



A Geographical Analysis Of Trends And Comparison Of Fertility Rate In India, Maharashtra And Satara District

Prof. (Dr.) Magar Tanaji Raosaheb

Professor Dept. of Geography

Uma Mahavidyalaya, Pandharpur, Dist.- Solapur- 413304 (MS)

Email ID: magartanajirao@gmail.com

Abstract

This paper attempts to analyze the trend and comparison of fertility rate in different strata of India, Maharashtra and Satara district. Fertility measures the rate at which a population reproduces itself by birth. This measurement can be related to something e.g. Total female population of the region. The birth rate in a country or region depends on many factors eg. Relative status of childbearing women and men, marriage behavior, attitudes towards children, extramarital affairs, pregnancy control methods and some social and biological characteristics of the population, political and religious attitudes and state of medical facilities. These factors are uneven across space and time. Therefore, the fertility trend varies and decreased during the study period at different levels such as India, Maharashtra and Satara districts. In 1961, the total birth rate in India was 39.2, Maharashtra state 36.5 and Satara district 25.7. So in 2021 India's total birth rate was 20.3, Maharashtra state's 17.00 and Satara district's 15.98.

Key Words: fertility rate, social and biological characteristics, marriage behavior

Introduction

The population of any particular area can merely change through three processes viz. birth, death and migration. Therefore, the fertility, mortality and migration are known as important components of population changes in any region. The magnitude of births in a country or a region depends on different aspects e.g. absolute situation of childbearing females and males, marriage behavior, attitude towards children, outside marriage, beginning control practices and attitudes, definite social and biological characteristics of population, political and religious attitudes and the state of medicinal facilities. Even though the birth rate is a biological process, it includes social component also. The number of children is generally determined by the social environment in which they live. High fertility societies are often the result of the accumulation of a large number of individual decisions to have children who pleasure them as a form of insurance by their parents in their old age or a variety of risks. India which is dominated by the Hindus, in terms of population transfers the deep cultural significance of having sons. Contrary to the high fertility societies, the low fertility societies are affected by changing the overall social environment wherein wealth, reputation, position, education and other related causes often help to lower fertility through the change in the attitude of the people (Kapoor, 1984). In this research paper is an attempted to discuss the trend in birth rate i.e. fertility rate in India, Maharashtra in Satara district.

The fertility rate is generally expressed as the number of births per 1,000 matured females (15 to 44) in a schedule year. It can be easily be confused with total fertility rate, which calculates how many children a theoretical woman would have assumed she lives until 44 and has the same fertility rate in the future as women in the population currently have.

The birth rate is one of the most important factors influencing the growth of population and changes in population characteristics in any particular region. In the early days, the birth rate was very high only because of the high death rate. This was due to the security point of view for parents in old age. Since children become the only supporting means for parents. In ancient period, both births, as well as death rates, were high due to insufficient medical facilities as well as insufficient availability of nutritious food.

Now-a-days, both birth, as well as death rates, has come down due to improvement in better medical facilities and improved food supply. In any region, the birth rates become the only factor influencing the population changes. In order to understand the role birth rate in growth of population, the birth rates for different periods and for various tahsils have been calculated for the decades from 1961 to 2011.

Aim and Objectives:

The research work is carried out of the following specific objectives of the study:

- To examine the trends of fertility rate in the different levels such as India, Maharashtra and Satara district.
- To analyze the fertility rate in the such different levels.

Database and Methodology

This take a look at is based on secondary resources of information. The published records collected through the sources of district census handbook, Registration System Bulletin and Registrar General of India, New Delhi and National Family Health Survey-5.

The collected data about the fertility rate is tabulated, arranged in proper format and statistical methods are applied to obtain the desired results.

Fertility Rate

Fertility rate assessments the number of children a theoretical group of 1,000 females in the quantified population would accept if they all went through their childbirth years feeling the same age-specific birth rates for identified time period.

$$\text{Fertility Rate} = \frac{\text{Total number of births in a given year}}{\text{Total Population of Mid year}} \times 1000$$

Trends of Fertility rate in India

The fertility rate of India during the period of 1961 to 2011 has been given Table 3.1. It is found that the fertility of India in 1961 was as high as 39.2 and it is steadily decreased from 1961 to 2011 up to 21.8. The fertility rate has declined from 1981 to 1991 i.e. 31.1 to 29.5 per 1000 population. In 2001, the fertility rate was 25.8. In 2011, the fertility rate was 21.8.

The rural fertility rate is also decreased during the period of investigation in India. The fertility rate in rural areas of India in 1961 was as high as 41.2 and this was steadily decreased reached up to 23.3 from 1961 to 2011. Table 3.1 indicated that there is a continuous decreased in rural fertility rate in India due to the Government policies and increase in literacy rate.

Table 1

India: Trend of Fertility Rate from 1961 to 2021

Sr. No.	Year	Total	Decadal Change	Urban	Decadal Change	Rural	Decadal Change
1	1961	39.2	-	34.2	-	41.2	-
2	1971	35.4	-3.8	29.1	-5.1	37.2	-4
3	1981	31.1	-4.3	24.4	-4.7	32.5	-4.7
4	1991	29.5	-1.6	24.3	-0.1	30.9	-1.6
5	2001	25.8	-3.7	20.7	-3.6	27.1	-3.8
6	2011	21.8	-4.0	17.6	-3.1	23.3	-3.8
	2021	20.3	-1.5	16.0	-1.6	21.0	-2.3

Source: Sample Registration System Bulletin and Registrar General of India, New Delhi and National Family Health Survey-5 (2019-21).

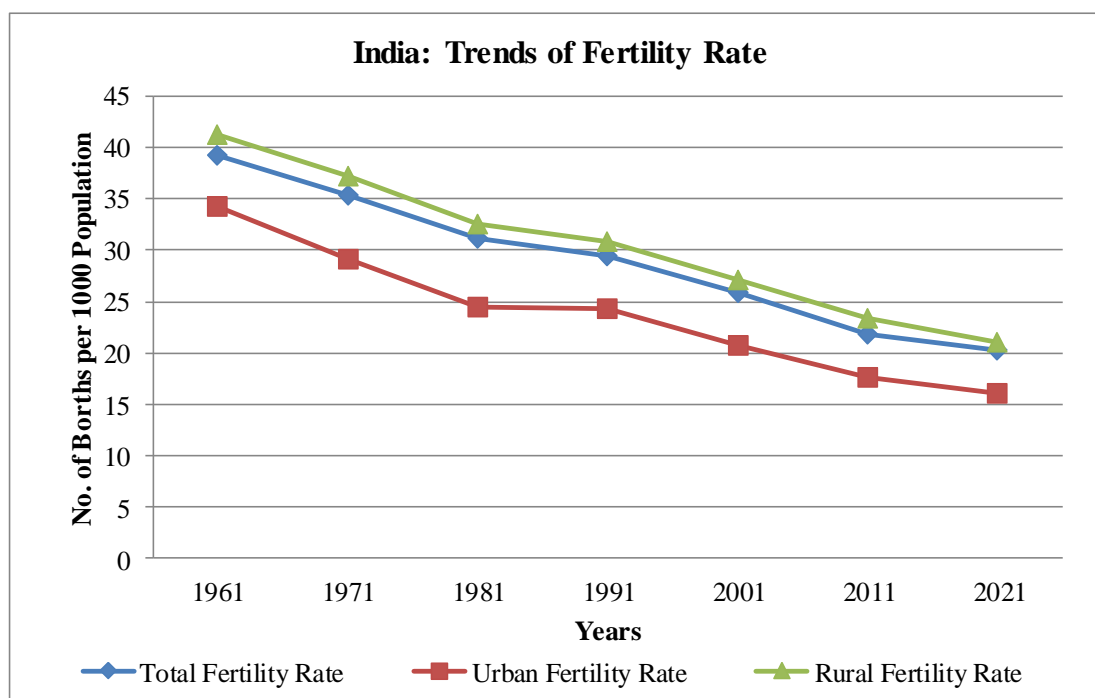


Fig. 1

The fertility rate of India in the urban areas during the period of 1961 to 2011 has been given table 1. Table 1 designates that the fertility of India was as high as 34.2 in 1961 and this continuously decreased and reached up to 17.6 in 2011. Table 3.1 indicates that urban fertility rapidly decreased during the period of 1961 to 1981 but in the next decade i.e. 1981 to 1991 there is a light decrease in the urban birth rate of India. In the next decade i.e. 1991 to 2001, it is decreased by 3.6 per 1000 population and in the decade 2001 to 2011 it is decreased by 3.1 per 1000 population.

In short, it has been observed that the fertility rate in India continuously declined during the period of investigation. There are different physiological, biological, social and economic factors are responsible for the declining fertility in India. Such factors are availability to affordable family planning i.e. sufficient medical facilities and government

policies, use of family planning, improved economic conditions and improved standard of living, the status of women in society, increased the literacy rate of female, increase female participation in the workforce and so on.

Trends of Fertility rate in Maharashtra

The fertility rate of Maharashtra during the period of 1961 to 2011 has been given table 3.2. It is found that the total fertility of Maharashtra in 1961 was i.e. high as 36.5 and this steadily decreased up to 16.7 in 2011. In 1991, the fertility rate has decreased up to 26.2 as compared to 28.5 in 1981. In 2001, the fertility rate was decreased up to 20.7 as compared to 1991.

Table 3.2
Maharashtra: Trend of Fertility Rate from 1961 to 2011

Sr. No.	Year	Total	Decadal Change	Urban	Decadal Change	Rural	Decadal Change
1	1961	36.5	-	33.4	-	38.2	-
2	1971	32.2	-4.31	29.0	-4.4	33.7	-4.5
3	1981	28.5	-3.7	24.5	-4.5	30.4	-3.3
4	1991	26.2	-2.3	22.9	-1.6	28.0	-2.4
5	2001	20.7	-5.5	20.2	-2.7	21.1	-6.9
6	2011	16.7	-4.0	15.8	-4.4	17.3	-3.8
	2021	17.0	0.3	15	-0.8	19	1.7

Source: Sample Registration System Bulletin and Registrar General of India, New Delhi, 1961 to 2011 and National Family Health Survey-5 (2019-21)

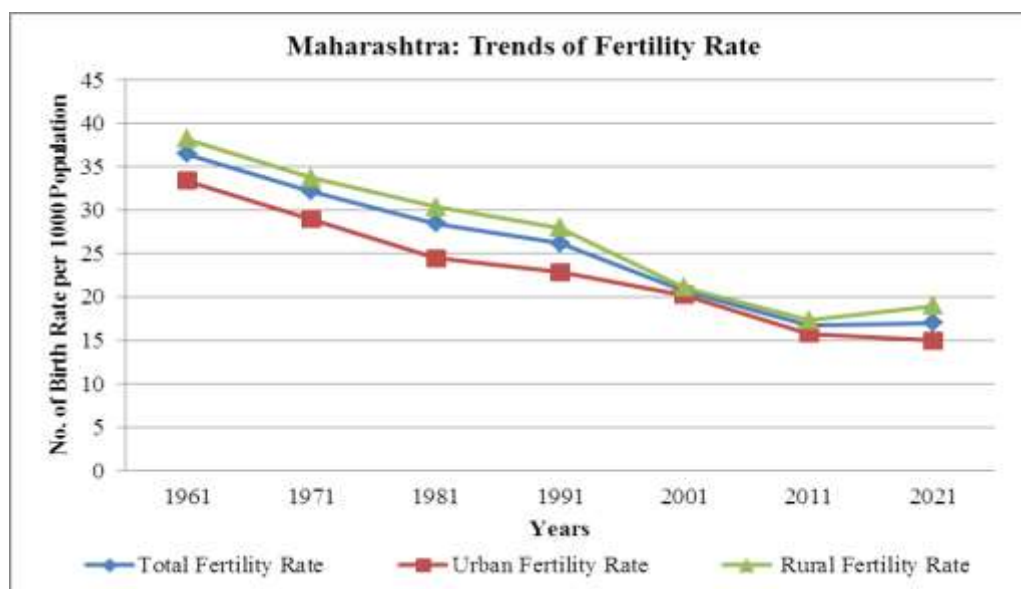


Fig. 2

The rural fertility rate of Maharashtra is continuously decreased in each decade from 1961 to 2011 but the rate of decrease differs from decade to decade. Table 3.2 indicates that during the decade of 1961 to 1971 it was decreased by 33.7 per 1000 population i.e. it was

38.2 in 1961. After that rate of decrease in birth rate is decreased in the decade of 1971 to 1981 and 1981 to 1991 i.e. 30.4 and 28.0 respectively. The rate of decrease in birth rate is increased from 1991 to 2001 and become 21.1 per 1000 population due to Government Programmes such as child survival and motherhood.

The urban fertility rate of Maharashtra is continuously decreased in each decade from 1961 to 2011 but the rate of decrease is varied from decade to decade. Table 3.2 shows that during the decade of 1961 to 1971 it was decreased by 4.4 per 1000 population i.e. it was 33.4 in 1961 and decreased up to 29.0 in 1971. After that rate of decrease in birth rate in the decade of 1971 were 29.0 to 24.5 in 1981 and 22.9 in 1991. The rate of decrease in birth rate is increased from 1991 to 2001 and 2001 to 2011 and become 2.7 and 4.4 and reached up to 20.2 and 15.8 per 1000 population respectively due to government policies.

In short, it has been observed that the total, urban and rural fertility rate is declined in Maharashtra during the period from 1961 to 2011. It is found that the fertility rate is higher in rural areas than the urban areas of Maharashtra. Because of high literacy in the urban area, use of family planning, variations of economic conditions and the standard of living, variations in the status of women in society and variation in female participation in the workforce, etc. are responsible for the higher fertility rate in rural areas of Maharashtra.

Trends of Fertility rate in Satara District

Fertility is one of the important factors in the population changes in the study region. The fertility rate of Satara district during the period of 1961 to 2011 has been given table 3.3. The total fertility rate of Satara district was 25.70 in 1961 and it is steadily decreased up to 16.72 in 2011. The fertility rate was 20.38 in 1991 as compared to 20.87 in 1981. According to 2001, the fertility rate has been decreased by 19.39 as compared to 1991 and the fertility rate has 16.72 in 2011. The fertility rate of study region is considerably decreased during the period of investigation due to increase in literacy leads the awareness in the society and Government policy.

The rural fertility rate of Satara district is continuously decreased in each decade from 1961 to 2011 but the rate of decrease is varied from decade to decade. Table 3.3 exhibits that during the decade of 1961 to 1971 it was decreased by 0.7 per 1000 population i.e. it was 27.3 in 1961 and decreased up to 26.6 in 1971. After that rate of decrease in birth rate is increased in the decade of 1971 to 1981 and 1981 to 1991 i.e. 1.4 and 1.8 respectively. The rate of decrease in birth rate is increased from 1991 to 2001 and 2001 to 2011 and become 2.2 and 1.0 per 1000 population respectively due to Government policies and increases of awareness of society due to increase in literacy rate and increase in marriageable age.

Table 3

Satara District: Trend of Fertility Rate from 1961 to 2011

Sr. No.	Year	Total	Decadal Change	Urban	Decadal Change	Rural	Decadal Change
1	1961	25.70	-	23.2	-	27.3	-
2	1971	23.97	-1.73	22.9	-0.3	26.6	-0.7
3	1981	20.87	-3.10	17.5	-5.4	25.2	-1.4

4	1991	20.38	-0.49	16.7	-0.8	23.4	-1.8
5	2001	19.39	-0.99	15.2	-1.5	21.2	-2.2
6	2011	16.72	-2.67	14.7	-0.5	20.2	-1.0
7	2021	15.98	-0.74	14.5	-0.2	19.7	-0.2

Source: Compiled by researcher on the basis of 1) District Census Handbook of Kolhapur District, 2001-2011 2) Annual Vital Statistic Report of Maharashtra State, 2001-2011.

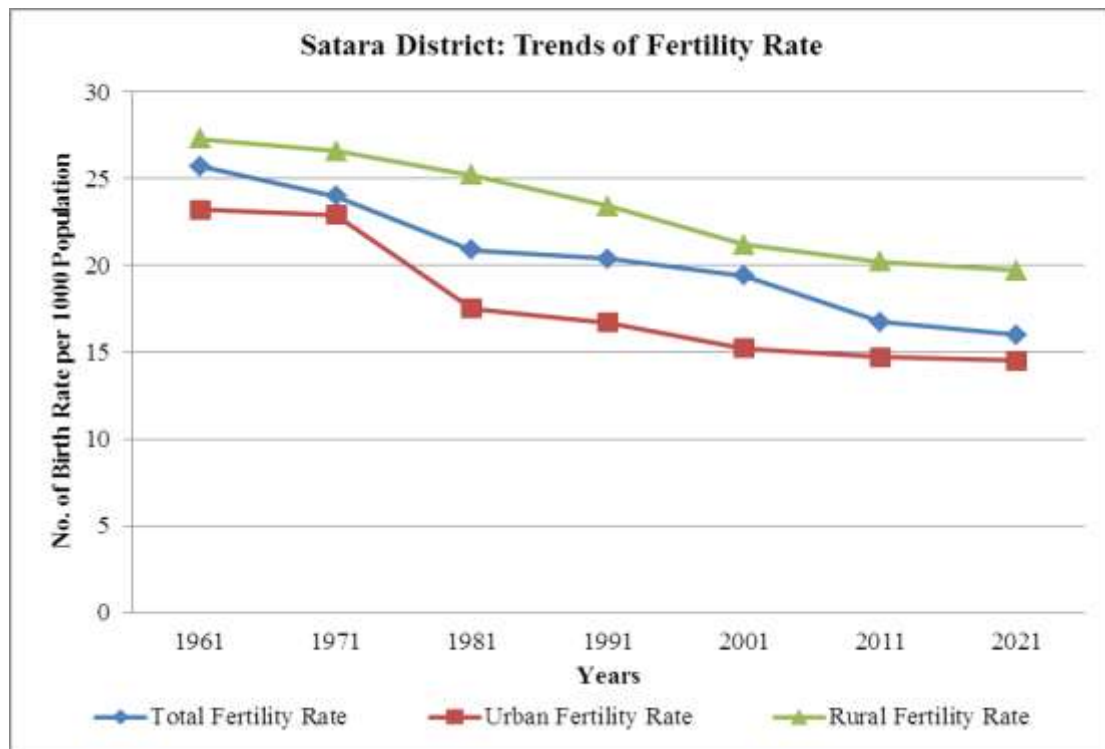


Fig. 3

The urban fertility rate of Satara district is continuously decreased in each decade from 1961 to 2011 but the rate of decrease differs from decade to decade. Table 3.3 indicates that during the decade of 1961 to 1971 it was decreased by 0.3 per 1000 population i.e. it was 23.2 in 1961 and decreased up to 22.09 in 1971. After that rate of decrease in birth rate is increased in the decade of 1971 to 1981 and 1981 to 1991 i.e. 5.4 and 0.8 respectively. The rate of decrease in birth rate is increased from 1991 to 2001 and become 1.5 due to government policies and increases of awareness of society due to high literacy rate and increase in marriageable age.

In short, it is recorded that the total, urban and rural fertility rate is declined in Satara district during the period from 1961 to 2011. It is also noted that the fertility rate is higher in rural areas than the urban areas of Satara district. Because of low use of family planning, variations of economic conditions and the standard of living, low literacy in the rural area, poor status of women in society, etc. are responsible for the higher the fertility rate in rural areas of Satara district.

It explains the rural birth rate is higher than the urban population due to the lower family planning, low health awareness and old human thought. The urban birth rate is rapidly

decreased because of the adoption of family planning programs and improved education facility.

Comparison of Fertility Rate in India, Maharashtra and Satara District

In the last five decades the total birth rate, urban birth rate and rural birth rate of Satara district are lower than the state and country because Satara is one of the advanced districts of Maharashtra having high literacy rate which leads to the adoption of family planning through using different artificial tools. In 1961, the total birth rate in India it was 39.2, that of Maharashtra state was 36.5 and Satara district was 25.7. Same time urban birth rate of India was 34.2, Maharashtra state was 33.4 and Satara district was 23.2. The rural birth rate of India was 41.2, Maharashtra State was 38.2 and Satara district rural birth rate is 27.3. It explains rural birth rate higher than urban birth rate due to the low literacy rate, poor standard of living, lower the status of women in society, etc.

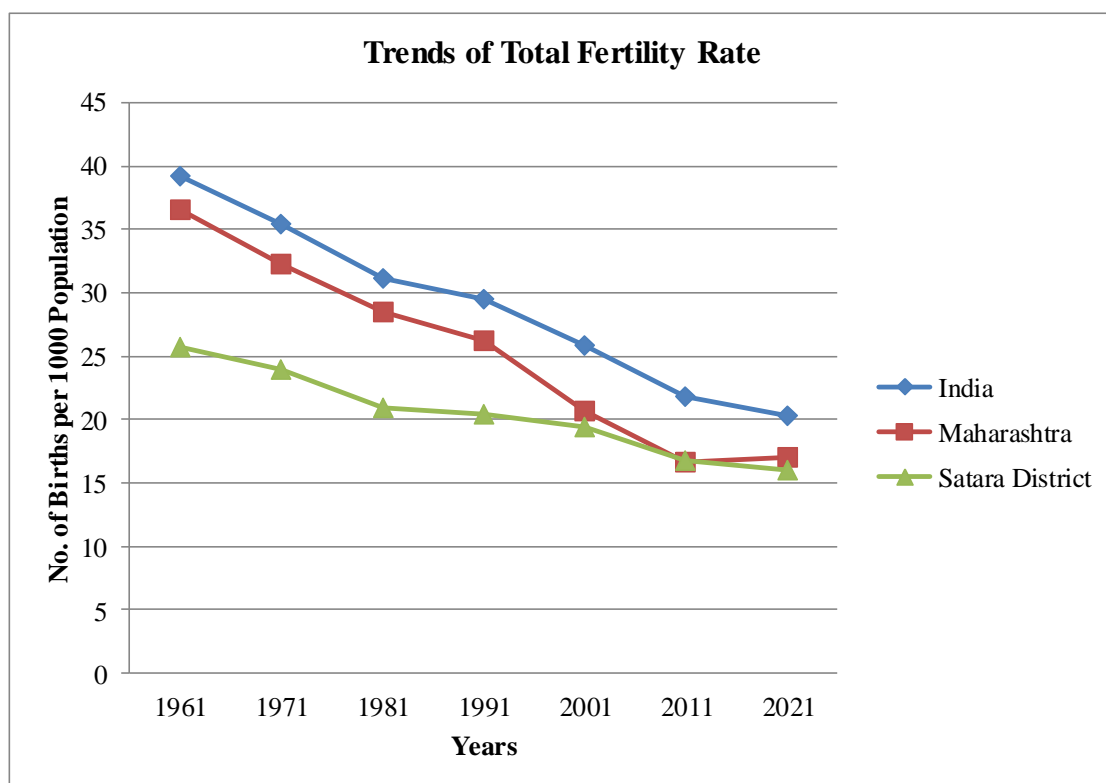


Fig. 4

In 2021, the trend of birth rate i.e. both rural and urban area indicates declining trend and urban birth rate remained higher than the rural birth rate during the period of investigation. The total birth rate of India was 20.3, that of Maharashtra state was 17.00 and Satara district was 15.98. In the urban area, the fertility rate of India was 16.0, in Maharashtra was 15.0 and in Satara was 14.5. In the rural area, the fertility rate of India was 21.0, in Maharashtra were 19.0 and in Satara district were 19.7.

Conclusion

It has been observed that the fertility rate of the throughout level declined from 1961 to 2021 because improve the transportation facilities, adequate availability of educational facilities leads increased literary rate, improved medical facilities, high awareness about the

problems of high birth rate and improve the status of women in society, etc. Therefore all over the levels fertility rate has been declined. The fertility rate of Satara district is lower than the state and India due to the implementation of the family planning programme and awareness of the society.

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