

Gender and regional fertility variation in India
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Fertility rates in India have been declining steadily since the early 1970's: TFR declined from 5.2 in 1971 to 3.0 in 2003. The decline in fertility rates has shown marked regional variation. While in the southern states TFR ranged from 1.8 to 2.5 in many of the northern states TFR is well above 3.8. The rapid decline in fertility among the southern states has occurred without any significant improvement in economic, social and health status, though southern states have a slightly better economic condition than the northern states. The causes of this regional variation have received little attention. Investigation of these factors will not only significantly advance the current understanding on fertility change in India but also contribute to broader understanding of fertility transitions in general.

Though northern and southern states have numerous cultural differences, one important cultural difference that could influence fertility is women's status. In south India, marriage and kinship structure favors a more egalitarian status for women (women in the south marry within close kin and within their community and are connected to their families even after their marriage), while the northern states are patrilineal and patrilocal societies and exhibit strong patriarchy that places women at a greater disadvantage. The same cultural factors have created a situation in the north where parents prefer sons to daughters. As a generalization, it can be stated that social and cultural conditions are favorable to women in the south than in the north; but it should be noted that there is variation within the southern states itself and some districts in the south have worst child sex ratios in the entire country. For the purpose of this paper, gender inequality comprises women's autonomy and son preference.

Nearly quarter century has passed since Dyson and More (1983) first suggested that the regional differences in women's autonomy may be related to the kinship structure and that this difference may explain the fertility variation. Since their writing, the pace of fertility decline in the south has been so rapid that the fertility difference between the regions has been greatly widened. During this time, rich literature has emerged on how and if women's status affects fertility, but rarely has there been a study that explicitly examines how this difference in women's status is associated with regional fertility variation. It has been generally assumed that since women's autonomy is associated with fertility and there is lack of autonomy in the north and more autonomy in the south, autonomy is the cause of fertility variation. Such an inference, without any empirical examination seems unwarranted: lack of decline in the north compared to the south could be due to whole set of different reasons – family planning program implementation, for instance – unrelated to women's autonomy or other measures of gender inequality. This should not be construed to mean that women's autonomy is not important but just that it does not explain the regional fertility pattern.

In examining the potential pathways through which gender inequality could influence fertility, I make the critical distinction between the influence of gender inequality on fertility intentions (desired number of children) and the influence of gender inequality on actual fertility (total fertility or children ever born). Gender inequality could influence both or none or either one of these aspects of fertility. Though actual fertility and fertility intentions are related in certain respects, there is a crucial difference between these measures - actual fertility might include births that were not intended and could be the result of unmet needs in fertility control. The question I address by making this distinction is whether the impact of gender inequality on fertility variation is through its influence on fertility norms (for instance, norms about the number of sons in the family may increase overall family size as parents try to achieve this right number)

or through the barriers to access effective fertility control methods (both psychological and real barriers – for instance, women with low autonomy may be unwilling or unable to access and use fertility control to achieve their desired fertility). If gender factors play a significant role in explaining regional variation for both actual and desired fertility then we can conclude that the gender inequality impedes fertility control by increasing their preference for large families and by impeding their access to fertility control technologies. If gender inequality affected only actual fertility, this would mean that fertility differential is likely due to impediments caused by gender inequality in accessing or using fertility control methods.

The objectives of this study can be summarized in the following statement: To examine the independent and interrelated effects of gender inequality on fertility intentions and actual fertility, paying close attention to whether these effects operate differently for those living in the northern states versus those living in the southern states. This is accomplished by doing the following:

1. Estimating the effect of gender inequality in explaining the regional variation in actual fertility (children born in the last 5 years).
2. Estimating the influence of gender inequality in explaining the regional variation in fertility intention at parity 2 and parity 3
3. Estimating how the effect of gender inequality differs between these regions

Data and methods

Data for this study comes from the National Family Health Survey conducted in 1998 (NFHS-2). The survey was conducted in all the states and the data set include sample weights at state and national level to make the survey representative at each of this level. NFHS-2 surveyed 89199 married women age 15-49. For this analysis, we use data from 7 states (4 northern and 3 southern states).

Dependent variables:

To investigate the possible causes for variation in actual fertility we children ever born is considered as the dependent variable. Since this is a count variable Poisson regression is used for analysis.

Next, fertility intention - whether the woman wanted another child (those who were sterilized are considered as having no intention for another child) at parity 2 and parity 3 is analyzed using logistic regression (the sample is limited to those who had 2nd birth in the last 5 years for parity 2, and those who had 3rd birth in the last 5 years for parity 3). Analyzing transitions at parity allows us to take into account the effect past experience of pregnancy and child birth.

Gender inequality

We measure gender inequality based on two measures: women's autonomy and son preference. Three major dimensions of women's autonomy are considered. These dimensions closely follow Jejeebhoy's (1995) terminology, though it is not as comprehensive due to limitations of data. The dimensions used are as follows: decision-making autonomy, physical autonomy, and economic autonomy. Decision-making autonomy reflects the autonomy of women to make decisions about health care and other family decisions. Economic autonomy is based on the questions relating to whether women are allowed to have money set aside. And physical autonomy refers to freedom of movement.

In the analysis of fertility intention, son preference is measured by the inclusion of number of living sons at parity 2 and parity 3. In analyzing actual fertility, response to ideal number of sons is used as measure of son preference.

Controls

The controls included in the analysis are standard of living index (that comes with the dataset), education, age, previous child death, husband's occupation, number of living sons, caste, religion, exposure to mass media, area of residence (rural/urban).

Results

Preliminary analysis indicates that though son preference and some dimensions of women's autonomy are significant influences on fertility intentions and actual fertility they do not constitute the major reason for the regional variation in fertility. Results also indicate that north Indians are more likely to have children, more likely to want to have a third and a fourth child than south Indians, net the controls in the model. The significant effect of fertility intentions suggests that higher fertility rates in northern India cannot be just explained by impediments to fertility control (lack of access to contraception). Analysis also shows that the interactive effect of gender inequality and region to be not significant.

The lower fertility intention and actual fertility in south India point towards changing norms about family size, which are largely independent of gender inequity. What is interesting about this is that this has happened in the midst of high poverty and high levels of illiteracy. The desire for smaller families in the south seems to be widespread across various social and economic groups as indicated by interaction analysis - poor people in the south have lower fertility intentions compared to poor in the north. The analysis conducted thus far shows the limitation gender inequality in explaining fertility variation but does not address why people in the south are choosing smaller families and how fertility reduction was achieved. These issues will be investigated and discussed in detail in future analysis.

References

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