sociological science

Supplement to:

Maralani, Vida, Camille Portier, and Berkay Özcan. 2026. “Early Childhood Investments and Women’s Work Outcomes across the Life Course” Sociological Science 13: 214-241.

Online Supplement

Appendix for Early Childhood Investments and Women's Work Outcomes across the Life Course, by Vida Maralani, Camille Portier, and Berkay Özcan

Formally, we estimate the following baseline linear fixed effects model:

(1)

$$Y_{it} = \mu_i + \sum_{t=-23}^{120} \beta_t M_t + \sum_{t=-23}^{120} \sum_c \gamma_t \left((BF_c \times M_t) + \sum_{t=-23}^{120} \theta_t (ReadDaily \times M_t) + \sum_{t=-23}^{120} \sum_c (BF_c \times ReadDaily \times M_t) w_t + \sum_{t=-23}^{120} (X^{TC} \times M_t)\delta_t) + \sum_{t=-23}^{120} (X^{TV} \times M_t)\lambda_t + \varepsilon_{it},$$

where Y_{it} represents the work outcome of individual *i* at time *t*. Our outcomes include the total number of hours worked in a month (given working any hours) and the probability of not working (working 0 hours) in a given month. μ_i represents the individual fixed effects. M_t represents the time fixed effects, which is a set of dummy variables indicating the months before and after the birth of the first child for individual *i*. Months run from -24 (two years before first birth) to 120 (10 years after first birth). The first birth happens in month 0.

BF_c represents the four breastfeeding categories (none, < 3 months, 3 to 6 months, > 6 months). $ReadDaily$ is an indicator variable for whether the mother reads daily to the child when the child is age three to five. The main effects of these variables are not identified because they do not vary within women, but their interactions with time are identified. These interactions with time measure whether breastfeeding duration and reading daily have a differing association over time with labor force participation. The interactions before first birth capture differences in anticipatory behavior whereas the interactions after first birth capture differences in the short and long-term association between early childhood investment and work outcomes.

$\mathbf{X^{TC}}$ represents a matrix of the time-constant covariates, including women's education in categories, spouse's education in categories, whether the respondent was married at the time of first birth, her age at first birth (in categories), and whether she had any paid maternity leave. These characteristics are strongly associated with making more intensive early childhood investments. By including these interactions across time, we allow the model to account for the differential associations of these characteristics and labor supply across the life course, and to separate these associations from those of child investment on labor supply. $\mathbf{X^{TV}}$ represents a matrix of time-varying covariates, including marital status at each month, and whether the

woman has an additional child under age two in the given month. Because these characteristics can vary over time, both the main effects and the interactions are identified.

Appendix Figure 1. Changes in predicted hours worked (top panel) and the probability of not working (bottom panel) by breastfeeding duration and reading from two years before first birth to ten years after, NLSY79