

Upward Mobility and State-Level EITCs: Evaluating California's Earned Income Tax Credit

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I. INTRODUCTION

In 1975, Congress adopted the earned income tax credit (EITC),¹ an income support program for low-income households implemented through the Code and administered by the Internal Revenue Service.² Over the ensuing four decades, twenty-six states and the District of Columbia have enacted their own versions of the credit, supplementing the federal subsidy at varying levels of generosity and conformity with the federal statute.³ In combination, these federal and state credits provide meaningful financial support to working families trying to make ends meet. In addition, extensive research suggests that the credit has raised labor force participation among low-income workers⁴ and there is growing evidence of significant beneficial effects of EITC exposure in childhood,⁵ including some recent research suggesting a

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¹ Tax Reduction Act of 1975; Pub. L. No. 94-12, § 204, 89 Stat. 26, 30-32.

² IRC § 32.

³ A complete list of current state-level EITCs (including the District of Columbia) is provided in Table 3.

⁴ V. Joseph Hotz & John Karl Scholz, The Earned Income Tax Credit, in Means-Tested Transfer Programs in the United States 141, 171-77 (Robert A. Moffitt ed., 2003); Bruce Meyer, The Effect of the Earned Income Tax Credit and Recent Reforms, 24 Tax Pol'y & Econ. 153, 162-65 (2010).

⁵ See, e.g., Hilary Hoynes, Doug Miller & David Simon, Income, the Earned Income Tax Credit, and Infant Health, 7 Am. Econ. J. 172 (2015); Day Manoli & Nick Turner, Cash-on-Hand & College Enrollment: Evidence from Population Tax Data and the Earned Income Tax Credit, daymanoli.com (Mar. 2015), http://www.daymanoli.com/wp-content/uploads/2014/04/Manoli_Turner1.pdf.

positive correlation between state-level EITCs and intergenerational social mobility.⁶

At present there is substantial variation among the states in the provision of supplemental EITCs. As an example, in 2015 a single parent with two children and \$15,000 of earned income residing in New Jersey was entitled to a refundable credit of \$7213, with just over three-quarters of that amount funded by the federal government and the rest by New Jersey.⁷ By contrast, the same parent in Maine would have received a refundable federal credit of \$5548 and a nonrefundable state credit of \$277,⁸ while similarly situated families in Georgia and California (as well as numerous other states) would have received only the federal credit.⁹

The emerging patchwork of federal and state credits, along with nationwide variation in minimum wage requirements, illustrates the not uncommon practice of uncoordinated policy innovation among the several tiers of government in the U.S. federation. While numerous commentators have celebrated this “laboratories of democracy” approach, including most famously Justice Louis Brandeis in his dissenting opinion in *New State Ice Co. v. Liebmann*,¹⁰ there is nothing inevitable—or axiomatically desirable—about decentralized policy ex-

⁶ See, e.g., Raj Chetty, Nathaniel Hendren, Patrick Kline & Emmanuel Saez, *The Economic Impact of Tax Expenditures: Evidence from Spatial Variation Across the U.S.* (Apr. 2015) (unpublished manuscript), <https://www.irs.gov/pub/irs-soi/14rpttaxexpenditures.pdf>; Jacob Bastian & Katherine Michelmoro, *The Intergenerational Impact of the Earned Income Tax Credit on Education and Employment Outcomes* (2015), at 2, 4-7 (Dec. 27, 2016) (unpublished manuscript), <https://ssrn.com/abstract=2674603>.

⁷ In 2015, the federal EITC for a single parent with \$15,000 of earned income and two children was \$5548. IRS, Publication No. 596, *Earned Income Credit (EIC) 31* (2015), <https://www.irs.gov/pub/irs-prior/p596—2015.pdf>. The New Jersey credit in effect for 2015 would supplement the federal credit by 30% or \$1665. N.J. Rev. Stat. § 54A:4-7 (2016).

⁸ The earned income tax credit in Maine entitles recipients to an amount equal to 5% of the federal credit. Me. Rev. Stat. Ann. tit. 36, § 5219-S (2009). Maine was one of four states, along with Delaware, Ohio, and Virginia, with a nonrefundable credit in 2015. 30 Del. Code Ann. tit. 30, § 1117(c) (2016); Ohio Rev. Code Ann. § 5747.71 (LexisNexis 2015); Va. Code Ann. § 58.1-339.8(C) (2004). Oklahoma made its credit nonrefundable in 2016 due to budget difficulties in the state. Okla. Stat. tit. 68, § 2357.43 (2016); 2016 Okla. Sess. Laws 341 (LexisNexis).

⁹ Georgia does not have an EITC. Jessica Hathaway, *Tax Credits for Working Families: Earned Income Tax Credit (EITC)*, Nat'l Conference of State Legislatures (Apr. 15, 2017), <http://www.ncsl.org/research/labor-and-employment/earned-income-tax-credits-for-working-families.aspx>. California enacted an earned income tax credit in 2015 but for a single parent with two children the credit is phased out entirely at annual income of \$13,870. Cal. Rev. & Tax Code § 17052 (West Supp. 2017); State of Cal. Franchise Tax Bd., *California 540, 2015 Personal Income Tax Booklet 67-70* (2015), https://www.ftb.ca.gov/forms/2015/15_540bk.pdf#page=67.

¹⁰ 285 U.S. 262, 311 (1932) (Brandeis, J., dissenting) (“It is one of the happy incidents of the federal system that a single courageous state may, if its citizens choose, serve as a laboratory; and try novel social and economic experiments without risk to the rest of the country.”).

perimentation. It is possible that divergent subnational policies, on balance, may diminish national welfare. It is also possible that some state's policy innovation will provide an example worth emulating throughout the country. Whether or not this decentralized policy experimentation is a "happy incident" of our federal form of government, as Brandeis asserted, or instead a pernicious one, depends on a careful evaluation of the facts on the ground. Although subnational policy variation may reflect the diverse preferences of state and local political communities, differing policies can also work at cross purposes, potentially jeopardizing the aims and objectives of the original programs.

In this Article, we summarize and evaluate our evolving experience with state-level EITCs. The first of these credits, adopted by Maryland in 1987,¹¹ followed an approach that has since become standard, which is to specify the amount of the state credit as a simple percentage of the federal credit.¹² While most states have adopted similar programs, they often differ in the size of the state credit and in some instances whether a taxpayer must have income tax liability to benefit from the program (that is, refundability). Some states, however, introduce credits with different features, often motivated by cost considerations or different priorities. For example, while the District of Columbia has a credit based on the federal EITC at a very high match rate (40%), it has chosen to target additional benefits to recipients without children through an even higher match (100%).¹³ Wisconsin offers a standard piggyback EITC design, though the percentage of the federal credit the state matches varies depending on whether the taxpayer has one (4%), two (11%), or more (34%) children.¹⁴

Most recently, California has adopted an EITC with notable departures from the federal credit. California's idiosyncratic approach (not unusual for a state that often regards itself as its own country) significantly augments the federal credit, but only for a small subset of the population of federal EITC beneficiaries in the state—that is, those with the lowest amounts of earned income. With the credit phased out completely at annual income of \$13,870,¹⁵ its chief beneficiaries are part-time low-wage workers or those who experience extended

¹¹ 1987 Md. Laws 378 (codified as Md. Code Ann., Tax-Gen. § 10-704 (West 2015)).

¹² See *id.*; Md. Dep't of Legislative Serv., Evaluation of the Maryland Earned Income Tax Credit: Poverty in Maryland and the Earned Income Tax Credit, at vii-viii (Sept. 2015), http://dls.state.md.us/data/polanasubare/polanasubare_taxnfispla/Evaluation-of-the-Maryland-Earned-Income-Tax-Credit.pdf.

¹³ D.C. Code § 47-1806.04(f) (2015); see DC Fiscal Pol'y Inst., District of Columbia's Earned Income Tax Credit 2 (Aug. 14, 2014), <http://www.dcfpi.org/wp-content/uploads/2009/03/EITC-brief-2014-08-15b.pdf> (noting expansion of EITC for childless adults).

¹⁴ Wis. Stat. § 71.07(9e) (2017).

¹⁵ Cal. Rev. & Tax Code § 17052 (West Supp. 2017).

gaps in employment over the course of a year. Given the state's \$10/hour minimum wage,¹⁶ the credit is unlikely to provide any benefits for those who enter the labor force on a full-time basis or for those who move from part-time to full-time work. Indeed, because the maximum California credit peaks at such low levels of income (for example, \$6935 of annual income for households with two or more children),¹⁷ its benefits are likely to accrue primarily to those who work 600-800 hours per year (assuming a \$10/hour wage rate). At the same time, California's unique targeting approach may also provide something of a financial cushion for those workers whose hours are reduced from full-time to part-time or for those who lose their job partway through the year.

California's new EITC provides an opportunity to consider whether or not the design characteristics of the federal EITC, which most states have simply replicated, should be reconsidered—either by states acting on their own or perhaps by the federal government itself through modifications of the federal credit. Our analysis highlights the various trade-offs inherent in alternative credit designs and shows that by specifying different parameters states can differentially affect specific groups of taxpayers.

While California's credit is too new to say anything definitive about its impact on the state's working families, we consider what we know about the operation of the credit so far and offer some preliminary thoughts on how and whether a state-level EITC with such characteristics is likely to accomplish its intended objectives. We provide an analysis of the likely incentive effects of the California approach relative to the standard EITC model, as well as the different distributional properties of the California approach. One possible advantage of a state credit that deviates from the federal model is the introduction of different phase-in or phase-out ranges that could alter the labor supply calculus that workers face. At the same time, states following a nonpiggyback approach are likely to experience different distributional and revenue effects. To illustrate the effects of following the California approach, we offer a comparison of the distributional properties and revenue effects of the current credit in selected states with an alternative credit based on the California model. If California is in fact a "model for the nation" as some claim,¹⁸ these simulations should give us a more complete and empirically grounded understand-

¹⁶ Cal. Lab. Code § 1182.12 (West Supp. 2017).

¹⁷ Cal. Rev. & Tax Code § 17052 (West Supp. 2017).

¹⁸ E.g., Narda Zacchino, *California Comeback: How A "Failed State" Became a Model for the Nation* (2016) (detailing a series of progressive policies under Governor Jerry Brown and their contribution to the stability and growth of California's economy).

ing of how working families in other states would fare if their lawmakers were to adopt the Golden State's unique EITC design.

II. ORIGINS AND OPERATION OF THE FEDERAL EITC

A. *Political Origins of the Federal EITC*

Congress adopted the federal earned income tax credit in 1975.¹⁹ The legislative history of the EITC is familiar and has been recounted elsewhere in detail.²⁰ In short form, the political history can be described as an illustration of what happens when a very large and ambitious idea (that is, the negative income tax) is subjected to the practical realities of a legislative process characterized by a diversity of ideological perspectives (most notably Senator Russell Long's views on welfare).

The negative income tax (NIT) idea had its origins in Milton Friedman's 1962 book *Capitalism and Freedom* and had been studied extensively throughout the 1960's, most famously in the SIME/DIME pilot programs (Seattle-Denver Income Maintenance Experiment).²¹ The idea figured prominently in President Nixon's "Family Assistance Plan" that the administration introduced in August 1969.²² Over the ensuing years, Nixon's welfare reform proposals faced a host of political obstacles, the most insurmountable of which was Russell Long's dogged insistence on limiting the benefits of any new program to "the 'deserving' poor, that is, those willing to work."²³ In 1972, 1973, and 1974, the Senate passed legislation that Long had introduced providing a so-called "work bonus" designed to offset a portion of Social Security taxes paid by low-income workers.²⁴ Long's work bonus legislation formed the basis for what eventually became the EITC.

¹⁹ Tax Reduction Act of 1975, Pub. L. No. 94-12, § 204, 89 Stat. 26, 30-32. The original EITC was quite simple, providing a refundable credit equal to 10% of the taxpayer's earnings up to \$4000 for a maximum credit of \$400. *Id.* The credit was phased out at a 10% rate and thus reduced to zero at \$8000 of income. *Id.*

²⁰ E.g., Dennis Ventry, *The Collision of Tax and Welfare Politics: The Political History of the Earned Income Tax Credit, 1969-99*, 53 *Nat'l Tax J.* 983 (2000).

²¹ *Id.* at 987, 991; see also Milton Friedman, *Capitalism and Freedom 190-95* (40th anniversary ed. 2002) (depicting the NIT as an arrangement to alleviate poverty); Office of the Assistant Sec'y for Planning & Evaluation, U.S. Dep't of Health & Human Servs., *Overview of the Final Report of the Seattle-Denver Income Maintenance Experiment* (1983), <https://aspe.hhs.gov/report/overview-final-report-seattle-denver-income-maintenance-experiment>.

²² Ventry, note 20, at 988-92.

²³ *Id.* at 991-92. With regard to Long's position, see in particular his lengthy statement on the Senate floor on March 14, 1972. 118 *Cong. Rec.* S8289-94 (daily ed. Mar. 14, 1972) (statement of Sen. Long).

²⁴ The work bonus provisions introduced by Senator Long in 1972 were passed by the Senate but removed in Conference Committee. Conf. Comm., 93d Cong., H.R. 1 Social

The EITC differed chiefly from the original NIT idea in its treatment of those without any earned income. Whereas an NIT confers some statutorily specified benefit to all citizens, including those who are voluntarily or involuntarily unemployed, the EITC is expressly limited to those with positive earned income.²⁵ Both approaches involve a phasing out of the benefit over some specified income range. Using crass political shorthand, one might say the EITC is designed to deny benefits to both those who do not “deserve” it (that is, the non-working poor) and those who do not “need” it (that is, those with enough income to manage without this particular government benefit). As explained further below, the introduction of these limitations necessarily alters the behavioral incentives faced by workers throughout the income ranges over which the benefit is phased in and phased out.

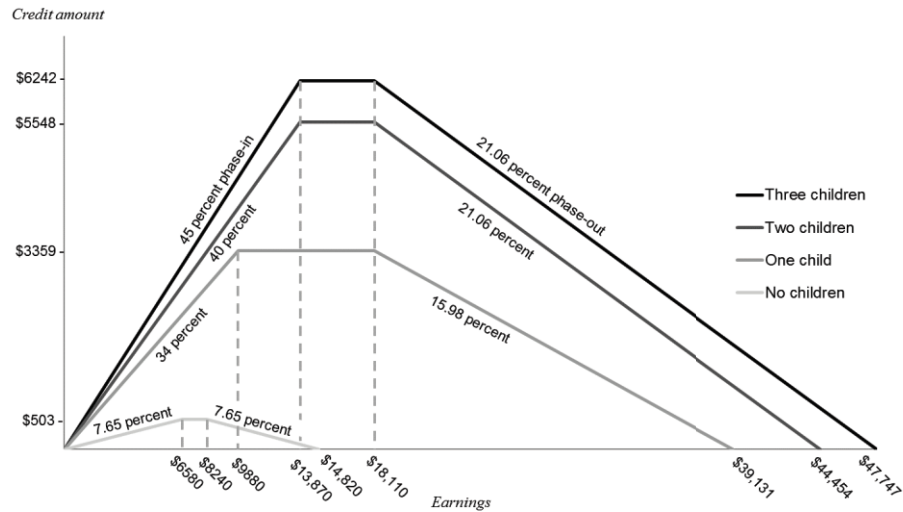
B. Design Features of the Federal EITC

The basic contours of the federal credit’s current design are best illustrated by the familiar mesa-like graph shown in Figure 1 below for tax year 2015.

Security Amendments of 1972 Brief Description of Senate Amendments 44-45 (Comm. Print 1973), <https://www.finance.senate.gov/download/1972/10/11/social-security-amendments-of-1972-brief-description-of-senate-amendments>. The Senate again passed the provisions in 1973 but they failed in Conference Committee. Conf. Comm., 93d Cong., H.R. 3153 Social Security Amendments of 1973 Brief Description of Senate Amendments 6-7 (Comm. Print 1973), <https://www.finance.senate.gov/download/1973/12/10/hr-3153-social-security-amendments-of-1973-brief-description-of-senate-amendments>. Senator Long’s proposal of a credit equal to 10% of wages for low-income workers was ultimately enacted in 1975. Tax Reduction Act of 1975, Pub. L. No. 94-12, § 101, 89 Stat. 27, 27-28; see also Christopher Howard, *The Hidden Welfare State: Tax Expenditures and Social Policy in the United States* 68-69 (1997).

²⁵ See IRC § 32(a)(1).

FIGURE 1²⁶
 FEDERAL EARNED INCOME TAX CREDIT
 SINGLE OR HEAD-OF-HOUSEHOLD FILERS (TAX YEAR 2015)



Note: Assumes all income comes from earnings. Amounts are for taxpayers filing a single or head-of-household tax return. For married couples filing a joint tax return, the credit begins to phase out at income \$5520 higher than shown.

The figure above derives from several specific statutory concepts and terms spelled out in the Code and accompanying regulations.²⁷ The four terms of particular relevance to our discussion are (1) the *credit percentage*, (2) the *phase-out percentage*, (3) the *earned income amount*, and (4) the *phase-out amount*. As discussed in further detail below, each of these terms is relevant in evaluating how the California credit interacts with the federal credit.

The first two terms establish the slope of the two lines spanning the phase-in and phase-out ranges, respectively. These percentages represent the marginal tax rate implied by phasing the credit in and out at the indicated rate. Thus, as shown on the left-hand side of Figure 1 above, for a parent with two qualifying children, the credit percentage is 40%, meaning that each additional dollar of earned income in the phase-in range increases the taxpayer's credit by 40 cents. The reader can see the effect of this 40% rate in the graph above by noting that an increase in earned income from \$0 to \$13,870 for a single parent with two children would generate a credit of \$5548 (that is, 40% of \$13,870).²⁸ On the right-hand side of Figure 1, the phase-out percentage for this same taxpayer is 21.06%, meaning that each additional

²⁶ Authors' calculations; Rev. Proc. 2014-61, 2014-47 I.R.B.

²⁷ IRC § 32(b)(1), (2); Reg. § 1.32-2, -3.

²⁸ We use the \$13,870 figure here because, as explained further below, this is the income level at which the California credit is completely phased out in 2015.

dollar of *any* income (not just earned income) decreases the taxpayer's credit by 21.06 cents. Here too the reader can eyeball the effect of this rate by noting that an increase in income from \$18,110 to \$44,454 (that is, \$26,344) would result in a credit reduction of \$5548 (that is, 21.06% of \$26,344). As described further below, because these phase-in/phase-out percentages increase/decrease the marginal benefit of additional earnings (as well as the marginal cost of reduced earnings), there is reason to believe that the availability of the credit may influence work effort, though the direction of that influence likely depends not only on the phase-in/phase-out rates, but also on the overall generosity of the credit.

The latter two terms above—earned income amount and phase-out amount—specify the income levels at which the maximum credit is reached and then phased out. If the first two terms determine the incentive effects of the statute, these two additional terms specify where on the income distribution these incentive effects apply. Thus, for a single parent with two children, those with earned income ranging from \$0 to \$13,870 face the 40% credit percentage, while those with adjusted gross income from \$18,110 to \$44,454 face the 21.06% phase-out percentage.²⁹ Over the “flat” range of the EITC (for example, between \$13,870 and \$18,110 for families with two or more children), changes in income neither increase nor reduce the amount of the credit.

The statute itself does not specify a maximum amount of credit that any one taxpayer can claim, but this figure is easily derived by multiplying the earned income amount by the credit percentage. Thus, for a single parent with two children, the maximum credit is 40% of \$13,870, or \$5548.³⁰ These figures are different for different categories of taxpayers depending on the number of qualifying children. For example, the maximum credit available for a single taxpayer with no qualifying children is \$503 (credit percentage of 7.65% at \$6580 of earnings), while the same figure for a single parent or a married couple with three qualifying children is \$6242 (credit percentage of 45% at \$13,870).³¹

C. Distribution and Revenue Cost of Federal EITC

Not surprisingly, the observed distributional effects of the federal EITC follow the pattern of the credit derived from the statute. As

²⁹ See IRC § 32(b) (showing the credit and phaseout percentages); see also Rev. Proc. 2014-61, 2014-47 I.R.B. 860 (showing the threshold phaseout amount and the complete phaseout amount, as adjustment for inflation for tax years beginning in 2015).

³⁰ See IRC § 32(a)(1).

³¹ *Id.*

shown in Table 1, of the nearly 30 million returns claiming the credit in 2014, slightly more than 80% had AGI under \$30,000. To put this figure in perspective, note that median AGI for all individual federal income tax returns filed in 2014 was \$38,171.³² Taxpayers with total AGI between \$10,000 and \$30,000, which encompasses the flat range for most categories of EITC claimants, accounted for nearly three-quarters of the total amount of credit claimed in 2014.³³ The remaining 25% of the credit claimed is received roughly equally between those who earn less than \$10,000 and those who earn more than \$30,000.³⁴

TABLE 1³⁵
FEDERAL RETURNS WITH EARNED INCOME TAX CREDITS (2014)

<i>Adjusted Gross Income</i>	<i>Tax Returns Claiming the Credit</i>			<i>Amount of Credit Claimed</i>		<i>Average Credit Claimed (dollars)</i>
	<i>Number Claiming the Credit (thousands)</i>	<i>Percent of All Returns Claiming the Credit</i>	<i>Percent of Returns in the Income Group</i>	<i>Total (millions of dollars)</i>	<i>Percent of Credit Claimed</i>	
Under \$10,000	7,660	26.8	31.8	9,208	13.5	1,202
\$10,000 under \$20,000	10,165	35.6	43.0	32,410	47.4	3,188
\$20,000 under \$30,000	5,463	19.1	28.9	18,515	27.1	3,389
\$30,000 under \$40,000	3,812	13.4	26.1	6,929	10.1	1,817
\$40,000 under \$50,000	1,369	4.8	11.9	1,259	1.8	920
\$50,000 or more	69	0.2	0.1	18	0.0	264
All	28,538	100.0	19.2	68,339	100.0	2,395

The amount of the federal credit is a function not only of one's earned income but also the number of children in the household. For tax year 2014, almost three-quarters (74%) of EITC claimants had qualifying children: 37% with one child, 25% with two children, and 12% with three or more.³⁶ Childless workers filed the remaining 26% of returns. These figures illustrate that the benefits of the federal EITC are chiefly concentrated on working families with children where total household earnings fall in the \$10,000-\$30,000 range. These figures do not differentiate between single and married EITC claimants, though most recipients of the federal credit file as "Head of

³² IRS, Publication 4198, SOI Tax Stats at a Glance (2016), <https://www.irs.gov/pub/irs-soi/16taxstatscard.pdf>.

³³ See Table 1.

³⁴ Returns with income of zero or less receive a small fraction of the total credit. Those returns are included in the total but not shown separately in Table 1.

³⁵ IRS, Statistics of Income, Individual Income Tax Returns 2014, at 43-45 tbl.1.1, 129-37 tbl.2.5 (2016), <https://www.irs.gov/pub/irs-soi/14inalcr.pdf>.

³⁶ See Table 2.

Household” (48%) or “Single” (29%), with a large share of the single filers representing childless workers.³⁷

TABLE 2³⁸
FEDERAL RETURNS WITH EITCS
BY NUMBER OF QUALIFYING CHILDREN (TAX YEAR 2014)

Adjusted Gross Income	Tax Returns Claiming the Credit							
	No Children		One Child		Two Children		Three or More Children	
	Number (thousands)	Total Credit Claimed (millions of \$)	Number (thousands)	Total Credit Claimed (millions of \$)	Number (thousands)	Total Credit Claimed (millions of \$)	Number (thousands)	Total Credit Claimed (millions of \$)
\$1 under \$5,000	1,752	375	461	508	180	233	74	111
\$5,000 under \$10,000	2,708	1,157	1,601	4,461	488	1,499	184	644
\$10,000 under \$20,000	2,774	555	3,628	11,711	2,684	13,864	1,079	6,279
\$20,000 under \$30,000	1	0	2,807	6,531	1,811	7,714	843	4,270
\$30,000 under \$40,000	0	0	1,772	1,640	1,354	3,171	686	2,118
\$40,000 under \$50,000	0	0	191	62	674	512	504	685
\$50,000 or more	0	0	0	0	0	0	69	18
All	7,384	2,121	10,491	24,976	7,213	27,075	3,449	14,167

For context, it may be useful to keep in mind that an individual working 2000 hours per year (for example, 40 hours per week for 50 weeks) at \$15 per hour would earn a total of \$30,000 over the year. A recent study by the National Employment Law Project (NELP) found that 42% of U.S. workers make less than \$15 per hour.³⁹ This group of U.S. workers is disproportionately female, African-American, and Latino.⁴⁰ The NELP study shows that more than half of African-American workers and nearly 60% of Latino workers earn less than \$15 per hour.⁴¹ In terms of the type of work at this wage level, the NELP study identifies food service/preparation, agricultural, private household employees, personal/laundry services, hotel/motel accommodation services, retail trade, and administrative/support services.⁴²

The significance of the EITC benefit for particular households can be seen in the average credit claimed by taxpayers in each of the specified AGI bins. For taxpayers with income in the \$10,000-\$20,000 range, the average credit claimed is \$3188, while those in the \$20,000-\$30,000 range claim an average credit amount of \$3389.⁴³ By contrast, those with earned income under \$10,000 claim an average credit of \$1202, while those earning more than \$30,000 claim an average credit

³⁷ IRS, EITC & Other Refundable Credits, Statistical Sample (2017), <https://www.eitc.irs.gov/EITC-Central/press/statistics/statsmpl> (showing statistics for tax year 2015 EITC returns processed in 2016). The remaining 23% of returns with an EITC are married filing jointly or qualified widow(er). *Id.*

³⁸ IRS, note 37, at 129-37 tbl.2.5.

³⁹ Irene Tung, Yannet Lathrop & Paul Sonn, Nat'l Emp't Law Project, *The Growing Movement for \$15*, at 1 (2015).

⁴⁰ *Id.*

⁴¹ *Id.*

⁴² *Id.* at 1-2.

⁴³ Table 1.

of \$1563.⁴⁴ Refundable credits of this magnitude (along with the personal exemption, standard deduction, child credit, and the like) are the primary reason why households in the bottom two quintiles of the income distribution have negative federal income tax liability. It bears noting, however, that despite paying no federal income tax, these households face federal payroll and excise taxes, as well as various state and local taxes.⁴⁵

With expansions to the federal EITC program over the years, the overall program cost has grown significantly. In 1975 when the credit was first enacted, there were 6.2 million returns claiming the credit for a total revenue cost of \$1.25 billion.⁴⁶ As shown in Table 1, there were 28.5 million returns claiming the credit in tax year 2014 at a total cost of \$68.3 billion to the federal government. The Joint Committee on Taxation estimates the cost of the federal EITC at \$73 billion for FY 2016.⁴⁷ This figure is just shy of the roughly \$75 billion that the federal government spent on food stamps (that is, SNAP—Supplemental Nutrition Assistance Program) for FY 2016.⁴⁸ Both of these programs dwarf the amount transferred by the federal government to the states in the form of block grants for the Temporary Assistance to Needy Families (TANF) program, which totaled \$16.5 billion in FY 2015.⁴⁹

⁴⁴ Id.

⁴⁵ See, e.g., Deborah A. Geier, *The Payroll Tax Liabilities of Low- and Middle-Income Taxpayers*, 106 *Tax Notes* 711 (2005) (discussing the increased payroll tax burden on low-income taxpayers); Cong. Budget Office, *The Distribution of Household Income and Federal Taxes, 2013*, at 36 fig.5 (2016), https://www.cbo.gov/sites/default/files/114th-congress-2015-2016/reports/51361-HouseholdIncomeFedTaxes_OneCol.pdf (showing that taxpayers with negative individual income tax rates, due to refundable tax credits such as the EITC, are nevertheless subject to positive payroll and excise taxes); Katherine S. Newman & Rourke L. O'Brien, *Taxing the Poor: Doing Damage to the Truly Disadvantaged 20-29* (2011) (discussing the increasing burden being placed on low-income taxpayers by local sales taxes).

⁴⁶ Gene Falk & Margot L. Crandall-Hollick, Cong. Research Serv., R43805, *The Earned Income Tax Credit (EITC): An Overview 10* (2016), available at <https://fas.org/sgp/crs/misc/R43805.pdf> (\$5.4 billion in 2013 dollars).

⁴⁷ Staff of the Joint Comm. on Tax'n, 114th Cong., *Estimates of Federal Tax Expenditures for Fiscal Years 2016-2020*, at 39 (Comm. Print 2017), available at <https://www.jct.gov/publications.html?func=startdown&id=4971>.

⁴⁸ Cong. Budget Office, *Supplemental Nutrition Assistance Program—CBO's March 2016 Baseline* (2016), available at <https://www.cbo.gov/sites/default/files/recurringdata/51312-2016-03-snap1.pdf>.

⁴⁹ Personal Responsibility and Work Opportunity Reconciliation Act of 1996, Pub. L. No. 104-193, § 103, 110 Stat. 2110, 2112-24 (codified at 42 U.S.C. § 603 (2012)); see also Office of Family Assistance, Dep't of Health & Human Servs., *State TANF Spending in FY 2015*, at 1 (2016), https://www.acf.hhs.gov/sites/default/files/ofa/2015_tanf_financial_data_report_factsheet_final.pdf.

D. Labor Supply Effects of Federal EITC

The EITC provides a significant incentive for eligible nonworkers to enter the labor force. Because only people with earnings can claim the credit,⁵⁰ the additional income from the credit may be enough to tip the scales in favor of working. The effect for married workers sometimes can work in the opposite direction, however. For example, if a nonworking married person has a working spouse who is already receiving an EITC, additional earnings may cause the couple to lose some or all of their existing credit rather than increasing the amount of credit they receive.

The effect for those already working is more complicated. In theory, the effects on hours worked are ambiguous. Given that EITC benefits rise sharply with earned income over lower income levels, then phase out more gradually once income reaches the phase-out amount of \$18,110 for families with children, we should observe different behavioral effects depending on the taxpayer income level. Economic theory would predict that high negative marginal tax rates (earning subsidies) associated with the phase-in range should encourage additional labor effort because the credit augments the return from additional hours of work in this range. Over the flat range, where increased earnings have no effect on the credit, there should be no such effect on labor effort, and over the phase-out range the positive marginal tax rate implicit in phasing out the credit should discourage labor effort. In that range, earnings from working an additional hour are effectively subject to an additional marginal tax rate above any existing income or payroll taxes. These substitution effects (positive-neutral-negative) must be balanced against the negative income effect of the credit over all three income ranges, as the additional income from the credit may induce individuals to substitute away from work towards leisure. Thus, in theory, the EITC's effect on labor effort is ambiguous over the phase-in range (positive substitution effect, negative income effect), negative over the flat range (no substitution effect, negative income effect), and more strongly negative over the phase-out range (substitution and income effects both negative).⁵¹

Researchers examining the work incentive effects of the EITC have generally found that labor supply responses are more pronounced at the *extensive* margin (the decision to work) rather than at the *intensive*

⁵⁰ See IRC § 32(c)(2).

⁵¹ For a useful summary overview, see Nada Eissa & Hilary W. Hoynes, Behavioral Responses to Taxes: Lessons from the EITC and Labor Supply, 20 Tax Pol'y & Econ. 73, 88-90 (2006).

margin (number of hours worked).⁵² Studies typically have focused on legislative expansions of the federal EITC, evaluating the labor supply response of selected individuals following the introduction of more generous benefits. For example, Bruce Meyer examined the employment patterns of single mothers with two or more children following the expansion of EITC benefits for such households as part of the Omnibus Budget Reconciliation Act of 1993.⁵³ Meyer concluded that “incentives affecting the labor supply of single mothers work almost exclusively through the participation margin”⁵⁴—a result that has since been reinforced by additional research.⁵⁵ While cautioning that these conclusions should be regarded as tentative, Meyer also noted that these results cast some doubt on the supposed labor supply disincentives over the phase-out range of the EITC.⁵⁶

A more recent survey by Nada Eissa and Hillary Hoynes of the now vast literature in this area concludes that, for single mothers, “the EITC leads to significant increases in employment (extensive margin) . . .” but “there is little evidence that the EITC leads to a reduction in labor supply for those in the labor market (intensive margin).”⁵⁷ Again, these findings are with respect to single mothers. For married couples (which constitute a relatively small share of all EITC recipients), the labor supply effects are less clear.⁵⁸

II. EMERGENCE OF STATE-LEVEL EITCS

In 1987, Maryland became the first state to adopt its own EITC.⁵⁹ The Old Line State, along with two dozen other states and the District of Columbia, followed what has since become a standard approach for

⁵² See *id.* at 102-05 (discussing various theories for why no impact on hours worked is found in any evaluation of the EITC); see also Jeffrey B. Liebman, *The Impact of the Earned Income Tax Credit on Incentives and Income Distribution*, 12 *Tax Pol’y & Econ.* 83, 97-100, 104 (1998) (estimating the effect of the EITC expansion in the 1986 Act by comparing labor-force behavior of taxpayers who were eligible for the credit and those who were ineligible, and finding that the EITC expansion increased the return to work for eligible taxpayers more than it did for ineligible taxpayers, but finding little impact on hours of work).

⁵³ Bruce D. Meyer, *Labor Supply at the Extensive and Intensive Margins: The EITC, Welfare, and Hours Worked*, 92 *Am. Econ. Rev.* 373 (2002).

⁵⁴ *Id.* at 378.

⁵⁵ See, e.g., Nada Eissa, Henrik Jacobsen Kleven & Claus Thustrup Kreiner, *Welfare Effects of Tax Reform and Labor Supply at the Intensive and Extensive Margins*, in *Tax Policy and Labor Market Performance* 147 (Jonas Agell & Peter Birch Sørensen, eds., 2006).

⁵⁶ Meyer, note 53, at 378.

⁵⁷ Nada Eissa & Hilary Hoynes, *Redistribution and Tax Expenditures: The Earned Income Tax Credit*, 64 *Nat’l Tax J.* 689, 704 (2011).

⁵⁸ *Id.* at 703.

⁵⁹ H.B. 246, 1987 Leg., 393d Sess. (Md. 1987), 1987 Md. Laws 378 (codified as Md. Code. Ann., Tax-Gen. § 10-704 (West 2015)).

supplementing the federal EITC with a state-funded credit.⁶⁰ Table 3 lists all twenty-six states that have adopted an EITC to date.

⁶⁰ See Erica Williams, Ctr. on Budget & Pol'y Priorities, *States Can Adopt or Expand Earned Income Tax Credits to Build a Stronger Future Economy* (2017), <http://www.cbpp.org/research/state-budget-and-tax/states-can-adopt-or-expand-earned-income-tax-credits-to-build-a>.

TABLE 3⁶¹
STATE EARNED INCOME TAX CREDITS (2015)

<i>State</i>	<i>Percentage of Federal Credit</i>	<i>Refundable?</i>	<i>Workers Without Qualifying Children Eligible</i>
California	85% of the federal credit up to half of the federal phase-in range	Yes	Yes
Colorado	10%	Yes	Yes
Connecticut	27.5%	Yes	Yes
Delaware	20%	No	Yes
District of Columbia	40%	Yes	Yes
Illinois	10%	Yes	Yes
Indiana ^a	9%	Yes	Yes
Iowa	15%	Yes	Yes
Kansas	17%	Yes	Yes
Louisiana	3.5%	Yes	Yes
Maine	5%	No	Yes
Maryland ^b	25.5%	Yes	Yes
Massachusetts ^c	15%	Yes	Yes
Michigan	6%	Yes	Yes
Minnesota ^d	Based on income	Yes	Yes
Nebraska	10%	Yes	Yes
New Jersey ^e	30%	Yes	Yes
New Mexico	10%	Yes	Yes
New York	30%	Yes	Yes
Ohio ^f	10%	No	Yes
Oklahoma	5%	Yes	Yes
Oregon	8%	Yes	Yes
Rhode Island ^g	10%	Yes	Yes
Vermont	32%	Yes	Yes
Virginia	20%	No	Yes
Washington ^h	10%	Yes	Yes
Wisconsin	4% - one child 11% - two children 34% - three children	Yes	No

Notes

North Carolina enacted a refundable EITC in 2007 but repealed it in TY 2014.

a Indiana's credit is based on a percentage of what the federal credit would be if taxpayers with three or more qualifying children received the same credit as taxpayers with two qualifying children and if the credit was not protected from the alternative minimum tax.

b Maryland also offers a nonrefundable EITC at 50% of the federal credit. Taxpayers may claim either the refundable credit or the nonrefundable credit but not both. The rate for Maryland's refundable EITC increased to 26% in TY 2016, 27% in TY 2017, and 28% in the years that follow. See Hathaway, note 9.

c Massachusetts' credit increased to 23% of the federal credit beginning in TY 2016. Mass. Dep't of Revenue, Earned Income Tax Credit (EITC) (2016), <http://www.mass.gov/dor/individuals/filing-and-payment-information/guide-to-personal-income-tax/credits/earned-incomecredit-eic.html>.

d Minnesota's credit for families with children, unlike the other credits shown in this Table, is not expressly structured as a percentage of the federal credit. Depending on income level, the credit for families with children may range from 25% to 45% of the federal credit; taxpayers without any children may receive a 25% credit. Minn. Dep't of Revenue, Working Family Credit, www.revenue.state.mn.us/individuals/individual_income/Pages/Working_Family_Credit.aspx.

e New Jersey's credit increased to 35% in 2016.

f Ohio's credit is limited to 50% of liability for Ohio taxable income above \$20,000. Ohio Rev. Code Ann. § 5747.71 (Lexis Nexis 2015).

g Rhode Island's credit increased to 12.5% of the federal credit beginning in TY 2016. R.I. Dep't of Revenue, Div. of Tax'n, Summary of Legislative Changes (July 11, 2016), <http://www.tax.ri.gov/Tax%20Website/TAX/Reports/Summary%20of%20Legislative%20Changes%20—%202007-11-16.pdf>.

h Washington enacted a refundable EITC in TY 2009 but has been unable to fund the credit. See Hathaway, note 9.

⁶¹ IRS, States and Local Governments with Earned Income Tax Credit (2016), <https://www.irs.gov/credits-deductions/individuals/earned-income-tax-credit/states-and-local-governments-with-earned-income-tax-credit>.

The key decision points for designing a state-level EITC relate to the extent to which the credit conforms to the main features of the federal credit, including (1) the amount of the credit (2) whether or not the credit is refundable, (3) the rates at which the credit phases in and phases out, and (4) the income levels at which the maximum credit is reached and at which the credit begins to phase out. In addition, a state must decide how these parameters will vary, if at all, depending on household characteristics such as filing status (single, married filing jointly, head of household) and number of qualifying children.

Most states with an EITC bypass many of these complexities by simply specifying a state-specific percentage of the federal credit for determining the level of the state EITC. In New Jersey, for example, the state has provided a refundable EITC based on a statutorily specified percentage that has fluctuated over the years depending on budget circumstances.⁶² This simple piggyback approach renders moot all of the other questions regarding whether to conform to the various features of the federal credit. Any taxpayer entitled to a federal credit simply multiplies the amount of the federal credit by the applicable state percentage for the year in question to determine the amount of the state credit. Thus, a New Jersey taxpayer receiving a \$1000 federal credit in 2015 would have been able to claim a \$300 state credit based on the 30% piggyback rate then in effect, while a taxpayer receiving a \$5000 federal credit would be entitled to a \$1500 credit.

In addition to increasing the total credit by the calculated amount, the standard piggyback approach increases the effective (negative/positive) marginal tax rates associated with the phase-in and phase-out. Thus, rather than a 40% phase-in rate, a single parent with two qualifying children in a state with a 30% piggyback EITC benefits from an earnings subsidy rate of 52% (that is, $.40 \times 1.30$) over the phase-in range. Likewise, rather than facing a 21.06% phaseout rate, the same parent faces a positive marginal tax rate of 27.38% (that is, $.2106 \times 1.30$) over the phase-out range. In other words, the effective marginal tax rates implied by the phase-in/out rates of the federal credit increase in proportion to the state's piggyback rate across the affected income ranges.

The advantages of the standard piggyback approach in terms of administrative simplicity are considerable, though by tethering its credit to the federal calculation the state necessarily sacrifices the ability to custom target its own credit to any particular subset of potential beneficiaries. With the piggyback approach, the distribution

⁶² N.J. Stat. Ann. § 54A:4-7 (West 2016).

of state EITC benefits necessarily mirrors the distribution of federal EITC benefits in the state. In addition, the piggyback approach replicates (and amplifies) the labor supply incentives implicit in the federal EITC design. The positive work incentive effects implicit in the wage subsidy feature over the phase-in range are accentuated, and the negative work incentive effects implicit in the effective marginal tax feature over the phase-out range are intensified.

As with any state decision to conform to the Code, the piggyback approach in effect delegates authority from state lawmakers to Congress for deciding how best to allocate state resources devoted to an EITC program.⁶³ The statutory parameters discussed above (for example, earned income amount) are simply replicated with the state limiting decisionmaking about the cost of the program solely by deciding the percentage of the credit available to state taxpayers. Such an approach may or may not comport with the particular needs of the EITC beneficiary community within any given state.

Some states have begun examining what this format means for their taxpayers and have either augmented benefits through other credits (for example, New York's low-income family credit⁶⁴) or through changes in the specifics of the EITC. For example, in 2014 the District of Columbia D.C. decided to expand its EITC for low-income childless taxpayers by expanding the match rate for this group from 40% to 100% of the federal credit.⁶⁵

IV. DESIGN AND OPERATION OF THE CALIFORNIA EITC

In June 2015, California Governor Jerry Brown signed into law Senate Bill 80, which adopted the first ever earned income tax credit for the state.⁶⁶ Like most other states, California uses the federal EITC as a starting point for determining the parameters of its own credit.⁶⁷ However, California's credit is substantially more generous than those of other states for the lowest-income working taxpayers, but then

⁶³ See generally Ruth Mason, *Delegating Up: State Conformity with the Federal Tax Base*, 62 *Duke L.J.* 1267 (2013) (exploring the trade-offs involved in state conformity with federal tax law).

⁶⁴ N.Y. Tax Law § 606(vv) (McKinney 2014 & Supp. 2017).

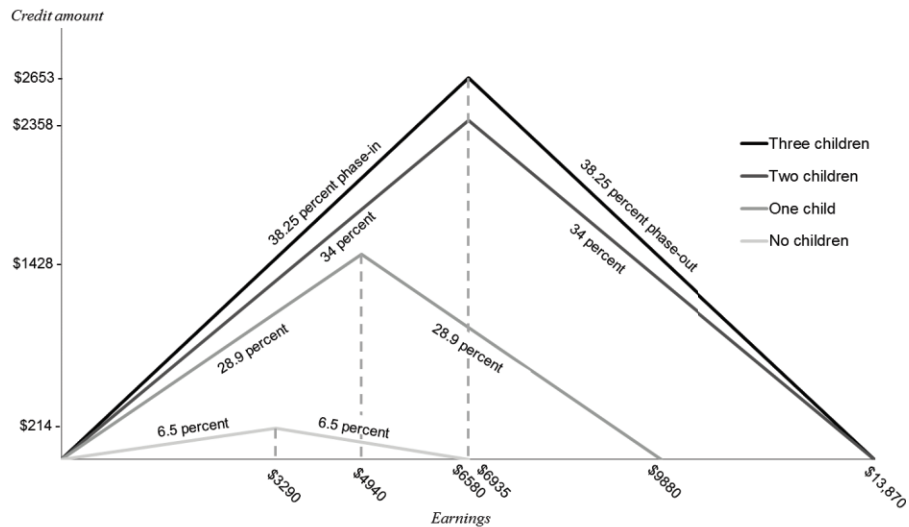
⁶⁵ D.C. Code § 47-1806.04(f)(1)(C)(i) (2015 & Supp. 2016); Inst. on Tax'n & Econ. Pol'y, *Rewarding Work Through State Earned Income Tax Credits 3* (2016), http://itep.org/itep_reports/pdf/EITC%20Brief%202016.pdf; Sebastian Johnson, *The DC Tax Reform Story Everyone Missed*, Tax Justice Blog (July 2, 2014, 1:28 PM), http://www.taxjusticeblog.org/archive/2014/07/the_dc_tax_reform_story_everyo.php#.V-7p8C0rK7A.

⁶⁶ S.B. 80, 2015-16 Leg., Reg. Sess., ch. 21, § 1 (Cal. 2015) (codified as amended at Cal. Rev. & Tax. Code § 17052 (West Supp. 2017)). For a summary of the bill by the Franchise Tax Board, see Comm. on Budget & Fiscal Review, *Bill Analysis: SB 80*, Cal. Franchise Tax Board (June 22, 2015), https://www.ftb.ca.gov/law/legis/15_16bills/sb80_Final.pdf.

⁶⁷ Cal. Rev. & Tax. Code § 17052(a)(1) (West Supp. 2017).

phases out the benefit so it is not available for the majority of the population of federal EITC beneficiaries. To accomplish this, the statute provides a dollar-for-dollar match of the federal credit but only over the first half of the phase-in range of the federal credit.⁶⁸ Significantly, however, the credit is subject to annual appropriations at a level to be determined each year through the specification of an “earned income tax credit adjustment factor.”⁶⁹ For 2015, the legislature set this figure at 85% so that the state credit matches 85% of the federal credit over the specified range.⁷⁰ As shown in Figure 2, the result is a relatively generous credit over a concentrated range of very low income.

FIGURE 2⁷¹
CALIFORNIA EARNED INCOME TAX CREDIT (TAX YEAR 2015)



Note: Assumes all income comes from earnings. Amounts are for taxpayers filing a single, head-of-household, or married couples filing jointly tax return.

As Figure 2 illustrates, for a single parent with two children, the maximum amount of the California credit in 2015 is \$2358 at an earned income level of \$6935. This figure is derived from the statutory formula, which provides a state credit equal to 85% of the federal

⁶⁸ Cal. Rev. & Tax Code § 17052(b)(1)-(2) (West Supp. 2017).

⁶⁹ Cal. Rev. & Tax Code § 17052(a)(2)(A)-(B) (West Supp. 2017).

⁷⁰ Budget Act of 2015, A.B. 93, 2015-16 Leg., Reg. Sess., ch. 10, § 2 (Cal. 2015), http://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201520160AB93 (stating in Provision 8 of Item 7730-001-0001 that the California EITC “shall have an adjustment factor at a rate of 85 percent for the 2015 tax year”).

⁷¹ Authors’ calculations. Cal. Rev. & Tax Code § 17052(b)(1), (b) (2)(A).

credit at any earned income level from \$0 up to \$6935.⁷² This represents a phase-in rate (that is, negative marginal tax rate) of 34%, or 85% of the federal phase-in rate of 40%.⁷³ The California credit then phases out at the same rate until it is phased out completely at \$13,870—that is, the point at which the federal credit reaches the flat range.⁷⁴ The taxpayer's state phase-out rate (that is, positive marginal tax rate) is the same as the phase-in rate at 34%.⁷⁵

California's approach of concentrating its EITC entirely within the phase-in range of the federal EITC has some interesting effects on the marginal tax rates that taxpayers face over this range of income. Sticking with the example of a single parent with two children, as the taxpayer's earned income increases from \$0 to \$13,870, she faces (1) a federal negative marginal tax rate of 40% over the entire range, (2) a state negative marginal tax rate of 34% over the first half of that range (that is, \$0-\$6935), and (3) a state positive marginal tax rate of 34% over the second half of that range (that is, \$6936-\$13,870).

The combined effect of these provisions means that California's lowest income workers will face a very different marginal tax rate schedule than those who face only the federal EITC schedule. More specifically, as shown in Figure 3, EITC beneficiaries in California have: a 74% negative marginal tax rate in the \$0-\$6935 range (or an additional seventy-four cents for every dollar earned), and (2) a 6% negative marginal tax rate in the \$6936-\$13,870 range (or an additional six cents per dollar earned), before going back to the federal phase-out rates as reported above.

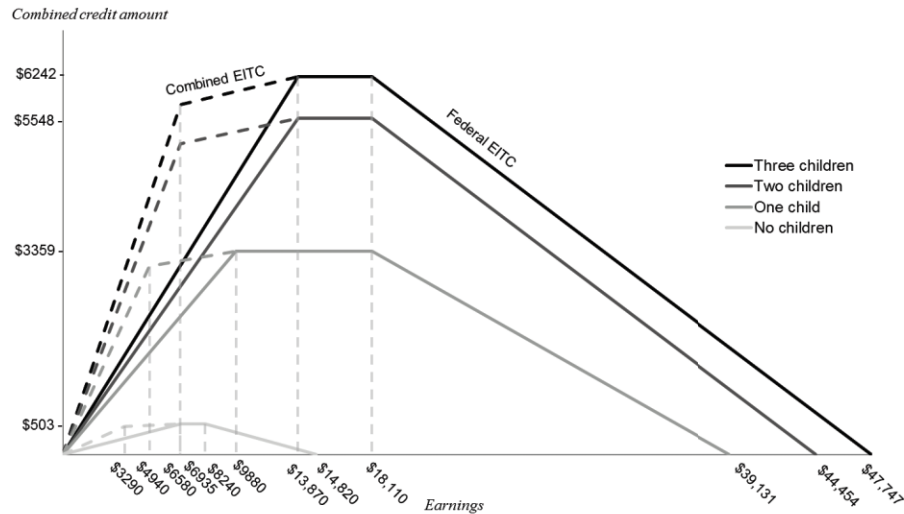
⁷² Budget Act of 2015, note 70; Cal. Rev. & Tax Code § 17052(b)(2)(A) (West Supp. 2017).

⁷³ Cal. Rev. & Tax Code § 17052(b)(1) (West Supp. 2017).

⁷⁴ Rev. Proc. 2014-61, 2014-47 I.R.B. 860 (adjusting the dollar amounts set forth in IRC § 32(b)(2) to reflect inflation and showing an earned income amount of \$13,870 and a threshold phase-out amount of \$18,110 for a taxpayer with two qualifying children).

⁷⁵ Cal. Rev. & Tax Code § 17052(b)(1) (West Supp. 2017).

FIGURE 3⁷⁶
 COMBINED FEDERAL AND CALIFORNIA EITC
 SINGLE FILERS, TAX YEAR 2015

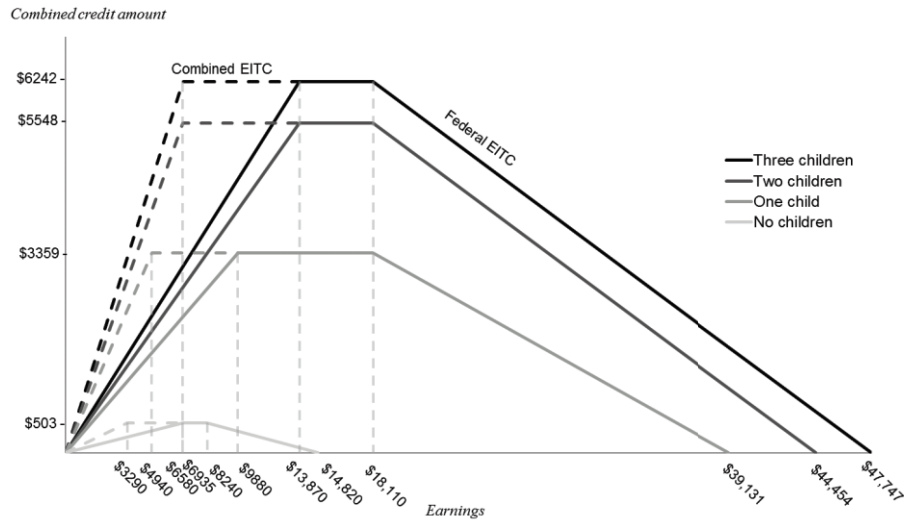


Note: Assumes all income comes from earnings. Amounts are for taxpayers filing a single tax return.

Figure 4 shows how the shape of Figure 3 would change if California had fully funded the EITC by specifying an adjustment factor of 100%. The result would have simply been: (1) a steepening of the phase-in range of the credit for all workers (increasing the phase-in rate from 40% for the federal credit to 80% for the combined federal and state credits), and (2) a corresponding extension of the flat range back to begin at half the federal earned income amount (decreasing the phase-in rate at that point from 40% to zero). In other words, like the District of Columbia credit expansion for childless recipients, the intent of the California credit—had it been fully funded—was to match the federal credit dollar for dollar but over a very concentrated range of lower-income taxpayers (that is, up to half of the phase-in rate of the federal credit). Over the second half of the federal phase-in range, however, the effect of a fully funded version of the California credit would be a dollar-for-dollar offset to the federal credit because of a reduction in the state credit. This would have had the effect of fully neutralizing the positive substitution effect of the federal credit over the second half of the federal phase-in range and thus discouraging (relative to the federal credit only) additional work over this income level.

⁷⁶ Authors' calculations; see notes 26 and 71.

FIGURE 4⁷⁷
 COMBINED FEDERAL AND CALIFORNIA EITC
 (SINGLE FILERS, TAX YEAR 2015, WITH 100%
 ADJUSTMENT FACTOR FOR CA EITC)



V. PROS/CONS OF CALIFORNIA'S UNIQUE EITC DESIGN

California's alternative EITC design naturally prompts the question of how this approach compares to the conventional piggyback model in terms of promoting or hindering state policy objectives. For most states, the criteria for evaluating a state-level EITC are similar to those for the federal government.⁷⁸ The credit is clearly intended to promote the material well-being of working families, especially those with children, but to do so in a manner consistent with state-specific distributional objectives and budget constraints. In addition, state policymakers may wish to consider the work incentive effects of alternative designs, especially as those particular features interact with the federal EITC or other programs. Most obviously, by deviating from the standard federal design, a state is able to concentrate its resources on specific populations or address its own custom-tailored policy needs. For example, by almost doubling the benefit or return to the first dollars earned by a taxpayer, California's credit may have positive effects on labor market participation. So *if* the policy objective is

⁷⁷ Authors' calculations. See notes 26 and 71.

⁷⁸ See, e.g., Md. Dep't of Legislative Servs., note 12, at 4-7 (describing similar objectives of federal and state EITC programs).

to induce participation in the labor market by those who are currently unemployed, and we think there is reason not to be concerned about the negative income effects of a more generous credit, then the California credit would seem to serve that policy objective well.

In addition, by setting the highest negative marginal tax rate entirely within the federal phase-in range, California's approach may have the effect of inducing uptake of the federal EITC within the state. In effect, by offering a full (or 85%) match, the California EITC can be viewed as an inducement for those who are not currently EITC beneficiaries to file for the federal credit. From the state's perspective, this brings additional federal resources for the low-income population into the state.⁷⁹ Interestingly, states may use federal grant money under the Temporary Assistance to Needy Families program to fund state-level EITCs,⁸⁰ providing a "double-dip" of sorts—that is, using federal grant money to induce greater uptake of the federal EITC. These incentives may be especially pronounced for very low-income households, who often are not otherwise required to file either federal or California income tax returns.⁸¹

Perhaps the most important effect of the California credit is the alleviation of poverty for extremely low-income earners. According to the Census Bureau, 16.4% of Californians lived in poverty in 2014, which was a higher poverty rate than the country as a whole.⁸² The California EITC would largely benefit these taxpayers, though because it is targeted at very low-income levels and phases out well below the poverty line (about \$10,000 for a single worker with two children), its reach is limited. Nevertheless, the California EITC in conjunction with the federal EITC would unambiguously reduce the

⁷⁹ See, e.g., Kirk J. Stark, *Should California Adopt an Earned Income Tax Credit?*, in *California Policy Options 2006*, at 93, 100-06 (David J.B. Mitchell ed., 2006) (discussing strategies to maximize the value of federal EITC payments to Californians).

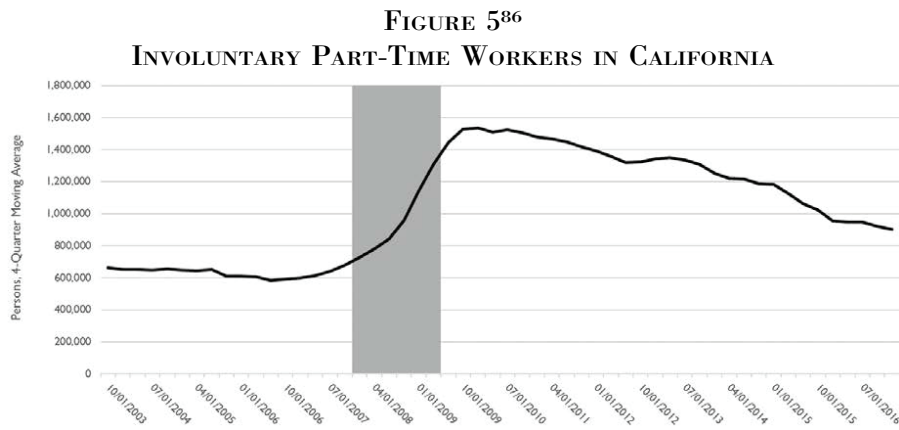
⁸⁰ Admin. for Children & Families, U.S. Dep't of Health & Human Servs., FY 2015 Federal TANF & State MOE Financial Data 6 tbl.A.1 (2016), https://www.acf.hhs.gov/sites/default/files/ofa/tanf_financial_data_fy_2015.pdf; Liz Schott & Ife Floyd, *How States Use Funds Under the TANF Block Grant*, Ctr. on Budget & Pol'y Priorities (Jan. 5, 2017), <http://www.cbpp.org/sites/default/files/atoms/files/1-5-17tanf.pdf>.

⁸¹ IRC § 6012(a) (exempting income tax return filing for individuals with gross income of less than the sum of the personal exemption and the basic standard deduction); Cal. Rev. & Tax Code § 18501 (West 2015 & Supp. 2017).

⁸² Alemayehu Bishaw & Brian Glassman, U.S. Census Bureau, *Poverty: 2014 and 2015*, at 3 tbl.1 (2016), <https://www.census.gov/content/dam/Census/library/publications/2016/demo/acsbr15-01.pdf>; Sarah Bohn & Caroline Danielson, *Pub. Pol'y Inst. Cal., Poverty in California 1* (2017), http://www.ppic.org/content/pubs/jtf/JTF_PovertyJTF.pdf; Bernadette D. Proctor, Jessica L. Semega & Melissa A. Kollar, U.S. Census Bureau, *Income and Poverty in the United States: 2015*, at 12 (2016), <http://www.census.gov/content/dam/Census/library/publications/2016/demo/p60-256.pdf> ("The official poverty rate [of the United States] in 2015 was 13.5 percent, down 1.2 percentage points from 14.8 percent in 2014 . . .").

number of Californians living in extreme poverty (or earning less than half of the federal poverty level).⁸³

Because the California credit phases out for those working full-time at the California minimum wage, the primary work incentives are for individuals to enter the labor force to work part-time. This is different from who in general is claiming the federal EITC in California. According to a Public Policy Institute of California (PPIC) report in 2013-2014, 62% of federal EITC dollars paid out in California went to individuals working full-time, with 26% of the total going to workers who were working part-time but who reported they would prefer to work full-time.⁸⁴ Thus, California's EITC targets part-time workers whether by choice or circumstance. During the Great Recession, the number of involuntary part-time workers in California jumped significantly.⁸⁵ As shown in Figure 5, the number of such workers more than doubled during the recession, peaking at more than 1.5 million in 2010. While the trend has reversed more recently, involuntary part-time employment remains well above prerecession levels, suggesting a larger than usual pool of potential beneficiaries for the California credit.



As shown in Figure 6 below, the number of Californians claiming the federal EITC rose in tandem with the increase in part-time work shown above. From slightly above 2.5 million recipients in 2004, the

⁸³ Claire Montialoux & Jesse Rothstein, *The New California Earned Income Tax Credit*, Inst. for Research on Labor and Employment, U.C. Berkeley (Dec. 2015), <http://irle.berkeley.edu/files/2016/IRLE-The-New-California-Earned-Income-Tax-Credit.pdf>.

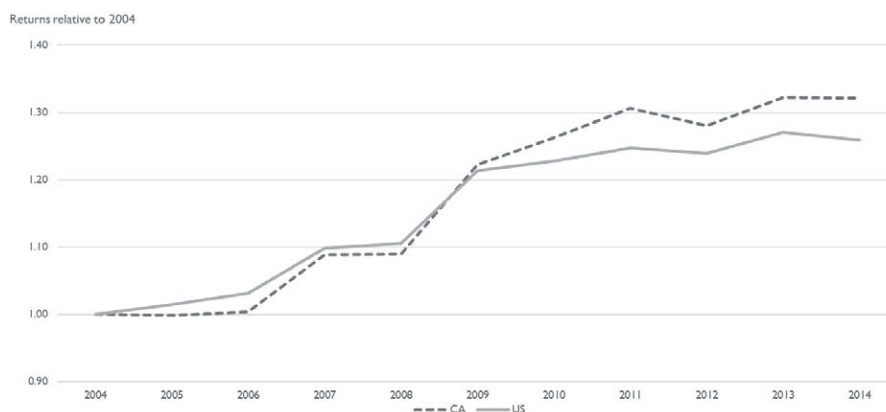
⁸⁴ Caroline Danielson, *The Earned Income Tax Credit in California*, Pub. Pol'y Inst. of Cal. (May 2015), http://www.ppic.org/content/pubs/jtf/JTF_EITCJTF.pdf.

⁸⁵ *Employed Involuntary Part-Time for California*, Fed. Reserve Bank of St. Louis, <https://fred.stlouisfed.org/series/INVOLPTMPCA> (last updated Jan. 27, 2017).

⁸⁶ *Id.*

number of tax returns claiming the federal EITC was 9% higher in 2007 (2.7 million recipients) and a full 31% higher in 2011 (3.3 million recipients).⁸⁷ While the initial increase mirrored the increase in recipients nationwide, the increase in federal EITC recipients in California was proportionally higher than the total U.S. increase after 2009. These figures suggest that the significance of the federal EITC for California's low-income households has grown in the years following the Great Recession and leading up to the adoption of the state's own EITC in 2015.

FIGURE 6⁸⁸
CALIFORNIA AND TOTAL U.S. RETURNS WITH FEDERAL EITC
(2004-2014)



The increased role of the federal EITC in California, along with the concomitant rise in involuntary part-time employment, suggests a likely rationale for California's idiosyncratic state credit design. Targeting a state-level EITC to part-time workers makes sense if policymakers are interested in providing insurance for workers who may be subject to spells of unemployment or reduced work hours. Put

⁸⁷ IRS, Statistics of Income, Individual Income and Tax Data, by State and Size of Adjusted Gross Income, Tax Year 2004 tbl.2, <https://www.irs.gov/uac/soi-tax-stats-historic-table-2> (last updated Sept. 6, 2016) (reporting that 2,506,646 California taxpayers claimed the federal EITC in 2004); IRS, Statistics of Income, Individual Income and Tax Data, by State and Size of Adjusted Gross Income, Tax Year 2007 tbl.2, <https://www.irs.gov/uac/soi-tax-stats-historic-table-2> (last updated Sept. 6, 2016) (reporting that 2,729,208 California taxpayers claimed the federal EITC in 2007); IRS, Statistics of Income, Individual Income and Tax Data, by State and Size of Adjusted Gross Income, Tax Year 2011 tbl.2, <https://www.irs.gov/uac/soi-tax-stats-historic-table-2> (last updated Sept. 6, 2016) (reporting that 3,273,578 California taxpayers claimed the federal EITC in 2011).

⁸⁸ IRS, Statistics of Income, Individual Income and Tax Data, by State and Size of Adjusted Gross Income, Tax Years 2004-2014 tbl.2, <https://www.irs.gov/uac/soi-tax-stats-historic-table-2> (last updated Sept. 6, 2016).

differently, a state credit that augments EITC benefits only for part-time workers not only amplifies the labor force participation incentives for those not currently working (over the state phase-in range) but also operates to ensure a minimum level of income for those who experience an unanticipated reduction in hours worked (over the state phase-out range). The policy trade-off in adopting such a design, however, is that the state credit by definition has no positive incentive effects to encourage individuals to secure full-time employment.

It is worth emphasizing that California's approach to funding its EITC may undermine any effort to influence labor force behavior. As noted above, the amount of the credit may vary from year to year, including the possibility that the credit will not be funded at all in certain years. Any program that is subject to the vicissitudes of annual appropriations faces the prospect of political and fiscal uncertainty. In a state that experiences substantial revenue volatility, perhaps this method of funding a tax-based expenditure program is not necessarily a bad thing (and, indeed, may be worth considering as an example to follow for other California tax expenditures). Nevertheless, this uncertainty in program funding could undercut the credit's anticipated behavioral effects. It also makes the credit vulnerable for cuts exactly when it would be most important for low-income families to receive the added insurance it provides. Because budget shortfalls are more likely to occur during economic downturns, exactly when individuals are most likely to face unexpected cuts in employment hours, any insurance aspect is likely mitigated. Thus, it will provide help if an individual faces an unexpected decline in hours worked or temporary separation from employment, but is less reliable during a statewide recession.

The uncertainty about the level of the credit and demand, however, does illustrate a positive aspect of the program from the state's budget perspective. Because of the targeting, the program is much less expensive than a more traditional EITC. As we show in the following Part, if California had chosen to spend the same amount of funds on a traditional piggyback-model EITC (fully funded with a 100% adjustment factor), it would have only been able to afford a 7.4% credit (that is, matching 7.4% of the federal credit but across the entire distribution of federal EITC beneficiaries). While a 7.4% state EITC would not be the lowest offered, it is substantially less generous than the credit most other states offer.

Finally, it is worth pointing out that implementation of a program of this type requires more intention or thought than a more standard credit. It is not clear whether this is a pro or con but does mean policymakers can take the opportunity to think about what they are

trying to accomplish and what they can afford. With the implementation of the legislation, policymakers could consider expanding the EITC income levels or amount for specific populations. For example, if the intention is to have more individuals enter the labor market, targeting or expanding the credit for childless workers or for some populations excluded from the current federal credit (that is, those under twenty-five⁸⁹) might also be attractive.

VI. SIMULATING ALTERNATIVE STATE-LEVEL EITC DESIGNS

Having considered the tax price effects and some of the pros and cons of the new California EITC format, we next examine the distribution of benefits across income groups of the California credit versus a standard credit. In other words, if California had chosen to adopt the standard model of a state-level EITC, simply replicating the federal design, how would the distribution of the credit differ from the model actually chosen? Using the Tax Policy Center's (TPC) state income tax calculators, we estimate the effects of alternative credit designs on the low-income population in California.⁹⁰ In Part VII, we extend our analysis by considering the effects of implementing a California-type EITC in selected other states. Our hope is that by providing these simulation results, we can provide a richer understanding of the distributional and revenue effects of alternative design choices in crafting state-level EITCs.

Before describing these results, a brief note on methodology is warranted. Our model uses a weighted sample of taxpayers from 2011 to represent the population of a state's taxpayers. This means that our results reflect the household income and tax filing attributes of the population for that year. When simulating the effect of an alternative policy for a particular state, it is necessary to make certain assumptions. For example, our results assume that all taxpayers receiving a federal EITC (as estimated in the TPC model) also receive a California EITC if eligible.⁹¹ In addition, as is evident in our consideration of

⁸⁹ IRC § 32(c)(1)(A)(ii)(II).

⁹⁰ Building upon the Urban-Brookings Tax Policy Center federal income tax microsimulation model, these state models calculate the effect of various changes in federal and state policies on state income taxes. Our model uses a weighted sample of taxpayers to represent the population of a state's taxpayers in 2011. See Surachai Khitatrakun, Gordon B. Mermin, & Norton Francis, Urban-Brookings Tax Pol'y Ctr., *Incorporating State Analysis into the Tax Policy Center's Microsimulation Model: Documentation and Methodology* 26-27 (Mar. 30, 2016), <http://www.taxpolicycenter.org/publications/incorporating-state-analysis-tax-policy-centers-microsimulation-model-documentation-0> (working paper).

⁹¹ Unlike the federal EITC, California's credit as originally enacted did not allow the credit for self-employment income. Cal. Rev. & Tax Code § 17052(c)(2)(B) (West Supp. 2017) ("Section 32(c)(2)(A)(ii) . . . shall not apply."); see IRC § 32(c)(2)(A)(ii) (defining earned income to include self-employment income). This feature of the California credit

other states, the magnitude of the observed revenue and distributional effects depends not only on the generosity of the EITC but also on the distribution of income within a state and the family characteristics of that state's low-income population. Finally, we note that because our estimates are based on a sample of the population, they provide only an approximation and thus may not necessarily match the precise revenue effects or distributional properties of the specific credit under consideration.

A. *Simulating a Standard Piggyback EITC for California*

We estimate that a fully-funded version (that is, 100% funding of the current design, rather than the 85% funding actually adopted) of the new EITC would cost the state of California \$524 million and provide a credit to 791,000 taxpayers, at income levels and population characteristics in 2011 (Table 4, top panel).⁹² As expected, families with income under 50% of the federal poverty guideline (FPG) make up 92% of recipients and receive over 96% of funds from this heavily targeted credit.⁹³ Recipients in that income group receive on average a credit of \$694. Recipients with income between 50% and 100% of the FPG account for 6% of recipients and 3% of the credit amount, receiving an average credit of \$331. These figures illustrate the unique design properties of the California EITC, which as discussed above concentrates the benefits on very low-income earners.

was changed with the passage of the state's 2017-2018 budget. See 2017-18 California State Budget 3, <http://www.ebudget.ca.gov/FullBudgetSummary.pdf>.

⁹² In the estimates, we compare tax law in place in each state in 2015, but deflated to 2011 dollars.

⁹³ To account for differences in family size among EITC recipients, we classified tax units by the ratio of their AGI to the 2011 HHS Federal Poverty Guideline for the forty-eight contiguous states and Washington, D.C. The FPG varies by the number of people in the family. For the first person, the FPG is \$10,890, and for each additional person the FPG rises by \$3820. Annual Update of the HHS Poverty Guidelines, 76 Fed. Reg. 3637, 3637-38 (Jan. 20, 2011), <https://aspe.hhs.gov/2011-poverty-guidelines-federal-register-notice>.

TABLE 4⁹⁴
CALIFORNIA STATE EARNED INCOME TAX CREDIT
(TAX YEAR 2015)

Adjusted Gross Income as a Percent of Poverty Guidelines	All Tax		Tax Returns Claiming the Credit		Amount of Credit Claimed		
	Percent of Returns in the Income Group	Number of Returns (thousands)	Percent of All Returns Claiming the Credit	Percent of Returns in the Income Group	Total (millions of dollars)	Percent of Credit Claimed	Average Credit Claimed
<i>Fully Funded California Credit</i>							
0%-50%	24.3	726	91.7	15.4	503	96.1	694
50%-100%	14.3	49	6.3	1.8	16	3.1	331
100%-150%	11.4	0	0.0	0.0	0	0.0	0
150%-200%	8.2	0	0.0	0.0	0	0.0	0
200%-250%	6.3	0	0.0	0.0	0	0.0	0
250%-300%	5.3	0	0.0	0.0	0	0.0	0
Greater Than 300%	29.1	0	0.0	0.0	0	0.0	0
Total	100.0	791	100.0	4.1	524	100.0	662
<i>Credit Equal to 7.4% of the Federal EITC</i>							
0%-50%	24.3	939	28.6	19.9	121	23.1	129
50%-100%	14.3	1,318	40.2	47.3	275	52.6	209
100%-150%	11.4	772	23.6	34.9	115	21.9	149
150%-200%	8.2	211	6.4	13.3	9	1.8	44
200%-250%	6.3	2	0.1	0.2	0	0.0	68
250%-300%	5.3	0	0.0	0.0	0	0.0	0
Greater Than 300%	29.1	0	0.0	0.0	0	0.0	0
Total	100.0	3,279	100.0	16.9	524	100.0	160

By contrast, if California had adopted a standard EITC that was a percentage of the federal EITC, the benefits would spread further up the income scale, but average benefits for very low-income workers would be much lower. We estimate that, to spend the same amount on a standard credit, California would need to adopt a credit rate equal to 7.4% of the federal credit, which would have placed California's credit among the least generous states with a credit.⁹⁵ The average credit under this program for taxpayers with income under 50% of the FPG would be \$129 per recipient, much smaller than the actual credit (Table 4, bottom panel). In contrast, a much larger number of California taxpayers would receive a credit (3.3 million vs. 791,000). Unlike the targeted credit, almost one-quarter of recipients would have had income of at least 100% of the FPG, but no credits would be paid to taxpayers with income over 200% of the FPG.

These estimates highlight the policy dilemma at the heart of California's EITC design. Given the magnitude of the state's low-income population and the distribution of income across that population, adopting a standard piggyback EITC with a more generous credit rate would have been substantially more costly. This fiscal fact of life likely helps explain why California, despite its progressive politics, had

⁹⁴ Urban-Brookings Tax Pol'y Ctr., State & Local Fin. Initiative, State Income Tax Model [hereinafter State Tax Model]; Urban-Brookings Tax Pol'y Ctr., Microsimulation Model (version 0516-1) [hereinafter Microsimulation Model]; 2011 HHS Poverty Guidelines, U.S. Dep't Health & Hum. Servs. (Dec. 1, 2011), <https://aspe.hhs.gov/2011-hhs-poverty-guidelines>.

⁹⁵ See Table 3.

balked at adopting an EITC for so many years. By targeting its credit at very low-income taxpayers, California is able to provide a relatively generous credit to a smaller number of families at limited fiscal cost. Of course the trade-off in pursuing this strategy is that the state's new credit fails to provide any assistance to taxpayers with low but slightly higher income.

B. Simulating California's EITC Design in Other States

As discussed above, simulating the adoption of a standard piggyback EITC in California gives us a better sense of the relative generosity of the California credit as well as the winners and losers under a piggyback model versus the approach California actually chose. We now take the opposite tack by simulating the adoption of California's model in other states. In this Section we estimate the distributional and revenue consequences of substituting the California EITC for the existing credit in four specific states: Massachusetts, Louisiana, Virginia, and New Jersey.⁹⁶

Massachusetts had a standard EITC equal to 15% of a taxpayer's federal EITC in 2015,⁹⁷ about the average rate for states with an EITC that piggybacks on the federal credit.⁹⁸ The credit rate in Massachusetts increased to 23% in 2016.⁹⁹ If Massachusetts adopted a fully-funded California credit, the cost of the program would decline from \$109 million (at the 15% credit rate) to \$50 million, estimated at 2011 income levels (Table 5). Similar to what we found in California, a targeted EITC would reach less than one-quarter of current recipients. For those with income under 50% of the FPG, the average credit for those with a credit would increase from \$202 to \$556 and from \$356 to \$381 for workers with income between 50% and 100% of the FPG. Because the credit dramatically limits eligibility of taxpayers without children, however, the number of recipients with income of less than 50% of the FPG would fall from 110,000 to 86,000, and the number with income between 50% and 100% of the FPG would fall from 157,000 to 6000. Recall that no childless taxpayers with income over \$6580 (57% of FPG) would be eligible for a credit.¹⁰⁰ No taxpayers with income in excess of 100% of FPG would be eligible for the California-type credit.

⁹⁶ We limit our estimates to these specific states to highlight variations found in existing programs but results for other state are available upon request.

⁹⁷ Mass. Gen. Laws ch. 62 § 6(h) (2015), amended by 2015 Mass. Legis. Serv. ch. 52 (H.B. 3671) (West).

⁹⁸ See Table 3.

⁹⁹ Mass. Gen. Laws ch. 62 § 6(h) (2016).

¹⁰⁰ State of Cal. Franchise Tax Bd., note 9, at 68.

TABLE 6¹⁰³
LOUISIANA STATE EARNED INCOME TAX CREDIT
(TAX YEAR 2015)

Adjusted Gross Income as a Percent of Poverty Guidelines	Tax Returns Claiming the Credit				Amount of Credit Claimed		
	All Tax Returns in the Income Group	Number of Returns (thousands)	Percent of All Returns Claiming the Credit	Percent of Returns in the Income Group	Total (millions of dollars)	Percent of Credit Claimed	Average Credit Claimed
<i>Current Law</i>							
0%-50%	21.1	140	26.0	31.0	10	20.6	68
50%-100%	17.9	248	46.0	64.3	28	59.6	111
100%-150%	12.2	115	21.3	43.9	8	18.0	73
150%-200%	8.7	33	6.1	17.5	1	1.5	21
200%-250%	6.9	0	0.1	0.3	0	0.0	30
250%-300%	6.4	0	0.0	0.0	0	0.0	0
Greater Than 300%	26.1	0	0.0	0.0	0	0.0	0
Total	100.0	540	100.0	25.1	46	100.0	86
<i>Fully Funded California Credit</i>							
0%-50%	21.1	113	87.9	25.0	77	93.6	680
50%-100%	17.9	14	11.1	3.7	5	5.9	342
100%-150%	12.2	0	0.0	0.0	0	0.0	0
150%-200%	8.7	0	0.0	0.0	0	0.0	0
200%-250%	6.9	0	0.0	0.0	0	0.0	0
250%-300%	6.4	0	0.0	0.0	0	0.0	0
Greater Than 300%	26.1	0	0.0	0.0	0	0.0	0
Total	100.0	129	100.0	6.0	82	100.0	638

We next consider how a California credit would change the recipients in Virginia. Because Virginia's EITC is nonrefundable, currently individuals with income under 50% of the FPG do not benefit from the EITC because they have no state income tax liability (Table 7).¹⁰⁴ With a credit equal to 20% of a taxpayer's federal EITC, in theory, the Virginia EITC could be very generous but its reach is limited in practice due to nonrefundability.¹⁰⁵ If Virginia switched from its current nonrefundable credit to a refundable credit equivalent to California's, there would be an almost total reversal of who is and is not eligible for the credit. Under a fully-funded California-type program, 92% of recipients would be those with income under 50% of the FPG. These families would receive an average credit of \$645 and the program would cost just about the same as the current credit (a simulated \$88 million). The overall number of recipients would fall from 260,000 to 142,000.

Finally, New Jersey's credit is refundable and set at 30% of the federal credit, one of the highest rates among the states.¹⁰⁶ Its estimated cost in our simulations is \$360 million with 588,000 recipients, receiving an average credit of \$613 (Table 8). If New Jersey adopted a fully-funded California credit, the cost would drop to \$82 million, about 23% of the cost of the current credit. As in other states, the benefits

¹⁰³ State Tax Model, note 94; Microsimulation Model, note 94; 2011 HHS Poverty Guidelines, note 94.

¹⁰⁴ Va. Code Ann. § 58.1-339.8(C) (2016).

¹⁰⁵ Id. at § 58.1-339.8(B)(2); see also Table 3.

¹⁰⁶ N.J. Stat. Ann. § 54A:4-7(a)(2)(h) (2016); see also Table 3.

would be targeted to very low-income households with children. Recipients with income under 50% of the FPG would account for 90% of those receiving a credit. Those families would receive a larger benefit on average—increasing from \$479 to \$637.

TABLE 7
VIRGINIA STATE EARNED INCOME TAX CREDIT
(TAX YEAR 2015)

Adjusted Gross Income as a Percent of Poverty Guidelines	All Tax Returns		Tax Returns Claiming the Credit		Amount of Credit Claimed		
	Percent of Returns in the Income Group	Number of Returns (thousands)	Percent of All Returns Claiming the Credit	Percent of Returns in the Income Group	Total (millions of dollars)	Percent of Credit Claimed	Average Credit Claimed
<i>Current Law</i>							
0%-50%	18.4	0	0.0	0.0	0	0.0	0
50%-100%	12.5	67	25.8	13.2	26	29.6	388
100%-150%	10.4	144	55.3	34.1	56	63.8	392
150%-200%	8.2	49	18.7	14.6	6	6.5	118
200%-250%	7.0	1	0.3	0.2	0	0.1	183
250%-300%	6.4	0	0.0	0.0	0	0.0	0
Greater Than 300%	36.5	0	0.0	0.0	0	0.0	0
Total	100.0	260	100.0	6.4	88	100.0	339
<i>Fully Funded California Credit</i>							
0%-50%	18.4	130	91.7	17.4	84	95.4	645
50%-100%	12.5	10	6.9	1.9	3	4.0	355
100%-150%	10.4	0	0.0	0.0	0	0.0	0
150%-200%	8.2	0	0.0	0.0	0	0.0	0
200%-250%	7.0	0	0.0	0.0	0	0.0	0
250%-300%	6.4	0	0.0	0.0	0	0.0	0
Greater Than 300%	36.5	0	0.0	0.0	0	0.0	0
Total	100.0	142	100.0	3.5	88	100.0	620

If New Jersey wished to maintain the same level of funding for an EITC while targeting more of those funds to very low-income families than under its current EITC, it could adopt a program similar to California's and still provide a substantial, if reduced, piggyback EITC to other families. We estimate that New Jersey could adopt a fully-funded California-style program and still provide a 23% piggyback EITC for the same cost as the current 30% credit. This would shift spending on the EITC to very low-income taxpayers yet still provide significant assistance to other low-income families. Thus the same number of taxpayers would receive the credit; however, more of the benefit would be targeted to the lowest-income working taxpayers.

TABLE 8¹⁰⁷
NEW JERSEY STATE EARNED INCOME TAX CREDIT
(TAX YEAR 2015)

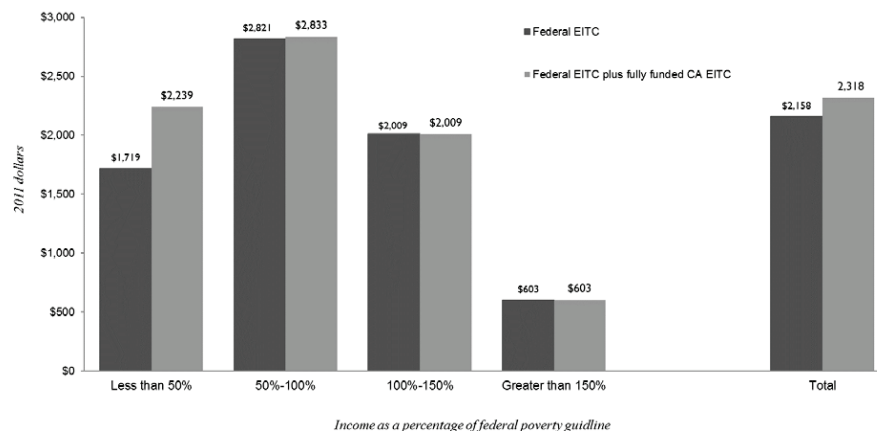
Adjusted Gross Income as a Percent of Poverty Guidelines	All Tax		Tax Returns Claiming the Credit			Amount of Credit Claimed		
	Percent of Returns in the Income Group	Number of Returns (thousands)	Percent of All Returns Claiming the Credit	Percent of Returns in the Income Group	Total (millions of dollars)	Percent of Credit Claimed	Average Credit Claimed	
<i>Current Law</i>								
0%-50%	22.2	157	26.7	14.7	75	20.8	479	
50%-100%	11.5	238	40.5	43.0	190	52.8	800	
100%-150%	9.4	137	23.4	30.4	83	23.1	606	
150%-200%	7.4	49	8.4	13.8	9	2.6	190	
200%-250%	6.2	1	0.1	0.2	0	0.0	268	
250%-300%	5.8	0	0.0	0.0	0	0.0	0	
Greater Than 300%	36.7	0	0.0	0.0	0	0.0	0	
Total	100.0	588	100.0	12.2	360	100.0	613	
<i>Fully Funded California Credit</i>								
0%-50%	22.2	122	90.5	11.4	78	94.7	637	
50%-100%	11.5	10	7.6	1.9	4	4.5	355	
100%-150%	9.4	0	0.0	0.0	0	0.0	0	
150%-200%	7.4	0	0.0	0.0	0	0.0	0	
200%-250%	6.2	0	0.0	0.0	0	0.0	0	
250%-300%	5.8	0	0.0	0.0	0	0.0	0	
Greater Than 300%	36.7	0	0.0	0.0	0	0.0	0	
Total	100.0	135	100.0	2.8	82	100.0	609	
<i>Fully Funded California Credit Plus Credit Equal to 23.2</i>								
0%-50%	22.2	157	26.7	14.7	136	37.6	864	
50%-100%	11.5	238	40.5	43.0	151	41.8	634	
100%-150%	9.4	137	23.4	30.4	64	17.9	468	
150%-200%	7.4	49	8.4	13.8	7	2.0	147	
200%-250%	6.2	1	0.1	0.2	0	0.0	207	
250%-300%	5.8	0	0.0	0.0	0	0.0	0	
Greater Than 300%	36.7	0	0.0	0.0	0	0.0	0	
Total	100.0	588	100.0	12.2	360	100.0	613	

VII. COMBINED FEDERAL AND STATE EITC IN CALIFORNIA

The combination of the federal and state EITC provides a significant benefit to California's low-income working population. Because the California EITC is intended to supplement the federal EITC, it is useful to look at the effect of the two credits in combination. Figure 7 shows the average federal credit and the federal credit plus a fully-funded California credit by income group. The federal EITC using 2015 law averages \$1719 (in 2011 dollars) for families with income below 50% of the FPG, often considered as the threshold for extreme poverty. A fully-funded California credit would increase that amount by 30% to \$2239. While the California credit would have very little impact on the combined average credit for recipients with income between 50% and 100% of the FPG, recipients in that income range would still receive a combined credit that was on average about \$600 greater than the combined credit for recipients in the lowest income group.

¹⁰⁷ State Tax Model, note 94; Microsimulation Model, note 94; 2011 HHS Poverty Guidelines, note 94.

FIGURE 7¹⁰⁸
 AVERAGE FEDERAL AND CALIFORNIA EITC PER RECIPIENT
 BY INCOME AS A PERCENTAGE OF FEDERAL POVERTY GUIDELINES



Note: Federal EITC figures come from the TPC model; state EITC figures come from the State Income Tax Model and apply 2015 tax law to 2011 data.

The EITC is the most effective federal anti-poverty program for the working-age population. Although official estimates of poverty measure income before taxes, and thus exclude the EITC, the U.S. Census Bureau has developed a supplemental poverty measure that includes additional resources available to families (as well as additional expenses) not captured in the official measure.¹⁰⁹ The Census Bureau estimates that without the federal EITC (and the much smaller refundable portion of the child tax credit) an additional 9.2 million people would have been considered poor, holding all else constant.¹¹⁰

The California credit is targeted towards the working population with very low income. As such, it is not effective in moving people above the poverty line, a job left to the federal EITC, but it does help in moving families out of extreme poverty. While we do not attempt to calculate a measure consistent with the Census supplemental poverty measure, we do consider the simple exercise of measuring income relative to the federal poverty guidelines with and including the federal and fully-funded California EITC.

We estimate that of the approximately 4.7 million California tax units eligible for a federal EITC whose income before the credit is less

¹⁰⁸ State Tax Model, note 94; Microsimulation Model, note 94; 2015 HHS Federal Poverty Guidelines, U.S. Dep't Health & Hum. Servs. (Sept. 3, 2015), <https://aspe.hhs.gov/2015-poverty-guidelines>.

¹⁰⁹ Trudi Renwick & Liana Fox, U.S. Census Bureau, *The Supplemental Poverty Measure: 2015*, at 2 (2016), <https://www.census.gov/content/dam/Census/library/publications/2016/demo/p60-258.pdf>.

¹¹⁰ *Id.* at 13.

than 50% of the FPG, about 300,000 would have income in excess of that threshold if we include their federal EITC. An additional 50,000 would have income in excess of that threshold if we also included a fully-funded California EITC.

VIII. CONCLUSION

In 2015, California joined the majority of other states with income taxes by offering a credit for low-income working taxpayers. By introducing a more targeted program, California has highlighted that there are options beyond just piggybacking off the federal rules. Targeting the parameters can be a cost-effective way of helping specific populations. It is important, however, for policymakers to understand how these options affect both the behavior of taxpayers and the returns from existing federal (and other state programs).

Perhaps in recognition of rising income inequality and the increase in the number of California workers who are involuntarily working part-time, California's EITC targets its benefit at very low-income workers, benefitting families whose earnings place them in the category of families facing extreme poverty or those earning less than half the federal poverty level. Thus, California's EITC will be most effective at both encouraging currently unemployed individuals, especially single parents, to join the work force, albeit on a part-time basis. However, California's credit is not sufficient to lift these taxpayers above the poverty line. If California was interested in ensuring an income level above the poverty line or encouraging full-time work, it would be necessary to expand the credit by expanding the match rate and/or extending eligibility to taxpayers earning more income. In either case, the cost of the state program would be much more expensive.

California's EITC does serve as an example to other states and possibly the federal government as a way of targeting benefits. It will be important for policymakers to understand the ultimate goals they are trying to achieve and structure their credits in the best way to achieve these goals.

