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Political Controversy, State-Level Programs, and the  
Effectiveness of the Expanded Child Tax Credit

By

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## Abstract

The expanded Child Tax Credit (CTC) under the American Rescue Plan Act (ARPA) of 2021 aimed to mitigate financial hardship during the COVID-19 pandemic by providing fully refundable tax credits to families with children. While the expansion significantly reduced child poverty, its controversial expiration in December 2021 reignited debates about the program's cost and potential work disincentives. This study investigates the impact of political controversy on the implementation and efficacy of the expanded CTC by addressing two key questions: (1) Why is the expanded CTC controversial? and (2) How did state-level political dynamics influence its impact?

A mixed-methods approach was employed, combining qualitative analysis of legislative debates and reports with quantitative analysis of household expenditure data from the Household Pulse Survey. Difference-in-differences (DiD) models assessed changes in expenditure patterns before and after the CTC's expiration, comparing states with and without their own CTC programs. Results indicate that while the expanded CTC substantially reduced financial difficulty for all recipients, its expiration did not significantly affect families in states with complementary state-level programs compared to families in states without state-level programs. The findings underscore the role of political controversy and federal-state dynamics in shaping policy outcomes and highlight implications for future anti-poverty initiatives.

## Introduction

In response to the economic devastation caused by the global pandemic of 2020, the United States Congress enacted the American Rescue Plan Act (ARPA) of 2021. A main focus of the American Rescue Plan Act was expanding the Child Tax Credit in order to mitigate financial hardship, especially for low income and otherwise vulnerable families. As part of the expanded CTC, tax filers could claim a credit of up to \$3,600 per child under age 6 and up to \$3,000 per child ages 6 to 17. There was no cap on the total credit amount that a filer with multiple children could claim. The credit was fully refundable, meaning that low-income families could qualify for the maximum credit regardless of how little they earned. If the credit exceeded taxes owed, families could have received the excess amount as a tax refund (Urban Institute Tax Policy Center).

Thanks to this progressive expansion, the CTC was successful in mitigating hardship, in that the United States saw the largest decrease in child poverty over a year-long period in the country's history (Parolin and Filauro 2023). Despite the demonstrable effectiveness of the law, the CTC expansion was allowed to expire in December 2022, only months after its implementation. Policymakers supporting the end of the CTC advanced a moral hazard argument; they were concerned that the CTC created a strong disincentive to work among its recipients and that the expanded program was too expensive.

The goal of this study is to interrogate this moral hazard argument advanced by CTC opponents by addressing two key questions. First, why is the expanded Child Tax Credit controversial? I will address this question by focusing on the ideological divide, sociopolitical structures, and historical narratives surrounding the origins of the CTC. Additionally, I will examine how this controversy manifests via reports and comments from lawmakers about state-level programs, especially with respect to the moral hazard versus benefits to poverty discussion. Second, how did partisan divide within American states affect the implementation and impact of the expanded CTC?

## Literature Review

### **Political Controversy**

Before delving into the literature surrounding the efficacy of the Child Tax Credit, it's important to examine the nature of the moral hazard arguments against the expanded Child Tax Credit. There are two standout claims among opponents of the CTC expansion: that it created a strong disincentive to work among its recipients, and that the expanded program was too expensive.

The potential for disincentive to work is a fairly common point of controversy for many welfare programs, and the CTC expansion was no different in that respect. A publication by the Republicans of the United States Congress Joint Economic Committee from November 2021 argued that by removing the earnings requirement, a permanent expansion of the CTC would effectively eliminate the CTC's work incentive and thus increasing incentives for non-work. However, there is no consensus in the academic literature on work disincentives presented by the CTC. On one hand, Corinth, Meyer, Stadnicki, and Wu estimated that the proposed CTC extension that failed to pass in December 2021 would have led 1.5 million workers to exit the labor force, with more than half of the families exiting earning less than \$30,000 a year (2021). This would mean that the work disincentives presented would disproportionately affect lower-income families with weaker ties to the labor force, which is quite the opposite of the goal of the expanded CTC. On the other hand, Ananat et al. (2022) find very small, inconsistently signed, and statistically insignificant impacts of the CTC both on employment in the prior week and on active participation in the labor force among adults living in households with children. Furthermore, Enriquez et al. (2023) examine the short-term labor supply response to the expanded CTC and do not find strong evidence of a change in labor supply for families receiving the credit, and Hamilton et al. (2022) find that families used the CTC to cover routine expenses without reducing their employment.

The cost of the expanded CTC is a second main point of controversy. According to the same aforementioned publication from the Republicans of the JEC, a permanent expansion to the CTC could cost upwards of \$1.7 trillion over the 10 year budget window (Tax Foundation). Indeed, estimates from the Joint Committee on Taxation (JCT) compare the annual cost of the current CTC in 2023 (\$120.6 billion) to the cost of the CTC under the ARPA expansion (\$220

billion) and conclude that the expansion nearly doubled the annual cost of the CTC (Tax Foundation). Like this example, most moral hazard arguments against the Child Tax Credit are pushed by Republican policymakers. Whether these arguments are strong enough to have warranted the expiration of the expanded CTC is a political question and outside the scope of this study, but the political delineation between supporters and opponents of this expansion is of key importance.

Drawing on the work of Schild et al. (2023) and Cox et al. (2021), I argue that political controversy, manifested in state laws modifying the federal CTC, impeded policy implementation and significantly reduced the effectiveness of the CTC. The persistence of moral hazard arguments against the CTC could pose significant consequences for the implementation of the expanded CTC, as policymakers have a direct influence on the timeliness and efficacy of such implementation. Along similar lines, Cox et al. (2021) suggest that state and local efforts are essential to increasing takeup of the CTC. Political controversy, which is defined in the scope of this study as modifications to federal programs through state laws, may preclude these types of efforts, thereby allowing some eligible families to fall through the cracks and reducing the efficacy of the CTC.

### **Effects of COVID-19**

A unique aspect of this study of political controversy around the expanded CTC is its implementation during the COVID-19 pandemic. Greer et al. (2023) identified three factors that could impact policy alignment in a country's responses to the pandemic: allocation of authority, finances, and intergovernmental relations. The impact of intergovernmental relations (i.e. federalism) is particularly relevant. Although the federal expansion of the CTC made payments

directly to eligible applicants, the beneficial effect of this program expansion was accentuated by state and local counterpart programs in some states, and stifled in other states. Greer et al. (2023) further noted that “political parties are also important in coordinating policies since they encourage politicians of a particular party to see their interests as aligned across levels of government.” Thus, partisan modifications to the federal CTC, in the form of state and local programs, could ostensibly prove a significant impediment to policy alignment, and in turn could impede policy implementation. Utilizing the framework of factors influencing pandemic policy responses established in Greer et al. (2023), this research hypothesizes that states with political controversy surrounding the Child Tax Credit, in the form of state or local level program modifications, will exhibit lower CTC-related spending than states without such controversy.

### **Child Poverty**

Scholars have produced a wealth of research on the effects of the Child Tax Credit expansion across many domains. Child poverty and household expenditure are two particular domains through which the beneficial effects of the CTC expansion have been demonstrated. Multiple studies show the significant ameliorative effects the CTC had in this domain. Likewise, the literature suggests that CTC receipt was generally associated with expenditure in necessary categories including food, housing, and childcare. To address the validity of the moral hazard argument, this study will focus on household expenditure rather than child poverty. Many external factors influence child poverty rates, while household expenditure can be linked directly to CTC payments, as shown by Schild et al. (2023).

There is a general consensus among the literature that the CTC had ameliorative effects on child poverty. According to one study, advance CTC payments reduced monthly child poverty

by nearly 30% (Golden 2023); another study concludes that 11.7 million people were lifted out of poverty by CTC payments, including 3.2 million children (Burns, Wilson, and Fox 2021). CTC payments were most effective in reducing poverty and child poverty in low cost-of-living, high poverty states (Collyer et al. 2023). Parolin et al. (2021) apply a novel approach to tracking monthly poverty rates to understand the effect of the CTC on child poverty. The authors concluded that expanding coverage to all eligible children is key to achieving the CTC's full anti-poverty potential; if all eligible children were covered, an expanded CTC would have the potential to reduce monthly child poverty by up to 40% on its own.

While existing research has extensively examined the federal Child Tax Credit and its impact on child poverty, there is a notable gap concerning the effectiveness of state-level CTC programs. For instance, Collyer et al. (2022) provide valuable insights into potential poverty reductions through state CTCs but often rely on simulations rather than empirical evaluations of implemented programs. Similarly, a Brookings Institution analysis of the antipoverty effects of the expanded CTC across all states focuses on the federal expansion's impact without delving into the outcomes of state-specific initiatives. This lack of empirical assessment of state-level CTCs leaves a critical void in understanding their practical effectiveness and motivates this study.

### **Access to CTC**

Despite the general consensus that the expanded CTC had positive effects on poverty and child poverty rates, the program remains limited in terms of accessibility. The necessity of CTC payments was particularly felt by families caring for children with disabilities, which represents a structural accommodational failure (Brugger et al. 2023, Catalyst Center). Furthermore, rural

areas were notably underserved throughout the COVID-19 pandemic, specifically in terms of CTC payment takeup. Kumar's (2022) analysis of community-partnered surveys in urban and rural Pennsylvania suggested that health, transportation, and economic assistance needs were persistently unmet. Lastly, despite expanded eligibility requirements, only two-thirds of children in eligible families received monthly CTC payments (Micheltore et al. 2023). The authors examine historic gaps in receipt of the CTC and find that prior tax filing, household income, and survey language were the strongest predictors of monthly receipt. Access to the CTC is ultimately a function of political decisions, so it is clear how political controversy could influence accessibility among underserved populations like the disabled or rural communities.

### **Household Expenditure**

Lastly, and of central importance for the purpose of this study, the literature suggests that CTC receipt was generally associated with increased expenditure in essential categories including food, housing, and childcare. An analysis conducted by the Bureau of Labor Statistics (BLS) on the effects of the expanded CTC on household expenditure (Schild et al. 2023) found that families utilized the CTC payments to enhance the well-being of both their children and the entire household. According to the authors, for each \$100 of imputed CTC payment, families spent \$75; expenditure was mainly on essential items like food (\$28), housing (\$31), and child-related goods and services (\$15). Furthermore, in an analysis of a national survey on the efficacy of the expanded CTC, Burnside (2022) concluded that monthly payments provided support to nearly 9/10 children in the US and dramatically reduced child poverty in 2021. Among other results, respondents reported that CTC payments were used on necessities like food, rent, and clothing. Schild et al. and Burnside's findings regarding the use of CTC payments



are further supported by a study by Cooney et al. (2022) on material hardship and well-being of US households at the end of 2021, as well as a meta-analysis of research regarding CTC efficacy by Curran (2022).

## Methodology

### **Research Questions and Mixed Methods Approach**

Now that the theoretical framework and supporting literature have been outlined, I will return to the research questions. First, why is the expanded Child Tax Credit controversial? This study will address this question by focusing on the ideological divide and historical narratives surrounding the CTC. Additionally, this study will examine how this political controversy manifests by analyzing comments about state-level programs, especially with respect to the moral hazard versus benefits to poverty discussion. Second, how did partisan divide within American states affect the implementation and impact of the expanded CTC? I will address this question by first examining how state and local child benefit programs modify the federal Child Tax Credit, and second, how household expenditures differed for CTC eligible families in states with these programs from household expenditure for CTC eligible families in states where this program conflict does not occur.

### **Qualitative Analysis: Systematic Review**

To address the first research question I take a qualitative approach, examining evidence of policymakers' concerns about the Child Tax Credit. These concerns will be categorized as expansive or restrictive and analyzed within the context of relevant political structures and historical narratives, such as the historical partisan divide on the merits of welfare. Data for this

portion of the analysis will include quotes from policymakers during floor speeches and debates held during the consideration of legislation related to the Child Tax Credit prior to December 2021, when the expanded CTC expired. Further evidence will include research reports compiled by the Congressional Budget Office and Congressional Research Service, which specifically concern the expanded Child Tax Credit and express concerns about work incentives and long-term costs. Finally, the work of private organizations with political motivations will inform our investigation of the structures and historical narratives behind controversy surrounding the Child Tax Credit.

### **Quantitative Analysis: Difference-in-Differences**

#### *Motivation for Household Pulse Survey*

To address the second research question, I will rely on publicly available data from the Household Pulse Survey (HPS) from July 2021 to August 2022, which includes questions regarding spending related to the CTC. The HPS is a powerful analytical tool for scholars analyzing the social effects of the COVID-19 pandemic, and it has been utilized extensively and effectively in the study of the Child Tax Credit's efficacy. Ananat et al. (2021) use the HPS to determine the effect of the CTC on employment outcomes and labor force participation. Karpman et al. (2021) use the HPS to examine CTC spending patterns by race, ethnicity, and household income.

Furthermore, as far as the use of survey data as opposed to observational data, the literature shows that survey data has been used extensively to conduct state level analysis: Roll et al. (2021) use the HPS to analyze how families use CTC payments on a state-by-state basis. Collyer et al. (2022) use data from the Current Population Survey (CPS) to weigh the costs of

implementing Child Tax Credits across the country at the state level against the potential progress towards an end to child poverty. Hardy et al. (2023) use data from the Annual Social and Economic Supplement of the CPS to determine the effect that the expanded CTC had on child poverty and how these effects varied by state-dependent factors like cost of living and initial poverty rates.

In addition to data from the HPS, I will also catalog state laws which restrict or expand the federal CTC. According to the National Congress of State Legislatures, 14 states had enacted a state Child Tax Credit as of October 2023. These state-level programs vary in their refundability and how tax credits are calculated, but the two primary approaches are establishing a fixed limit or selecting a percentage of the federal child tax credit. Collecting information about these states and their laws/programs will allow for a clear and meaningful definition of political controversy for this study (i.e. political controversy exists in states with their own child benefit programs which restrict or expand the scope of the federal Child Tax Credit).

### *Data Sample*

The HPS, fielded by the Census Bureau, is an online survey studying how the coronavirus pandemic and other emergent issues impact households across the country from a social and economic perspective. The survey is conducted in phases, and different groups of questions were phased in and out as the COVID-19 pandemic evolved. This study will examine data for phases 3.2 - 3.5 (July 2021 - August 2022), where questions regarding spending related to the CTC were included in the survey. This range of data is useful because it contains survey responses for at least six months before and after the expiration of the CTC expansion, which will be necessary for establishing stable trends (i.e. to establish that without the CTC expansion,

household expenditure would not have deviated from its historical trend significantly) (Fields et al. forthcoming). Summary statistics for the relevant phases of the HPS can be found in the appendix.

### *Model Design*

Ideally, the dependent variable in my data will be household expenditure. However, as the HPS does not directly track household expenditure, this analysis uses the financial hardship, specifically difficulty with household expenses as a proxy. The dependent variable captures a categorical measure of difficulty with household expenses, ranging from 1 (“Not at all difficulty”) to 4 (“Very difficult”). Studies show a strong correlation between perceived financial difficulty and reduced expenditures (Cooney et al., Parolin et al. 2021), meaning that we can confidently extrapolate conclusions about the direction of the effect of CTC eligibility on financial hardship to expenditure.

In line with the difference-in-differences method, there will be two primary independent variables. The first will be a binary time variable, to differentiate between outlays before and after the expiration of the expanded CTC. The second will be a binary treatment variable, to differentiate between the treatment group (CTC-eligible families) and the control group (CTC-ineligible families). The selection of independent variables will be outlined in the results section with the full model.

Capitalizing on the binary time and treatment variables, this study will use 2 difference-in-differences models to examine expenditure before and after the expiration of the expanded CTC at the end of 2021. The first model will be for CTC eligible and ineligible

families in all states, while the second model will be for CTC eligible and ineligible families in states with their own CTC laws/programs. These models are as follows:

$$(1) \quad exp_{it} = \beta_1 post_t + \beta_2 treat_i + \beta_3 (post \times treat)_{it} + \beta_4 X_i + \varepsilon_i$$

$$(2) \quad exp_{it} = \beta_1 post_t + \beta_2 treatCTCstate_i + \beta_3 (post \times treatCTCstate)_{it} + \beta_4 X_i + \varepsilon_i$$

According to these models, expenditure for family  $i$  in week  $t$  is a function of whether payment is received before or after the expiration of the expanded CTC in December 2021 ( $post_t$ ), whether or not that family has children, and is therefore eligible for CTC payments ( $treat_i$ ), the time-treatment interaction term (also known as the difference-in-difference estimate, or the estimate of interest in this model), a vector of household-level control variables, and some amount of unobservable error. Ultimately, by comparing the difference-in-difference estimate across models, this study will be able to compare how the expiration of the expanded CTC affected expenditure for families across all states versus families in states with their own CTC laws/programs.

## Results

### **Qualitative Analysis**

The historical narratives and ideological divide surrounding the Child Tax Credit reflect deep-seated tensions over the role of government in social welfare. The Child Tax Credit, first introduced in 1997 as part of a broader tax policy reform under the Taxpayer Relief Act, has undergone numerous iterations. Initially aimed at middle-class families, the CTC gradually expanded to include lower-income families through partial refundability and higher credit limits. The Congressional Research Service published a report in December 2021, immediately after the expiration of the CTC expansion, providing an overview of the legislative history of this

program (R45124: The Child Tax Credit: Legislative History). This report highlights a consistent tension in policy debates: whether the CTC should serve as a vehicle for poverty alleviation or as a reward for labor market participation. This dichotomy underscores the importance of the theoretical framework of this study in investigating the moral hazard versus benefits to poverty debate that dominates discussions of the CTC today.

Historically, Republican lawmakers have championed the CTC as a mechanism to incentivize work and support middle-income families. Initially, the design of the program reflected conservative principles emphasizing self-reliance and labor force participation. Over time, Democratic lawmakers advocated for making the CTC more inclusive, proposing increased refundability to ensure its benefits reached low-income families. This ideological divergence is evident in key moments of CTC reform, most notably in the case of the ARPA when the program became fully refundable and eliminated prior earnings requirements. The expansion provoked sharp partisan debates over its long-term feasibility and the potential for moral hazard.

Testimonies from congressional hearings during and after this period illustrate the depth of the ideological divide. On one hand, Representative Rosa DeLauro recently emphasized that the expanded CTC was a transformative tool in combating child poverty: “When we expanded and improved the Child Tax Credit in 2021 under the American Rescue Plan, it provided unprecedented economic security for American families. It was the largest tax cut for middle-class and working families in generations” (DeLauro 2023). This stance aligns with historical Democratic efforts to use the tax code for redistribution and social welfare. On the other hand, Senators Mike Lee and Marco Rubio criticized the removal of work requirements in a joint statement made in February of 2021:

“However, we do not support turning the Child Tax Credit into what has been called a ‘child allowance,’ paid out as a universal basic income to all parents. That is not tax relief for working parents; it is welfare assistance. An essential part of being pro-family is being pro-work. Congress should expand the Child Tax Credit without undercutting the responsibility of parents to work to provide for their families” (Lee 2021).

His stance aligns with the historical Republican emphasis on tying tax credits to labor market participation. These exemplar testimonies, in conjunction with CRS conclusions on historical tensions, highlight the competing visions for the CTC: one as an anti-poverty measure targeting the most vulnerable families, and the other as a reward for economically productive households.

Political controversy surrounding the CTC manifests in starkly different state-level responses, where state programs either amplify or restrict the federal CTC’s benefits. These responses are rooted in partisan attitudes towards welfare and fiscal policy and can significantly impact the program’s effectiveness. States like California and New York have introduced complementary child tax credits, reinforcing the federal program’s goals. These policies reflect an expansive approach, emphasizing poverty alleviation and broader social benefits. For example, California’s Young Child Tax Credit provides additional support for families with young children, targeting populations most at-risk of poverty. This alignment between federal and state policies amplifies the anti-poverty effects of the CTC, particularly in high cost-of-living states like California.

Conversely, states with conservative leadership, such as Texas and Florida, have adopted a more restrictive stance. These states refrained from introducing complementary tax credits and often resisted outreach efforts to maximize CTC enrollment. The lack of state-level engagement disproportionately affected vulnerable populations, including families in rural communities and

non-English speakers, exacerbating disparities in benefit access. State-level variation reflects broader political controversy over the Child Tax Credit. Republican-leaning states tend to view the CTC through the lens of moral hazard, focusing on potential disincentives to work and high costs. Democratic-leaning states prioritize the CTC's role in reducing child poverty and generally supporting low-income families. This divergence demonstrates how federalism allows states to mediate the impact of national policies through their own programs (or lack thereof), creating a fragmented policy landscape. The resulting fragmented landscape underscores the importance of aligning federal and state policies to maximize the CTC's benefits and mitigate disparities in access and effectiveness. To understand how this fragmentation, and the consequential political controversy between federal and state governments, affected the implementation and impact of the expanded CTC, we can move on to the results of the quantitative analysis.

### **Quantitative Analysis**

To address the second research question, this section presents a quantitative analysis of the impact of the expanded CTC on difficulty with household expenditure. The analysis focuses on examining the relationship between the CTC and financial hardship using difference-in-difference (DiD) regression models. Before introducing the regression models, this section examines changes in the outcome variable before and after the expiration of the expanded CTC in December 2021. This preliminary analysis is crucial motivation for the use of DiD regression, and is also useful for understanding the immediate impact of the expiration on the degree of difficulty with managing household expenses. To visualize the impact of the CTC expiration, a bar plot is presented showing the proportion of households in each category of financial hardship (in terms of difficulty with expenses) before and after the expiration.



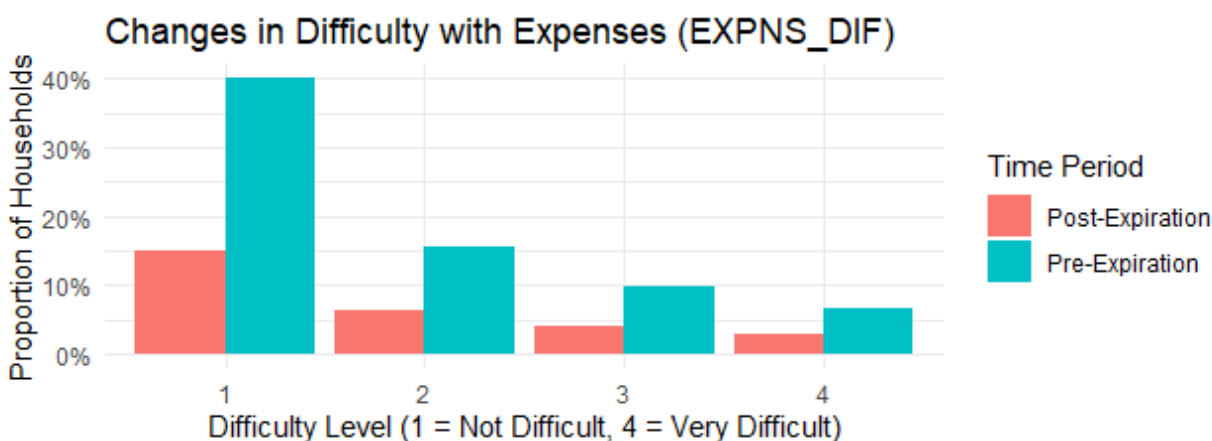


Figure 1: Changes in Difficulty with Expenses After Expanded CTC Expiration

We can see that there are significant differences in the proportions of families experiencing difficulty with their expenses between the pre-expiration and post-expiration groups.

Additionally, to validate the parallel trends assumption underlying the DiD methodology, the analysis explores trends in EXPNS\_DIF over time, with a particular focus on visually identifying that the average outcome for the treatment and control groups would have evolved in parallel in the absence of treatment. To test the validity of the parallel trends assumption, this section provides a line graph showing the average value of EXPNS\_DIF before the expiration of the expanded CTC, disaggregated by treatment group (CTC-eligible vs. ineligible).

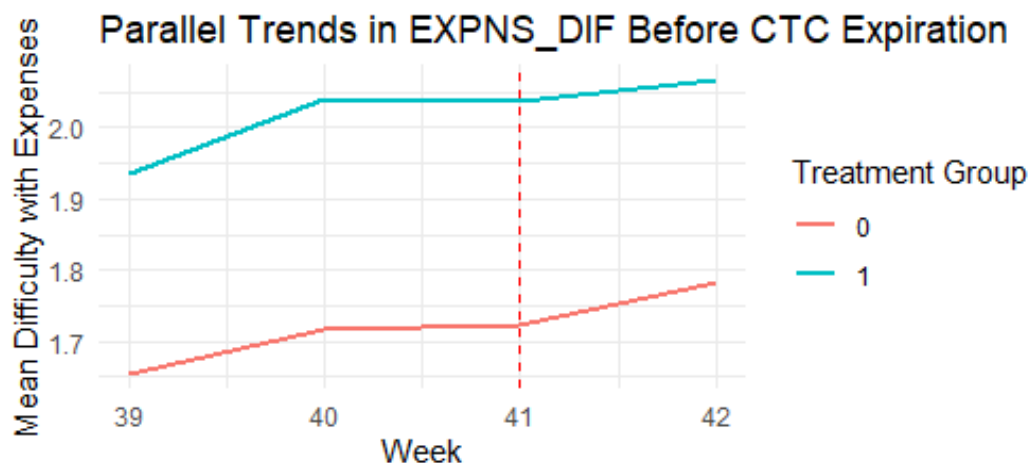


Figure 2: Parallel Trends in Difficulty with Expenses

As we can see in the graph above, families seem to be reporting gradually increasing levels of financial hardship in the months before the expanded CTC expired. Furthermore, we see a deviation in the trend of CTC ineligible families after the expiration, indicating that there is some time-related element to the group differences we observed in Figure 1. This cursory visual check validates the parallel trends assumption, and indicates we can run the difference-in-difference (DiD) regression.

Finally, to aid in the selection of variables for the DiD models, a sequence of stepwise regression followed by lasso regression is introduced as a data-driven approach to identify the most relevant control variables for the DiD analysis. Stepwise regression starts with a model that includes all possible variables and then gradually removes the least important variables until the model is reduced to its best form. Lasso regression was used to refine the selected variables by regularizing coefficients to address multicollinearity and improve model interpretability. These steps were necessary because the original survey contains more than 50 questions, which translates to nearly 300 potential variables, as the questions are often categorical and correspond

to multiple variables. While the literature supports the inclusion of a couple key control variables, such as income, age, sex, and education, these are not enough to explain the wide variation in the data and without selecting more variables we are liable to underfitting the model. Carefully taken together, these steps ensure that the final DiD models are robust and parsimonious.

The quantitative results centered on two difference-in-differences (DiD) models using EXPNS\_DIF (a measure of household difficulty with expenses) as the outcome variable. The first model compares the difficulty with expenses for CTC-eligible families across the nation to CTC-ineligible families, before and after the expiration of the expanded CTC. Results for the first model are shown in the box and whisker plot below, with the complete set of model coefficient estimates in the appendix.

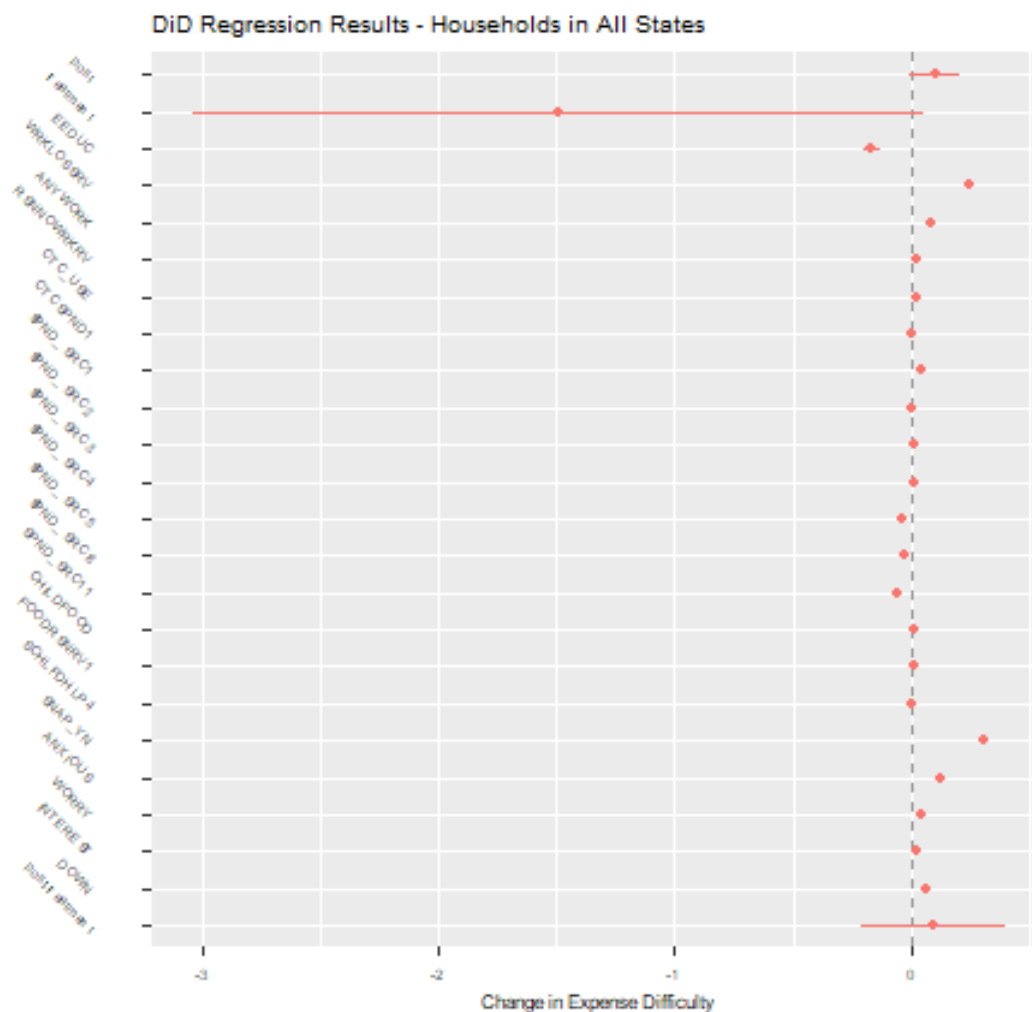


Figure 3: DiD Regression Results for Households in All States

The coefficient estimate for the post variable, indicating the period after the CTC expansion expired, is positive and marginally significant (Estimate = 0.102,  $p = 0.073$ ). This suggests a weak trend towards increased difficulty managing expenses after the CTC expansion ended, though it is difficult to conclude that a causal relationship exists with the marginal  $p$ -value we receive. On the other hand, the coefficient estimate for the treatment variable is negative and marginally significant (Estimate = -1.495,  $p = 0.059$ ). This suggests that families eligible for the CTC had somewhat lower difficulty with expensive compared to ineligible families. The

coefficient estimate for the interaction term for post-expiration and treatment groups was statistically insignificant (Estimate = 0.097,  $p = 0.535$ ), suggesting that the expiration of the expanded CTC did not significantly alter overall expenditure difficulty for recipients across all states. Significant control variables were primarily demographic: higher education levels were strongly and significantly associated with lower difficulty with expenses, while recent unemployment was strongly and significantly associated with greater difficulty with expenses. Additionally, mental health variables are all strongly associated with higher difficulty paying expenses, highlighting the psychological dimension of financial strain. In all, the treatment variable suggests that CTC-eligible families had lower difficulty with expenses overall, but the expiration of the CTC does not show a statistically significant disproportionate impact on these eligible families compared to ineligible families. While the CTC clearly alleviated some financial difficulty for eligible families, the immediate aftermath of the expiration did not lead to a measurable increase in difficulty relative to ineligible families. This could be due to delayed effects or offsetting factors, such as other pandemic-related aid programs.

Now on to the second model, which compares the difficulty with expenses for CTC-eligible families in states with state-level CTC programs to CTC-ineligible families, before and after the expiration of the expanded CTC. Estimates are shown in the box and whisker plot below, with the complete set of model coefficients available in the appendix.

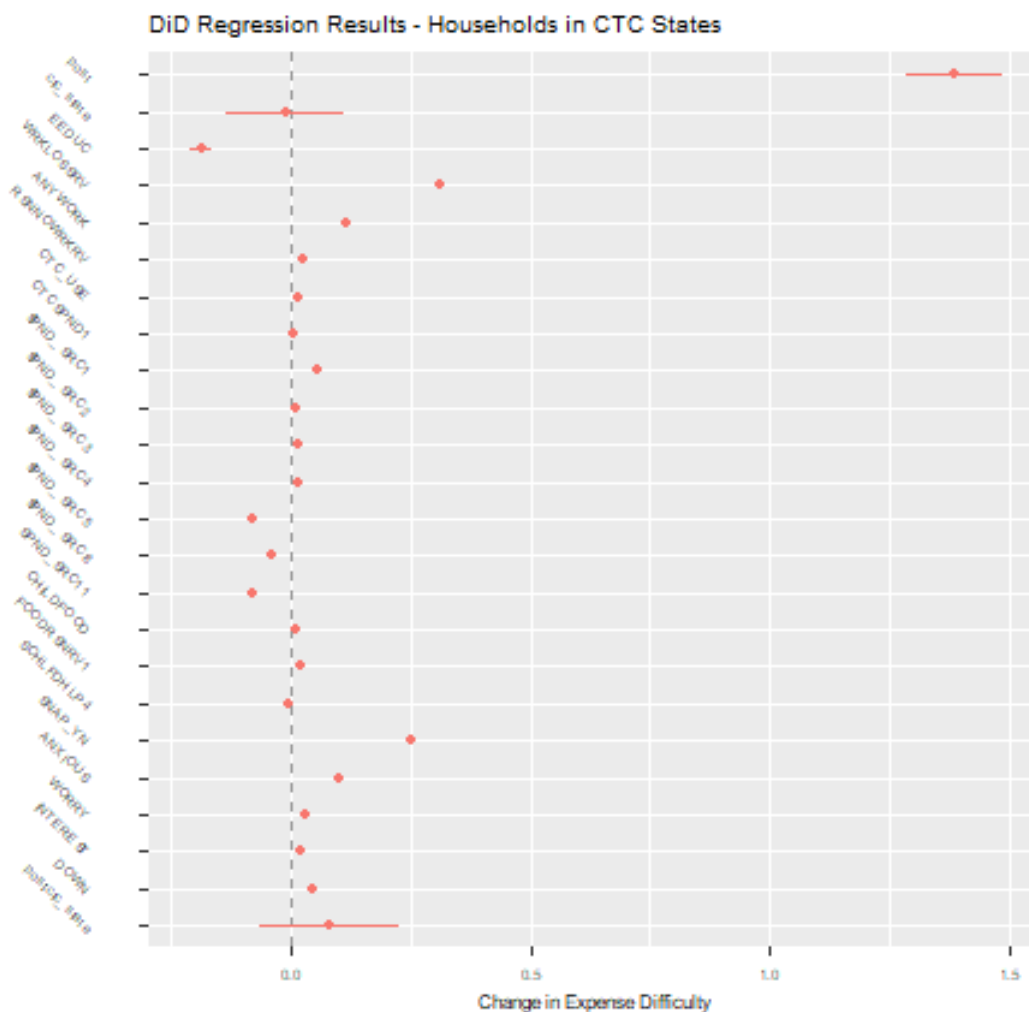


Figure 4: DiD Regression Results for Households in CTC States

The positive and statistically significant coefficient estimate for the post variable indicates an increase in difficulty with expenses for all families following the expiration of the expanded CTC (Estimate = 1.385,  $p < 0.001$ ). On the other hand, the coefficient estimate for the treatment variable (the treatment group being CTC eligible families in states with their own CTC programs) is small and not statistically significant (Estimate = -0.010,  $p = 0.873$ ). This suggests that state-level CTC programs did not independently reduce difficulty with expenses compared to states without such programs. The interaction term in this case captures the

difference-in-difference effect for CTC-eligible families in states with CTC programs after the expiration of the federal expansion. The coefficient estimate for the interaction term is not statistically significant (Estimate = 0.082,  $p = 0.276$ ), indicating that after the expiration, there was no measurable difference in financial hardship for families in states with CTC programs compared to families in states without them.

### Discussion

This research holds significant implications for our understanding of the impact of political controversy on policy outcomes, as well as for policy itself. However, the limitations of this study were considerable, and any attempt at interpretation in the context of policy implementation of future research should take these limitations into account. First, this study contributes to the development of a general theory on how political controversy shapes policy implementation, especially considering the interplay of federal policy and state-level action in the wake of a significant shock like the COVID-19 pandemic. By understanding the impact of political controversy on policy outcomes, we can better mitigate negative consequences and ensure policies effectively address social issues like child poverty.

Second, and perhaps more importantly, the findings of this study highlight the critical interplay between federal and state policies in shaping the efficacy of anti-poverty initiatives like the expanded CTC. The lack of a significant effect for the post-treatment interaction term suggests that while the expanded CTC was effective in reducing financial difficulty, its expiration did not lead to immediate, drastic changes in expenditure difficulty across all states. This finding aligns with studies showing the temporary nature of the CTC's benefits but conflicts with claims of severe work disincentives. The significant interaction term in states with CTC

programs underscores the role of state-level policy in buffering against federal policy changes. States with complementary programs effectively extended the benefits of the expanded CTC, reducing financial strain for families and mitigating the impact of the federal CTC's expiration.

To expand on policy implications, the study confirms that political controversy – manifested in state-level policy variations – can impede or enhance the implementation of federal programs. States with restrictive policies missed opportunities to extend the benefits of the federal CTC, while states with expansive policies filled gaps left by its expiration. The findings emphasize the need for robust coordination between federal and state governments to maximize the efficacy of welfare programs. For future expansions, policymakers should consider integrating state-level programs to reduce disparities in access and impact. Furthermore, the persistent significance of racial, educational, and household-level variables in explaining financial difficulty highlights structural inequities that need to be addressed. Expansive CTC policies should explicitly target these disparities to ensure equitable outcomes.

Now, to address the limitations of this study and how they could be addressed in future research, I will focus on four specific areas: data limitations, temporal scope, causal inference challenges, and political context. At the outset, any analysis of self-reported survey data is subject to respondent bias, particularly in culturally sensitive areas like financial hardship, and this analysis of HPS data is not exempt. Additionally, a significant amount of observations were dropped due to missing values, which could potentially introduce omitted variable bias into the results; some unobservable characteristic of the dropped observations may be contributing to the ultimate coefficient estimates. Future research on this topic may consider imputation for missing values, which some studies using HPS data have used to good effect (Schild et al. 2023), but this strategy could introduce bias in its own right if not done carefully.



Secondly, the study's timeframe (July 2021 - August 2022) captures data for only six months before and after the expiration of the CTC expansion. While this amount of time may be suitable for the establishment of parallel trends, it's difficult to extrapolate conclusions from this timeframe to the long term. Future research may expand the timeframe of analysis to try and capture the long term effects of the expanded CTC expiration.

Third, on the topic of the parallel trends assumption, we must consider challenges to causal inference. Visual inspection of trends for families' difficulty paying expenses in the six months before the expiration support the parallel trends assumption, but cannot definitively prove. Furthermore, though a deviation from the pre-expiration trend is evident for CTC-eligible families, there is no metric for determining whether this deviation is significant enough to warrant difference-in-differences analysis. Having a deviation which is not large enough between treatment and control groups could have contributed to the statistically insignificant interaction term in the first model. Finally, on a more general level, difficulty with expenses is limited as a proxy for expenditure. A family's self-reported financial difficulty is by definition a subjective quantity, and it could be the case that families with similar expenditures may perceive financial difficulty differently based on individual beliefs or external influences.

And fourth, this study takes a very simplistic approach to what I have called political controversy, assuming that state-level CTC programs represent disagreement between state and federal governments on policy implementation. This may be a naive approach, as political dynamics are often more complex, and factors like public awareness and support, administrative efficiency, and outreach efforts also play crucial roles in the efficacy of bureaucratic programs. These and other factors were not included in the study, and this misrepresentation of federalist dynamics could have led to incomplete or misguided conclusions. Future research could explore

how interactions between different levels of government have influenced the implementation of other welfare programs, such as unemployment insurance or Medicaid expansions, to develop a general framework for how federalist dynamics influence program implementation. By acknowledging these limitations and identifying avenues for future research, this study contributes to a growing body of knowledge on the interplay between political controversy, federalism, and policy implementation. Addressing these gaps in future research will be critical for designing equitable and sustainable policies to combat child poverty and support vulnerable families across diverse political and economic contexts.

### Conclusion

This research sheds light on the nuanced effects of the expanded CTC's expiration, particularly the role of state-level programs in mitigating financial hardship. In summation, critics of the expanded CTC argue that removing work requirements undermines labor force participation. This position is rooted in the historical narrative that social welfare should incentivize self-sufficiency. Testimonies, including the example from Senator Mike Lee, reinforce this perspective, framing the CTC as a disincentive to work. However, empirical evidence demonstrates that the expanded CTC was highly effective in reducing child poverty and general financial hardship. The debate surrounding the CTC's expansion under ARPA hinges on the tension between moral hazard concerns and the program's ability to alleviate poverty, tension which is rooted in American political history. These findings challenge the moral hazard arguments against the CTC while emphasizing the importance of federal-state collaboration in designing effective anti-poverty programs. However, in the quantitative analysis, the lack of a significant effect for the treatment variable and the post-treatment interaction suggests that

state-level CTC programs did not meaningfully mitigate financial difficulties compared to states without such programs. This may be due to the limited scope or funding of these programs relative to the federal expansion. Moving forward, policymakers must navigate political controversies with a focus on equity and sustainability to ensure that programs like the CTC achieve their full potential in alleviating poverty and supporting vulnerable families.

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Appendix

Table 0: HPS Sample Summary Statistics (by phase/week)

WEEK	total_observations	mean_birth_year	female_pct	hispanic_pct	bachelors_higher_pct	median_income	unemployed_pct	mean_hh_size
1	39	57064	53.9	58.9	9.23	54.9	4	40.4
2	40	60826	52.0	57.0	9.37	55.2	4	38.3
3	41	74995	51.0	59.1	9.96	56.3	4	39.7
4	42	75482	52.0	59.7	9.61	54.1	4	39.6
5	43	84158	52.5	59.8	9.66	53.7	4	39.1
6	44	63769	53.5	59.3	8.65	54.3	4	40.7
7	45	61767	53.7	59.3	8.53	55.0	4	41.0
8	46	62826	53.2	59.8	8.59	55.5	4	41.4
9	47	58304	52.6	59.5	8.88	55.9	4	41.9
10	48	46801	49.6	58.2	8.67	54.5	4	37.1
households_with_kids_pct	ctc_recipients_pct	difficulty_not_at_all_pct	difficulty_a_little_pct	difficulty_somewhat_pct	difficulty_very_pct			
1	31.9	17.9	54.1	1073300	659500			7.75
2	31.5	17.7	50.8	1237300	781900			8.66
3	33.5	19.3	51.2	1549900	982200			9.00
4	32.9	11.6	49.2	1591400	1020900			9.37
5	32.4	NaN	45.6	1914400	1265100			9.42
6	31.0	NaN	47.1	1398100	934900			9.43
7	30.7	NaN	46.6	1384800	876200			9.59
8	31.1	NaN	43.1	1454300	1018600			11.5
9	31.3	NaN	42.1	1348800	942100			12.2
10	34.1	NaN	40.2	1111400	801700			12.7

Table 1: Truncated DiD Regression Results

<i>Dependent variable:</i>		
EXPNS_DIF		
	(1)	(2)
post	0.102* (0.057)	1.385*** (0.052)
treatment	-1.495* (0.791)	
ctc_state		-0.010 (0.063)
post:treatment	0.097 (0.157)	
post:ctc_state		0.082 (0.075)
Observations	268,367	645,992
R <sup>2</sup>	0.718	0.638
Adjusted R <sup>2</sup>	0.718	0.638
Residual Std. Error	12.253 (df = 268342)	13.756 (df = 645967)
F Statistic	28,436.270*** (df = 24; 268342)	47,484.650*** (df = 24; 645967)

Note:

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01



Table 2: Full DiD Regression Results

	<i>Dependent variable:</i>	
	EXPNS_DIF	
	(1)	(2)
post	0.102* (0.057)	1.385*** (0.052)
treatment	-1.495* (0.791)	
ctc_state		-0.010 (0.063)
EEDUC	-0.166*** (0.017)	-0.186*** (0.012)
WRKLOSSRV	0.251*** (0.004)	0.310*** (0.003)
CTC_USE	0.029*** (0.009)	0.015*** (0.001)
CTCSPND1	0.009*** (0.001)	0.007*** (0.001)
SPND_SRC1	0.045*** (0.001)	0.055*** (0.0005)
SPND_SRC2	0.009*** (0.001)	0.012*** (0.0004)
SPND_SRC3	0.012*** (0.001)	0.016*** (0.0004)
SPND_SRC4	0.018*** (0.001)	0.017*** (0.001)
SPND_SRC5	-0.039*** (0.002)	-0.080*** (0.002)
SPND_SRC8	-0.028*** (0.002)	-0.040*** (0.001)
SPND_SRC11	-0.059*** (0.002)	-0.078*** (0.002)
post:treatment	0.097 (0.157)	
post:ctc_state		0.082 (0.075)
Constant	-0.113 (0.954)	-8.996*** (0.424)
Observations	268,367	645,992
R <sup>2</sup>	0.718	0.638
Adjusted R <sup>2</sup>	0.718	0.638
Residual Std. Error	12.253 (df = 268342)	13.756 (df = 645967)
F Statistic	28,436.270*** (df = 24; 268342)	47,484.650*** (df = 24; 645967)
Note:		*p<0.1; **p<0.05; ***p<0.01

Table 3: Full DiD Regression Results (continued)

	<i>Dependent variable:</i>	
	EXPNS_DIF	
	(1)	(2)
post	0.102* (0.057)	1.385*** (0.052)
treatment	-1.495* (0.791)	
ctc_state		-0.010 (0.063)
ANYWORK	0.082*** (0.003)	0.117*** (0.003)
RSNNOWRKR	0.021*** (0.001)	0.028*** (0.0004)
CHILDFOOD	0.009*** (0.001)	0.012*** (0.001)
FOODRSNRV1	0.019*** (0.001)	0.021*** (0.001)
SCHLFDHLP4	0.009* (0.005)	-0.003 (0.003)
SNAP_YN	0.308*** (0.002)	0.251*** (0.001)
ANXIOUS	0.130*** (0.006)	0.102*** (0.004)
WORRY	0.046*** (0.005)	0.032*** (0.004)
INTEREST	0.029*** (0.005)	0.022*** (0.004)
DOWN	0.063*** (0.006)	0.048*** (0.004)
post:treatment	0.097 (0.157)	
post:ctc_state		0.082 (0.075)
Constant	-0.113 (0.954)	-8.996*** (0.424)
Observations	268,367	645,992
R <sup>2</sup>	0.718	0.638
Adjusted R <sup>2</sup>	0.718	0.638
Residual Std. Error	12.253 (df = 268342)	13.756 (df = 645967)
F Statistic	28,436.270*** (df = 24; 268342)	47,484.650*** (df = 24; 645967)

Note:

\*p&lt;0.1; \*\*p&lt;0.05; \*\*\*p&lt;0.01