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The Child Tax Credit: Economic Analysis and Policy Options

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Summary

The child tax credit is currently structured as a \$1,000-per-child credit that is partially refundable for lower-income families with more than \$3,000 in earnings. Prior to 2001, the child tax credit was a \$500-per-child nonrefundable tax credit which generally benefited middle- and upper-middle-income taxpayers.

Since 2001, legislative changes, particularly those made by the Economic Growth and Tax Relief Reconciliation Act of 2001 (EGTRRA; P.L. 107-16) and the American Recovery and Reinvestment Act of 2009 (ARRA; P.L. 111-5), have altered the structure of this tax benefit. Specifically, the amount of the credit per child has increased and the credit has been made partially refundable, expanding the availability of the credit to some low-income families. The American Taxpayer Relief Act (ATRA; P.L. 112-240) made the EGTRRA changes to the child tax credit permanent. The Protecting Americans from Tax Hikes (PATH) Act (Division Q of P.L. 114-113) made the ARRA change to the child tax credit permanent.

In light of these recent changes to the structure of the child tax credit, this report provides an economic analysis of the current credit, focusing on the credit's impact on fairness (also referred to as "equity"). The report then explores how the credit has affected taxpayers' behavior about working and having children. Finally, this report examines the complexity of administering this tax provision in the context of other child-related tax benefits.

This report concludes with an overview of possible modifications to the child tax credit. The impact of these modifications will depend on a taxpayer's income. Modifications that benefit middle- and upper-middle-income taxpayers include increasing the amount of the credit per child and increasing the phase-out thresholds. Modifications that benefit lower-income taxpayers include reducing the refundability threshold or increasing the current refundability rate. These changes will likely have significant budgetary cost that policymakers may consider alongside their policy goals.

This report does not provide an in-depth examination of the history of the credit. For more information on the legislative history of the credit, see CRS Report R41873, *The Child Tax Credit: Current Law and Legislative History*, by (name redacted) .

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Introduction

The Taxpayer Relief Act of 1997 (P.L. 105-34) created a \$500-per-child nonrefundable tax credit to help ease the financial burden that families incur when they have children.¹ Since 2001, legislative changes, particularly those made by the Economic Growth and Tax Relief Reconciliation Act of 2001 (EGTRRA; P.L. 107-16) and the American Recovery and Reinvestment Act of 2009 (ARRA; P.L. 111-5), have altered the structure of this tax benefit. Specifically, the amount of the credit per child has increased and the credit has been made partially refundable, expanding the availability of the credit to some low-income families. The American Taxpayer Relief Act (ATRA; P.L. 112-240) made the EGTRRA changes to the child tax credit permanent. The Protecting Americans from Tax Hikes (PATH) Act (Division Q of P.L. 114-113) made the ARRA change to the child tax credit permanent.

The goal of this report is to analyze the economic impact of the child tax credit. This report first provides a brief overview of the current structure of the credit, followed by an economic and distributional analysis of the credit. The economic analysis focuses on the equity (i.e., “fairness”) of this tax provision, based on different definitions of equity, and examines the limited impact of the credit on taxpayer behavior. This report does not provide an in-depth examination of the history of the credit.²

Current Law

Families with children may be eligible to claim a tax credit for each eligible child, subtracting the amount of the credit from their tax bill in order to reduce the taxes they owe. The child tax credit has three key features.

- **Amount:** The credit equals a maximum of \$1,000 per child.
- **Refundability:** Families with little or no income tax liability may be able to claim the credit as a refund. The amount of the refund is equal to 15% of a taxpayer’s earnings above \$3,000, up to the maximum amount of credit for the family. This is referred to as the “earned income” refundability formula.
- **Phase-out:** The credit is phased out for higher-income taxpayers. Specifically, the credit is reduced by \$50 for every \$1,000 a family’s modified adjusted gross income (AGI)³ exceeds specific income thresholds.⁴

The monetary parameters of the credit (credit amount, refundability threshold, and phase-out threshold) are not indexed for inflation. The child tax credit can also offset a taxpayer’s alternative minimum tax (AMT)⁵ liability.

¹ For more information see U.S. Congress, Joint Committee on Taxation, JCS-23-97, *General Explanation of Tax Legislation Enacted in 1997*, December 17, 1997, pp. 6-7.

² For more information on the legislative history of the credit, see CRS Report R41873, *The Child Tax Credit: Current Law and Legislative History*, by (name redacted).

³ With respect to the child tax credit, modified adjusted gross income (MAGI) is equal to adjusted gross income (AGI) increased by foreign earned income of U.S. Citizens abroad, including income earned in Guam, American Samoa, the Northern Mariana Islands, and Puerto Rico. AGI is equal to a taxpayer’s total income minus certain adjustments to income (“above the line deductions”). AGI is the basic measure of income under the federal income tax and is the income measurement before deductions and personal exemptions are taken into account.

⁴ The phase-out thresholds depend on filing status: \$75,000 for single parents filing as head of household, \$110,000 for married taxpayers filing jointly, and \$55,000 for married taxpayers filing separately.

Who Claims the Child Tax Credit?

The current structure of the child tax credit benefits taxpayers over a wide range of income, as illustrated by **Table 1**. Roughly half (52.4%) of the child tax credit benefits go to taxpayers with cash incomes under \$40,000, whereas the other half go to those making more than \$40,000. Roughly the same proportion of the child tax credit goes to taxpayers with AGI between \$10,000 and \$20,000 (18.0%) as goes to those with AGI between \$50,000 and \$75,000 (16.9%), underscoring the fact that this tax credit provides significant benefits to both low-income and middle-income families. Most taxpayers with incomes above \$200,000 will be ineligible for the credit due to the phase-out thresholds.⁶

Table 1. Distribution of Child Tax Credit Benefit, 2013

Adjusted Gross Income (AGI)	Share of Total Benefit	Distribution of Tax Units ^a
Less than \$10k	3.6%	16.8%
\$10k to \$20k	18.0%	16.4%
\$20k to \$30k	17.6%	12.9%
\$30k to \$40k	13.3%	9.8%
\$40k to \$50k	9.7%	7.7%
\$50k to \$75k	16.9%	13.0%
\$75k to \$100k	12.0%	8.5%
\$100k to \$200k	9.0%	11.1%
More than \$200k	0.0%	3.8%
Total	100%	100%

Source: IRS Statistics of Income (SOI) Table 3.3

Notes: Items may not sum to 100% due to rounding.

- a. A tax unit consists of an individual or married couple and their dependents that would, if their income exceeded the relevant filing threshold, file an individual income tax return.

EGTRRA and ARRA, which first made the credit partially refundable and then expanded refundability respectively, expanded the credit’s availability to lower-income Americans, especially those with incomes between \$10,000 and \$20,000. Prior to this expansion, the credit was largely available only to middle- and upper-middle-income taxpayers. As previously noted, the EGTRRA provisions were made permanent by ATRA, while the ARRA changes were made permanent by the PATH Act.

Although the current credit is generally available to low-income taxpayers, it provides little benefit to extremely poor taxpayers. Taxpayers with incomes under \$10,000 receive 3.6% of the

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⁵ The AMT is a parallel income tax system created by Congress to ensure that everyone pays at least a minimum of taxes and still preserves the economic and social incentives in the tax code. For more information on the AMT, see CRS Report RL30149, *The Alternative Minimum Tax for Individuals*, by (name redacted).

⁶ The maximum amount of income at which the credit equals zero depends on the number of eligible children for whom the taxpayer is claiming the credit. Generally \$1,000 of child tax credit is reduced to zero for every \$20,000 of modified AGI above the phase-out threshold. Hence, a family with five eligible children would theoretically see the child credit phase-out to zero once AGI exceeded \$210,000. In addition, taxpayers with cash income above \$200,000 may be able to claim the credit because modified AGI may be less than cash income in certain circumstances.

child tax credit, even though they make up 16.8% of tax units. This suggests that this provision may not benefit the very poor in proportion to their population.

Taxpayers with very low income (i.e., less than \$10,000) do not benefit from the child tax credit (or receive a very small credit, less than \$1,000 per child) for two reasons. First, taxpayers with very low income do not have any income tax liability and so cannot claim the nonrefundable portion of the child tax credit. Even if the taxpayer had one qualifying child—and so would be able to reduce their tax liability by \$1,000—if they do not owe any federal income taxes, they cannot reduce their taxes by the credit amount. This is one rationale for making tax credits refundable (i.e., available to taxpayers with little or no tax liability). The child tax credit is refundable. However, the child tax credit is only refundable if taxpayers have earnings above \$3,000, and the refund is calculated as 15 cents for every dollar of earnings above this \$3,000 threshold. Hence, the second reason the very poor do not claim the credit, or claim less than the full value of the credit, is that their low income prevents them from fully benefiting from the refundable portion of the credit. For example, a taxpayer with two children and earnings of \$10,000 would, based on the refundability formula, be eligible for \$1,050 in child tax credits, as opposed to the maximum amount of \$2,000. A taxpayer with two children needs \$16,333 in earnings to be able to claim the full \$2,000 of child tax credit.

Economic Analysis

Generally, economists evaluate tax policy—like the child tax credit—through three different lenses: the equity (or fairness) of the provision (which necessitates defining fairness), how the tax provision affects taxpayers' behavior (again, the intended behavior must be specified), and the complexity of administering the tax provision. These three lenses are often referred to as equity, efficiency, and administration, respectively. A provision may be seen differently through these lenses. For example, a tax provision may simplify the tax code (improve administration), but result in an undesirable behavior (reduce efficiency). Hence economists tend to evaluate a tax provision using these three approaches to provide the most complete economic analysis of the provision. As with other tax provisions, this report will analyze the child tax credit through the lenses of equity, efficiency, and administration. Specifically:

Equity: Economic theory suggests that there are two ways to analyze the fairness of a provision, vertical equity and horizontal equity. Vertical equity states that groups with more resources should pay more taxes, whereas horizontal equity states that families with the same circumstances should pay the same taxes. While the child tax credit is generally evaluated as vertically equitable, because it reinforces the progressivity of the current tax code, economists have differing views on whether it is horizontally equitable.

Efficiency: When examining the efficiency of a tax provision, economists examine how a tax provision affects taxpayer behavior, in terms of encouraging a taxpayer to do more or less of a certain activity. Theoretically, the child tax credit may have effects on taxpayer behavior, in terms of encouraging taxpayers to work and to have children, but there is currently very little evidence to support or refute these theories.

Administration: Tax policies—like the child tax credit—can be analyzed with respect to their effect on the complexity of the tax code. The administration of a tax provision can affect whether it ultimately achieves its economic or policy goals. There are a variety of tax benefits available to families with children, and the addition of the child tax credit, while beneficial to many families, has made the tax code potentially more complicated especially for lower-income taxpayers.

The following section examines in detail the child tax credit in terms of its impact on equity, taxpayer behavior, and tax administration.

Equity of the Child Tax Credit

There are several ways to assess the fairness or equity of a tax provision. Depending on the definition used, the child tax credit may or may not be equitable.

The current federal income tax is progressive, meaning higher-income taxpayers pay a greater share of their income in taxes (and thus have a higher average income tax rate) than lower-income taxpayers. A progressive tax system reflects a standard of fairness called vertical equity (whether taxes should be progressive and how progressive is subject to some debate).⁷

The child tax credit is generally considered vertically equitable because it reinforces the progressivity of the current income tax structure. The credit is structured to lower the tax burden of families earning between \$3,000 and the phase-out income level, generally \$150,000 for a married couple with two children.⁸ As illustrated in **Table 2**, the child tax credit reduces the average federal tax rate of taxpayers with cash income under \$200,000, while having little impact on taxpayers with income greater than \$200,000. In addition, the child tax credit tends to reduce lower-income taxpayers' average tax rates more than it reduces the average tax rate of higher-income taxpayers. The largest reduction occurs among those with income between \$10,000 and \$20,000.

Table 2. Federal Tax Rates With And Without The Child Tax Credit, 2010

Cash Income (2009 dollars) ^b	Average Federal Tax Rate ^a		Average Change in Federal Taxes from Credit
	Without Credit	With Credit	
Less than \$10k	-13.6%	-19.1%	-\$347
\$10k to \$20k	-9.4%	-15.8%	-\$994
\$20k to \$30k	0.5%	-5.3%	-\$1,450
\$30k to \$40k	8.8%	4.4%	-\$1,549
\$40k to \$50k	13.3%	9.6%	-\$1,669
\$50k to \$75k	16.9%	14.2%	-\$1,669
\$75k to \$100k	19.2%	17.3%	-\$1,715
\$100k to \$200k	23.2%	22.6%	-\$981
\$200k to \$500k	26.5%	26.5%	-\$67
\$500k to \$1 million	26.0%	26.0%	-\$60
More than \$1 million	28.5%	28.5%	-\$12

Source: Tax Policy Center, Table T10-0074, Feb. 8, 2010.

- a. The average federal tax rate includes individual and corporate income tax, payroll taxes and the estate tax as a percentage of average cash income. Negative tax rates indicate that taxpayers did not owe taxes and

⁷ For more information on the progressivity of the tax code see CRS Report RL32693, *Distribution of the Tax Burden Across Individuals: An Overview*, by (name redacted) .

⁸ In general it takes \$20,000 of modified AGI to eliminate \$1,000 of child tax credit. Hence, if a single parent has one child, the child tax credit will be eliminated when modified AGO exceeds \$95,000.

- received a refund. This may be a result of a variety of tax benefits including the standard deduction, the dependent exemption and the Earned Income Tax Credit (EITC).
- b. Cash income includes wages and salaries, investment (taxable dividends, realized net capital gains) and business income as well as government transfer payments (social security, SSI, veterans benefits), employee contributions to tax-deferred retirement savings plans, and business income or loss.
 - c. At the end of 2012, all of the parameters of the child tax credit that were in effect from 2009-2012 were extended through the end of 2017 by P.L. 112-240. However, P.L. 112-240 did increase tax liabilities on upper income taxpayers beginning in 2013. Hence, as a result of these legislative changes, tax liabilities with and without the credit may have changed for taxpayers making over \$250,000 (\$300,000 married taxpayer filing jointly)—especially for taxpayers making over \$400,000 (\$450,000 married taxpayer filing jointly)—between 2010 and 2013. For more information on the tax provisions of P.L. 112-240, see CRS Report R42894, *An Overview of the Tax Provisions in the American Taxpayer Relief Act of 2012*, by (name redacted)

Another standard of fairness used by economists—referred to as horizontal equity—suggests that families with equal circumstances should pay equal taxes. The child tax credit’s effect on horizontal equity ultimately depends on what are considered “equal circumstances.” In other words, are taxpayers considered equal if they have the same income or are they considered equal if they have chosen to spend that income in the same way?

Some economists interpret horizontal equity to mean that families with the same amount of financial resources (i.e., income) should pay the same amount in taxes (and thus have the same average tax rate), *regardless* of whether they use those resources to buy a house, go on a vacation, or have a child. If children are viewed as choices of how taxpayers use their resources, the credit would violate horizontal equity. Specifically, the child tax credit generally provides greater tax benefits to a family as the number of children increases, assuming their income remains unchanged.⁹ For example, in 2012 a married couple that has \$50,000 in earnings and no children (and hence is ineligible for the child tax credit) would be expected to owe \$3,634 (7.3% average tax rate) in taxes. If the same married couple had one child, they would be expected to owe \$2,634 after applying the child tax credit (5.3% average tax rate). If they had an additional child, the credit would lower their tax liability to \$1,634 (3.3% average tax rate).¹⁰

Other economists define horizontal equity to mean that families with the same “ability to pay” should pay the same in tax.¹¹ Under this definition, families with more children should pay less in tax because additional children reduce their ability to pay.¹² According to the “ability to pay”

⁹ For a family with very low income and no tax liability, additional children will not necessarily increase their child tax credit and thus lower their average tax rate.

¹⁰ In this example, the family’s tax liability is arrived at by reducing their AGI (which in this case is entirely earnings) by the standard deduction and two personal exemptions for the parents to arrive at taxable income in 2012. The 2012 tax tables are then used to determine the tax rate for a married couple with taxable income of \$30,000 (\$50,000 minus \$12,200 in the standard deduction and \$7,800 in personal exemptions). For the two-, three-, and four-member families in this example, only two personal exemptions are applied in order to isolate the impact of the child tax credit on average tax rates. In practice, as families have children, they can also reduce their taxable income by the dependent exemption.

¹¹ For example, see Joseph J. Cordes, “Horizontal Equity,” in *The Encyclopedia of Taxation and Tax Policy*, ed. Joseph J. Cordes, Robert D. Ebel, (name redacted), 2nd ed. (Washington D.C.: The Urban Institute Press, 2005), pp. 183-184 or Frances Woolley, Arndt Vermaeten, and Judith Madill, “Ending Universality: The Case of Child Benefits,” *Canadian Public Policy*, vol. 22, no. 1 (March 1996), p. 25.

¹² A family’s ability to pay is often calculated by making adjustments for family size that reflect that each additional family member does not increase expenses by the same amount. In other words, a family with four members does not need four times the income of a single person because the family can share certain goods like housing and utilities. For more information on approaches to calculating a family’s ability to pay, see CRS Report RL33755, *Federal Income Tax Treatment of the Family*, by (name redacted).

approach, the child tax credit does not generally violate horizontal equity.¹³ Congress used the “ability to pay” interpretation of horizontal equity to justify the structure of the child tax credit in 1997. According to the Joint Committee on Taxation, the main reason for the creation of a child tax credit was that

Congress believed that [prior to the child tax credit] the individual income tax structure [did] not reduce tax liability by enough to reflect a family’s reduced ability to pay taxes as family size increases.... The Congress believed that a tax credit for families with dependent children will reduce the individual income tax burden of those families, will better recognize the financial responsibilities of raising dependent children, and will promote family values.¹⁴

Policymakers may also be interested in evaluating child tax benefits like the child tax credit simultaneously with the other available tax benefits to get a holistic picture of the tax code’s impact on equity. For example, as previously mentioned, the child tax credit when evaluated individually may not be horizontally equitable at low incomes. Based on this analysis, increasing refundability of the credit could make the credit more horizontally equitable for some low-income families. However, prior CRS analysis suggests that after making adjustments for a family’s ability to pay based on family size, the totality of child tax benefits results in a tax system that is disproportionately generous at lower income levels to larger as opposed to smaller families.¹⁵ In this broader context, expanding refundability of the child tax credit could exacerbate horizontal inequities.

Efficiency (Behavioral Effects) of the Child Tax Credit

Economists may also analyze tax provisions in terms of whether a tax provision results in more or less of a good being produced or consumed. Subsidies, which lower the prices of goods, theoretically result in more of a good being consumed and produced. The current structure of the child tax credit subsidizes both low-wage work (by the earned income formula) and children (by the \$1,000 per child aspect of the provision). However, there is currently very little substantive research evaluating the impact of the child tax credit on taxpayer behavior.

Impact on Work Choices

The child tax credit’s current refundability structure creates a wage subsidy for some low-income families, suggesting it may affect work decisions. For eligible families with sufficiently low income, the child tax credit gives families 15 cents for every dollar of earnings above \$3,000. Economic theory suggests that increasing the price of labor (the wage) among low-income workers will have the overall effect of encouraging them to work more.¹⁶ In practice, however, it

¹³ In certain cases, primarily among certain low- and high-income families, the credit is more likely to violate this interpretation of horizontal equity. Among low-income families, the amount of the child tax credit is primarily a function of a family’s earnings, not the number of children. Hence, for low-income families, the credit may not increase as the number of children does and is not horizontally equitable. For example, a family with two children and \$15,000 in earnings will be able to claim \$1,800 of child tax credits. If their income remains unchanged and they have an additional child, the maximum of the credit will remain \$1,800. Among high-income families, the credit phases-out until it can no longer be claimed.

¹⁴ For more information see U.S. Congress, Joint Committee on Taxation, JCS-23-97, *General Explanation of Tax Legislation Enacted in 1997*, December 17, 1997, pp. 6-7.

¹⁵ For more information on this research, see CRS Report RL33755, *Federal Income Tax Treatment of the Family*, by (name redacted) .

¹⁶ A wage subsidy will have two conflicting effects on the amount of labor supplied by a worker. The first effect will be (continued...)

is very difficult to isolate the labor market effects of the child tax credit from the similarly structured but larger subsidy provided by the EITC, since both credits simultaneously subsidize earnings over the same income range.

Impact on Having Children

The child tax credit is unlikely to have a significant impact on inducing families to have additional children. While the child tax credit reduces the cost of a child, the expenses incurred from having children greatly exceed the value of the credit for most taxpayers. A government report estimates that the annual cost of raising a child in a middle-income family ranged from \$11,650 to \$13,530.¹⁷ In addition, families choose to have children for a variety of factors that are not motivated by economics, including the happiness and fulfillment that children may bring them.

Complexity of Administering Child-Related Tax Benefits

In a 2010 report to Congress, the IRS Taxpayer Advocate identified the complexity of the current tax code as the most serious problem facing taxpayers.¹⁸ Tax policies, including those targeted toward families with children, are currently structured very differently, adding to the complexity of the tax code.¹⁹ For example, a single parent with a 16-year-old child and income of \$20,000 in 2010 will be eligible for a \$1,000 child tax credit, a \$3,650 dependent exemption for that child (which lowers their tax liability by \$548), and \$2,487 of EITC. In 2011, when the child is 17, the single parent will be ineligible for the child tax credit, but remain eligible for the dependent exemption (which equals \$3,700 in 2011 and will lower their tax bill by \$555) and approximately \$2,598 of EITC. The amount of these tax benefits will also change if the parent marries (which can change their tax liability), has an additional child, or their income changes (which changes the value of the child tax credit and EITC). Tax complexity associated with child-related tax provisions is particularly burdensome for lower-income families. Complexity reduces utilization rates among eligible populations and reduces the value of the benefits among those who do claim them, because they often rely on a paid preparer for assistance. Complexity can thus undermine the ultimate goal of policymakers, whether it be behavioral changes or increased equity.

(...continued)

to encourage the worker to work more because they are paid more (“the substitution effect”). The second effect will be to encourage the worker to work less because they can achieve the same income level with less work hours (“the income effect”). Evidence suggests that for low-income workers, the income effect is much smaller than the substitution effect, meaning a wage subsidy should increase labor-market participation for those eligible for the refundable portion of the credit. For more information on the impact of taxes and subsidies on labor supply see CRS Report RL31949, *Issues in Dynamic Revenue Estimating*, by (name redacted).

¹⁷ Mark Lino, *Expenditures on Children by Families, 2009*, U.S. Department of Agriculture, Center for Nutrition Policy and Promotion., June 2010, <http://www.cnpp.usda.gov/Publications/CRC/crc2009.pdf>.

¹⁸ National Taxpayer Advocate, *2010 Annual Report to Congress*, December 31, 2010.

¹⁹ For example, child tax benefits have different phase-in and phase-out levels and eligibility requirements from the EITC and the dependent exemption. For more information on the definition of a qualifying child for different tax benefits, see CRS Report RS22016, *Tax Benefits for Families: Changes in the Definition of a Child*, by (name redacted)

Policy Options: Changing Other Parameters of the Credit

Policymakers may consider modifying the current parameters of the child tax credit. The impact of modifications will depend on a taxpayer's income. Modifications that benefit middle- and upper-middle-income taxpayers include increasing the amount of the credit per child and increasing the phase-out thresholds. Modifications that benefit lower-income taxpayers include reducing the refundability threshold or increasing the current refundability rate. These changes will likely have significant budgetary cost that policymakers may consider alongside policy goals they may achieve by increasing this tax benefit.

Increasing the Maximum Amount of the Credit

Increasing the maximum amount of credit per child, either by a fixed amount or proportional to inflation, would be most valuable to families whose income does not exceed the phase-out limits. However, for lower-income families—those with income tax liability less than the value of their credit—increasing the maximum amount of the credit will be valuable insofar as they can claim it as a refund using the earned income formula. If their earnings are sufficiently low, they may not be able to benefit from increasing the maximum amount of the credit. For example, if the child tax credit was doubled to \$2,000 per child, and all other aspects of the credit remained the same as current law, a family with two children would need earnings of at least \$29,667 to claim the full credit if the maximum credit value doubled. Currently the minimum amount of earnings needed to claim the full credit for two children is \$16,333.

Policymakers could also choose to increase the value of the credit by indexing it to inflation. If the \$500 per child tax credit in 1998 had been indexed for inflation using the Consumer Price Index (CPI), it would be \$693.14 in 2011 dollars. If the \$1,000 child tax credit in effect in 2003 were indexed to the CPI it would be \$1,228.07 in 2011 dollars. Increasing the amount of the credit based on inflation will not benefit certain lower-income taxpayers whose earnings tend to grow more slowly than inflation.²⁰

Reducing the Refundability Earnings Threshold and Increasing the Refundability Rate

Among lower-income taxpayers, whose tax liability is less than the value of their child tax credit, the most relevant parameters of the child tax credits are those that affect refundability. Lowering the refundability threshold (currently set at \$3,000) and increasing the refundability rate (currently 15%) would result in more families with low earnings being eligible to receive the credit or a larger credit. Under current law, a family with two children must earn \$16,333 to be eligible to receive \$2,000 in child tax credits as a refund. If the refundability threshold was lowered to zero (and all other parameters remained the same), this same family would need earnings of \$13,333 to receive the full \$2,000 in child tax credits as a refund. Economic modeling of this scenario indicates that roughly 95% of the benefit resulting from reducing the child tax

²⁰ Historical data suggest that the income of lower-income Americans increases much more slowly than prices do. U.S. Census Bureau, *Income Statistics for Families: Table F-3. Mean Income Received by Each Fifth and Top 5 Percent of Families*, <http://www.census.gov/hhes/www/income/data/historical/families/index.html> and Bureau of Labor Statistics, *Inflation Calculator*, <http://data.bls.gov/cgi-bin/cpicalc.pl>.

credit refundability threshold to zero would go to taxpayers with cash income levels below \$30,000. Nearly half of the benefit, 46%, would go to taxpayers with cash income below \$10,000.

Distribution of Benefit from Increasing the Refundability Rate to 40%, 2011²¹

Cash Income Level (2011 dollars)	Share of Benefit
Less than \$10,000	35.2%
\$10,000-\$20,000	44.3%
\$20,000-\$30,000	14.3%
\$30,000-\$40,000	3.1%
More than \$40,000	2.6%

Source: Tax Policy Center, Table T11-0128, May 26, 2011.

On the other hand, if the refundability rate were increased to 100% (meaning for every dollar a family earned above the \$3,000 threshold, they received \$1 of refundable credit), this same family would need earnings of \$5,000 to receive the full \$2,000 in child tax credits. Alternatively, if the refundability rate were the same as the refundability rate of the EITC for a family with two children (40%), this family would need earnings of \$8,000 to receive the full value of the child tax credit.²² Increasing the refundability rate and keeping the refundability threshold the same as current law would result in certain low-income households that already receive the

child tax credit being eligible for a larger refundable credit. However, it would not provide any benefit to households with earnings below the refundability threshold.

Economic modeling of a 40% refundability rate suggests that approximately 94% of the tax benefits associated with increasing the refundability rate would benefit taxpayers with cash income levels under \$30,000. The greatest share of the tax benefit would go to taxpayers with cash income between \$10,000 and \$20,000, because their income level is significantly above the \$3,000 refundability threshold such that they can benefit from the increased refundability rate.

Changing the refundable portion of the credit by changing the refundability threshold or refundability rate primarily affects lower-income families for whom the refundable portion is often the key component of the credit. Approximately 80% of the benefit that arises from reducing the refundability threshold to zero or raising the refundability rate to 40% would go to families making less than \$20,000.

Distribution of Benefit from Reducing the Refundability Threshold to Zero, 2011²³

Cash Income Level (2011 dollars)	Share of Benefit
Less than \$10,000	46.0%
\$10,000-\$20,000	36.8%
\$20,000-\$30,000	11.7%
\$30,000-\$40,000	2.9%
More than \$40,000	2.0%

Source: Tax Policy Center, Table T11-0126, May 26, 2011.

²¹ This model, created by the Tax Policy Center (TPC), assumes current law as the baseline (i.e., the 15% refundability rate, \$1,000 credit per child, and \$3,000 refundability threshold).

²² For a family with two eligible children, increasing the refundability rate from the current level of 15% to 16% (while keeping the refundability threshold fixed at \$3,000) will reduce the minimum earnings needed to qualify for \$2,000 in child tax credits by \$833 from \$16,333 to \$15,500. However, the magnitude of this effect decreases as the refundability rate increases such that when the rate is raised from 99% to 100%, the level of minimum earnings needed to qualify for \$2,000 in credits falls from \$5,020 to \$5,000, a difference of \$20.

²³ This model assumes current law as the baseline (i.e., the 15% refundability rate, \$1,000 credit per child, and \$3,000 refundability threshold).

Increasing the Phase-out Limits of the Credit

Since the child tax credit was created in 1997, the credit has phased out for married taxpayers filing joint returns whose income²⁴ exceeds \$110,000 (\$55,000 for married couples filing separately) and for head of household filers with income above \$75,000. These phase-out thresholds are not indexed for inflation. If they had been indexed for inflation, they would have been 41% higher in 2012 than they were in 1998.²⁵ Over the years, the real value of these thresholds has decreased due to inflation, pushing more taxpayers into the phase-out range and reducing the amount of the child tax credit these taxpayers are eligible for. One policy option would be a one-time increase in the phase-out limits. Another policy option would be indexing the amounts in accordance with established procedures applied to other elements of the tax system, such as personal exemption and the standard deduction. Finally, some combination of the two approaches is also possible.

Increasing the AGI phase-out limits for the child tax credit would significantly expand the number of taxpayers who would be eligible to receive the child tax credit. Such a change may be particularly important for taxpayers who live in areas with a high cost of living, where both incomes and costs of rearing children may be correspondingly higher. It would also increase the budgetary cost of the program. Critics of this change may question the necessity of such relief. The empirical evidence suggests that the overall federal tax burden, as well as the federal individual income tax burden, fell for most households with children between 1979 and 2007.²⁶ Legislation enacted since 2007 to address economic insecurity resulting from the recent recession, including ARRA and the 2010 Tax Act, has further reduced taxes for many Americans through the enactment of new provisions like the Making Work Pay tax credit (which expired at the end of 2010),²⁷ payroll tax reduction, and the extension of EGTRRA's individual income tax provisions.²⁸

Policy Options: Reducing Complexity by Creating Uniform Child Benefits

Tax benefits compose a substantial proportion of the federal benefits that go to families with children. According to one study, of the five largest spending and tax programs on children, three are tax provisions—the child tax credit (number two), the EITC (number three), and the exemption for dependents (number four). Only Medicaid spending on children is higher.²⁹ The refundable portions of the EITC and child tax credit are structured to direct assistance to low-

²⁴ The phase-out limits are based on modified adjusted gross income (MAGI). With respect to the child tax credit, modified adjusted gross income (MAGI) is equal to AGI increased by foreign earned income of U.S. Citizens abroad, including income earned in Guam, American Samoa, the Northern Mariana Islands, and Puerto Rico.

²⁵ Based on price inflation calculations using the Bureau of Labor Statistics (BLS) inflation calculator, http://www.bls.gov/data/inflation_calculator.htm.

²⁶ Tax Policy Center, *Historical Effective Federal Tax Rates for Households with Children*, April 8, 2011, <http://www.taxpolicycenter.org/taxfacts/displayafact.cfm?Docid=459>.

²⁷ For more information on the Making Work Pay tax credit, see CRS Report R40969, *Withholding of Income Taxes and the Making Work Pay Tax Credit*, by (name redacted).

²⁸ The individual income tax provisions of EGTRRA reduced marginal income tax rates, reduced taxes on capital gains/dividend income, and provided marriage penalty tax relief.

²⁹ Julie Isaacs, C. Eugene Steurle, and Stephanie Rennane, et al., *Kids Share 2010: Report on federal expenditures on children through 2009*, Urban Institute, July 2010, Figure 3.

income families, and could reflect an increased interest by Congress in providing financial assistance to low-income workers through the tax code as opposed to transfer payments. In fact, the refundable portion of the EITC and child tax credit ranked fourth and sixth respectively in outlays among programs targeted toward low-income populations.³⁰

Some experts believe that the different eligibility rules for different child-related tax benefits make it increasingly difficult for taxpayers to claim these benefits. This complexity results in direct financial costs for taxpayers, who may choose to use paid preparers instead of preparing their returns themselves. According to IRS data, more than half of taxpayers with income below \$50,000 use paid tax preparers.³¹ President Bush's 2005 Presidential Panel on Federal Tax Reform summarized the complexity of claiming the child tax credit, "Figuring out whether you can claim the child tax credit ... requires the skills of a professional sleuth: You need to complete eight lines on a tax form, perform up to five calculations, and fill out as many as three other forms or schedules."³²

Much of the complexity in child-related tax benefits is related to differing definitions of what constitutes an eligible child, specifically the different age limits of qualifying children among the different tax benefits.³³ The child tax credit is limited to children under 17 years old, unlike other tax benefits, such as the dependent exemption, that can be claimed by taxpayers with children as old as 23. Increasing the age of eligible children would have significant budgetary costs. One study estimated that expanding the child tax credit to 17- and 18-year-olds would reduce revenues by \$6.1 billion in 2011.³⁴ Beyond the differing eligibility definitions used for different child tax benefits, the tax benefits themselves are structured differently. The interaction of these different structures has led to middle-income families receiving a smaller total benefit than some higher-income taxpayers, as illustrated in the **Figure 1**.³⁵

President Bush's 2005 Panel on Federal Tax Reform³⁶ recommended simplifying the tax code, including child tax benefits, but to date these proposals have not been adopted. Specifically, the panel recommended consolidating the standard deduction, personal exemption, and child tax credit into one tax benefit, a family tax credit.³⁷

³⁰ See Table 2 in CRS Report R41625, *Federal Benefits and Services for People with Low Income: Programs, Policy, and Spending, FY2008-FY2009*, by (name redacted).

³¹ Internal Revenue Service, SOI Tax Stats., Table 2, Individual Income and Tax Data, by State and Size of Adjusted Gross Income, Tax Year 2007.

³² The President's Advisory Panel on Federal Tax Reform, *Simple, Fair, and Pro-Growth: Proposals to Fix America's Tax System*, November 2005, p. 2.

³³ For more information on the definition of a child for child-related tax benefits, see CRS Report RS22016, *Tax Benefits for Families: Changes in the Definition of a Child*, by (name redacted).

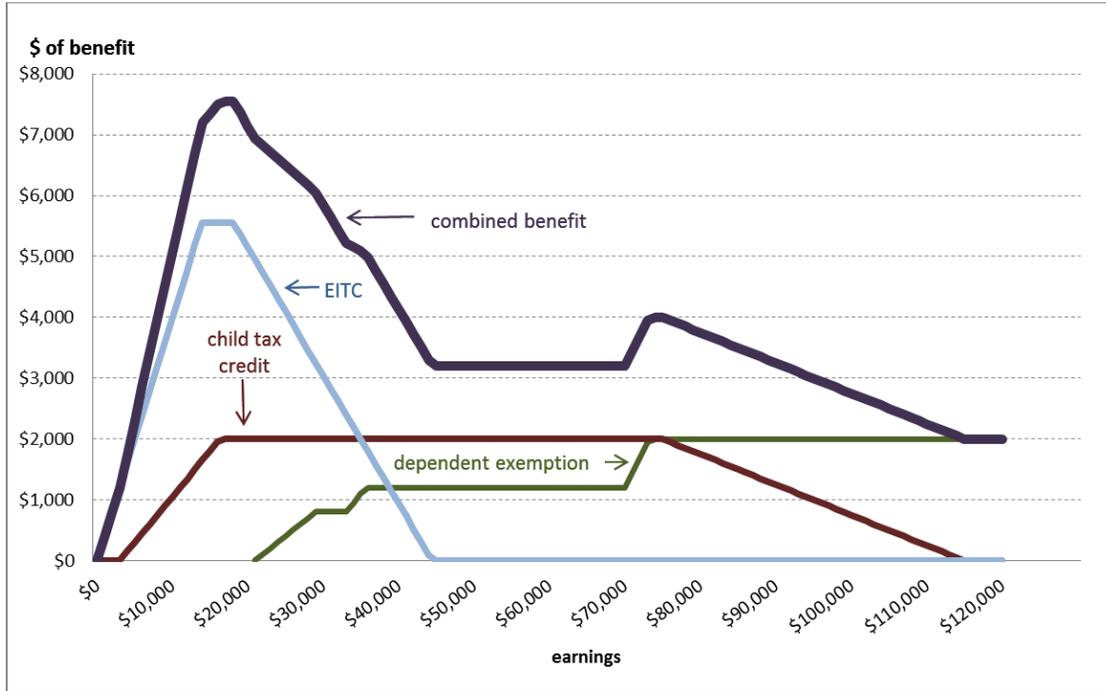
³⁴ For more information on proposals to create a uniform age for child-related tax benefits, see Elaine Maag, "Tax Simplification: Clarifying Work, Child, and Education Incentives," *Tax Notes*, March 28, 2011, pp. 1587-1596.

³⁵ This figure does not represent the full array of child-related tax benefits that may be available to a family. For example, it does not include the child and dependent care tax credit, or education-related tax benefits like the American Opportunity Tax Credit.

³⁶ The President's Advisory Panel on Federal Tax Reform, *Simple, Fair, and Pro-Growth: Proposals to Fix America's Tax System*, November 2005.

³⁷ *Ibid.*, pp. 61.

Figure I. Amount of Child Tax Credit by Income Level, 2015 Single Parent with Two Children Filing as Head of Household



Notes: EITC refers to the Earned Income Tax Credit

More than five years later, some experts have again proposed reducing the complexity of these provisions and making their benefits more transparent by combining child tax benefits into a uniform child credit.³⁸ While such a proposal could significantly simplify eligibility rules as well as the calculation of the benefit, policymakers would need to consider the competing functions of current tax benefits as they create a uniform benefit. For example, some benefits like the EITC and refundable portion of the child tax credit subsidize earnings, whereas the nonrefundable portion of the child tax credit provides a uniform benefit per child for taxpayers with sufficient earnings that do not exceed the phase-out level. Because of this distinction, policymakers might consider creating different uniform credits based on the purpose of the credit, whether the purpose of the credit is to subsidize earnings of low-income taxpayers or provide a benefit for having children.

³⁸ For more information on proposals to create a Uniform Child Credit, see Elaine Maag, “Simplicity: Considerations in Designing a Unified Child Credit,” *National Tax Journal*, vol. 63, no. 4 (Part 1) (December 2010), pp. 765-780.

Appendix. The Impact of the EGTRRA and ARRA Changes to the Child Tax Credit

The most recent changes to the child tax credit were made by the Economic Growth and Tax Relief Reconciliation Act of 2001 (EGTRRA; P.L. 107-16) and the American Recovery and Reinvestment Act of 2009 (ARRA; P.L. 111-5). These changes, while once temporary, are now permanent. Policymakers interested in potentially modifying the child tax credit in the future may be interested in understanding the economic impact of these past legislative changes.

The data indicate that while the ARRA modifications did provide relatively more benefit to lower-income taxpayers, the EGTRRA changes benefited more children. The analysis will then turn to the implications of extending the ARRA modifications, both on the number of children who will be affected as well as the budgetary cost, with similar data on the impact of the EGTRRA changes provided for comparison.

Impact of EGTRRA Versus ARRA Modifications to the Credit

EGTRRA and ARRA substantially changed the structure of the child tax credit. EGTRRA increased the value of the credit from \$500 per child to \$1,000 per child and made the credit partially refundable using the earned income formula. At the end of 2012, ATRA made these changes permanent. ARRA expanded upon EGTRRA's changes to refundability by lowering the earnings threshold of the earned income formula to \$3,000. The Protecting Americans from Tax Hikes (PATH) Act (Division Q of P.L. 114-113) made the \$3,000 threshold permanent.

Distributional Impact

A distributional impact of a tax benefit indicates the share of a tax benefit received by taxpayers at different income levels. **Table A-1** illustrates the different impacts of the EGTRRA and ARRA provisions on taxpayers based on cash income. Overall, approximately 60% of the child tax benefits from EGTRRA went to taxpayers with cash income above \$50,000. By contrast, 70.5% of child tax benefits under ARRA went to taxpayers with cash income of less than \$20,000.

Table A-1. Distribution of EGTRRA and ARRA Child Tax Credit Benefits, 2011

Cash Income (2009 dollars) ^a	EGTRRA		ARRA		Distribution of Tax Units
	Tax Benefit (billions)	Share of Total Benefit	Tax Benefit (billions)	Share of Total Benefit	
Less than \$10K	\$0.1	0.2%	\$1.5	18.0%	12.5%
\$10K to \$20K	\$1.4	4.5%	\$4.4	52.4%	16.5%
\$20K to \$30K	\$4.1	13.5%	\$1.9	22.7%	13.1%
\$30K to \$40K	\$3.9	12.7%	\$0.4	4.8%	10.3%
\$40K to \$50K	\$3.0	9.9%	\$0.1	1.5%	8.0%
\$50K to \$75K	\$6.0	19.7%	\$0.0	0.5%	13.1%
\$75K to \$100K	\$6.5	21.2%	\$0.0	0.2%	9.5%
\$100K to \$200K	\$5.5	18.1%	\$0.0	0.0%	11.9%
More than \$200k	\$0.1	0.2%	\$0.0	0.0%	4.3%

Cash Income (2009 dollars) ^a	EGTRRA		ARRA		Distribution of Tax Units
	Tax Benefit (billions)	Share of Total Benefit	Tax Benefit (billions)	Share of Total Benefit	
Total	\$29.6	100.0%	\$8.3	\$100.0%	100.0%

Source: CRS calculations using Tax Policy Center Tables T10-0007 and T10-0005, January 12, 2010.

Notes: Items may not sum to 100% due to rounding. Tax Units includes both filing and non-filing units but excludes those that are dependents of other tax units. Tax Benefit values indicate the total value of credit in terms of reduction in revenues and increase in outlays (from the refundable portion of the credit).

- a. Cash income includes wages and salaries, investment (taxable dividends, realized net capital gains) and business income as well as government transfer payments (social security, SSI, veterans benefits), employee contribution to tax-deferred retirement savings plans, and business income or loss.

In addition, after the EGTRRA modification went into effect, research indicates that qualifying Hispanic and African American households were less likely to receive the full value of the child tax credit than qualifying white households. Specifically, in 2005, when all the child tax credit provisions of EGTRRA were effective, 49.5% of households with qualifying African American children and 46.0% of households with qualifying Hispanic children were ineligible to receive the full credit due to low incomes, in contrast to 18.1% of households with white children.³⁹

Estimates of the distributional impact on tax filers of the EGTRRA and ARRA provisions are currently unavailable, but can reasonably be expected to approximate the distribution in **Table A-1**. Recent data (provided in **Figure A-1**) do, however, provide information on the impact in 2013 of these modifications in terms of the number of children who benefit. (Although the data are presented in terms of the number of children who benefit, the tax credit is actually claimed by their parents, ostensibly for children’s benefit.) These data provide another way to analyze the impact of the EGTRRA and ARRA changes to the credit.

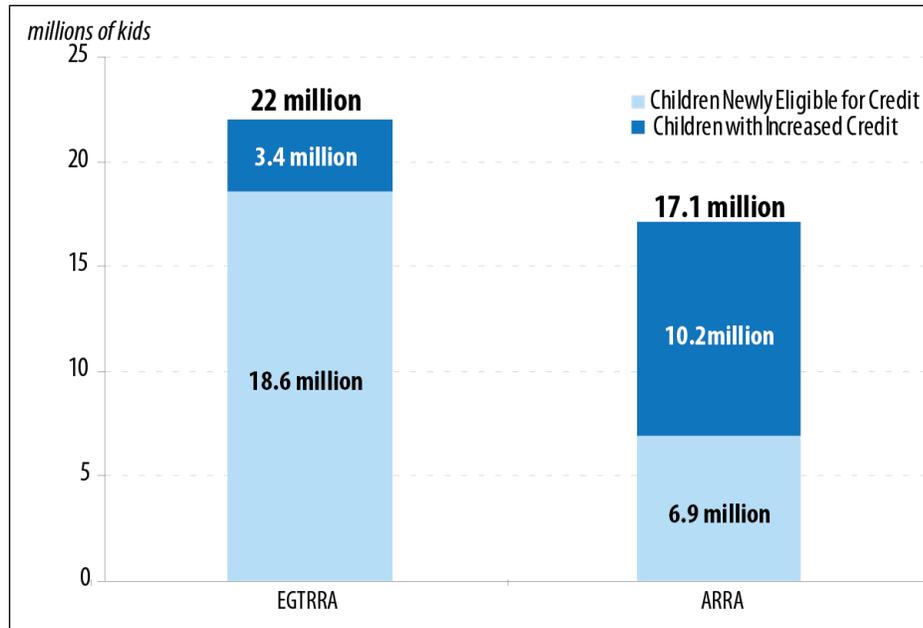
Number of Children Affected by EGTRRA Versus ARRA Changes

According to estimates provided by the Tax Policy Center, both the EGTRRA and ARRA changes to the child tax credit are estimated to have a significant impact on the benefits received by millions of children, as illustrated in **Figure A-1**.⁴⁰ In 2013, the EGTRRA provisions are estimated to result in 18.6 million children being eligible for the credit who otherwise would not receive this tax benefit if the EGTRRA changes had expired. In addition, 3.4 million children in 2013 are estimated receive a larger credit as a result of the EGTRRA provisions.

³⁹ For more information see Leonard Burman and Laura Wheaton, “Who Gets the Child Tax Credit,” *Tax Notes*, October 17, 2005, pp. 387-393.

⁴⁰ Data in this figure represent the number of children who would benefit from the extension of EGTRRA and ARRA child tax credit provisions in 2013.

Figure A-1. Number of Children Affected by an Extension of EGTRRA and ARRA Child Tax Credit Provisions, 2013



Source: Tax Policy Center, Table T11-0125, May 24, 2011.

Notes: The baseline assumed the expiration at the end of 2012 of both the EGTRRA and ARRA modifications to the child tax credit. Hence, the term “newly eligible” refers to those who were scheduled to lose the benefit entirely in 2013. However, both these changes were extended by the American Taxpayer Relief Act of 2012 (P.L. 112-240; ATRA). EGTRRA is the Economic Growth and Tax and Tax Relief Reconciliation Act of 2001 (P.L. 107-16) and ARRA is the American Recovery and Reinvestment Act of 2009 (P.L. 111-5).

The extension of the ARRA modifications is estimated to have a lower overall benefit in terms of the impact on children.⁴¹ Approximately 17.1 million children in 2013 will benefit from the extension of ARRA child tax credit provisions as opposed to 22 million children that benefit from the EGTRRA provisions. The majority of children who will benefit from the ARRA modification would receive a larger credit (10.2 million children), while fewer will be newly eligible (6.9 million children).

Cost of Extending EGTRRA and ARRA Modifications to the Credit

Historical data provide estimates of the comparative costs associated with the EGTRRA and ARRA modifications, indicating that a majority of the cost is due to the EGTRRA provisions. The Joint Committee on Taxation’s revenue estimates for the 2010 Tax Act isolated the costs of extending the EGTRRA and ARRA provisions for two years (2011 and 2012) and indicated that 78% of the cost of these policies was associated with the extension of the EGTRRA provisions. Specifically, the cost of the two-year extension of EGTRRA child tax credit provisions was \$71.7 billion over 10 years (2011-2020), whereas the cost of extending the ARRA provisions was \$19.7 billion over the same period.⁴²

⁴¹The baseline for the ARRA estimate assumes the EGTRRA changes are extended. Hence, these figures isolate the impact of the ARRA modifications to the child tax credit from changes made by EGTRRA.

⁴² This includes the budgetary impact of the outlays attributed to the refundable portion of the credit.

Of the total annual cost of the child tax credit in 2012, approximately 60% was a result of the EGTRRA changes, 16% was a result of ARRA modification, and 24% was a result of the underlying parameters of the pre-EGTRRA and ARRA credit.

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