The Work Incentive and Employment Effects of Eliminating the Child Tax Credit's Annual Income Requirement

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Abstract

Senior House and Senate tax committee leaders agreed to a framework for modifying the Child Tax Credit on January 16, 2024. The most consequential reform would eliminate the Child Tax Credit's annual income requirement by allowing individuals to calculate their eligibility using their current or prior year's income, whichever year maximizes the family's benefit. We show that for the vast majority of families who work regularly, this reform would—every other year—eliminate the Child Tax Credit's work incentive and lead over 700,000 parents to stop working. For the minority of families who do not work in any given two-year period, the Child Tax Credit's work incentive would be doubled every other year and lead 395,000 parents to start working. We also discuss how the reform would affect the incentive to work more or fewer hours. We conclude that this reform would have important impacts on the labor market that require further study before being considered for passage by Congress.

1. Introduction

The Child Tax Credit (CTC) is a partially refundable tax credit that encourages work and supports families with children. In its current form, the CTC provides families a maximum benefit of $2,000 per dependent child under age 17. Families with an insufficient federal income tax liability to qualify for the maximum credit on behalf of each of their dependent children can still qualify for the refundable portion of the CTC, currently up to $1,600 per dependent child. Families must have earnings during the tax year in order to qualify for the refundable portion of the CTC. For every dollar earned above $2,500, the family receives a $0.15 CTC benefit. This is often referred to as the CTC's work requirement, because a family with no earnings is not eligible to receive the refundable portion of the CTC (and is unlikely to qualify for the non-refundable CTC either unless they have substantial taxable unearned income).

In 2021, motivated as pandemic-related relief, the American Rescue Plan Act (ARPA) modified the CTC in substantial ways for one year only (117th Congress 2021). First, the maximum CTC benefit was increased to $3,600 per child aged 0 to 5 and $3,000 per child aged 6 to 17.[1] Second, the CTC was paid in monthly allotments of $300 (or $250 for older children) from July through December of 2021, with the remaining half of the increased annual credit amount paid when families filed their taxes in early 2022. Third, the entire credit was made fully refundable and the work requirement was eliminated. This meant that families with no earnings and no tax liability received the same (maximum) CTC as families that did have earnings and a tax liability.

The elimination of the CTC's minimum earnings requirement and phase-in during 2021 weakened the incentive for low-income parents to work because instead of requiring earnings to receive the credit, parents could receive the full credit regardless of their work effort. Because this policy change was enacted partway into 2021 and was temporary, any negative employment effects associated with the policy were likely dampened relative to a permanent version of the policy (for a discussion, see Corinth et al. 2021). Nonetheless, some studies suggest that even this temporary policy led to potentially important declines in employment among single mothers. Using monthly Current Population Survey (CPS) data on employment, Han, Meyer, and Sullivan (2021) find that among parents with a high school education or less, employment levels of those

[1] Children aged 17 were also newly made available for the full credit in 2021, instead of only being eligible for the $500 credit for other dependents under current law.

with children relative to those without children declined after the first advanced CTC payments were sent and did not recover until after the final payments were distributed. They estimated that approximately 400,000 parents with a high school education or less left employment due to the changes to the CTC in 2021. Similarly, Pac and Berger (2024) estimate that between 344,000 and 495,000 parents exited employment due to the 2021 policy. Other studies found smaller or no impacts, which could have resulted from focusing on different samples of parents or focusing on when payments were first distributed rather than when the policy was enacted (e.g., Ananat et al. 2021; Hamilton et al. 2021). In any case, the long-run employment effects of a permanent policy would be expected to be larger, with one study estimating that 1.5 million parents would exit employment, once accounting for the change in work incentives and relying on more accurate data than previous studies (Corinth et al. 2021). Since the expiration of the 2021 version of the CTC, several attempts have been made to restore at least some elements of the policy, but so far, such attempts have failed.

Also during the pandemic, starting with tax year 2020, the annual income requirement for both the CTC and the Earned Income Tax Credit (EITC) were temporarily modified. In the December 2020 Consolidated Appropriations Act (CAA), Congress created a "temporary special rule," which provided that tax filers could use their 2019 earnings to claim the CTC and EITC for 2020 (116th Congress 2020). The ARPA passed in March 2021 allowed tax filers to continue using their pre-pandemic 2019 earnings to claim the EITC for 2021 as well; similar treatment was not required for the CTC since as already noted the maximum credit was paid to families regardless of their tax liability and earnings. Pandemic era exceptions to the annual income requirement follow a precedent set during natural disasters and other emergencies for these tax credits. As recently explained by the Internal Revenue Service Taxpayer Advocate, exceptions to the annual income requirement for claiming the EITC have occurred when the President declared a disaster and Congress "passed legislation to give taxpayers who earn less income in the disaster year than the prior year the option of using their prior-year income to calculate their EITC benefits" (Internal Revenue Service 2022). For example, Congress responded that way when Hurricane Katrina struck in 2005, allowing adults directly affected by the hurricane to use their 2004 earnings to claim the EITC and CTC (109th Congress 2005).

Those recent pandemic exceptions have expired, but some in Congress have proposed reviving this treatment permanently—that is, even outside of disasters and national emergencies. For example, under the *Working Families Tax Relief Act*, introduced in June 2023 by Senator Sherrod Brown (D-OH) and other senior Democratic senators, the pandemic lookback policy for the EITC would be made permanent (Brown 2023). That is, if an individual's current year earnings are below their earnings in the prior year, they could use the prior year's earnings when applying for the EITC. Notably, the same legislation proposes making the CTC fully refundable and removing the earnings requirement altogether.

A new attempt to modify the CTC was announced on January 16, 2024 by Senate and House committee leaders. The modifications include increasing the maximum benefit with inflation each year, increasing the maximum amount of the refundable portion of the CTC (the portion that requires earnings but not a tax liability) to $1,800 per child, and increasing the phase-in rate of the refundable portion of the CTC for families with more than one child, to 30% for families with two children, 45% for families with three children, and an additional 15% for each additional child. These changes would increase federal outlays on the CTC and modestly increase extensive margin work incentives (the decision of whether to work at all) since the CTC conditional on any level of earnings would be higher, while effects on intensive margin work incentives (the decision of how many hours to work) would be mixed. The changes would be effective through 2025, anticipating future efforts to extend the policies.

However, a final—and the most consequential—modification would substantially weaken the incentive to work by allowing families to use either of the prior two years of income to determine their CTC amount. Namely, this modification, effective for tax years 2024 and 2025, would calculate the CTC based on earnings and tax liability in either the current tax year or the previous tax year, whichever results in a higher CTC. As a result, the CTC would be received even for years in which families have zero earnings, as long as they had earnings in the previous year, effectively eliminating the CTC's work requirement every other year. In a sense, this reform would represent a middle point between the current CTC which requires work every year and the ARPA CTC in 2021 which did not require work at all. While the extent to which parents would ultimately switch between work and non-work each year over the long run is unclear, the increased incentive to do so would be substantial and warrants careful analysis. Notably, claims

about the magnitude of poverty reduction resulting from the proposed CTC legislation appear to ignore the work incentive changes imbedded in the policy (Cox et al. 2024).

This paper analyzes the work incentive and employment consequences of eliminating the CTC's annual income requirement. We do so within days of the proposed law's announcement because the consequences are important, complicated, and not well understood, and because some legislators have voiced an intention to pass and enact this proposed legislation within weeks. A policy change of this magnitude warrants much more detailed analysis of its effects and a more informed policy debate. Our analysis represents a first step in that process, and should motivate future studies that provide more refined estimates of the effects of both the elimination of the CTC's annual income requirement as well as the other proposed reforms. That process requires substantially more time before such significant changes are seriously considered by Congress for potential enactment into law.

The paper proceeds as follow. Section 2 shows how eliminating the annual income requirement affects the incentive to work, both the decision to work at all and the number of hours to work. Section 3 estimates the number of parents whose work incentives would be strengthened or weakened and by how much, and the effect on employment. Section 4 concludes.

2. Change in work incentives

This section describes how eliminating the CTC's annual income requirement would change work incentives on the extensive margin, the decision of whether to work at all, and the intensive margin, the decision of how many hours to work conditional on working in the first place.

Extensive margin

We first consider how eliminating the CTC's annual income requirement would affect the incentive to participate in work during a given year.

Under current law, the CTC amount for which a family qualifies depends on their earnings and federal income tax liability in the current tax year. For example, a family's 2024 CTC benefit will depend on their earnings and federal income tax liability in 2024. A family that has no earnings and no tax liability in 2024 would receive no CTC for the 2024 tax year. The newly proposed bill would calculate the CTC differently. The family's 2024 tax year CTC benefit

would be calculated as the maximum of (1) the CTC calculated using the family's 2023 income, and (2) the CTC calculated using the family's 2024 income. Thus, a family with no earnings and no tax liability in 2024 could still receive the CTC for tax year 2024 if they had sufficient earnings or tax liability in 2023.

As an example, consider a single-parent family with two qualifying children that earns $40,000 in 2023, qualifying the family for the maximum CTC benefit of $4,000 in 2023 (putting aside the other proposed changes to the CTC). Under current law, the family would receive a $0 CTC in 2024 if the parent did not work that year. But under the proposed bill, the family would receive the full $4,000 in 2024 regardless of whether the parent works. This would substantially weaken the parent's incentive to work in 2024. Rather than facing a $4,000 incentive for working in 2024, she would receive the maximum CTC regardless of her work effort.

This example is laid out in detail in Table 1. It reports the CTC benefit a family receives in 2023 and 2024 depending on whether a parent works in neither year, in 2023 only, or in both 2023 and 2024. While 2023 employment decisions have already been realized, for the sake of this example we allow 2023 decisions to be affected by the policy change, in order to illustrate the incentive changes induced by the policy over a general two-year period. We also assume the elimination of the two-year income requirement is perceived by parents as a permanent change that would be continued after tax year 2025. For the example, we consider a parent with two dependent children, who if she works, earns $40,000 during the year. We see that under current law, the total CTC across both years is $0 when working neither year, $4,000 when working only in 2023, and $8,000 when working in both 2023 and 2024. Under the proposed elimination of the annual income requirement, the total CTC across both years is $0 when working neither year, $8,000 when working only in 2023, and $8,000 when working in both 2023 and 2024.

From this hypothetical example, we can see how eliminating the annual income requirement would affect the CTC work incentive.

First consider the decision of whether to work in 2023. Under current law, the family receives a CTC of $4,000 as a result of working in 2023. This work incentive is doubled under the proposed law because the family is guaranteed a CTC of $4,000 in each 2023 and 2024, a total of $8,000, as a result of working in 2023. Thus, tax units that currently do not work at all over a

two-year period would experience a greater incentive to work in the first year due to eliminating the annual income requirement.

Table 1. Child Tax Credit in 2023 and 2024 based on various work scenarios, under current law and proposed elimination of annual income requirement

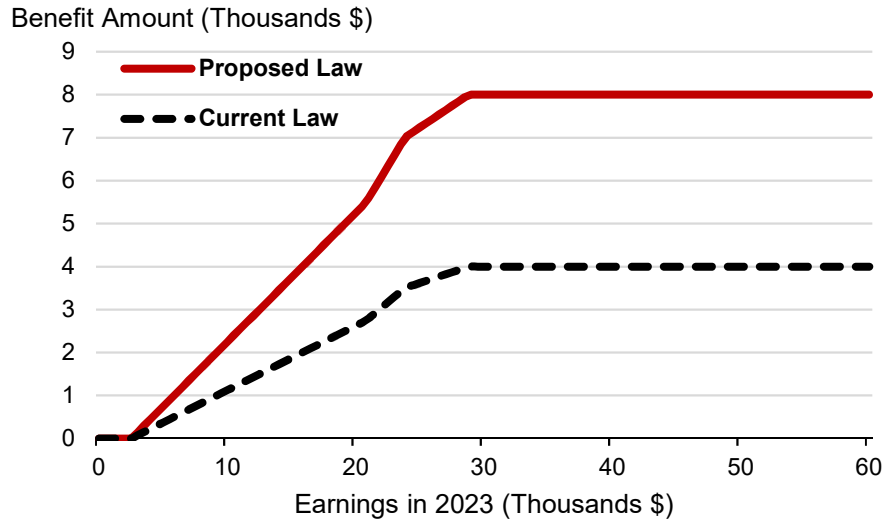
	Work in neither year	Work in 2023 only	Work in 2023 & 2024
Earnings in 2023	$0	$40,000	$40,000
Earnings in 2024	$0	$0	$40,000
Current law			
CTC in 2023	$0	$4,000	$4,000
CTC in 2024	$0	$0	$4,000
Total CTC in 2023 & 2024	**$0**	**$4,000**	**$8,000**
Proposed law: Elimination of annual income requirement			
CTC in 2023	$0	$4,000	$4,000
CTC in 2024	$0	$4,000	$4,000
Total CTC in 2023 & 2024	**$0**	**$8,000**	**$8,000**

Note: Tax unit is a single parent with two dependent children who earns $40,000 annually if she decides to work. Current law is tax law as of 2022 prior to any proposed modifications. Proposed law is for tax years 2023 and 2024 in which, starting in tax year 2024, the annual income requirement is replaced with a two-year income requirement, that provides the CTC benefit based on the current or prior tax year, whichever maximizes the CTC benefit. Other proposed CTC reforms are not incorporated.

Second consider the decision of whether to work in 2024, after having already worked in 2023. Under current law, the family receives a CTC of $4,000 as a result of working in 2024. This work incentive is eliminated under the proposed law because the family is already guaranteed the full CTC in 2024, based on its earnings in 2023. The family's 2025 CTC benefit would technically still be affected by its 2024 income, but under an optimal strategy the parent would only consider exiting employment every other year and so any income in 2024 would not affect her 2025 CTC benefit when taking as given her decision to work in 2025. Thus, tax units that currently work both years in a two-year period would experience a weakened incentive to continue working in the second year.

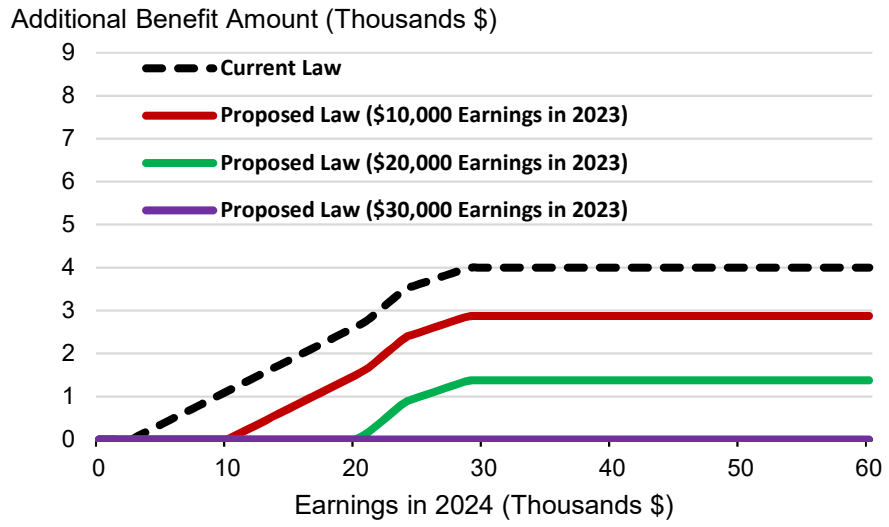
The doubling of the CTC work incentive in the first year, and the elimination of the CTC work incentive in the second year, apply to families with other earnings levels as well. In Figure 1 and Figure 2, we show how the proposed law would change work incentives for various earnings levels in 2023 and 2024, for a single parent with two children.

Figure 1. Total Child Tax Credit in 2023 and 2024 resulting directly from tax unit earnings in 2023



Note: Tax unit is a single parent with two dependent children. Taxable income is assumed to come only from earnings. Current law is tax law for 2023 prior to any proposed modifications. Proposed law is tax law for 2023 except that the annual income requirement is replaced with a two-year income requirement, that provides the CTC benefit based on either 2023 or 2024 income, whichever maximizes the CTC benefit. Other proposed CTC reforms are not incorporated.

Figure 2. Child Tax Credit in 2024 resulting directly from tax unit earnings in 2024, given tax unit earnings of various levels in 2023



Note: Tax unit is a single parent with two dependent children. Taxable income is assumed to come only from earnings. Current law is tax law for 2023 prior to any proposed modifications. Proposed law is tax law for 2023 except that the annual income requirement is replaced with a two-year income requirement, that provides the CTC benefit based on either 2023 or 2024 income, whichever maximizes the CTC benefit. Other proposed CTC reforms are not incorporated.

As shown in Figure 1, the CTC work incentive is doubled in 2023, because any given level of earnings in 2023 guarantees the tax unit the corresponding CTC for both 2023 and 2024. This encourages work among non-workers in 2023 without inducing current workers to exit the workforce. Then in 2024, the work incentive is smaller for tax units that worked in 2023. As shown in Figure 2, for tax units that had earnings of $30,000 or more in 2023, the CTC work incentive in 2024 is completely eliminated because they have already guaranteed the maximum benefit based on their 2023 earnings (note that they still receive the CTC in 2024, but that this amount does not depend on their 2024 earnings). Tax units that qualified for less than the maximum CTC in 2023 still face a positive work incentive from the CTC in 2024, but only if their 2024 earnings exceed their 2023 earnings. However, we would not generally expect tax units to seek to earn more in 2024 than in 2023, since under the new policy, the return to each hour of work in 2023 is higher. While wage growth over the life-cycle will of course lead hourly wages for a given worker to rise to some extent year-over-year, it is worth noting that a positive return to work can be maintained in 2024 only if 2023 earnings were less than $30,000, reflecting an hourly wage of $15 per hour when working full-time. Annual wage growth is therefore unlikely to create a significant work incentive in 2024 for most workers. Thus, the extensive margin work incentive is generally still eliminated in 2024 because the level of earnings each tax unit would be expected to receive if deciding to work would not result in any significant amount of additional CTC in 2024.

From this analysis, we conclude that eliminating the annual income requirement strengthens the incentive to work every other year, relative to either not working at all or working every year. Thus, we would expect families currently not working at all for multiple years at a time to increase their work effort, and the far larger number of families working every year to decrease their work effort. Parents currently working one year but not the next are not likely to increase or decrease their work effort. In the following section, we estimate the sizes of these three groups and their changes in extensive margin work incentives.

Intensive margin

In addition to changing the incentive to participate in work at all (the extensive margin), eliminating the annual income requirement would also change the incentive for some working parents to work additional hours (the intensive margin). A family receiving less than the

maximum CTC benefit under current law receives approximately $0.15 per additional dollar earned (after reaching the $2,500 minimum threshold).[2] But under the proposed policy, the family can earn an additional dollar and increase their CTC not only by $0.15 in the current year but also by $0.15 in the following year. Then in the following year, earning an additional dollar produces no additional CTC benefit at all. In this way, the proposed law incentivizes lower income parents to work more one year and less the following year in order to maximize their total CTC benefit for any given level of total work hours across a two-year period. This can be seen in Figure 1 and Figure 2, where the slope of the phase-in of CTC benefits with respect to 2023 earnings doubles, and where the slope of the phase-in of CTC benefits with respect to 2024 earnings falls to zero. While the latter is true only until 2024 earnings reach 2023 earnings, we would not expect tax units to seek to keep earnings in 2023 substantially below their 2024 level because earnings in 2023 are rewarded twice as much by the modified CTC.

Parents who work enough hours every year to receive the maximum CTC for their family see no change in the incentive to work an additional hour, *on the margin*. Under current law, they receive no additional CTC benefit for earning an additional dollar, because they already receive the maximum. Under the proposed law, they similarly receive no additional benefit for earning an additional dollar, because they are guaranteed to receive the maximum CTC benefit based on their previous year's earnings. However, the loss in CTC benefits they face for reducing their earnings by large amounts changes. Under current law, a family would lose a portion of their CTC benefit if they reduce their earnings sufficiently such that they no longer qualify for the maximum benefit. But under the proposed law, every other year they would not lose any of their CTC benefit for dramatically reducing their earnings because they receive the maximum benefit regardless.

[2] The refundable portion of the CTC phases in at a rate of $0.15 per dollar of earnings, starting at $2,500 of earned income, until the refundable portion reaches its cap of $1,600 times the number of dependent children under age 17. The non-refundable portion phases in at the marginal federal income tax rate (which is 10% in the lowest bracket) once the standard deduction has been reached. Thus, the CTC will typically phase in at a cumulative rate of $0.15, $0.10, or $0.25 per dollar of earnings depending on which of the refundable portion, the non-refundable portion, or both, are being phased in at a given level of earnings.

3. Employment effects

In this section we estimate how the elimination of the CTC's annual income requirement would affect work incentives and ultimately employment among parents, focusing on the extensive margin of whether to participate in work. Because the change in incentives depends on employment status over two consecutive years, we require a survey that tracks the employment, income, and tax information of the same families over time. To this end we use the 2019 and 2020 Current Population Survey Annual Social and Economic Supplement (CPS ASEC), which asks respondents to report on their income from calendar years 2018 and 2019 respectively, and surveys some of the same families in each of the two years.[3] The CPS ASEC is frequently used to simulate the effects of tax policy changes, including a number of studies on the effects of the changes to the CTC in 2021 (e.g., Collyer et al. 2021; Corinth et al. 2021; Goldin, Maag, and Michelmore 2021). For our purposes, it is important to have two years of data after the Tax Cuts and Jobs Act implemented the current version of the CTC starting with tax year 2018, but before the COVID-19 pandemic dramatically affected year-to-year employment changes starting in 2020, and not including 2021, when the CTC temporarily departed from its current form. This motivates our use of the 2018-2019 period.[4] We treat the tax units in these years as emblematic of tax units and the incentives they would face in years following the permanent elimination of the CTC's annual income requirement. To isolate the impact of this provision, we ignore other changes in the CTC proposal under consideration.

[3] Respondents are provided the monthly CPS for four consecutive months, then receive no survey for eight consecutive months, then receive 4 consecutive months of the CPS again. This design allows us to observe a subset of CPS ASEC respondents (the version of the CPS ASEC conducted once per year in February, March and April) for two consecutive years. The CPS ASEC respondents who are in the monthly CPS in March can be linked in consecutive years, but the respondents who are oversampled for the ASEC and not in the monthly CPS in March cannot be linked. Because the weights in the longitudinal file are designed only to replicate the population represented by the matched cases, we use the cross-sectional 2019 CPS ASEC for our totals and then apply percentages from the longitudinal 2019-2020 ASEC file to obtain the subtotals we report. Implicitly, we assume that the cases that cannot be linked longitudinally resemble the cases that can be linked. We use the version of the CPS ASEC from (Flood et al. 2022).

[4] While the CPS ASEC, like other household surveys, suffers from a high and growing amount of income misreporting (Meyer, Mok, and Sullivan 2015), correcting for misreporting requires linking the survey to administrative records which is beyond the scope of this report.

Our sample is comprised of all tax units whom we observe for two consecutive years in the CPS ASEC and who have dependent children under the age of 17 in both years.[5] Tax units without children under 17 are not eligible for the CTC and thus not affected by the elimination of the CTC's annual income requirement.[6]

In Table 2, we separately analyze three categories of tax units: tax units that have strictly positive earnings in two consecutive years (panel A), tax units that have strictly positive earnings in exactly one of two consecutive years (panel B), and tax units that have zero earnings in two consecutive years (panel C).[7] After elimination of the annual income requirement, tax units in panel A would see their incentive to work weakened every other year because they would only be required to work in one of every two years to obtain the same total CTC benefit. Tax units in panel B would see no incentive to change their extensive margin work decision. Tax units in panel C would see their incentive to work every other year increase because they could receive twice the CTC benefit for working just one year. We break down these three categories of tax units further based on their marital status (single mothers, single fathers, and married couples), as reported in the 2019 CPS ASEC (which refers to income in 2018).

The second column of Table 2 reports the number of tax units in each of the three categories. 32.9 million tax units (91%) had strictly positive earnings in both years and thus would experience an elimination of the CTC work incentive every other year. 1.6 million tax units (5%) had strictly positive earnings in only one year. 1.5 million tax units (4%) had no earnings in either year and would thus experience a doubling of the CTC work incentive every other year. While married couples make up the majority (72%) of tax units that work in both years, they make up only 18% of tax units that work in only one year and 20% of tax units that work in neither year. Single parents, and in particular single mothers, comprise the large majority of these latter two groups. In panel A only, we disaggregate married couples into those with one parent working and those with two parents working, because we may expect them to respond

[5] Following the recommendation of the IPUMS documentation, we retain only linked persons within a household who have consistent demographic information. We require that they have the same sex and race in both interviews, and their ages in the two interviews must be no more than two years apart.
[6] Families with dependents aged 17 or above may still be eligible for the Credit for the Other Dependents. We do not consider that credit in this paper.
[7] Tax units with negative earnings, due to self-employment income losses, are excluded from the analysis.

differently from one another to work incentive changes. Married couples are about twice as likely to have both parents working than just one.

The following three columns of Table 2 quantify the magnitude of the work incentive change resulting from the elimination of the annual income requirement, for tax units that we expect to potentially change their extensive margin work decision on the basis of the policy change. For tax units with strictly positive earnings in both years (panel A), this includes only those tax units with a single worker, either because they are a single parent or because they are a married couple in which only one spouse works. We assume that married couples in which both spouses work would not exit employment—due to the complexity in modelling dual labor force decisions—and we note that this assumption will tend to make our employment loss estimates conservative. Tax units that work only one year (panel B) face neither an incentive to work an additional year nor an incentive to exit employment altogether, and thus, their employment decisions are not expected to change. Single parent tax units working in neither year (panel C) would be expected to potentially enter employment for one year as a result of the effective doubling of the CTC work incentive every other year. We assume that never-working married couples would not respond to the changed work incentive. Their small size (just over 300,000 tax units) and the fact that they do not work at all over a two-year period suggests they may not be responsive to work incentives, and in any case, work participation elasticities from the literature may not be applicable to this sliver group. We note that even if a substantial share of this group entered work as a result of the incentive change, our estimates would not be substantially affected.

For the tax units that would potentially be expected to respond to the changed work incentives, we report earnings in the marginal work year. For tax units currently working both years (panel A), this refers to earnings in the lower earnings year.[8] Mean earnings in the marginal year are about $37,000 for single mothers, $57,000 for single fathers, and $78,000 for married couples in which one parent works. For tax units currently working in neither year (panel C), earnings in the marginal year are assumed to be equal to mean earnings of tax units that work in only one year of the two-year period. That is about $18,000 for single mothers and $28,000 for single fathers.

[8] Our implicit assumption is that tax units could rearrange their lower earning year to come after their higher earning year under the proposed policy.

Table 2. Effect of eliminating Child Tax Credit's annual income requirement on work incentives and employment, tax units with dependent children under age 17, by earnings in 2018 and 2019

Category	Number at baseline	Earnings in marginal work year	Change in RTW	Change in RTW divided by earnings	Employment change (every other year)
Panel A. Earnings > 0, both years					
Single mother	6,865,011	$37,464	-$2,335	-0.076	-481,915
Single father	2,457,959	$56,850	-$2,321	-0.051	-38,651
Married, one parent working	7,667,320	$77,882	-$4,114	-0.077	-181,076
Married, two parents working	15,915,832	—	—	—	—
Subtotal	**32,906,122**	**—**	**—**	**—**	**-701,641**
Panel B. Earnings > 0, one year					
Single mother	1,085,676	—	—	—	—
Single father	258,830	—	—	—	—
Married	290,513	—	—	—	—
Subtotal	**1,635,020**	**—**	**—**	**—**	**—**
Panel C. Earnings = 0, both years					
Single mother	1,024,032	$18,042	$1,654	0.082	367,507
Single father	176,854	$27,978	$1,363	0.060	27,549
Married	309,247	—	—	—	—
Subtotal	**1,510,132**	**—**	**—**	**—**	**395,056**
Panel D. All tax units					
Single mother	8,974,719	—	—	—	-114,407
Single father	2,893,643	—	—	—	-11,102
Married	24,182,912	—	—	—	-181,076
Total	**36,051,274**	**—**	**—**	**—**	**-306,585**

Source: Current Population Survey Annual Social and Economic Supplement, 2019 and 2020; Corinth et al. (2021); Authors' calculations

Note: All tax units with at least one dependent under age 17 that are observed in both the 2019 and 2020 CPS ASEC (with consistent demographic information and at least one dependent child under age 17 in both) are included in the table. For panel A, earnings in the marginal work year is the mean earnings in the lower-earning year, and change in the RTW (return to work) is equal to the mean CTC in the lower earning year (multiplied by -1). For panel C, earnings in the marginal work year are assumed to be equal to the mean earnings of the relevant tax unit type with earnings in only one year, and the change in the RTW is the mean CTC of that same group. Change in RTW divided by earnings is the mean of the ratios (not the ratio of the means). The employment change (every other year) is calculated as the percent change in the return to work times the elasticity of employment participation with respect to the return to work. The percent change in the return to work is equal to the ratio of the change in the RTW to earnings, multiplied by 1.23, a ratio derived from results in Corinth et al. (2021), as discussed in the text. In Panel C, the elasticity for single mothers is multiplied by 4.73 and the elasticity for single fathers is multiplied by 8.45. These elasticity adjustments account for the definition of elasticities which identify the percent change in employment with respect to a one percent increase in the RTW. Because we apply the elasticities to non-workers, we scale the elasticities by the ratio of working to non-working members of each tax unit type (i.e., single mothers and single fathers), in a typical year within the two-year 2018-2019 period. Dollar values are expressed in 2022 dollars using the Personal Consumption Expenditures price index.

We next report the dollar change in the return to work (RTW) due to the policy based on the employment decision in the marginal work year, i.e., the change in the incentive to work. The baseline return to work is the change in a family's income that results from a tax unit working. It is equal to earnings net of taxes (federal and state income tax and federal payroll tax) and the phaseout of transfer benefits due to working. For tax units working in both years (panel A), the dollar change in the return to work in the marginal year is equal to the negative of the observed CTC in the lower earning year, because receiving this CTC amount would no longer depend on working that year under the proposed elimination of the CTC's annual income requirement. The mean dollar change in the return to work is around -$2,300 for single mothers and single fathers, and around -$4,100 for married couples with one working parent. Expressed as a share of earnings in the marginal work year, the changed work incentive represents an increase in the implicit average tax on earnings of 7.6 percentage points for single mothers, 5.1 percentage points for single fathers, and 7.7 percentage points for married couples with one working parent.

For tax units working in neither year (panel C), the dollar change in the return to work in the marginal year is equal to the CTC they would receive if they work, because instead of receiving this level of the CTC for only one year under current law, they would receive twice this amount under the proposed elimination of the annual income requirement. We assume the CTC they would receive if working is equal to the mean CTC received by tax units that currently work in only one year of the two-year period. The dollar change in the return to work due to the policy change is about $1,700 for single mothers and $1,400 for single fathers. Expressed as a share of earnings in the marginal work year, the changed work incentive represents a decrease in the implicit average tax on earnings of 8.2 percentage points for single mothers and 6.0 percentage points for single fathers.

In the final column of Table 2, we report simulated employment effects of eliminating the CTC's annual income requirement. In order to simulate employment effects we multiply the percent change in the return to work due to the policy change by the elasticity of employment participation with respect to the return to work. The percent change in the return to work is equal to the dollar change in the return to work divided by the baseline return to work. As noted previously, the baseline return to work adjusts earnings for taxes and the phaseout of transfers, so the return to work will generally be lower than earnings, and therefore, the percent change in the

return to work will generally be higher than the ratio of the dollar change in the return to work to earnings. We apply a scaling factor of 1.23 to convert the ratio of the dollar change in the return to work to earnings into the percent change in the return to work, an approach we validate on the basis of previous research simulating changes in CTC work incentives.[9] We obtain the 1.23 scaling factor based on results from Corinth et al. (2021), which simulated a similar reform that eliminated the CTC's work incentive. In particular, we use their results to calculate (i) the mean percent change in the return to work, and (ii) the mean ratio of the dollar change in the return to work to earnings, due to eliminating the CTC's work incentive. Our scaling factor of 1.23 is equal to (i) divided by (ii).[10] Note that the resulting estimates of the percent change in the return to work are consistent to those used in related research.[11]

Our elasticities are based on estimates from the academic literature and that are used in major microsimulation models. For the employment exit simulation among parents who currently work both years (panel A), we use an elasticity of 0.75 for single mothers (Nichols and Rothstein 2016; Corinth et al. 2021), 0.25 for single fathers and parents in married couples who are sole earners (Chetty et al. 2013), and 0 for parents in married couples in which both partners work.[12]

[9] To validate our use of a scaling factor for calculating the percent change in the return to work, we use the same approach to simulate the elimination of the CTC's work incentives in a single year, which is the exercise taken up by Corinth et al. (2021). For purposes of this validation exercise only, we allow for employment exit among dual earner tax units, following the approach in Corinth et al. (2021). In doing so, we estimate that 1.07 million workers would exit employment due to the elimination of the CTC's work incentives in a single year, somewhat lower than the 1.32 million substitution effect they found. Our lower estimate is likely in part due to the undercount of head of household filers in the survey (and thus a lower number of tax units who are assigned the 0.75 elasticity reserved for single mothers), for which Corinth et al. (2021) correct using linked administrative tax data.

[10] Future analyses enabled by additional time to inform the policymaking process should calculate the baseline return to work directly.

[11] Corinth et al. (2021) simulate the change in the incentive to work when replacing the CTC with a child allowance, an exercise parallel to ours because it eliminates the CTC work incentive. Their results imply a mean percent change in the return to work among workers of about 6.3% (authors' calculations). We estimate a mean percent change in the return to work among workers of 6.0% (including married couples with two earners in order to be consistent with the Corinth et al. (2021) estimates). A reason that could explain why our estimate is slightly lower is that the CPS ASEC undercounts head of household filers including single mothers who generally have a higher percent change in the return to work, an issue for which they correct using linked administrative tax data.

[12] When modelling employment exit due to weakening the CTC work incentives, some recent research applies an elasticity of 0.75 only to those single mothers who receive the EITC (Corinth et al. 2021). However, that research relies on linked administrative tax data to correct for the sharp undercounting of the EITC among single mothers in the survey. This issue is exacerbated by the single parent (i.e., head of household) undercount in the CPS ASEC. Because we do not have access to the linked administrative tax data, we instead assign the 0.75 elasticity to all single mothers. We also note that the 0.75 elasticity itself is lower than some prominent studies have suggested. For a discussion, see Corinth et al. (2021) and Winship (2022).

Because some parents in dual earner couples are likely to exit employment in response to the proposed policy, this assumption tends to make our employment exit estimates conservative.

For the employment entrance simulation among parents who currently work neither year (panel C), we use an elasticity of 0.75 for single mothers, 0.25 for single fathers, and 0 for married couples. We use an elasticity of 0 for married couples because very few married couples with dependents do not work for consecutive years, and those who do not work may have disabilities or other characteristics that make employment unlikely for them even when work incentives are strengthened. To the extent that married couples who do not work at all for consecutive years are induced by the policy to enter employment, this assumption tends to make our employment entrance estimates too low. When simulating employment effects for tax units that currently work in neither year, we scale up the elasticity to account for the fact that the elasticities refer to the percent change in employment relative to the baseline number of employed, not the non-employed. Thus, we multiply the elasticity for each group by the ratio of employed to non-employed members in a given year, which is 4.73 for single mothers and 8.45 for single fathers in the average year in the 2018-2019 period.

We estimate that nearly 702,000 consistently working parents would stop working every other year due to the elimination of the CTC's annual income requirement, of whom 69% are single mothers. At the same time, nearly 395,000 never-working parents would start working every other year due to the policy change, of whom 93% are single mothers. On net, employment would fall by about 307,000 parents every other year (not necessarily the same year for all parents), for an annual average reduction of approximately 153,000.

4. Conclusion

Following the expiration of the 2021 CTC, policymakers have continued to debate and propose various ways of modifying it once again. The latest proposal by a group of senior policymakers in Congress seeks to revive and make permanent a policy that previously applied only during disasters or national emergencies, allowing tax units to qualify for the CTC based on their current or previous year's income. As described above, this policy would substantially change the work incentives of the CTC, essentially doubling the work incentive one year and then eliminating it the following year. We find that the policy change could lead just over 700,000

parents to stop working every other year, while leading another 395,000 to begin working every other year. On net in an average year, employment would be expected to fall by approximately 153,000 workers.

The employment effects we estimate could ultimately be too low or too high. Our reliance on survey data is likely to lead us to understate both exit from employment among consistently working parents and entrance into employment among never-working parents. This is because the survey data sharply understate the number of head of household filers, who are most often single mothers who have been shown to be the most responsive group to extensive margin work incentives. We also assume that no parents in dual earner tax units would exit employment and that no married couples would enter employment, again leading us to understate employment effects in both directions. At the same time, our estimated employment effects could be too high to the extent that parents are less likely to respond to year-to-year changes in work incentives than a consistent work incentive change that applies every year. In this way, it is plausible to think that fewer parents would exit employment over a two-year period than our estimates suggest, but that more parents would exit employment over say a ten-year period than our estimates suggest. In addition, the intensive margin effects (i.e., hours worked conditional on working) could be substantially affected, with the policy encouraging year-to-year fluctuations in hours worked to maximize the total amount of CTC benefits for a given amount of work.

The policy could have more wide ranging consequences as well. In years in which parents stop working, claims for unemployment benefits, public health insurance, the Supplemental Nutrition Assistance Program, and even disability and other benefits could rise as families seek other benefits to supplement their CTC benefits. It is also possible that the elimination of the annual income requirement for the CTC could motivate similar efforts to reform the Earned Income Tax Credit in the future.

It is important to note that our analysis does not account for other proposed changes to the CTC. The proposed faster phase-in rate of CTC benefits for families with more than one child increases the extensive margin work incentive for low-earning families, while increasing the intensive margin work incentive for the lowest earning families and decreasing the intensive margin work incentive for those with moderate earnings. Notably, a family with three dependent children would see their CTC phase-in rate rise to 45%, which in effect would be twice as large,

or 90%, every other year due to the elimination of the annual income requirement. Meanwhile, the phase-in rate of the Earned Income Tax Credit is 45% for families with three children, for a combined effective phase-in rate of 135% every other year across the two programs. The other proposed reforms, increasing the portion of the CTC that is refundable, and increasing the maximum benefit with inflation each year, would also modestly strengthen work incentives.

Despite the wide-ranging potential effects of the proposed CTC policy change, it has received no oversight or hearings in the appropriate tax-writing committees. Instead, policymakers are, without evidence as to its likely impact, about to consider legislation that would allow CTC claimants to collect two years of payments from the Internal Revenue Service despite working in only one year. As we demonstrate in this paper, this would be a highly consequential change deserving of careful study before such legislation is advanced.

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