

On Returns to Birthweight

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The most updated paper is available at: <http://research.tigrou.jp/>

Abstract:

Worse future outcomes of low birthweight infants are well-documented, but their causal relationship remains controversial, because birthweight itself might only be a composite variable of infant health, maternal health, and other unobserved factors that directly affect infants' future outcomes. To quantify causal effects of birthweight on various outcomes, we apply an instrumental variable approach for mother/grandmother fixed-effects models, using Danish administrative register data. Our instrument is a diagnosis of placenta previa, an obstetric complication that often results in low birthweight. Placenta previa is highly unpredictable once we control for its risk factors, and thus provides a good exogenous randomization. Unlike most other obstetric complications, it has very limited direct long-term impact on mothers and children except for its effect through low birthweight. We find that a higher birthweight improves infant health and early child development. A 10 percent increase in birthweight reduces one-year mortality by 7 to 8 deaths per 1,000 births. Birthweight does impact long-term outcomes, but our innovative instrument offers results very different from the existing literature. A larger birthweight lowers test scores, increases welfare reliance and criminal tendency, and increases the propensity for males to become a father before age 20. On the other hand, extra birthweight has favorable effects on the family; it makes the next birth more likely, reduces the risk of parental separation, and increases household income.