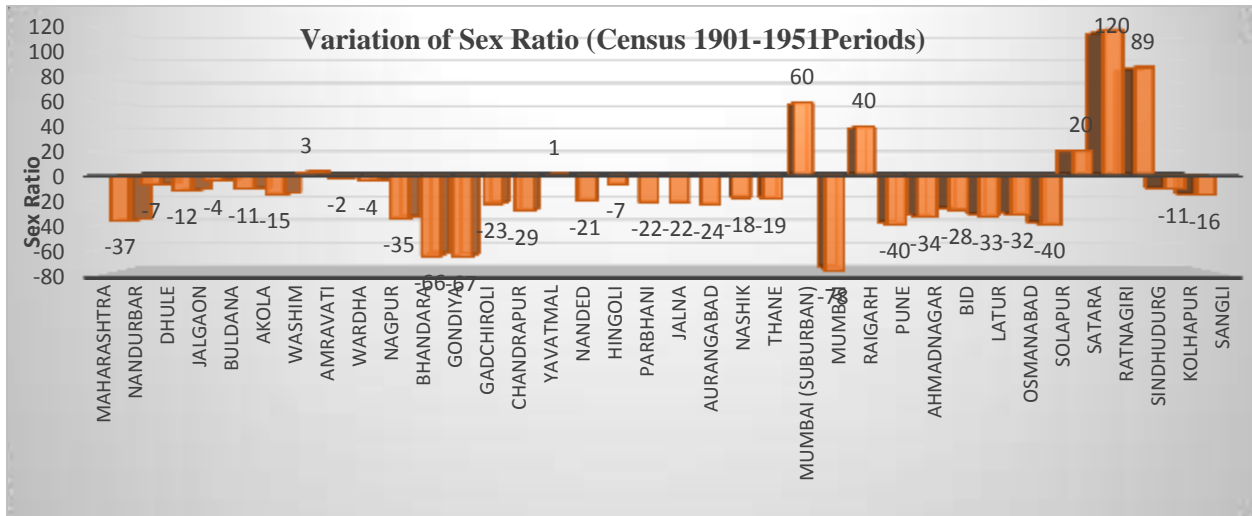x ratio is the unequal, in some states it is higher and in some states it is very low. The most important reason behind this is the economic inequality in the region. The above analysis of regional pattern in Maharashtra in district wise the fast changes in sex ratio. It is observed that the sex ratio has constantly decreased. There is a wide variation in the sex ratio period of 1901 to the 2011 census. As per 2011 census, only two districts have sex ratio more than 1000 Ratnagiri (1123) Sindhudurg (1037) because of indicates out-migration of a male in search of jobs outside on one hand and change the social structure in terms of literacy, better treatments of female, etc. regional pattern of the study area is closely related with the economy of the region.

Table 3. Sex Ratio Variation in Maharashtra State (Census 1901-2011Periods)

| Sl. No.	District	1901-1951	1961-2011	1901-2011	Sl. No.	District	1901-1951	1961-2011	1901-2011
1	Nandurbar	-7	-3	-8	19	Aurangabad	-24	-38	-81
2	Dhule	-12	-20	-39	20	Nashik	-18	-15	-43
3	Jalgaon	-4	-35	-53	21	Thane	-19	-39	-59
4	Buldana	-11	-31	-64	22	Mumbai(Suburban)	60	113	205
5	Akola	-15	16	-26	23	Mumbai	-78	212	186
6	Washim	3	-30	-42	24	Raigarh	40	-103	-45
7	Amravati	-2	14	-13	25	Pune	-40	-34	-69
8	Wardha	-4	-18	-41	26	Ahmadnagar	-34	-28	-71
9	Nagpur	-35	19	-43	27	Bid	-28	-57	-73
10	Bhandara	-66	-9	-87	28	Latur	-33	-26	-56
11	Gondiya	-67	-4	-75	29	Osmanabad	-32	-28	-60
12	Gadchiroli	-23	-23	-48	30	Solapur	-40	-4	-53
13	Chandrapur	-29	-20	-64	31	Satara	20	-61	-45
14	Yavatmal	1	-25	-41	32	Ratnagiri	120	-141	4
15	Nanded	-21	-33	-67	33	Sindhudurg	89	-157	-74
16	Hingoli	-7	-40	-61	34	Kolhapur	-11	-8	-22
17	Parbhani	-22	-29	-56	35	Sangli	-16	7	-20
18	Jalna	-22	-41	-69		**Maharashtra**	**-37**	**-11**	**-53**

Graph no 03: Variation of sex ratio (Census 1901-1951 Periods)
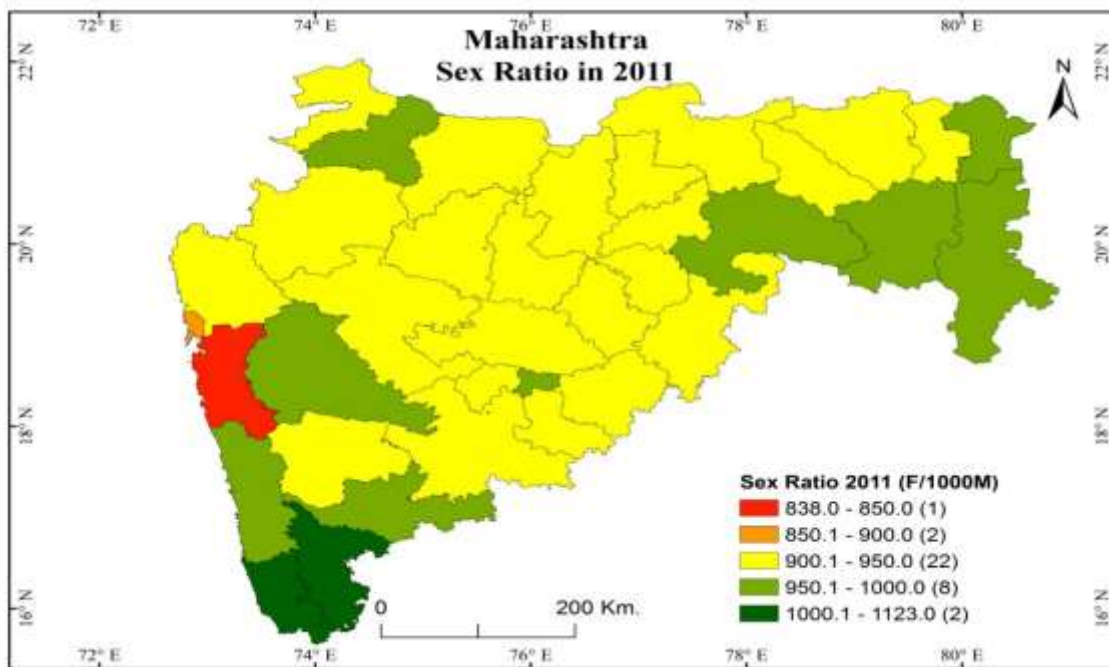

Graph no 04 : Variation of sex ratio (Census 1961-2011 Periods)
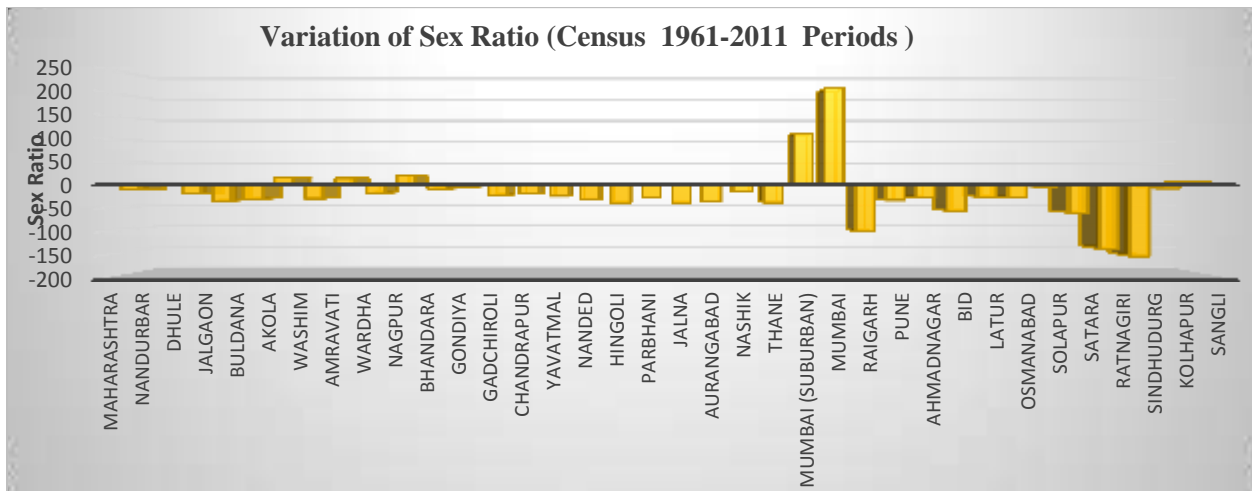
Graph no 05: Variation of sex ratio (Census 1901-2011Periods)
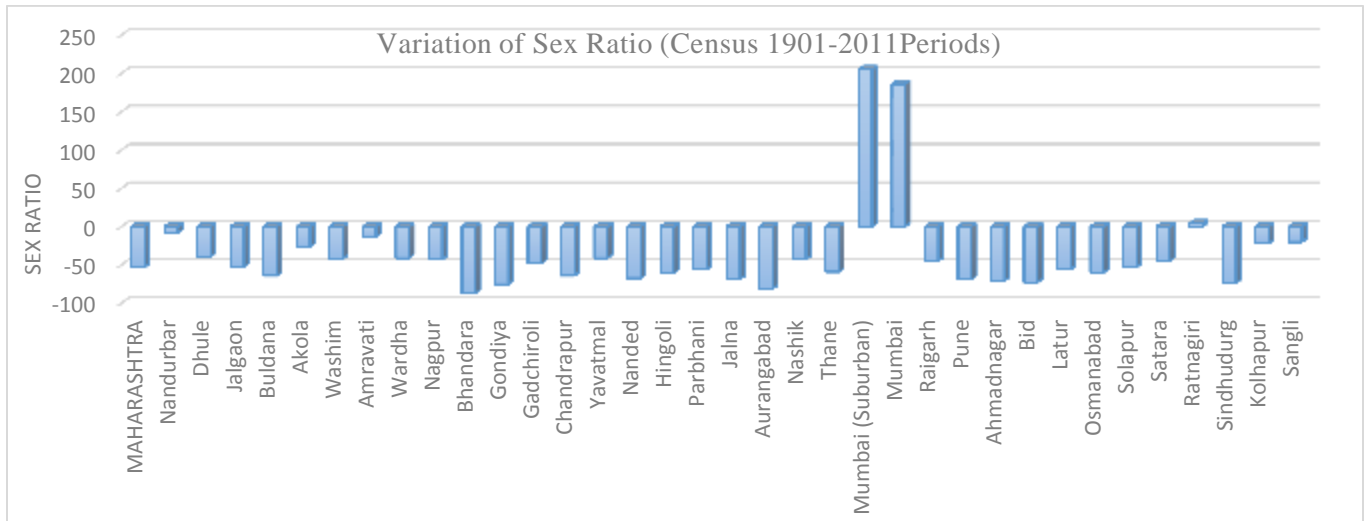
Map no 02: Sex Ratio of Maharashtra State in 2011 census year

CONCLUSION

From the above study, it is clear that in the state of Maharashtra, the proportion of sex ratio is the unequal, in some states it is higher and in some states it is very low. The most important reason behind this is the economic inequality in the region. The above analysis of regional pattern in Maharashtra in district wise the fast changes in sex ratio. It is observed that the sex ratio has constantly decreased. There is a wide variation in the sex ratio period of 1901 to the 2011 census. As per 2011 census, only two districts have sex ratio more than 1000 Ratnagiri (1123) Sindhudurg (1037) because of indicates out-migration of a male in search of jobs outside on one hand and change the social structure in terms of literacy, better treatments of female, etc. regional pattern of the study area is closely related with the economy of the region. The study region recording high sex ratio suffers from poor agricultural and show emigration, while the region of low sex ratio has undergone industrial development

attracting in migration. The sex ratio is observed that from 1901 to 2001 census sex ratio is decreasing but can see that the sex ratio of the country is higher than that of Maharashtra in the 2011 census year. From this research, it is clear that in the state of Maharashtra, the average number of sex ratio is declining, which requires proper policy and planning. The most important reason for the decrease in sex ratio seems to be the advancement in technology and the increase in health facilities.

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