

Socio-economic Development and Fertility change in Uttar Pradesh

Introduction:

Despite six decades of developmental planning, the population stabilization in India remains elusive. While the population has increased from 351 million in 1951 to 1210 million in 2011 (3.5 times), the per capita income had increased by 6 fold. Among 187 countries, India ranked 134 in the human development index with an index value of 0.547. The average progress in the national achievement conceals large differences in the socio-economic development among the states of India. While the country become stronger and emerge as fastest growing economy, the regional inequality continued to widen over the years. One of the factors that lead to widening economic disparity is the population growth among the states. The state that has reduced population growth has significantly improved on the socio-economic development. On the other hand the four larger states of India, namely Uttar Pradesh, Bihar, Madhya Pradesh and Rajasthan that constitute 37% of India's population are still experiencing high population growth, due to natural increase and a low level of human development. The state of Uttar Pradesh with 18% of India's population is at the bottom two of the human development index.

There is no denying the fact that development and demographic transition these two processes are highly interrelated and go hand in hand. The past fifty years have been a period of social, economic and demographic change particularly for countries in their earlier stages of the development process like India. Moreover a national level study usually conceals the state specific problem. The effects of fertility are immensely essential for understanding the overall effect of population on development. Thus the present research is an attempt to study the fertility change and its linkages with socio-economic development in Uttar Pradesh.

This research has been conceptualized with the following rationale

- ❑ The population stabilization and the improvement in India's development is largely contingent on the population stabilization and development in the state of Uttar Pradesh as Uttar Pradesh is the most populous state and still have higher fertility.
- ❑ In Uttar Pradesh, fertility transition is taking place under diverse socio-economic condition. Hence it is interesting to examine the linkages of social and economic development and fertility change in state
- ❑ Third, several programme are underway to improve the socio-economic upliftment of the people in the state. Little is known on the actual benefits.
- ❑ The earlier attempt was made for undivided Uttar Pradesh, while this exercise will be carried out for divided UP.

Objectives:

The broad objective of this research is to understand the linkages of socio-economic development and fertility change in Uttar Pradesh. Specific objectives are

- ✓ To examine the trends in fertility among socio-economic groups in Uttar Pradesh
- ✓ To examine the change in proximate determinants (age at first marriage, contraception and post partum amenorrhea (PPA) among socio-economic groups in Uttar Pradesh
- ✓ To establish the extent to which the change in proximate determinants promoted the fertility change in state of Uttar Pradesh.

Data Source and Methodology:

In this paper, we have used the first and third rounds of NFHS, conducted in 1992-93 and 2005-06 respectively so as to have a sufficient time interval to understand the change in demographic behaviour. In Uttar Pradesh, total number of women interviewed under NFHS-1 and NFHS-3 are 9,800 (in age group 13-49) and 12,183 (in 15-49 age group) respectively. It may be mentioned that NFHS-1 provided the data for undivided Uttar Pradesh, but we have provided estimate for both periods for Uttar Pradesh. The unit data (women file) from NFHS is being used to understand the role of proximate determinants and socio-economic development on fertility changes. Only three proximate determinants of fertility change- age at marriage, contraception and post partum amenorrhea have been analysed (Data were not collected uniformly on induced abortion). The state weight is used for state level analyses. Decomposition analyses have been carried out to understand the significant predictor of fertility change. To measure the role of socio-economic development on fertility change, multivariate analyses have also been undertaken.

Findings: Table 1: Socio- demographic profile of Uttar Pradesh

Index	2001	2011	Table shows the selected socio-demographic indicators of Uttar Pradesh. Uttar Pradesh as one of the empowered action group states continues to share a number of characteristics with other backward states of India. These includes high birth rate, death rate, growth rate, infant mortality rate, maternal mortality, under five mortality, population below poverty line, proportion of girls marrying below legal age at marriage and a low female literacy, percent urban and level of contraceptive prevalence rate.
Population	166197921	19,95,81,477	
Percent population increase	25.80	20.09	
Density	690	828	
Percent Urban	20.78	22.28	
Sex ratio	898	908	
Percent 0-14 yrs old	41.1	-	
Percent 60+ yrs old	6.1	-	
Percent schedule caste	21.1	-	
Percent schedule tribe	0.1	-	
Literacy rate	56.27	69.72	
Male	68.82	79.24	
Female	42.22	59.26	
Birth rate	32.1	28.3	
Death rate	10.1	8.1	
Exponential Growth Rate	22.0	20.2	
TFR	4.5	3.5	
IMR	83	61	
U5MR	27	79	
Life expectancy	59.3	62.0	
Male	59.6	61.7	
Female	58.7	62.4	
Contraceptive Prevalence Rate	19.8	43.6	

At present Uttar Pradesh is experiencing a high Total Fertility Rate of 3.5 children per women, which is considered to be contributing to the country's high population growth rate of 1.76 percent per annum. Alike other states of India, the state of Uttar Pradesh has also noticed a steady decline in fertility from 5.8 children in 1981 to 3.5 in 2010 children per women. The fertility pattern by age groups has also changed over the period from 1991 to 2010. In 1991, fertility reached its peak in the age group 20-24 and declines thereafter however in 2010, the highest fertility has been attained in the age group 25-29.

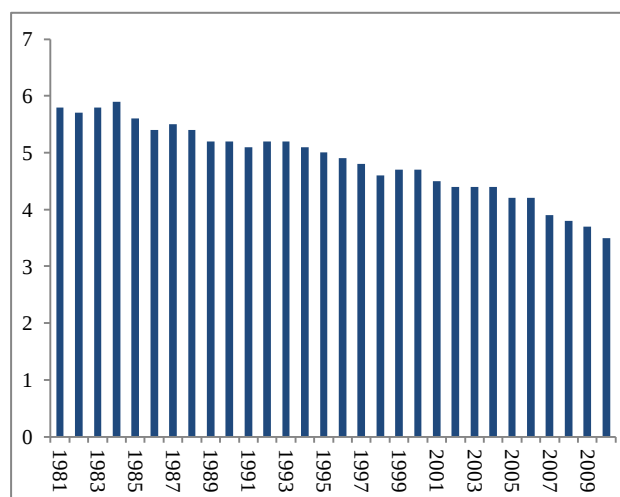


Fig. 1 Trend in Fertility, Uttar Pradesh

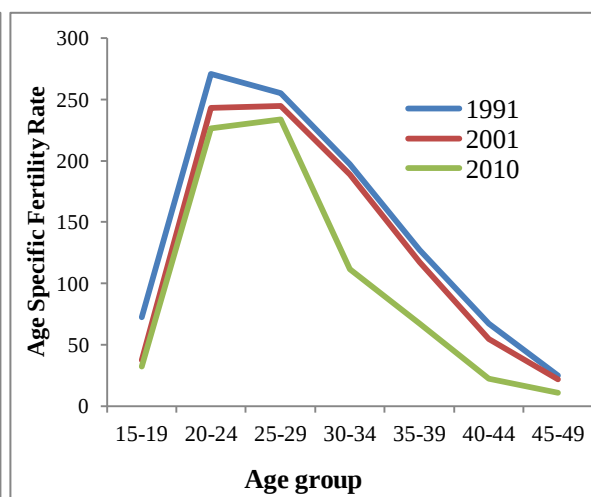


Fig. 2 Change in ASFRs, Uttar Pradesh (1991-2010)

The analysis reveals that at current fertility levels, women in Uttar Pradesh will have on an average 3.8 children in her life. From NFHS-1 to NFHS-3 fertility has declined by 1 child per women. Fertility decline in rural areas is higher as compared to urban women. Though the fertility levels are very high among disadvantaged group in both the periods, fertility decline is much pronounced among these groups, like fertility decline is more among illiterate or about 0.77 children per women as compared to women with 10 or more years educated (0.18 children per women). It is observed that religion does not play any significant role in shaping the women's fertility in state of Uttar Pradesh. Similarly for women belonging to poorest household reflects large fertility decline as compared to women from richest wealth quintile.

Table 2: Percentage of girls marrying below legal age among socio-economic groups by selected variables in Uttar Pradesh

Background variables	Social Groups						Economic Groups		
	SC/ST	OBC	Others	Hindu	Muslim	Other	Poor	Middle	Rich
Age									
<25 yrs	78.1	73.8	56.1	71.7	70.0	37.5	81.7	73.1	49.6
25-34 yrs	73.7	65.0	46.8	63.4	58.7	14.8	75.9	64.4	39.3
35+ yrs	75.6	70.2	53.5	69.0	56.7	23.3	75.2	70.6	53.2
Place of residence									
Urban	64.0	53.9	38.5	50.9	50.2	14.3	72.5	64.3	43.7
Rural	78.7	73.1	58.4	72.3	67.1	25.0	77.6	70.3	51.5
Education									
No education	78.8	74.5	67.3	76.8	66.6	27.3	78.3	72.8	61.8
<5 yrs	81.6	75.5	62.2	77.3	61.9	0.0	76.8	80.0	62.5
5-7 yrs	73.5	68.1	64.0	69.7	58.8	33.3	74.7	67.9	61.8
8-9 yrs	68.6	62.1	48.9	60.3	40.6	50.0	73.1	61.0	50.0

10-11 yrs	56.4	45.7	43.3	46.3	43.8	37.5	60.6	58.7	39.2
>12 yrs	32.4	29.9	16.7	23.6	10.8	4.0	56.7	35.0	19.3
Total	75.7	69.3	51.5	67.7	61.2	21.5	77.3	69.2	47.2

Table 3: Change in Proximate Determinants and Total Fertility Rates of the selected variables from NFHS-1 to NFHS-3, Uttar Pradesh

Background variables	Mean age at first marriage	Proportion girls marrying below age 18	Current use of any contraception	Mean duration of Post Partum Amenorrhea (PPA) in months	NFHS-1	NFHS-3	Change
Total	16.66	65.9	43.6	6.81	4.74	3.82	0.92
Residence							
Urban	17.92	49.5	56.3	5.09	3.97	2.95	1.02
Rural	16.27	71.0	39.7	7.69	4.96	4.13	0.83
Education							
No education	16.04	74.5	39.6	7.83	5.36	4.59	0.77
<5 yrs	16.93	60.6	40.8	5.74	4.16	3.27	0.89
5-9 yrs	16.85	63.2	47.3	5.96	3.81	3.32	0.49
>=10 yrs	19.31	30.1	58.1	3.88	2.55	2.37	0.18
Religion							
Hindu	16.55	67.3	46.3	6.87	4.75	3.73	1.02
Muslim	17.07	61.0	29.6	6.73	5.26	4.33	0.93
Other	20.24	18.30	72.90	2.61	3.39	1.80	1.59
Caste/Tribe							
Schedule caste	16.06	74.9	42.2	7.63	5.56	4.46	1.10
Schedule tribe	14.83	88.0	38.6	10.21	5.89	5.34	0.55
Other	16.87	62.9	44.1	6.50	4.66	3.61	1.05
Wealth Index							
Poorest	15.74	78.90	34.20	9.37	5.44	4.94	0.50
Poorer	16.05	75.20	39.00	7.55	5.08	4.27	0.81
Middle	16.41	69.10	39.90	6.67	4.76	3.88	0.88
Richer	17.24	55.30	51.40	5.15	4.34	3.10	1.24
Richest	18.92	36.40	63.10	3.98	3.88	2.32	1.56

Conclusions:

This research indicates that the level of fertility has declined over time in Uttar Pradesh, however the decline are not equal across both social and economic groups. It shows large differentials in fertility decline among subgroups. The fertility decline is more among certain socio-economic groups like those from urban areas, with higher level of education and those belonging to rich households. Among proximate determinants, reductions in fertility are less reflected with increase in age at marriage and Post-partum amenorrhea but more by increase in contraception. It also highlight that women belonging to low socio-economic groups are increasingly adopting the contraception and contributing to fertility transition despite their social and economic backwardness. It was established that there were wide variations in the degree of influence of the socio-economic factors that operate through the proximate determinants in influencing fertility. The most influencing socio-economic variables are education, religion, occupation and residence. It is recommended that promotion of contraceptive use, female education and general reproductive and child health care utilization are important if the fertility in Uttar Pradesh is to decrease.