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"Fertility, Mortality Risk and Returns to Human Capital:

Quasi-Experimental Evidence

from 20th Century America"

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Abstract: The introduction of antibiotics in 1937 in America was one of the largest health innovations in history, leading to a sharp fall in infectious disease mortality. This paper investigates causal impacts of this shock on fertility. Although causal estimates remain scarce, theory predicts that reductions in the risk of infant mortality will tend to reduce fertility. However, alongside the drop in infant mortality, antibiotics led to a drop in maternal mortality, which may be expected to raise fertility. This is indeed, what we find, and the net effect on fertility is positive. Moreover, the fertility response to infant mortality is only negative at the intensive margin. The extensive margin response is positive, consistent with the notion of "essential complementarity", the notion that for women with no children, reductions in infant disease and mortality must raise the value of having a child. So, alongside a slight overall increase in fertility, there was a compression of the distribution of fertility in the population. We find significant gradients in the identified impacts by education and race. The results contribute to a small literature that identifies the "quantity-quality" trade-off, and it informs continuing debate on the causes of the demographic transition.