Effects of EITC on Birth Outcomes: Research Findings

KA Komro, PhD, S Markowitz, PhD, MD Livingston, PhD, & AC Wagenaar, PhD
Emory University Rollins School of Public Health & Dept of Economics
S Burris, JD, Temple University Beasley School of Law
Understanding How Law Affects Health
Scientific Contributions from Multiple Disciplines

• Law
• Social & Behavioral Sciences
• Epidemiology
• Economics
• Statistics


1. Minimum Wage Laws
2. Earned Income Tax Credit (EITC)
3. Unemployment Insurance
4. Temporary Assistance for Needy Families (TANF)

R01 funded by the National Institute on Minority Health and Health Disparities, 2015-2019

Social Determinants of Birth Outcomes
Conceptual Framework

Socioeconomic & Political Context
- Family Economic Security Policies

Socioeconomic Position
- Poverty
- Gender & Racial Discrimination

Mediators
- Health Behaviors
- Toxic Stress Weathering
- Health Care Access & Quality

Birth Outcomes
- Low Birth Weight
- Preterm Birth
- Infant Mortality
Effects of state-level Earned Income Tax Credit laws in the U.S. on maternal health behaviors and infant health outcomes

Sara Markowitza, Kelli A. Komrob,* Melvin D. Livingstona, Otto Lenhartd, Alexander C. Wagenaarb
Contribution

1. Strong quasi-experimental and longitudinal design
   • state-level EITCs
   • multiple policy changes over 20 years

2. Presence and generosity of state EITCs
   • infant health outcomes
   • possible mechanisms via maternal health behaviors
State EITC

- In 1994, 5 states had an EITC → In 2013, 26 states had an EITC
- State-specific EITC ranges from 3.5% to 40% of the federal amount, varies by number of children and refundability

### EITC summary measure

<table>
<thead>
<tr>
<th>States with no EITC</th>
<th>States with an EITC, nonrefundable payments, and payments less than 10% of the federal amount</th>
<th>States with an EITC, refundable payments, and payments less than 10% of the federal amount</th>
<th>States with an EITC, nonrefundable payments, and payments 10% or more of the federal amount</th>
<th>States with an EITC, refundable payments, and payments 10% or more of the federal amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>least generous</td>
<td>most generous</td>
<td>most generous</td>
<td>most generous</td>
<td>most generous</td>
</tr>
</tbody>
</table>
## Birth Outcome Results

<table>
<thead>
<tr>
<th>Dependent Variables</th>
<th>Birth Weight in Grams</th>
<th>Birth Weight &lt;2500g</th>
<th>Gestation Weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low EITC No Refund</td>
<td>9.44</td>
<td>-0.003</td>
<td>0.05</td>
</tr>
<tr>
<td>Low EITC With Refund</td>
<td>16.85</td>
<td>-0.005</td>
<td>0.03</td>
</tr>
<tr>
<td>High EITC No Refund</td>
<td>12.68</td>
<td>-0.003</td>
<td>0.17</td>
</tr>
<tr>
<td>High EITC With Refund</td>
<td>27.31</td>
<td>-0.008</td>
<td>0.08</td>
</tr>
</tbody>
</table>
Fig. 2. Effects of EITC Generosity on Birth Weight Using Unconditional Quantile Regression at 5th through 95th Quantiles. Note: N = 30,780,950. Solid marker indicates point estimate is statistically significant at the 5% level.
Conclusions

• More generous EITCs associated with reductions in *probability of LBW*
  • 0.3 to 0.8 percentage-point reductions
  • 4% to 11% reductions
  • 4,300 to 11,850 fewer babies born LBW every year among women with high school education or less

• If Georgia implemented a refundable EITC at 10% or more of the federal, based on results we estimate
  • 1,047 fewer LBW babies per year in Georgia
Effects of Changes in Earned Income Tax Credit: Time-series Analyses of the Experience in Washington DC

A.C. Wagenaar, M.D. Livingston, S. Markowitz & K.A. Komro

Under review
EITC in DC

- Four distinct policy changes over 8 year period
- Percentage of the federal EITC, fully refundable

1990: Study period begins
2000: DC’s EITC initiated at 10%
2001: DC’s EITC increased to 25%
2005: DC’s EITC increased to 35%
2008: DC’s EITC increased to 40%
2015: Study period ends
Effects of EITC on Low Birth Weight
Bottom Line: Effects in DC

• 40% tax credit → 40% decrease in low birth weight births from baseline

• Prevents an estimated 349 low-weight births per year in DC
Effects of State-level Earned Income Tax Credit Laws on Birth Outcomes by Race and Ethnicity

K.A. Komro, S. Markowitz & M.D. Livingston, A.C. Wagenaar,

Under review
Health Inequities

• Health inequities in birth outcomes by mother’s income, education level and race
  • Percent low birth weight births (2016)
    • Hispanic women: 7% to 9.5%
    • non-Hispanic white women: 7%
    • non-Hispanic black women: nearly 14%
  • Caused by a complex set of social factors across the life course
    • income inequality
    • education achievement gaps
    • residential segregation
    • toxic environment exposures
Results

• Larger beneficial effect among black mothers compared with white mothers for the probability of low birth weight and gestation weeks

• No significant differences in birth outcomes between Hispanic and white mothers
We’re Just Getting Started

- Minimum wage and EITC interactive effects
- Minimum wage and EITC optimum legal constructions
- TANF effects on maternal, infant and child outcomes
- Exploring differential effects by race/ethnicity
- Additional health outcomes
- Additional policies affecting social determinants
- Continued monitoring and coding of legal changes

Thank You! Kelli
(kkomro@emory.edu)