

Intergenerational Transfers and the Fertility-Income Relationship

A great disagreement between policymakers, economists and the general public is the extent to which individual outcomes, such as income, reflect individuals' true abilities or, on the contrary, are strongly shaped by various types of market failures. Does the invisible hand ultimately work? Finding uncontested evidence of market frictions is often difficult due to identification problems. There is, however a key choice individuals make in which market frictions are all but elusive. We are referring to the fertility choice.

Children are noticeably unable to access financial markets. In a perfect world the invisible hand could work, as parents could act as banks for their children and guarantee that they reach their potential. Specifically, imagine a situation in which the present value of a child's future income exceeds the costs of raising the child. If altruistic parents could borrow on behalf of the child, say to cover rearing costs, then the child will be born and will reach her/his potential. But in this case it would also be profitable for parents to have as many children as possible regardless of parental income. This is actually not very far from reality prior to 1850 when parents had legal access to their children's income in the United States (Schoonbrood and Tertilt, 2010). Since then parents have gradually lost legal ability to own or borrow against their children's income, and have legal obligation to provide appropriate care to their children. Parents cannot impose any debts on their children for their upbringing. Our research shows that constraints to intergenerational transfers can explain why fertility rates are significantly lower than their potential, and why fertility rates are negatively related to income. These are both indicative of market frictions affecting family choices and ultimate individual outcomes.

Consider a child born in 2011 to a low-income family of two adults and two children in the United States. According to the USDA (2012), the average cost of raising this child from age 0 to 17 is \$148,962. This includes direct parental expenses such as housing, food, transportation, health care, clothing, child care, and private expenses in education. Parents also incur time costs in raising this child. Using available information we estimate this time cost to be between \$223,443 and \$446,886. Therefore, the total cost of raising a child in a low-income family is between \$372,405 and \$595,848. In addition, we estimate that the present value of the total future income of this child would be around \$661,529. These figures show that children are on average a potentially sound investment for parents. But the observed low fertility rates suggest that parents have limited ability to access their children's income, offering prima facie evidence on the existence of operational constraints to intergenerational transfers.

Market frictions can also explain the negative fertility-income relationship documented across countries and time, and also across families within countries (Jones and Tertilt, 2008). Absent constraints to intergenerational transfers, fertility would be independent of parental income. But in the presence of these constraints, we show that fertility declines with parental income as long as parental own consumption is a luxury good. This occurs when, as parental income increases, altruistic parents care more about saving and

smoothing their own consumption over the life cycle, rather than having more children and smoothing consumption across family members. Our research suggests that learning about fertility choices can change the way we think about market frictions in macroeconomics in a fundamental way.

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