Title: Multidimensional poverty and fertility preferences among women in India

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Extended abstract:

Background: Spacing and limiting pregnancies has direct effect on health and well-being of the women. According to WHO (2013) in developing countries an estimated 222 million women would like to delay or stop childbearing but are not using any method of contraception. It is evident that mothers who have more than four children are at greater risk of maternal mortality. Robust family planning can contribute positively to a healthy life of a woman. However, use of contraceptive methods can regulate the fertility preferences of the individuals and couple. Studies found that the poor couples have lower contraceptive use and higher unmet need for contraception. The women who can decide number of children, spacing and timing of child birth are better able to use the window of development and lower the poverty level.

Objective: The broad objective of this paper is to examine the differentials in fertility preferences by multidimensional poverty among women in India. This paper has been conceptualised with the following rationale: 1) in recent decades the measurement of poverty has been shifted from money-metric to multidimensional in nature, 2) there are limited number of studies that explore the linkages of multidimensional poor and fertility preferences among the women in India. In this paper we proposed to measure the multidimensional poverty index (MPI) incorporating a wide range of important dimensions and indicators which are very relevant in the context of human development. Further the fertility preference is examined by the multidimensional poverty.

Data and Methodology: We have used the India Human Development Survey (IHDS), 2004-05, a multi-topic survey data that covered over 41554 households and 215754 individuals. The IHDS data is a multi-topic survey that collected the income as well as consumption information in addition to education, health, fertility history, maternal and child health care, gender relations, social security etc. The multidimensional poverty is measured by incorporating five dimensions; health, knowledge, consumption expenditure, employment and household environment and comprising ten indicators. Health dimension includes two indicators; mortality (if the household experienced any child or adult death (<60 years) in last one year preceding to the survey date), and underweight (if the household has any

undernourished (BMI<18.5) ever married women). The education dimension includes two indicators; school enrolment status (if at least one school-age child (6-14 years) in the household currently not enrolled in school), and years of schooling (if no adult member aged 15 years and above in the household has completed five years of schooling. the economic dimension used the consumption expenditure data. The work/employment dimension includes two indicators; occupation (if the per-capita annual income is less than Rs. 5000 and the household belongs to either low paid non-farm business, or labour class, or low land holdings with less than 2.5 acre, and employment (if no one in the household aged 15 to 59 years has worked more than 240 hours in one activity in the last year preceding to the survey date). The household environmental dimension includes three indicators; drinking water, basic sanitation and clean cooking fuel. The Alkire-Foster (2007, 2011) family of multidimensional measures is used in estimating multidimensional poverty. Equal weight is given to all dimensions and among the indicators within the dimension. An individual is considered as multidimensional poor if his/her weighted deprivation score is more than one-third of the total weighted deprivation score (i.e. 0.33). The households with missing cases in any indicator are excluded from the analysis. A total of 36397 households are included in measurement of multidimensional poverty. The differentials in fertility preferences in terms of contraceptive use, any more additional child desired, time to next child, ideal number of child (son and daughter) among women is examined by the multidimensional poverty. a total of 31322 currently married women in the age group of 15-59 years are included.

Results: The bivariate results (table 1) show that the percentage of currently pregnant women is higher among the multidimensional poor women (5.9%) compared to the non-poor women (4.9%). Among those who are not pregnant, 59% women among non-poor are using contraception (any method) compared to half of the women among multidimensional poor are using contraception. Among sever multidimensional poor women the prevalence of contraception use is very low. About 21.8% multidimensional poor women desired at least one more child compared to 19.8% among non-poor. The multidimensional poor women also want more number of additional children compared to the non-poor women. However, the multidimensional poor women would have more number of children as their ideal number of children is higher compared to their non-poor counterpart women. For example, about 46.7% of the multidimensional poor women revealed that more than 2 child as their ideal number of children compared to only 27.2% of the non-poor women. However, more than 55% of the

women among those who are sever multidimensional poor revealed that more than 2 children as their ideal number of children.

Logistic regression is used to examine the effect of multidimensional poverty on fertility preferences among women in India. Table 2 provides the logistic regression results of contraception use and want additional child. The dependent variables; contraception and want additional child are dichotomous. The variable contraception categorised as 0 for not using any contraception method and 1 for using, and the variable want additional child categorised as 0 for don't want more child and 1 for want more additional child. The multivariate results (table 2) show that by controlling a set of demographic and socio-economic variables, compared to the non-poor women, the odds of using contraception among multidimensional poor women is 0.803 [CI:0.740-0.871] and the odds of desire more child among multidimensional poor women is 1.336 [CI:1.178-1.517].

Discussion and conclusion:

The fertility preferences are significantly varying among the multidimensional poor and non-poor women. The prevalence of currently pregnant women is high among multidimensional poor women and also among sever multidimensional poor women compared to the non-poor women. Compared to the non-poor women, the multidimensional poor women are less likely to use contraception and it is very low among those are sever multidimensional poor women. The multidimensional poor women want more number of additional children compared to the non-poor women. Similarly the multidimensional poor women also want more number of children as their ideal number of children compared to the non-poor women. Along with other background characteristics of women, the multidimensional poverty has an important role on fertility preferences among women.

Table 1: Percentage of women by fertility preferences among non-poor, multidimensional poor and sever multidimensional poor in India, 2004-05

Fertility preferences	Non-Poor	Multidimensional poor	All	Sever multidimensional poor
Currently pregnant	4.9	5.9	5.3	6.1
Currently using contraception	59.0	50.0	55.0	47.6
Desired at least one more additional child	19.8	21.8	20.6	20.3
Ideal number of children	27.2	46.7	35.7	54.5

Table 2: Logistic regression of contraception use and women wish to additional child in India, 2004-05

Covariates	Contraception use		Want additional child	
	Odds Ratio	95% CI	Odds	95% CI
Poverty				
Non-Poor ®				
Multidimensional poor	0.803***	0.740 - 0.871	1.336***	1.178 - 1.517
Age				
15-24®				
25-34	1.920***	1.724 - 2.140	0.303***	0.268 - 0.342
35+	2.250***	2.004 - 2.526	0.050***	0.042 - 0.060
Education				
No education®				
5th standard	1.253***	1.130 - 1.389	0.820**	0.698 - 0.964
Metric	1.301***	1.188 - 1.424	0.810***	0.703 - 0.933
Higher secondary and above	1.364***	1.206 - 1.543	1.397***	1.168 - 1.671
No of children				
No children®				
1-2 children	9.353***	7.791 - 11.227	0.082***	0.067 - 0.100
3-4 children	13.649***	11.284 -16.510	0.016***	0.013 - 0.021
5 and more children	8.122***	6.537 - 10.091	0.014***	0.009 - 0.022
Caste				
OBC®				
SC	1.130**	1.020 - 1.251	0.908	0.781 - 1.056
ST	0.850**	0.737 - 0.980	1.418***	1.144 - 1.758
Other	1.369***	1.259 - 1.488	0.886*	0.777 - 1.010
Religion				
Hindu®				
Muslim	0.526***	0.471 - 0.588	1.246**	1.048 - 1.482
Others	0.791***	0.689 - 0.907	1.145	0.943 - 1.391

Note: *** = p<0.001, **=p<0.05
® = reference category