New Evidence on the EITC, Labor Supply, and Income Inequality

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ABSTRACT AND SUMMARY

The Earned Income Tax Credit (EITC) is the most important near-cash program for families with children in the U.S. In 2010, the EITC reached 26 million families at a total cost of $59 billion. The income transfers are significant; for example, among families with two or more children eligibility extends to annual earnings over $40,000 and the maximum for these recipient families is more than $5000 (2010). The release of the new supplemental poverty measure reveals that in 2011, the EITC lifted 4.7 million children from poverty, more than any other program (Short 2012).

There is a large and growing literature establishing a causal link between the EITC and labor supply. This work has consistently found that the EITC has increased labor force participation and the after tax income of single mothers.[1] Partly as a response to this evidence, states have enacted their own versions of the EITC, tying work to an income support program, where encouraging work is an explicit policy goal (CBPP 2011).

[1] Eissa and Liebman 1996, Ellwood 2000, Meyer and Rosenbaum 2001, Hotz and Scholz 2003, Grogger 2003, Eissa and Hoynes 2004, LaLumia 2009, Eissa and Hoynes 2006, Eissa, Kleven and Kreiner 2007, Hotz, Mullin and Scholz 2010, Chetty, Friedman and Saez 2012.

Much of the literature exploring the relationship between the EITC and labor supply utilizes a difference-in-difference approach. In this paper, we extend and update this approach in several ways. First, we estimate the impact of the EITC on labor force participation consistently across different sources of variation created by the federal credit, controlling for other state and federal programs. For example, we compare (using a consistent estimation approach) the results across different federal expansions, leveraging (and comparing) variation across presence of children as well as number of children.

Second, we are the first to explicitly compare the implied elasticities estimated using variation in the federal versus state credits. While the majority of the literature relies on federal variation, the introduction and expansion of state credits allows for different (and potentially more convincing) identifying assumptions. However, given that the state credits are relatively small (5 to 40 percent of the federal credit), adjustment costs may imply small responses (Chetty et al 2010). In our analysis of state-level EITCs, we control for changes in the federal EITC and other tax and transfer programs (Meyer and Rosenbaum 2001, Struley, Rehkopf and Xuan 2010), and exploit changes in state-level EITC generosity between 1986 and 2007. By estimating the impact of federal and state EITCs in different ways, we are able to create many natural experiments and compare their results.

Third, in addition to estimating the labor supply effects of the EITC, we go on to also examine impacts on income inequality and poverty. We apply methods in Lee (1999) to examine how the EITC affects after-tax incomes across the lower tail of the income distribution. We also estimate impacts on official poverty and supplemental poverty. Our estimates of the EITC capture the effect of the credit itself (as in the numbers in Short (2011) discussed above) as well as capturing the behavioral changes in labor supply.

We apply two estimation approaches; both use variation in the credit induced by legislative changes across tax year, family size and state of residence. We begin with a non-parametric event study approach to estimating the effects of the federal and state credits. This approach is well suited to a single expansion – say the 1993 federal expansion. It is also well suited to estimating the effects of the introduction of state EITCs. The appeal of this approach is its transparency; it is also well-suited to test the identifying assumption of no pre-existing trends. We then move on to a more parametric model. In this we construct a "simulated" version of the EITC at the federal and state level to summarize the tax changes. This measure captures changes in the EITC across reforms and expansions, allowing us to fully exploit variation induced by legislative changes in policy. Finally, we rescale estimates so that they can be easily compared across specifications and used to draw lessons for policy.

The preliminary results show compelling event study results supporting the validity of difference-in-difference methods applied to the federal and state credit expansions. Additionally, although the estimates at the state level are less precise, we find that the implied elasticities are roughly comparable between the federal and state designs.