

Child Endowment and the Demand for Children: Revisiting the Quantity-Quality Model of Fertility

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Abstract

Past research has tested the quantity-quality model of fertility by studying a shock to quantity, typically by exploiting the birth of twins or China's one-child policy. We take an alternative approach and study the effect of a quality shock on the QQ trade-off, measured as a birth of a child with an extreme level of an endowment. Theory predicts that a rise in child endowment increases parental demand for children through an increase in family income and a fall in the shadow price of children. The opposite is valid for a fall in child endowment. Using two quasi-experiments, we estimate the reduced-form effect of a positive or negative change in endowment on family size. The first experiment estimates the effect of a first-born high-endowment child on further fertility in a sample including families with either a first- or second-born high-endowment child and at least two children. Similarly, we estimate the effect of a second-born high-endowment child on further fertility in a sample including families with either a second or third-born high-endowment child and at least three children. We use Israeli data on families and their children and measure high endowment by giftedness and exceptional scores on early cognitive tests. We find that the birth of a high-endowment child increases the probability of an additional child in both quasi-experiments. This effect is mainly driven by families with educated mothers and gifted boys. On the contrary, the birth of a low-endowment child, measured as enrollment in a special-education class and by exceptionally low cognitive scores, negatively affects the demand for children in both quasi-experiments. However, this effect is smaller and less significant in the first quasi-experiment, in which we focus on families with at least two children. This last result is consistent with families' preference for a child with a regular endowment, which offsets the negative income and price effects activated by a low-endowment child.