

**Liberal welfare state policies and health:
the effect of the earned income tax credit on child well-being**

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Abstract

In this analysis, we investigate the health effects of liberal welfare state policies by examining how enactments and expansion of state and national earned income tax credit (EITC) programs impact the health of the children of the working poor. Using two data sources — Children of the NLSY79 and U.S. Natality Data — to conduct a difference-in-difference analysis, we examine the effect of the EITC on birth weight, preterm birth, and child height.

Although the U.S. spends more on health care and biomedical research than any other nation, it lags behind most other wealthy nations in life expectancy and infant mortality.¹ This fact has led several scholars to suggest that more attention should be paid to the health effects of U.S. non-health policy.² According to Esping-Andersen's classic typology, U.S. welfare state policies typify a "liberal" regime. This implies that, because most benefits are tied to labor market participation, the U.S. welfare state fails to "decommodify" citizens (i.e., citizens cannot maintain a livelihood without reliance on the market). Further, since many programs are means-tested, the U.S. welfare state does little to reduce market-generated stratification.³ The Earned Income Tax Credit (EITC), the fastest-growing anti-poverty program in the U.S., provides a very clear case for this argument. As a refundable tax credit targeted at low-wage workers, the EITC is means-tested and it explicitly ties welfare entitlements to the market.

In this analysis, we investigate the health effects of liberal welfare state policies by focusing specifically on how enactments and expansion of state and national EITC programs impact the health of the children of working poor. The effects of the EITC on health remain ambiguous. On the one hand, the EITC has lifted many single mothers and their children out of poverty,⁴ and this income boost is likely to have a positive impact on child health. On the other hand, the EITC provides an incentive for mothers to enter low-wage jobs, and this may impinge on the time they have to invest in their children's health (e.g., preparing healthy meals, getting prenatal care, etc.).

¹ United Nations Development Programme (2004), United Nation Human Development Report 2004: Cultural Liberty in Today's Diverse World. (New York: United Nations).

² Schoeni, Robert F., James S. House, George A. Kaplan, and Harold Pollack. (forthcoming) *The Health Effects of Social and Economic Policy*. New York: Russell Sage.

³ Esping-Andersen, G. (1990) *The Three Worlds of Welfare Capitalism*. Princeton, NJ: Princeton University Press.

⁴ Hotz, V. and Scholz, J. (2003) "The Earned Income Tax Credit." In Robert A. Moffitt, ed., *Means-Tested Transfer Programs in the United States*. Chicago: The University of Chicago Press

Drawing on data from the National Longitudinal Survey of Youth 1979 (NLSY79) and the biological children of women in this dataset (NLSY79 Children and Young Adults) and U.S. Natality Data 1985-2004, we use temporal and state variation in the enactment and expansion of state and national EITCs to estimate the effect of the EITC on perinatal health (i.e., birth weight and preterm birth) and child growth. We also attempt to disentangle the effects of income and low-wage employment by comparing birth outcomes occurring at different times of year. While EITC eligibility rules require people to be in low-wage work for a significant amount of time, the vast majority of people receive the credit itself as a lump sum payment⁵ in the months of February and March.⁶ Comparing the birth outcomes of EITC-eligible women who were pregnant in early-Spring, to their counterparts who were not pregnant in early spring, we can see whether the income shock of the credit has a distinct effect from the related incentive to enter low-wage jobs.

Research Strategy: Policy as a Natural Experiment

When trying to estimate the health consequences of EITC, we encounter a standard set of selection concerns: the EITC is targeted at a disadvantaged population that is relatively less healthy to begin with, and, within that population, earnings and program up-take (i.e., actually filing for the credit) will also be associated with health. In an effort to address selection bias, we turn to national and state variations in EITC programs as source of identification. Since the mid-1980s, there have been several substantial, non-linear expansions of the federal EITC.⁷ During

⁵ Alternatively, one can receive the EITC throughout the year as reduced withholdings from pay checks, however, very few people use this option.

⁶ Edwards, R.D. (2004) "Macroeconomic implications of the Earned Income Tax Credit," *National Tax Journal* 57, March, 45-65.

⁷ The largest expansion occurring in the mid-1990s increased eligible families' incomes by as much as 20 percent (Dahl and Lochner 2006).

this period, 17 states also enacted their own EITCs, typically expressed as a simple percentage of the federal EITC.⁸ After adjusting for various temporal and state-level differences, these national expansions and state enactments should be exogenous to individual families' and their children's wellbeing.

Data for this analysis come from the NLSY79 Children and Young Adults survey and U.S. Natality Data 1985-2004. The NLSY79 Children and Young Adults survey is a nationally representative survey, which collected height data on biological children of the NLSY79 cohort from the years 1988 to 2002. The outcome variable we examine with these data is height, which was collected both through measurement and through self-report, allowing us to validate overall results using the sub-sample for which objective measurements were taken. We analyze height as percentiles of gender and age-specific distributions and, in all models, adjust for race, maternal education, AFQT score, marital status, foreign born and region of birth.

U.S. Natality data are based on U.S. vital statistics and include information from birth certificates for all births occurring in the U.S. in a given year.⁹ When working with the natality data, the outcomes are low birth weight (a dichotomous indicator for weight $\leq 2,500$ grams) and preterm birth (a dichotomous indicator for delivery at ≤ 37 weeks gestation), and we adjust for race, maternal age, maternal education, birth order and interval since last birth.

In the analysis, we use a difference-in-difference strategy. When examining the effects of national expansions, we employ the following model which compares the outcomes of EITC-eligible and –ineligible families before and after national expansions

$$Y = \beta_0 + \beta_1 \text{ EITC Expansion} + \beta_2 \text{ Eligibility} + \beta_3 \text{ EITC Expansion*Eligible} + \beta_4 \text{ Individual Controls} + \beta_5 \text{ National Econ/Policy Controls} + \beta_6 \text{ Year} + u$$

⁸ As an example, in 2002, residents of New York who were eligible for the federal EITC could receive a state credit equal to 27.5 percent their federal credit (State EITC on-line resource center n.d.)

⁹ For more information see 2004 Technical Appendix, Vital Statistics of the United States, available at

When working with the NLSY, EITC eligibility is determined based on number of dependents and income prior to taxes. With birth certificate data, income data is not available, so we must rely on maternal education as an indicator of EITC eligibility (≤ 12 years education is considered EITC eligible, while > 12 years is considered ineligible). In this model we also adjust for trends in the national economy (e.g., unemployment and poverty rate) and in national policies (e.g., welfare reform, changes in the minimum wage, etc)

When examining the effects of an enactment of a state EITC, we employ the following model, which compares the outcomes of families in states with EITCs to families in states without EITCs before and after state enactment.

$$Y = \beta_0 + \beta_1 \text{ State EITC} + \beta_2 \text{ Individual Controls} + \beta_3 \text{ State Econ/Policy Controls} + \beta_4 \text{ State} + \beta_5 \text{ Year} + u$$

This model is limited to women who should be eligible for the EITC and we adjust for state-level economic performance (e.g., unemployment and poverty) and changes in state-level policy (e.g., Medicaid spending, TANF work requirements, AFDC/TANF benefit size, etc). Preliminary analyses conducted so far suggest that, among women with a high school degree or less, the enactment of a state EITC significantly reduces the risk of preterm birth and low birth weight.¹⁰ The next step in this state-level analysis is to distinguish outcomes by month-of-birth to see whether women in EITC-states who were pregnant in early-Spring, when most people receive the credit as a lump sum, have better outcomes than their counterparts who were not pregnant in early-Spring.

¹⁰ However, there was no significant effect of a state EITC on the birth outcomes of college-educated women, most of whom should not be eligible for the EITC.