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**The Implications of Sex Preference for Parental Investments and Demographic
Outcomes: Sex Ratios, Parental Investments and Unmarried Men**

Organizer: Sonia Bhalotra, University of Bristol, UK

Speakers: Karen Norberg (Washington), Ethan Jennings (Pennsylvania), Sonia Bhalotra
Co-authors and Discussants: Elizabeth Ananat (Duke), Karen Norberg, Ethan Jennings,
Monica Dasgupta (World Bank), Avraham Ebenstein (Jerusalem), Sonia Bhalotra, Tom
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Summary

This section draws together evidence from the US, China and India of the implications of son preference. One paper investigates whether child gender in the USA influences parental investments indicated by birth spacing, mother's employment and father's presence. The second paper builds upon evidence of missing girls in China to explore the nature of the consequent marriage market imbalance. It argues that China will see new generations of male dominated cohorts amongst which the unmarried men will be of low socioeconomic status. The third paper investigates evidence for the hypothesis that son preference in India is increasingly being implemented on account of the diffusion of ultrasound technology.

(1) **Vulnerable parents and vulnerable sons**

Karen Norberg, MD, NBER and Center for Health Policy, Washington University.

Although there is evidence of pervasive parental discrimination against daughters in developing countries, it is unclear which gender is at a disadvantage for which outcomes in industrialized countries. This study explores the possible effects of infant gender, health, and development on several family outcomes, including the timing of mother's first entry to employment after the child's birth, the presence of the child's father in the household at age 7 and time to next sibling, using historical longitudinal data from the 1959 National Collaborative Perinatal Project. The data date from an era of greater gender role stereotyping in US society. The findings suggest no direct effect of child gender on any of the three target outcomes. However, circumstances of delivery (eg, duration of labor) and child health characteristics (eg, prematurity, Rh incompatibility, head circumference, neurological status at birth and motor development at 8 months), were significant predictors of parental employment, fertility, and partnership stability, with complex interactions between child health, child gender, and family background.

Keywords: families, children, gender, NCPP, sex differences in parental investment, child health, fertility, parental employment, family background.

Discussant: Ethan Jennings, University of Pennsylvania

(2) **The socio-economic implications of son preference and fertility decline in China**
Monica Dasgupta, Avraham Ebenstein, **Ethan Jennings**

Fertility decline in China has fuelled a sharp increase in the proportion of 'missing girls' observed since the advent of the One Child Policy. Increasing proportions of men will

consequently fail to marry, and face old age without the economic and non financial support normally provided by wives and children. Little is known about the potential consequences of this impending imbalance in China's marriage markets. Using decennial Chinese census extracts, we demonstrate that these unmarried men will be in greater need of safety nets—they will be of low socio-economic status and concentrated in poorer provinces that have fewer financial and institutional resources. We use knowledge about hypergamous mating patterns in the Chinese population in a cohort-component population projection to estimate the number and geographical distribution of unmarried men in China in the 21st century. We argue that China should consider initiatives for national funding for social insurance programs before heavily male-dominated cohorts pass through adulthood.

Keywords: missing girls, marriage markets, China
Discussant: Karen Norberg, Washington University

(3) *Mass female foeticide in India?: Inference from matching trends in conditional sex ratios with trends in availability of ultrasound-* **Sonia Bhalotra** and Tom Cochrane

The juvenile sex ratio in India has been rising sharply since 1981 and more so since 1991. This paper tests the hypothesis that this trend is associated with the rapid diffusion of prenatal sex diagnostic technology during this period. It conducts a difference in difference analysis, using information on the timing of the introduction and diffusion of prenatal sex determination technology to identify structural breaks in the sex ratio of higher order births conditional upon the sex of the first child. The premise, supported by field-based research, is that families seldom attempt sex selection for first births. We allow heterogeneity in the bias in the conditional sex ratio by family level indicators of heterogeneity in son preference and access to ultrasound. Using non-parametric and parametric techniques, we find evidence consistent with the hypothesis that sex selective abortion has increased in line with the widespread availability of ultrasound since the mid-80s and especially since the early 90s which, we argue, is associated with the progressive deregulation of the economy. Sex selective abortion appears to have started earlier in and remains more prevalent amongst families with greater wealth, more educated women, urban location, residence in the north-west of the country and high caste Hindu status. We estimate that as many as 0.44 million girls p.a. went missing during 1994-2005 and that they were concentrated amongst high status households. To back our inference that sex selective abortion is at play, we consider a range of alternative hypotheses, arguing that no one of these can, by itself, explain the patterns in the data. Our estimates suggest that the ideal composition of births in India is 2 boys and 1 girl.

Keywords: sex ratio at birth, son preference, abortion, India
Discussant: Elizabeth Ananat, Duke University