

# MPES Colloquium Series

## Early Production of Cognitive Skill: Evidence from Randomly-Assigned Childcare Prices and Pre-natal Investments

### Aaron Sojourner

University of Minnesota  
Carlson School of Management  
Dept. of Work and Organization



**Friday, April 24, 12:30-1:30pm**  
**Annenberg 303**

This paper models the determinants of children's age-3 cognitive skill as a function of innate endowment, pre-natal influences, and the quality of the post-natal care environment. We use data from the Infant Health and Development Program (IHDP), which randomly assigned new mothers and their low-birth weight babies to a control group or an intervention involving access to home visits during the child's first year of life and very high-quality, center-based care while the child was 1 and 2 years old. We develop a model of maternal choice of child human-capital investment, consumption, labor, and leisure, and use the randomly assigned intervention to estimate maternal responses with respect to parenting, time use, and other margins. We estimate the degree of productive complementarity between (1) pre-natal and early post-natal investments (inter-temporal complementarity) and (2) maternal and non-maternal post-natal care (intra-temporal complementarity), and find inter-temporal complementarity between pre-natal and early post-natal investments but intra-temporal substitutability of maternal and non-maternal care.

Sojourner is a labor economist and assistant professor at the University of Minnesota's Carlson School of Management. His research focuses on three areas: (1) policies to promote efficient and equitable development of human capital with a focus on early childhood and K-12 education systems, (2) effects of labor-market institutions on economic productivity and in politics, and (3) behavioral economic approaches to consumer financial decisions. Sojourner serves on Minneapolis Mayor Betsy Hodges's Cradle-to-K Cabinet advising the city on how to reduce racial disparities through policies affecting children's first 3 years. Sojourner completed his PhD in economics at Northwestern University in 2009 and was pre-doctoral fellow in the university's Multidisciplinary Program in Education Sciences.



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