DIFFERENTIALS IN FERTILITY BY RELIGION: A CASE STUDY OF DARJEELING DISTRICT

Doctoral Dissertation Abstract (2012)

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Growth of population and replenishment of human society depend on human fertility i.e. biological replacement and therefore, plays a positive role in the population dynamics. Study of fertility has traditionally been an exclusive filed of demographers and medical/bio-scientists. But in the recent years "Saffron Demographers" have utilized 'demographic data to achieve non-demographic objectives'. 'Politicization of fertility' is aimed at pressurizing policy makers to intervene in the private life of a particular community. "Saffron Demographers" have been successful to mislead the common folk with lack of their proper understanding about the dynamics of fertility.

Fertility is considered to be an important attribute of demography of any region. It may be determined by several socio-economic, cultural, demographic and biological factors such as literacy, work participation ratio, female work participation ratio, female literacy, tertiary sex ratio and age at marriage etc. Since the above attributes are not uniform across the religious groups, therefore differentials in fertility exist between the communities.

As part of the study 600 respondents i.e. married female in the age group of 15-49 years were drawn following scientific sampling method. The sample respondents have been drawn out of the universe primarily following multi-stage random sampling. But at the first stage six blocks (out of 12 blocks) and Siliguri Municipal Corporation have been selected using clustered random sampling. At the second stage a number of mouzas (revenue village) and wards (Municipal area) have been selected using random sampling with the help of random table from out of the list of villages/mouzas/wards. At the third stage, the list of households with married female in the age group of 15-49 years have been collected from Integrated Child Development Scheme (ICDS) Centres i.e. Anganwari Centres and also from the ASHA (Accredited Social Health Assistant) workers. Using random table the respondents were selected randomly. Replacement was allowed only when the respondent was not available even on the subsequent day too. The replacement was essentially the next available eligible woman in the list.

The research work is primarily designed to answer the following questions:

1. Is there any difference in fertility among the major religious groups i.e. Buddhists, Christians, Hindus and Muslims in Darjeeling district?

2. If there are differentials, then to what extent it varies among the religious groups under study?

3. What are possible reasons for such a phenomenon of fertility differentials by religion?

In order to fulfill the objectives of the study a set of research questions was framed. The research questions that have been answered during the course of the study are as follows:

1. What is the influence of religion on fertility in the study area?

2. Whether TFR and CBR for a group of people with similar socio-economic background but belonging to different religions are same or different?

3. Whether a group of population belonging to the same religion but having varied educational attainment, income and occupation has equal fertility?

4. How much variation in fertility is observed when income enhancement takes place?

5. To what extent occupation of husband and wife influences the fertility rate?

6. What happens to fertility rate when educational attainment level of the couple is high?

7. Is there any relationship between age at marriage and fertility rate?

Two measures of fertility have been approached in this study, namely Crude Birth Rate (CBR) and Total Fertility Rate (TFR). The average CBR and TFR for all the religions under study taken together is 39.56 and 3.58 respectively. Religion-wise fertility estimation shows that in respect of Crude Birth Rate, the Muslims top the list with 51.02 and the Buddhists remain in the bottom position with a CBR of 26.25. The Christians (47.72) and the Hindus (33.26) hold second and third position respectively in respect of Crude Birth Rate. Moving to a finer measure of fertility i.e. Total Fertility Rate, it has been found that the Christians have the highest level of fertility i.e. 4.98 with the lowest level of fertility estimated for the Buddhists. The Muslims (3.99) and the Hindus (2.98) hold second and third rank respectively in respect of Total Fertility Rate.

While relating the fertility to educational attainment we get the following results:

1. Buddhists are educationally better off; so far the respondent's education and education of their husbands and parents are concerned, the Christians are lagging behind others on the education front.

2. Educational attainment has negative impact on fertility but the extent of influence varies from one religious community to other as their socio-economic conditions vary.

3. Among others the impact of educational attainment of the respondents is much more effective (strong) than the husbands and the parents.

Relation of fertility to occupation produces the following results:

1. There is no definite trend of relationship between fertility and sector of economic activities in which the respondents are engaged.

2. Working females have relatively less number of children as compared to the housewives but the difference is not significant.

3. There is no significant difference in fertility across religious groups in the same sector of occupation (respondents engaged in occupation in the same sector).

4. Even among the employed respondents,

only a few are gainfully employed and therefore, nothing remarkable is observed on fertility behaviour.

The important results coming out of the section where fertility is related to income are as follows:

1. There exists a negative relationship between fertility (number of births) and income (per capita monthly income).
2. The income has strong negative relation with fertility among the Christians and Weak among the Muslims.
3. The correlation coefficient calculated between fertility (number of births) and income (per capita monthly income) varies between -0.0495 and -0.3236.

On examining fertility and age at marriage we get the following results:

1. There exists negative relationship between fertility and age at marriage.
2. The relationship also holds good in case of pregnancy and births.
3. The relation between fertility and age at marriage is negative for all the religions but the magnitude differs across the religious groups.
4. The strongest relationship between the variables is found among the Buddhists and the weakest relationship exists among the Hindus of all the religious groups studied.

In order to ascertain the importance of the relationship that exists between the variables i.e. level of fertility and the variables for which correlation coefficients have been calculated. Sample size being large, test of significance of the correlation coefficients has been done taking the critical points of Standard Normal Distribution Values i.e. T (tau) values. Actual T (tau) values have been calculated using the formula:

$$T = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}$$

Where, T (tau) = computed value, r = correlation coefficient (here modulus of r has been taken) and n = sample size.

A close observation of the theoretical values and actual computed values show that some of the variables taken to find out correlation with fertility level have no significant relation. But for other variables the relation is significant. The significance of relationship also varies from one community to other. Let us take individual variable to test the significance.

1) Educational attainment of the respondent has significant negative relationship with fertility both at 5 % and 1% level of confidence irrespective of religious groups. It could be said that educational improvement of the respondent of all religious affiliation can reasonably control fertility as it is expected to improve their sense of social responsibilities.
2) Father's educational attainment of the respondent has significant negative relationship with fertility both at 5 % and 1% level of confidence among the respondents belonging to Muslim and Hindu religious groups. It means that educational improvement of the respondent of these religious affiliations can also effectively control fertility. At the same time, among the Buddhists and Christians, the relationship is found not to be significant both at 5 % and 1% level of confidence. Societal value systems may be responsible for not having significant influence on daughter's fertility in spite of the fact that fathers' education showing an increasing trend.
3) It is also interesting to note that mother's educational achievement has almost no significant influence on the fertility of their daughters. As it has been found from the test of significance that among Christians and

Muslims, mother's educational attainment has no significant relation with fertility of their daughter both at 5 % and 1% level of confidence. It is only among the Buddhists and Hindus where we find marginally significant negative relationship between mother's educational attainment and their daughters' fertility found only at 5 % level of confidence. However, at 1 % level of confidence it is found not to be significant.

4) Husband's educational attainment presents a varied kind of relationship with their wives' fertility. Among the Buddhists, the variable has no significant relationship both at 5 % and 1% level of confidence where as among the Muslims and the Christians it is found to be significantly negatively related only at 5 % level of significance. It is only among the Hindus that the variable is significantly related to the fertility both at 5 % and 1% level of confidence.

5) Age at first marriage of the respondents has significant negative relation with the fertility of the respondents among all the religious groups both at 5 % and 1% level of confidence. That means rising age at first marriage has a positive effect on the rate of fertility.

6) The analysis of correlation between the per capita income and the fertility rates shows that it is only among the Buddhists and the Christians that the variable i.e. per capita income has significant negative relation with fertility both at 5 % and 1% level of confidence. In case of Hindus, the variable has significant relation only at 5 % level of confidence. However, it is interesting to note that the increase in income does not seem to have negative impact on the fertility in the Muslim community in this area as it has been statistically found that per capita income has no significant relation even at 5

% level of confidence. This phenomenon may be attributed to the fact that food security and other basic necessities of life may not prompt Muslims to adopt small family norm in the area under study.

Thus, from the above discussion on test of significance of correlation coefficients it may be said that educational attainment of the respondents and their age at the first marriage have significant negative relationship with fertility irrespective of religious affiliation. Such relationship between the variable, as is understood from the analysis, will go a long way in helping the policy makers to formulate policy planning in regard to an emerging demographic scenario in the study area. As far as the other variables are concerned, such variables do not show consistent negative relationship for all the communities.

In spite of sincere attempts some of the hurdles were found to be irresolvable e.g. religion being a sensitive issue particularly in the charged environment of mutual distrust in the period of post-Godhra pogrom, respondents in a number of cases refused to cooperate. The prevailing political upheaval due to Gorkhaland agitation and a so called 'Bengali-Gorkha divide' created a major hurdle during field survey in the hilly region in particular.