# Examining SNAP and TANF Caseload Trends, Responsiveness, and Policies during the COVID-19 Pandemic

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## Abstract

TANF and SNAP cases increased by 3.3 million between March and June 2020, their largest quarterly increase ever. During the pandemic, many states adopted a wide set of policies and procedures to facilitate program enrollment, retention, and eligibility. I track these policies and create a pandemic policy index measuring state generosity. States that adopted more generous policies experienced larger TANF and SNAP caseload growth, especially eligibility policies such as exempting TANF work requirements or SNAP P-EBT availability. Analyzing the caseload relationship to labor markets, caseloads were less responsive to unemployment rate changes during the pandemic relative to the pre-pandemic period.

JEL Classification Codes: H0, H53, I3.

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# I  Introduction

Between March and June 2020, Temporary Assistance for Needy Families (TANF) and the Supplemental Nutrition Assistance Program (SNAP) together surged by 3.3 million caseloads, their largest quarterly gain ever. This caseload growth was incited by the labor market upheaval stemming from the COVID pandemic, however numerous new pandemic programs and policies combined with preexisting policies also contributed to this rise. This paper explores the state-level TANF and SNAP caseload trends during the COVID pandemic and analyzes how pandemic policies, labor market conditions, and unemployment insurance (UI) affected caseloads.

As two primary means-tested social safety net programs, understanding the SNAP and TANF caseload response provides insight to policymakers about the demand for relief during the pandemic and provides policy evaluation for potential future emergencies. SNAP and TANF are particularly important to study during economic downturns because of their ability to quickly provide relief to the most vulnerable households. The broad eligibility of SNAP among low-income households makes it an important harbinger of hardship and a vital benefit. Alternatively, TANF generally provides greater cash benefits than the cash value of SNAP food vouchers, and TANF additionally targets more needy households, but a gradual erosion of benefit levels combined with work requirements and time limits has raised concerns of its ability to effectively respond during recessions (Hembre, 2020; Bitler and Hoynes, 2016).

To track SNAP and TANF trends and the effects of pandemic policy innovations, I utilize monthly state-level caseload data from January 2014 through September 2021. I begin with a descriptive analysis of SNAP and TANF trends over the course of the pandemic, finding a swift and large caseload response to the COVID-19 crisis. Compared to March 2020, TANF and SNAP caseloads rose 10 and 17 percent by June 2020, equating to 86,000 and 3.2 million new caseloads. This expansion ended in July 2020 as national TANF caseloads declined through

September 2021, dropping 20 percent below pre-pandemic levels. SNAP caseloads remained steady following the initial pandemic expansion —unresponsive to the large unemployment rate reduction over this time.

In response to the pandemic, many legislative and procedural changes to SNAP and TANF occurred, yet their effect on caseloads remains unknown. For instance, the Families First Coronavirus Response Act includes a SNAP emergency allotment that provides the maximum benefit to all recipients, which I calculate provides an additional $343 or a 44 percent benefit increase to the average SNAP household. In part because this emergency allotment provides no benefits to lowest-income SNAP recipients, in April 2021 an enhanced emergency allotment guaranteed all SNAP recipients received at least a $95 allotment. This unprecedented increase to SNAP benefits during the pandemic is far greater than the 14 percent maximum benefit increase during the Great Recession, particularly increasing the SNAP benefit value among households near the income eligibility threshold. The Act also included a Pandemic Electronic Benefit Transfer, or "P-EBT" payment, providing households with children eligible for the National School Lunch Program and at home from school the SNAP benefit equivalent of the school lunch program, worth $5.70 per child per school day. In contrast, the only federal emergency TANF funds provided during the pandemic were an additional $1 billion allotted to TANF after a year into the pandemic by the American Rescue Plan.[1] However, the block grant system provides states with wide flexibility on TANF spending priorities. Since only a fifth of TANF expenditures are used on basic cash assistance, more funds could be diverted to cash assistance to meet demand as needed.

SNAP and TANF caseloads may have also been indirectly affected by many other pandemic policy changes. UI has been the primary focus for pandemic relief with 28 million initial claims filed between March and July 2020.[2] Through the Coronavirus Aid, Relief, and Economic Security (CARES) Act signed in March

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[1]This is lower than the $5 billion in emergency TANF funds allocated during the Great Recession.

[2]Total claims include both the Pandemic Unemployment Assistance program and traditional UI claims.

2020, UI benefits were extended, expanded, and augmented through the Pandemic Emergency Unemployment Assistance Compensation (PEUC), Pandemic Unemployment Assistance (PUA), and Pandemic Unemployment Compensation (PUC) programs. The severe drop in labor demand during the pandemic (Forsythe et al., 2020) justifies this focus because UI targets assistance to workers negatively affected by the crisis. Han et al. (2020) use monthly Current Population Survey data to show that these UI enhancements effectively reduced poverty during the pandemic and find that a majority of households losing employment were covered by UI although delays in processing and benefit receipt in many states may have negatively affected recipients. However, the enhanced UI payments, along with a combined $3,000 in Economic Impact Payments and expanded Child Tax Credit payments may have spillover affects on SNAP and TANF eligibility or participation. While Congress exempted the Economic Impact Payments from SNAP eligibility, recipients may have been unaware of this provision and believed that they no longer met the income eligibility threshold. Enhanced UI benefits may have increased SNAP and TANF take-up if UI recipients reduced labor market activity, increasing potential SNAP and TANF eligibility. Alternatively, enhanced UI benefits could reduce SNAP and TANF take-up if they lowered demand for additional assistance.

In addition to benefit changes, many state agencies adapted SNAP and TANF policies to the unique challenges of the pandemic. A central goal has been trying to reduce face-to-face interactions and administrative burdens for healthcare reasons, yet these policies may also affect program participation. Important SNAP policy changes include extending certification periods, waiving interview requirements, and using periodic reporting procedures. State-level TANF pandemic policy responses have been more varied, but many states have changed policies such as extending recertification periods, exempting work requirements, suspending in-person interviews, and disregarding enhanced unemployment benefits for program eligibility. Understanding the effect these policy changes have on program participation could be beneficial to administrators and policymakers especially given recent evidence of the high administrative burdens within these programs and

the role of state policies in program participation (Fox et al., 2019; Herd and Moynihan, 2019; Jones et al., 2022; Stacy et al., 2018; Finkelstein and Notowidigdo, 2019).

These pandemic policy changes could affect program participation in several ways. Many of these policies reduce program participation costs by removing barriers and hassles associated with applications and maintenance such as interviews, recertification documentation, and travel to state agency offices. These policy changes could be particularly beneficial to groups with high travel costs, such as the physically disabled, or groups who could become confused navigating complex tasks, such as people with reduced cognitive abilities. Further, the reductions in social interactions involved with program participation may reduce stigma costs or potential caseworker biases. Alternatively, removal of or limitations on physical application assistance may reduce program participation among those are not computer savvy.

To investigate the effect of SNAP and TANF pandemic policies on caseloads, I create a pandemic policy index for each program. I estimate that in months where states adopted the entire set of policies, TANF and SNAP caseloads were 18 and 19 percent higher compared to states that adopted none of the policies. Similar to prior work (Dickert-Conlin et al., 2020; Ratcliffe et al., 2008; Ziliak, 2015b; Ganong and Liebman, 2018), this finding suggests a large participation response to state policies and reflects the benefits of adapting policies for unusual circumstances. Categorizing policies into either primarily affecting retention, eligibility, or enrollment, I find the strongest caseload response to eligibility-based policies. Splitting states based on their pre-pandemic policy generosity, I find mixed evidence that pandemic policies were more effective in states with more generous preexisting policies.

The spillover effects of the higher UI benefits and wider UI eligibility on other safety net participation is both currently unknown and of interest to policymakers. Higher UI payments could increase households' incomes above SNAP or TANF

eligibility thresholds, reducing participation. However, expanding UI eligibility to the long-term unemployed and self-employed could reduce labor supply and increase TANF and SNAP income eligibility. Utilizing cross-state variation in the deployment of these programs, I find that enhanced UI programs generally increased TANF and SNAP participation. Estimates suggest that each month a state actively distributed PUC funds, TANF and SNAP cases rose by 4.2 and 5.0 percent, while distributing PUA funds increased cases by 4.4 and 1.4 percent, respectively. Higher caseload growth during months that greater UI benefits were distributed suggests that concerns of program crowd out are not observed in the data but instead potential complementarities across programs appear more likely.

In addition to evaluating the pandemic policy effect on caseloads, I measure the safety net caseload response during the pandemic relative to the labor market shock prior to the pandemic. Regressing TANF and SNAP caseloads on within-state changes in the unemployment rate, I find a strong relationship between the unemployment rate and both TANF and SNAP caseloads prior to the pandemic with each percentage point increase in the unemployment rate corresponding to a 2.5 and 3.5 percent increase in TANF and SNAP. During the pandemic, this relationship is significantly weaker with each percentage point increase in the unemployment rate associated with only a 1.1 and a 0.6 percent increase in TANF and SNAP. This suggests that cross-state labor market conditions during the pandemic were less predictive of caseload growth and other factors such as policy adoption, fiscal stimulus, and health conditions may have played a more important role relative to prior recessions.

## II    Program Overview

SNAP and TANF are two of the primary means-tested social safety net programs able to quickly respond to economic shocks because both provide benefits within a month from application. Other social safety net programs are not designed for

rapid assistance because benefits are either provided annually (Earned Income Tax Credit), the application process is lengthy (Supplemental Security Income), or the program is rationed (Housing Assistance and Subsidized Childcare). Many of the households that these programs target have few financial resources, making rapid assistance extremely valuable when economic hardship hits.

SNAP is a federal program offering in-kind food benefits to low-income households. SNAP has a standardized benefit formula set at the federal level, but states have some policy discretion on setting implementation and eligibility policies.[3] Stacy et al. (2018) document a comprehensive list of state SNAP policies through 2014. Some of this state policy variation, including asset tests, length of certification period, and fingerprint requirements, are further explored by Geller and Isaacs (2019). Many of these policy differences have been shown to have a significant effect on SNAP caseloads (Ganong and Liebman, 2018; Schwabish, 2012; Ziliak, 2015b; Ratcliffe et al., 2008; Dickert-Conlin et al., 2020). SNAP cases have more than doubled since 2000 resulting from a combination of policy changes, such as broad-based categorical eligibility and able-bodied adults without dependents eligibility, and state economic conditions (Dickert-Conlin et al., 2020; Ziliak, 2015b). In 2018, 19.7 million households participated in SNAP, averaging $255 in benefits per month.

As a means-tested program, SNAP is designed to be counter-cyclical, helping to offset negative economic shocks. As incomes decrease more households become eligible for SNAP, and negative income shocks among SNAP participants are partially mitigated by the SNAP benefit formula. Prior work such as Bitler and Hoynes (2016) and Ziliak et al. (2003) use state-level variation to find that SNAP caseloads responded to a 1 percentage point unemployment rate shock by increasing caseloads 3.4 and 2.3 percent. Ganong and Liebman (2018) expand on this by disentangling the SNAP caseload response to labor market conditions from state SNAP policy variation using county-level data, developing a SNAP policy

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[3]Hawaii and Alaska are the only two states that have slightly higher SNAP benefits than other states.

index, and instrumenting for unemployment rate changes. They find a greater SNAP response where each percentage point increase in the local unemployment rate increases caseloads by 15 percent. More recent work by Bitler et al. (2020) finds that each percentage point increase in the unemployment rate increased SNAP expenditures by 4.2 percent throughout the 2000s. Moffitt and Ziliak (2020) combine historical data from the Annual Social and Economic Supplement of the Current Population Survey with the COVID Impact Survey data to provide an early look into the COVID safety net response and find no evidence of a TANF response but document a sizable early increase in SNAP participation during the pandemic.

TANF is a block grant program providing cash assistance primarily to single-parent families and was created as part of the 1996 Personal Responsibility and Work Opportunity Reconciliation Act. In 2019, there were 1.1 million TANF cases. As reported in Hembre (2020), between 2009 and 2016 the average TANF family received $918 in monthly income, with $398, or 43 percent, coming from TANF cash assistance. Combined state and federal TANF expenditures totaled $31 billion, though states have wide discretion on spending priorities and in 2019 only 21 percent of TANF funds were spent on basic (cash) assistance.[4] TANF caseloads and benefits, both statutory and effective, have declined steadily since its creation (Hembre, 2020; Ziliak, 2015a). Relative to its predecessor, Aid to Families with Dependent Children (AFDC), TANF imposed additional requirements and restrictions such as lifetime benefit limits and work requirements, which have contributed to decreased participation (Chan, 2018, 2013; Grogger, 2004). The work requirement exemptions implemented by thirty-one states during the pandemic offer a unique opportunity to assess the role this policy has in affecting TANF participation, particularly in a weak labor market environment.

Historically, TANF (and AFDC) caseloads were quite responsive to unemployment shocks (Klerman and Haider, 2004; Figlio et al., 2000; Blank, 2001). One concern of conditional program eligibility on a work requirements is that the policy might

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[4]https://www.acf.hhs.gov/ofa/data/tanf-financial-data-fy-2019

reduce program effectiveness during economic contractions when work is more difficult to obtain. Recent research by Bitler and Hoynes (2016), Bitler et al. (2020), and Moffitt (2013) examine the safety net caseload response during the Great Recession and find that the TANF response was smaller than during prior contractions. There is no comparable infectious disease pandemic in recent history, but during a pandemic the cost of work requirements are likely much higher as many daycares and schools are closed and family members are reluctant to provide childcare assistance due to infection risk.

# III   Data

Between March and April 2020, the COVID pandemic ravaged the labor market, causing a 10 percentage point increase in the national unemployment rate. Both labor supply and demand dried up quickly.

To measure and evaluate the safety net response to the COVID pandemic, I utilize TANF and SNAP monthly caseload data. SNAP data are provided by the Food and Nutrition Service in the Department of Agriculture and TANF data are provided by the Administration of Children and Families in the Department of Health and Human Services. The estimation sample includes observations from all fifty states and Washington, D.C., between January 2014 and September 2021.[5]

Many states adapted to the COVID pandemic by modifying SNAP and TANF policies and procedures to provide greater assistance and to lessen the COVID transmission risk by reducing personal interaction. For SNAP, I am able to track implementation dates for fifteen pandemic policies that vary by state and are provided by the Department of Agriculture. Pandemic policies range from waiving initial interviews, allowing online grocery store purchases for SNAP, and extending certification periods.

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[5]Summary statistics are available in Appendix Table A.1.

States have greater autonomy over TANF policies than SNAP. As a result, TANF pandemic policies are not tracked at the federal level, so I instead rely on a survey of state pandemic policies carried out by the Center for American Progress combined with pre-pandemic policies reported by the Welfare Rules Database.[6] This survey included five relevant policies such as whether states were excluding PUC payments for TANF eligibility and whether time limits were suspended. While TANF policies do not have implementation or expiration dates provided, these changes likely represent the general generosity or stringency of TANF policy adoption in the states during the pandemic. Potential program participants in states lacking an online application submission option may be less likely to apply during the pandemic. To investigate whether online applications affected the pandemic caseload response, I surveyed TANF state agency websites in April 2020 to find which states offered online applications. Twelve states did not have an online application available.

I utilize pandemic policy data to investigate whether these policies affected program participation. Because states implemented many policies within a short time frame, it would be difficult to separately identify the effect of each policy simultaneously with statistical precision. Instead, I create COVID pandemic policy indices for SNAP and TANF, measuring policy generosity. To begin, I group policies for each program into one of three categories: enrollment, retention, and eligibility. These categories group policies that similarly affect differing aspects of program participation. Enrollment policies for SNAP include postponing expedited service interviews, accepting telephonic signatures, suspending in-person applications and verification, and waiving initial interviews. SNAP includes six retention policies: waiving face-to-face interviews, core verification and interview adjustments, periodic report flexibility, waiving recertification interviews, extending certification periods, and adjusting periodic reporting. The four SNAP eligibility policies are emergency allotments, SNAP online submission, P-EBT availability for

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[6]https://www.americanprogress.org/issues/poverty/reports/2020/12/17/493861/states-can-use-tanf-immediately-help-struggling-residents/

school-aged kids, and PEBT-availability for childcare centers. TANF enrollment policies include availability of online applications and suspension of in-person interviews. TANF retention policies are suspending time limits and waiving recertification. TANF eligibility policies are excluding federal PUC payments and exempting work requirements.

For each policy I create a dummy variable equal to 1 in months the policy was available. Each policy index group is then constructed as the mean of the indicator variables within the group. An aggregate policy index for each program is created as the average of these three categorical indices. For the TANF and SNAP in the baseline specification, these policies indices are static measures that vary by state. Since I can observe SNAP policy implementation dates, I alternatively check whether a time-varying SNAP policy index affects the results. These summary COVID policy measures help address concerns about attenuation bias from measurement error. Measurement error is a concern for two reasons. One reason is that there may be a lag between legislative adoption dates and implementation dates. Another is that these are not uniform policies across states. For example, some states automatically extended TANF recertification periods by two months and others by six months. On average, my TANF policy index has a value of 0.45 during the pandemic months with a standard deviation of 0.24, while the SNAP policy index has a value of 0.35 with a standard deviation of 0.35. States with lower COVID index values for both TANF and SNAP tend to be run by Republican governors and have lower SNAP and TANF participation rates and TANF and UI benefit levels.

Preexisting program policies related to eligibility, procedures, and benefits may also contribute to pandemic program responsiveness and take-up. To examine state program differences, I utilize the TANF policies reported in the Welfare Rules Database and the SNAP policy index created by Stacy et al. (2018). I focus on six important TANF policies to create a pre-pandemic TANF policy index: time limits, benefit amounts, asset limits, vehicle exemptions, diversion programs, and income disregards. For each policy I create a binary indicator equal to 1 if the state policy

is either more generous or less restrictive.[7] To compare pandemic caseload responsiveness based on preexisting policies, I split the TANF sample by states at the median value, four, when summing these policy indicators. For SNAP, Stacy et al. (2018) track SNAP state policies related to eligibility, transaction costs, and stigma associated with SNAP participation between 1996 and 2014. Aggregating these policies into a single policy index provides a useful indicator of state SNAP policy restrictiveness. I similarly divide states into above- and below-median SNAP policy index scores when examining pandemic responsiveness.

UI was the primary pandemic safety-net response conduit with a three-pronged approach, the PUC, the PUA, and the PEUC. The PUC provided a $600 federal supplement to UI recipients between March 27 and July 26, 2020, and later provided a $300 supplement between December 26, 2020, and September 6, 2021. This was a large supplement in comparison to the average state maximum UI payment of $496, and Ganong et al. (2020) find the initial PUC resulted in three-quarters of eligible workers having wage replacement rates above 100 percent. The PUA extended UI eligibility to the self-employed, independent contractors, and "gig" workers who are usually ineligible for UI benefits. PUA beneficiaries could receive up to 39 weeks of UI benefits through September 4, 2021. The PEUC initially provided an additional thirteen weeks of unemployment benefits to unemployed workers who had exhausted standard benefits. PEUC benefits were later extended to twenty-four weeks and then to fifty-three weeks, lasting through early September 2021.

To determine whether enhanced UI benefits affected TANF and SNAP caseloads, I use variation across time and states in UI program processing and distribution of UI benefits and claims. State agencies operate state UI application and benefit offices. Substantial variation in the capacity and efficiency of these offices caused

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[7]Specifically, the indicator is equal to 1 if the state time limit is no shorter than the federal time limit, maximum benefits are above the median state benefit level, liquid assets limits are greater than $2,000, the vehicle exemption allows at least one car per adult, a diversion program exists, and if the earned income disregard is at 50 percent of income or 50 percent of the three-person maximum benefit level.

significant delays in UI application processing and benefit distribution. These delays could affect program participation. Households needing income support may have applied for TANF and SNAP while waiting for UI benefits to arrive. Alternatively, households waiting on UI benefits may have alternatively accepted job opportunities, which would reduce TANF and SNAP eligibility.

To measure PUC, PUA, and PEUC availability, I utilize data from the Department of Labor on UI cash distributions and claims, converted into a per-capita rate. States varied considerably on their distribution of enhanced UI benefits during the pandemic. For example, even with the same PUC benefit level, the PUC dollars distributed per person ranged from \$105 to \$319 in May 2020 among sixteen states with a similar unemployment rate (between 10 and 12 percent). There is far greater variation in enhanced UI benefit receipt than in unemployment rates, with the coefficient of variation on average state unemployment during the pandemic of 0.27 compared to 0.48, 0.88, and 0.73 for average PUC, PUA, and PEUC dollar distributions per capita.

I create three proxy measures for the availability of the PUC, PUA, and PEUC. The first measure, shown on the left panel of Figure 1, is based on whether the state is actively distributing funds for the program in the month. I create an indicator variable for every program and for each state and month indicating whether funds distributed for the program exceeded a threshold value, set at the $25^{th}$ percentile of the program during the pandemic. Using this threshold-based measure some states such as Rhode Island and Massachusetts actively provided PUA funds for up to seventeen of the nineteen pandemic months while Kentucky, Utah, and South Dakota only registered as active for zero or one pandemic month. As shown in Figure 1, this set of UI policy variables captures the expected time trends of the three programs, with PUC dipping during the fall 2020 months when the program was inactive and the PEUC program having a delayed rise as fresh UI participants needed several months before exhausting their regular UI benefits and moving onto PEUC benefits.

To address concerns that a threshold-based UI policy measure could be biased due to state differences in benefit levels and eligibility, the other two measures are created using within-state variation in the timing of enhanced UI claims and benefit receipt. Separately for the claims and distributions data, I create PUC, PUA, and PEUC distributional measures that represent the fraction of total spending on each program in a given month. In contrast to the threshold-based measure that highlights cross-state variation in the level of benefits provided, the distributional measure highlights cross-state variation in the timing of when benefits are distributed.

State trends in the benefit-based distributional UI policy measure are shown in the right panel of Figure 1. Though similar to the threshold-base UI policy measure, the distributional measure focuses on two additional state differences concerning UI distributions during the pandemic. The first difference is in the PUC variation, where the reduced benefits of the second PUC iteration are more clearly reflected in the distributional measure. The second difference is the cross-state variation in distribution amount within a given month. For instance, all states are counted as active in PUC for May through July 2020 using the threshold value, however the range of the total PUC payment share during these months is 8.9 to 32.7 with a standard deviation of 4.1. To the extent enhanced UI benefit amounts influenced TANF and SNAP take-up more than enhanced UI participation, the distribution-based variable results might differ from the threshold-based measure.

# IV    COVID-19 Pandemic Caseload Trends

Figure 2 displays changes in monthly TANF and SNAP caseloads between March 2019 and September 2021. The dark line displays the monthly sample average, and each thin gray line represents a state. Between March and June of 2020, both TANF and SNAP experienced the largest quarterly caseload increase ever. TANF caseloads rose by 86,000 (10 percent) over this quarter, while SNAP caseloads rose

by 3.2 million (17 percent).

This initial pandemic caseload increase was widespread. During the first three months of the pandemic thirty-five states increased TANF cases while forty-eight states increased SNAP cases. Variation in TANF caseloads was greater than SNAP caseloads. By September 2021, changes to TANF caseloads range between -56 percent and 32 percent with a standard deviation of 20 percent. This is nearly double SNAP variation, which ranges from -12 percent to 41 percent with a standard deviation of 11.5 percent.

After June 2020, average SNAP caseloads leveled off and began a gradual decline while average TANF caseloads experienced a much sharper decline. By November 2020, average TANF caseloads had returned to pre-pandemic levels while SNAP caseloads declined only 3 percent from their June peak. This caseload decline coincided with a steep fall in the unemployment rate after April 2020. TANF cases may also have declined because several states directed COVID-related cases to short-term (less than four months) TANF diversion programs, which may be included in some state reports, as a survey of state TANF administrators revealed (Shantz et al., 2020). Other TANF policies, such as binding time limits, work requirements, and sanctions may have forced participants off of TANF.

Figure 3 plots the percentage change in SNAP and TANF caseloads during the pandemic months relative to the prior nine months, revealing the scale and correlation between the TANF and SNAP pandemic caseload responses. On average, SNAP cases increased by 8.5 percent over this nineteen month period, while average TANF cases decreased by 7.3 percent. Nine states decreased SNAP caseloads during the pandemic and an additional twenty-seven states decreased TANF caseloads.

The SNAP and TANF eligibility overlap can lead to program complementarities. For instance, qualifying for TANF provides categorical SNAP eligibility and finding documents and filling out paperwork for SNAP could lower the TANF application costs. Since TANF and SNAP both target low-income households one would expect

related changes in these programs. SNAP and TANF caseload changes indeed exhibit a correlation of 0.54 during the pandemic, with Figure 3 revealing this strong positive association. This strong correlation of caseload changes is likely driven by the shared labor market shock program participants in these states experience, however other factors such as state policy choices could contribute to this association.

The dashed line in Figure 3 displays a linear fit of the SNAP and TANF pandemic caseload changes. Observations above this line experienced a greater percent increase in TANF cases relative to SNAP cases during the pandemic. To investigate the role of pandemic policies in influencing pandemic caseload changes, we split states into two groups based on their relative pandemic policy generosity. The black circles represent states with relatively more generous TANF pandemic policies while red triangles represent states with more generous SNAP pandemic policies based on our pandemic policy indices. Given observed SNAP pandemic caseload growth, TANF cases grew about 5 percent higher relative to the linear expectation in relatively more generous TANF policy states.

Figure 4 further investigates the role of pandemic policies by displaying the caseload time trend and splitting states based on the policy categories: retention, enrollment, and eligibility. Gray lines display the TANF and SNAP average state percent change relative to May 2019 for states with above-average policy generosity for each category while black lines show the average change for below-average generosity states. With the exception of enrollment policies for TANF, states with greater adoption for each COVID policy for both TANF and SNAP experienced a greater relative caseload change between March 2020 and September 2021.

For TANF, the largest disparity in caseload changes is between states based on eligibility policies: exempting PUC payments and suspending work requirements. States that adopted these eligibility policies experienced a 12 percent increase in TANF caseloads by June 2020 while states not adopting these policies had little change to their caseloads and this caseload difference persisted through 2021. This

trend suggests that both PUC payments and work requirements during the pandemic were important factors for many TANF-eligible households. Splitting the sample based on TANF enrollment policies shows a slight initial increase in caseloads among states facilitating TANF enrollment during the pandemic, but this initial growth evaporated by 2021 and eventually fell below less generous enrollment states. States offering more generous TANF retention policies displayed no initial difference in caseload growth but, perhaps due to increased retention, steadily grew to 6 percent lower decline in caseloads relative to less generous retention policies.

For SNAP, states adopting more generous policies for each of the three policy categories displayed similar trends throughout the pandemic averaging roughly 7 percent greater caseload growth for each group. State differences based on retention policies had the greatest average difference, with this difference again growing steadily over the pandemic similar to TANF retention policies. States showed little difference in the initial seven months of the pandemic based on SNAP eligibility policies, but then diverged after September 2020. This may suggest that the P-EBT program, which temporarily stopped providing benefits in many states in August 2020, may have helped facilitate SNAP participation.

# V    Methodology

To gauge the quality of a net one must compare the force exerted upon it against the cushion it provides. Similar to prior work including Ganong and Liebman (2018), Bitler and Hoynes (2016), Hardy et al. (2018), Ziliak et al. (2000), and Blank (2001), I measure the social safety net response in relation to unemployment rate changes during the pandemic. Prior work, such as Bitler and Hoynes (2016), has found that while historically TANF (and its predecessor AFDC) provided a buffer to low-income households during periods of reduced labor demand, during the Great Recession TANF provided little increased assistance to states with high unemployment rates. This finding confirmed worries that TANF policies such as

time limits and work requirements reduced the counter-cyclical benefits of TANF.

Following Bitler and Hoynes (2016), I measure the responsiveness of the safety net during the COVID pandemic by estimating the following equation:

$$y_{it} = \beta_0 + \beta_1 UR_{it} + \beta_2 UR_{it} \times \text{Pandemic}_t + \beta_3 \overline{\text{Policy}}_{it} + \beta_4 X_{it} + \alpha_i + \gamma_i t + \eta_y + \psi_m + \epsilon_{it}$$

(1)

where subscript $i$ refers to state, $t$ refers to date (in months), and $UR_{it}$ is the state unemployment rate.[8] The outcome variable, $y_{it}$, is either TANF or SNAP log of per capita caseloads.[9] The variable $\text{Pandemic}_t$ is a dummy variable equal to 1 between February and September 2021. The coefficient $\beta_1$ represents the effect of the unemployment rate on caseloads prior to the pandemic while $\beta_2$ represents the change in the unemployment rate effect on caseloads during the pandemic period. The effect of state-level pandemic policies, $\overline{\text{Policy}}_{it}$, on caseloads is captured by $\beta_3$. In some specifications, the three separate policy groups are controlled for. When checking for the influence of expanded UI benefits on caseloads, indicator variables for the PUA, PEUC, and PUC availability are added.

Numerous state-level differences may influence program participation outside of pandemic policies and labor market conditions, including program generosity, stigma, participation transaction costs, and, during the pandemic, health status. To help address these concerns, I control for additional state-level variables that may influence caseloads: the COVID infection rate, an indicator if the governor is a Democrat, maximum TANF and UI benefit amounts, and dummy variables to account for large spikes in SNAP and TANF caseloads due to natural disaster responses such as hurricanes and tornadoes. Though these variables help control for potential state-differences in pandemic policy adoption, other unobserved variables may be correlated with pandemic policy. However, it is encouraging that in Figure 4, after splitting states based on pandemic policy generosity, the

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[8]Monthly unemployment rate data are provided by the Department of Labor.

[9]Results remain similar if levels in caseloads per capita are used instead of logs.

pre-pandemic caseload trends are quite similar in generous relative to less generous states.

Equation (1) includes state fixed effects ($\alpha_i$) and a state linear time trend $\gamma_i t$, along with year and month fixed effects $\eta_y$ and $\psi_m$ to capture annual trends and seasonal caseload variation. The state fixed effects control for permanent differences in programs and economic conditions by state while the state linear time trends capture cross-state differences in caseload trends. Regressions use robust standard errors clustered at the state level.

Similar to prior work such as Bitler and Hoynes (2016), Ganong and Liebman (2018), Bitler et al. (2020), and Ziliak et al. (2000), I utilize the unemployment rate as an indicator of macroeconomic conditions when measuring the pandemic caseload response. Changes in the unemployment rate are a direct measure of change in unemployed households that are likely eligible for SNAP and potentially eligible for TANF. Unemployment rate change can also be a proxy variable for other changes in eligibility, such as income loss or labor force participation. It is possible that the relationship between the unemployment rate and program eligibility changed during the pandemic as reports of furloughs or temporary hours reductions were common and new government programs, such as the Paycheck Protection Program, may have kept workers employed while reducing household income. While the primary specifications focus on the unemployment rate, we test alternative measures of the labor market by substituting in either the employment-to-population ratio (EPOP) or by supplementing the unemployment rate by adding the rate of reported "not at work" from the Current Population Survey. An advantage of using the EPOP is that it abstracts away from the fuzzy line defining labor force participation while the "not at work" supplement captures the potential misclassification issues with the unemployment rate arising during the early months of the pandemic.

# VI Results

Table 1 displays results from estimating Equation (1). Columns (1) and (2) display TANF results with and without control variables while Columns (3) and (4) similarly display SNAP results. Subsequent regression tables focus on the policy and labor market determinants of caseloads and hide these control variable estimates. During the pandemic, higher COVID infection rates are associated with lower TANF and SNAP cases perhaps indicating that healthier households had greater capacity to actively submit program applications or maintain eligibility documentation. State-level politics appears to influence caseloads as well with Democratic governors increasing TANF caseloads by 6.8 percent but having no effect on SNAP cases. While maximum UI benefit amounts appear unrelated to SNAP and TANF cases, I find that each additional \$100 per month in TANF benefits is associated with TANF caseload grow of 7.6 percent.[10]

Turning to the labor market effects on caseloads, for each percentage point increase in the unemployment rate, I find that TANF cases increased between 2.5 to 3.0 percent while SNAP caseloads are slightly more responsive at 3.5 to 3.8 percent. During the pandemic, the change in the responsiveness of caseloads to state-level unemployment rates was statistically different than the pre-pandemic period with both programs decreasing to roughly 1.1 percent for TANF and 0.4 percent for SNAP. Columns (2) and (4) of Table 1 are replicated in Appendix Table A.2, replacing the unemployment rate with either the EPOP or the supplemented unemployment rate including those "not at work." These alternative measures generally weaken the relationship between the labor market and caseloads, however have a minimal effect on the pandemic policy effects on caseloads.

Relative to the Great Recession, the TANF response is surprising and encouraging considering the estimates reported by Bitler and Hoynes (2016) that TANF cases were unresponsive to unemployment during the Great Recession and the initial

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[10]Given the absence of state variation in SNAP benefits, I am unable to test whether SNAP cases similarly respond to benefit levels.

findings of Moffitt and Ziliak (2020) that reported a limited TANF pandemic caseload response using the COVID Impact Survey. While the TANF responsiveness was lower during the pandemic relative to the pre-pandemic period, its responsiveness was greater than SNAP, especially during the initial pandemic months. Because of larger state variation in policies and administration, the TANF pandemic caseload response was also much more diffuse relative to SNAP. Policy flexibility brought about by the pandemic, such as exempting work requirements and ignoring time limits, additionally differentiate the pandemic from the Great Recession and may help explain the difference in responsiveness. TANF is a small program compared to historical norms, but its positive response to the pandemic in many states may have had an especially high value for recipients as it targets cash assistance to very low income households.

Adding over 3 million SNAP cases in just three months during the pandemic was unprecedented. Yet state-level unemployment shock variation during the pandemic has far less predictive power in explaining caseload changes as the percent impact is about a third as large as the Great Recession estimates obtained by Bitler and Hoynes (2016). This differential response could be attributed to several causes. Pre-pandemic SNAP caseloads are significantly higher than the pre-Great Recession period. While the SNAP percent effect is smaller than estimates from prior periods, the caseload response in levels is actually greater. Alternatively, perhaps the most surprising trend during the pandemic period is that SNAP cases only declined modestly as the unemployment rate dropped 8 percentage points between April and November 2020. The asymmetric SNAP responsiveness to unemployment is potentially related to the novel pandemic policies. While these policy changes were crafted to help adapt to the pandemic environment and reduce infectious disease transmission, they may have also affected program participation and other behavior responses. The automatic extensions and altered recertification procedures may have led income-ineligible households to continue receiving benefits. The pandemic emergency allotments also changed labor market disincentives for SNAP recipients. By providing maximum SNAP benefits to all recipients, the emergency allotments

created a large benefit cliff from exceeding SNAP income eligibility thresholds. Another factor influencing the relationship between unemployment and SNAP cases could be that more unemployed workers may have surpassed SNAP income eligibility thresholds due to the PUA, PUC, and PEUC programs.

Estimates of the effect of pandemic policies on caseloads in Table 1 suggest that states that adopted more lenient policies had greater caseload growth throughout the pandemic. From Columns (1) and (2), a state adopting all the TANF pandemic policies, $\overline{\text{TANF Policy}}_{it}$, would be expected to raise caseloads by 18 percent. Columns (3) and (4) suggest that adopting all the SNAP pandemic policies would increase caseloads between 19 and 22 percent. Both results are statistically significant at the 90 percent confidence level or higher and suggest policy adaptation played an important role in the safety net response during the pandemic. These findings are in line with prior work finding that SNAP and TANF policies have had significant effects on caseload trends since the 1996 welfare reform (Dickert-Conlin et al., 2020; Ratcliffe et al., 2008; Ziliak, 2015b). However, given the varying scope of the policies included in this measure, understanding the mechanisms by which these polices affected caseloads is difficult.

Table 2 reports estimates of the effect of TANF and SNAP pandemic policy categories on caseloads. As suggested by Figure 4, Columns (1) and (2) show that TANF eligibility policies during the pandemic resulted in the highest caseload changes. States adopting all the pandemic eligibility policies increased TANF caseloads by a statistically significant 22 percent ceteris paribus.[11] TANF policies related to retention and enrollment were statistically insignificant and small in magnitude.

Breaking out SNAP policies categories in Columns (3) and (4), I find a statistically insignificant relationship between retention, enrollment, and eligibility pandemic policies and SNAP caseloads. Retention policies do reveal a large but noisy point

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[11]Appendix Table A.3 includes each policy separately in the regression and finds that TANF work requirement exemptions in particular had the largest and only statistically significant effect on TANF caseloads.

estimate of about 0.2. Column (5) substitutes the static policy definition for a dynamic definition that allows the variable to change within-state throughout the pandemic as policies are adopted and abandoned. Using this date variation, I find that SNAP eligibility policies increased SNAP caseloads with full adoption of these policies, leading to a statistically significant 5 percent caseload increase. The SNAP retention policy coefficient is double the eligibility coefficient size but statistically insignificant.

Following this evidence that pandemic policies contributed to SNAP and TANF caseload changes, Table 3 separates this pandemic policy response based on the preexisting policy generosity in each state. Less generous or restrictive preexisting pandemic policies may have deterred households that would have otherwise participated in TANF during the pandemic. I find that states with more generous pre-pandemic TANF policies exhibit a stronger caseload relationship with the labor market. More restrictive policies may indicate stricter eligibility requirements, so conditional on an unemployment shock, more families could become newly eligible for TANF compared to less restrictive states. For both TANF and SNAP there is a large reduction in the labor market relationship with caseloads during the pandemic, although this change is not statistically different between higher and lower generosity states for either TANF or SNAP. I also find mixed evidence that pre-pandemic policy generosity interacted with pandemic policies, with the more generous pre-pandemic TANF states having a stronger reaction to pandemic polices and more generous pre-pandemic SNAP states having a weaker reaction to pandemic policies.

To investigate the role of the pandemic-expanded UI benefits on SNAP and TANF caseloads, Table 4 reports coefficients from Equation 1 with additional policy variables representing the provision of expanded UI programs during the pandemic. Columns (1) and (4) proxy for monthly state-level PUC, PUA, and PEUC availability using the threshold-based enhanced UI measures. Columns (2) and (5) alternatively use the benefit-based distributional UI policy measure while Columns (3) and (6) use the claims-based distributional measure. Including these UI

pandemic policy measures reveals some interesting program interactions but does not significantly alter our prior estimates of the unemployment rate or pandemic policy effect on TANF and SNAP caseloads.

Of the eighteen coefficient estimates evaluating the interaction between enhanced UI programs and TANF and SNAP, only one is negative, which suggests a general complementarity between UI programs and other components of the social safety net. The strongest UI links to TANF and SNAP are through the PUC and PUA programs. UI benefits through the PUC program, which provided supplemental benefits to UI recipients, was the largest program and provided more than four times the total benefits than either the PUA or PEUC. Each additional month a state actively distributes PUC funds is associated with a statistically significant 4.2 and 5.0 percent increase in TANF and SNAP caseloads, respectively. Alternatively, in a month a state distributed 10 percent more of their total PUC funds, TANF and SNAP cases rose by 8 and 5 percent. The claims-based PUC measure is weaker than the benefit-based measure and statistically insignificant, perhaps suggesting household program participation decisions for most UI recipients depended more on actual benefit receipt timing as opposed to expected benefit receipt.

For each additional month a state provided PUA benefits, which expanded UI benefits to previously ineligible unemployed workers, TANF and SNAP cases rose by 4.4 and 1.4 percent, respectively. While each 10 percent increase in PUA benefits distributed is not significantly associated with changes in TANF and SNAP cases, a 10 percent increase in claims increased TANF and SNAP cases by 5 and 3 percent. The PUA estimates on the claims versus benefits distribution differ from the PUC findings perhaps because expected UI benefits, reflected by claims, mattered more to PUA recipients who were previously ineligible for UI. PEUC coefficient estimates were generally small and statistically insignificant, indicating that TANF and SNAP program participation decisions were largely unaffected by whether long-term unemployed workers receive extended UI benefits.

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# VII Conclusion

This paper investigated TANF and SNAP caseload growth during the first nineteen months of the COVID pandemic. Following a historic initial rise in caseloads for both programs at the outset of the COVID pandemic, SNAP caseloads leveled off and slowly declined after June 2020 while TANF cases continued its pre-pandemic consistent decline in a majority of states but with wider cross-state variation. Contrary to prior work such as Moffitt and Ziliak (2020), the monthly administrative TANF caseload data analyzed in this paper suggests that in many states TANF positively responded to the COVID pandemic though the small size of the program limited its overall impact. Investigating the caseload dynamics relative to pandemic policy changes, I find that COVID-friendly policies played an important role in explaining the cross-state caseload response variation, particularly policies related to increasing enrollment and retention. In comparison to prior recessions, I also show that cross-state variation in the caseload response to the unemployment rate was weaker during the pandemic. Expanded UI programs, especially the PUC supplement, provided unprecedented assistance levels to the unemployed during the pandemic. I find that SNAP and TANF caseloads rose higher as states distributed PUC, PUA, and PEUC funds, suggesting that UI participation may positively affect SNAP and TANF participation.

The economic shock during the pandemic provided an extraordinary test of the social safety net. This paper illuminates how TANF and SNAP provided vital assistance to low-income households during the pandemic. This assistance is especially valuable during the health crisis since the sharp reduction in labor demand and childcare or schooling arrangements has limited the ability for adults to support their families through labor supply. Understanding the safety net response to COVID is immediately valuable to policymakers currently debating continued policy modifications to these programs as the pandemic continues. Particularly important, I find evidence that pandemic policies reducing administrative burdens and participation costs helped to increase SNAP and TANF

caseloads during the pandemic. Policymakers interested in strengthening the social safety net and reducing barriers to access should consider whether the benefits program rules and regulations outweigh the reduced program participation they result in.

The relevance of TANF as a safety net program has dwindled over time. However, this paper shows that in many states, at least initially, TANF caseloads provided some quick immediate relief even though this increased assistance was short-lived. Results from this paper bolster prior work that finds TANF policies enforcing work requirements and lifetime benefit limits have contributed to the 70 percent TANF caseload decline since 1996 (Chan, 2018; Grogger, 2004; Swann, 2005), while the erosion of effective benefits (Hembre, 2020; Ziliak, 2007) has reduced the appeal of participation. Though its role has diminished, TANF remains an important program because it targets the lowest income households and provides cash, as opposed to in-kind transfers. Cash may be especially important during the pandemic, because households with children may have to invest in remote learning materials and personal health safety measures among other essential expenses. States varied widely in their pandemic policy adoption and this paper shows these policies played an important role in the caseload response.

While this study documents the safety net response to the COVID pandemic, many aspects deserve continued exploration. One important question is studying the participation response and welfare consequences of the large expansion of SNAP benefits through the emergency allotments, P-EBT, the temporary 15 percent increase in maximum benefits (Consolidated Appropriations Act of 2021), and longer-lasting 21 percent increase to the updated Thrifty Food Plan. Since SNAP benefits are indexed to inflation, this large increase in SNAP benefits provides a unique experiment on the value of SNAP benefits.

The COVID pandemic provided an extraordinary test to our social safety net. This paper shows that the safety net responded positively, quickly adapting policies to accommodate pandemic challenges and in turn experiencing its largest expansion

on record. The brief resurgence of TANF as a pandemic cushion, though small in absolute terms, was encouraging while the SNAP expansion has clearly helped to ease the financial consequences of the pandemic for many low-income families.

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Figure 1: PUC, PUA, and PEUC Activity
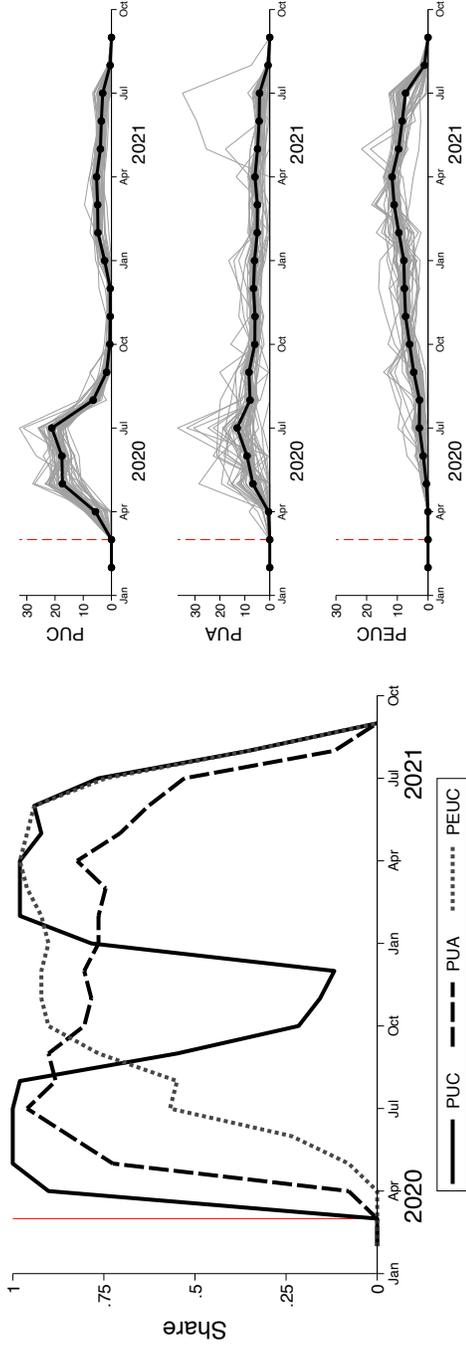


**Source:** Department of Labor.
**Note:** This left panel displays the percent of states that distributed significant (defined as greater than the pandemic sample 25th percentile) program benefits for PUC, PUA, and PEUC each month. The right panel displays percent of total dollars distributed each month. The black line is the state average and each gray line represents a state.

Figure 2: TANF and SNAP Caseloads Trends
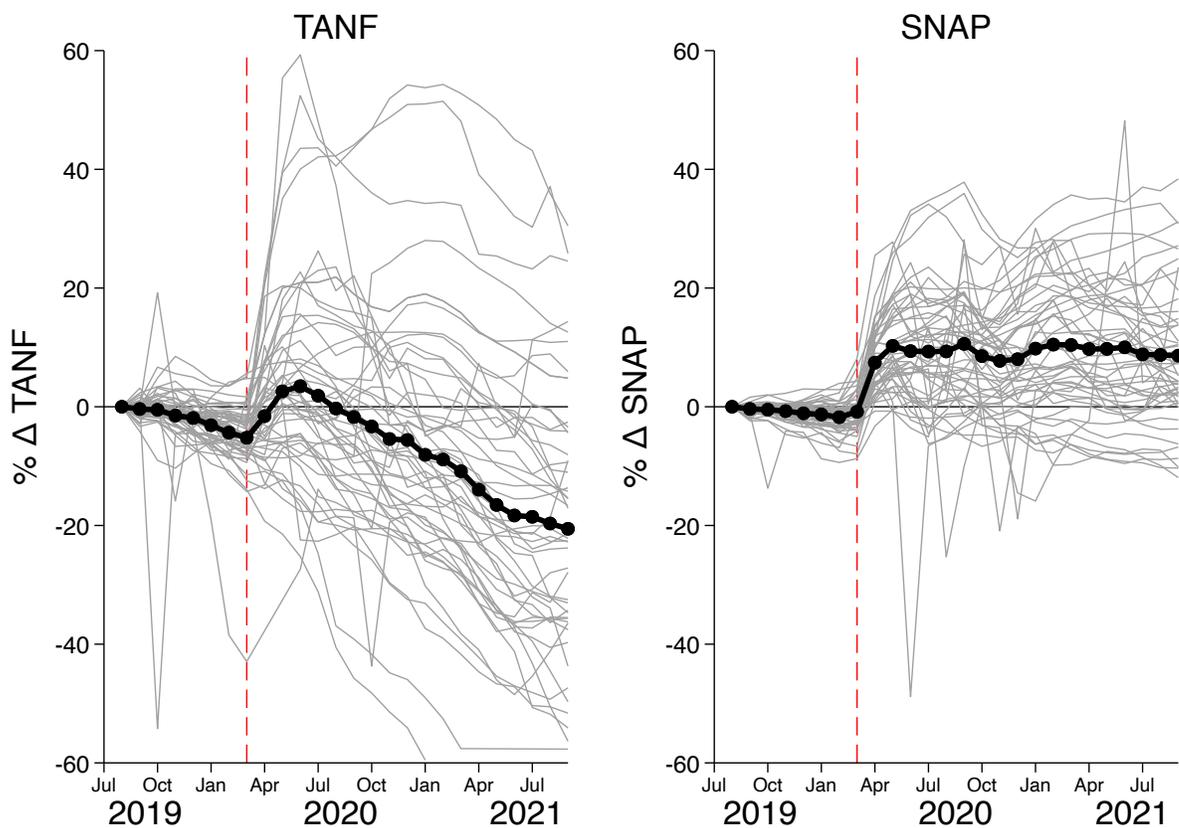
**Sources:** Department of Agriculture and the Administration of Children and Families.

**Note:** This figure displays the percentage change in monthly TANF and SNAP caseloads relative to July 2019 through September 2021. Each gray line represents a state. The black line is the sample average.

Figure 3: TANF and SNAP Pandemic Caseload Response By State
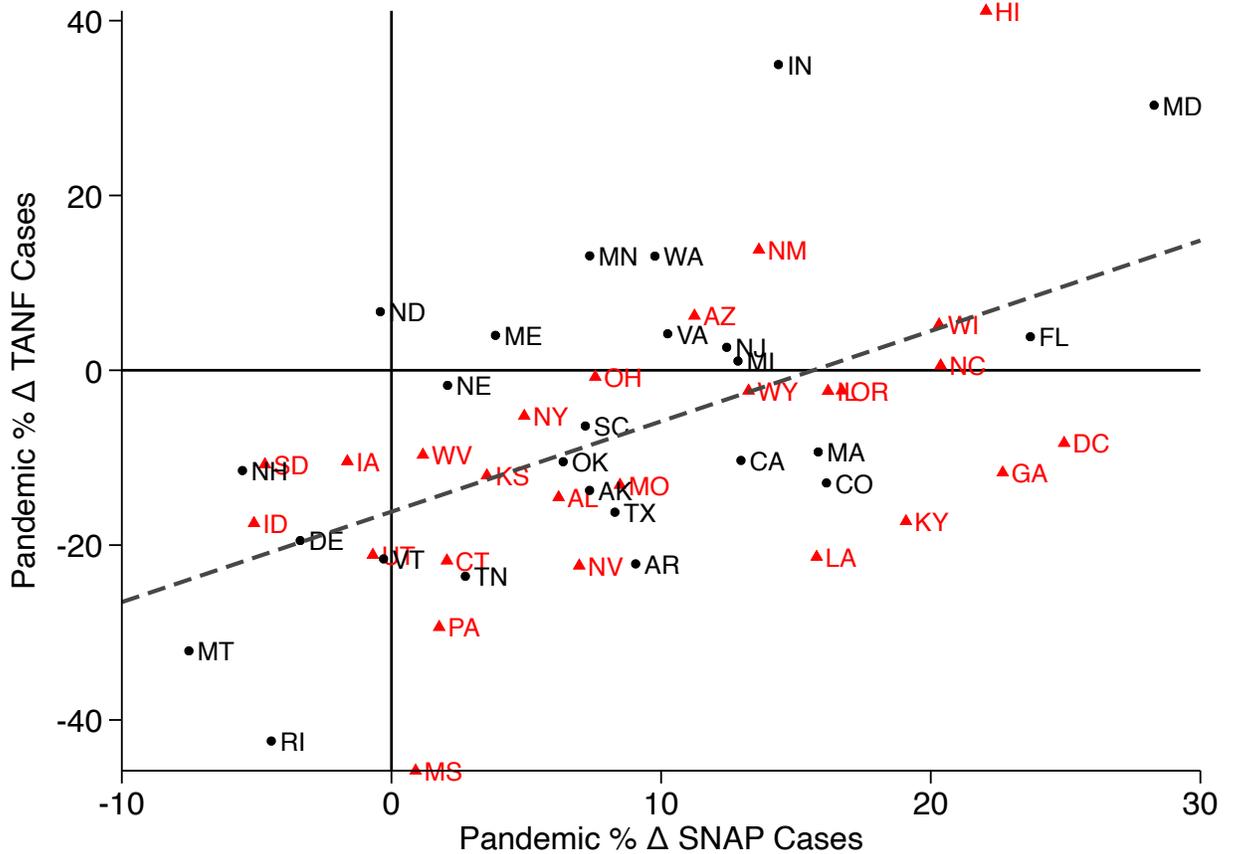
**Sources:** Department of Agriculture and the Administration of Children and Families.

**Note:** This figure displays the state-level percentage change in TANF and SNAP caseloads. Pandemic period is April-September 2021 compared to the August 2019-March 2020 average. Variation in state colors and symbols reflect COVID policy differences. States represented with black circles had a more generous TANF pandemic policies relative to SNAP. Red triangles represent states with more generous SNAP pandemic policies relative to TANF. The dashed black line is linear best fit line. Observations above the dashed line reflect states that had larger than expected TANF caseload changes during the pandemic given the observed SNAP caseload change.

Figure 4: TANF and SNAP Caseload Trends, by Pandemic Policy Categories
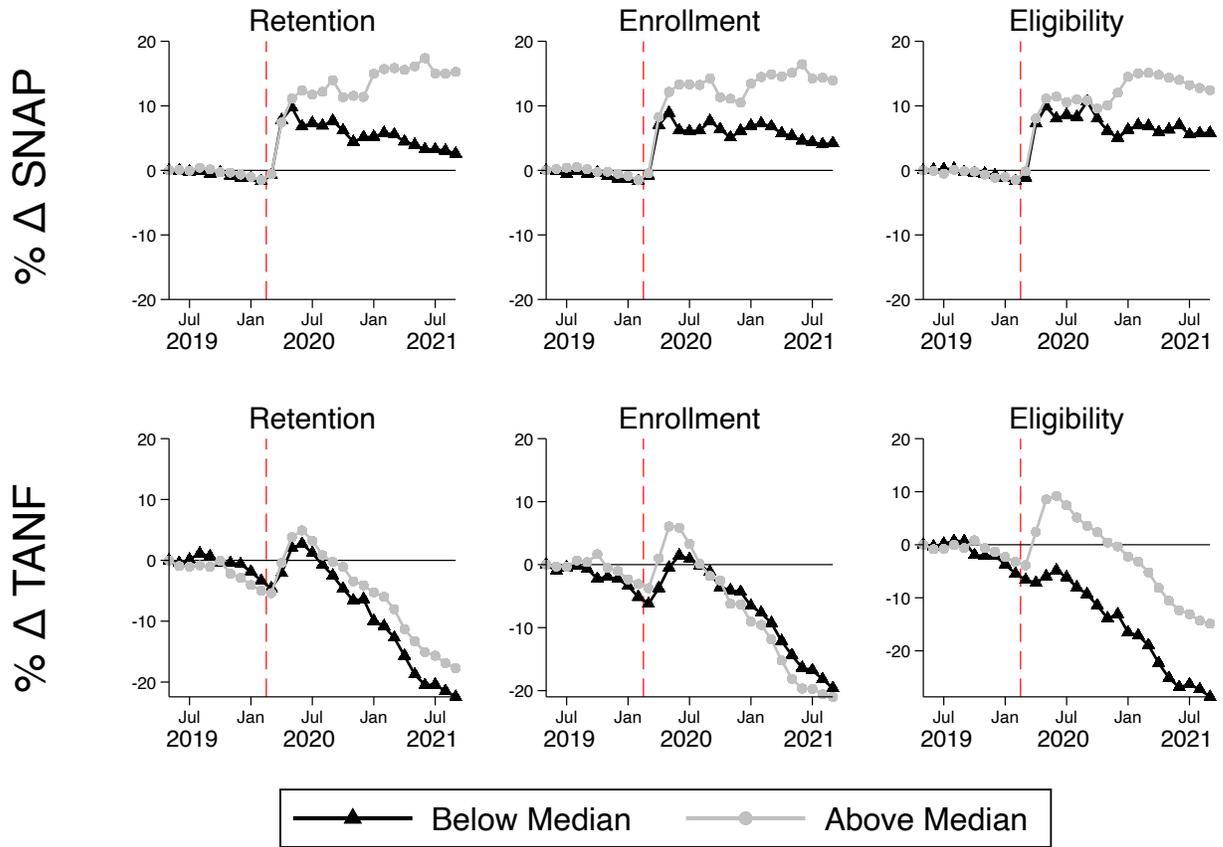


**Sources:** Department of Agriculture, Administration of Children and Families, Department of Labor, Center for American Progress.
**Note:** This figure displays the percentage change in monthly TANF and SNAP caseloads relative to July 2019 through September 2021. Each panel is separated into states which had more generous (gray lines) and less generous (black lines) policies in each policy category.

Table 1: Effect of Pandemic Policies and Unemployment Rate on TANF and SNAP Caseloads

|  | TANF | | SNAP | |
|---|---|---|---|---|
|  | (1) | (2) | (3) | (4) |
| Unemployment Rate | 3.033** | 2.514** | 3.829*** | 3.527*** |
|  | (1.146) | (1.133) | (0.606) | (0.596) |
| Pandemic x Unemployment Rate | -1.963* | -1.331 | -3.452*** | -2.982*** |
|  | (1.041) | (0.982) | (0.613) | (0.666) |
| TANF COVID | 0.182* | 0.175* |  |  |
|  | (0.103) | (0.102) |  |  |
| SNAP COVID |  |  | 0.218** | 0.191** |
|  |  |  | (0.084) | (0.091) |
| TANF Max Benefit ($00s) |  | 0.076** |  | 0.043* |
|  |  | (0.031) |  | (0.022) |
| UI Max Benefit Amount ($00s) |  | -0.020 |  | -0.016 |
|  |  | (0.022) |  | (0.010) |
| Democratic Governor |  | 0.068** |  | 0.013 |
|  |  | (0.033) |  | (0.016) |
| COVID Rate |  | -0.156** |  | -0.105** |
|  |  | (0.071) |  | (0.046) |
| SNAP Disaster |  | 0.052*** |  | 0.165*** |
|  |  | (0.011) |  | (0.040) |
| TANF Disaster |  | 0.157*** |  | 0.016 |
|  |  | (0.057) |  | (0.022) |
| Observations | 4,743 | 4,743 | 4,743 | 4,743 |

* p<0.10, ** p<0.05, *** p<0.010

**Sources: Department of Agriculture, Administration of Children and Families, Department of Labor, Center for American Progress.**

**Note:** This table represents results from estimating Equation (1). Sample period is January 2014 to September 2021. All specifications include state, month, year, and linear state time trends with an outcome variable of log caseloads per capita. Columns (2) and (4) include control variables. UI max benefit amount is the total UI benefits received during an unemployment spell (maximum weekly benefit $x$ maximum weeks). SNAP and TANF disasters are indicator variables when state natural disasters occur that cause brief caseload spikes. COVID Rate is the number of COVID caseloads per thousand people.

Table 2: Effect of Pandemic Policies and Unemployment Rate on TANF and SNAP Caseloads, by Policy Categories

| | TANF | | SNAP | | |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| Unemployment Rate | 2.914*** | 2.334** | 3.696*** | 3.428*** | 3.240*** |
| | (0.975) | (0.958) | (0.718) | (0.695) | (0.544) |
| Pandemic x Unemployment Rate | -1.913** | -1.312 | -3.235*** | -2.793*** | -2.615*** |
| | (0.916) | (0.910) | (0.715) | (0.738) | (0.511) |
| TANF Enrollment | 0.031 | 0.025 | | | |
| | (0.064) | (0.065) | | | |
| TANF Eligibility | 0.223** | 0.236** | | | |
| | (0.110) | (0.105) | | | |
| TANF Retention | -0.054 | -0.064 | | | |
| | (0.092) | (0.090) | | | |
| SNAP Enrollment | | | -0.004 | -0.019 | -0.012 |
| | | | (0.184) | (0.184) | (0.054) |
| SNAP Eligibility | | | -0.017 | -0.020 | 0.051** |
| | | | (0.062) | (0.061) | (0.024) |
| SNAP Retention | | | 0.266 | 0.250 | 0.131 |
| | | | (0.244) | (0.238) | (0.080) |
| Controls | No | Yes | No | Yes | Yes |
| Observations | 4,743 | 4,743 | 4,743 | 4,743 | 4,743 |

* $p<0.10$, ** $p<0.05$, *** $p<0.010$

**Sources:** Department of Agriculture, Administration of Children and Families, Department of Labor, Center for American Progress.

**Note:** This table represents results from estimating Equation (1). Sample period is January 2014 to September 2021. All specifications include state, month, year, and linear state time trends with an outcome variable of log caseloads per capita. Columns (2) and (4) include control variables. Column (5) alters the SNAP policy indices to be time varying instead of static.

Table 3: Effect of Pandemic Policies and Unemployment Rate on TANF and SNAP Caseloads, by Pre-Pandemic Policy Generosity

| | TANF | | SNAP | |
| --- | --- | --- | --- | --- |
| | (1) | (2) | (3) | (4) |
| | Lower Pre-Policy | Higher Pre-Policy | Lower Pre-Policy | Higher Pre-Policy |
| Unemployment Rate | 1.186 | 3.208** | 3.847*** | 3.402*** |
| | (1.298) | (1.460) | (0.714) | (0.919) |
| Pandemic x Unemployment Rate | -0.930 | -1.818 | -3.295*** | -2.774*** |
| | (1.657) | (1.167) | (0.904) | (0.989) |
| $\overline{\text{TANF COVID}}$ | 0.117 | 0.233** | | |
| | (0.204) | (0.107) | | |
| $\overline{\text{SNAP COVID}}$ | | | 0.252* | 0.143 |
| | | | (0.145) | (0.123) |
| Controls | Yes | Yes | Yes | Yes |
| Observations | 1,767 | 2,976 | 2,325 | 2,418 |

* $p<0.10$, ** $p<0.05$, *** $p<0.010$

**Sources:** Department of Agriculture, Administration of Children and Families, Department of Labor, Center for American Progress.

**Note:** This table represents results from estimating Equation (1). Sample period is January 2014 to September 2021. All specifications include state, month, year, and linear state time trends with an outcome variable of log caseloads per capita. Columns (1) and (3) are restricted to states with below-median pre-pandemic policy generosity, and Columns (2) and (4) have above-median pre-pandemic policy generosity.

Table 4: Effect of PUC, PUA, and PEUC on TANF and SNAP Caseloads

|  | TANF | | | SNAP | | |
| --- | --- | --- | --- | --- | --- | --- |
|  | (1) | (2) | (3) | (4) | (5) | (6) |
| Unemployment Rate | 2.741** | 3.006** | 2.920** | 3.672*** | 3.832*** | 3.762*** |
|  | (1.153) | (1.173) | (1.190) | (0.603) | (0.603) | (0.622) |
| Pandemic x Unemployment Rate | -1.867* | -1.713 | -1.952* | -3.409*** | -3.206*** | -3.481*** |
|  | (1.016) | (1.023) | (1.103) | (0.681) | (0.665) | (0.714) |
| $\overline{\text{TANF COVID}}$ | 0.153 | 0.162 | 0.157 | | | |
|  | (0.099) | (0.100) | (0.104) | | | |
| $\overline{\text{SNAP COVID}}$ | | | | 0.156* | 0.150* | 0.153 |
|  | | | | (0.091) | (0.089) | (0.092) |
| PUC Ind ($) | 0.042*** | | | 0.050*** | | |
|  | (0.014) | | | (0.009) | | |
| PUA Ind ($) | 0.044** | | | 0.014 | | |
|  | (0.019) | | | (0.013) | | |
| PEUC Ind ($) | -0.021* | | | 0.000 | | |
|  | (0.012) | | | (0.012) | | |
| PUC Dist ($) | | 0.008*** | | | 0.005*** | |
|  | | (0.002) | | | (0.001) | |
| PUA Dist ($) | | 0.001 | | | 0.000 | |
|  | | (0.001) | | | (0.001) | |
| PEUC Dist ($) | | 0.000 | | | 0.002** | |
|  | | (0.001) | | | (0.001) | |
| PUC Dist (Claims) | | | 0.002 | | | 0.001 |
|  | | | (0.003) | | | (0.002) |
| PUA Dist (Claims) | | | 0.005*** | | | 0.003** |
|  | | | (0.002) | | | (0.001) |
| PEUC Dist (Claims) | | | 0.000 | | | 0.003*** |
|  | | | (0.001) | | | (0.001) |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 4,743 | 4,743 | 4,557 | 4,743 | 4,743 | 4,557 |

* p<0.10, ** p<0.05, *** p<0.010

**Sources:** Department of Agriculture, Administration of Children and Families, Department of Labor, Center for American Progress.

**Note:** This table represents results from estimating Equation (1). Sample period is January 2014 to September 2021. All specifications include state, month, year, and linear state time trends with an outcome variable of log caseloads per capita. All specifications include control variables.

# Appendix

Table A.1: TANF and SNAP Summary Statistics

|  | Pre-Pandemic | | | Pandemic | | |
|---|---|---|---|---|---|---|
|  | Low | Mid | High | Low | Mid | High |
| TANF Rate | 2.18 | 3.59 | 3.23 | 1.52 | 3.00 | 2.44 |
|  | (1.10) | (1.99) | (2.06) | (0.83) | (2.22) | (1.43) |
| SNAP Rate | 57.24 | 69.00 | 62.73 | 54.40 | 67.30 | 64.00 |
|  | (22.45) | (22.81) | (16.97) | (23.18) | (25.65) | (15.27) |
| $\overline{\text{TANF COVID}}$ | 0.22 | 0.46 | 0.63 | 0.22 | 0.46 | 0.63 |
|  | (0.13) | (0.22) | (0.16) | (0.13) | (0.22) | (0.16) |
| $\overline{\text{SNAP COVID}}$ | 0.24 | 0.36 | 0.44 | 0.24 | 0.36 | 0.44 |
|  | (0.06) | (0.10) | (0.05) | (0.06) | (0.10) | (0.05) |
| TANF Max Benefit ($00s) | 3.94 | 4.52 | 4.95 | 4.07 | 5.03 | 5.34 |
|  | (1.37) | (2.16) | (1.57) | (1.47) | (2.46) | (1.72) |
| Max UI Benefit Amount ($00s) | 1.06 | 1.14 | 1.34 | 1.82 | 1.88 | 2.13 |
|  | (0.27) | (0.37) | (0.59) | (0.66) | (0.75) | (0.91) |
| Unemployment Rate | 0.04 | 0.05 | 0.04 | 0.06 | 0.06 | 0.08 |
|  | (0.01) | (0.01) | (0.01) | (0.03) | (0.03) | (0.04) |
| EPOP | 0.47 | 0.47 | 0.48 | 0.46 | 0.46 | 0.45 |
|  | (0.04) | (0.04) | (0.02) | (0.04) | (0.04) | (0.03) |
| PUC $ Rate | 0.00 | 0.00 | 0.00 | 38.50 | 52.12 | 68.90 |
|  | (0.00) | (0.00) | (0.00) | (60.63) | (66.22) | (87.41) |
| PUA $ Rate | 0.00 | 0.00 | 0.00 | 6.33 | 9.77 | 21.31 |
|  | (0.00) | (0.00) | (0.00) | (8.94) | (11.22) | (23.42) |
| PEUC $ Rate | 0.00 | 0.00 | 0.00 | 5.89 | 9.44 | 14.28 |
|  | (0.00) | (0.00) | (0.00) | (8.28) | (11.04) | (16.29) |
| Democrat Governor | 0.20 | 0.30 | 0.59 | 0.24 | 0.38 | 0.75 |
|  | (0.40) | (0.46) | (0.49) | (0.42) | (0.48) | (0.43) |
| COVID Infection Rate | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
|  | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) |
| Obs | 1,110 | 1,184 | 1,480 | 285 | 304 | 380 |

**Source:** Department of Agriculture, Administration of Children and Families, Department of Labor, Center for American Progress, UKCPR National Welfare Data.
**Note:** UI max benefit amount is the total UI benefits received during an unemployment spell (maximum weekly benefit $x$ maximum weeks). SNAP and TANF disasters are indicator variables when state natural disasters occur that cause brief caseload spikes. COVID Rate is the number of COVID caseloads per thousand people. Observations are groups by SNAP and TANF policies, with the "Low" group representing states with below-median TANF and SNAP policy index values, "Mid" are states with only one of TANF or SNAP index values above median, and "High" are for states with both TANF and SNAP index values above median.

Table A.2: Effect of EPOP and Supplemental Unemployment Rate on TANF and SNAP Caseloads

|  | TANF | | SNAP | |
| --- | --- | --- | --- | --- |
|  | (1) | (2) | (3) | (4) |
|  | EPOP | UR+NAW | EPOP | UR+NAW |
| EPOP | -0.711 |  | -0.492 |  |
|  | (0.901) |  | (0.388) |  |
| Pandemic x EPOP | -0.063 |  | -0.375*** |  |
|  | (0.109) |  | (0.099) |  |
| $\overline{\text{TANF COVID}}$ | 0.193 | 0.211* |  |  |
|  | (0.117) | (0.106) |  |  |
| $\overline{\text{SNAP COVID}}$ |  |  | 0.332** | 0.194** |
|  |  |  | (0.130) | (0.092) |
| UR (+ NAW) |  | 0.794** |  | 1.129*** |
|  |  | (0.355) |  | (0.385) |
| Pandemic x UR (+ NAW) |  | -0.490 |  | -1.074*** |
|  |  | (0.436) |  | (0.401) |
| Controls | Yes | Yes | Yes | Yes |
| Observations | 4,743 | 4,743 | 4,743 | 4,743 |

* p<0.10, ** p<0.05, *** p<0.010

**Sources:** Department of Agriculture, Administration of Children and Families, Department of Labor, Center for American Progress.

**Note:** This table represents results from estimating Equation (1). Sample period is January 2014 to September 2021. All specifications include state, month, year, and linear state time trends with an outcome variable of log caseloads per capita. Columns (1) and (3) use the employment-to-population ratio. Columns (2) and (4) adjust the unemployment rate by adding the rate of "not at work" reported in the monthly Current Population Survey for each state.

Table A.3: Effect of Individual Pandemic Policies on TANF and SNAP Caseloads

| | TANF | | SNAP | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Unemployment Rate | 2.973*** | 2.375** | 0.633*** | 0.577*** |
| | (1.021) | (0.990) | (0.131) | (0.143) |
| Pandemic x Unemployment Rate | -2.005** | -1.404 | 0.000 | 0.000 |
| | (0.957) | (0.939) | (.) | (.) |
| WorkReqExemp | 0.140** | 0.131** | | |
| | (0.061) | (0.058) | | |
| In-Person Interview | 0.039 | 0.027 | | |
| | (0.059) | (0.057) | | |
| Recertification | 0.004 | -0.000 | | |
| | (0.057) | (0.056) | | |
| FedPUC | 0.047 | 0.083 | | |
| | (0.113) | (0.110) | | |
| TANF Online | -0.013 | -0.001 | | |
| | (0.056) | (0.054) | | |
| TimeLimit | -0.075 | -0.077 | | |
| | (0.083) | (0.082) | | |
| Waive Face-to-Face Interview | | | 0.002 | 0.001 |
| | | | (0.008) | (0.007) |
| Core Verification and Interview Adjustment | | | 0.022 | 0.021 |
| | | | (0.016) | (0.016) |
| Periodic Report Flexibility | | | 0.008 | 0.008 |
| | | | (0.008) | (0.008) |
| Waive Recertification Interview | | | -0.057*** | -0.059*** |
| | | | (0.016) | (0.015) |
| Extend Certification Periods | | | -0.015 | -0.016 |
| | | | (0.010) | (0.010) |
| Adjust Periodic Reports | | | 0.042*** | 0.043*** |
| | | | (0.011) | (0.011) |
| Emergency Allotments | | | 0.030** | 0.028** |
| | | | (0.014) | (0.014) |
| SNAP OnlinePurch | | | 0.041*** | 0.041*** |
| | | | (0.012) | (0.012) |
| PEBT School | | | 0.012* | 0.011 |
| | | | (0.007) | (0.007) |
| PEBT Childcare | | | -0.011 | -0.010 |
| | | | (0.008) | (0.008) |
| Postpone Expedited Service Interview | | | -0.009 | -0.012 |
| | | | (0.010) | (0.009) |
| Telephonic Signature | | | -0.005 | -0.006 |
| | | | (0.007) | (0.006) |
| Suspend In-Person Application and Verification Submissions | | | -0.033** | -0.033** |
| | | | (0.014) | (0.014) |
| Waive Initial Interview | | | 0.052*** | 0.053*** |
| | | | (0.017) | (0.016) |
| Controls | No | Yes | No | Yes |
| Observations | 4,743 | 4,743 | 912 | 912 |

* p0.10, ** p<0.05, *** p<0.010

**Sources:** Department of Agriculture, Administration of Children and Families, Department of Labor, Center for American Progress.

**Note:** This table represents results from estimating Equation (1). Sample period is January 2014 to September 2021. All specifications include state, month, year, and linear state time trends with an outcome variable of log caseloads per capita. Columns (2) and (4) include control variables.