RESEARCH REPORT

How Can States Help Young Adults Weather a Recession?

Kassandra Martinchek

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Executive Summary

In February 2020, the US experienced a recession prompted by a global outbreak of the novel coronavirus (COVID-19). During this time, young adults faced employment instability and increased financial distress compared with older peers, which could undermine their long-term financial stability. Such effects were more pronounced for young adults living in communities of color, as they experienced greater job losses and pandemic-related health effects. Given these effects, young adults living in communities of color may fall behind their peers living in majority-white communities during recovery—prompting the need for policy action to help them maintain financial resilience.

In this report, I employed a case-study example using longitudinal credit bureau data to better understand young adults' financial coping during economic downturns. This analysis focuses on three key aspects of youth credit health during the COVID-19 pandemic:

1. examining young adults' (ages 20 to 29) credit health trends throughout the COVID-19 pandemic (from February 2020 to August 2023)
2. tracking changes in credit health disparities between those living in communities of color and majority-white communities
3. assessing the influence of state-level consumer protection policies—specifically utility shutoff moratoria and extended unemployment insurance (UI) programs—on young adults' credit health

Analyzing the trajectories of young adults' credit health, I found the following:

- Credit scores steadily improved for young adults living in all communities, including majority-white, majority-Black, majority-Latinx, and majority-Native communities—although credit scores of young adults living in communities of color remained lower throughout the pandemic.
- While young adults living in communities of color and majority-white communities exhibited similar credit card delinquency trends over the pandemic, experiencing substantial declines in 2020 before rising above prepandemic levels in 2022 and 2023, those living in majority-Black, majority-Latinx, and majority-Native communities faced rates nearly twice as high as young adults living in majority-white communities. By August 2023, 1 in 5 young adults with credit

cards living in majority-Black communities were delinquent on their credit card bills—indicating high levels of financial distress.

Given the evidence that recessions may exacerbate racial disparities in financial well-being, I explored if community-level racial disparities in credit health between young adults living in majority-white communities and communities of color widened or narrowed through the pandemic. I found the following:

- Community-level racial disparities in credit scores between young adults living in majority-white, majority-Latinx, and majority-Black communities narrowed by August 2023, although the reduction was marginal relative to the overall disparity.
- Community-level racial disparities in credit card delinquencies between young adults living in majority-white, majority-Latinx, and majority-Black communities widened by August 2023, reversing prior gains in narrowing disparities observed before 2022.

Given the evidence of pandemic-era improvements in young adults' credit and debt outcomes and the narrowing of community-level racial disparities credit health before 2021, I explored whether state-level consumer protection and safety net policies helped improve young adults' credit health. I found that policies designed to help consumers effectively respond to economic volatility and mitigate material hardship likely relieved pressures on repaying utility bills and provided additional economic resources, enabling young adults to remain current on bills:

- Utility shutoff moratoria were associated with very marginal increases in young adults' credit scores, with stronger effects for young adults living in communities of color, particularly majority-Native communities.
- Additionally, utility shutoff moratoria were linked to a 2.2 percent decrease in credit card delinquencies among young adults with a credit card.
- Extended UI programs (20 week) were associated with very marginal increases in young adults' credit scores.
- Extended UI programs (both 13 and 20 weeks) were associated with decreases in young adults' credit card delinquencies. The 13-week program reduced credit card delinquencies substantially among young adults living in majority-Native and majority-Black communities, with 28.0 and 9.7 percent reductions, respectively.

Overall, the findings from this study suggest several potential policy pathways to (1) address structural disparities in wealth and credit between communities of color and majority-white communities; and (2) enhance the resilience of vulnerable young adults against dynamic risks like recessions. Addressing disparities in credit health necessitates policies directly confronting the underlying issues of wealth-building opportunities and credit access disparities between communities by implementing targeted credit and banking programs in communities of color and supporting young adults' wealth-building through baby bonds. These policies may be more impactful when paired with those that help young adults living in communities of color remain resilient to recessions, including (1) strengthening SNAP and UI programs to reach more young adults when they need support; (2) expanding consumer protections to ensure families can access essential goods and services even amid economic turmoil; and (3) directly providing funds for young adults to weather financial emergencies.

Future research could expand on this study's findings to deepen our understanding of fostering financial resilience in young adults during economic downturns by exploring the impact of other policy buffers, quantifying impacts on a broader range of financial well-being outcomes, and comparing findings across other economic downturns.

Introduction

During recessions, young adults face employment instability and increased financial distress compared with older peers, impacting their long-term financial well-being. Young adults in communities of color face heightened vulnerability to economic shocks because of decades of disinvestment rooted in structural racism, limiting opportunities and mobility. This often results in a higher likelihood of falling behind their peers in majority-white communities during recovery. While macroeconomic shocks, such as recessions, can undermine young adults' efforts to establish financial stability and security, effective policies can act as buffers, assisting them in maintaining financial resilience.

In February 2020, the National Bureau of Economic Research declared a recession, prompted by the global outbreak of the novel coronavirus (COVID-19).[1] The ensuing pandemic resulted in more than 1 million deaths in the US by 2023, with higher losses of life among Native American and American Indian, Black, and Latinx families.[2*]

Following the implementation of shelter-in-place and public health protocols, there were rapid and severe levels of job loss that disproportionately impacted families and communities of color and led to declines in economic growth (CBPP 2022a, 2022b, 2023). In response, federal and state lawmakers enacted broad recovery policies to expand protections and public supports for families affected by pandemic-related job loss and financial distress (CBPP 2022a, 2022b, 2023).

Although unemployment dropped rapidly in the months following the pandemic recession, the recovery was uneven, especially for low-wage, Black, and Latinx workers. Spikes in virus caseloads and

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[*] In this report, I use the term Latinx to refer to residents of communities that reported Hispanic ethnicity across racial identities in a gender-inclusive way. Hispanic is the term used by government agencies when collecting data about populations with Latinx ethnic identities but can be associated with colonialism and can exclude populations that do not trace their ancestry to Spain.

Throughout this report, I use the term Native to refer to populations and communities that reported they had Native American or American Indian ancestry. In doing so, it is important to recognize that Native Americans are not monolithic, and that this term—which colonizers created—will not resonate with all tribal citizens and communities.

I acknowledge these may not be the preferred identifiers and remain committed to employing inclusive language whenever possible.

supply chain disruptions contributed to economic instability, while increasing inflation levels threatened the burgeoning recovery (CBPP 2022a, 2022b, 2023). This unique economic context varies substantially from other economic downturns like the Great Recession and raises the question of how people, particularly young adults, fared during the recession and the recovery (CBPP 2022a, 2022b, 2023).

I employed a case-study example using longitudinal credit bureau data to better understand young adults' financial coping during economic downturns. This analysis focuses on three key aspects of young adults' credit health during the COVID-19 pandemic:

1. examining young adults' (ages 20 to 29) credit health trends throughout the COVID-19 pandemic (from February 2020 to August 2023)[3]
2. tracking changes in credit health disparities between those living in communities of color and majority-white communities
3. assessing the influence of state-level consumer protection policies—specifically utility shutoff moratoria and extended unemployment insurance (UI) programs—on young adults' credit health

My findings reveal the following:

- Credit scores steadily improved for young adults living in all communities, including majority-white, majority-Black, majority-Latinx, and majority-Native communities. Some evidence exists of a marginal reduction in community-level racial disparities in credit scores between young adults living in communities of color and those living in majority-white communities, although these disparities remain large.
- While young adults in both communities of color and majority-white communities shared similar credit card delinquency trends during the pandemic—with substantial declines in 2020 followed by increases above prepandemic levels in 2022 and 2023—those in majority-Black, majority-Latinx, and majority-Native communities experienced rates nearly double those in majority-white communities. These disparities widened from February 2020 to August 2023.
- In assessing the effects of state-level consumer protection and safety net policies on young adults' credit health, I found the following:
    1. Utility shutoff moratoria were linked to marginal increases in young adults' credit scores (more pronounced in communities of color) and a 2.2 percent decrease in credit card delinquencies.

2. Extended UI programs (both 13 and 20 weeks) were associated with modest increases in credit scores and reductions in credit card delinquencies. The 13-week programs were associated with larger declines in credit card delinquencies for young adults living in communities of color.

On the whole, these findings indicate that significant and persistent community-level racial disparities in credit health between young adults living in communities of color and those in majority-white communities persisted throughout the pandemic. Some evidence exists that these disparities narrowed before August 2021, although these changes were marginal.

While state-level consumer protection and safety net policies demonstrated modest positive impacts on young adults' credit health, these impacts were likely more pronounced for people who used these policies. Such policies may have helped them by easing bill repayment pressures and bolstering economic resources, enabling young adults to stay current on bills and preserve strong credit profiles.

Future research could expand on these insights by exploring additional policy buffers, assessing the pandemic's broader impact on various financial well-being outcomes for young adults, comparing findings across different economic downturns, and evaluating inflation's effects on young adults' credit health. Ultimately, this study emphasizes the need for policymakers to combine policies addressing structural disparities in wealth and credit between communities of color and majority-white communities with race-conscious macroeconomic stabilization policies. This approach aims to mitigate vulnerabilities to dynamic economic risks and empower young adults in communities of color to respond effectively without lagging behind their peers in more affluent communities.

In this report, I examine the literature that underscores the importance of cultivating young adults' financial resilience during recessions. I then detail the study's methodology and core research questions and present empirical findings of young adults' use of debt and credit over the COVID-19 pandemic, along with insights from a causal analysis of policy impacts on their credit health. The report concludes with a discussion of the results and reflections on their implications for research and policy.

Why Is it Important to Examine Young Adults' Financial Resilience to Recessions?

Understanding how to support young adults in building resilience to economic shocks is crucial, given their unique vulnerabilities during recessions and the potential for widening disparities between communities of color and majority-white communities. Below, I explore how young adulthood is a sensitive time for establishing financial security, the impact of structural racism on *community-level* financial disparities, and how the interaction between policies and economic shocks can either widen or narrow these disparities (Martinchek forthcoming).

Young Adulthood and the Challenges of Building Financial Security during Recessions

Compared with older adults, young adults often face challenges in responding to financial emergencies because of lower levels of resources, including savings, assets and investments, family financial support, insurance, and access to credit (Martinchek forthcoming). This lack of financial resilience is underscored by their average lower levels of savings, assets, and access to credit compared with older adults, indicating they may face steeper challenges in remaining financially solvent during tough economic times (Martinchek forthcoming).[4]

Young adulthood is when consumers commonly accumulate more debt and save less, prioritizing investments in human capital and assets for future economic mobility (Ando and Modigliani 1963; Modigliani and Parkin 1975). However, taking on significant debt with limited assets can present challenges in repaying debt that can contribute to short-term financial distress or delayed investments in critical financial milestones (Cramer 2020; Friedline and Freeman 2016; Henry 2017; Martinchek forthcoming).[5]

Previous research indicates that young adults, in particular, may encounter difficulties in recovering and establishing financial security during recessions. Studies on postrecession employment and earnings trajectories reveal that those entering the labor market during economic downtowns experience lower employment and earnings even a decade after the recession has concluded (Ellwood 1982; Kahn 2006; Rinz 2019; Rothstein 2021; Wachter 2020).

Structural Racism and Persistent Disparities in Community-Level Financial Well-Being

Research demonstrates significant and enduring disparities in credit health rooted in race and ethnicity. These disparities stem from race-based and race-neutral policies that have limited wealth-building opportunities and access to credit at the community level (Baradaran 2017; Furtado, Verdeflor, and Waidmann 2023; Kijakazi et al. 2019; Rothstein 2017).

In the mid-20th century, the discriminatory practice of redlining classified communities as "hazardous" investments based on their changing racial and ethnic compositions, leading to the denial of mortgage applications from residents in those designated areas (Faber 2019; Mitchell and Franco 2018). Although no longer in practice, redlining has left a lasting impact by fostering and perpetuating homeownership gaps between white and Black households, racial disparities in housing price appreciation and wealth-building returns, and entrenched residential segregation (Aaronson, Hartley, and Mazumde 2021; Baradaran 2017; Faber 2019; Markley et al. 2020; Mitchell and Franco 2018; Rothstein 2017).

Other policies, including the discretionary application of G.I. Bill benefits, predatory practices in subprime lending pre-2008, and geographical targeting of high-cost and traditional credit based on community demographics, have further exacerbated racial disparities in wealth and credit (Baradaran 2017; Dymski 2009; Gale 2021; Goodstein and Rhine 2017; Katznelson 2005; Markley et al. 2020; Martinchek forthcoming; McKenna 2008; Rothstein 2017; Taylor 2019; Wyley et al. 2009).

Importantly, the cumulative impact of these policies has shaped the geography of opportunity *at the community level*. This has led to racial residential segregation, clustering people of similar races together, creating distinct groups with disparate access to affordable credit, wealth-building opportunities, and economic mobility prospects (Acs et al. 2017; Baradaran 2017; Rothstein 2017; Turner et al. 2020). Such economic segregation within racially segregated communities results in lower quality of life and wealth for residents (Acs et al. 2017). Ultimately, a long-standing history of policies and practices has left communities of color and the young adults residing within them with cumulative disadvantages and fewer supports for mobility and recovery.

Structural Racism and the Individual-Level Financial Well-Being Outcomes of Young Adults

Beyond shaping community-level opportunities and resources, these policies have also shaped young adults' individual-level outcomes (Baradaran 2017; Rothstein 2017). Young adults of color, for instance, hold less wealth and savings than their white peers and are more likely to have a negative net worth (Cramer 2020; Killewald and Bryan 2018; Perry and Donoghoe 2023).

Exacerbating these challenges, young adults of color frequently bear the responsibility of providing financial support to family members, while their white peers receive intergenerational wealth and income transfers that contribute to financial stability and asset investments (Fingerman et al. 2011; Harvey 2022; Lee, Peek, and Coward 1998; O'Brien 2012; Park 2018). On the other side of the balance sheet, young adults of color are more likely to hold more costly forms of debt, be delinquent on loan payments, and carry high debt burdens relative to their incomes (Baradaran 2017; Charron-Chénier 2018; Charron-Chénier and Seamster 2021; Faber 2019; Killewald 2013).

Collectively, research evidence indicates that individual young adults of color may encounter more significant struggles than their white peers in establishing financial security, grappling with both high debt burdens and limited economic resources.

Dynamic Risks to Racial Equity: Examples from the Great Recession

Communities' disparities in wealth and credit are not static and face the potential of widening during economic shocks, posing a dynamic threat to advancing racial equity in financial well-being (Martinchek forthcoming; Neal and McCargo 2020).

During the Great Recession, existing racial disparities in homeownership and overall wealth were exacerbated during the recovery, despite policies like the Troubled Asset Relief Program and Neighborhood Stabilization Program aimed at preventing foreclosures (Neal and McCargo 2020). However, these initiatives did not address structural differences in vulnerability to foreclosure between communities of color and majority-white communities entrenched through targeted subprime lending, redlining, and racialized lending practices (Baradaran 2017; Rothstein 2017) .

As a result, communities of color faced concentrated foreclosures and vacancies and higher rates of negative home equity, and they experienced a slower and less-pronounced recovery (Immergluck 2016;

Raymond 2018; Reid 2021; Rothstein 2017; Sharp, Whitehead, and Hall 2020; Taylor 2019). Black, Latinx, and Native families were more likely to lose wealth and accumulate high debt during the aftermath of the Great Recession—leaving them on less-stable financial footing over a longer period than their white peers (Pfeffer, Danziger, and Schoeni 2013; Zhang and Feng 2017).

Ultimately, the persistent and pronounced disparities in community-level risks and assets between communities of color and majority-white communities may render residents of communities of color more vulnerable during economic downturns, causing them to fall further behind their peers in more well-resourced communities. Current research could extend its focus to better understand how dynamic risks evolve during recessions, particularly concerning debt and credit outcomes, which are relatively understudied compared with housing and employment outcomes.

Policies as Buffers

While recessions pose threats to young adults' financial security and can exacerbate racial inequities in wealth and credit, policies can help people navigate economic shocks and narrow existing inequities.

Recent research examining pandemic-era investments in social insurance and safety net programs suggests that such investments may have contributed to reducing child and household poverty, food insecurity, and material hardship amid heightened economic volatility (Karp man and Acs 2020; Karpman et al. 2021, 2022; Wheaton and Kwon 2022). Further, the Federal Reserve's findings show a narrowing racial wealth gap between 2019 and 2022 because of increased asset investments among families of color.[6] However, income expectations and stability for these families worsened, leading to more pessimistic views of their financial futures.[7]

Studies investigating state-level policies reveal the positive impact of utility shutoff and eviction moratoria in reducing use of nonbank loans such as payday loans and lowering delinquencies on auto loans and credit cards during freezes (Andre et al. 2023a, 2023b). These policies potentially increase individuals' resources to respond to economic shocks or minimize their impact (Martinchek forthcoming).

To expand this body of literature, it would be useful to investigate whether policy investments improved overall financial well-being outcomes for all families and if they had specific distributional impacts, particularly on groups more financially vulnerable to recessions. A crucial aspect would be to assess whether these policies helped young adults living in communities of color respond to the pandemic without falling even further behind their white peers during the recovery from the pandemic recession (which officially spans February to April 2020).[8]

Methods: Understanding the Impact of State-Level Policies on Young Adults' Credit and Debt

Research Goals

This study builds on existing literature on the complex interplay between structural racism, dynamic economic risks, young adults' financial coping and trajectories, and recessionary policy buffers. It seeks to provide evidence on

1. changes in young adults' credit and debt over an economic recession; and
2. the potential buffering impact of state-level policies on young adults' credit health.

By delving into the dynamics of how the pandemic recession affected young adults living in communities of color and the potential supportive role that consumer protection and safety net programs played, this research offers insights for policymakers. This understanding can guide efforts to effectively support young adults in developing resilience to economic shocks, setting them on a sustainable path toward long-term financial stability and security.

To meet these goals, this study focuses on two research questions:

- How did young adults' (ages 20 to 29) credit health change over the pandemic? Did racial disparities in credit health across communities widen or narrow?
- Did state-level countercyclical policies, such as utility shutoff moratoria and extended UI programs, support young adults' (ages 20 to 29) credit health, especially for young adults living in communities of color?

This study focuses on pandemic-era trends and policy impacts related to credit health indicators because creditworthiness at the beginning of a young adults' financial journey influences their access to wealth-building opportunities and the cost of borrowing. This, in turn, shapes their ability to build lasting financial stability. Further, the study emphasizes the importance of measures of debt and delinquencies in the context of financial resilience-building. Unpaid debt can impede consumers' ability to effectively navigate financial shocks without enduring additional hardships (Collins and Lorenze

2021; Deevy et al. 2021). Collectively, these measures offer valuable insights into consumers' readiness for future wealth accumulation, past encounters with financial distress, and resilience to unforeseen shocks.

For other related papers exploring young adults' use of debt and credit during macroeconomic shocks and the impact of countercyclical consumer protection policies on consumer credit health outcomes, please see box 1.

BOX 1

Additional Reading and Related Research

This report is part of a larger body of work focused on both understanding (1) young adults' resilience to macroeconomic shocks; and (2) the impact of countercyclical consumer protection policies on consumer credit health outcomes. This report specifically explores the credit health trajectories of young adults ages 20 to 29 and the impact of state-level utility shutoff moratoria and extended UI programs on this population. Additional reports and publications in this series include the following:

Andre, Jennifer, Breno Braga, Kassandra Martinchek, and Signe-Mary McKernan. 2023a. "The Effects of State Consumer Protection Policies During the Pandemic on the Use of Alternative Financial Services Loans." Available at SSRN: https://www.doi.org/10.2139/ssrn.4345180.

———. 2023b. "The Effects of the State Utility Shutoff Moratoria on Credit Delinquencies during the Covid-19 Pandemic." Available at SSRN: https://www.doi.org/10.2139/ssrn.4702669.

Martinchek, Kassandra. 2024. "Young Adults' Use of Debt and Credit During the COVID-19 Pandemic Data Tables." Accessible from https://datacatalog.urban.org/dataset/young-adults-use-debt-and-credit-during-the-pandemic. Data originally sourced from credit bureau data, developed at the Urban Institute, and made available under the ODC-BY 1.0 Attribution License.

———. forthcoming. "Young Adults' Use of Debt and Credit During the COVID-19 Pandemic." PhD Diss., The George Washington University.

Research Design

Analysis of Trends in Young Adults' Credit and Debt During the Pandemic

To better understand young adults' credit health trends throughout the pandemic, I employed two analyses: (1) a descriptive analysis to outline trends; and (2) a descriptive regression analysis to test whether community-level racial disparities in credit health widened or narrowed.

First, I generated plots (see figures 1 through 4) illustrating descriptive trends in credit scores and credit card delinquencies. This allowed me to assess how young adults' credit health trends evolved across different communities during the COVID-19 pandemic, incorporating some prepandemic data from 2018 to 2023.

Then, I used descriptive individual-consumer level regressions to statistically test whether the initial disparities in credit health between young adults living in communities of color and majority-white communities narrowed or widened over the pandemic. For a detailed regression specification and methodology, refer to appendix A (and see appendix B, tables B.1 and B.2, for full regression results) and Martinchek (forthcoming), which provides a more in-depth discussion.

Impact Analysis of Consumer Protection and Safety Net Policies

Expanding on this analysis, I used a staggered difference-in-difference design to gauge the impact of different state-level policies on young adults' credit health. I measured the policy impacts of two state-level policies between 2020 and 2023: (1) utility shutoff moratoria; and (2) extended UI programs (both 13- and 20-week programs).

Throughout the pandemic, states varied in their implementation, duration, and timing of these policies. I exploited these variations to measure the impact of such policies on *all* young adults while controlling for other state-level consumer protection and safety net policies, differences in COVID-19 metrics (cases, vaccinations, and deaths), economic volatility indicators (unemployment rate, home price changes), and pandemic-related business closures. Refer to appendix A for the full regression specification and detailed methodology and appendix B for full regression results. Further, during this time there were many federal-level policies that likely benefited young adults' financial stability and credit health (box 2), although these are not the analytical focus of this report.

These policy impacts are intent-to-treat (ITT) effects estimated for all young adults, irrespective of whether they received benefits from the policies. I explore potential treatment-on-the-treated effects (TOT) in the discussion section of this report. The analysis estimates ITT effects for (1) young adults overall; (2) young adults living in majority-Black communities; (3) young adults living in majority-Latinx communities; and (4) young adults living in majority-Native communities. See appendix A for more details on sample characteristics and regression specifications.

To complement this impact analysis, I conducted several robustness checks designed to build confidence in the direction and magnitude of policy impacts. In these checks, I did the following:

- quantified policy impacts within a set of paired contiguous counties, comparing states that implemented policies in the period with those that did not
- estimated policy impacts among the sample of consumers living in bordering counties of states that did and did not implement the policy of interest during the period
- quantified the impacts of policies on consumers who did not benefit from federal-level student loan and mortgage forbearance programs—or consumers who did not have student loans or mortgages in February 2020 (see detailed methodology details in appendix B).

BOX 2

Federal and State Policy Protections for Young Adults during the Pandemic

In addition to state-level policy protections, the federal government implemented several national-level protections and expansions of benefits during the pandemic. Many young adults likely benefited from these investments in ways that enabled them to remain financially secure, despite significant economic volatility. Below, I include estimates of the share of young adults who may have benefited from different federal policies during the pandemic, based on work by Martinchek (forthcoming).

TABLE 1

Young Adults Likely Benefited from an Expanded Safety Net during the Pandemic

Federal-level policies and the share of young adults who likely could benefit from them

Federal policy	What the policy did	Share of young adults who likely benefited
Student loan forbearance	Suspended federal student loan payments and interest accrual	24.7 percent
Economic Impact Payments (EIPs)	Provided direct cash payments to eligible households	67.8 percent (as measured in May 2020)[a]
National eviction moratoria	Suspended eviction proceedings from being filed by landlords	11.9 percent of renters in 2020, 15.7 percent of renters in 2021, and 13.4 percent of renters in 2022
Federal unemployment insurance (UI)	Several policy provisions enhanced traditional UI benefits at this time. Pandemic Unemployment Assistance expanded UI eligibility to part-time, contract, and gig workers; Federal Pandemic Unemployment Compensation increased benefits by $600 between March 2020 and July 2020 and $300 between December 2020 and September 2021; and Pandemic Emergency Unemployment Compensation expanded the number of weeks that claimants could access UI.	18.2 percent of 18- to 24-year-olds and 20.9 percent of 25- to 34-year-olds
Supplemental Nutrition Assistance Program	Increased monthly SNAP benefits by $95 to $250 for eligible households	16.0 percent of young adults with incomes below 400 percent of the federal

Federal policy	What the policy did	Share of young adults who likely benefited
(SNAP) emergency allotments		level in 2020, 19.6 percent of this group in 2021, and 17.3 percent of this group in 2022
Expanded Child Tax Credit	Increased the maximum benefits, expanded eligibility, and implemented periodic (i.e., monthly) instead of one-time payments	11.4 percent of household heads ages 18 to 24
Mortgage forbearance	Enabled mortgage holders to reduce or suspend payments temporarily with greater ease	0.19 percent of young adults ages 20 to 29 with a credit record

Source: Author's analysis in Martinchek (forthcoming).
Notes: Student loan forbearance estimates adjust the share of young adults ages 20 to 29 in the credit bureau data with a student loan by the share of borrowers who applied for student loan forgiveness—see Kristin Blagg , Elise Colin, and Michael Karpman, "As the Supreme Court Weighs Student Loan Forgiveness, Who Has Not Yet Applied? An Essay for the Learning Curve" (Washington, DCL Urban Institute, 2023), https://www.urban.org/research/publication/supreme-court-weighs-student-loan-forgiveness-who-has-not-yet-applied. Federal UI participation rates are from the US Census Household Pulse Survey, as analyzed by Carey et al. (2021) and capture the share of young adults who *received* UI benefits. Expanded Child Tax Credit estimates adjust the share of 18- to 24-year-old headed households with children as reported in the American Community Survey (Alicia VanOrman and Linda A. Jacobsen, "US household composition shifts as the population grows older; More young adults live with parents," Population Reference Bureau, February 12, 2020, https://www.prb.org/resources/u-s-household-composition-shifts-as-the-population-grows-older-more-young-adults-live-with-parents/) by the share of households with children who received the Child Tax Credit in 2021 (Burnside et al. 2023). Mortgage forbearance estimates use the share of young adults ages 20 to 29 in the credit bureau data with a delinquent (60+ day) mortgage. Economic Impact Payment estimates use the share of young adults ages 20 to 29 who reported receiving such payments in the Urban Institute Coronavirus Tracking Survey by mid to late May 2020. Some young adults are likely to have received Economic Impact Payments after this period but are not captured in this estimate. National eviction moratoria estimates use the share of *young adult renters* who reported having problems paying rent in the Urban Institute Well-Being and Basic Needs Survey in 2020, 2021, and 2022. It is important to note that not all young adults are renters, and only a subset of those who rent and experience problems paying their rent would have been evicted or threatened with eviction. SNAP emergency allotment estimates use the share of young adults ages 20 to 29 who reported that their families used SNAP benefits *and had incomes below 400 percent of the federal poverty level* during the period in which SNAP emergency allotments were active (2020, 2021, and 2022) in the Urban Institute Well-Being and Basic Needs Survey. As such, these estimates do not estimate SNAP participation among young adults who have incomes above 400 percent of the federal poverty level.
[a] This share reflects young adults ages 20 to 29 who received an Economic Impact Payment as of mid to late May 2020. Some young adults may have received such payments after this period—please see Holtzblatt and Karpman (2020).

Data Sources

I drew on several data sources to measure young adults' credit outcomes, capture community-level racial demographics, represent state-level policies, and control for COVID-19 cases and deaths, economic volatility, and pandemic-related business closures.

Credit Health Outcomes

For the outcome variables, I used administrative data from a 2 percent nationally representative sample of consumer credit records sourced from one of the three major credit bureaus. The main study sample included more than 850,000 consumers in the credit bureau data between ages 20 and 29 in February 2020.

Consumer credit records contain details on consumers' zip code of residence, age, and use of credit and debt—but no other demographic details, including consumers' race and ethnicity. Notably, the data do not include details on 11 percent of US adults with no credit record, with people of color and young adults disproportionately represented among credit invisibles (Brevoort, Grimm, and Kambara 2015).

Credit data provide a window into young adults' overall credit health, shaping their ability to borrow at affordable rates, access to wealth-building opportunities, and their past experiences of financial distress. In this report, I focus on two credit-health indicators:

- **Credit scores** reflect consumers' ability to repay loans, with subprime scores below 600 indicating potential barriers to credit access and higher associated costs (Elliott and Lowitz 2018). These scores are influenced by consumers' payment histories, the share of available credit used, the length of credit history, credit product mix, and recent credit inquiries. I used the average VantageScore (from 300 to 850) of consumers with credit bureau records as an outcome in this study.[9]
- **Credit card delinquencies** can indicate whether consumers are experiencing challenges making ends meet and meeting existing financial obligations. Unpaid credit card bills can undermine young adults' creditworthiness, signaling distress. I measure whether consumers with at least one open credit card are 30 days or more past due on payments. This early measure captures whether consumers have at least one missed credit card bill, which can lower consumers' credit scores marginally. However, this measure also captures later stages of delinquencies, involving longer periods of nonpayment, leading to substantial drops in overall credit scores, high fees, and interest that can be challenging to repay, along with the risk of accounts moving into collections.

Community-Level Race and Ethnicity

To disaggregate results across racial demographics, I used Zip Code Tabulation Area (ZCTA)–level data on racial and ethnic demographics from the five-year American Community Survey (ACS) from 2015 to 2019.

As credit bureau data lack individual consumers' race and ethnicity details, I used these data to categorize communities (or ZCTAs) into majority-Black, majority-Latinx, majority-Native, and majority-white communities to examine heterogenous effects between young adults living in different communities.

To create this classification, I first merged ACS data on community-level (ZCTA) race and ethnicity with credit bureau data using consumers' zip codes of residence in February 2020. I then used ACS population data to categorize communities, following similar approaches taken in Martinchek and colleagues' dataset[10] and Andre et al. (2023a, 2023b).[11] Majority communities are defined at a 50 percent threshold where 50 percent or more of the ZCTA's residents identify with the racial or ethnic group of interest in the 2015–19 ACS.

Although this approach is imperfect for examining individual-level credit and debt outcomes, it is well-suited to investigate community-level disparities that are central to this study and aligns with a substantial body of scholarship emphasizing the role of residential segregation in shaping individual consumers' financial outcomes. By adopting a community-level approach, the study explores how racially clustered areas may limit young adults' opportunities to build and preserve strong credit profiles (Baradaran 2027; Furtado, Verdeflor, and Waidmann 2023; Rothstein 2017).

This community-level approach shifts focus "away from an individual's race as associated with disparities and toward systems and structures as drivers of disparities" (Balu et al. 2023, p. 6). Using community-level demographics as a proxy for residential clustering by race and ethnicity offers advantages: (1) it is available at a low level of geographic aggregation—the ZCTA level; and (2) it covers both rural and urban areas, where dissimilarity indices (which are often used to measure residential segregation and clustering) are often available only in urban areas or at higher geographies (Furtado, Verdeflor, and Waidmann 2023).

Consequently, this study examines the outcomes of *young adults living within various communities*, reflecting differences in credit and debt outcomes at the community (or ZCTA) level.

Policy Data

To gauge policy impacts, I relied on data detailing the timing and duration of state-level policies from two sources: (1) data on state-level utility shutoff moratoria from the National Consumer Law Center (NCLC); and (2) data on state-level UI policies from the COVID-19 US State Policy Database (CUSP).

At the same time as states implemented utility shutoff moratoria and extended UI programs, they also implemented a spectrum of policies and practices targeting consumer financial well-being. This

included state-level financial assistance and consumer protections, in addition to federal interventions such as stimulus checks, enhanced unemployment benefits, and emergency increased allotments for safety net programs (see box 2 for additional details).

Given the large and multifaceted nature of state and federal policy innovations, capturing their effects on consumer credit health requires additional data to isolate the impact of the policies of interest. To do this, I used data on garnishment suspensions, repossession suspensions, and state-level eviction moratoria from NCLC. I also incorporated data on differences in state-level timing of expanded eligibility through Pandemic Unemployment Assistance (PUA) and additional UI allotments (from Federal Pandemic Unemployment Compensation, or FPUC) from CUSP to control for other state-level policies affecting consumer credit outcomes differentially over time across implementing and nonimplementing states.[12]

Contextual Controls

Beyond considering state-level time-varying policies that could affect consumer credit health during the study period, I also addressed differences in states' COVID-19 cases and deaths, economic volatility, and pandemic-related business closures. This involved utilizing data on

- states' COVID-19 cases and deaths from the *New York Times*;
- vaccination rates from the Centers on Disease Control and Prevention;
- state-level home price changes from the Urban Institute;
- state-level unemployment rates and on-time payment of UI benefits from the Bureau of Labor Statistics; and
- state-level business closures from CUSP.[13]

Results: Young Adults' Credit Health Trends during the Pandemic

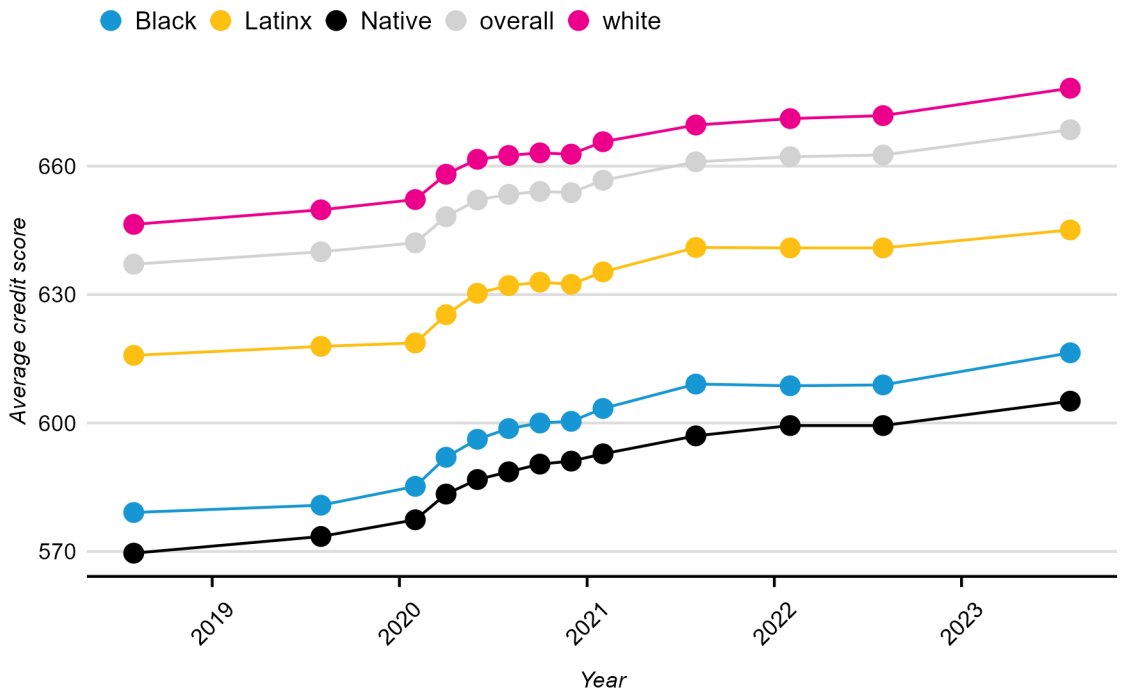
Credit Scores

Examining young adults' credit health trends throughout the pandemic, I observed a consistent improvement in credit scores for young adults living in all communities, including majority-white, majority-Black, majority-Latinx, and majority-Native communities (figure 1). Despite this improvement, substantial disparities persisted in scores among young adults living in different communities. Those in majority-Black, majority-Latinx, and majority-Native communities continued to experience worse credit scores at the beginning of the pandemic and throughout compared with their counterparts in majority-white communities (figure 1).

FIGURE 1

Credit Scores Improved for Young Adults through the Pandemic

Average credit scores of young adults (ages 20 to 29) living in different communities, 2018–23



Source: Author's analysis of Urban Institute credit bureau data (as published in Martinchek 2024).
Notes: The figure displays average VantageScores (300 to 850) of young adults ages 20 to 29 with a credit bureau record between August 2018 and August 2023 by community demographic composition. Black, Native, Latinx, and white communities

are defined as Zip Code Tabulation Areas where more than 50 percent of the population identifies as a particular race or ethnicity in the 2015–19 five-year American Community Survey. This visualization does not show a statistical test of the policy effect, which is done in the staggered difference-in-difference analysis.

Using a descriptive regression analysis, I found significant community-level racial disparities in credit scores in February 2020. Young adults living in majority-Black communities had credit scores 67.0 points lower than their peers in majority-white communities. Similarly, those living in majority-Latinx and Native communities had credit scores 33.5 and 74.8 points lower than young adults living in majority-white communities (see table B.1, for the full regression table).

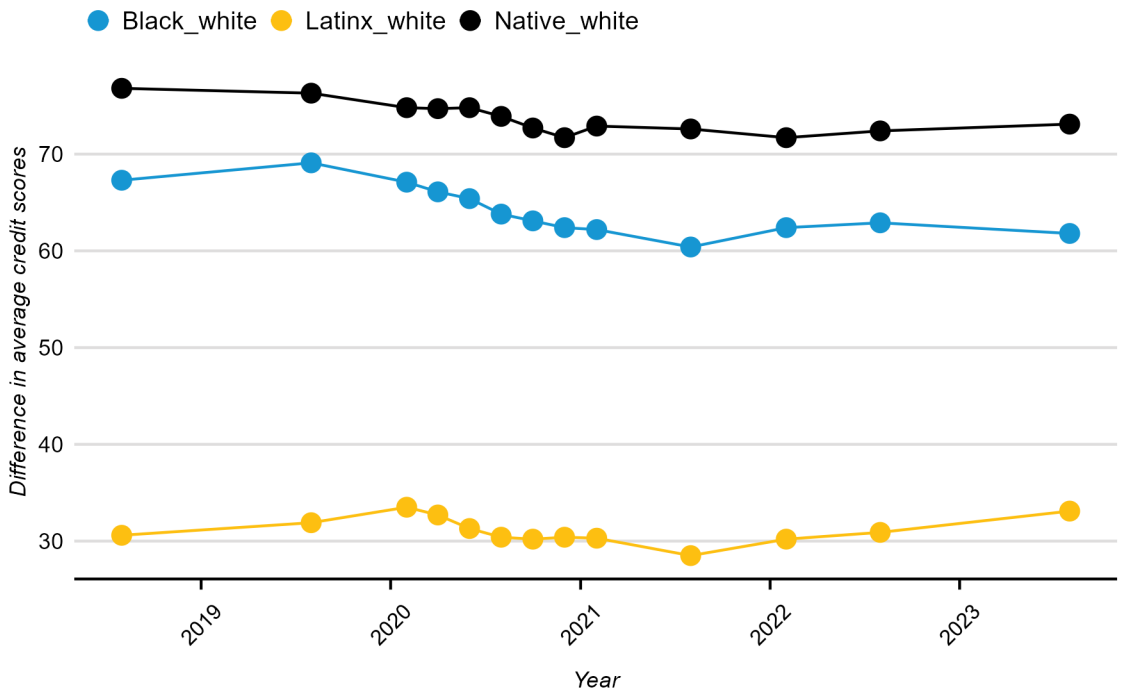
Given the substantial and persistent community-level racial disparities in credit scores, it is important to consider whether financial pressures during the pandemic further exacerbated existing inequities between communities. In my descriptive regression analysis, I observed the following trends:

- Community-level racial disparities in credit scores between young adults living in majority-white and Black communities narrowed by 5.2 points or 7.7 percent by August 2023, relative to February 2020 (see table B.1, for the full regression table). These disparities were smallest in August 2021, with a decline of 6.6 points, relative to the beginning of the pandemic. Figure 2 visualizes these changes using descriptive (not regression-adjusted) data.
- Similarly, community-level racial disparities in credit scores between young adults living in majority-white and majority-Latinx communities showed a marginal narrowing of 0.4 points, representing a 1.1 percent decline by August 2023 (see table B.1, for the full regression table). Again, the community-level racial disparity in credit scores (33.5 points in February 2020) narrowed most substantially in August 2021 (4.9 points, or 14.6 percent). Figure 2 visualizes these changes using descriptive data.

FIGURE 2

Community-Level Racial Disparities in Young Adults' Credit Scores Narrowed Marginally through the Pandemic

Changes in the difference in average credit scores between young adults living in communities of color and majority-white communities from 2018 to 2023



Source: Author's analysis of Urban Institute credit bureau data (as published in Martinchek 2024).
Notes: The figure displays the mean difference in average VantageScores (300 to 850) of young adults ages 20 to 29 with a credit bureau record living in communities of color and majority-white communities, by community composition. Higher values indicate larger disparities in average credit scores between young adults living in majority-white communities and those living in communities of color. Black, Native, Latinx, and white communities are defined as Zip Code Tabulation Areas where more than 50 percent of the population identifies as a particular race or ethnicity in the 2015–19 five-year American Community Survey. This visualization does not show a statistical test of the policy effect, which is done in the staggered difference-in-difference analysis.

The shift in the community-level racial disparity in credit scores between young adults living in majority-white and majority-Native communities, while consistent with the trends observed for majority-Black and majority-Latinx communities, does not reach statistical significance at the $p < 0.05$ level because of the smaller sample size (see table B.1, for the full regression table).

Credit Card Delinquencies

Analyzing young adults' credit health trends during the pandemic, I observed a significant decrease in credit card delinquencies in the first year (2020) followed by an increase post-August 2021 to levels

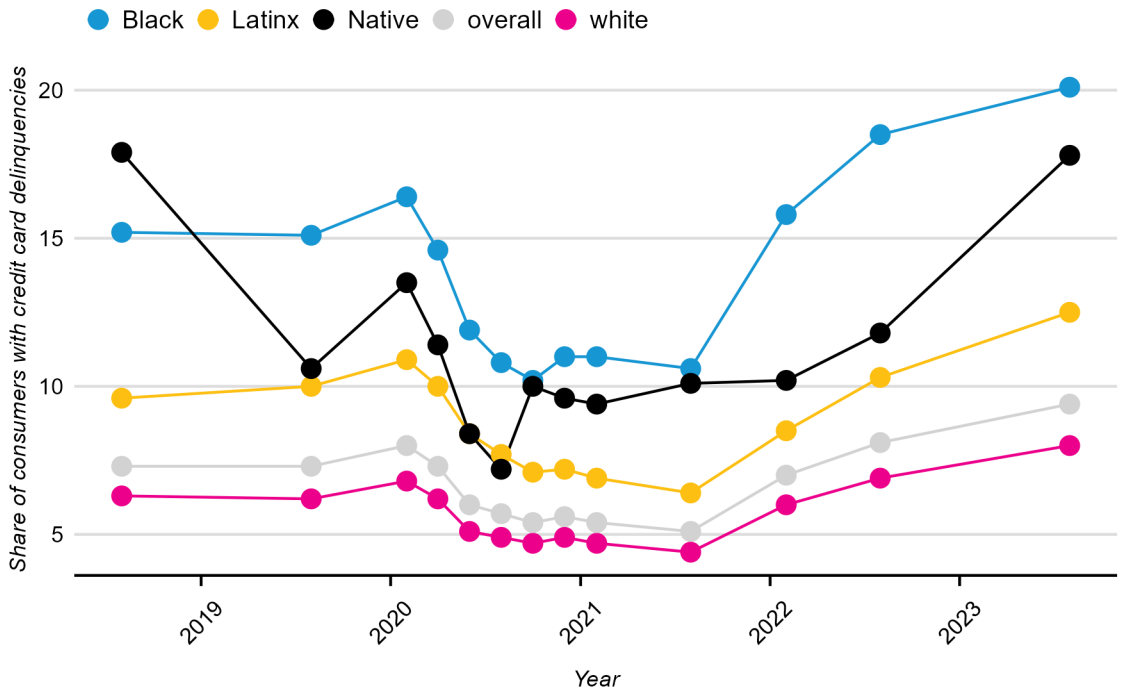
higher than before the pandemic (figure 3). While similar trends emerged across young adults living in majority-white, majority-Black, majority-Latinx, and majority-Native communities, those in communities of color consistently experienced higher credit card delinquencies from the pandemic's onset and throughout.

Notably, the escalation of credit card delinquency rates between late 2021 and 2023 was more pronounced for young adults living in majority-Black and majority-Native communities, with 1 in 5 young adults with a credit card living in majority-Black communities falling more than 30 days behind on their credit card payments by August 2023 (figure 3). These elevated delinquency rates raise concerns, as they may signify severe financial distress and can undermine long-term creditworthiness.

FIGURE 3

Young Adults' Credit Card Delinquencies Declined Rapidly in the First Year of the Pandemic before Rising to Prepandemic Levels

Share of young adults (ages 20 to 29) with a delinquent credit card payment, among consumers with a credit card, by community demographic composition from 2018 to 2023



Source: Author's analysis of Urban Institute credit bureau data (as published in Martinchek 2024).
Notes: The figure displays the share of young adults ages 20 to 29 with a credit bureau record and at least one credit card who were 30 or more days behind on their credit card bill, by community demographic composition. Black, Native, Latinx, and white communities are defined as Zip Code Tabulation Areas where more than 50 percent of the population identifies as a particular race or ethnicity in the 2015–19 five-year American Community Survey. This visualization does not show a statistical test of the policy effect, which is done in the staggered difference-in-difference analysis.

Using a descriptive regression analysis, I found that in February 2020 young adults living in majority-Black communities had credit card delinquency rates 9.5 percentage points higher than peers in majority-white communities. Similarly, prepandemic credit card delinquency gaps were 4.0 percentage points for young adults living in majority-Latinx communities and 6.6 percentage points for young adults living in majority-Native communities (see table B.2, for the full regression table).

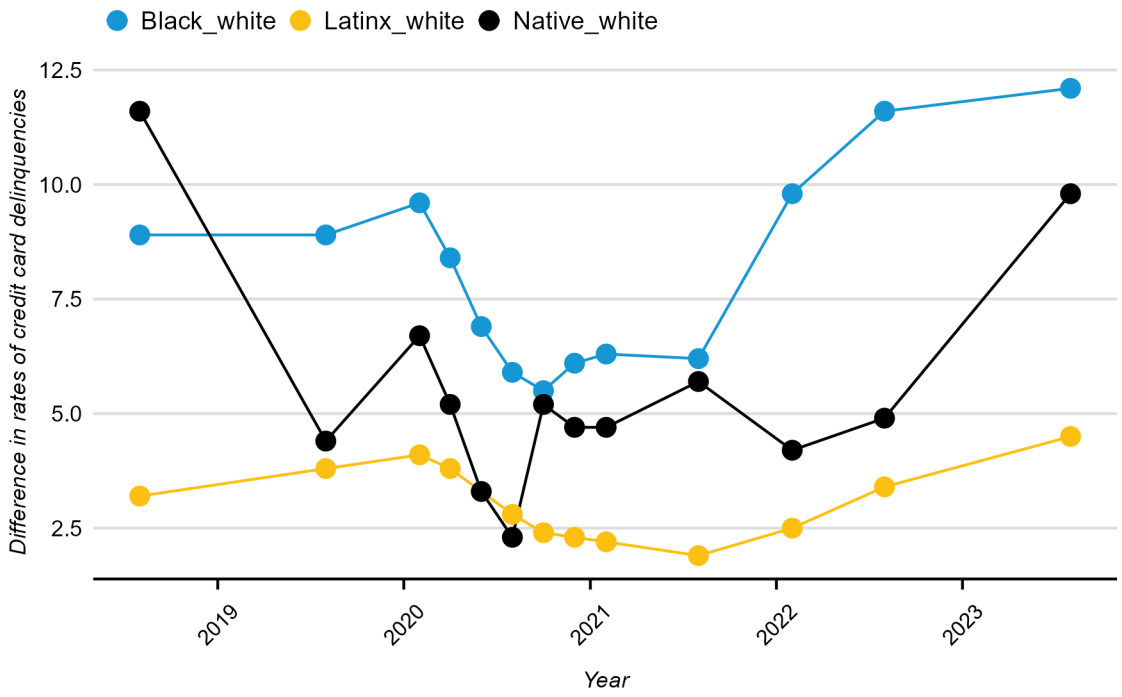
Given such large and persistent disparities in credit card delinquencies between young adults living in communities of color and majority-white communities throughout the pandemic, an exploration of whether the pandemic widened existing disparities in credit health becomes pertinent. I found the following:

- Community-level racial disparities in credit card delinquencies between young adults living in majority-white and majority-Black communities widened by 2.5 percentage points, or 26.3 percent, by August 2023 compared with the beginning of the pandemic in February 2020 (see table B.2, for the full regression table). However, in August 2021, these disparities were 34.7 percent lower than they were at the beginning of the pandemic, a relative reduction in community-level racial disparities of 3.3 percentage points. Figure 4 visualizes these changes using descriptive data.
- Similarly, community-level racial disparities in credit card delinquencies between young adults living in majority-white and majority-Latinx communities widened by 0.4 percentage points by August 2023, representing a 10 percent increase in the gap (see table B.2, for the full regression table). Until 2023, these disparities narrowed, with the largest decline occurring in August 2021 (2.1 percentage points, or 52.5 percent relative to February 2020). Figure 4 visualizes these changes using descriptive data.

FIGURE 4

Initial Disparities in Young Adults' Credit Card Delinquencies across Communities of Color and Majority-White Communities Widened by August 2023

Changes in the difference in credit card delinquency rates between young adults living in communities of color and majority-white communities from 2018 to 2023



Source: Author's analysis of Urban Institute credit bureau data (as published in Martinchek 2024).
Notes: The figure displays the mean difference in the share of young adults ages 20 to 29 with a credit bureau record and at least one credit card who were 30 or more days behind on their credit card bill between communities of color and majority-white communities. Higher values indicate larger disparities in the share of young adults who were delinquent on their credit card payments between young adults living in majority-white communities and those living in communities of color. Black, Native, Latinx, and white communities are defined as Zip Code Tabulation Areas where more than 50 percent of the population identifies as a particular race or ethnicity in the 2015–19 five-year American Community Survey. This visualization does not show a statistical test of the policy effect, which is done in the staggered difference-in-difference analysis.

The change in community-level racial disparities in credit card delinquencies between young adults living in majority-white and majority-Native communities, while not statistically significant at the $p < 0.05$ level because of a smaller sample size, aligns with the trends observed in majority-Black and majority-Latinx communities. Evidence suggests a potential widening of disparities by August 2023, as detailed in the full regression tables in appendix B, table B.2.

Results: The Impact of State-Level Policies on Young Adults' Credit Health

The observed improvements in credit health among young adults and the narrowing of community-level racial disparities in credit scores and credit card delinquencies early in the pandemic present an opportunity to explore the underlying mechanisms driving these trends.

During economic recessions, young adults experience larger and more persistent declines in employment and earnings than older adults, impacting their ability to establish long-term financial security and stability (Ellwood 1982; Kahn 2006; Rinz 2019; Rothstein 2021; Wachter 2020). Despite the significant levels of unemployment and financial distress during the pandemic, I found that young adults experienced improvements in their credit scores between 2020 and 2023 and declines in their credit card delinquencies in 2020 and 2021 before rebounding significantly in 2022 and 2023. This suggests a short-term buffering effect that shielded young adults against the negative impacts of the pandemic recession in the short term. Here are several plausible rationales for this:

- During the initial years of the pandemic, shifts in individual consumers' savings and consumption behaviors may have enabled consumers to amass resources and flexibility. This could have facilitated debt management, financial obligation fulfillment, and the ability to meet their day-to-day financial needs—thereby improving their credit early in the pandemic.
- On the other hand, recent research on the effects of pandemic-era federal and state policies suggests that these interventions may have reduced financial distress, ensuring families' financial security despite economic volatility (Andre et al. 2023a, 2023b; Karpman et al. 2021, 2022; Karpman and Acs 2020; Wheaton and Kwon 2022).

Understanding the mechanisms safeguarding young adults' credit health during this period could provide insight into which policies and practices could help young adults maintain financial stability during economic downturns. This could help ensure that future recessions do not exacerbate structural disparities in financial well-being. This study tests whether two state-level consumer protection and safety net policies contributed to improving young adults' credit health over the pandemic.

Utility Shutoff Moratoria

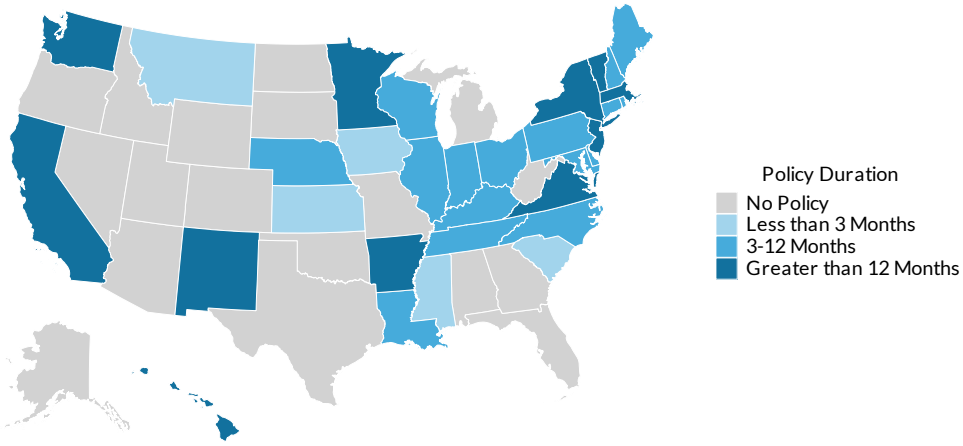
Utility shutoff moratoria prevented service providers from cutting off utilities because of nonpayment. Some but not all states implemented this protection for consumers, and the time such policies were active over the pandemic varied (figure 5). While active, these policies alleviated concerns about utility bill payment among young adults, ensuring continued access to essential services despite economic challenges.[14] Considering credit health, we may expect the following:

- Utility shutoff moratoria could leave consumers with more economic resources to stay current on bills, which would improve their credit scores.
- Consumers who usually rely on credit cards to pay utility bills on time and avoid shutoffs may choose to prioritize other financial obligations during moratoria. As a consequence, credit card delinquency rates may decline.

FIGURE 5

Some States Implemented Utility Shutoff Moratoria during the Pandemic

States that implemented utility shutoff moratoria, by policy duration



Sources: COVID-19 Eviction Moratoria and Housing Policy dataset (2023), as shown in Andre et al. (2023a, 2023b).
Notes: This map shows in gradations of blue states that implemented utility shutoff moratoria between February 2020 and August 2023, by the length of time the policy was active. Darker blue shades identify states that had utility shutoff moratoria in place over longer periods.

Credit Scores

I found that utility shutoff moratoria increased young adults' credit scores by 0.58 points, representing a modest 0.09 increase in credit scores ($p < 0.01$, mean = 642.2; table B.3, model 4; figure 6).

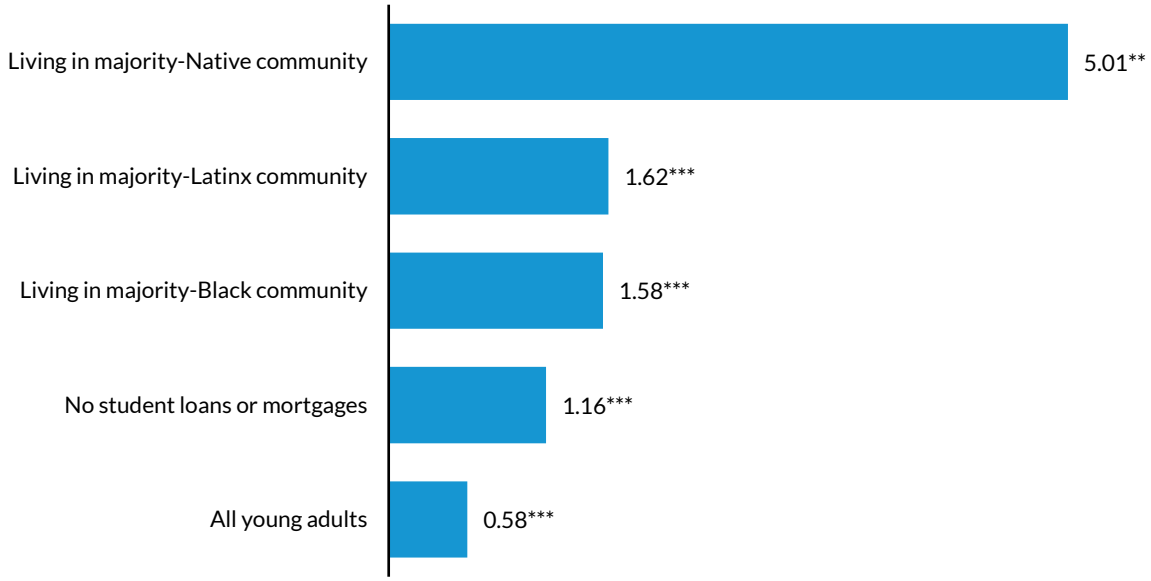
Among consumers who did not benefit from other federal policies aiding homeowners and student loan holders, utility shutoff moratoria exhibited a larger impact, resulting in a 1.16 point increase in credit scores. However, this increase remained small in magnitude, reflecting a 0.15 percent increase in scores ($p < 0.01$, mean = 639.6; table B.3, model 5; figure 6).[15]

My analysis reveals that utility shutoff moratoria have more pronounced effects for young adults living in communities of color. There was a 1.58 point increase in credit scores for those living in majority-Black communities, a 1.62 point increase for those in majority-Latinx communities, and a substantial 5.01 point increase for those living in majority-Native communities ($p < 0.01$ for majority-Black and majority-Latinx, $p < 0.05$ for majority-Native; mean = 573.1 majority-Native, mean = 600.8 majority-Black, mean = 627.4 majority-Latinx; table B.4, models 3, 5, and 7).

FIGURE 6

Utility Shutoff Moratoria Marginally Increased Young Adults' Credit Scores

Changes in young adults' (ages 20 to 29) average credit scores (in points) after implementation of state-level utility shutoff moratoria, across different groups



Source: Author's analysis of Urban Institute credit bureau data (as published in Martinchek 2024).
Notes: The figure displays difference-in-difference estimates of the impact of state-level utility shutoff moratoria on consumer VantageScore credit scores for young adults ages 20 to 29 with a credit bureau record (full regression tables shown in tables B.3 and B.4). Young adults are classified as living in a majority-Black or majority-Latinx community if they live in Zip Code Tabulation Areas where more than 50 percent of the population identifies as a particular race or ethnicity in the 2015–19 five-year American Community Survey in February 2020. *** denotes that the coefficient estimate is statistically significant at the $p < 0.01$ level, ** denotes that the coefficient estimate is statistically significant at the $p < 0.05$ level, and * denotes that the coefficient estimate is statistically significant at the $p < 0.10$ level.

While the impacts of utility shutoff moratoria on credit scores were statistically significant, the magnitude was relatively small. The impact was slightly larger among young adults living in communities of color, particularly those living in majority-Native communities.

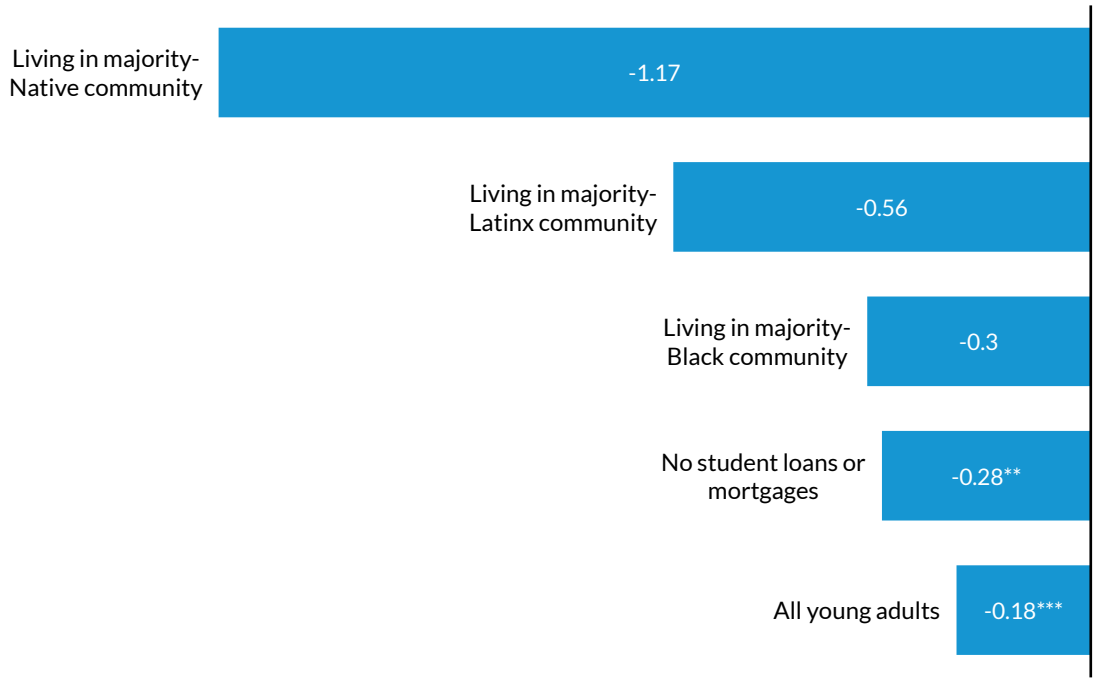
Credit Card Delinquencies

I found that utility shutoff moratoria were linked to a 0.18 percentage point, or 2.25 percent, decrease in young adults' credit card delinquencies ($p < 0.01$, mean = 7.97; table B.5, model 4; figure 7). For consumers without student loans and mortgages who may not benefit from federal forbearance policies, utility shutoff moratoria were associated with slightly larger declines in credit card delinquencies of 0.28 percentage points, or 2.6 percent ($p < 0.05$, mean = 10.5; table B.5, model 5; figure 7).[16] No significant evidence exists that utility shutoff moratoria were associated with statistically significant changes in credit card delinquencies for young adults living in specific communities of color. However, the direction of coefficients aligned with the impacts for young adults overall (table B.6; figure 7).

FIGURE 7

Utility Shutoff Moratoria Reduced Young Adults' Delinquencies

Percentage point changes in the share of young adults (ages 20 to 29) with a 30+ day late credit card bill after implementation of state-level utility shutoff moratoria, across different groups



Source: Author's analysis of Urban Institute credit bureau data (as published in Martinchek 2024).

Notes: The figure displays difference-in-difference estimates of the impact of state-level utility shutoff moratoria on the share of young adults ages 20 to 29 with a credit bureau record and a 30+ day late credit card payment (full regression tables shown in

tables B.5 and B.6). Young adults are classified as living in a majority-Black or majority-Latinx community if they live in Zip Code Tabulation Areas where more than 50 percent of the population identifies as a particular race or ethnicity in the 2015–19 five-year American Community Survey in February 2020. *** denotes that the coefficient estimate is statistically significant at the $p < 0.01$ level, ** denotes that the coefficient estimate is statistically significant at the $p < 0.05$ level, and * denotes that the coefficient estimate is statistically significant at the $p < 0.10$ level.

In summary, utility shutoff moratoria were associated with statistically significant improvements in credit card delinquencies among young adults with a credit card. However, such improvements were not evident for young adults living in communities of color despite their outsized economic distress during the pandemic.[17]

UI Extended Benefits Programs

Extended UI policies provide additional weeks of UI payments to individuals who have exhausted traditional UI benefits. Extended UI policies are activated when states meet predetermined criteria, which vary by state and capture their residents' economic distress and unemployment levels. The extended UI program has two levels: the regular 13-week extension and the 20-week benefit extension. These extensions are activated at different economic distress and unemployment thresholds, as defined by each state.

During the pandemic, all states enacted the extended UI regular program, though they had differing implementation and expiration dates. For example, fewer than half of the states had active extended benefits programs in December 2020, and no states had the benefits by April 2022. Importantly, extended benefits programs are only a small portion of the overall UI program, accounting for roughly 2.6 percent of all UI claims in 2021 (CBPP 2022a, 2022b). This analysis leverages variations in the implementation and expiration of extended UI benefits (both 13 and 20 weeks) to identify their policy impacts on young adults' credit scores and credit card delinquencies. It is important to note that the analysis presented below estimates the impact of the extended UI programs (13 and 20 weeks), not the overall impact of UI programs on young adults' credit health.

For young adults, UI programs may be especially beneficial, as they experienced disproportionately higher job losses and income disruptions during the pandemic and struggled to secure jobs at higher rates than older adults.[18] As such, we may expect the following:

- Extended UI programs (both 13 and 20 weeks) may provide young adults with more economic resources over a longer period, helping them stay on time in repaying bills, which is the largest component of credit scores, thus increasing their scores.

- The prolonged economic support provided by extended UI programs (both 13 and 20 weeks) may contribute to young adults' ability to stay current on credit card bills and repay charges.

Credit Scores

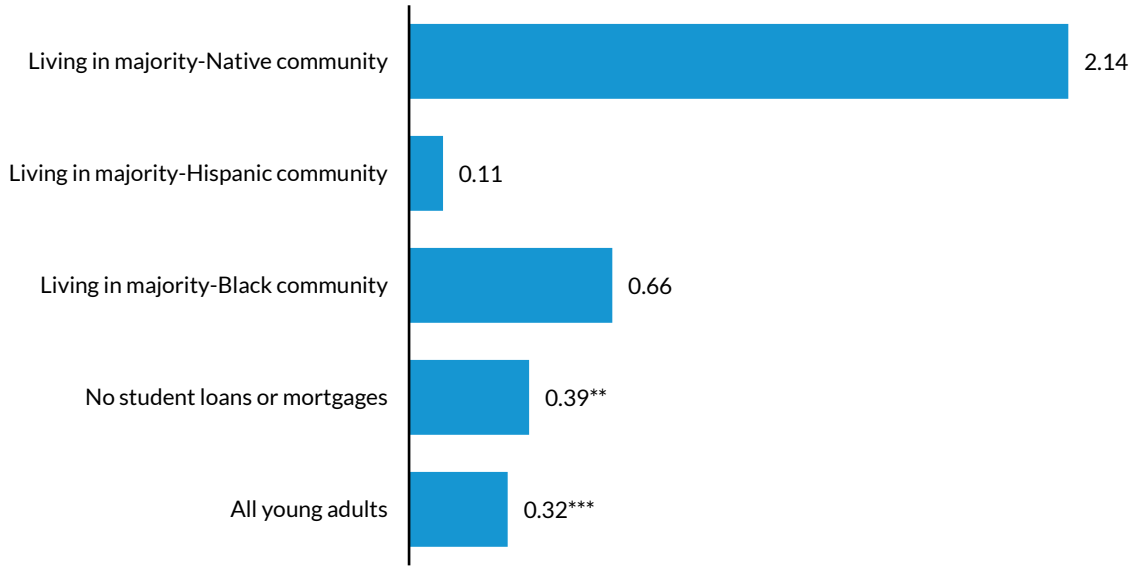
I found that extended UI benefit programs (20 weeks) were associated with a 0.32 point increase in credit scores among young adults ($p < 0.01$, mean = 642.2; table B.3, model 4; figure 8). While statistically significant, this only reflected a 0.04 percent increase in credit scores.[19] In contrast, the shorter extended benefit UI program (13 weeks) was not associated with statistically significant changes in young adults' credit scores between February 2020 and August 2023 (table B.3, model 4; figure 9).

For young adults without student loans or mortgages who are less likely to benefit from federal forbearance programs during the pandemic, extended UI programs were associated with marginal increases in credit scores of 0.37 points and 0.39 points for the 13-week and 20-week programs respectively ($p < 0.05$, mean = 639.6; 0.05 and 0.06 percent increase in credit scores; table B.3, model 5; figures 8 and 9).

FIGURE 8

Longer Extended UI Programs (20 Week) Marginally Increased Young Adults' Credit Scores

Changes in young adults' (ages 20 to 29) average credit scores (in points) after implementation of state-level 20-week extended benefits UI programs, across different groups



Source: Author's analysis of Urban Institute credit bureau data (as published in Martinchek 2024).
Notes: The figure displays difference-in-difference estimates of the impact of state-level 20-week extended UI programs on consumer credit scores for young adults ages 20 to 29 with a credit bureau record (full regression tables shown in tables B.3 and

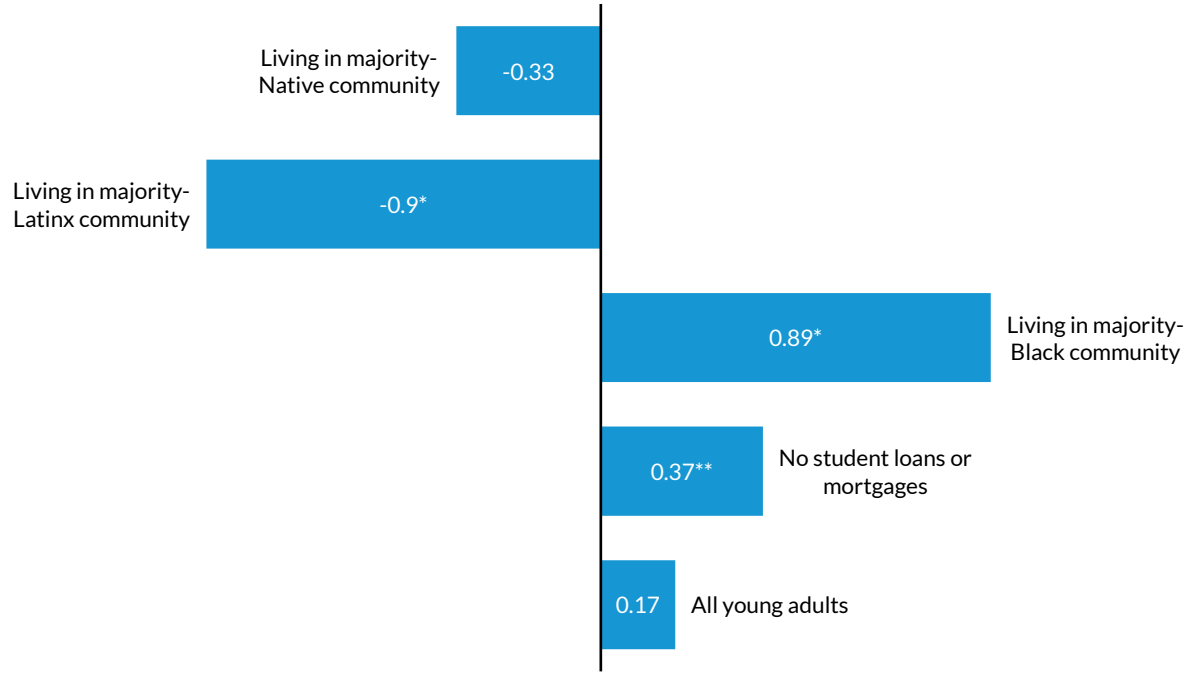
B.4). Young adults are classified as living in a majority-Black or majority-Latinx community if they live in Zip Code Tabulation Areas where more than 50 percent of the population identifies as a particular race or ethnicity in the 2015–19 five-year American Community Survey in February 2020. *** denotes that the coefficient estimate is statistically significant at the $p < 0.01$ level, ** denotes that the coefficient estimate is statistically significant at the $p < 0.05$ level, and * denotes that the coefficient estimate is statistically significant at the $p < 0.10$ level.

I also found that 13-week extended UI programs had somewhat stronger effects for young adults living in majority-Black communities. Extended UI benefit programs were weakly associated with an 0.89 point increase in credit scores among young adults living in majority-Black communities ($p < 0.10$, mean = 600.8; table B.4, model 5; figure 9). For young adults living in majority-Latinx communities, extended UI benefit programs (13 weeks) were associated with a 0.9 point decrease in credit scores, but this was relatively weak ($p < 0.10$, mean = 627.4; table B.4, model 7; figure 9). There were no statistically significant impacts for young adults living in majority-Native communities (table B.4, model 3; figure 9).

FIGURE 9

Extended UI Programs (13 Week) May Marginally Improve Credit Scores of Young Adults Living in Majority-Black Communities

Changes in young adults' (ages 20 to 29) average credit scores (in points) after implementation of state-level 13-week extended benefits UI programs, across different groups



Source: Author's analysis of Urban Institute credit bureau data (as published in Martinchek 2024).
Notes: The figure displays difference-in-difference estimates of the impact of state-level 13-week extended UI programs on consumer credit scores for young adults ages 20 to 29 with a credit bureau record (full regression tables shown in tables B.3 and B.4). Young adults are classified as living in a majority-Black or majority-Latinx community if they live in Zip Code Tabulation Areas where more than 50 percent of the population identifies as a particular race or ethnicity in the 2015–19 five-year American

Community Survey in February 2020. *** denotes that the coefficient estimate is statistically significant at the $p < 0.01$ level, ** denotes that the coefficient estimate is statistically significant at the $p < 0.05$ level, and * denotes that the coefficient estimate is statistically significant at the $p < 0.10$ level.

Credit Card Delinquencies

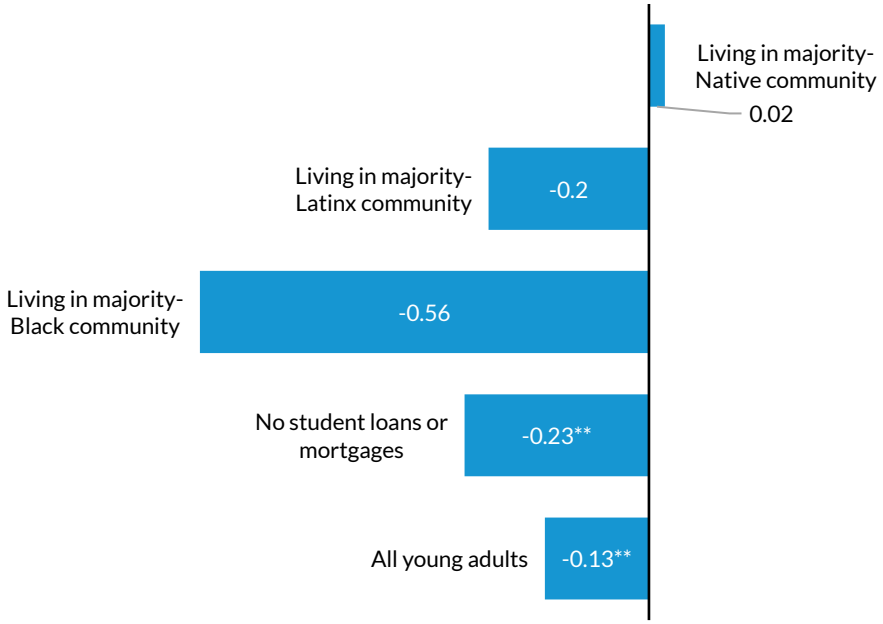
I found that 13-week and 20-week extended UI benefit programs reduced young adults' credit card delinquencies by 0.29 percentage points and 0.13 percentage points, respectively ($p < 0.01$ and $p < 0.05$ respectively, mean = 7.97; table B.5, model 4; figures 10 and 11).[20] This reflected a 3.5 percent and 1.6 percent decline in credit card delinquencies for young adults in states with active 13- and 20-week extended UI benefit programs.

For young adults without student loans and mortgages, 13-week and 20-week extended UI benefit programs reduced young adults' credit card delinquencies by 0.26 percentage points and 0.23 percentage points, respectively (2.3 and 2.0 percent decline in delinquencies respectively, $p < 0.01$, mean = 10.5; table B.5, model 5; figures 10 and 11).

FIGURE 10

Longer Extended UI Programs (20 Week) Decreased Young Adults' Delinquencies

Percentage point changes in the share of young adults (ages 20 to 29) with a 30+ day late credit card bill after implementation of state-level 20-week extended benefits UI programs, across different groups



Source: Author's analysis of Urban Institute credit bureau data (as published in Martinchek 2024).
Notes: The figure displays difference-in-difference estimates of the impact of state-level 20-week extended UI programs on the share of young adults ages 20 to 29 with a credit bureau record and a 30+ day late credit card payment (full regression tables

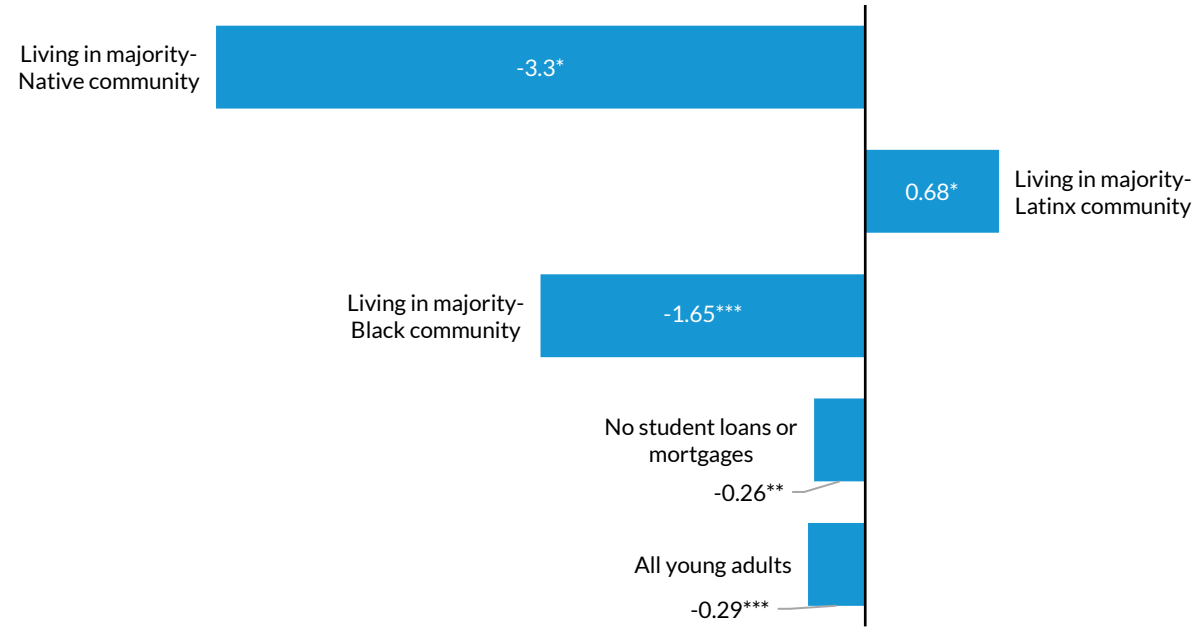
shown in tables B.5 and B.6). Young adults are classified as living in a majority-Black or majority-Latinx community if they live in Zip Code Tabulation Areas where more than 50 percent of the population identifies as a particular race or ethnicity in the 2015–19 five-year American Community Survey in February 2020. *** denotes that the coefficient estimate is statistically significant at the $p < 0.01$ level, ** denotes that the coefficient estimate is statistically significant at the $p < 0.05$ level, and * denotes that the coefficient estimate is statistically significant at the $p < 0.10$ level.

I also found that 13-week extended UI benefit programs were associated with stronger effects for young adults living in communities of color, while these impacts were null for longer (20-week) programs. The 13-week extended UI benefit programs reduced credit card delinquencies by 3.30 percentage points and 1.65 percentage points among young adults living in majority-Native and majority-Black communities, respectively ($p < 0.10$ and $p < 0.001$ respectively, mean = 11.76 majority-Native, mean = 16.90 majority-Black; table B.6, models 3 and 5). This reflected a 28.0 percent decline in credit card delinquencies among young adults living in majority-Native communities and a 9.7 percent decline for young adults living in majority-Black communities—both qualitatively large declines in credit card delinquency rates for young adults living in these communities of color.[21]

FIGURE 11

Extended UI Programs (13-week) Decreased Delinquencies for Young Adults Living in Communities of Color

Percentage point changes in the share of young adults (ages 20 to 29) with a 30+ day late credit card bill after implementation of state-level 13-week extended benefits UI programs, across different groups



Source: Author's analysis of Urban Institute credit bureau data (as published in Martinchek 2024).
Notes: The figure displays difference-in-difference estimates of the impact of state-level 13-week extended UI programs on the share of young adults ages 20 to 29 with a credit bureau record and a 30+ day late credit card payment (full regression tables shown in tables B.5 and B.6). Young adults are classified as living in a majority-Black or majority-Latinx community if they live in

Zip Code Tabulation Areas where more than 50 percent of the population identifies as a particular race or ethnicity in the 2015–19 five-year American Community Survey in February 2020. *** denotes that the coefficient estimate is statistically significant at the $p < 0.01$ level, ** denotes that the coefficient estimate is statistically significant at the $p < 0.05$ level, and * denotes that the coefficient estimate is statistically significant at the $p < 0.10$ level.

Discussion: State-Level Policies May Manage Dynamic Risks to Racial Equity Postpandemic

As expected, utility shutoff moratoria and extended UI programs have small yet positive impacts on young adults' credit health, as measured by credit scores and credit card delinquencies. These findings support the notion that utility shutoff moratoria may alleviate pressures associated with repaying utility bills to avoid shutoffs, while extended UI programs may furnish young adults with prolonged economic resources, enabling them to stay current on bills and debt obligations. While the empirical findings in this study are consistent with these hypotheses, this study does not directly test these explanations within its scope, making the evidence suggestive rather than conclusive.

While my findings are statistically significant, many of the effects measured in this study are small in magnitude, suggesting they may not reflect measurable improvements across the board *for all young adults*—whether it be in young adults' ability to access credit, reduce their borrowing costs, or alleviate acute financial distress. However, not all young adults participated in these programs. The policy impact estimates presented in this study reflect ITT estimates, providing insights into the impacts for *all* young adults with a credit record living in a state where a policy was active, irrespective of individual participation.

To better understand the potential magnitude of the impact of these policies on young adults who did use these programs, I employed the Bloom adjustment (Bloom 1984) to rescale the ITT estimates generated in this study by the share of young adults who used these programs (see appendix A for the full methodology). Through this adjustment, I found that state-level utility shutoff moratoria and extended UI programs indeed had a meaningful and positive impact on the credit health of the young adults who used them. For example, utility shutoff moratoria were associated with an estimated1.82 to 1.61 percentage point decrease in credit card delinquencies (22.8 to 20.2 percent) and an estimated 5.85 to 5.17 point increase in credit scores (less than 1 percent) for young adults who may have benefited from these protections as they experienced challenges repaying their utility bills. Similarly, young adults taking advantage of extended UI programs likely experienced more profound declines in credit card delinquencies and increases in credit scores.

Further, it's important to note that policies are not the only factors influencing credit health. Research indicates that consumers curbed consumption and increased their savings during the pandemic as public health directives closed restaurants, bars, and other locations in an effort to reduce viral transmission. For young adults in particular, COVID-19 left most 18- to 29-year-olds living with their parents, with 71 percent of those 18-to-24 living at home.[22] These shifts may have provided a buffering effect, as many young adults reported living with their parents to save money (SHED 2021). Changes in household status, reduced consumption, and increased savings during this period may have left young adults with more resources and flexibility to manage debts, repay financial obligations, meet their day-to-day financial needs, and improve their credit, irrespective of policy interventions.

It is also crucial to contextualize the impacts of pandemic-era consumer protection and safety net policies, such as utility shutoff moratoria and extended UI programs. These policies were designed to help consumers weather volatile economic circumstances, offering support during job loss, health emergencies, and unexpected expenses. However, it's important to recognize that their primary aim was not to close racial gaps in credit health or tackle the root causes of such disparities (Traub 2021).[23]

Considering the risk recessions pose to widening existing racial disparities in credit health, successful countercyclical policies, like consumer protections or expanded safety net supports, may need to be race-conscious. This means providing additional supports to consumers living in communities of color, acknowledging and counteracting structural vulnerabilities created through racist policies and practices to avoid deepening and cumulative disadvantages during recovery (Furtado, Verdeflor, and Waidmann 2023; Martinchek forthcoming).[24] Successful race-conscious interventions during recessions should aim to prevent the deepening of existing inequities in credit health or lead to marginal improvements. These policies can be a crucial component of the macrostabilization toolkit, offering targeted support to those most vulnerable to recessionary risks. (For a full discussion of race-conscious macrostabilization policies, see the "Implications for Policy and Directions for Future Research" section below.)

Further, it is important to note that these race-conscious countercyclical policies complement, rather than replace, efforts to address the root causes of credit health disparities between white communities and communities of color (see the "Implications for Policy and Directions for Future Research" section for full discussion).

Implications for Policy and Directions for Future Research

In this study, I examine three main aspects of young adults' credit health: (1) young adults' credit health trajectories during the pandemic; (2) changes over time in credit health disparities between young adults living in communities of color and those in majority-white communities; and (3) the influence of state-level consumer protection policies on young adults' credit health.

Analyzing the trajectories of young adults' credit health, I found the following:

- Credit scores steadily improved for young adults living in all communities, including majority-white, majority-Black, majority-Latinx, and majority-Native communities—although credit scores of young adults living in communities of color remained lower throughout the pandemic.
- While young adults living in communities of color and majority-white communities exhibited similar credit card delinquency trends over the pandemic, experiencing substantial declines in 2020 before rising above prepandemic levels in 2022 and 2023, those living in majority-Black, Latinx, and Native communities faced rates nearly twice as high as young adults living in majority-white communities. By August 2023, 1 in 5 young adults with credit cards living in majority-Black communities were delinquent on their credit card bills—indicating high levels of financial distress.

Given the evidence that recessions may exacerbate racial disparities in financial well-being, I explored if community-level racial disparities in credit health between young adults living in majority-white communities and communities of color widened or narrowed through the pandemic. Here are the key findings:

- Community-level racial disparities in credit scores between young adults living in majority-white and majority-Latinx and majority-Black communities narrowed by August 2023, although the reduction was marginal relative to the overall disparity.
- Community-level racial disparities in credit card delinquencies between young adults living in majority-white and majority-Latinx and majority-Black communities widened by August 2023, reversing prior gains in narrowing disparities observed before 2022.

Given the evidence of pandemic-era improvements in young adults' credit and debt outcomes and the narrowing of community-level racial disparities credit health before 2021, I explored whether state-

level consumer protection and safety net policies helped improve young adults' credit health. Here are the key findings:

- Utility shutoff moratoria were associated with very marginal increases in young adults' credit scores, with stronger effects for young adults living in communities of color, particularly majority-Native communities.
- Additionally, utility shutoff moratoria were linked to a 2.2 percent decrease in credit card delinquencies among young adults with a credit card.
- Extended UI programs (20 week) were associated with very marginal increases in young adults' credit scores.
- Extended UI programs (both 13 and 20 weeks) were associated with decreases in young adults' credit card delinquencies. The 13-week program reduced credit card delinquencies substantially among young adults living in majority-Native and majority-Black communities, with 28.0 and 9.7 percent reductions, respectively.

As discussed in the interpretations section, these policies aimed to help young adults effectively respond to economic volatility, mitigating material hardship, but were not specifically targeted to closing racial gaps in credit health. I found evidence supporting these objectives, with indications that these policies relieved pressures on repaying utility bills and provided additional economic resources, enabling young adults to remain current on bills—especially those likely benefiting from utility shutoff moratoria and extended UI policies.

Overall, this study provides valuable insights into young adults' credit health trends and identifies potential policies that helped buffer them against pandemic-related economic volatility. However, several key limitations must be acknowledged:

1. Credit health, a reflection of financial obligations and borrowing capacity, is only one aspect of overall consumer well-being. Although credit indicators provide insights into financial struggles, they do not reflect overall financial well-being, and consumers employ various resources beyond credit and debt during economic challenges.
2. The study focuses on young adults with a credit record, potentially representing a more economically advantaged subset. Fewer young adults have credit records, and those with a credit record often have past experiences with borrowing and accessing credit, offering them more financial options than those without a credit record (Brevoort, Grimm, and Kambara 2015).

3. No community-level breakdowns are provided for Asian American or Pacific Islander (AAPI) communities because of data limitations. In this study, I include breakdowns of young adults' credit health outcomes across four community demographics: majority-white, majority-Black, majority-Latinx, and majority-Native communities. Relatively few communities can be identified as majority-AAPI, so analyses for this group would be underpowered. Further, AAPI groups experience such varied financial well-being outcomes that treating them as a monolithic group would generate inaccurate inferences on the gaps in credit health experienced by different AAPI ethnicities—although this remains a fruitful avenue for future scholarship (Schwabish and Feng 2021).
4. Race and ethnicity data are limited to the community level. Credit bureau data lack details on individual consumers' race and ethnicity, so this study relies on community demographic data to examine young adults' differing credit health trajectories during the pandemic. As such, the study's inferences are applicable at the community level. The analyses can be valuable for exploring how community context shapes individual residents' credit health.
5. Unmeasured variables and simultaneous implementation of policies alongside the analyzed state-level policies may have swamped the actual policy impacts. The study period witnessed significant economic volatility and various state and federal interventions. Failure to account for unmeasured policies or factors differing between states over time could result in inaccurate policy impact estimates.
6. The estimates in this study reflect ITT effects encompassing *all* young adults with a credit record rather than specifically those who accessed the policies. According to Bloom adjustments (1984), the impacts of state-level utility shutoff moratoria and extended UI programs on credit health were much larger for young adults who likely used these policies.
7. This study does not consider variations in the severity of economic recessions across communities. Between 2020 and 2023, communities experienced differing trends in unemployment, COVID-19 cases and deaths, and price increases. Although this study does not analyze policy effects separately based on the pandemic's varying impacts on communities, it does include some controls for these factors when estimating policy impacts.
8. The period from 2020 to 2023 is characterized by heightened economic volatility, significant policy experimentation, and distinct recessionary antecedents compared with prior economic downturns (CBPP 2022a, 2022b, 2023). It is crucial to contextualize and thoughtfully evaluate the trends and policy impacts observed during this period to assess their transferability to future economic shocks.

Despite its limitations, this study contributes to research by

- assessing postrecession financial well-being outcomes for young adults beyond employment and earnings;
- exploring the interconnections between communities and individual residents' financial outcomes;
- developing a deeper understanding of how the pandemic recession shaped community-level racial disparities in young adults' credit and debt outcomes; and
- exploring state-level consumer protection and safety net supports as potential mechanisms for buffering young adults against pandemic-related economic hardship.

Directions for Future Research

This study presents compelling evidence on the evolution of young adults' credit scores and credit card delinquencies during the pandemic. It examines changes in credit health disparities between young adults living in communities of color and majority-white communities, as well as the role of state-level consumer protection and safety net policies in supporting young adults' credit health. Future research could expand on these findings to deepen our understanding of fostering financial resilience in young adults during economic downturns. Future research could explore the following:

- **The impact of other policy buffers.** During the pandemic, state and federal policymakers implemented a range of programs and protections that could explain credit health improvements among young adults during the pandemic, beyond the study's focus on utility shutoff moratoria and extended UI benefits. Future research could examine the impacts of additional state- and federal-level policies on young adults' financial well-being, identifying other mechanisms that may have offered support against pandemic-related economic volatility.
- **Impacts on a broader range of financial well-being outcomes.** This study estimates policy impacts on young adults' credit health, representing only one facet of their overall financial well-being. Future research could explore the asset side of the balance sheet, including wealth, investments, and savings, to gain a more holistic understanding of changes and disparities in young adults' financial well-being through the pandemic.
- **Comparative analyses across other economic downturns.** This study examines young adults' use of debt and credit in the wake of the pandemic recession, which, unlike previous downturns,

was driven by a global health emergency. Economic recoveries were influenced by spikes in virus caseloads and second-order effects on economic activity (CBPP 2023). Further, the policy response to the pandemic was significant—in dollar terms, its federal and state policies surpassed the recovery packages passed in the wake of the Great Recession (CBPP 2023). Given these significant differences, we may expect differences in young adults' credit health trajectories in the aftermath of the recession. Future research could analyze similarities and differences in young adults' financial well-being following different economic shocks, providing insight into how to build consumers' financial resilience during these times.

- **The unique risk of an inflation shock on young adults' credit health trajectories.** During the pandemic recovery, price inflation rose precipitously to a 40-year high—rapidly increasing the cost of many essential goods. This inflation led the Federal Reserve to increase interest rates, which in turn drove up consumers' borrowing costs. Such an "interest-rate shock," marked by rapid interest changes, can result in less money for consumers, as servicing debt becomes more expensive and borrowing to sustain consumption becomes more costly (Weller and Chaurushiya 2004). For young adults, with comparatively lower levels of savings and credit scores, this could render access to credit prohibitively expensive, prompting changes in consumption, savings, or spending habits to meet daily financial needs. Future research can examine the impacts of inflation rate shocks in 2021 and 2022 on young adults' financial well-being to better understand these risks.
- **Engaging young adults in shaping future quantitative analyses.** To inform policymaking on race-conscious countercyclical policies, researchers should consider directly engaging young adults who have experience living through recessions. Researchers can gather valuable insights by exploring the supports they relied on, the challenges they faced, and their preferences for future research. This engagement could extend beyond qualitative analysis to include direct involvement in shaping future research inquiries (Torres Rodriquez et al. 2023). This collaborative approach ensures that future research projects align closely with young adults' needs and interest in building financial resilience during recessions and could inform race-conscious countercyclical policy development.

Policy Implications

This study outlines potential policy pathways to address both (1) structural disparities in wealth and credit between communities of color and majority-white communities; and (2) enhancing the resilience of vulnerable young adults against dynamic risks like recessions.

Pairing measures that reduce structural disparities with those offering support during tough economic times can decrease the vulnerabilities of minoritized groups to financial shocks. The aim is to prevent residents of communities of color from starting recessions at a disadvantage and falling further behind their peers during such events (Martinchek forthcoming). The policies reviewed in this section draw from the work of Martinchek (forthcoming).

Policies to Reduce Structural Disparities in Wealth and Credit

Addressing disparities in credit health necessitates policies directly confronting the underlying issues of wealth-building opportunities and credit access disparities between communities (Baradaran 2017; NCLC 2016; Rothstein 2017). Several people- and place-based policies have the potential to reduce structural disparities in credit by focusing on improving mobility and wealth outcomes for individual young adults and directing investments to neighborhoods grappling with localized disadvantages (Chetty et al. 2018; Theodos 2021).

- **Implement targeted credit and banking programs in areas impacted by residential segregation.** Counteract the historical impact of policies like Homeowners Loan Corporation grading, subprime lending, and community disinvestment by directing reinvestment initiatives to benefit communities of color and address racialized economic segregation (Baradaran 2017; Rothstein 2017; Theodos 2021). Examples include special purpose credit programs and postal banking to (1) extend credit to borrowers in communities that have faced systematic disadvantage and (2) equalize banking access in communities of color with limited access to mainstream services (Friedline et al. 2021; Haberle and House 2021; Long and Pressman 2023; Solomon, Baradaran, and Roberts 2020).[25]
- **Support young adults directly through baby bonds.** Baby bonds are universal, publicly funded asset-building accounts that seed savings progressively based on household wealth, offering resources for young adults to use as they see fit in adulthood. These programs aim to reduce persistent racial wealth inequities—with typical white families holding more than eight times the wealth of Black families and five times that of Latinx families (Brown, Sawo, and Biu 2023; Hamilton and Darity 2010; Zewde 2020). While baby bonds programs provide crucial economic resources for young adults of color to invest in asset-building opportunities, such as education, homeownership, business capitalization, and retirement, they do not serve as an emergency fund for financial shocks (Brown, Sawo, and Biu 2023). This need should be met through other

policy efforts. Various localities, including Connecticut and the District of Columbia, are in the early stages of implementing baby bonds programs (Brown, Sawo, and Biu 2023).

Policies to Insulate Consumers against Recessions

Policymakers should consider measures to insulate young adults against recessions. These policies could

1. strengthen existing targeted, automatic macroeconomic stabilizers;
2. preserve consumers' access to essential services; and
3. directly provide funds to help young adults weather financial emergencies.

Together, these actions can prevent recessions from exacerbating racial disparities, ensuring that young adults of color are not left behind their white peers.

EXPAND CONSUMER PROTECTIONS

Policymakers can enact consumer protection policies to ensure families' access to essential services, alleviating financial pressures that may lead to increased hardship. This study and others have highlighted the effectiveness of policies that help consumers maintain access to housing, utilities, and other essential services, which helped them avoid financial distress and hardship during the pandemic (Ali and Wehby 2022; An, Gabriel, and Tzur-Ilan 2022; Andre et al. 2023a, 2023b; Leifheit et al. 2021). In addition, pandemic-era consumer protections, like debt forbearance programs (e.g., the student loan pause), helped consumers flexibly respond to financial distress and cost pressures, prevented delinquencies, and stimulated borrowing (Cherry et al. 2021; Chingos and Cohn 2023; Dinerstein, Yannelis, and Chen 2023).

STRENGTHEN AND TARGET AUTOMATIC STABILIZERS

Examples of targeted, automatic stabilizers include the Supplemental Nutrition Assistance Program (SNAP) and the UI program. These programs directly provide funds to consumers affected by recessionary pressures, sustaining economic spending and consumption levels despite volatility and job loss.[26] SNAP and UI naturally expand enrollment during tough economic times as more consumers become eligible because of job loss or income shortfalls. This makes them effective counterbalances to macroeconomic shifts. Improvements could strengthen the role of SNAP and UI to act as automatic and race-conscious stabilizers, directing resources to those most in need of supports, including young adults and families of color, who are most vulnerable to recessionary pressures.

Policymakers can improve UI programs to better address the needs of diverse workers during economic downturns. Currently, limitations in eligibility, benefits, and duration hinder the program's effectiveness. To improve this, policymakers could **expand eligibility for UI programs to cover part-time and gig workers (whose workers are disproportionately young), adjust extended benefits program triggers, and increase weekly benefits amounts and program length during economic downturns** (Boushey, Nunn, and Sahmbaugh 2019). The existing UI system reaches less than one-third of unemployed workers, disproportionately excluding workers of color because of the nature of their employment (Boushey, Nunn, and Sahmbaugh 2019; Traub 2021).[27] Moreover, the triggers for extended benefits often overlook high unemployment rates in substate areas or for specific groups, disadvantaging unemployed people, particularly young Black workers who face prolonged joblessness (Traub 2021).

Existing UI benefit amounts are also often insufficient, especially for low-wage, Black, and Latinx workers who receive lower levels of benefits because of their lower incomes—despite spending more of their income on essential goods (Boushey, Nunn, and Sahmbaugh 2019; Traub 2021).[28] Additionally, UI benefits have a time limit, affecting workers unable to quickly secure a new job (Traub 2021).[29] During the pandemic, federal legislation temporarily increased UI benefit amounts, expanded eligibility to part-time, self-employed, and gig workers, and extended benefits length (Gwyn 2022; Traub 2021). These UI benefit enhancements effectively kept 4.7 million people out of poverty, reduced material hardship, and benefited Black workers (CBPP 2022a, 2022b).

Additionally, policymakers could improve SNAP's effectiveness by **eliminating SNAP work requirements, expanding eligibility to include underserved young adults (e.g., college students), and instituting automatic SNAP benefits increases during economic downturns** (Boushey, Nunn, and Sahmbaugh 2019; Hahn, Coffey, and Adams 2021). During the pandemic, the Families First Coronavirus Response Act[30] temporarily suspended work requirements and increased monthly SNAP benefits between $95 and $250 for eligible families. These measures reduced poverty by 9.6 percent and overwhelmingly insulated Black and Latinx families against falling into poverty (Wheaton and Kwon 2022). To optimize SNAP's impact during future recessions, these policies could be made both automatic and permanent, ensuring macroeconomic stabilization and helping young adults maintain financial security.

IMPLEMENT DIRECT PAYMENTS

Policymakers could also consider enacting direct stimulus payments to individuals during recessions (Edelberg, Sheiner, and Wessel 2022). Such payments can stimulate consumer spending, a crucial factor

during recessions when spending tends to decline, potentially exacerbating the recession by increasing unemployment and limiting production (Edelberg, Sheiner, and Wessel 2022). During the pandemic, the federal government sent three rounds of Economic Impact Payments to eligible families in 2020–21. Research suggests that these payments provided immediate support, particularly benefiting families with lower savings, such as Black and Latinx families, and those awaiting UI benefits. They also provided future insulation for those more vulnerable to pandemic-related economic losses (Edelberg, Sheiner, and Wessel 2022; Parker, Minkin, and Bennett 2022).[31] Direct payments can be especially valuable for young adults as stabilizers, given their lower levels of emergency savings, increased employment losses during the pandemic, and higher likelihood to tap into savings or borrow during recessions (Parker, Minkin, and Bennett 2020).[32]

Pairing Policies Together for Broader Impact

Above, I review several potential policy pathways to address both (1) structural disparities in wealth and credit between communities of color and majority-white communities; and (2) enhancing the resilience of vulnerable young adults against dynamic risks like recessions. While each set of policies is individually important, pairing them may generate broader impact.

In addressing structural disparities in wealth and credit between young adults living in communities of color and majority-white communities, policies can also mitigate vulnerability to economic shocks. By fostering wealth building and equitable credit access, these policies direct crucial resources to communities and consumers of color, helping to address persistent racial disparities. However, complementary policies are essential to prevent the widening of these disparities during economic downturns and assist young adults in navigating challenging times. These combined strategies can provide important investments in communities of color, helping residents, especially young adults, remain resilient to economic shocks.

Appendix A. Detailed Methodology

This appendix includes three sections: (1) data details and sample characteristics; (2) formal regression specifications for the analyses done in this report; and (3) data used to make the Bloom (1984) adjustment. Appendix B contains the full regression tables and estimates.

Data Details and Sample Characteristics

Data Details

The core analytic dataset for this report is derived from a 2 percent nationally representative sample of 5 million consumer credit records provided by one of the three major credit bureaus. These data are longitudinal, following the same consumers over time, and are refreshed at each data pull to maintain the sample's representativeness at the national, state, and local levels. Consumer credit records contain details on consumers' zip code of residence, age, credit scores, debt amounts, delinquencies, and ownership of various loans and accounts—but do not contain details on consumers' race and ethnicity.

Sample Characteristics

Below, I summarize characteristics of the sample. More than 850,000 consumers in the credit bureau data were between ages 20 and 29 in February 2020 and formed the main study sample. First, I summarize the share of consumers in the sample, including their ownership of different loans and accounts. Overall, most young adults had at least one open credit card, while more than one-third had student loans and auto loans. However, young adults living in communities of color (majority-Black, majority-Latinx, and majority-Native communities) were less likely to have credit cards than peers in majority-white communities. Young adults living in majority-Black communities had the highest rates of student loan holding, and less than 1 in 4 young adults living in majority-Latinx communities had student loans. Although more than half of all young adults had credit cards, this rate was much lower for young adults living in majority-Black and majority-Native communities. Relatively few young adults overall had mortgages, although those living in majority-white communities had higher mortgage-holding rates.

TABLE A.1

Sample Characteristics and Account Ownership

Share of young adults (ages 20 to 29) in the sample who had each type of loan in February 2020, by community composition

Community	Average credit score	Share with a student loan	Share with a credit card	Share with an auto loan	Share with an alternative financial services loan	Share with a mortgage
Majority-Black	598.4	37.8	40.2	30.5	4	4.2
Majority-Latinx	631.5	24.7	51	37.1	4.1	5.7
Majority-Native	588.9	21.8	24.1	35.7	5.1	1.9
Majority-white	662.6	34.7	57.8	38.7	2.3	11.7
Overall	**642.1**	**33.9**	**55.1**	**36.6**	**4.5**	**7.6**

Source: Author's tabulations of Urban Institute credit bureau data (as published in Martinchek 2024).
Notes: The table shows the share of young adults ages 20 to 29 with a credit bureau record with different loans and accounts in February 2020. Black, Native, Latinx, and white communities are defined as Zip Code Tabulation Areas where more than 50 percent of the population identifies as a particular race or ethnicity in the 2015–19 five-year American Community Survey. Numbers are not shown for states where fewer than 50 young adults ages 20 to 29 with a credit bureau record live in majority-Black communities.

Second, in tables A.2, A.3, and A.4, I show the number of young adults living in communities of color across each state. Young adults living in majority-Black communities resided in 31 states and larger numbers live in southern states, including Georgia, Florida, and Louisiana, although many resided in New York, Maryland, and Michigan (table A.2). Young adults living in majority-Latinx communities resided in 34 states and larger numbers live in California, Texas, Florida, New York, and Arizona (table A.3). Young adults living in majority-Native communities resided in 21 states, mainly in Arizona, New Mexico, North Carolina, Alaska, Montana, and South Dakota (table A.4). Importantly, these numbers reflect areas where more than 50 percent of residents identified as non-Latinx Native American or Alaska Native in the 2015–19 ACS, and these areas may share some overlap with, but are not the same as, reservation lands.[33]

TABLE A.2

Number of Consumers by State in Majority-Black Communities

State	Number of consumers
AL	2,142
AR	578
CA	477
CT	144
DC	781
DE	121
FL	3,725
GA	6,089
IL	3,285
IN	555
KY	209
LA	2,317
MA	422
MD	3,391
MI	2,354
MN	102
MO	1,173
MS	2,062
NC	2,098
NE	56
NJ	1,211
NY	4,212
OH	2,173
OK	132
PA	1,972
SC	1,569
TN	1,823
TX	1,848
VA	1,639
WI	691
WV	<50
Total	**49,352**

Source: Author's tabulations of Urban Institute credit bureau data.

Notes: The table shows the number of young adults ages 20 to 29 with a credit bureau record living in majority-Black communities by state in February 2020. Black, Native, Latinx, and white communities are defined as Zip Code Tabulation Areas where more than 50 percent of the population identifies as a particular race or ethnicity in the 2015–19 five-year American Community Survey. Numbers are not shown for states where fewer than 50 young adults ages 20 to 29 with a credit bureau record live in majority-Black communities.

TABLE A.3

Number of Consumers by State in Majority-Latinx Communities

State	Number of consumers
AL	<50
AR	<50
AZ	3,795
CA	37,117
CO	1,317
CT	396
FL	8,526
GA	242
IA	<50
ID	<50
IL	2,821
IN	108
KS	239
KY	<50
MA	779
MD	277
MI	135
MO	<50
MT	<50
NC	<50
NE	188
NJ	2,758
NM	2,199
NV	1,151
NY	4,914
OK	311
OR	106
PA	629
RI	290
TX	23,562
UT	86
VA	<50
WA	677
WI	304
Total	**92,965**

Source: Author's tabulations of Urban Institute credit bureau data.

Notes: The table shows the number of young adults ages 20 to 29 with a credit bureau record living in majority-Latinx communities by state in February 2020. Black, Native, Latinx, and white communities are defined as Zip Code Tabulation Areas where more than 50 percent of the population identifies as a particular race or ethnicity in the 2015–19 five-year American Community Survey. Numbers are not shown for states where fewer than 50 young adults ages 20 to 29 with a credit bureau record live in majority-Latinx communities.

TABLE A.4

Number of Consumers by State in Majority-Native Communities

State	Number of consumers
AK	114
AZ	356
CA	<50
CO	<50
ID	<50
LA	<50
MN	<50
MT	77
NC	132
ND	<50
NE	<50
NM	235
NV	<50
NY	<50
OK	<50
OR	<50
SD	62
UT	<50
WA	<50
WI	<50
WY	<50
Total	**1,156**

Source: Author's tabulations of Urban Institute credit bureau data.
Notes: The table shows the number of young adults ages 20 to 29 with a credit bureau record living in majority-Native communities by state in February 2020. Black, Native, Latinx, and white communities are defined as Zip Code Tabulation Areas where more than 50 percent of the population identifies as a particular race or ethnicity in the 2015–19 five-year American Community Survey. Numbers are not shown for states where fewer than 50 young adults ages 20 to 29 with a credit bureau record live in majority-Native communities.

Regression Specifications

In this section, I describe the regression specifications used for (1) the analysis of debt and credit trends over the pandemic for young adults as well as changes community-level racial disparities in credit health between young adults living in communities of color and majority-white communities; (2) the difference-in-difference policy impact estimates; and (3) robustness checks of the policy impact estimates. Robustness check results are not shown in the body of this report but detailed in appendix B tables and endnotes.

TRENDS AND CHANGES IN THE CREDIT HEALTH GAP

I used individual-level descriptive regressions to explore both (1) young adults' credit and debt trends over the pandemic as well as (2) whether initial disparities in credit and debt outcomes between young adults living in communities of color and those living in majority-white communities changed from February 2020 to August 2023.

EQUATION A.1

Estimation Strategy for Descriptive Trend Analysis

$$Y_{izt} = \alpha_1 Community_{iz} + \alpha_2 Community_{iz} \times \theta_t + u_{izt}$$

Here, Y_{izt} represents the credit or debt outcome of interest of young adult i living in Zip Code Tabulation Area (ZCTA) z in period t, α_1 is a measure of the difference in credit outcomes between young adults living in communities of color and those living in majority-white communities in February 2020 , α_2 allows for the time trend in the outcome variable to vary based on whether or not a consumer lives in a community of color in February 2020, θ_t represents time fixed effects, and u_{izt} is the heteroskedastic-robust error term, which is clustered at the Zip Code Tabulation Area level. This specification is run separately for each outcome and for majority-Black, majority-Latinx, and majority-Native communities. Throughout the analysis, we characterize whether a consumer lives in a community of color or majority-white community based on their zip code of residence in February 2020.

To assess whether initial community-level racial disparities in debt and credit changed over the pandemic, I interpreted α_2, which captures changes over time in the *difference* in credit and debt outcomes between young adults living in majority-white communities and those living in different communities of color. As such, this coefficient measures not the magnitude of community-level racial disparities in credit and debt, but how this changed over time relative to February 2020.

CAUSAL POLICY IMPACT ANALYSIS

I used a consumer-level staggered difference-in-difference research design to identify the effects of state utility shutoff moratoria and extended unemployment insurance (UI) benefits on young adults' credit and debt outcomes (equation A.2). Using a difference-in-difference two-way fixed effects model, I compared young adults' mean credit scores and rates of credit card delinquencies between states that did and did not implement the policy before and after policy implementation. The underlying assumption was that those affected by the policy and the comparison group would have parallel outcome trends in the absence of state consumer protection or safety net policies.

EQUATION A.2

Estimation Strategy for Difference-in-Difference Policy Impact Estimates

$$Y_{icst} = \gamma_t + \delta_c + \beta Policy_{st} + \beta X_{icst} + \epsilon_{icst}$$

Where Y_{icst} is the credit or debt outcome of interest for consumer *i* residing in county c in state *s* in period *t*. Throughout the analysis, I characterize an individual's state and county of residence based on the consumer's home address in February 2020 to account for the potential endogeneity of migration decisions as a response to the policy implementation; γ_t includes year-month fixed effects; and δ_c includes county fixed effects—while in some specifications, I use individual-fixed effects.[34] $Policy_{st}$ are indicators for whether the state *s* had the policy active (utility shutoff moratoria or extended benefits UI programs (13 and 20 week) in period *t*. X_{ist} is a large set of individual, state, and county-level controls. At the individual level, this vector of controls includes age and age squared. At the state level, we include COVID-19 vaccination rate (population 18+), number of COVID-19 cases per capita and the number of COVID-19 deaths per capita, unemployment rate, the share of UI payments out within three weeks, indicators for whether states had closure orders for restaurants, bars, movie theatres, gyms, and child care centers, indicators for whether states had active suspensions on vehicle repossessions and garnishments, an indicator for whether states had active Pandemic Unemployment Assistance programs, and an indicator for whether states had an active eviction moratorium in each period. Standard errors are clustered at the state level.[35] The preferred specification includes controls and individual consumer-level fixed effects.

This specification was run on several additional samples: (1) young adults living in different communities (e.g., majority-Black, majority-Latinx, and majority-Native communities); and (2) young adults without student loans or mortgages, who likely did not benefit from federal-level forbearances on student loans and mortgage repayment.

ROBUSTNESS CHECKS

I performed two robustness checks of the estimates described in equation A.2. These robustness checks were valuable because states experienced different policy and economic shocks during the pandemic, which could confound the impacts estimated in equation A.2, despite the inclusion of controls.

First, I ran equation A.2 on a subsample of consumers living in bordering counties within states that implemented utility shutoff moratoria or extended benefits programs and their neighboring counties within states that never implemented that policy using data from the 1991 Census Bureau Contiguous County File, following a similar approach as in Andre et al. (2023a, 2023b).[36] I identified contiguous counties separately by period and policy. Contiguous counties were more likely to suffer the same health and economic shocks but differed in their policy responses.

Second, I used policy discontinuities at county borders to identify the causal effects of policies following similar approaches as Dube, Lester, Reich (2010) and Schmidt, Shore-Sheppard, and Watson (2020). To perform this analysis, I restructured the data so each county was observed once per period per adjacent pair. This restructuring was necessary so that observations could be assigned a vector of county pair-time fixed effects that allowed the adjacent border county to serve as a counterfactual. I

tested several different sets of fixed effects: (1) county-level fixed effects only; (2) pair-time fixed effects only; and (3) county-level and pair-time fixed effects (preferred specification).

EQUATION A.3

Estimation Strategy for Contiguous County Policy Impact Estimates

$$Y_{ict} = \beta_1 Policy_c + \beta_2 X_c + \gamma_{pt} + \varepsilon_{ist}$$

Y_{icst} is the outcome of young adult (age 20 to 29) *I*, living in border county *c* in period *t*. $Policy_c$ is an indicator for whether the adult's county c of residence implemented the policy (utility shutoff moratoria or extended benefits UI programs (13 and 20 week). X_c includes a robust set of controls, including COVID-19 vaccination rate (population 18+), number of COVID-19 cases per capita and the number of COVID-19 deaths per capita, unemployment rate, the share of UI payments out within three weeks, indicators for whether states had closure orders for restaurants, bars, movie theatres, gyms, and child care centers, indicators for whether states had active suspensions on vehicle repossessions and garnishments, an indicator for whether states had active Pandemic Unemployment Assistance programs, and an indicator for whether states had an active eviction moratorium in each period. γ_{pt} is a pair-specific time effect. Standard errors are clustered at the state *s* level. This specification is run separately for each policy of interest, based on the contiguous county pairs for that policy in each period.

Bloom Adjustment

The regression specifications (equations A.2 and A.3) above estimated the ITT impacts of state-level consumer protection and safety net policies implemented during the pandemic. As such, these estimates do not reflect the impact of policies on consumers who used the policy (or the TOT effect). These impacts (ITT and TOT) may differ substantially from one another in cases where there is low takeup of policies. In the credit bureau data, I was not able to observe data on whether consumers in the sample took up each of the policies, so I used the Bloom (1984) adjustment to rescale the ITT estimates by the share of the population that likely benefited from the offered policies. In computing this adjustment, I made two assumptions: (1) no consumers in the nonimplementing states received the policy in the period of interest; and (2) no sampling variability existed in the share of consumers who did not take up the policy—which could bias estimates (Litwok and Peck 2019). I used the data below to calculate the Bloom (1984) adjustment, with estimates from equation A.2, with individual fixed effects:

- share of young adults (ages 20 to 29) who reported they had problems paying their utility bill from the Urban Institute Well-Being and Basic Needs Survey[37] (9.9 percent in 2020 and 11.2 percent in 2021)
- share of young adults who received UI from the US Census Bureau Household Pulse Survey as analyzed by Carey et al. (2021) and scaled by the share of UI claims for extended benefits programs from the Department of Labor's Unemployment Weekly Claims Report (18.2 percent of young adults ages 18 to 24 and 20.9 percent of young adults ages 25 to 34 received UI benefits,

and 2.6 percent of all UI claims were filed for extended benefits, which results in 0.47 percent and 0.54 percent as the adjustment factors to be used for the Bloom (1984) adjustment).

Appendix B. Full Regression Tables

Trends and Changes in Community-Level Racial Disparities in Credit Health among Young Adults

Below, I show estimates of the trend in average credit scores among young adults ages 20 to 29 from 2020 to 2023, including how initial community-level racial disparities in credit health between young adults living in majority-white communities and those living in communities of color changed over the course of the pandemic (see tables B.1 and B.2, under interaction terms). See equation A.1 for estimation strategy.

TABLE B.1

Young Adults See Gains in Credit Scores over the Pandemic and Declines in Community-Level Racial Disparities

Trends in average credit scores and community-level racial disparities in credit scores from February 2020 to august 2023 among young adults (20 to 29)

Model	(1)	(2)	(3)	(4)
Description	1: Overall	2: Majority-Black	3: Majority-Latinx	4: Majority-Native
Time trend				
Period = 1, 2018	-5.03775	-5.79428	-5.79428	-5.79428
	(0.08778)***	(0.10244)***	(0.10244)***	(0.10244)***
Period = 2, 2019	-2.14134	-2.40128	-2.40128	-2.40128
	(0.06008)***	(0.07061)***	(0.07061)***	(0.07061)***
Period = 4, 04/2020	6.07390	5.84638	5.84638	5.84638
	(0.03745)***	(0.04506)***	(0.04506)***	(0.04506)***
Period = 5, 06/2020	9.97624	9.35325	9.35325	9.35325
	(0.04716)***	(0.05470)***	(0.05470)***	(0.05470)***
Period = 6, 08/2020	11.21785	10.23483	10.23483	10.23483
	(0.05513)***	(0.06157)***	(0.06157)***	(0.06157)***
Period = 7, 10/2020	11.93988	10.84404	10.84404	10.84404
	(0.06100)***	(0.06836)***	(0.06836)***	(0.06836)***
Period = 8, 12/2020	11.69657	10.58043	10.58043	10.58043
	(0.06434)***	(0.07265)***	(0.07265)***	(0.07265)***
Period = 9, 02/2021	14.54690	13.43168	13.43168	13.43168
	(0.06838)***	(0.07671)***	(0.07671)***	(0.07671)***
Period = 10, 08/2021	18.84611	17.33888	17.33888	17.33888
	(0.08202)***	(0.09128)***	(0.09128)***	(0.09128)***
Period = 11, 02/2022	20.01283	18.91256	18.91256	18.91256
	(0.08563)***	(0.09940)***	(0.09940)***	(0.09940)***
Period = 12, 08/2022	20.46209	19.61370	19.61370	19.61370
	(0.09206)***	(0.10761)***	(0.10761)***	(0.10761)***

Model	(1)	(2)	(3)	(4)
Description	1: Overall	2: Majority-Black	3: Majority-Latinx	4: Majority-Native
Period = 13, 08/2023	26.35322	25.94811	25.94811	25.94811
	(0.11289)***	(0.13047)***	(0.13047)***	(0.13047)***
Initial disparities				
Effect of being in a community of color in February 2020		-67.05569	-33.52915	-74.83553
		(1.43406)***	(0.99929)***	(3.05690)***
Interaction terms: changes in disparity over time				
August 2019 time interaction with community of color		-2.01140	1.62485	-1.44691
		(0.28161)***	(0.20752)***	(1.56606)
April 2020 time interaction with community of color		0.95757	0.79235	0.14377
		(0.17164)***	(0.12075)***	(1.13040)
June 2020 time interaction with community of color		1.64105	2.23566	0.05956
		(0.21268)***	(0.15893)***	(1.30869)
August 2020 time interaction with community of color		3.28804	3.16264	0.97776
		(0.24686)***	(0.18010)***	(1.36837)
October 2020 time interaction with community of color		3.96352	3.34042	2.12995
		(0.26809)***	(0.20058)***	(1.43515)
December 2020 time interaction with community of color		4.63529	3.07992	3.11394
		(0.28935)***	(0.21313)***	(1.50301)**
February 2021 time interaction with community of color		4.83744	3.22443	1.94546
		(0.30822)***	(0.23042)***	(1.50726)
August 2021 time interaction with community of color		6.64692	4.99999	2.23139
		(0.35596)***	(0.26239)***	(1.76871)
February 2022 time interaction with community of color		4.63963	3.32098	3.10580
		(0.37837)***	(0.28593)***	(1.99775)
August 2022 time interaction with community of color		4.16849	2.59968	2.41125
		(0.40281)***	(0.30923)***	(2.18350)
August 2023 time interaction with community of color		5.27203	0.41496	1.76088
		(0.51303)***	(0.38063)	(2.55062)
Constant	642.14943	652.21940	652.21940	652.21940
	(0.40024)***	(0.41263)***	(0.41263)***	(0.41263)***
Observations	9,703,535	6,839,660	7,362,147	6,281,081
R-squared	0.00840	0.04243	0.02182	0.00963
Mean of dependent variable	642.1	646.5	647.2	652.1

Source: Author's analysis of Urban Institute credit bureau data (as published in Martinchek 2024).

Notes: This table shows the regression output of the average difference in credit scores between young adults ages 20 to 29 living in communities of color relative to those living in majority-white communities in February 2020 and changes in this disparity over time, as estimated using equation A.1. The sample includes consumers with a credit bureau record. Differences in average credit scores are measured in points. Standard errors are listed in parentheses. *** denotes that the coefficient estimate is statistically significant at the $p < 0.01$ level, ** denotes that the coefficient estimate is statistically significant at the $p < 0.05$ level, and * denotes that the coefficient estimate is statistically significant at the $p < 0.10$ level. Column 1 presents regression estimates for all consumers, and columns 2 through 4 present estimates for consumers living in communities of color in February 2020. Majority-Black, majority-Latinx, and majority-Native communities are zip codes where more than 50 percent of residents were in the respective racial or ethnic group in the five-year 2015–19 American Community Survey. Credit score measures the average VantageScore from 300 to 850 of consumers with a credit bureau record. In VantageScore, credit scores below 600 are considered subprime and often signal that consumers may face higher costs in borrowing and be likely to be approved for new credit (Elliott and Lowitz 2019). This table shows descriptive regression results, not impact estimates.

TABLE B.2

Young Adults See Sharp Increases in Credit Card Delinquencies in 2022 and 2023, with Sharper Gains among Young Adults Living in Majority-Black and Majority-Native Communities

Trends in average credit scores and community-level racial disparities in credit scores from February 2020 to August 2023 among young adults (20 to 29) with a credit card

	(1)	(2)	(3)	(4)
Variables	**1: Time only**	**2: Black**	**3: Latinx**	**4: Native**
Time trend				
Period = 1, 2018	-0.62792	-0.46647	-0.46647	-0.46647
	(0.05558)***	(0.06355)***	(0.06355)***	(0.06355)***
Period = 2, 2019	-0.69854	-0.62766	-0.62766	-0.62766
	(0.04233)***	(0.04824)***	(0.04824)***	(0.04824)***
Period = 4, 04/2020	-0.66515	-0.61636	-0.61636	-0.61636
	(0.03036)***	(0.03546)***	(0.03546)***	(0.03546)***
Period = 5, 06/2020	-1.96086	-1.76083	-1.76083	-1.76083
	(0.03668)***	(0.04173)***	(0.04173)***	(0.04173)***
Period = 6, 08/2020	-2.28211	-1.92348	-1.92348	-1.92348
	(0.04123)***	(0.04632)***	(0.04632)***	(0.04632)***
Period = 7, 10/2020	-2.55814	-2.10206	-2.10206	-2.10206
	(0.04623)***	(0.05140)***	(0.05140)***	(0.05140)***
Period = 8, 12/2020	-2.35201	-1.89533	-1.89533	-1.89533
	(0.04924)***	(0.05498)***	(0.05498)***	(0.05498)***
Period = 9, 02/2021	-2.56766	-2.11695	-2.11695	-2.11695
	(0.05070)***	(0.05630)***	(0.05630)***	(0.05630)***
Period = 10, 08/2021	-2.86935	-2.38696	-2.38696	-2.38696
	(0.05197)***	(0.05798)***	(0.05798)***	(0.05798)***
Period = 11, 02/2022	-0.97614	-0.80682	-0.80682	-0.80682
	(0.05263)***	(0.05993)***	(0.05993)***	(0.05993)***
Period = 12, 08/2022	0.16822	0.08528	0.08528	0.08528
	(0.05361)***	(0.06153)	(0.06153)	(0.06153)
Period = 13, 08/2023	1.46617	1.15626	1.15626	1.15626
	(0.05564)***	(0.06289)***	(0.06289)***	(0.06289)***

Variables	(1) 1: Time only	(2) 2: Black	(3) 3: Latinx	(4) 4: Native
Initial disparities				
Effect of being in a community of color in February 2020		9.55589	4.07457	6.67828
		(0.37051)***	(0.18347)***	(2.18569)***
Interaction terms: Changes in disparity over time				
August 2019 time interaction with community of color		-0.62082	-0.27732	-2.29172
		(0.27610)**	(0.16125)*	(2.30655)
April 2020 time interaction with community of color		-1.10850	-0.22706	-1.44713
		(0.19714)***	(0.10408)**	(1.77301)
June 2020 time interaction with community of color		-2.69938	-0.72655	-3.36470
		(0.24901)***	(0.12948)***	(1.64842)**
August 2020 time interaction with community of color		-3.62826	-1.27625	-4.33967
		(0.27903)***	(0.14759)***	(1.81101)**
October 2020 time interaction with community of color		-4.02659	-1.66504	-1.42832
		(0.30237)***	(0.16369)***	(2.02710)
December 2020 time interaction with community of color		-3.46119	-1.82026	-1.96710
		(0.33015)***	(0.17465)***	(2.39678)
February 2021 time interaction with community of color		-3.23144	-1.89656	-1.98883
		(0.33660)***	(0.18129)***	(2.40421)
August 2021 time interaction with community of color		-3.35366	-2.15081	-0.97439
		(0.34945)***	(0.18035)***	(2.20842)
February 2022 time interaction with community of color		0.19916	-1.62407	-2.47503
		(0.35046)	(0.18860)***	(2.36223)
August 2022 time interaction with community of color		2.03046	-0.66699	-1.73162
		(0.34866)***	(0.19358)***	(2.56471)
August 2023 time interaction with community of color		2.56294	0.43293	3.12945
		(0.35997)***	(0.20096)**	(2.70567)
Constant	7.97259	6.81378	6.81378	6.81378
	(0.05776)***	(0.05913)***	(0.05913)***	(0.05913)***
Observations	5,852,204	4,129,908	4,488,003	3,875,714
R-squared	0.00270	0.00979	0.00442	0.00216
Mean of dependent variable	7.973	7.385	7.376	6.820

Source: Author's analysis of Urban Institute credit bureau data (as published in Martinchek 2024).

Notes: This table shows the regression output of the average difference in the share of consumers with credit card delinquencies between young adults ages 20 to 29 living in communities of color and those living in majority-white communities in February 2020 and changes in this disparity over time, as estimated using equation A.1. The sample includes consumers with a credit bureau record and at least one credit card. Differences in credit card delinquencies are measured in percentage points. Standard

errors are listed in parentheses. *** denotes that the coefficient estimate is statistically significant at the $p < 0.01$ level, ** denotes that the coefficient estimate is statistically significant at the $p < 0.05$ level, and * denotes that the coefficient estimate is statistically significant at the $p < 0.10$ level. Column 1 presents regression estimates for all consumers, and columns 2 through 4 present estimates for consumers living in communities of color in February 2020. Majority-Black, majority-Latinx, and majority-Native communities are zip codes where more than 50 percent of residents were in the respective racial or ethnic group in the five-year 2015–19 American Community Survey. In these data, a consumer is considered delinquent if they are more than 30 days past due on payments on at least one open credit card. This table shows descriptive regression results, not impact estimates.

Causal Policy Impact Analysis

Below, I show the difference-in-difference results for credit scores (table B.3). Each coefficient reflects the average estimated change in credit scores for young adults living in states that implemented the policy relative to young adults living in states that did not, measured in points. Model 4 is the preferred specification and includes policy and contextual controls and individual consumer-level fixed effects. Table B.4 shows model 4 estimated for three subgroups: (1) young adults living in majority-Black communities, (2) young adults living in majority-Latinx communities, and (3) young adults living in majority-Native communities. Column 5 in table B.3 presents effects of model 4 for a sample of young adults without student loans or mortgages as a robustness check to the main analysis. See equation A.2 for the estimation strategy.

TABLE B.3

Difference-in-Difference Impact Estimates for Credit Scores

Point change in young adults' (ages 20 to 29) average credit scores post-policy

Model	(1)	(2)	(3)	(4)	(5)
Description	County FEs	County FEs with controls	Individual FEs	Individual FEs with controls	Individual FEs with controls, no students
Policy impacts					
Utility moratoria	1.08830	0.76231	0.88963	0.58031	1.15872
	(0.10772)***	(0.09742)***	(0.10144)***	(0.08986)***	(0.16816)***
Extended UI	0.26497	0.09482	0.33990	0.17068	0.36884
	(0.13102)**	(0.12745)	(0.11693)***	(0.11336)	(0.18378)**
Extended UI 20 wks	0.70688	0.30198	0.68477	0.31838	0.39111
	(0.09503)***	(0.09725)***	(0.08881)***	(0.09019)***	(0.17513)**
Controls	No	Yes	No	Yes	Yes
Fixed effects	County and time		Individual and time		
Observations	9,702,581	9,702,581	9,702,581	9,702,581	1,979,598
R-squared	0.07382	0.07422	0.85795	0.85798	0.81686
Mean of dependent variable	642.2	642.2	642.2	642.2	639.6

Source: Author's analysis of Urban Institute credit bureau data (as published in Martinchek 2024).

Notes: This table shows the regression output of the difference-in-difference policy impact analysis, as estimated using equation A.2. The sample includes consumers with a credit bureau record. Differences in average credit scores are measured in points. Standard errors are listed in parentheses. *** denotes that the coefficient estimate is statistically significant at the $p < 0.01$ level, ** denotes that the coefficient estimate is statistically significant at the $p < 0.05$ level, and * denotes that the coefficient estimate is statistically significant at the $p < 0.10$ level. Column 1 presents estimates using county and time fixed effects, and column 2 estimates this specification with additional controls. Column 3 presents estimates using individual and time fixed effects, and column 4 estimates the same model using controls. Column 5 presents estimates using individual and time fixed effects and controls for a subsample of consumers without student loans or mortgage loans in February 2020. Model 4 is the preferred specification. Control variables include indicators for other time-varying state-level policies (including garnishment suspensions, repossession suspensions, and state-level eviction moratoria from the National Consumer Law Center; as well as differences in state-level timing of expanded eligibility through Pandemic Unemployment Assistance (PUA) and additional UI allotments (from Federal Pandemic Unemployment Compensation, or FPUC) from the COVID-19 US State Policy Database), data on states' COVID-19 cases and deaths from the *New York Times*, data on vaccination rates from the Centers on Disease Control and Prevention, data on state-level home price changes from the Urban Institute, data on state-level unemployment rates and on-time payment of UI benefits from the Bureau of Labor Statistics, and data on state-level business closures from the COVID-19 US State Policy Database. Fixed effects (FEs) control for all factors (observed and unobserved) that remain constant within units (individual consumers or counties) and periods. Credit score measures the average VantageScore from 300 to 850 of consumers with a credit bureau record.

TABLE B.4

Difference-in-Difference Impact Estimates for Credit Scores, by Community Composition

Point change in young adults' (ages 20 to 29) average credit score post-policy

Model	(3)	(5)	(7)
Description	Majority-Native	Majority-Black	Majority-Latinx
Policy impacts			
Utility moratoria	5.012875	1.57675	1.61848
	(2.354434)**	(0.60244)***	(0.52947)***
Extended UI	-0.3278887	0.88896	-0.90222
	(1.972467)	(0.46142)*	(0.54616)*
Extended UI 20 wks	2.140803	0.66231	0.11614
	(1.561389)	(0.57810)	(0.34860)
Controls		Yes	
Fixed effects		Individual and time	
Observations	5,488	175,509	432,273
R-squared	0.76494	0.79223	0.80107
Mean of dependent variable	589.8	600.8	627.4

Source: Author's analysis of Urban Institute credit bureau data (as published in Martinchek 2024).

Notes: This table shows the regression output of the difference-in-difference policy impact analysis, as estimated using equation A.2. The sample includes consumers with a credit bureau record. Differences in average credit scores are measured in points. Standard errors are listed in parentheses. *** denotes that the coefficient estimate is statistically significant at the $p < 0.01$ level, ** denotes that the coefficient estimate is statistically significant at the $p < 0.05$ level, and * denotes that the coefficient estimate is statistically significant at the $p < 0.10$ level. Column 1 presents regression estimates for all consumers, and columns 2 through 4 present estimates for consumers living in communities of color in February 2020. All estimates include individual and time fixed effects and controls. Control variables include indicators for other time-varying state-level policies (including garnishment suspensions, repossessions suspensions, and state-level eviction moratoria from the National Consumer Law Center; as well as differences in state-level timing of expanded eligibility through Pandemic Unemployment Assistance (PUA) and additional UI allotments (from Federal Pandemic Unemployment Compensation, or FPUC) from the COVID-19 US State Policy Database (CUSP)), data on states' COVID-19 cases and deaths from the *New York Times*, data on vaccination rates from the Centers on Disease Control and Prevention, data on state-level home price changes from the Urban Institute, data on state-level unemployment rates and on-time payment of UI benefits from the

Bureau of Labor Statistics, and data on state-level business closures from the CUSP. Majority-Black, majority-Latinx, and majority-Native communities are zip codes where more than 50 percent of residents are in the respective racial or ethnic group in the five-year 2015–19 American Community Survey. Consumers are defined as living in communities of color if their address of residence in February 2020 is in a ZIP Code Tabulation Area that meets the criteria. Fixed effects (FEs) control for all factors (observed and unobserved) that remain constant within units (individual consumers or counties) and periods. Credit score measures the average VantageScore from 300 to 850 of consumers with a credit bureau record.

Below, I show the difference-in-difference results for credit card delinquencies among young adults with at least one credit card (table B.5). Each coefficient reflects the average estimated change in the share of young adults with credit card delinquencies for young adults living in states that implemented the policy relative to young adults living in states that did not, measured in percentage points. Model 4 is the preferred specification and includes policy and contextual controls and individual consumer-level fixed effects. Table B.6 shows model 4 estimated for three subgroups: (1) young adults living in majority-Black communities, (2) young adults living in majority-Latinx communities, and (3) young adults living in majority-Native communities. Column 5 in table B.5 presents effects of model 4 for a sample of young adults without student loans or mortgages.

TABLE B.5

Difference-in-Difference Impact Estimates for Credit Card Delinquencies

Percentage point change in the share of young adults (ages 20 to 29) with a delinquent credit card payment post-policy

Model	(1)	(2)	(3)	(4)	(5)
Description	County FEs	County FEs with controls	Individual FEs	Individual FEs with controls	Individual FEs with controls, no students
Policy impacts					
Utility moratoria	-0.21429	-0.24791	-0.11961	-0.18070	-0.28474
	(0.06732)***	(0.06496)***	(0.05789)**	(0.05429)***	(0.11495)**
Extended UI	-0.25816	-0.26932	-0.26527	-0.28695	-0.25878
	(0.06475)***	(0.06212)***	(0.05424)***	(0.05315)***	(0.11345)**
Extended UI 20 wks	-0.04467	-0.06072	-0.11056	-0.13090	-0.22627
	(0.06936)	(0.07014)	(0.05620)**	(0.05824)**	(0.10731)**
Controls	No	Yes	No	Yes	Yes
Fixed effects	County and time		Individual and time		
Observations	5,851,910	5,851,910	5,851,910	5,851,910	1,282,308
R-squared	0.01119	0.01127	0.46696	0.46701	0.44399
Mean of dependent variable	7.973	7.973	7.973	7.973	10.50

Source: Author's analysis of Urban Institute credit bureau data (as published in Martinchek 2024).

Notes: This table shows the regression output of the difference-in-difference policy impact analysis, as estimated using equation A.2. The sample includes consumers with a credit bureau record and at least one credit card. Differences in credit card delinquencies are measured in percentage points. Standard errors are listed in parentheses. *** denotes that the coefficient

estimate is statistically significant at the $p < 0.01$ level, ** denotes that the coefficient estimate is statistically significant at the $p < 0.05$ level, and * denotes that the coefficient estimate is statistically significant at the $p < 0.10$ level. Column 1 presents estimates using county and time fixed effects, and column 2 estimates this specification with additional controls. Column 3 presents estimates using individual and time fixed effects, and column 4 estimates the same model using controls. Column 5 presents estimates using individual and time fixed effects and controls for a subsample of consumers without student loans or mortgage loans in February 2020. Model 4 is the preferred specification. Control variables include indicators for other time-varying state-level policies (including garnishment suspensions, repossessions suspensions, and state-level eviction moratoria from the National Consumer Law Center; as well as differences in state-level timing of expanded eligibility through Pandemic Unemployment Assistance (PUA) and additional UI allotments (from Federal Pandemic Unemployment Compensation, or FPUC) from the COVID-19 US State Policy Database (CUSP)), data on states' COVID-19 cases and deaths from the *New York Times*, data on vaccination rates from the Centers on Disease Control and Prevention, data on state-level home price changes from the Urban Institute, data on state-level unemployment rates and on-time payment of UI benefits from the Bureau of Labor Statistics, and data on state-level business closures from the CUSP. Fixed effects (FEs) control for all factors (observed and unobserved) that remain constant within units (individual consumers or counties) and periods. In these data, a consumer is considered delinquent if they are more than 30 days past due on payments on at least one open credit card.

TABLE B.6

Difference-in-Difference Impact Estimates for Credit Card Delinquencies by Community Composition

Percentage point change in the share of young adults (ages 20 to 29) with a delinquent credit card payment post-policy

Model	(3)	(5)	(7)
Description	**Majority-Native**	**Majority-Black**	**Majority-Latinx**
Policy impacts			
Utility moratoria	-1.17335	-0.30161	-0.56404
	(3.216347)	(0.49129)	(0.37377)
Extended UI	-3.307558	-1.65434	0.67817
	(1.875269)*	(0.42961)***	(0.35849)*
Extended UI 20 wks	0.0270027	-0.55893	-0.19589
	(1.609386)	(0.52943)	(0.28026)
Controls		Yes	
Fixed effects		Individual and time	
Observations	1,879	109,732	290,035
R-squared	0.48559	0.42708	0.43245
Mean of dependent variable	11.76	16.90	12.22

Source: Author's analysis of Urban Institute credit bureau data (as published in Martinchek 2024).
Notes: This table shows the regression output of the difference-in-difference policy impact analysis, as estimated using equation A.2. The sample includes consumers with a credit bureau record and at least one credit card. Differences in credit card delinquencies are measured in percentage points. Standard errors are listed in parentheses. *** denotes that the coefficient estimate is statistically significant at the $p < 0.01$ level, ** denotes that the coefficient estimate is statistically significant at the $p < 0.05$ level, and * denotes that the coefficient estimate is statistically significant at the $p < 0.10$ level. Column 1 presents regression estimates for all consumers, and columns 2 through 4 present estimates for consumers living in communities of color in February 2020. All estimates include individual and time fixed effects and controls. Control variables include indicators for other time-varying state-level policies (including garnishment suspensions, repossessions suspensions, and state-level eviction moratoria from the National Consumer Law Center; as well as differences in state-level timing of expanded eligibility through Pandemic Unemployment Assistance (PUA) and additional UI allotments (from Federal Pandemic Unemployment Compensation, or FPUC) from the COVID-19 US State Policy Database (CUSP)), data on states' COVID-19 cases and deaths from the *New York Times*, data

on vaccination rates from the Centers on Disease Control and Prevention, data on state-level home price changes from the Urban Institute, data on state-level unemployment rates and on-time payment of UI benefits from the Bureau of Labor Statistics, and data on state-level business closures from the CUSP. Majority-Black, majority-Latinx, and majority-Native communities are zip codes where more than 50 percent of residents are in the respective racial or ethnic group in the five-year 2015–19 American Community Survey. Consumers are defined as living in communities of color if their address of residence in February 2020 is in a ZIP Code Tabulation Area that meets the criteria. Fixed effects (FEs) control for all factors (observed and unobserved) that remain constant within units (individual consumers or counties) and periods. In these data, a consumer is considered delinquent if they are more than 30 days past due on payments on at least one open credit card.

Robustness Checks

Contiguous County Analysis

CREDIT SCORES

Below, I show the contiguous county impact estimates of utility shutoff moratoria for credit scores (table B.7) and extended UI programs (table B.8 for 13-week programs and B.9 for 20-week programs). Each coefficient reflects the average estimated change in average credit scores for young adults living in states that implemented the policy relative to young adults living in states that did not, measured in points, using equation A.3. Because this model restructures the data to estimate policy impacts, estimates are presented for each policy in a separate table. Model 6 is the preferred specification and includes controls as well as pair-time and county fixed effects.

TABLE B.7

Contiguous County Policy Impact Estimates for Utility Shutoff Moratoria on Credit Scores

Point change in young adults' (ages 20 to 29) average credit scores post-policy

Model	(2)	(4)	(6)
Description	County fixed effects	Pair-time fixed effects	Pair-time and county fixed effects
Policy impact			
Utility moratoria	0.75672	-0.04146	0.20619
	(0.18775)***	(1.78803)	(0.21843)
Controls		Yes	
Fixed effects	County	Pair-time	County and pair-time
Observations	38,814	38,810	38,810
R-squared	0.98733	0.87891	0.99507
Mean of dependent variable	630	630	630

Source: Author's analysis of Urban Institute credit bureau data (as published in Martinchek 2024).

Notes: This table shows the regression output of the contiguous county policy impact analysis, as estimated using equation A.3. The sample includes consumers with a credit bureau record. Differences in average credit scores are measured in points. Standard errors are listed in parentheses. *** denotes that the coefficient estimate is statistically significant at the $p < 0.01$ level, ** denotes that the coefficient estimate is statistically significant at the $p < 0.05$ level, and * denotes that the coefficient estimate is

statistically significant at the $p < 0.10$ level. Column 1 presents estimates using county fixed effects and controls. Column 2 presents estimates pair-time fixed effects and controls. Column 3 presents estimates using pair-time and county fixed effects and controls. Model 6 is the preferred specification. Control variables include indicators for other time-varying state-level policies (including garnishment suspensions, repossessions suspensions, and state-level eviction moratoria from the National Consumer Law Center; as well as differences in state-level timing of expanded eligibility through Pandemic Unemployment Assistance (PUA) and additional unemployment insurance allotments (from Federal Pandemic Unemployment Compensation, or FPUC) from the COVID-19 US State Policy Database (CUSP)), data on states' COVID-19 cases and deaths from the *New York Times*, data on vaccination rates from the Centers on Disease Control and Prevention, data on state-level home price changes from the Urban Institute, data on state-level unemployment rates and on-time payment of UI benefits from the Bureau of Labor Statistics, and data on state-level business closures from the CUSP. Credit score measures the average VantageScore from 300 to 850 of consumers with a credit bureau record.

TABLE B.8

Contiguous County Policy Impact Estimates for 13-Week Extended UI Programs on Credit Scores

Point change in young adults' (ages 20 to 29) average credit scores post-policy

Model	(2)	(4)	(6)
Description	County fixed effects	Pair-time fixed effects	Pair-time and county fixed effects
Policy impact			
Extended UI	0.10232	-0.11992	0.19012
	(0.20198)	(1.76641)	(0.26635)
Controls		Yes	
Fixed effects	County	Pair-time	County and pair-time
Observations	59,988	59,968	59,968
R-squared	0.98675	0.88156	0.99478
Mean of dependent variable	627.9	627.9	627.9

Source: Author's analysis of Urban Institute credit bureau data (as published in Martinchek 2024).

Notes: This table shows the regression output of the contiguous county policy impact analysis, as estimated using equation A.3. The sample includes consumers with a credit bureau record. Differences in average credit scores are measured in points. Standard errors are listed in parentheses. *** denotes that the coefficient estimate is statistically significant at the $p < 0.01$ level, ** denotes that the coefficient estimate is statistically significant at the $p < 0.05$ level, and * denotes that the coefficient estimate is statistically significant at the $p < 0.10$ level. Column 1 presents estimates using county fixed effects and controls. Column 2 presents estimates pair-time fixed effects and controls. Column 3 presents estimates using pair-time and county fixed effects and controls. Model 6 is the preferred specification. Control variables include indicators for other time-varying state-level policies (including garnishment suspensions, repossessions suspensions, and state-level eviction moratoria from the National Consumer Law Center; as well as differences in state-level timing of expanded eligibility through Pandemic Unemployment Assistance (PUA) and additional unemployment insurance allotments (from Federal Pandemic Unemployment Compensation, or FPUC) from the COVID-19 US State Policy Database), data on states' COVID-19 cases and deaths from the *New York Times*, data on vaccination rates from the Centers on Disease Control and Prevention, data on state-level home price changes from the Urban Institute, data on state-level unemployment rates and on-time payment of UI benefits from the Bureau of Labor Statistics, and data on state-level business closures from the CUSP. Credit score measures the average VantageScore from 300 to 850 of consumers with a credit bureau record.

TABLE B.9

Contiguous County Policy Impact Estimates for 20-Week Extended UI Programs on Credit Scores

Point change in young adults' (ages 20 to 29) average credit scores post-policy

Model	(2)	(4)	(6)
Description	County fixed effects	Pair-time fixed effects	Pair-time and county fixed effects
Policy impact			
Extended UI 20 wks	0.23734	2.52658	-0.03990
	(0.18863)	(1.90374)	(0.25686)
Controls		Yes	
Fixed effects	County	Pair-time	County and pair-time
Observations	25,916	25,910	25,910
R-squared	0.98733	0.89126	0.99511
Mean of dependent variable	629.2	629.2	629.2

Source: Author's analysis of Urban Institute credit bureau data (as published in Martinchek 2024).

Notes: This table shows the regression output of the contiguous county policy impact analysis, as estimated using equation A.3. The sample includes consumers with a credit bureau record. Differences in average credit scores are measured in points. Standard errors are listed in parentheses. *** denotes that the coefficient estimate is statistically significant at the $p < 0.01$ level, ** denotes that the coefficient estimate is statistically significant at the $p < 0.05$ level, and * denotes that the coefficient estimate is statistically significant at the $p < 0.10$ level. Column 1 presents estimates using county fixed effects and controls. Column 2 presents estimates pair-time fixed effects and controls. Column 3 presents estimates using pair-time and county fixed effects and controls. Model 6 is the preferred specification. Control variables include indicators for other time-varying state-level policies (including garnishment suspensions, repossessions suspensions, and state-level eviction moratoria from the National Consumer Law Center; as well as differences in state-level timing of expanded eligibility through Pandemic Unemployment Assistance (PUA) and additional unemployment insurance allotments (from Federal Pandemic Unemployment Compensation, or FPUC) from the COVID-19 US State Policy Database (CUSP)), data on states' COVID-19 cases and deaths from the *New York Times*, data on vaccination rates from the Centers on Disease Control and Prevention, data on state-level home price changes from the Urban Institute, data on state-level unemployment rates and on-time payment of UI benefits from the Bureau of Labor Statistics, and data on state-level business closures from the CUSP. Credit score measures the average VantageScore from 300 to 850 of consumers with a credit bureau record.

CREDIT CARD DELINQUENCIES

Below, I show the contiguous county impact estimates of utility shutoff moratoria for credit card delinquencies (table B.10) and extended UI programs (tables B.11 for 13-week programs and B.12 for 20-week programs). Each coefficient reflects the average estimated change in the share of young adults more than 30 days behind on a credit card will between young adults living in states that implemented the policy relative to young adults living in states that did not, measured in percentage points, using equation A.3. Because this model restructures the data to estimate policy impacts, estimates are presented for each policy in a separate table. Model 6 is the preferred specification and includes controls as well as pair-time and county fixed effects.

TABLE B.10

Contiguous County Policy Impact Estimates for Utility Shutoff Moratoria on Credit Card Delinquencies

Percentage point change in the share of young adults (ages 20 to 29) with a delinquent credit card post-policy

Model	(2)	(4)	(6)
Description	County fixed effects	Pair-time fixed effects	Pair-time and county fixed effects
Policy impact			
Utility moratoria	-0.28577	-0.07027	-0.28071
	(0.12078)**	(0.20448)	(0.14569)*
Controls		Yes	
Fixed effects	County	Pair-time	County and pair-time
Observations	38,517	38,220	38,218
R-squared	0.59255	0.68899	0.81518
Mean of dependent variable	9.037	9.058	9.058

Source: Author's analysis of Urban Institute credit bureau data (as published in Martinchek 2024).

Notes: This table shows the regression output of the contiguous county policy impact analysis, as estimated using equation A.3. The sample includes consumers with a credit bureau record and at least one credit card. Differences in credit card delinquencies are measured in percentage points. Standard errors are listed in parentheses. *** denotes that the coefficient estimate is statistically significant at the $p < 0.01$ level, ** denotes that the coefficient estimate is statistically significant at the $p < 0.05$ level, and * denotes that the coefficient estimate is statistically significant at the $p < 0.10$ level. Column 1 presents estimates using county fixed effects and controls. Column 2 presents estimates pair-time fixed effects and controls. Column 3 presents estimates using pair-time and county fixed effects and controls. Model 6 is the preferred specification. Control variables include indicators for other time-varying state-level policies (including garnishment suspensions, repossessions suspensions, and state-level eviction moratoria from the National Consumer Law Center; as well as differences in state-level timing of expanded eligibility through Pandemic Unemployment Assistance (PUA) and additional UI allotments (from Federal Pandemic Unemployment Compensation, or FPUC) from the COVID-19 US State Policy Database (CUSP)), data on states' COVID-19 cases and deaths from the *New York Times*, data on vaccination rates from the Centers on Disease Control and Prevention, data on state-level home price changes from the Urban Institute, data on state-level unemployment rates and on-time payment of UI benefits from the Bureau of Labor Statistics, and data on state-level business closures from the CUSP. In these data, a consumer is considered delinquent if they are more than 30 days past due on payments on at least one open credit card.

TABLE B.11

Contiguous County Policy Impact Estimates for 13-Week Extended UI Programs on Credit Card Delinquencies

Percentage point change in the share of young adults (ages 20 to 29) with a delinquent credit card post-policy

Model	(2)	(4)	(6)
Description	County fixed effects	Pair-time fixed effects	Pair-time and county fixed effects
Policy impact			
Extended UI	-0.36618	-0.17710	-0.17345
	(0.09521)***	(0.22745)	(0.12682)
Controls		Yes	
Fixed effects	County	Pair-time	County and pair-time
Observations	59,304	58,604	58,604
R-squared	0.58275	0.68113	0.80880
Mean of dependent variable	9.220	9.245	9.245

Source: Author's analysis of Urban Institute credit bureau data (as published in Martinchek 2024).

Notes: This table shows the regression output of the contiguous county policy impact analysis, as estimated using equation A.3. The sample includes consumers with a credit bureau record and at least one credit card. Differences in credit card delinquencies are measured in percentage points. Standard errors are listed in parentheses. *** denotes that the coefficient estimate is statistically significant at the $p < 0.01$ level, ** denotes that the coefficient estimate is statistically significant at the $p < 0.05$ level, and * denotes that the coefficient estimate is statistically significant at the $p < 0.10$ level. Column 1 presents estimates using county fixed effects and controls. Column 2 presents estimates pair-time fixed effects and controls. Column 3 presents estimates using pair-time and county fixed effects and controls. Model 6 is the preferred specification. Control variables include indicators for other time-varying state-level policies (including garnishment suspensions, repossessions suspensions, and state-level eviction moratoria from the National Consumer Law Center; as well as differences in state-level timing of expanded eligibility through Pandemic Unemployment Assistance (PUA) and additional UI allotments (from Federal Pandemic Unemployment Compensation, or FPUC) from the COVID-19 US State Policy Database (CUSP)), data on states' COVID-19 cases and deaths from the *New York Times*, data on vaccination rates from the Centers on Disease Control and Prevention, data on state-level home price changes from the Urban Institute, data on state-level unemployment rates and on-time payment of UI benefits from the Bureau of Labor Statistics, and data on state-level business closures from the CUSP. In these data, a consumer is considered delinquent if they are more than 30 days past due on payments on at least one open credit card.

TABLE B.12

Contiguous County Policy Impact Estimates for 20-Week Extended UI Programs on Credit Card Delinquencies

Percentage point change in the share of young adults (ages 20 to 29) with a delinquent credit card post-policy

Model	(2)	(4)	(6)
Description	County fixed effects	Pair-time fixed effects	Pair-time and county fixed effects
Policy impact			
Extended UI 20 wks	-0.05407	-0.37782	-0.10010
	(0.10576)	(0.18187)**	(0.13028)
Controls		Yes	
Fixed effects	County	Pair-time	County and pair-time
Observations	25,687	25,454	25,454
R-squared	0.59750	0.70279	0.81843
Mean of dependent variable	8.863	8.885	8.885

Source: Author's analysis of Urban Institute credit bureau data (as published in Martinchek 2024).

Notes: This table shows the regression output of the contiguous county policy impact analysis, as estimated using equation A.3. The sample includes consumers with a credit bureau record and at least one credit card. Differences in credit card delinquencies are measured in percentage points. Standard errors are listed in parentheses. *** denotes that the coefficient estimate is statistically significant at the $p < 0.01$ level, ** denotes that the coefficient estimate is statistically significant at the $p < 0.05$ level, and * denotes that the coefficient estimate is statistically significant at the $p < 0.10$ level. Column 1 presents estimates using county fixed effects and controls. Column 2 presents estimates pair-time fixed effects and controls. Column 3 presents estimates using pair-time and county fixed effects and controls. Model 6 is the preferred specification. Control variables include indicators for other time-varying state-level policies (including garnishment suspensions, repossessions suspensions, and state-level eviction moratoria from the National Consumer Law Center; as well as differences in state-level timing of expanded eligibility through Pandemic Unemployment Assistance (PUA) and additional UI allotments (from Federal Pandemic Unemployment Compensation, or FPUC) from the COVID-19 US State Policy Database (CUSP)), data on states' COVID-19 cases and deaths from the *New York Times*, data on vaccination rates from the Centers on Disease Control and Prevention, data on state-level home price changes from the Urban Institute, data on state-level unemployment rates and on-time payment of UI benefits from the Bureau of Labor Statistics, and data on state-level business closures from the CUSP. In these data, a consumer is considered delinquent if they are more than 30 days past due on payments on at least one open credit card.

Consumers in Contiguous Counties

CREDIT SCORES

Below, I show the policy impact estimates of utility shutoff moratoria (table B.13) and extended UI programs (tables B.14 for 13-week programs and B.15 for 20-week programs) on credit scores for the subgroup of consumers living in contiguous counties (see equation A.2). Each coefficient reflects the average estimated change in average credit scores for young adults living in states that implemented the policy relative to young adults living in states that did not, measured in points. Model 4 is the preferred specification and includes policy and contextual controls and individual consumer-level fixed effects.

TABLE B.13

Policy Impact Estimates for Utility Shutoff Moratoria on Credit Scores among Consumers in Contiguous Counties

Point change in young adults' (ages 20 to 29) average credit scores post-policy

Model	(1)	(2)	(3)	(4)
Description	County FEs	County FEs with controls	Individual FEs	Individual FEs with controls
Policy impacts				
Utility moratoria	1.03690	0.74467	0.87846	0.61721
	(0.17090)***	(0.16098)***	(0.16073)***	(0.14999)***
Controls	No	Yes	No	Yes
Fixed effects	County and time		Individual and time	
Observations	9,702,581	9,702,581	9,702,581	9,702,581
R-squared	0.07382	0.07422	0.85795	0.85798
Mean of dependent variable	642.2	642.2	642.2	642.2

Source: Author's analysis of Urban Institute credit bureau data (as published in Martinchek 2024).

Notes: This table shows the regression output of the difference-in-difference policy impact analysis on consumers living in bordering counties, as estimated using equation A.2. The sample includes consumers with a credit bureau record and identifies consumers living in bordering counties within states that implemented utility shutoff moratoria or extended benefits programs (separately) and their neighboring counties within states that never implemented that policy using data from the 1991 Census Bureau Contiguous County File. Differences in average credit scores are measured in points. Standard errors are listed in parentheses. *** denotes that the coefficient estimate is statistically significant at the $p < 0.01$ level, ** denotes that the coefficient estimate is statistically significant at the $p < 0.05$ level, and * denotes that the coefficient estimate is statistically significant at the $p < 0.10$ level. Column 1 presents estimates using county and time fixed effects, and column 2 estimates this specification with additional controls. Column 3 presents estimates using individual and time fixed effects, and column 4 estimates the same model using controls. Model 4 is the preferred specification. Control variables include indicators for other time-varying state-level policies (including garnishment suspensions, repossessions suspensions, and state-level eviction moratoria from the National Consumer Law Center; as well as differences in state-level timing of expanded eligibility through Pandemic Unemployment Assistance (PUA) and additional UI allotments (from Federal Pandemic Unemployment Compensation, or FPUC) from the COVID-19 US State Policy Database (CUSP)), data on states' COVID-19 cases and deaths from the *New York Times*, data on vaccination rates from the Centers on Disease Control and Prevention, data on state-level home price changes from the Urban Institute, data on state-level unemployment rates and on-time payment of UI benefits from the Bureau of Labor Statistics, and data on state-level business closures from the CUSP. Credit score measures the average VantageScore from 300 to 850 of consumers with a credit bureau record.

TABLE B.14

Policy Impact Estimates for 13-Week Extended Benefits UI Programs on Credit Scores among Consumers in Contiguous Counties

Point change in young adults' (ages 20 to 29) average credit scores post-policy

Model	(1)	(2)	(3)	(4)
Description	County FEs	County FEs with controls	Individual FEs	Individual FEs with controls
Policy impacts				
Extended UI	0.31890	0.11813	0.44027	0.25561
	(0.21564)	(0.18414)	(0.19672)**	(0.16195)
Controls	No	Yes	No	Yes
Fixed effects	County and Time		Individual and Time	
Observations	3,090,808	3,090,808	3,090,808	3,090,808
R-squared	0.07874	0.07877	0.85954	0.85956
Mean of dependent variable	642	642	642	642

Source: Author's analysis of Urban Institute credit bureau data (as published in Martinchek 2024).

Notes: This table shows the regression output of the difference-in-difference policy impact analysis on consumers living in bordering counties, as estimated using equation A.2. The sample includes consumers with a credit bureau record and identifies consumers living in bordering counties within states that implemented utility shutoff moratoria or extended benefits programs (separately) and their neighboring counties within states that never implemented that policy using data from the 1991 Census Bureau Contiguous County File. Differences in average credit scores are measured in points. Standard errors are listed in parentheses. *** denotes that the coefficient estimate is statistically significant at the $p < 0.01$ level, ** denotes that the coefficient estimate is statistically significant at the $p < 0.05$ level, and * denotes that the coefficient estimate is statistically significant at the $p < 0.10$ level. Column 1 presents estimates using county and time fixed effects, and column 2 estimates this specification with additional controls. Column 3 presents estimates using individual and time fixed effects, and column 4 estimates the same model using controls. Model 4 is the preferred specification. Control variables include indicators for other time-varying state-level policies (including garnishment suspensions, repossessions suspensions, and state-level eviction moratoria from the National Consumer Law Center; as well as differences in state-level timing of expanded eligibility through Pandemic Unemployment Assistance (PUA) and additional UI allotments (from Federal Pandemic Unemployment Compensation, or FPUC) from the COVID-19 US State Policy Database (CUSP)), data on states' COVID-19 cases and deaths from the *New York Times*, data on vaccination rates from the Centers on Disease Control and Prevention, data on state-level home price changes from the Urban Institute, data on state-level unemployment rates and on-time payment of UI benefits from the Bureau of Labor Statistics, and data on state-level business closures from the CUSP. Credit score measures the average VantageScore from 300 to 850 of consumers with a credit bureau record.

TABLE B.15

Policy Impact Estimates for 20-Week Extended Benefits UI Programs on Credit Scores among Consumers in Contiguous Counties

Point change in young adults' (ages 20 to 29) average credit scores post-policy

Model	(1)	(2)	(3)	(4)
Description	County FEs	County FEs with controls	Individual FEs	Individual FEs with controls
Policy impacts				
Extended UI 20 wks	0.41181	0.24904	0.44685	0.29950
	(0.16595)**	(0.14853)*	(0.15548)***	(0.14672)**
Controls	No	Yes	No	Yes
Fixed effects	County and time		Individual and time	
Observations	2,564,456	2,564,456	2,564,456	2,564,456
R-squared	0.07469	0.07472	0.85980	0.85983
Mean of dependent variable	643	643	643	643

Source: Author's analysis of Urban Institute credit bureau data (as published in Martinchek 2024).

Notes: This table shows the regression output of the difference-in-difference policy impact analysis on consumers living in bordering counties, as estimated using equation A.2. The sample includes consumers with a credit bureau record and identifies consumers living in bordering counties within states that implemented utility shutoff moratoria or extended benefits programs (separately) and their neighboring counties within states that never implemented that policy using data from the 1991 Census Bureau Contiguous County File. Differences in average credit scores are measured in points. Standard errors are listed in parentheses. *** denotes that the coefficient estimate is statistically significant at the $p < 0.01$ level, ** denotes that the coefficient estimate is statistically significant at the $p < 0.05$ level, and * denotes that the coefficient estimate is statistically significant at the $p < 0.10$ level. Column 1 presents estimates using county and time fixed effects, and column 2 estimates this specification with additional controls. Column 3 presents estimates using individual and time fixed effects, and column 4 estimates the same model using controls. Model 4 is the preferred specification. Control variables include indicators for other time-varying state-level policies (including garnishment suspensions, repossessions suspensions, and state-level eviction moratoria from the National Consumer Law Center; as well as differences in state-level timing of expanded eligibility through Pandemic Unemployment Assistance (PUA) and additional UI allotments (from Federal Pandemic Unemployment Compensation, or FPUC) from the COVID-19 US State Policy Database (CUSP)), data on states' COVID-19 cases and deaths from the *New York Times*, data on vaccination rates from the Centers on Disease Control and Prevention, data on state-level home price changes from the Urban Institute, data on state-level unemployment rates and on-time payment of UI benefits from the Bureau of Labor Statistics, and data on state-level business closures from the CUSP. Credit score measures the average VantageScore from 300 to 850 of consumers with a credit bureau record.

CREDIT CARD DELINQUENCIES

Below, I show the policy impact estimates of utility shutoff moratoria (table B.16) and extended UI programs (tables B.17 for 13-week programs and B.18 for 20-week programs) on credit card delinquencies among consumers living in contiguous counties (see equation A.2). Each coefficient reflects the average estimated change in the share of young adults more than 30 days behind on a credit card bill between young adults living in states that implemented the policy relative to young adults living in states that did not, measured in percentage points. The sample only includes consumers with at

least one open credit card. Model 4 is the preferred specification and includes policy and contextual controls and individual consumer-level fixed effects.

TABLE B.16

Policy Impact Estimates for Utility Shutoff Moratoria on Credit Card Delinquencies among Consumers in Contiguous Counties

Percentage point change in the share of young adults (ages 20 to 29) with a delinquent credit card post-policy

Model	(1)	(2)	(3)	(4)
Description	County FEs	County FEs with controls	Individual FEs	Individual FEs with controls
Policy impacts				
Utility moratoria	-0.20720 (0.10964)*	-0.28863 (0.10826)***	-0.15621 (0.08207)*	-0.22199 (0.08232)***
Controls	No	Yes	No	Yes
Fixed effects	County and time		Individual and time	
Observations	1,743,359	1,743,359	1,743,359	1,743,359
R-squared	0.01114	0.01117	0.46977	0.46981
Mean of dependent variable	7.870	7.870	7.870	7.870

Source: Author's analysis of Urban Institute credit bureau data (as published in Martinchek 2024).

Notes: This table shows the regression output of the difference-in-difference policy impact analysis on consumers living in bordering counties, as estimated using equation A.2. The sample includes consumers with a credit bureau record, an open credit card, and identifies consumers living in bordering counties within states that implemented utility shutoff moratoria or extended benefits programs (separately) and their neighboring counties within states that never implemented that policy using data from the 1991 Census Bureau Contiguous County File. Differences in credit card delinquencies are measured in percentage points. Standard errors are listed in parentheses. *** denotes that the coefficient estimate is statistically significant at the $p < 0.01$ level, ** denotes that the coefficient estimate is statistically significant at the $p < 0.05$ level, and * denotes that the coefficient estimate is statistically significant at the $p < 0.10$ level. Column 1 presents estimates using county and time fixed effects, and column 2 estimates this specification with additional controls. Column 3 presents estimates using individual and time fixed effects, and column 4 estimates the same model using controls. Model 4 is the preferred specification. Control variables include indicators for other time-varying state-level policies (including garnishment suspensions, repossessions suspensions, and state-level eviction moratoria from the National Consumer Law Center; as well as differences in state-level timing of expanded eligibility through Pandemic Unemployment Assistance (PUA) and additional unemployment insurance allotments (from Federal Pandemic Unemployment Compensation, or FPUC) from the COVID-19 US State Policy Database (CUSP)), data on states' COVID-19 cases and deaths from the *New York Times*, data on vaccination rates from the Centers on Disease Control and Prevention, data on state-level home price changes from the Urban Institute, data on state-level unemployment rates and on-time payment of UI benefits from the Bureau of Labor Statistics, and data on state-level business closures from the CUSP. In these data, a consumer is considered delinquent if they are more than 30 days past due on payments on at least one open credit card.

TABLE B.17

Policy Impact Estimates for 13-Week Extended Benefits UI Programs on Credit Card Delinquencies among Consumers in Contiguous Counties

Percentage point change in the share of young adults (ages 20 to 29) with a delinquent credit card post-policy

Model	(1)	(2)	(3)	(4)
Description	County FEs	County FEs with controls	Individual FEs	Individual FEs with controls
Policy impacts				
Extended UI	-0.36236	-0.34622	-0.33294	-0.31369
	(0.11834)***	(0.10693)***	(0.10081)***	(0.09402)***
Controls	No	Yes	No	Yes
Fixed effects	County and time		Individual and time	
Observations	1,847,653	1,847,653	1,847,653	1,847,653
R-squared	0.01152	0.01155	0.47001	0.47005
Mean of dependent variable	7.920	7.920	7.920	7.920

Source: Author's analysis of Urban Institute credit bureau data (as published in Martinchek 2024).

Notes: This table shows the regression output of the difference-in-difference policy impact analysis on consumers living in bordering counties, as estimated using equation A.2. The sample includes consumers with a credit bureau record, an open credit card, and identifies consumers living in bordering counties within states that implemented utility shutoff moratoria or extended benefits programs (separately) and their neighboring counties within states that never implemented that policy using data from the 1991 Census Bureau Contiguous County File. Differences in credit card delinquencies are measured in percentage points. Standard errors are listed in parentheses. *** denotes that the coefficient estimate is statistically significant at the $p < 0.01$ level, ** denotes that the coefficient estimate is statistically significant at the $p < 0.05$ level, and * denotes that the coefficient estimate is statistically significant at the $p < 0.10$ level. Column 1 presents estimates using county and time fixed effects, and column 2 estimates this specification with additional controls. Column 3 presents estimates using individual and time fixed effects, and column 4 estimates the same model using controls. Model 4 is the preferred specification. Control variables include indicators for other time-varying state-level policies (including garnishment suspensions, repossessions suspensions, and state-level eviction moratoria from the National Consumer Law Center; as well as differences in state-level timing of expanded eligibility through Pandemic Unemployment Assistance (PUA) and additional UI allotments (from Federal Pandemic Unemployment Compensation, or FPUC) from the COVID-19 US State Policy Database (CUSP)), data on states' COVID-19 cases and deaths from the *New York Times*, data on vaccination rates from the Centers on Disease Control and Prevention, data on state-level home price changes from the Urban Institute, data on state-level unemployment rates and on-time payment of UI benefits from the Bureau of Labor Statistics, and data on state-level business closures from the CUSP. In these data, a consumer is considered delinquent if they are more than 30 days past due on payments on at least one open credit card.

TABLE B.18

Policy Impact Estimates for 20-Week Extended Benefits UI Programs on Credit Card Delinquencies among Consumers in Contiguous Counties

Percentage point change in the share of young adults (ages 20 to 29) with a delinquent credit card post-policy

Model	(1)	(2)	(3)	(4)
Description	County FEs	County FEs with controls	Individual FEs	Individual FEs with controls
Policy impacts				
Extended UI 20 wks	-0.06786	-0.06561	-0.14449	-0.14703
	(0.12256)	(0.12557)	(0.09428)	(0.09424)
Controls	No	Yes	No	Yes
Fixed effects	County and time		Individual and time	
Observations	1,549,634	1,549,634	1,549,634	1,549,634
R-squared	0.01039	0.01042	0.47036	0.47039
Mean of dependent variable	7.882	7.882	7.882	7.882

Source: Author's analysis of Urban Institute credit bureau data (as published in Martinchek 2024).

Notes: This table shows the regression output of the difference-in-difference policy impact analysis on consumers living in bordering counties, as estimated using equation A.2. The sample includes consumers with a credit bureau record, an open credit card, and identifies consumers living in bordering counties within states that implemented utility shutoff moratoria or extended benefits programs (separately) and their neighboring counties within states that never implemented that policy using data from the 1991 Census Bureau Contiguous County File. Differences in credit card delinquencies are measured in percentage points. Standard errors are listed in parentheses. *** denotes that the coefficient estimate is statistically significant at the $p < 0.01$ level, ** denotes that the coefficient estimate is statistically significant at the $p < 0.05$ level, and * denotes that the coefficient estimate is statistically significant at the $p < 0.10$ level. Column 1 presents estimates using county and time fixed effects, and column 2 estimates this specification with additional controls. Column 3 presents estimates using individual and time fixed effects, and column 4 estimates the same model using controls. Model 4 is the preferred specification. Control variables include indicators for other time-varying state-level policies (including garnishment suspensions, repossessions suspensions, and state-level eviction moratoria from the National Consumer Law Center; as well as differences in state-level timing of expanded eligibility through Pandemic Unemployment Assistance (PUA) and additional UI allotments (from Federal Pandemic Unemployment Compensation, or FPUC) from the COVID-19 US State Policy Database (CUSP)), data on states' COVID-19 cases and deaths from the *New York Times*, data on vaccination rates from the Centers on Disease Control and Prevention, data on state-level home price changes from the Urban Institute, data on state-level unemployment rates and on-time payment of UI benefits from the Bureau of Labor Statistics, and data on state-level business closures from the CUSP. In these data, a consumer is considered delinquent if they are more than 30 days past due on payments on at least one open credit card.

Notes

[1] "US Business Cycle Expansions and Contractions," National Bureau for Economic Research (NBER), last updated March 14, 2023, https://www.nber.org/research/data/us-business-cycle-expansions-and-contractions.

[2] Latoya Hill and Samantha Artiga, "COVID-19 Cases and Deaths by Race/Ethnicity: Current Data and Changes Over Time," Kaiser Family Foundation, August 22, 2022, https://www.kff.org/racial-equity-and-health-policy/issue-brief/covid-19-cases-and-deaths-by-race-ethnicity-current-data-and-changes-over-time/.

[3] Although the pandemic recession was formally declared from February 2020 to April 2020, economic volatility and uncertainty and public health risks (e.g., high caseloads and deaths from the virus) continued after this time. See "US Business Cycle Expansions and Contractions," NBER. As such, I examined the evolution of young adults' credit and debt trajectories in the three and a half years following the formal recession.

[4] Kassandra Martinchek, Alexander Carther, Breno Braga, and Signe-Mary McKernan, "Credit Health during the COVID-19 Pandemic Dataset," Urban Data Catalog, accessed December 22, 2023, https://datacatalog.urban.org/dataset/credithealth-during-covid-19-pandemic.

[5] Martinchek et al., "Credit Health during the COVID-19 Pandemic Dataset."

[6] Aditya Aladangady, Andrew C. Chang, and Jacob Kimmel, "Greater Wealth, Greater Uncertainty: Changes in Racial Inequality in the Survey of Consumer Finances," *FEDS Notes* (blog), Board of Governors of the Federal Reserve System, October 18, 2023, https://www.federalreserve.gov/econres/notes/feds-notes/greater-wealth-greater-uncertainty-changes-in-racial-inequality-in-the-survey-of-consumer-finances-20231018.html#:~:text=We%20document%20racial%20disparities%20in,as%20the%20typical%20Hispanic%20family.

[7] Aladangady, Chang, and Kimmel, "Greater Wealth, Greater Uncertainty: Changes in Racial Inequality in the Survey of Consumer Finances."

[8] See "US Business Cycle Expansions and Contractions," NBER.

[9] VantageScore is one type of credit-scoring algorithm that uses slightly different criteria than FICO to determine scores. FICO and VantageScore vary in how long it takes for consumers to generate a scorable file (VantageScore requires any open account while FICO requires an account older than six months); the importance of different factors in scoring (VantageScore prioritizes payment history, credit depth, credit utilization, recency of credit, current balances, and available credit presence, while FICO scores are based on payment history, amounts owned, credit history length, presence of new credit, and mix of credit types); and the impact of credit inquiries on scores, and the values of their scores—or which scores are considered good (over 600 for VantageScore is prime, while over 660 is prime for FICO). Further, FICO is more often used by lenders to decide if consumers are approved for loans, including mortgages—although these scores vary among each of the three credit bureaus. Additionally, FICO provides industry-specific scores for auto lenders and credit card issuers so are often used in those industries. We used VantageScores in this analysis as FICO scores were not available in the data. See Holly Johnson, "VantageScore vs. FICO," TIME Stamped, updated October 14, 2023, https://time.com/personal-finance/article/vantagescore-vs-fico/.

It is also important to note that during this time certain types of loan delinquencies were not penalized on consumers' credit reports because of active forbearance policies, so the content of credit scores in terms of evaluating consumers' creditworthiness differs from other periods where such policies are not in effect.

[10] Martinchek et al., "Credit Health during the COVID-19 Pandemic Dataset."

[11] I used the ZCTA of residence of consumers in February 2020 to identify consumers who lived in majority-Black, majority-Latinx, majority-Native, and majority-white communities to account for potential endogeneity of migration decisions in response to state-level policies, as is done in Andre et al. (2023a, 2023b).

Additionally, in this report, I used community-level race and ethnicity to explore heterogenous trends in young adults' credit and debt and policy impacts. Large bodies of research document the role of residential segregation in shaping residents' outcomes—particularly financial outcomes—which supports the value of an analysis that explores how residents' credit health can be shaped by the communities in which they live (Acs et al. 2017; Baradaran 2017; Rothstein 2017). As administrative credit bureau records do not contain details on individual consumers' race and ethnicity, other research efforts have tried to predict consumers' race and ethnicity using ancillary data, and this is an area of current research inquiry and innovation. See Brown et al. 2021; CFPB 2014; and "RAND Bayesian Improved Surname Geocoding," RAND, accessed December 21, 2023, https://www.rand.org/health-care/tools-methods/bisg.html, for a discussion.

[12] "Major Consumer Protection Announced in Response to COVID-19," National Consumer Law Center (NCLC), accessed October 1, 2022, https://library.nclc.org/article/major-consumer-protections-announced-response-covid-19#:~:text=These%20actions%20include%20suspensions%20on,on%20debt%20collection%2C%20and%20more..

[13] "NY Times COVID-19 Data," *New York Times*, accessed October 1, 2022, https://github.com/nytimes/covid-19-data; "COVID Data Tracker," Center for Disease Control and Prevention, accessed October 1, 2022, https://covid.cdc.gov/covid-data-tracker/#datatracker-home; Richard Auxier, Aravind Boddupalli, Erin Huffer, and Kim Rueben, "State Economic Monitor," Urban Institute, August 2023, https://apps.urban.org/features/state-economic-monitor/; "Major Consumer Protection Announced in Response to COVID-19," NCLC.

[14] Kassandra Martinchek and Andrew Warren, "Gen Zers Are Financially Struggling during the COVID-19 Pandemic," *Urban Wire* (blog), May 22, 2020, https://www.urban.org/urban-wire/gen-zers-are-financially-struggling-during-covid-19-pandemic.

[15] Testing for robustness in the contiguous county analysis, I did not find a statistically significant impact of utility shutoff moratoria on young adults' credit scores at the $p < 0.05$ level using pair-time and county fixed effects (for my preferred specification in the contiguous county analysis, see table B.7, model 6) but do find positive impacts on credit scores with county fixed effects (0.75 point increase, $p < 0.01$; table B.7, model 2). Similarly, among young adults living in bordering counties, utility shutoff moratoria were associated with a 0.61 point increase in credit scores, reflecting a 0.09 percent increase in scores ($p < 0.01$, mean = 642.9; table B.13).

[16] Testing for robustness in the contiguous county analysis, I found that utility shutoff moratoria were associated with a 0.28 percentage point decline in credit card delinquencies using pair-time and county fixed effects (for my preferred specification in the contiguous county analysis; table B.10, model 6), although this was only significant at the $p < 0.10$ level (mean = 9.05). I also found evidence of similar declines in credit card delinquencies among the sample of consumers in bordering counties of 0.22 percentage points ($p < 0.01$, mean = 7.87; table B.16).

[17] These findings cohere with Andre et al. (2023a), which also examines the impact of state-level utility moratoria on consumer credit card delinquencies—which finds reductions in delinquencies across all consumers and stronger effects among consumers with subprime credit scores.

[18] Kassandra Martinchek and Andrew Warren, "Gen Zers Are Financially Struggling during the COVID-19 Pandemic," *Urban Wire* (blog), May 22, 2020, https://www.urban.org/urban-wire/gen-zers-are-financially-struggling-during-covid-19-pandemic.

Kassandra Martinchek, "Young Millennials and Gen Zers Face Employment Insecurity and Hardship during the Pandemic," *Urban Wire* (blog), December 18, 2020, https://www.urban.org/urban-wire/young-millennials-and-gen-zers-face-employment-insecurity-and-hardship-during-pandemic.

[19] Testing for robustness in the contiguous county analysis, I did not find a statistically significant impact of extended UI benefit programs on young adults' credit scores at the $p < 0.05$ level using pair-time and county fixed effects, although the direction does match the main results (table B.8, model 6, for 13-week extended UI programs; table B.9, model 6 for 20-week extended UI programs). When examining policy impacts among young adults living in bordering counties, extended benefits 20-week programs were associated with a 0.33 point increase in credit scores, matching the direction of the main findings ($p < 0.01$, mean = 642.0; table B.15) but were not statistically significant for 13-week programs (table B.14).

[20] Testing for robustness in the contiguous county analysis, I did not find a statistically significant impact of extended UI benefit programs (13 week and 20 week) on young adults' credit card delinquencies at the $p < 0.05$ level using pair-time and county fixed effects (my preferred specification, see table B.11, model 6, and table B.12, model 6) but did find positive impacts on credit card delinquencies with county fixed effects for 13-week programs (0.36 percentage point increase, $p < 0.01$; table B.11, model 2). I also found that extended UI benefit programs (13 week and 20 week) were associated with a 0.31 and 0.17 percentage point decline (or 3.9 percent and 2.1 percent decline) in credit card delinquencies among the sample of consumers in bordering counties ($p < 0.01$ and $p < 0.05$, respectively, mean = 7.92; tables B.17 and B.18).

[21] I also found weak evidence that extended UI benefit programs (13 weeks) were associated with a small increase in credit card delinquencies of 0.67 percentage points (mean = 12.22) for young adults living in majority-Latinx communities, although this was not statistically significant at the $p < 0.05$ level.

[22] Richard Fry, Jeffrey Passel, and D'Vera Cohn, "A Majority of Young Adults in the US live with Their Parents for the First Time since the Great Depression," Pew Research Center, September 4, 2020, https://www.pewresearch.org/short-reads/2020/09/04/a-majority-of-young-adults-in-the-u-s-live-with-their-parents-for-the-first-time-since-the-great-depression/.

[23] Alix Gould-Worth, "How to Stop a Recession by Strengthening Income Supports in the United States," Washington Center for Equitable Growth, August 15, 2022, https://equitablegrowth.org/how-to-stop-a-recession-by-strengthening-income-supports-in-the-united-states/.

Michael Neal and Madeline Baxter, "In a Recession, Fewer Liquid Assets Add to Black Financial Instability," WorkRise, October 23, 2023, https://www.workrisenetwork.org/working-knowledge/recession-fewer-liquid-assets-add-black-financial-instability.

[24] Neal and Baxter, "In a Recession, Fewer Liquid Assets Add to Black Financial Instability."

[25] Jung Hyun Choi, Liam Reynolds, and Vanessa G. Perry, "How Place-Based Special Purpose Credit Programs Can Reduce the Racial Homeownership Gap," *Urban Wire*, February 1, 2022, https://www.urban.org/urban-wire/how-place-based-special-purpose-credit-programs-can-reduce-racial-homeownership-gap.

[26] Gould-Worth, "How to Stop a Recession by Strengthening Income Supports in the United States."

[27] Neal and Baxter, "In a Recession, Fewer Liquid Assets Add to Black Financial Instability."

[28] Neal and Baxter, "In a Recession, Fewer Liquid Assets Add to Black Financial Instability."

[29] Gould-Worth, "How to Stop a Recession by Strengthening Income Supports in the United States."

[30] "Families First Coronavirus Response Act: Employee Paid Leave Rights," Department of Labor, accessed December 22, 2023, https://www.dol.gov/agencies/whd/pandemic/ffcra-employee-paid-leave.

[31] Neal and Baxter, "In a Recession, Fewer Liquid Assets Add to Black Financial Instability."

[32] Martinchek, "Young Millennials and Gen Zers Face Employment Insecurity and Hardship during the Pandemic."

[33] It is worth noting that the small sample size and state distribution of young adults in majority-Native communities makes it challenging to detect statistically significant policy impacts for state-level policies.

[34] By using individual consumer-level fixed effects, I controlled impact estimates for a consumer's credit history, improving the estimates' precision. The model with individual fixed effects and policy and contextual controls is the preferred model.

[35] Past work has shown that infection rates and shelter-in-place policies only explain a small portion of the variation of economic outcomes during the pandemic (Kim, Parker, and Schoar 2020), while unemployment rates and UI generosity had more significant impacts on financial outcomes (Ganong et al. 2022; Wang et al. 2020). Research also shows that moratoria on vehicle repossessions and state eviction moratoria positively affected families' credit health and financial well-being during the pandemic (Tanya Bakshi and Jonathan Rose, "What Happened to Subprime Auto Loans during the COVID-19 Pandemic?," *Chicago Fed Insights* (blog), Federal Reserve Bank Chicago, June 30, 2021, https://www.chicagofed.org/publications/blogs/chicago-fed-insights/2021/what-happened-subprime-auto-loans).

[36] I adjusted the county pair list to keep only counties that share a common land border or are separated by a body of water but connected by a bridge or boat.

[37] "The Well-Being and Basic Needs Survey," Urban Institute, accessed December 26, 2023, https://www.urban.org/policy-centers/health-policy-center/projects/well-being-and-basic-needs-survey.

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About the Author

Kassandra Martinchek is a senior research associate in the Center on Labor, Human Services, and Population at the Urban Institute and an expert on financial well-being and food access and security. At Urban, she leads research that uses qualitative analysis, econometrics, and "big" data to understand disparities in families' food security and financial health, structural barriers to families' stability, and policies that can reduce these gaps. She holds an MPA from the University of Wisconsin–Madison and is a PhD candidate in public policy and administration at George Washington University (expected May 2024), focusing on young adults' use of debt and credit during the pandemic to meet their financial needs.

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