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Evaluation of India's Family Planning Efforts through Policy Perspective

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1 Introduction

India's National Population Policy, announced in the year 2000, has aimed at achieving stable population by the year 2045 and replacement fertility by the year 2010 through addressing the unmet need of contraception, health care infrastructure and health personnel and through integrated service delivery for basic reproductive and child health care (Government of India, 2000). The policy has perceived that meeting the unmet need of contraception for spacing births along with the increase in the age at marriage and age at first birth of girls would lead to delayed child-bearing whereas meeting the unmet need of contraception for limiting births would promote the small family norm. The goals and objectives of the National Population Policy have been reiterated in the year 2005 when the National Rural Health Mission 2005-12 was launched (Government of India, 2005).

It is now more than a decade when India's National Population Policy was announced. There has however been little effort to analyse the progress in terms of delayed child bearing and promotion of small family. Evidence available from the District Level Household and Facility Survey suggests that there has been little change in the unmet need for contraception for both spacing births and limiting births (IIPS, 2010) whereas the total fertility rate is estimated to be 2.4 live births per woman of reproductive age circa 2011 which means that the goal of achieving replacement fertility by the year 2010 set in the National Population Policy 2000 could not be achieved (Government of India, 2013). There is little possibility that the country will be able to achieve stable population by the year 2045 as stipulated in the National Population Policy 2000.

Achievement of the small family norm and delay in child bearing reflect two different dimensions of fertility transition. Progress towards universal adoption of small family norm may be captured through the decrease in the proportion of 3rd and higher order births. On the other hand, delayed child bearing is important in the context of population momentum which is the tendency of the population to grow for some time after fertility has reached the replacement level (Frejka, 1982; Keyfitz, 1971, Merrick, 1989). Population momentum is primarily the consequence of a young population age structure (Bongaarts, 1994). Population momentum is estimated to account for a substantial proportion of projected population growth in India during the first quarter of the present century (Chaurasia and Gulati, 2008). Attention to the timing of child bearing therefore is essential in any analysis of fertility transition as a delay in the onset of child bearing and wider spacing of births lead to a temporary decline in period fertility and hence in the rate of population growth.

Traditionally, fertility transition has been analysed in terms of total fertility rate (TFR). TFR is essentially a synthetic measure of completed fertility which is determined by the birth limitation dimension of fertility transition. It is invariant to birth planning or birth spacing dimension of fertility transition. This dimension is important in any analysis of fertility transition, especially, in the context of population stabilisation, especially when the replacement fertility is achieved and the growth of the population is largely the result of population momentum resulting from the age structure of the population. The effect of the timing of child bearing, however, is not reflected in measures of completed fertility such as the total fertility rate of the total marital fertility rate.

Family planning, along with efforts to increase the age at marriage of girls, has been the key intervention to hasten the pace of fertility transition in India. The mainstay of family planning efforts in the country has been the official family welfare programme launched way back in 1952. Although, the programme has undergone evolutionary ups and downs since its inception, yet it is still remains the key policy and programme intervention to achieve population stabilisation and mainstay of efforts to accelerate fertility transition.

This paper attempts to analyse fertility transition through a two-dimensional perspective - birth limitation and birth planning. The analysis is based on a fertility transition index that has been developed for the purpose as the conventional measures of fertility such as total fertility rate do not capture the transition in the timing of child bearing and spacing between successive births.

The paper is organised as follows. The next section of the paper outlines the construction of the fertility transition index. The third section describes the data source used in analysing fertility transition. Results of the analysis at national, state and district levels are presented in section 4 and their policy and programme implications are discussed in section five. Results of the analysis and their key programmatic implications are summarised in the last section.

2 Measurement of Fertility

Fertility of a population can be measured in terms of either intensity or incidence of child bearing. Intensity is measured in terms of exposure of a specific category of women to conception and child birth. It is also termed as occurrence-exposure rate (Hoem and Hoem 1989) or the rate of the first kind (Calot 2002). Incidence, on the other hand, is measured in terms of exposure of all women in the age category. It is also termed as frequency or rate of second kind or reduced rate. Intensity and incidence are directly related. The choice between the two depends upon their intrinsic properties and measurement issues. Fertility intensities are advocated on theoretical grounds. When they include all relevant dimensions of fertility, they can represent instantaneous probability that a woman in a specific category gives birth (Hoem 1976). They are independent of the earlier child bearing behaviour. Incidence rates, on the other hand, do not reflect the risk of child bearing but have the additive property.

Estimation of the intensity or incidence of fertility requires information about occurrence of birth and population exposed to the risk of birth. In situations where information about the population exposed to the risk of birth is not available, numerator analysis has been advocated (Ravenholt and Frederiksen 1968, Reynolds 1972, Chidambaram 1965, Balasubramanian 1972). The key concept is the 'excess' fertility - the proportion of births falling in the 'excess' category. Excess category may be defined either in terms of the age of the woman or the order of birth. Hamilton (1968) has defined 'excess fertility' as all births to mothers under 15 years or over 40 years of age; births above first parity to mothers 15 to 19 years; above second parity to mothers 20 to 24 years; above third parity for mothers 25 to 29 years; above fourth parity to mothers 30 to 34 years; and above fifth parity to mothers 35-39 years of age.

Numerator analysis is particularly useful in analysing the impact of family planning programme (Bertrand, Magnani and Knowles, 1994). For example, a family planning programme may target reducing the proportion of births to women above a certain parity (e.g., 3rd and higher order births) or to women below a certain age (e.g., below 20 years of age). Numerator analysis is also argued to be more sensitive to short-term changes in individual fertility behaviour than the conventional fertility measures such as total fertility rate (Ryder 1982, Srinivasan and Freymann 1990).

Let the total number of live births reported in a given period is distributed by the age of woman and the order of birth in the following manner:

Age of woman	Birth order		
	<3	≥ 3	Total
15-19 years	b_{11}	b_{12}	$b_{1.}$
20-49 years	b_{21}	b_{22}	$b_{2.}$
Total	$b_{.1}$	$b_{.2}$	$b_{..}$

Clearly

$$b_{..} = b_{11} + b_{12} + b_{21} + b_{22}$$

or

$$b_{21} = b_{..} - (b_{11} + b_{12} + b_{22})$$

$$b_{21} = b_{..} - ((b_{11}+b_{12}) + (b_{12}+b_{22}) - b_{12})$$

or

$$b_{21}/b_{..} = 1 - [(b_{1.}/b_{..}) + (b_{.2}/b_{..}) - (b_{12}/b_{..})]$$

or

$$i = 1 - (w + o - s)$$

where

- i = proportion of live births to women aged at least 20 years and birth order less than 3 to total live births.
- w = proportion of births to women aged less than 20 years to total births.
- o = proportion of 3rd and higher order births to total births.
- s = proportion of 3rd and higher order births to women aged less than 20 years to total births.

The index i is an indicator of fertility which takes into account the two dimensions of fertility transition - the dimension of birth limitation and the dimension of timing of birth. Obviously, i varies from 0 through 1. When i=1, all births in a given period are births or order 1 and 2 and there is no birth to women aged less than 20 years. On the other hand when all births to women aged at least 20 years are 3rd and higher order births, i=0. Clearly, higher is the value of the index i, the more advanced is the transition in fertility. The proportion of 3rd and higher order births is an indicator of birth limitation. The progression from second to third birth is argued to be a crucial component of fertility

change (United Nations 1997) and a decline in fertility would be reflected by a decrease in the proportion of 3rd or higher order births. These expectations have been borne out in a number of studies (Prasartakul et al. 1987, Srinivasan et al. 1992, Singh 2002). On the other hand, proportion of births to women aged less than 20 years is an indicator of the delay in child bearing in view of the fact that fertility decline proceeds in two stages. The first stage of fertility decline is due to rising age at marriage and the age at first birth (Westoff 1992). It has been observed that the latter is the age at first birth, the lower is the fertility and a decreasing proportion of births to women aged less than 20 years reflects the rising age at first birth (Sivakumar, 2000).

If it is assumed that *s*, the proportion of 3rd and higher order births to women aged less than 20 years is small as compared to *w* and *o*, then the fertility transition index (*FTI*) may be defined as

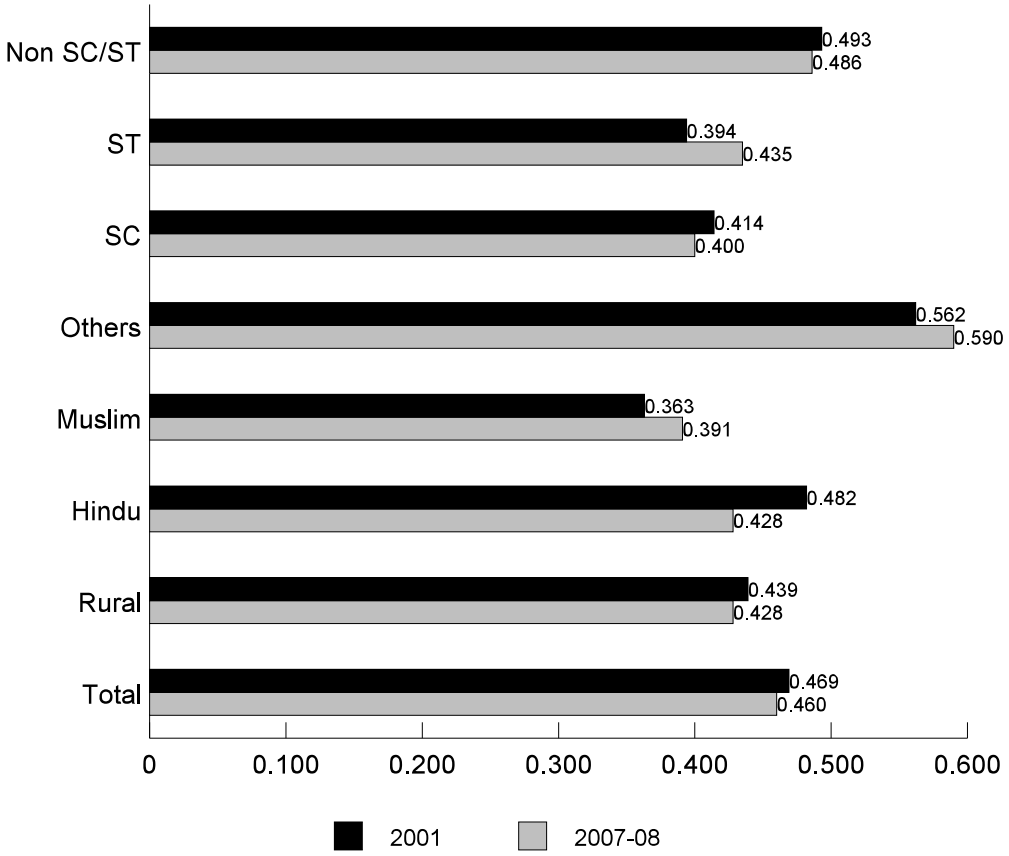
$FTI = 1 - (w + o)$.

Otherwise also, when *o* - the proportion of 3rd and higher order births decreases, *s* also decreases. Similarly, when *w* - the proportion of births to women below 20 years of age decreases, *s* also decreases and when both *o* and *w* are zero, *s* is also zero which means that *FTI* remains bounded from above by 1, although it is no longer bounded from below by 0 and may taken even negative value which is equal to the proportion of 3rd and higher order births to women aged less than 20 years. In fact, *FTI* assigns double weight to *s* in the early stages of fertility transition and as fertility transition advances, *s* decreases and the double weight assigned to *s* becomes less and less important. When $FTI = 1$, $s = 0$, and the weight assigned to *s* becomes immaterial.

3 Data

We use two data sets for the present analysis. The first data set is derived from the 2001 population census. During the 2001 population census, information was collected about any live births during one year prior to the census, age of the mother at the time of the birth and the order of the birth. This information is available for the total population as well as separately for rural and urban areas, for different social classes - Scheduled Castes, Scheduled Tribes and non Scheduled Castes/Tribes and for different religions. The second data set used here is available through the Districts Level Household and Facility Survey 2007-08 (DLHS 2007-08). DLHS 2007-08 was carried out throughout the country and covered around 0.7 million households in 611 districts (IIPS, 2010).During the survey, information about all births during the period 1 January 2004 to the survey date was collected from currently married women in the reproductive age group included in the sample. The survey date varied from state to state but all surveys were carried out during the period 2007-08. For each reported live birth during the survey, information about the age of the mother at the time of the birth and the order of birth was collected. The present analyses is based on the information of the most recent birth. If a currently married woman in the reproductive age group reported more than one birth during the reference period of the survey then information related to the most recent live birth has been used in the present analysis. A comparison of fertility transition index during the period 2000-01 with that during the period 2007-08 provides a framework for the

Figure 1
Fertility Transition Index in India

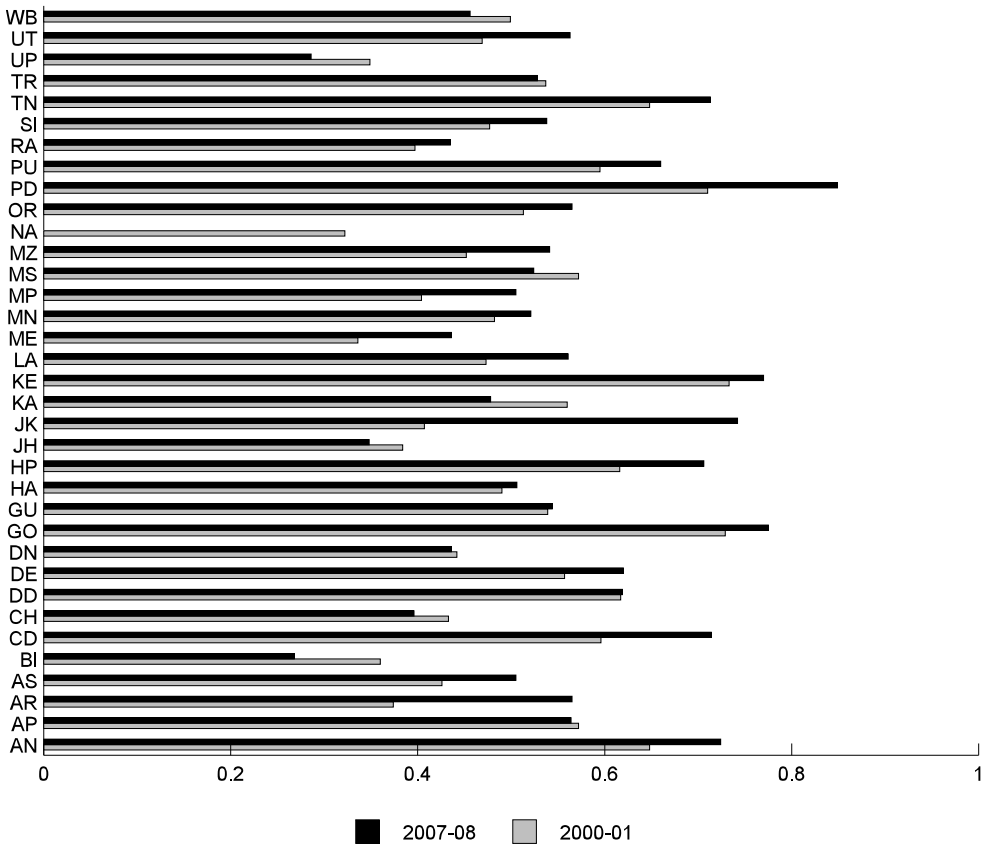


evaluation of family planning efforts in India. This evaluation has been carried out at the national level as well as at State/Union Territory and district levels for the combined population as well as for different population groups.

4. Fertility Transition in India

a. Country Scenario. According to the DLHS 2007-08, the *FTI* in India was around 0.46 during the period 2007-08. The proportion of 3rd and higher order births among the most recent births reported during DLHS 2007-08 was around 41 per cent whereas the proportion of births to women aged less than 20 years was around 13 per cent (Table 1). It is also clear from the table that *FTI* marginally decreased between 2000-01 and 2007-08. The proportion of 3rd and higher order births decreased from around 47 per cent during 2000-01 to around 41 per cent during 2007-08 but the proportion of births to women aged less than 20 years increased sharply from around 7 per cent to almost 13 per cent which actually accounted for the marginal decrease in *FTI*. This shows that family planning efforts in India have been able to promote, to some extent, the small family norm in the country but these efforts appear to have contributed little to delayed child bearing which an important dimension of fertility transition.

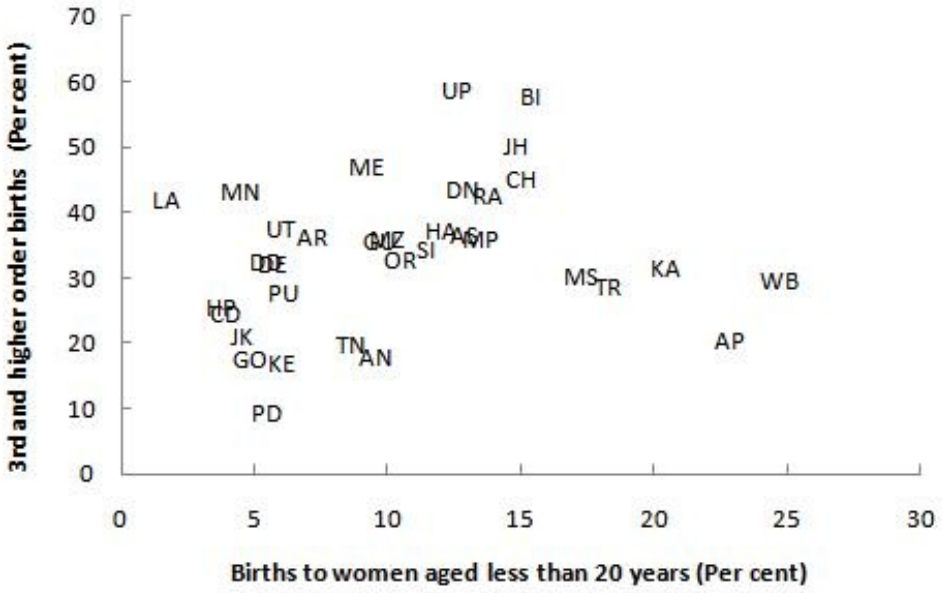
Figure 2
FTI across Indian states and Union Territories



In any case, a rather bleak picture of fertility transition in the second most populous country of the world is very much evident from table 1 which reflects the poor performance of family planning efforts in India. More than 40 per cent births in the country are still 3rd and higher order births while there has been a very rapid increase in the proportion of births to women aged less than 20 years indicating that concerns related to birth planning have largely remained unattended by the family planning efforts.

Differentials in *FTI* by residence, religion and social class are significant. *FTI* is lower in rural than in urban areas, lowest in Muslims as compared to Hindus and other religions and the lowest in Scheduled Castes as compared to Scheduled Tribes and non Scheduled Castes/Tribes. *FTI* decreased in the rural population ands in Hindus, Scheduled Castes and non Scheduled Castes/Tribes population but increased in Muslims and other religions and in Scheduled Tribes In Muslims, for example, the proportion of 3rd and higher order births decreased by more than 8 absolute points between 2000-01 and 2007-08 while the proportion of births to women aged less than 20 years increased by less than 6 absolute points. By contrast, in Hindus, the proportion of 3rd and higher order births decreased by

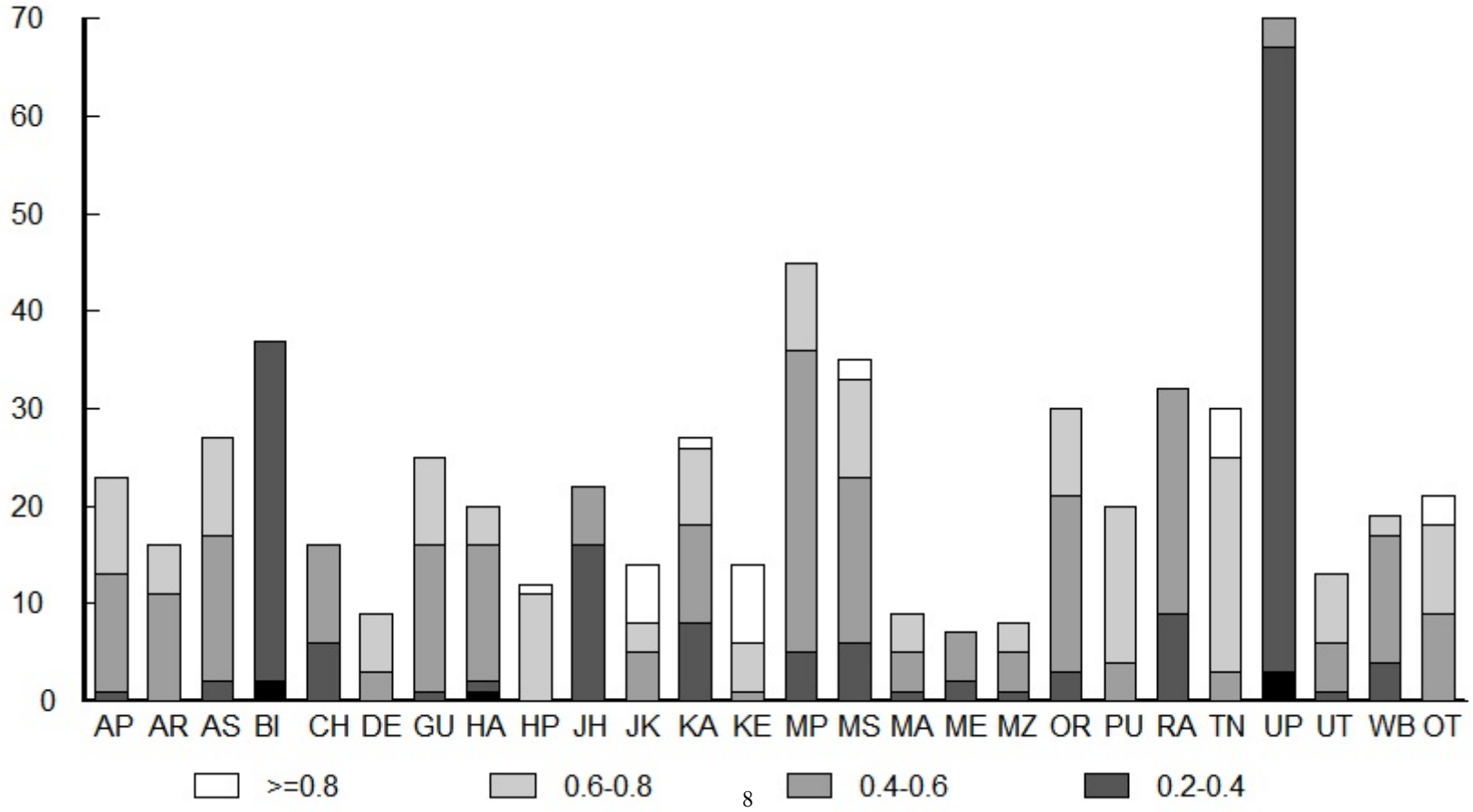
Figure 3
Location of states on the two dimensions of fertility transition



just around 2 absolute points while the proportion of births to women aged less than 20 years increased by almost 8 absolute points. Similarly, the proportion of 3rd and higher order births decreased by more than 10 absolute points whereas the proportion of births to women aged less than 20 years increased by around 6 absolute points in Scheduled Castes. By contrast, in the non Scheduled Castes/Tribes population, the proportion of 3rd and higher order births decreased by less than 6 absolute points whereas the proportion of births to women aged less than 20 years increased by almost 6 absolute points. Clearly, the dimension of birth planning has remained neglected in all population groups which is a reflection of the official approach to fertility reduction in the country.

b. State Scenario. *FTI* is found to vary widely across different States and Union Territories of the country. According to DLHS 2007-08, *FTI* was the highest in Puduchery which was the only State/Union Territory in the country with an *FTI* of almost 0.85. In seven States/ Union Territories of the country - Goa, Kerala, Jammu and Kashmir, Andman and Nikobar, Chandigarh, Tamil nadu and Himachal Pradesh - *FTI* has been estimated to be more than 0.70. On the other extreme, *FTI* has been estimated to be the lowest in Bihar followed by Uttar Pradesh. These two States are the only two States/ Union Territories in the country where *FTI* is estimated to be less than 0.30 circa 2007-08. Other States and Union Territories where the FTI has been estimated to be less than 0.50 are Jharkhand, Chhattisgarh, Rajasthan, Meghalaya, Dadra and Nagar Haveli, West Bengal and Karnataka.

Figure 3
Inter-district variations in Fertility Transition Index (*FTI*)



As regards the trend, in 10 States and Union Territories, *FTI* has decreased between 2000-01 and 2007-08. These states and Union Territories are Bihar, Karnataka, Uttar Pradesh, Maharashtra, West Bengal, Chhattisgarh, Jharkhand, Tripura, Andhra Pradesh and Dadra and Nagar Haveli. The decrease in *FTI* has been the fastest in Bihar, the state with the lowest *FTI*. In Uttar Pradesh also, the decrease in *FTI* has been very sharp. In Bihar, there has been virtually no change in the proportion of 3rd and higher order births between 2000-01 and 2007-08 while the proportion of births to women aged less than 20 years increased from 6 per cent to more than 15 per cent. Similarly, the proportion of 3rd and higher order births decreased only marginally in Uttar Pradesh but the proportion of births to women aged less than 20 years increased from 4 to 13 per cent. A similar situation prevailed in Karnataka and Jharkhand also. On the other hand, in Maharashtra, West Bengal, Chhattisgarh, Tripura and Andhra Pradesh, a substantial decrease in the proportion of 3rd and higher order births has been associated with a rapid to very rapid increase in the proportion of births to women aged less than 20 years. In these states, little attention appears to have been given to the dimension of the delay in child bearing and birth spacing in the quest for fertility reduction.

On the other hand, the most rapid increase in *FTI* has been observed in Jammu and Kashmir followed by Arunachal Pradesh, Puduchery, Chandigarh, Madhya Pradesh and Meghalaya. In Jammu and Kashmir, Arunachal Pradesh, Puduchery and Chandigarh, a very substantial decrease in the proportion of 3rd and higher order births between 2000-01 and 2007-08 is associated with virtually no increase in the proportion of births to women aged less than 20 years. In Assam, Madhya Pradesh and Meghalaya, a substantial decrease in the proportion of 3rd and higher order births has been offset by an increase in the proportion of births to women aged less than 20 years. In fact, Puducherry is the only State/Union Territory in the country where there has been a decrease, albeit marginal, in the proportion of births to women aged less than 20 years during 2007-08 compared to the period 2000-01.

Figure 3 depicts the location of the States and Union Territories on the two dimensions of fertility transition. The figure singles out three States - Karnataka, Andhra Pradesh and West Bengal - where the proportion of births to women aged less than 20 years has been estimated to be more than 20 per cent on the basis of DLHS 2007-08. In Maharashtra and Karnataka also, this proportion has been found to be higher than other States/Union Territories of the country. A very high proportion of births to women aged less than 20 years in these States suggest that child bearing in these States starts at an early age and there appears to be little child spacing. These States have recorded a sharp decline in the proportion of 3rd and higher order births in recent years leading to a rapid transition in the dimension of fertility limitation but the dimension of the delay in child bearing and birth spacing appears to have been completely ignored so that these States rank quite low in terms of *FTI*. Moreover, there are three States - Uttar Pradesh, Bihar and Jharkhand - where the situation appears to be precarious in both the dimensions of fertility transition. In these states, not only the proportion of 3rd and higher order births remains amongst the highest in the country but the proportion of births to women aged less than 20 years is also quite substantial. That is why *FTI*, in these States, is amongst lowest in the country.

c. District Scenario. Analysis of fertility transition at the district level is not a regular feature in India. Registration of births is compulsory in the country under the Registration of Birth and Death Act of 1967 but there is gross under registration so that estimates of fertility based on the registration data carries little meaning. District level estimates of fertility in India are derived through the decennial population census which is carried out at an interval of 10 years using indirect techniques (Government of India 1987; 1997, Mari Bhat 1996; Guilmoto and Rajan 2002). However, the need for analysing fertility transition at the district level emanates from the emphasis on decentralised district based approach towards population and development planning as emphasised in the National Population Policy 2000 and National Rural Health Mission. For example, one of the goals of the National Rural Health Mission is the decentralisation of the public health and family welfare services delivery system so as to effectively meet the diverse health and family welfare needs of the people.

Estimates of *FTI* for the districts of the country are presented in the appendix table. During 2007-08, 9 districts of the country had an *FTI* of more than 0.900 with district Pulwama of Jammu and Kashmir leading the list with an *FTI* of 0.959. Out of these 9 districts 6 are in Jammu and Kashmir, 2 in Kerala and 1 in Puduchery. On the other hand, in 6 districts, *FTI* was estimated to be less than 0.200 - 3 in Uttar Pradesh, 2 in Bihar and 1 in Haryana. District Budaun of Uttar Pradesh has the lowest *FTI* among the 601 districts of the country for which information is available through DLHS 2007-08.

On the whole, in 172 (29 per cent) districts of the country, *FTI* has been estimated to be less than 0.40 during 2007-08. In these districts, family planning efforts appear to have contributed little to transition in fertility because either the proportion of 3rd and higher order births remain exceptionally high or the proportion of births to women aged less than 20 years is very high. Out of these 172 districts, 120 are located in only three States - Bihar (37), Jharkhand (16) and Uttar Pradesh (64). *FTI* has been estimated to be less than 0.40 in all the 37 districts of Bihar, in 96 per cent districts of Uttar Pradesh and in almost 73 per cent in Jharkhand. On the other hand, in six States - Arunachal Pradesh, Delhi, Himachal Pradesh, Kerala, Punjab and Tamil Nadu - there was no district where *FTI* was less than 0.40 during 2007-78. *FTI* has also not been found to be less than 0.40 in any district of the smaller States and Union Territories.

By contrast, *FTI* is estimated to be at least 0.60 in 188 (31 per cent) districts of the country suggesting that these districts are at a fairly advanced stage of fertility transition. Most of these districts are located in Himachal Pradesh, Kerala, Tamil Nadu and Punjab. *FTI* is estimated to be at least 0.60 in all districts of Himachal Pradesh, 93 per cent districts of Kerala, 90 per cent districts of Tamil Nadu and 80 per cent districts of Punjab.

8. Conclusions

The foregoing analysis presents an unsatisfactory performance of family planning efforts in India through a policy perspective, especially in the context of the National Population Policy 2000. Evidence available from DLHS 2007-08 suggests that despite all emphasis on birth limitation during the 60 years of planned family planning efforts in the country, more than 40 per cent of annual live births in the country are still 3rd and higher

order births so that the goal of replacement fertility by the year 2010 could not be achieved. Although, this proportion appears to have decreased over time, yet the decrease in the proportion of 3rd and higher order births has been associated with an increase, not decrease, in the proportion of births to women aged less than 20 years which indicates family planning efforts in India have contributed little towards birth planning in terms of delayed child bearing and spacing between successive births. Given the current state of fertility transition, there is little possibility that India would be able to achieve stable population by the year 2045 as articulated in the National Population Policy 2000. Fertility transition implies that more and more couples adopt small family norm and, at the same time, child bearing is delayed and births are properly spaced so that there is no decrease in the mean age of childbearing (Bongaarts 1994, Ryder 1980). This means that with the decrease in the proportion of 3rd and higher order births, the focus of family planning efforts should shift to birth planning. There is however little evidence of such a shift in India. Obviously, from the policy perspective, the contribution of family planning efforts to the realisation of the goals and objectives of National Population Policy has at best been marginal.

The analysis highlights the need of revamping of official family welfare programme as the programme has been and continues to be the mainstay of family planning efforts in the country. An attempt to reinvigorate the programme was made in 1996 when the traditional top down, target-based approach of planning, implementation, and monitoring and evaluation of the programme was replaced by 'target free' or community needs-based approach. However, this shift at the policy level could not be translated into any change in planning, implementation, and monitoring and evaluation of the programme. Introduction of community needs-based approach required evolution of a monitoring and evaluation system tailored to the new approach but little serious thought was given to this important necessity and the old target-based system of planning, implementation, and monitoring and evaluation of family planning activities was retained and there was little change in programme orientation at the operational level. Despite all emphasis at the policy level, the official family welfare programme in the country remains highly centralised and planned, implemented and monitored in terms of number of sterilisations done, IUD inserted, and oral pills and condoms distributed.

One approach to reinvigorate the official family welfare programme in India is to evolve a monitoring and evaluation system that helps in monitoring transition the two dimensions of fertility - the dimension of birth planning and the dimension of birth limitation. The fertility transition index (*FTI*) may constitute the basis for this monitoring and evaluation system. There are many advantage of *FTI* in measuring and monitoring fertility transition as compared to conventional measures like total fertility rate and birth rate. First, unlike total fertility rate and birth rate, it is sensitive to both the dimension of birth planning and the dimension of birth spacing. Second, *FTI* is very simple to calculate and straightforward in interpretation. so that it can be used even at the grass roots level - the interface with the community. Third, it is not data intensive and can be estimated from the records routinely maintained in all health care delivery institutions and even from the registration data.

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Table 1

Fertility Transition Index (FTI) in India

Population group	Proportion of births to women aged less than 20 years			Proportion of 3rd and higher order births			FTI		
	2000-01	2007-08	Decrease	2000-01	2007-08	Change	2000-01	2007-08	Change
All	6.58	12.86	-6.28	46.56	41.10	5.46	0.469	0.460	-0.008
Rural	6.98	13.81	-6.83	49.07	43.39	5.68	0.440	0.428	-0.012
Hindu	6.74	14.48	-7.74	45.02	42.74	2.28	0.482	0.428	-0.055
Muslim	6.74	12.50	-5.76	56.99	48.40	8.59	0.363	0.391	0.028
Other Religions	3.73	8.75	-5.02	40.11	32.25	7.86	0.562	0.590	0.028
Scheduled Castes	7.54	14.74	-7.20	51.02	45.26	5.76	0.414	0.400	-0.014
Scheduled Tribes	6.57	12.95	-6.38	54.02	43.58	10.44	0.394	0.435	0.041
Non Scheduled Castes/Tribes	6.34	12.27	-5.93	44.39	39.16	5.23	0.493	0.486	-0.007

Source: Author's calculations

Table 2
Fertility Transition Index (FTI) in Indian States

State	Proportion of births to women aged less than 20 years			Proportion of 3rd and higher order births			FTI		
	2000-01	2007-08	Change	2000-01	2007-08	Change	2000-01	2007-08	Change
Andman and Nikobar	5.69	9.53	3.85	29.53	18.05	-11.47	0.648	0.724	0.076
Andhra Pradesh	14.43	22.92	8.48	28.41	20.72	-7.70	0.572	0.564	-0.008
Arunachal Pradesh	5.41	7.19	1.77	57.16	36.32	-20.84	0.374	0.565	0.191
Assam	5.79	12.88	7.09	51.59	36.58	-15.01	0.426	0.505	0.079
Bihar	6.03	15.33	9.30	57.94	57.86	-0.09	0.360	0.268	-0.092
Chandigarh	3.54	3.94	0.40	36.82	24.63	-12.19	0.596	0.714	0.118
Chhattisgarh	5.37	15.08	9.71	51.30	45.32	-5.98	0.433	0.396	-0.037
Daman and Dieu	3.72	5.44	1.72	34.55	32.64	-1.91	0.617	0.619	0.002
Delhi	3.77	5.66	1.89	40.51	32.33	-8.18	0.557	0.620	0.063
Dadra and Nagar Haveli	6.77	12.78	6.01	49.03	43.61	-5.42	0.442	0.436	-0.006
Goa	2.23	4.90	2.67	24.91	17.65	-7.27	0.729	0.775	0.046
Gujarat	4.12	9.69	5.57	41.99	35.91	-6.08	0.539	0.544	0.005
Haryana	7.55	12.01	4.45	43.46	37.42	-6.04	0.490	0.506	0.016
Himachal Pradesh	2.92	3.82	0.90	35.43	25.61	-9.82	0.616	0.706	0.090
Jharkhand	7.56	14.85	7.29	54.00	50.35	-3.65	0.384	0.348	-0.036
Jammu and Kashmir	2.66	4.54	1.89	56.69	21.22	-35.47	0.407	0.742	0.335
Karnataka	8.05	20.44	12.39	35.96	31.71	-4.25	0.560	0.478	-0.082
Kerala	4.93	6.03	1.10	21.76	17.00	-4.76	0.733	0.770	0.037
Lakshadweep	3.68	1.69	-1.99	49.01	42.16	-6.84	0.473	0.561	0.088
Meghalaya	3.94	9.24	5.30	62.47	47.19	-15.28	0.336	0.436	0.100
Manipur	2.73	4.50	1.77	49.06	43.43	-5.63	0.482	0.521	0.039
Madhya Pradesh	6.70	13.48	6.78	52.91	36.04	-16.88	0.404	0.505	0.101
Maharashtra	5.63	17.31	11.68	37.12	30.26	-6.86	0.572	0.524	-0.048
Mizoram	4.51	9.97	5.45	50.31	35.97	-14.34	0.452	0.541	0.089

State	Proportion of births to women aged less than 20 years			Proportion of 3rd and higher order births			FTI		
	2000-01	2007-08	Change	2000-01	2007-08	Change	2000-01	2007-08	Change
Nagaland	2.62		na	65.16		na	0.322		na
Orissa	4.47	10.44	5.97	44.26	33.05	-11.22	0.513	0.565	0.052
Puduchery	6.32	5.48	-0.83	22.72	9.57	-13.15	0.710	0.849	0.139
Punjab	2.93	6.13	3.20	37.56	27.85	-9.72	0.595	0.660	0.065
Rajasthan	7.89	13.84	5.95	52.37	42.64	-9.73	0.397	0.435	0.038
Sikkim	7.74	11.51	3.76	44.53	34.66	-9.88	0.477	0.538	0.061
Tamil Nadu	5.82	8.61	2.79	29.41	20.11	-9.30	0.648	0.713	0.065
Tripura	9.43	18.34	8.91	36.85	28.90	-7.95	0.537	0.528	-0.009
Uttar Pradesh	4.33	12.62	8.29	60.81	58.80	-2.00	0.349	0.286	-0.063
Uttarakhand	3.59	5.95	2.36	49.49	37.78	-11.71	0.469	0.563	0.094
West Bengal	11.32	24.72	13.40	38.80	29.72	-9.08	0.499	0.456	-0.043

Source: Author's calculations

Table 3
Location of states on the two dimensions of fertility

Proportion of 3rd and higher order births (*Per cent*)	Proportion of births to women aged less than 20 years (*Per cent*)				
	< 5	5-10	10-15	15-20	>= 20
< 20	Puduchery Goa	Kerala Andaman & Nikobar Tamil Nadu			
20-30	Jammu & Kashmir Chandigarh Himachal Pradesh	Punjab		Tripura	Andhra Pradesh West Bengal
30-40		Delhi Daman & Dieu Arunachal Pradesh Uttarakhand Mizoram	Assam Orissa Gujarat Sikkim Haryana Madhya Pradesh	Maharashtra	Karnataka
40-50	Lakshadeep Manipur	Meghalaya	Dadra & Nagar Haveli Rajasthan	Chhattisgarh	
>= 50			Jharkhand Uttar Pradesh	Bihar	

Table 4
Within state variation in the fertility transition index

State/Country	Fertility Transition Index (FTI)					
	Very low <0.20	Low 0.20-0.40	Average 0.40-0.60	High 0.60-0.80	Very high ≥0.80	Total
Andhra Pradesh	0	1	12	10	0	23
Arunachal	0	0	11	5	0	16
Assam	0	2	15	10	0	27
Bihar	2	35	0	0	0	37
Chhattisgarh	0	6	10	0	0	16
Delhi	0	0	3	6	0	9
Gujarat	0	1	15	9	0	25
Haryana	1	1	14	4	0	20
Himachal Pradesh	0	0	0	11	1	12
Jharkhand	0	16	6	0	0	22
Jammu &	0	0	5	3	6	14
Karnataka	0	8	10	8	1	27
Kerala	0	0	1	5	8	14
Madhya Pradesh	0	5	31	9	0	45
Maharashtra	0	6	17	10	2	35
Manipur	0	1	4	4	0	9
Meghalaya	0	2	5	0	0	7
Mizoram	0	1	4	3	0	8
Orissa	0	3	18	9	0	30
Punjab	0	0	4	16	0	20
Rajasthan	0	9	23	0	0	32
Tamil Nadu	0	0	3	22	5	30
Uttar Pradesh	3	64	3	0	0	70
Uttarakhand	0	1	5	7	0	13
West Bengal	0	4	13	2	0	19
Small States &	0	0	9	9	3	21
India	6	166	241	162	26	601
	1.00	27.62	40.10	26.96	4.33	100.00

Source: Author's calculations

Table 5
Fertility Transition Index (FTI) in the districts of India, 2007-08

State	District	Proportion of births to women aged <20 years (Per cent)	Proportion of 3rd and higher order births (Percent)	Fertility Transition Index (FTI)
Andaman & Nikobar	Andamans	11.51	20.86	0.676
	Nicobars	6.98	14.42	0.786
Andhra Pradesh	Adilabad	18.58	36.15	0.453
	Anantapur	25.37	21.39	0.532
	Chittoor	22.35	17.06	0.606
	Cuddapah	23.66	22.32	0.540
	East Godavari	31.14	18.56	0.503
	Guntur	27.98	7.34	0.647
	Hyderabad	6.57	23.23	0.702
	Karimnagar	14.05	21.62	0.643
	Khammam	17.46	16.40	0.661
	Krishna	23.85	11.30	0.649
	Kurnool	20.47	23.15	0.564
	Mahbubnagar	25.00	35.39	0.396
	Medak	23.74	21.94	0.543
	Nalgonda	31.03	21.98	0.470
	Nellore	22.45	15.31	0.622
	Nizamabad	17.76	19.63	0.626
	Prakasam	30.00	18.42	0.516
	Rangareddi	15.53	17.80	0.667
	Srikakulam	32.37	14.98	0.527
	Visakhapatnam	24.42	26.74	0.488
	Vizianagaram	32.08	18.33	0.496
	Warangal	20.61	20.00	0.594
	West Godavari	20.71	9.47	0.698
Arunachal Pradesh	Anjaw	6.59	34.13	0.593
	Changlang	9.15	37.80	0.530
	Dibang Valley	5.81	22.82	0.714
	East Kameng	10.73	48.07	0.412
	East Siang	7.47	32.78	0.598
	Kurung Kumey	4.73	31.08	0.642
	Lohit	8.70	32.92	0.584
	Lower Dibang Valley	4.06	45.02	0.509
	Lower Subansiri	6.35	39.68	0.540
	Papum Pare	10.36	44.22	0.454
	Tawang	2.46	37.70	0.598
	Tirap	11.76	14.71	0.735
	Upper Siang	3.72	47.52	0.488
	Upper Subansiri	9.04	36.75	0.542
	West Kameng	8.49	30.89	0.606

State	District	Proportion of births to women aged <20 years (Per cent)	Proportion of 3rd and higher order births (Percent)	Fertility Transition Index (FTI)
	West Siang	9.88	25.93	0.642
Assam	Barpeta	12.63	39.58	0.478
	Baska	13.06	22.04	0.649
	Bongaigaon	14.00	35.01	0.510
	Cachar	11.33	48.08	0.406
	Chirang	11.03	39.10	0.499
	Darrang	12.60	36.64	0.508
	Dhemaji	15.98	37.87	0.462
	Dhubri	18.10	34.91	0.470
	Dibrugarh	8.47	31.42	0.601
	Goalpara	13.55	38.21	0.482
	Golaghat	11.03	28.31	0.607
	Hailakandi	14.19	50.43	0.354
	Jorhat	13.82	25.33	0.609
	Kamrup	12.43	16.95	0.706
	Kamrup Metro	8.72	24.10	0.672
	Karbi Anglong	11.40	14.51	0.741
	Karimganj	16.59	55.30	0.281
	Kokrajhar	16.43	38.10	0.455
	Lakhimpur	15.22	30.21	0.546
	Marigaon	17.46	34.91	0.476
	Nagaon	12.53	40.87	0.466
	Nalbari	7.56	25.00	0.674
	North Cachar Hills	7.63	26.69	0.657
	Sibsagar	6.39	29.44	0.642
	Sonitpur	11.55	38.60	0.498
	Tinsukia	10.39	37.92	0.517
	Udalguri	10.45	41.79	0.478
Bihar	Araria	17.44	63.91	0.186
	Aurangabad	17.33	51.62	0.310
	Banka	20.57	54.70	0.247
	Begusarai	17.68	58.69	0.236
	Bhagalpur	14.86	60.53	0.246
	Bhojpur	19.37	55.54	0.251
	Buxar	14.84	57.42	0.277
	Darbhanga	14.93	57.56	0.275
	Gaya	19.20	56.59	0.242
	Gopalganj	13.19	54.40	0.324
	Jamui	16.77	55.34	0.279
	Jehanabad	16.08	54.27	0.296
	Kaimur Bhabua	12.39	60.77	0.268
	Katihar	13.66	59.20	0.271

State	District	Proportion of births to women aged <20 years (Per cent)	Proportion of 3rd and higher order births (Percent)	Fertility Transition Index (FTI)
	Khagaria	14.81	60.77	0.244
	Kishanganj	11.89	61.96	0.262
	Lakhisarai	14.79	55.79	0.294
	Madhepura	18.48	58.31	0.232
	Madhubani	14.67	56.93	0.284
	Munger	15.17	50.25	0.346
	Muzaffarpur	11.11	55.56	0.333
	Nalanda	18.41	55.78	0.258
	Nawada	12.20	58.01	0.298
	Pashchim Champaran	14.75	63.60	0.216
	Patna	19.13	48.09	0.328
	Purba Champaran	16.62	58.61	0.248
	Purnia	11.90	63.10	0.250
	Rohtas	15.56	55.39	0.290
	Saharsa	18.83	55.27	0.259
	Samastipur	14.64	60.95	0.244
	Saran	9.98	57.62	0.324
	Sheikhpura	13.33	58.37	0.283
	Sheohar	13.76	63.06	0.232
	Sitamarhi	18.84	62.79	0.184
	Siwan	9.17	52.44	0.384
	Supaul	12.11	58.00	0.299
	Vaishali	18.26	53.53	0.282
Chandigarh	Chandigarh	3.94	24.63	0.714
Chhattisgarh	Bastar	15.50	49.79	0.347
	Bilaspur	18.08	50.89	0.310
	Dantewada	11.11	50.00	0.389
	Dhamtari	14.02	33.64	0.523
	Durg	10.85	38.98	0.502
	Janjgir-Champa	14.25	45.25	0.405
	Jashpur	10.54	47.06	0.424
	Kanker	16.72	42.82	0.405
	Kawardha	21.29	52.93	0.258
	Korba	13.53	44.27	0.422
	Koriya	18.81	47.02	0.342
	Mahasamund	15.48	40.00	0.445
	Raigarh	8.22	41.78	0.500
	Raipur	18.14	37.75	0.441
	Rajnandgaon	9.83	42.70	0.475
	Surguja	17.53	50.65	0.318
Daman & Dieu	Daman	7.77	22.97	0.693
	Diu	3.51	40.64	0.558

State	District	Proportion of births to women aged <20 years (Per cent)	Proportion of 3rd and higher order births (Percent)	Fertility Transition Index (FTI)
Delhi	Central	3.49	27.51	0.690
	East	4.15	33.22	0.626
	New Delhi	5.24	32.66	0.621
	North	3.20	37.60	0.592
	North East	5.25	37.65	0.571
	North West	8.33	35.33	0.563
	South	6.40	33.23	0.604
	South West	6.86	22.38	0.708
	West	7.26	29.44	0.633
Dadra & Nagar Haveli	Dadra Nagar Haveli	12.78	43.61	0.436
Goa	North Goa	3.93	17.47	0.786
	South Goa	6.15	17.88	0.760
Gujarat	Ahmadabad	5.78	22.67	0.716
	Amreli	6.99	38.24	0.548
	Anand	7.06	36.86	0.561
	Banas Kantha	11.02	41.21	0.478
	Bharuch	9.12	25.55	0.653
	Bhavnagar	7.82	32.90	0.593
	Dohad	14.99	58.93	0.261
	Gandhinagar	7.25	28.99	0.638
	Jamnagar	6.08	28.90	0.650
	Junagarh	5.99	34.15	0.599
	Kachchh	9.73	45.90	0.444
	Kheda	7.95	25.76	0.663
	Mahesana	8.64	32.92	0.584
	Narmada	11.08	40.82	0.481
	Navsari	4.37	22.82	0.728
	Panch Mahals	9.49	39.24	0.513
	Patan	10.88	44.90	0.442
	Porbandar	7.92	30.00	0.621
	Rajkot	5.77	27.69	0.665
	Sabar Kantha	11.29	40.75	0.480
	Surat	9.43	16.80	0.738
	Surendranagar	13.06	38.83	0.481
	The dangs	13.69	42.03	0.443
	Vadodara	12.04	28.83	0.591
	Valsad	11.62	29.93	0.585
Haryana	Ambala	4.26	26.74	0.690
	Bhiwani	13.86	37.65	0.485
	Faridabad	16.36	45.91	0.377
	Fatehabad	12.50	32.14	0.554
	Gurgaon	10.80	38.85	0.503

State	District	Proportion of births to women aged <20 years (Per cent)	Proportion of 3rd and higher order births (Percent)	Fertility Transition Index (FTI)
	Hisar	16.67	35.07	0.483
	Jhajjar	13.47	32.32	0.542
	Jind	11.18	37.70	0.511
	Kaithal	10.43	33.33	0.562
	Karnal	10.15	30.75	0.591
	Kurukshetra	7.27	29.07	0.637
	Mahendragarh	15.44	28.07	0.565
	Mewat	14.06	67.79	0.181
	Panchkula	7.41	26.60	0.660
	Panipat	12.92	43.54	0.435
	Rewari	11.45	29.29	0.593
	Rohtak	10.65	33.55	0.558
	Sirsa	11.23	30.80	0.580
	Sonipat	16.77	32.34	0.509
	Yamunanagar	8.36	30.77	0.609
Himachal Pradesh	Bilaspur	3.86	23.55	0.726
	Chamba	5.07	33.45	0.615
	Hamirpur	0.65	16.13	0.832
	Kangra	0.96	23.92	0.751
	Kinnaur	2.80	32.87	0.643
	Kullu	6.00	22.00	0.720
	Lahul Spiti	1.92	33.33	0.647
	Mandi	6.82	17.05	0.761
	Shimla	5.71	31.43	0.629
	Sirmaur	5.65	29.03	0.653
	Solan	2.53	27.00	0.705
	Una	1.91	18.70	0.794
Jharkhand	Bokaro	17.76	44.16	0.381
	Chatra	16.00	55.84	0.282
	Deoghar	14.79	47.69	0.375
	Dhanbad	18.21	40.75	0.410
	Dumka	16.76	40.52	0.427
	Garhwa	15.76	58.33	0.259
	Giridih	17.48	45.85	0.367
	Godda	17.97	46.10	0.359
	Gumla	9.73	59.29	0.310
	Hazaribagh	17.13	45.37	0.375
	Jamtara	17.57	41.65	0.408
	Kodarma	17.23	55.77	0.270
	Latehar	12.11	59.40	0.285
	Lohardaga	12.95	55.41	0.316
	Pakaur	16.13	54.84	0.290

State	District	Proportion of births to women aged <20 years (Per cent)	Proportion of 3rd and higher order births (Percent)	Fertility Transition Index (FTI)
	Palamu	13.31	56.28	0.304
	Pashchimi Singhbhum	10.53	51.50	0.380
	Purbi Singhbhum	10.42	30.50	0.591
	Ranchi	14.15	42.14	0.437
	Sahibganj	18.73	51.93	0.293
	Seraikela	13.07	42.96	0.440
	Simdega	7.95	56.56	0.355
Jammu & Kashmir	Anantanag	3.35	1.78	0.949
	Badgam	2.59	2.59	0.948
	Baramula	2.42	1.88	0.957
	Doda	6.16	40.34	0.535
	Jammu	5.24	22.58	0.722
	Kargil	2.86	3.39	0.938
	Kathua	3.02	24.77	0.722
	Kupwara	5.47	43.21	0.513
	Leh Ladakh	2.93	33.89	0.632
	Pulwama	2.30	1.79	0.959
	Punch	9.00	50.48	0.405
	Rajauri	8.33	36.46	0.552
	Srinagar	1.63	2.61	0.958
	Udhampur	7.62	35.48	0.569
Karnataka	Bagalkot	27.35	45.01	0.276
	Bangalore	6.93	10.89	0.822
	Bangalore Rural	15.68	14.41	0.699
	Belgaum	18.98	31.53	0.495
	Bellary	21.74	36.34	0.419
	Bidar	24.62	37.24	0.381
	Bijapur	29.43	47.15	0.234
	Chamarajanagar	24.65	18.14	0.572
	Chikmagalur	9.09	15.79	0.751
	Chitradurga	24.26	22.43	0.533
	Dakshina Kannada	6.51	27.74	0.658
	Davanagere	22.07	32.76	0.452
	Dharwad	21.18	35.00	0.438
	Gadag	23.23	41.08	0.357
	Gulbarga	28.81	46.60	0.246
	Hassan	13.88	20.10	0.660
	Haveri	26.35	40.07	0.336
	Kodagu	8.30	17.90	0.738
	Kolar	17.87	29.28	0.529
	Koppal	33.77	46.19	0.200
	Mandya	21.60	7.51	0.709

State	District	Proportion of births to women aged <20 years (Per cent)	Proportion of 3rd and higher order births (Percent)	Fertility Transition Index (FTI)
	Mysore	19.66	21.37	0.590
	Raichur	27.21	43.26	0.295
	Shimoga	14.63	28.05	0.573
	Tumkur	18.18	25.97	0.558
	Udupi	3.13	21.43	0.754
	Uttara Kannada	4.57	28.31	0.671
Kerala	Alappuzha	2.49	6.97	0.905
	Ernakulam	3.76	9.68	0.866
	Idukki	4.46	6.93	0.886
	Kannur	4.63	10.68	0.847
	Kasaragod	6.04	30.20	0.638
	Kollam	2.76	7.83	0.894
	Kottayam	2.34	15.42	0.822
	Kozhikode	8.79	22.34	0.689
	Malappuram	10.79	34.99	0.542
	Palakkad	7.87	18.50	0.736
	Pathanamthitta	1.17	7.02	0.918
	Thiruvananthapuram	3.65	10.94	0.854
	Thrissur	9.45	11.44	0.791
	Wayanad	9.82	22.46	0.677
Lakshadeep	Lakshadweep	1.69	42.16	0.561
Meghalaya	East Garo Hills	10.44	46.52	0.430
	East Khasi Hills	6.78	39.45	0.538
	Jaintia Hills	9.94	45.13	0.449
	Ri Bhoi	10.10	38.22	0.517
	South Garo Hills	8.48	66.96	0.246
	West Garo Hills	7.44	60.79	0.318
	West Khasi Hills	10.16	46.78	0.431
Manipur	Bishnupur	3.61	34.02	0.624
	Chandel	6.77	48.18	0.451
	Churachandpur	5.46	51.54	0.430
	Imphal East	3.64	28.64	0.677
	Imphal West	1.14	28.57	0.703
	Senapati	6.99	50.82	0.422
	Tamenglong	5.84	55.25	0.389
	Thoubal	2.95	36.61	0.604
	Ukhrul	3.44	54.76	0.418
Madhya Pradesh	Balaghat	2.87	31.15	0.660
	Barwani	10.39	47.10	0.425
	Betul	8.52	41.64	0.498
	Bhind	15.02	34.04	0.509
	Bhopal	6.09	41.94	0.520

State	District	Proportion of births to women aged <20 years (Per cent)	Proportion of 3rd and higher order births (Percent)	Fertility Transition Index (FTI)
	Chhatarpur	11.81	39.70	0.485
	Chhindwara	9.28	26.65	0.641
	Damoh	14.45	38.05	0.475
	Datia	16.39	28.74	0.549
	Dewas	14.85	36.41	0.487
	Dhar	20.00	51.17	0.288
	Dindori	11.80	36.96	0.512
	East Nimar	12.92	39.48	0.476
	Guna	12.24	16.00	0.718
	Gwalior	14.29	20.63	0.651
	Harda	11.64	45.60	0.428
	Hoshangabad	13.38	45.77	0.408
	Indore	17.18	23.28	0.595
	Jabalpur	9.16	30.68	0.602
	Jhabua	18.04	59.15	0.228
	Katni	9.24	33.89	0.569
	Mandla	14.67	33.00	0.523
	Mandsaur	11.97	24.92	0.631
	Morena	19.05	27.08	0.539
	Narsimhapur	19.41	36.26	0.443
	Neemuch	10.79	33.61	0.556
	Panna	11.00	38.00	0.510
	Raisen	14.32	50.78	0.349
	Rajgarh	12.75	20.40	0.669
	Ratlam	11.54	40.17	0.483
	Rewa	16.20	29.81	0.540
	Sagar	11.60	37.35	0.510
	Satna	10.24	44.74	0.450
	Sehore	12.65	49.64	0.377
	Seoni	12.50	28.47	0.590
	Shahdol	13.68	30.53	0.558
	Shajapur	17.30	36.33	0.464
	Sheopur	12.96	44.97	0.421
	Shivpuri	15.63	14.51	0.699
	Sidhi	12.05	45.89	0.421
	Tikamgarh	18.28	25.38	0.563
	Ujjain	12.26	38.70	0.490
	Umaria	10.78	39.87	0.494
	Vidisha	12.45	20.39	0.672
	West Nimar	23.36	53.93	0.227
Maharashtra	Ahmadnagar	18.15	28.83	0.530
	Akola	10.73	29.76	0.595

State	District	Proportion of births to women aged <20 years (Per cent)	Proportion of 3rd and higher order births (Percent)	Fertility Transition Index (FTI)
	Amravati	11.88	31.80	0.563
	Aurangabad	26.20	39.04	0.348
	Bhandara	4.28	17.12	0.786
	Bid	26.02	37.13	0.368
	Buldana	22.48	28.19	0.493
	Chandrapur	5.88	13.03	0.811
	Dhule	19.10	35.82	0.451
	Gadchiroli	13.74	34.25	0.520
	Gondiya	5.66	25.66	0.687
	Hingoli	30.19	40.43	0.294
	Jalgaon	21.55	42.09	0.364
	Jalna	26.80	32.04	0.412
	Kolhapur	10.49	24.72	0.648
	Latur	26.28	33.42	0.403
	Mumbai	7.20	29.24	0.636
	Mumbai Suburban	9.75	26.27	0.640
	Nagpur	5.91	21.67	0.724
	Nanded	22.74	34.27	0.430
	Nandurbar	20.26	43.90	0.358
	Nashik	19.60	29.57	0.508
	Osmanabad	24.84	30.50	0.447
	Parbhani	26.08	38.71	0.352
	Pune	16.67	23.58	0.598
	Raigarh	6.60	27.92	0.655
	Ratnagiri	5.21	24.17	0.706
	Sangli	16.81	25.86	0.573
	Satara	12.45	20.75	0.668
	Sindhudurg	2.14	16.58	0.813
	Solapur	25.18	30.58	0.442
	Thane	11.99	29.79	0.582
	Wardha	5.83	16.67	0.775
	Washim	23.34	29.39	0.473
	Yavatmal	19.14	27.22	0.536
Mizoram	Aizawl	7.32	30.31	0.624
	Champhai	10.12	27.18	0.627
	Kolasib	9.46	38.65	0.519
	Lawngtlai	14.83	47.32	0.379
	Lunglei	8.14	47.77	0.441
	Mamit	11.88	39.67	0.485
	Saiha	10.48	29.75	0.598
	Serchhip	6.20	28.68	0.651
Orissa	Anugul	9.15	30.17	0.607

State	District	Proportion of births to women aged <20 years (Per cent)	Proportion of 3rd and higher order births (Percent)	Fertility Transition Index (FTI)
	Balangir	3.45	48.28	0.483
	Baleshwar	9.27	30.73	0.600
	Bargarh	10.15	33.46	0.564
	Baudh	8.41	38.63	0.530
	Bhadrak	2.85	30.38	0.668
	Cuttack	8.05	23.75	0.682
	Debagarh	11.15	29.00	0.599
	Dhenkanal	12.15	34.03	0.538
	Gajapati	15.05	54.30	0.306
	Ganjam	15.95	27.30	0.567
	Jagatsinghapur	3.83	19.14	0.770
	Jajapur	4.29	24.49	0.712
	Jharsuguda	6.40	33.60	0.600
	Kalahandi	5.99	50.23	0.438
	Kandhamal	8.08	40.07	0.519
	Kendrapara	4.15	30.03	0.658
	Kendujhar	14.79	32.30	0.529
	Khordha	7.36	13.57	0.791
	Koraput	21.79	37.43	0.408
	Malkangiri	19.41	54.12	0.265
	Mayurbhanj	15.33	33.33	0.513
	Nabarangapur	22.15	49.54	0.283
	Nayagarh	18.15	23.33	0.585
	Nuapada	8.09	33.09	0.588
	Puri	5.73	24.37	0.699
	Rayagada	13.41	43.73	0.429
	Sambalpur	6.15	25.82	0.680
	Sonapur	12.13	32.46	0.554
	Sundargarh	9.68	37.10	0.532
Puduchery	Karaikal	4.18	12.55	0.833
	Mahe	2.71	2.71	0.946
	Puducherry	6.31	14.41	0.793
	Yanam	10.16	9.09	0.807
Punjab	Amritsar	8.33	32.64	0.590
	Barnala	9.00	28.62	0.624
	Bathinda	8.33	23.61	0.681
	Faridkot	8.66	29.53	0.618
	Fatehgarh Sahib	4.23	21.48	0.743
	Firozpur	8.33	30.56	0.611
	Gurdaspur	4.96	27.10	0.679
	Hoshiarpur	2.23	21.34	0.764
	Jalandhar	2.89	31.05	0.661

State	District	Proportion of births to women aged <20 years (Per cent)	Proportion of 3rd and higher order births (Percent)	Fertility Transition Index (FTI)
	Kapurthala	3.45	27.59	0.690
	Ludhiana	6.36	27.54	0.661
	Mansa	8.67	26.33	0.650
	Moga	6.56	34.75	0.587
	Muktsar	7.37	35.44	0.572
	Nawanshahr	3.83	28.74	0.674
	Patiala	6.61	29.57	0.638
	Nupnagar	2.44	24.04	0.735
	Sangrur	8.68	21.56	0.698
	SAS Nagar Mohali	4.40	25.16	0.704
	Tarn Taran	7.41	33.70	0.589
Rajasthan	Ajmer	10.61	45.66	0.437
	Alwar	15.20	38.67	0.461
	Banswara	17.58	51.56	0.309
	Baran	14.22	44.02	0.418
	Barmer	6.32	56.84	0.368
	Bharatpur	17.96	38.37	0.437
	Bhilwara	18.16	47.43	0.344
	Bikaner	17.03	41.08	0.419
	Bundi	11.97	35.90	0.521
	Chittaurgarh	13.99	31.20	0.548
	Churu	14.72	43.15	0.421
	Dausa	16.09	45.71	0.382
	Dhaulpur	13.52	59.43	0.270
	Dungarpur	10.81	46.55	0.426
	Ganganagar	15.61	29.96	0.544
	Hamumangarh	15.25	27.68	0.571
	Jaipur	20.30	41.58	0.381
	Jaisalmer	14.70	48.33	0.370
	Jalore	8.76	47.41	0.438
	Jhalawar	19.41	27.13	0.535
	Jhunjhunun	15.17	28.28	0.566
	Jodhpur	12.33	43.49	0.442
	Karauli	16.73	50.37	0.329
	Kota	15.22	27.46	0.573
	Nagaur	13.62	39.29	0.471
	Pali	9.63	50.42	0.399
	Rajsamand	11.56	44.09	0.444
	Sawai Madhopur	14.65	34.78	0.506
	Sikar	13.30	35.70	0.510
	Sirohi	6.54	49.49	0.440
	Tonk	12.89	42.63	0.445

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	Udaipur	11.63	44.65	0.437
Sikkim	East	9.87	28.34	0.618
	North	9.55	37.44	0.530
	South	12.96	34.49	0.525
	West	13.79	37.93	0.483
Tamil Nadu	Ariyalur	12.67	25.79	0.615
	Chennai	5.88	10.78	0.833
	Coimbatore	8.29	7.80	0.839
	Cuddalore	5.45	25.91	0.686
	Dharmapuri	18.69	25.70	0.556
	Dindigul	11.67	20.00	0.683
	Erode	10.37	5.49	0.841
	Kancheepuram	9.24	13.87	0.769
	Kanniyakumari	4.25	7.08	0.887
	Karur	9.63	23.53	0.668
	Krishnagiri	18.96	27.01	0.540
	Madurai	6.64	19.47	0.739
	Nagapattinam	7.05	24.90	0.680
	Namakkal	9.30	9.88	0.808
	Nilgiris	11.06	14.04	0.749
	Pudukottai	3.68	23.53	0.728
	Ramanathpuram	3.69	21.72	0.746
	Salem	18.39	13.90	0.677
	Sivganga	4.55	15.91	0.795
	Thanjavur	5.65	23.04	0.713
	Theni	13.14	20.57	0.663
	Thirunelveli	6.80	22.33	0.709
	Thiruvallur	6.97	15.98	0.770
	Thiruvarur	7.23	22.49	0.703
	Thoothukudi	2.45	18.14	0.794
	Tiruvannamalai	8.29	25.37	0.663
	Trichy	8.25	28.16	0.636
	Vellore	10.83	30.32	0.588
	Viluppuram	4.88	30.89	0.642
	Virudhunagar	8.09	19.08	0.728
Tripura	Dhalai	17.51	34.81	0.477
	North Tripura	17.18	38.65	0.442
	South Tripura	21.39	21.13	0.575
	West Tripura	17.17	19.58	0.633
Uttar Pradesh	Agra	14.73	55.56	0.297
	Aligarh	14.54	56.78	0.287
	Allahabad	14.85	56.62	0.285

State	District	Proportion of births to women aged <20 years (Per cent)	Proportion of 3rd and higher order births (Percent)	Fertility Transition Index (FTI)
	Ambedaker Nagar	9.31	55.85	0.348
	Auraiya	15.38	58.02	0.266
	Azamgarh	8.82	51.73	0.394
	Baghpat	12.65	54.42	0.329
	Bahraich	12.80	67.99	0.192
	Ballia	8.73	56.34	0.349
	Balrampur	10.16	66.62	0.232
	Banda	13.46	60.00	0.265
	Barabanki	11.55	63.87	0.246
	Bareilly	12.10	63.00	0.249
	Basti	9.84	57.56	0.326
	Bijnor	8.65	61.54	0.298
	Budaun	15.90	67.56	0.165
	Bulandshahar	13.47	54.11	0.324
	Chandauli	11.11	56.03	0.329
	Chitrakoot	11.52	64.21	0.243
	Deoria	12.34	50.38	0.373
	Etah	18.20	63.26	0.185
	Etawah	19.88	55.58	0.245
	Faizabad	11.01	57.14	0.319
	Farrukhabad	13.82	63.28	0.229
	Fatehpur	13.10	60.89	0.260
	Firozabad	12.58	57.06	0.304
	Gautam Buddha Nagar	12.80	57.73	0.295
	Ghaziabad	11.54	53.04	0.354
	Ghazipur	14.44	56.51	0.291
	Gonda	10.06	64.41	0.255
	Gorakhpur	13.29	46.24	0.405
	Hamirpur	12.68	51.41	0.359
	Hardoi	14.42	63.60	0.220
	Hathras	16.20	61.52	0.223
	Jalaun	15.88	48.10	0.360
	Jaunpur	6.96	56.52	0.365
	Jhansi	14.29	38.46	0.473
	Jyotiba Phule Nagar	10.87	58.98	0.301
	Kannauj	13.85	61.19	0.250
	Kanpur Dehat	10.72	54.55	0.347
	Kanpur Nagar	9.27	52.90	0.378
	Kaushambi	11.66	64.01	0.243
	Kheri	15.66	59.30	0.250
	Kushinagar	14.05	56.91	0.290
	Lalitpur	19.51	56.44	0.241

State	District	Proportion of births to women aged <20 years (Per cent)	Proportion of 3rd and higher order births (Percent)	Fertility Transition Index (FTI)
	Lucknow	8.92	51.69	0.394
	Maharajganj	15.38	53.67	0.309
	Mahoba	18.81	52.06	0.291
	Mainpuri	14.62	60.20	0.252
	Mathura	17.04	57.17	0.258
	Mau	5.95	57.91	0.361
	Meerut	10.34	55.56	0.341
	Mirzapur	13.55	58.59	0.279
	Moradabad	10.89	64.42	0.247
	Muzaffarnagar	10.34	54.99	0.347
	Pilibhit	10.94	58.97	0.301
	Pratapgarh	8.19	55.88	0.359
	Rae bareli	9.79	61.21	0.290
	Rampur	11.08	67.06	0.219
	Saharanpur	7.27	52.21	0.405
	Sant Kabir Nagar	10.92	55.93	0.331
	Sant Ravidas Nagar	15.15	55.45	0.294
	Shahjahanpur	11.40	68.57	0.200
	Shrawasti	15.21	61.98	0.228
	Siddharthnagar	10.68	66.91	0.224
	Sitapur	11.95	63.05	0.250
	Sonbhadra	18.37	59.18	0.224
	Sultanpur	9.97	53.16	0.369
	Unnao	10.22	59.41	0.304
	Varanasi	12.59	48.25	0.392
Uttarakhand	Almora	3.78	29.21	0.670
	Bageshwa	6.77	29.35	0.639
	Chamoli	3.33	26.67	0.700
	Champawat	9.48	45.40	0.451
	Dehradun	8.95	43.68	0.474
	Garhwal	1.92	35.58	0.625
	Hardwar	8.24	51.79	0.400
	Nainital	4.97	39.13	0.559
	Pithoragarh	5.08	28.25	0.667
	Rudraprayag	2.85	30.25	0.669
	Tehri garhwal	3.63	34.27	0.621
	Udham Singh Nagar	8.99	38.85	0.522
	Uttarkashi	4.19	39.94	0.559
West Bengal	Bankura	25.24	22.01	0.528
	Barddhaman	27.53	21.25	0.512
	Birbhum	32.02	28.57	0.394
	Dakshin Dinajpur	31.77	24.55	0.437

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	Darjiling	17.15	23.01	0.598
	Haora	15.03	25.17	0.598
	Hugli	21.72	14.34	0.639
	Jalpaiguri	18.33	32.48	0.492
	Koch Bihar	28.72	31.23	0.401
	Kolkata	14.56	24.68	0.608
	Maldah	25.37	42.29	0.323
	Murshidabad	31.91	34.15	0.339
	Nadia	27.39	21.58	0.510
	North 24 Parganas	23.62	23.62	0.528
	Paschim Medinipur	33.22	22.37	0.444
	Purab Medinipur	20.62	20.06	0.593
	Puruliya	24.74	34.90	0.404
	South 24 Four Parganas	22.38	28.67	0.490
	Uttar Dinajpur	20.43	49.85	0.297