What we know—and are learning—about the EITC

Kartik Athreya
May 21, 2015
Disclaimer

 The view expressed today are mine alone.

 They do not necessarily reflect those of the Federal Reserve Bank of Richmond or the Federal Reserve System.
Roadmap for the Talk

- Overview and facts
- What have economists learned?
The EITC: Overview and Facts
### Overview of Federal EITC

- **Refundable tax credit for working, low-income tax filers**
- **Value varies with earned income and number of children, with larger credit amounts for families with children**
  - The average credit in 2014 was $2,407.
- Nearly 28 million families received EITC in 2013, amounting to over $66 billion.

Spending on EITC

Real Federal Spending on EITC, CTC, and Welfare, 1975-2011

- Earned Income Tax Credit
- Child Tax Credit
- Aid for Families with Dependent Children and Temporary Aid for Needy Families

EITC Recipients

Number of Families Receiving Federal EITC, 1975-2012

Source: www.taxpolicycenter.org
## EITC in the Fifth District (2013)

<table>
<thead>
<tr>
<th>State</th>
<th>Number of Claims as a Percentage of Returns Filed</th>
<th>Sum of EITC received</th>
<th>Average Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>District of Columbia</td>
<td>18%</td>
<td>$124,102,119</td>
<td>$2,323</td>
</tr>
<tr>
<td>Maryland</td>
<td>16%</td>
<td>$951,070,545</td>
<td>$2,299</td>
</tr>
<tr>
<td>North Carolina</td>
<td>23%</td>
<td>$2,281,311,301</td>
<td>$2,466</td>
</tr>
<tr>
<td>South Carolina</td>
<td>26%</td>
<td>$1,232,559,485</td>
<td>$2,509</td>
</tr>
<tr>
<td>Virginia</td>
<td>17%</td>
<td>$1,396,562,025</td>
<td>$2,291</td>
</tr>
<tr>
<td>West Virginia</td>
<td>21%</td>
<td>$347,260,721</td>
<td>$2,214</td>
</tr>
</tbody>
</table>

*Source: Author’s calculations using data from [http://www.brookings.edu/research/interactives/eitc](http://www.brookings.edu/research/interactives/eitc)*
EITC Sensitivity: It’s about Kids!

- Until 2001, EITC parameters were identical for single and married filers.
  - EGTRRA extended flat/phase-out regions for married couples; now $3100 higher than for singles.
- Q: What’s the biggest source of sensitivity?
- A: Kids
Current EITC Structure

Eligibility extends well into moderate earning ranges. Median household income for 2013 was about $52,000 (US Census Bureau, 2014).

EITC by Age for Recipient Households

Source: Athreya, Reilly and Simpson (2010)
EITC by Age for Recipient Households, contd.

Source: Athreya, Reilly and Simpson (2010)
Demographic Composition of EITC Recipients

Source: Athreya, Reilly and Simpson (2010)
## Labor Market Characteristics of EITC Recipient vs. non-Recipient Households

<table>
<thead>
<tr>
<th></th>
<th>All</th>
<th>Married, no kids</th>
<th>Married, 1 kid</th>
<th>Married, 2+kids</th>
<th>Single, no kids</th>
<th>Single, 1 kid</th>
<th>Single, 2+kids</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EITC Recipients:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean Household Income</td>
<td>$15,194</td>
<td>$8,325</td>
<td>$18,700</td>
<td>$21,212</td>
<td>$7,024</td>
<td>$15,761</td>
<td>$17,421</td>
</tr>
<tr>
<td>Average EITC</td>
<td>$1,782</td>
<td>$495</td>
<td>$1,812</td>
<td>$2,623</td>
<td>$423</td>
<td>$1,808</td>
<td>$2,728</td>
</tr>
<tr>
<td>EITC as % of Income</td>
<td>11.7%</td>
<td>5.9%</td>
<td>9.7%</td>
<td>12.4%</td>
<td>6.0%</td>
<td>11.5%</td>
<td>15.7%</td>
</tr>
<tr>
<td><strong>Non-EITC Recipients:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean Household Income</td>
<td>$47,235</td>
<td>$68,549</td>
<td>$83,372</td>
<td>$94,271</td>
<td>$23,696</td>
<td>$32,125</td>
<td>$31,723</td>
</tr>
</tbody>
</table>

*Source: Athreya, Reilly and Simpson (2010)*
Credit Conditions for Recipients

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EITC Recipients:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bad credit</td>
<td>2.3%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Credit card balance (2007 $)</td>
<td>$2,131</td>
<td>$140</td>
</tr>
<tr>
<td>Late payment for 60+ days</td>
<td>11.2%</td>
<td>0.6%</td>
</tr>
<tr>
<td>Has no checking account</td>
<td>27.9%</td>
<td>0.9%</td>
</tr>
<tr>
<td><strong>Non-EITC Recipients:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bad credit</td>
<td>0.5%</td>
<td>0.1%</td>
</tr>
<tr>
<td>Credit card balance (2007 $)</td>
<td>$4,174</td>
<td>$91</td>
</tr>
<tr>
<td>Late payment for 60+ days</td>
<td>5.4%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Has no checking account</td>
<td>7.0%</td>
<td>0.3%</td>
</tr>
</tbody>
</table>

Source: Athreya, Reilly and Simpson (2010)
## Assets, Debt and Net Worth of EITC Recipient vs. non-Recipient Households

<table>
<thead>
<tr>
<th></th>
<th>All</th>
<th>Married, no kids</th>
<th>Married, 1 kid</th>
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<th>Single, no kids</th>
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<th>Single, 2+kids</th>
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<tbody>
<tr>
<td><strong>EITC Recipients:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean Net Worth</td>
<td>$103,753</td>
<td>$284,403</td>
<td>$204,918</td>
<td>$118,468</td>
<td>$67,574</td>
<td>$56,102</td>
<td>$49,837</td>
</tr>
<tr>
<td>Mean Assets</td>
<td>$149,507</td>
<td>$359,963</td>
<td>$255,239</td>
<td>$179,050</td>
<td>$86,545</td>
<td>$89,365</td>
<td>$96,465</td>
</tr>
<tr>
<td>Mean Debt</td>
<td>$45,755</td>
<td>$75,560</td>
<td>$50,321</td>
<td>$60,582</td>
<td>$18,971</td>
<td>$33,263</td>
<td>$46,628</td>
</tr>
<tr>
<td><strong>Non-EITC Recipients:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean Net Worth</td>
<td><strong>$580,245</strong></td>
<td>$803,447</td>
<td>$621,345</td>
<td>$737,654</td>
<td>$275,437</td>
<td>$351,416</td>
<td>$223,309</td>
</tr>
<tr>
<td>Mean Assets</td>
<td>$708,564</td>
<td>$929,270</td>
<td>$790,176</td>
<td>$933,762</td>
<td>$334,930</td>
<td>$448,206</td>
<td>$296,280</td>
</tr>
<tr>
<td>Mean Debt</td>
<td>$128,319</td>
<td>$125,823</td>
<td>$168,830</td>
<td>$196,108</td>
<td>$59,493</td>
<td>$96,790</td>
<td>$72,971</td>
</tr>
</tbody>
</table>

*Source: Athreya, Reilly and Simpson (2010)*
Marginal Tax Rates with and without EITC

Source: Athreya, Reilly and Simpson (2010)
State EITC

- 25 states and the District of Columbia have EITC
- Set as a percentage of the Federal credit
- Refundable in some states, not in others
## State EITC Based on Federal EITC (Tax Year 2015)

<table>
<thead>
<tr>
<th>State</th>
<th>% of Federal</th>
<th>Refundable?</th>
<th>State</th>
<th>% of Federal</th>
<th>Refundable?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colorado</td>
<td>10%</td>
<td>Yes</td>
<td>Nebraska</td>
<td>10%</td>
<td>Yes</td>
</tr>
<tr>
<td>Connecticut</td>
<td>30%</td>
<td>Yes</td>
<td>New Jersey</td>
<td>20%</td>
<td>Yes</td>
</tr>
<tr>
<td>Delaware</td>
<td>20%</td>
<td>No</td>
<td>New Mexico</td>
<td>10%</td>
<td>Yes</td>
</tr>
<tr>
<td>District of Columbia</td>
<td>40%</td>
<td>Yes</td>
<td>New York</td>
<td>30%</td>
<td>Yes</td>
</tr>
<tr>
<td>Illinois</td>
<td>10%</td>
<td>Yes</td>
<td>North Carolina</td>
<td>5%</td>
<td>Yes</td>
</tr>
<tr>
<td>Indiana</td>
<td>9%</td>
<td>Yes</td>
<td>Ohio</td>
<td>5%</td>
<td>No</td>
</tr>
<tr>
<td>Iowa</td>
<td>14%</td>
<td>Yes</td>
<td>Oklahoma</td>
<td>5%</td>
<td>Yes</td>
</tr>
<tr>
<td>Kansas</td>
<td>17%</td>
<td>Yes</td>
<td>Oregon</td>
<td>6%</td>
<td>Yes</td>
</tr>
<tr>
<td>Louisiana</td>
<td>3.5%</td>
<td>Yes</td>
<td>Rhode Island</td>
<td>25%</td>
<td>Partially</td>
</tr>
<tr>
<td>Maine</td>
<td>5%</td>
<td>No</td>
<td>Vermont</td>
<td>32%</td>
<td>Yes</td>
</tr>
<tr>
<td>Maryland</td>
<td>25%</td>
<td>Yes</td>
<td>Virginia</td>
<td>20%</td>
<td>No</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>15%</td>
<td>Yes</td>
<td>Wisconsin</td>
<td>4% - one child</td>
<td>Yes</td>
</tr>
<tr>
<td>Michigan</td>
<td>6%</td>
<td>Yes</td>
<td></td>
<td>11% - two children</td>
<td></td>
</tr>
<tr>
<td>Minnesota</td>
<td>Average 33%</td>
<td>Yes</td>
<td></td>
<td>34% - three children</td>
<td></td>
</tr>
</tbody>
</table>

Source: www.taxpolicycenter.org
Questions so far?
What have economists learned about the effects of EITC?
What can we say about how EITC should work?

- In a one-earner household, the effect of the EITC on labor force participation is unambiguously positive, but:
  - The EITC may increase or decrease total household work hours!
  - Especially applies to “second” earner
  - “Income” and “substitution” effects...what do we mean?
Pros of EITC

- Directly increases the reward to working
- Keeps people connected to work—experience
- Potentially insures workers more generally
Cons of EITC

- Phase-out acts like a tax on work.

- Historically, about half of claimants have been in the phase-out region.

- Recent expansions have made this less problematic.

- Wage subsidies can discourage “human capital.” (What’s this?)
Hurdles to Learning about the Effects of EITC

- Problem:
  - Never see the “counterfactual”!

- Have to be clever:
  - Natural experiments
  - Simulate artificial economies
The EITC’s Effect on Work

- Does affect work hours
- Convinces people to enter workforce: single moms!
- Does not change men’s work hours.
- Seems to lead married women to leave work.
- This is because the EITC acts the same way as welfare from the perspective of the second earner (Eissa and Hoynes, 2004):
  - Labor force participation of married women decreases by a full percentage point, and is not offset by the increase in participation by married men by 0.2 percentage points.
  - Married women facing highest tax rates are 2.1 percentage points less likely to work.
The EITC’s Effect on Wages (Rothstein, 2010)

- Builds model of tax incidence and uses it to assess effect of hypothetical increase in EITC.

Findings
- Increase in EITC leads to increase in labor supply of low-skilled women, which reduces wages in this labor market
- Each dollar spent on EITC leads to:
  - $1.07 increase in incomes net of taxes for women with children
  - Decrease of $0.34 for women without children
  - “Gain” of $0.36 for employers of low-wage workers due to reduced wage bill
The EITC’s Effect on Poverty and Health

- Earlier CEA studies: in late 1990s, the EITC removed 4.3 million individuals from poverty (Hotz and Scholz, 2003).

- More than 60% of EITC payments go to families below poverty line based on pre-EITC income (Hotz and Scholz, 2003).

- $1000 in EITC income is associated with 6.7% to 10.8% reduction in the rate of low birth weights, with larger impacts for births to African American mothers (Hoynes, Miller and Simon, 2012).
EITC and Employment of Single Mothers
(Hotz et al., 2011)

- Hotz, Mullin and Scholz:
  - Observe that expansion of the EITC in the 1990s coincided with increase in employment rates of single women with children
  - Use administrative and longitudinal data to assess whether EITC played a role in the increase.
    - Take advantage of the fact that expansion was more generous for families with 2+ children than for those with 1 child

- Findings:
  - Greater increases in employment for families with 2+ children than for families with 1 child
  - 77% of the difference in the increase can be explained by the differential rate of EITC expansion across the two groups.
Using Simulations (Chan, 2013)

- Sets up and simulates model (what do I mean?)

- Findings
  - “Policy simulations reveal that the economy accounts for half of the increase in the labor supply of female heads of family between 1992 and 1999.”
  - “Between 1992 and 1999, time limits and EITC explain 5.8 and 4.5 percent of the increase in employment and 16.0 and 3.4 percent of the decline in welfare participation, respectively.”
Using Simulations (Kosar, 2014)

- Sets up and simulates rich model (skill accumulation, savings choices, etc.)
- Finds that EITC boosts wage growth for single women over the life-cycle
- Works primarily by boosting their experience
- EITC acts like a form of debt relief for indebted single women.
What do economists know about what people know about the EITC?

- Everything that economists say about the potential effects of EITC is premised on workers knowing:
  - About the EITC
  - How to get it and use it

- Practitioners have long recognized that it takes work to get the word out.
Chetty, Friedman and Saez (2013) measure the degree of “bunching”—that is, people reporting income at exactly the level that maximizes EITC payouts—within zip codes.

Zip codes vary greatly in their degree of bunching, which appears to proxy very well for knowledge of EITC.

- Neighborhoods with high bunching have larger share of EITC recipients and professional tax preparers.
- When people move from low bunching to high bunching neighborhoods, they change their reporting of income to increase EITC refunds.
- When people move from high to low bunching neighborhoods, they do not change their reporting behavior, suggesting that they take knowledge with them.

Bunching getting larger and more widespread over time! Outreach may be working...
The EITC as an “Insurance” program (Athreya et al., 2014)

- The structure of the EITC is set up to provide insurance against productivity loss (Athreya, Reilly and Simpson, 2014).

- Why?
  - Keeps wage fluctuations from being passed through
  - Benefits workers no matter what the source of the wage fluctuation is.
  - Sensitivity to kids “insures” against dependent composition changes
Big Picture Questions/Issues

- How does EITC fit into overall tax/transfers schemes?
- What should we be trying to get low-market-productivity individuals to do?
Big Picture Questions/Issues, contd.

- **The** tradeoff: low level of no-questions-asked assistance vs. high level of targeted assistance
  - US shifting towards the latter

- Job matching: ideally, paying single people facing low wages to work may have costs
  - Depends on substitute opportunities—attaching strings sounds good, but it might be inefficient relative to other ways to help this group.
EITC: A recap of what (I know about) what we know

- Research suggests that the EITC:
  - Affects work hours (though it need not), but not by much
    - Does not change men’s work hours
  - Encourages single moms to enter workforce
  - May lead married women to leave work
  - Can alleviate poverty and improve health outcomes
  - May boost later-life wages by increasing work experience
References


Thank you