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Unemployment (Over)compensation

A yellow sign with blue and red text is mounted on a window. The sign reads "Help Wanted" in large blue letters, "Desperately" in red cursive, "Apply Today!" in large blue letters, and "PLEASE!" in red cursive at the bottom. The background shows a street scene with buildings and trees.

**Help
Wanted**
Desperately
**Apply
Today!**
PLEASE!

How the federal
supplemental
unemployment
benefits
impacted
unemployment
during the
pandemic

By
Ike Brannon,
Loren Wagner & Sam Wolf



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As the COVID-19 pandemic struck the United States in 2020, Congress began shotgunning money out over the country in unprecedented ways.

One was an extraordinary hike in unemployment benefits — an extra \$600 a week. Many Wisconsinites were already receiving as much as \$370 per week, bringing their total payment to almost \$1,000, more than many normally earned.

Employers short of workers swiftly pointed out that, for many employees, this meant returning to work could lead to an actual cut in pay. As companies struggled to open up again, commentators wondered how much of a severe labor shortage was caused by this disincentive to work — an “implicit tax,” as economists call it.

Thanks to a team of respected economists led by Ike Brannon, president of Capital Policy Analytics and a longtime Badger Institute visiting fellow, we now have the answer.

Brannon and his team found that extended supplemental benefits really did deter people from returning to work — and were able to put a number on the harm done to Wisconsin. We now know the real impact of the governor’s decision

to extend supplemental benefits even when so many other states had decided enough was enough.

Finally, Brannon, Loren Wagner and Sam Wolf examine some possible paths for reform.

Crises happen, and it is crucial to understand what was done badly in order to better respond to the next one. The findings and recommendations here don’t just shed light on effective crisis management, however. Our unemployment compensation system has long created disincentives to work that can and should be alleviated. This paper helps show a path forward.

The Badger Institute hopes the findings in this report will help policymakers forge a more thoughtful approach to assisting those who are temporarily sidelined while also encouraging employment and economic growth.

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Unemployment (Over)compensation

How the federal supplemental unemployment benefits impacted unemployment during the pandemic

By Ike Brannon, Loren Wagner & Sam Wolf

Executive Summary

In an effort to reduce the spread of COVID-19, authorities imposed an unprecedented shutdown of the U.S. economy. The quarantines and forced closures caused the U.S. unemployment rate to spike to 14.8% in April 2020, the highest level since the Department of Labor began collecting the statistic in 1948.

The CARES Act, passed in March 2020, provided for a four-month federal supplemental unemployment benefit of \$600 a week in addition to regular state unemployment benefits to help people financially weather the shutdown. The federal government reduced the supplemental benefit to \$300 a week in September 2020 and extended its availability until December 2020. Subsequent legislation extended it again to March 2021 and then to September 2021, well after a COVID vaccine was available for adults and most restrictions put in place to combat the spread of the virus had been lifted.

However, evidence of tight labor markets began to appear

across the country in the summer of 2021, which some economists attributed to the relatively high unemployment benefit available. Approximately half of the states responded to their tight labor markets by ending the federal supplement early. We used this difference across states — and the subsequent expiration of the federal supplement altogether in September 2021 — to estimate the extent to which the federal supplement affected the labor market in 2021.

Our analysis found that the supplemental unemployment insurance (UI) benefit did appear to delay people returning to work, and we estimate that unemployment was 3% to 6% higher because of the federal supplement in the states that kept it in place until September 2021, which translates to an unemployment rate of 0.2 to 0.3 percentage points higher.

If Wisconsin had opted out of the supplement in June, the total unemployment would have dropped faster than it did. By September, we estimate, there would have been about 28,000 fewer unemployed.

Introduction

The unemployment insurance program in the United States was created by the Social Security Act in 1935, which set forth the broad confines of the program and assigned its administration to each of the 50 states and the District of Columbia. States finance the program through a tax on employers.

The program calls for workers who are laid off or who otherwise lose their job through no fault of their own to receive up to half their weekly pay, capped at a maximum of \$235 to \$823 a week (depending on the state), typically for 26 weeks,

provided that they were employed for at least six months prior to losing their job. During periods of high unemployment, the federal government typically extends the duration for workers in all states. For instance, during the Great Recession of 2008-'09, a laid-off worker could receive benefits for as long as 99 weeks. The federal government also extended the duration of UI benefits in the pandemic-induced recession of 2020-'21 several times, with the extensions expiring Sept. 5, 2021.

Research suggests that the length of the benefits affect how

long people remain unemployed. When the government has extended benefits in the past, people have remained unemployed for longer, after controlling for the state of the economy.

There is also a modicum of evidence that more generous benefits increase the length of time people spend unemployed, but because the federal government typically does not change the benefit structure of state programs when it extends the duration of benefits, economists have found it difficult to discern how income replacement rates affect unemployment duration.

However, in March 2020, Congress passed the CARES Act, which initiated a federal supplemental unemployment benefit of \$600 a week on top of a person's state unemployment benefit. The combination of federal and state benefits meant that many people received benefits that exceeded their pre-unemployment weekly income. While there was some worry at the time that benefits this large would deter laid-off workers from seeking new employment, the government's pandemic actions resulted in the temporary loss of millions of jobs. Few jobs were available for the unemployed who did want to work; indeed, the number of applicants for available jobs increased.

Unlike every other recession in U.S. history, all of which were caused by a reduction in aggregate demand, this recession was a supply-side recession triggered by the government causing a significant portion of economic activity to cease.

The federal supplemental unemployment benefit was set to last for just four months to bridge the expected maximum duration of government-ordered shutdowns and to prevent the benefit from slowing any economic recovery and potentially deterring the unemployed from returning to work when the economy opened up again. However, at its four-month expiration, there were no COVID vaccines yet available and the economy had not begun opening up in a meaningful way. That led the Trump administration to extend the provision of the supplement, while reducing the maximum benefit to \$300 a week.¹

In December 2020, President Donald Trump signed a COVID-19 relief bill, the Consolidated Appropriations Act, which extended the supplemental unemployment benefit until March 2021 and extended the length of time that people could collect UI, among other things.

Shortly before the expiration of these benefits, President Joe Biden signed into law the American Rescue Plan Act of 2021, which extended the \$300 a week federal supplement until Sept. 6, 2021.

However, the governors of numerous states opposed this last extension. They argued that it would deter people from

returning to the labor market and would slow the economic expansion as their states' economies were beginning to reopen in earnest after vaccinations became widely available. Beginning in June 2021, states began to deny the federal supplement to their workers, and ultimately 26 states chose to end those benefits before they expired in September per federal statute. Wisconsin was not among them.

This early opt-out allows us to compare the two groups of states — those that extended benefits and those that chose not to — in order to determine the extent to which the federal supplement slowed the decline in unemployment rates during the summer of 2021 for those states that kept it in place.

The Effect of Unemployment Insurance on Unemployment

Economic theory unambiguously suggests that more generous unemployment benefits would deter workers' incentives to return to employment. The word "unambiguous" is important because labor market decisions can rarely be described in such a way. For instance, we observe that when a person's hourly wage increases, his opportunity cost of taking an additional hour of leisure goes up, which should encourage him to work more. However, at the same time, we observe that a person facing a higher wage rate is also wealthier, which means he will obtain more of all non-inferior goods and services—leisure being among them. As a result, the substitution and income effects conflict.

However, higher unemployment insurance benefits are a pure income effect — money without a trade-off — which means that a person's response is to take more leisure and, correspondingly, work less. The fact that benefits disappear as soon as a person takes a new job acts like a tax on working, and it means that these implicit taxes on work are quite high.

The economic literature finds substantial evidence that extending the length of unemployment benefits boosts the amount of time people spend unemployed. For instance, Robert Moffitt and Walter Nicholson found that 13-week extensions of benefits are associated with an additional three weeks of unemployment, all other things being equal.

Research by Laura Južnik Rotar and Sabina Kršnik that looked at unemployment insurance benefits across the European Union suggested that more generous social insurance benefits in general resulted in a more negative relationship between benefits and the spell of unemployment.

To the extent that there is an opportunity cost of remaining out of work, it would be that it delays potential raises for workers that can be expected when they acquire more tenure, experience and skills. Economist Casey Mulligan estimates that the implicit tax rate on low-income workers typically exceeds 50% when their weekly income is between \$600 and

¹ While the CARES Act created the original unemployment insurance benefit, the extension was done via executive order. President Donald Trump called for states to increase their benefits by \$100 a week as well, though no state did so.

\$1,100 and that many people rationally respond to this by forgoing the chance to work extra hours (and take time away from child care, meal preparation or other home services) or even promotions and wage increases that may result in more of a time commitment to their employer.

A higher and longer-lasting UI benefit that is dependent upon a worker remaining unemployed contributes to the implicit tax rate on working as long as a worker remains eligible to receive it. A solution would be to simply allow a worker to continue to receive all or most of the benefit even after becoming re-employed via the creation of a re-employment account that could be tapped for educational or training expenses.

Some workers worry that remaining unemployed may send a signal that they are not fit for employment in some way and that it might hamper their job search in the future. The literature on job searches suggests that the relationship between time spent unemployed and the wages of the next job is an inverted U: While it can pay to do a thorough search and not take the first job offer, an extended stint without a job can send a negative signal to future employers. For those workers, remaining unemployed is indeed costly even if benefits make up for lost wages.

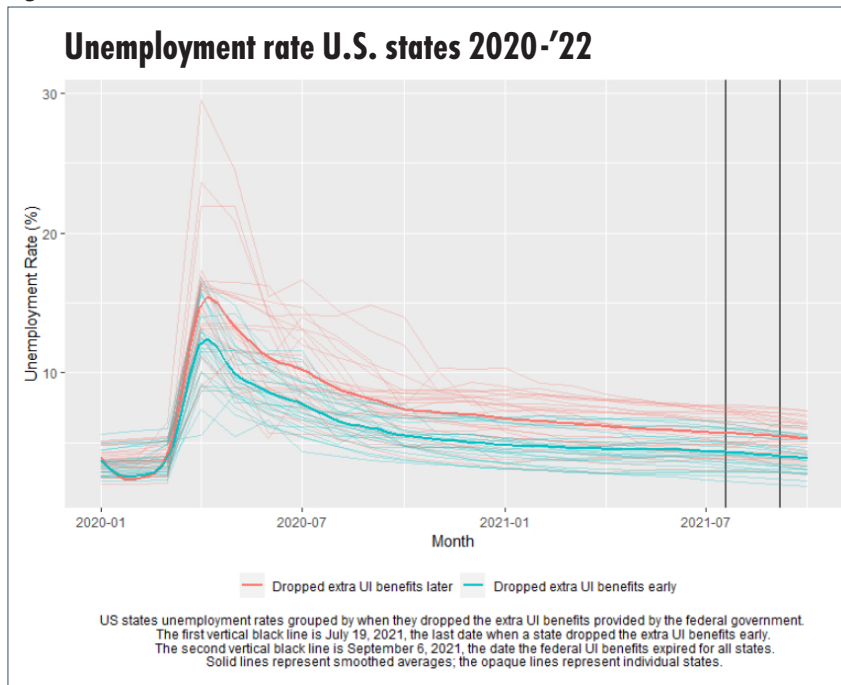
Nevertheless, if people perceive that the labor market is tight — as it was in many states by the summer of 2021 — and there is a very common and unimpeachable reason for having remained out of work the previous year, concerns about signaling may have waned.

The Data

We wanted to use the divergence of the federal unemployment benefit availability across the states to determine whether the benefit affected the unemployment rates in the summer and fall of 2021. We believe it had a minimal effect in 2020 because the supply of available jobs was the limiting factor on employment but that its continuation into 2021 did reduce employment, especially in the states that left the federal supplement in place until September 2021.

We compare the states that ended the federal supplement before its expiration to those that left the benefit in place both

Figure 1



before and after the expiration.

We obtained data for monthly unemployment rates and labor force participation rates for the states and the U.S. as a whole from the Bureau of Labor Statistics and additional labor market data from its Job Openings and Labor Turnover Survey (JOLTS) monthly reports. We collected data from the beginning of 2020 — effectively three months before the pandemic-induced recession occurred — through January 2022, which is 1,200 observations.

Additional state-level economic data came from the Federal Reserve Economic Data (FRED) website maintained by the Federal Reserve Bank of St. Louis.

We relied on research published by the Congressional Research Service for determining when states withdrew from the supplemental federal unemployment benefit program. We learned that nearly all of the states that withdrew did so in the middle of a month: Given that the BLS monthly unemployment survey asks respondents to report their status for the week in which the 10th day happens to fall, we treated all states that ended their benefits in the same month uniformly.

The time series of each state's unemployment rate are presented in Figure 1. Individual states (opaque lines) are grouped into those that denied the supplemental benefits (green) and those that did not (red). The dark lines represent the LOESS (locally estimated scatterplot smoothing) estimation of the pointwise means. There is clear evidence that the states that retained the supplemental benefits until they expired had a larger unemployment rate throughout the time period. Visually, it cannot be determined if there is a significant effect of denying the supplemental benefits.

For an explanation of our method in analyzing the data, see the Appendix.

How Did Prolonging Unemployment Benefits Affect Wisconsin?

Wisconsin was one of the 26 states that did not opt out of the federal supplemental UI benefit: While the state's Legislature voted to end the benefit early, Gov. Tony Evers vetoed the bill, and the benefit remained in place until September 2021.

Our analysis showed that the delay kept the unemployment rate significantly higher for the months it remained in place.

The governor's explanation for the veto was that ending the benefits would not affect the economy in any way and thus was unnecessary: He said in May 2021 that the state's unemployment rate was nearly the same as when the pandemic restrictions began and that this implied the federal supplement was not the proximate cause of the state's labor shortages that were beginning to be evident across its economy.

However, we submit that this was a misreading of the data: These comments came in May 2021, when the state's unemployment rate was 4.1%, 1.2 percentage points above the rate in March 2020, when the pandemic began. What's more, 11,270 more people were on the state unemployment rolls in May 2021 than were when the pandemic began.

The state benefit plus the reduced federal benefit combined to \$672 a week, or nearly \$35,000 a year. While the governor is right to say that the benefit is not making anyone wealthy, such an income would place someone just above the 30th percentile in the state's income distribution, and it approaches the median income for counties in northern Wisconsin.

In other words, for a sizable fraction of the state's population who lost a job because of the pandemic, the unemployment benefits they were receiving in 2021 approached or exceeded their pre-pandemic weekly salary. We used a similar time series approach that we applied to the national data to attempt to determine the impact that the supplemental unemployment benefit had on the number of unemployed in Wisconsin in the summer of 2021.

Our task is essentially to estimate the counterfactual — that is, what the number of unemployed would have been had the federal benefit ended before the expiration in September 2021. We did so by estimating the average effect the expiration of the federal supplement had on the unemployment rate across all 50 states, whether the state opted out early or waited until the federal expiration date (*see Appendix for discussion of this analysis and Table 1 in the Appendix for estimat-*

ed effect sizes). The average effect sizes then were used to calculate counterfactual unemployment levels for Wisconsin assuming the state opted out early, in particular in July 2021. We then compared Wisconsin's actual unemployment trend line in the summer of 2021 with the estimates under the counterfactual.

Figure 2

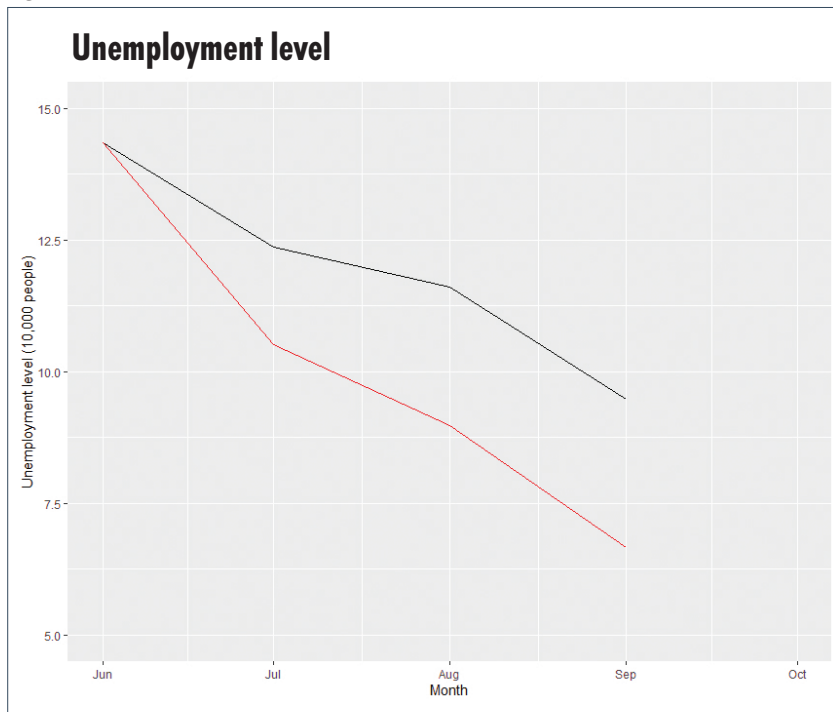


Figure 2 presents the comparison of the unemployment level Wisconsin actually saw between June and September 2021 (black line) and the estimated unemployment level based on the counterfactual (red line).

Our estimates showed that the unemployment rate remained about 0.2 of a percentage point higher because of the benefit between June, when the first states opted out of the federal supplement, through September, when the benefit expired. As Figure 2 shows, if Wisconsin had opted out of the supplement in June, the

total unemployment would have dropped faster than it did. By September, we estimate, there would have been about 28,000 fewer unemployed.

It is also worth observing that the drop in the unemployment rate in September 2021, when the federal supplement expired, was 0.56%, the largest such drop in the previous 12 months. The data suggests that a sizable portion of this decline was due to the benefit expiration.

Improving the Unemployment Insurance System to Withstand Pandemics and Ordinary Business Cycles

The pandemic-induced recession was unique in American economic history in that its proximate cause was a deliberate government shutdown of the U.S. economy, motivated by an effort to limit the spread of COVID-19.

That reality meant that the significant increase in unemployment benefits created by the CARES Act in March 2020 had a limited impact on the labor market. In fact, an express purpose of the benefits was to induce people who had lost their jobs to remain at home and out of the workforce for a period of time. Generous unemployment insurance can deter employment; that was a feature, not a bug, of the 2020 legislation. The intent was, on average, to make displaced workers

whole for their pandemic-induced losses. The benefit of \$600 a week was more generous than it needed to be, it turned out, because the staffers who (hurriedly) wrote the original legislation based that number on the average weekly wage and did not properly account for the fact that lower-wage workers were more likely to be laid off than higher-paid workers who could work remotely from home.

However, as the economy began to reopen after an effective vaccine became available, employers found it difficult to find workers, which constrained the economic expansion, especially in states that continued providing the federal supplemental benefit until September 2021.

We found that the continued availability of the federal supplement in those states increased unemployment by about 6%, which amounts to an unemployment rate about 0.2 to 0.3 percentage points higher than it would have been had the benefit been ended earlier.

The rejiggering of the unemployment insurance system more or less on the fly in March 2021 exposed some of the inherent weaknesses in the status quo. The method of financing it via a tax on employers based on how many of their workers have claimed benefits — with a floor and ceiling — creates moral hazard problems that can incentivize businesses to lay off workers in certain situations, as the late Martin Feldstein abundantly documented. What's more, the invariable yet uncertain lengthening of benefit duration during

downturns and the similar uncertainty about when the extensions will end also can engender uncertainty and lengthen unemployment duration unnecessarily.

While experiments with providing partial unemployment insurance benefits for people who have their hours of work merely reduced — not eliminated — during a recession have proved promising in reducing the scope and cost of unemployment during a downturn, such reforms have largely remained experimental.

But the biggest problem with the current system is that it essentially incentivizes workers to remain unemployed until benefits expire. There have been various proposals to reduce or eliminate this flaw: Mitt Romney in 2012 suggested that people be paid a re-employment bonus for returning to work before their benefits expire, and the George W. Bush administration proposed the creation of personal re-employment accounts that would go to workers shortly after being laid off, which would be independent of the duration of their unemployment spell and which could be used for retraining, tools of the trade or further education.

Our hope is that when the U.S. economy arrives at something resembling normalcy, the federal government will study how to improve the system so that it not only functions better across an ordinary business cycle but also considers how to best adapt the system in the event of another pandemic or similar supply-induced business cycle decline. ❏



About the authors

Ike Brannon, a Visiting Fellow at the Badger Institute, is president of the consulting firm Capital Policy Analytics in Washington, D.C. He is a former economics professor at the University of Wisconsin-Oshkosh and also has been a senior fellow for the Bush Institute. He was director of economic policy for the American Action Forum.

He served as the chief economist for the House Energy and Commerce Committee, chief economist for the Republican Policy Committee, senior adviser for tax policy at the U.S. Treasury, principal economic adviser for Sen. Orrin Hatch on the Senate Finance Committee, chief economist for the Congressional Joint Economic Committee and senior economist for the Office of Management and Budget.

Loren Wagner is a doctoral student in the University of Wisconsin-Milwaukee's economics department. He is also the lead biostatistician for Mpirik, a health care analytics firm in Milwaukee.

Sam Wolf is a 2020 graduate of Bradley University and is a research associate at Capital Policy Analytics.

Appendix

Methodology of Analysis

With time series or longitudinal data, there are two popular means of estimating the causal effect of an intervention: the Difference-in-Difference (DiD) regression and the segmented regression (SR). Both models have advantages and disadvantages. The DiD model can estimate the effect of an intervention with a paucity of longitudinal data; in the extreme, only two observations from each sample unit are needed. Under certain conditions, it is even possible to have no longitudinal data and estimate the outcome with just cross-sectional data from either side of the intervention. The SR model can estimate causal effects in either the time series or longitudinal setting. The SR model needs an extensive time series to estimate the underlying trend and residual model, which can be used as a synthetic control.

The DiD model is most appropriate in a natural experiment setting. In this setting, assuming the intervention assignment is conditionally independent of the outcome given any predictors, the DiD estimate is a consistent estimate of the effect of treatment. However, our unemployment data does not constitute a bona fide natural experiment. All U.S. states eventually dropped the supplemental unemployment insurance benefit when the federal extension expired, and the states that opted out early did so at varying times, which means that there are no distinct before and after periods.

Finally, it is possible that the federal supplement is affecting the time trend of the unemployment rate. Thus, we might see a change in the evolution of the unemployment rate when states opt out of the benefit. DiD models are not capable of identifying this sort of effect, save roughly through the difference between pre- and post-intervention averages, which will reflect changes in the time trend. However, such a gross estimate will not allow for a counterfactual time series to be calculated.

The data available contains a sufficiently large time series to estimate the underlying time series model for each single state. However, given the plethora of shocks that affect the unemployment rate time series (every recession likely would have to be modeled as a first-order intervention), identifying the underlying time series model likely would require a prohibitively long time series. Treating the data as longitudinal with a hierarchical SR model can mitigate this problem. This also allows us to handle the disparate times when the states dropped the supplemental UI benefit — before the federal expiration date or at the expiration date. Finally, the SR model can identify any changes to the dynamics of the time series due to dropping the supplemental UI benefit.

For these reasons, the SR model is more applicable to our analysis.

In addition, there are idiosyncratic state properties that are likely correlated with both the unemployment rate and the decision to opt out early, such as the economic growth rate, public health policies and lagged values of the unemployment rate. We can control for some of those state-specific properties, but others are difficult to observe. In particular, looking at Figure 1, it is clear that there was a significant difference between the states that opted out early and those that did not in their unemployment levels: The early opt-outs had generally lower unemployment rates; their labor markets were much tighter. In addition, there is a tight link between economic growth, labor force participation and the unemployment rate. These facts recommend adjusting our estimates for economic growth, labor force participation and serial correlation in our longitudinal samples.

For the sake of comparison and sensitivity analysis, we estimated both models with an AR(1) error process and without. The AR(1) models were categorically preferred by goodness-of-fit measures, and so are the only models we report.

Table 1 presents results from fitting both a DiD model and SR model both with an AR(1) error process and additional controls for economic growth and labor force participation. Somewhat satisfyingly, the estimates for the intercept, economic growth and labor force participation are all statistically indistinguishable between models, and there is also agreement on the AR(1) coefficient. The two models also agree — roughly — on the immediate effect of dropping the supplemental UI benefit. Neither model could identify this effect as different from 0. However, the SR model did identify a change in the time trend of the unemployment rate due to dropping the extra UI benefit.

Table 1: Estimated effect of dropping UI benefit on log unemployment rate

Variable	DiD	SR
	Posterior mean (95% highest density interval)	
Intercept	0.5 (-0.3, 1.32)	0.5 (-0.34, 1.36)
Time (years)		0.06 (-0.06, 0.17)
Economic growth	-1.87 (-2.18, -1.55)	-1.87 (-2.18, -1.55)
Labor force participation	-0.05 (-0.07, -0.04)	-0.05 (-0.07, -0.04)
AR(1) coefficient	0.76 (0.71, 0.80)	0.78 (0.74, .82)
Instantaneous effect of dropping extra UI benefit	0.06 (-0.09, 0.20)	-0.07 (-0.15, 0.01)
Dynamic effect of dropping extra UI benefit (years from dropping extra UI benefit)		-1.12 (-2.18, -1.55)
Before dropping benefit	0.05 (-0.06, 0.15)	
States that dropped early	-0.29 (-0.45, -0.11)	

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