

Presenter: Caroline Donado

"Inside the War on Poverty: The Impact of Food Stamps on Birth Outcomes"

Douglas Almond, Hilary W. Hoynes, and Diane Whitmore Schanzenbach (2011)

I. Research Question

Does the introduction of the Food Stamp Program impact birth outcomes?

II. Background

The Food Stamp Program (FSP), one of the country's largest anti-poverty programs, provides food stamps to eligible families in the United States. Eligibility is determined by household income and assets, with average benefits of \$200 per month for food purchases. Following the success of pilot programs of FSP in the early 1960s, the U.S. enacted the Food Stamp Act of 1964 (FSA) which mandated that all counties provide food aid through this program. The Food Stamp Program was renamed to Supplemental Nutrition Assistance Program (SNAP) in 2008.

The researchers aim to measure the impact of the FSP on birth outcomes, including birth weight, infant mortality, and gestation length. Although there have been other studies on FSP, there is not much research on its effect on health outcomes. Almond et al. are particularly interested in the connection between income and health.

III. Data

Almond et. al. use data from USDA annual reports to identify the month of FSP introduction in approximately 3,100 counties across the United States.

Birth and death statistics from the National Center for Health Statistics provide measures of birth weight and neonatal mortality rate (deaths within 28 days of life per 1,000 births). Information about cause of death allows the researchers to measure effects on deaths that could possibly be linked to nutritional deficiencies. This data also provides information on the age, race, and marital status of the child's mother. With natality microdata becoming available in 1968 (after FSP was already in place in many counties), the researchers had to fill in data for the prior period through digitizing annual print vital statistics, which did not provide the same level of information.

County population data from SEER was used to construct fertility rates per county. The researchers also used data from the 1960 City and County Data Book and REIS to control for county-level factors.

IV. Methodology

The FSP rollout provides a natural experiment in which Almond et. al. could estimate the causal relationship between FSP and birth outcomes. The researchers explain that the month that the FSP began in each of the counties was determined by funding limits, not endogenous factors, making the rollout virtually random. Almond et al. acknowledge that certain counties may have preferred the Commodity Distribution Program (CDP) over the FSP because it benefitted local

farmers. Nonetheless, the researchers found that characteristics of each county did not explain much of the variation in the timing of FSP implementation.

If the timing of the FSP adoption in each county was exogenous, then this would remove selection bias that was present in studies that simply compared participants to non-participants. The county-by-month variation also allows the researchers to separate the effects of the FSP with other anti-poverty programs that were being implemented.

In their regressions, the researchers include county fixed effects, time fixed effects, state-by-year fixed effects, as well as annual county-level controls from the REIS, and 1960 county characteristics interacted with a linear time trend.

The researchers also conduct a difference-in-differences analysis of the effects of FSP on low birth weight, for white and black infants. By using difference-in-differences, Almond et. al. was able to single out the FSP as the causal factor leading to decreases in low birth weights.

V. Results

Almond et al. found that the introduction of the FSP was associated with small increases in birth weight and decreases in the fraction of infants weighing fewer than 2,500g. The effects were higher for black infants as well as those in high-poverty counties. Those in urban counties also experienced larger impacts of the FSP. The researchers also found weak evidence for decreases in neonatal mortality rate, but the results are not statistically significant.

VI. Discussion + Questions

Future research

- Impact on subsequent outcomes

Implications

- Impact of income increases on health
- Higher impacts for poorest populations and black infants

Questions

- What are the mechanisms through which food stamps could increase birth weight? Is there any way that food stamp programs could negatively impact infant health?
- Do you agree with the researchers' assumption that food stamps are equivalent to cash transfers?
- What other health outcome measures would you include in this analysis?