Indian Population towards Stabilization

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Abstract

Literature and reports state that high population growth is no longer a major concern for India. Because the total fertility rate (TFR), and the population growth rate as well, have declined significantly during last two/three decades. It is expected that during next two decades, Indian population will reach its maximum size and start to decline thereafter. However, the TFRs, and consequently the population growth rates, of different communities have been different. Compared to other communities the population growth rate among Muslims has been higher. From this fact one may be inclined to jump to the conclusion that if appropriate population policies are not implemented, the religious composition of Indian population may drastically change in the coming vears. However, a closer look at the trends in the community-wise TFRs reveals that the TFR of all the communities including that of Muslims have declined significantly during this period. It is hence argued that community-specific targeted population control measures may not be required. The focus of policy should rather be on improving access of left-behind sections of population, including the Muslims with low income and educational attainment, to basic services such as education of the girl child, healthcare etc., which will quicken the decline of fertility rate among these population segment and, in turn, lead to early convergence of cross community-specific population growth rates. This will not only stabilize the total Indian population but also the inter-community composition of the population.

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Introduction

In India, until 1970s or 1980s, it was widely believed that high rate of population growth was mainly responsible for various socioeconomic problems such as unemployment, food shortage, price rise etc. The government also implemented various policies to control population. In fact, India was the first country in the world to introduce state sponsored family planning program way back in 1952. Initially the program was focused primarily on population control. In course of time though, its scope has been widened to a program of family welfare with women and child health occupying a major plank of the program. With improved understanding of the dynamics of population growth, the policy has been expanded beyond population contraceptives and birth-control measures to lay greater emphasis on socioeconomic determinants of fertility. The National Population Policy 2000 provides a holistic and target free approach to reduce the fertility.

Towards the end of 20th century, the problematic perception of India's large and growing population started to give way to an emerging positive perspective regarding its population to be a resource and a potential source of economic growth. This positive perception arose not just because of the size but also from the age structure of its population. Compared to most developed counties of Europe, North America and Japan, Indian population is remarkable young with an average age of only 28.7 years in 2020⁴. In contrasts, the average age of the population in Japan, Germany, Norway, Canada and China are 48.6 years, 47.8 years, 39.5 years, 41.8 years and 38.4 years respectively. With a larger share of population in the working age group of 15 to 60 years, India was slated to earn 'demographic dividend' by developing and deploying its human resource productively within and outside the country (Dahlman and Utz, 2005; Chandrasekhar et al. 2010). To what extent India has been able to appropriate this potential demographic dividend is a subject worthy of serious debate and discourse. But, as the title suggests, the theme of the present write-up is the discernable decline in the population growth rate India in the last few decades. Literature (Vollset et al, 2020) suggests that population growth is no longer a major concern for India, as the total fertility rate (TFR), the prime driver of pollution growth, has declined significantly in India during last two three decades. The article takes a closer look at the trend in TFR along with the population trend in India in the last two decades. Besides the review of literature on the theme of declining TFR and factors affecting the decline, we have examined the fertility data reported in the first, second, third, fourth and fifth rounds of National Family Health Survey⁵ (NFHS).

This article consists of four sections. The second section examines the declining TFR in India. Variation in the TFR across different communities is discussed in the third section. The last section gives some concluding remarks.

⁴ <u>https://www.cia.gov/the-world-factbook/field/median-age/country-comparison</u>, Accessed on 09-11-2022.

⁵The National Family Health Survey (NFHS) started in 1993 provides information on population, health, and nutrition for India, and each state and union territory (UT). The NFHS is done by Ministry of Health and Family Welfare, Government of India. Till 2022 five such surveys have been conducted. The latest one is the fifth NFHS 2019-21

Declining Fertility

The tendency towards declining growth rate of population started during 1980s. In the year 2020 the Lancet journal (a journal of medical sciences) made a projection regarding the world population. They stated that towards the end of this century the world population would be lower than what it is now (Vollset et al, 2020). They found that in India population would start to decline by the mid of 2040s. If this report is to be believed, we should not worry about the problem of population explosion; which was earlier extensively discussed in the literature (Malthus, 1798; Coale & Hover, 1958, Enke, 1970). According to this projection by 2100 the five most populated countries of the world would be India, Nigeria, China, USA and Pakistan. The total projected population and the Total Fertility Rate⁶ (TFR) of these five countries is given in Table1.

Countries	Total Population (in Crore)		Total Fertility Rate			
	2017	2100	2017	2100		
India	138.06	109.32	2.14	1.29		
Nigeria	20.61	79.01	5.11	1.69		
China	141.25	73.19	1.53	1.47		
USA	32.48	33.58	1.81	1.53		
Pakistan	21.43	24.84	3.40	1.31		
Global	764.05	878.56	2.37	1.66		

 Table 1: Projected Total Population and TFR of the Five Largest Countries in the World

Source: Vollset et al, 2020

It is not just the Lancet journal which has made the prediction of population of India soon reaching its peak and subsequently declining. The complete report of the National Family Health Survey-5(NFHS-5) is published during the beginning of 2022 has also hinted towards such an eventuality. The report states that the TFR of Indian women has declined significantly. Presently, the TFR of India is almost equal to that of replacement rate⁷. The TFR of India over the years is given in Table 2. It can be seen that the TFR in India has declined from 3.39 during 1993 to 2.0 during 2021. Thus, TFR is below the replacement rate (2.1) during 2021. TFR has declined across all the states. Among the 30 states and union territories shown in Table 2, only five states have their TFR above the replacement rate. TFR is highest in Bihar, followed by that in Meghalaya, Uttar Pradesh, Jharkhand and Manipur. It is worth noting that Uttar Pradesh had highest TFR (4.82) among the states of India during 1993 which had declined significantly by 2021. The TFR is lowest in Sikkim followed by that in Goa.

⁶Total fertility rate of a population in a particular year indicates the total number of children that would be born to each woman till the end of her child bearing age (14 to 49 years). It is an important indicator of population growth.

⁷If the total fertility rate of a country is 2.1, the the population of that country is expected to be stable. In other words, number of children born to that country will be equal to the number of deaths occur. This rate of total fertility (2.1) is known as the replacement rate.

STATES	1993	1999	2006	2016	2021
Bihar	4.0	37	4 0	3.4	3.0
Meghalaya	3 73	4 57	3.8	3.0	2.9
Uttar Pradesh	4.82	4.06	3.82	27	2.9
Iharkhand	NA	2 76	3 31	2.5	2.1
Manipur	2 76	3.04	2.83	2.6	2.2
Rajasthan	3.63	3.78	3.21	2.4	2.0
Madhya Pradesh	3.9	3.43	3.12	2.3	2.0
Harvana	3 99	2.88	2 69	2.3	1.0
Uttarakhand	NA	2.61	2.55	2.1	1.9
Assam	3.53	2.31	2.42	2.2	1.9
Mizoram	2.3	2.89	2.86	2.3	1.9
Guiarat	2.99	2.72	2.42	2.0	1.9
Chhattisgarh	NA	2.79	2.62	2.2	1.8
Orissa	2.92	2.46	2.37	2.0	1.8
Arunachal Pradesh	4.25	2.52	2.03	2.1	1.8
Kerala	2	1.96	1.93	1.6	1.8
Tamil Nadu	2.48	2.19	1.8	1.7	1.8
Telangana	NA	NA	NA	1.8	1.8
Himachal Pradesh	2.97	2.14	1.94	1.9	1.7
Nagaland	3.26	3.77	3.74	2.7	1.7
Tripura	2.67	1.87	2.22	1.7	1.7
Maharashtra	2.86	2.52	2.11	1.9	1.7
Andhra Pradesh	2.59	2.25	1.79	1.8	1.7
Karnataka	2.85	2.13	2.07	1.8	1.7
Punjab	2.92	2.21	1.99	1.6	1.6
Delhi	3.02	2.4	2.13	1.8	1.6
West Bengal	2.92	2.29	2.27	1.8	1.6
J&K	3.13	2.71	2.38	2.0	1.4
Goa	1.9	1.77	1.79	1.7	1.3
Sikkim	NA	2.75	2.02	1.2	1.1
All India	3.39	2.85	2.68	2.2	2.0

Table 2: Total Fertility Rate across the States in India over the Years

Source: Sample registration survey 2019.NFHS 5 (2019-21) and Data book for Planning Commission: 22nd December, 2014

Considering the TFR closer to the replacement rate, we may conclude that the population growth rate of India will decline significantly in the coming years. Moreover, the total

population of India will reach the maximum level within next two decades and start declining thereafter. The pertinent question to ask in this context is what factors are responsible for decline in TFR. Literature state that the level of education of the women has had significant impact on decline in TFR (Chaudhry, 1989; Sleebos 2003; Addio and Ercole 2005; Pourreza et al. 2021). Sometimes women postpone their marriage to complete education; which has a negative impact on their TFR. Data available from NFHS-4 and NFHS-5 also confirm that along with increase in the number of years of schooling of the women, TFR trend decline (refer to Table 3). It can be seen that the TFR among the women with no schooling is 2.82 during NFHS 5, which is 1.78 among the women with 12 or more years of schooling.

Years of schooling completed by the Women	NFHS 4	NFHS 5
No schooling	3.07	2.82
5 years of schooling	2.43	2.30
5-7 years of schooling	2.38	2.21
8-9 years of schooling	2.19	2.12
10-11 years of schooling	1.99	1.88
12 or more years completed	1.71	1.78

Table 3: Total Fertility Rate of the Women with Different Level of Schooling

Table 4: Total Fertility Rate across Different Wealth Groups					
Wealth index	NFHS 4	NFHS 5			
Lowest	3.17	2.63			
Second	2.45	2.12			
Middle	2.07	1.89			
Fourth	1.84	1.74			
Highest	1.54	1.57			

Source: www.rchiips.org/nfhs, Accessed on 01-10-2022

Source: www.rchiips.org/nfhs, Accessed on 01-10-2022

Economic condition of a family is also expected to affect the TFR. Table 4 shows the TFR of different wealth groups. Results from both NFHS- 4 and NFHS-5 show that TFR is highest among the lowest wealth index group, and lowest among the highest wealth index group. Thus, TFR has negative correlation with the economic condition (volume of wealth) of the society or community. There are also some other factors those affect the TFR and population growth rate. Literature state that infant mortality rate has a positive correlation with the TFR (Basu, 2002). It is because when parents are not sure about the survival of their children, they prefer to have more child. Thus, better public health system is expected to reduce the TFR. Preference for son and infant mortality rates are also related to each other. Global records show that more boys are born than girls. However, due to biological factors girls have more survival capacity than the boys. In other words, the natural infant mortality rate among the boys is more than that of girls. So, in the middle age equal number of male and female should be there in

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a society. But, in India, preference for son and neglect towards daughters in terms of nutritional requirements, medical care etc. leads towards higher infant mortality rate among the girls (Sen 1992, 2003 Arnold et al. 1998). In China, the one child policy has destabilized the sex ratio at birth due to sex selective abortion (Follett, 2020). Sex selective abortion is known to be a problem in India also, especially in some north Indian states. Additionally, if some couple has girl child and no boy, they are more likely to have another child at a short interval. In India, the median birth interval after the birth of a girl is one month shorter than the median birth interval after the birth of a boy. It is another cause of higher child mortality rate among the baby girls, as the mother has shorter time to take care of the baby girl (Arnold et al 1998). In the world, India and China are the only two countries with higher infant mortality rate among the girls compared to that of boys (United Nations, 2011).

Table 5: Percentage Distribution of Married Women (aged 15-49) Who do not Want more Children by Sex and Number of Their Living Children (in %)

Number of living children	NFHS 1	NFHS 2	NFHS 3	NFHS 4	NFHS 5
2 boys and no girls	71.5	82.7	89.9	89.2	90.8
1 boy and 1 girl	66	76.4	87	86.7	89
2 girls and no boys	36.9	47	61.4	62.6	65.3
2 children	59.7	72.4	83.2	83.6	85.8

Source: www.rchiips.org/nfhs, Accessed on 01-10-2022

The causes behind the preference for son are economic, social and religion. Boys are actively involved in agricultural and other works; while the participation of women in such work has declined significantly after the mechanization of agriculture (Mitra, 2014). Social factors include the tradition of dowries and a rigid patriarchal society where only sons have the rights to perform death rituals of parents and carries the title of the society etc. Preference for son has been observed to be higher in the northern and western states compared to that in southern and eastern states (Mitra 2014). Table 5 shows the percentage of currently married women who do not want any more children by the number and sex of living children. According to NFHS-5, more than 90 per cent of the women reported not to have any more children after having 2 boys; while only 65.3 per cent the women with 2 daughters and no son did not want to have any more children. Around 85.8 per cent of the women with two children (irrespective of gender) reported that they did not want more children. Across all rounds of NFHS, the percentage of women who do not want any more children is higher among those who have at least one son compared to those who do not have a son. Thus, the desire to have more children is strongly affected by the number of sons in India. But over the year the percentage of women with 2 daughters (without a son) wanting no more children had increased from 36.9 per cent during NFHS-1 of 1993 to 65.3 percent during NFHS-5 of 2021. Again the percentage of women with 2 children (irrespective of son or daughter) who do not want any more children have also increased from 59.7 per cent during NFHS-1to that of 85.8 per cent during NFHS-5. This change preference regarding number of children to be had must have been a significant contributory factor to the decline in the TFR.

Methods	NFHS 1	NFHS 2	NFHS 3	NFHS 4	NFHS 5
Any method	40.7	48.2	56	53.5	66.7
Female sterilization	27.4	34.1	37.3	36.0	37.9
Male sterilization	3.5	1.9	1.0	0.3	0.3
IUDs	1.9	1.6	1.7	1.5	2.1
Pill	1.2	2.1	3.1	4.1	5.1
Condom	2.4	3.1	5.2	5.6	9.5

 Table 6: Percentage of Currently Married Women (Aged 14-49) according to use of Contraception

Source: www.rchiips.org/nfhs, Accessed on 10-02-2024

It is to be noted here that the family planning in India is still women driven. Table 6 explains the use of contraception among married women (age 14-49) and their current partners. Although there is an increase in the use of condoms by the men in the recent years, still women are mainly responsible for adopting the birth control measures. While there is a significant increase in female sterilization over the years, the male sterilization has declined significantly during this period. So, it is important to sensitize the society about the importance of family planning measures to be taken both by male and female.

Fertility across Different Communities

Discussion on population growth rate would be incomplete without any discussion on the TFR of different castes and communities. The NFHS-5 has categorised the population into five groups, i.e. scheduled tribe, scheduled caste, other backward caste, others (general) and those who are not aware of their caste. The TFR across different castes are shown in Figure 1. It can be seen that among different castes TFR is lowest among those belonging to the others category and highest among those who do not know their caste.



Figure 1: Total Fertility Rate across Different Caste during 2019-21

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Source: NFHS-5, www.rchiips.org/nfhs, Accessed on 01-10-2022

The TFRs, and consequently the population growth rates, have also been different across communities along religious lines. Among such communities, population growth rate has been higher among the Muslims. From this fact one may be inclined to jump to the conclusion that, if appropriate population policies are not implemented, the religious composition of Indian population may drastically change in the coming years. However, a closer look at the trend in the community-wise TFRs reveals that the apprehension may be unfolded. The TFRs of different religion-wise communities are given in Figure 2. It can be seen that the TFRs of all communities have been declined significantly during last two decades. TFRs of communities excluding Muslims have already come down below the replacement rate. During 2019-21, the TFR among the Muslims was 2.4, which was marginally higher than the replacement rate (2.1). In other words, on the average 240 children were born to a group of 100 Muslim women during their reproductive period (life time). On the other hand, the TFR of the Hindus was slightly lower (1.9) than the replacement rate. In simple words, on the average 190 children were born to a group of 100 Hindu women during their reproductive period. TFR was significantly lower than the replacement rate among the Buddhists, Jains and Sikhs. It was found that on the average 160 and 140 children were born to a group of 100 Sikh and Buddhists women respectively during their reproductive age group. However, it will be misleading if it is not mentioned that the decline in TFR during last two decades is highest among the Muslim community. If these trends continue, we can well expect that after a decade or so, the TFR across the communities will converge to a below replacement level national rate. Along with it, the religious composition of Indian population will reach stability. It is to be mentioned here that the TFRs in many Islamic countries such as Iran, Tunisia, Lebanon, Turkey etc. have declined to the replacement level (Pourreza et al. 2021). Even in neighbouring Bangladesh, where 90% of population is Muslim, the TFR has fallen below the replacement rate (Vollset et al, 2020). So, we may conclude that religion is not a major factor determining TFR.



Figure 2: Total Fertility Rate in India across Religious Communities

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Source: Different Rounds of National Family Health Survey, www.rchiips.org/nfhs, Accessed on 01-10-2022

Besides showing that the fertility rates of all religious communities have tended to decline over time, the graphs in figure 2 also show another interesting feature about the trends in the fertility rates. The graphs show that after a fertility rate has come down to a sufficiently low level, further decline in the fertility rates take place rather slowly. If this trend continues, the fertility rates of all communities will tend to converge to a common fertility rate sometime in the future. Then on, there will be no significant difference in population growth rates across different communities. Until this convergence is achieved, inter-community population growth rates will be different, albeit by small extents.

Assuming declining trend in TFRs will continue in the observed pattern, the population growth rates of different religious groups in India will converge to a common rate which will also stabilize the religious composition of the population. Yet, some section of Indian public seems to be quite concerned with present differential population growth rates across communities, especially with the somewhat higher growth rate among Muslims. To address this concern, it may be necessary to take up policy measures to quicken the decline and eventual convergence in the fertility rates. Such policy need not be targeted to any particular community. If policy measures target reduction of fertility rates as such, it will impact those communities more whose fertility rates are higher than those of the others. The next question therefore is what kind of policy measures can be taken. One can think of three alternative policy options. The first, and the most obvious one, will be to enforce one child or two children norm. Such a measure will not only be drastic but its implementation may involve elements of coercion. In the past such coercive measures have not only been found to be difficult to implement, but proved to be socioeconomically politically costly. Forcible family planning measures during emergency imposed in India the mid-1970s was one of factors contributing to the Congress Party's unprecedented defeat in the general election to the Lok Sabha in 1977 (Gupte, 2017). Similarly, one child policy enforced by China on couples during 1979 led to many undesired socioeconomic consequences, which forced the country to finally abandon the policy (Zeng & Hesketh, 2016). In view of these unsatisfactory experiences from the past, measures of such types are best avoided. The second option may be to put some disincentive for having larger family size. The policy measures may take the form of denying or reducing benefits of various government-run welfare measures to couples having more children than the stipulated number. Such a policy may not be strictly coercive in nature but has the drawback of forcing a uniform standard without regards to specific contexts. In our opinion, the best policy option is to work through the factors that significantly impact the fertility rate; such as women education, improved access to basic healthcare, fuller immunization of children and general economic uplift of the poorer section of the society. These policies can be targeted to cover the hitherto uncovered or partially covered population. Apart from bringing down the fertility rate quickly, such policies will also serve the broader goal of development of the country, bringing down child mortality, malnutrition among children, and poverty and vulnerability in general.

Concluding Comment

The fear that faster population growth rates of some communities will eventually overwhelm the population of the other communities in India is not well founded. Yet the facts remain that, if left unattended the population of some communities may continue to increase faster than other communities for some time to come. Hence to quell the apprehension that such communities are going to dominate in terms of numbers in the future, it is necessary to adopt some policy measures targeting reduction of fertility rates. Such policy measures should be more development oriented for left-behind segment of population rather than the coercive measures attempting directly to force couples to have fewer numbers of children.

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