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The Effects of SNAP's ABAWD Work Requirement on Food Security and Work Outcomes

Thomas Cronin
William & Mary

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By: Thomas Cronin

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Accepted for Honors

Professor John Parman

Professor Peter McHenry

Professor Alexandra Joosse

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Thomas Cronin

College of William & Mary

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Abstract

The Supplemental Nutrition Assistance Program (SNAP) is the leading anti-hunger government assistance program in the United States. Included in SNAP is an 80 hour per month work requirement on Able-Bodied Adults Without Dependents (ABAWDs), designed to counteract the work disincentives that are inherent to the program's means-tested nature. In this paper, I leverage a two-way fixed effects triple differences model and ample variation in the policy's implementation from temporary waivers in high-unemployment areas to estimate the ABAWD work requirement's effects on low-income ABAWDs' food security and work outcomes. I find that the work requirement is associated with substantial increases in work indicators like job searching, employment, and full-time work in the short and long run, but at the cost of modestly higher incidences of food insecurity in the short run.

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1 Introduction

This study estimates the effect of the Supplemental Nutrition and Assistance Program (SNAP) Able-Bodied Adults Without Dependents (ABAWD) work requirement on low-income individuals' food security and labor outcomes. SNAP, the leading anti-hunger government assistance program in the U.S., provides food assistance to over 40 million low-income households each year. As a condition for program enrollment, SNAP recipients are subject to two work requirements: a general work requirement, which applies to nearly all SNAP recipients, and the stricter ABAWD work requirement, which only applies to SNAP-receiving ABAWDs, or adults ages 18-49 without children or a work-inhibiting disability.[1] While the general work requirement has been uniform in its implementation since its existence, the ABAWD work requirement is periodically waived in high-unemployment areas in recognition of the fact that where jobs are not freely available, consistent work may be difficult to find.

Research on the ABAWD work requirement is limited and inconclusive on several key questions. First, evidence suggests that the requirement reduces SNAP enrollment and benefits, but exact estimates range from a less than 1 percentage point decline to nearly 35 percentage points (Harris 2018; Ku et al. 2019). Much of this variance is likely due to the unreliability of self-identified SNAP enrollment data used in most of these studies (Meyer et al. 2022). It is also unclear how much of this decline is due to households earning enough to no longer qualify for SNAP, and how much is due to households losing support due to unemployment. Second, there it is unknown how the ABAWD requirement influences employment behaviors, with most existing studies finding minimal changes in overall employment, but few considering the effects on those already employed. This is a problem because even when the ABAWD work requirement is waived, the general work requirement remains in effect; very minor changes in employment rates, therefore, should be expected. Finally, the requirement's impact on net income and food security is uncertain, because although SNAP receipt is highly correlated with better health and short-term poverty reduction, its means-tested nature significantly reduces the short-run payoff of work, which may negatively affect earnings, health, and long-term economic mobility. More comprehensive studies

[1] The work requirement has since been expanded to apply to adults up to age 52, but only those up to age 49 were subject to the work requirement in 2010-2019, which is the period of analysis for this study.

are needed, therefore, to clarify the requirement's specific effects on recipients' work behaviors, income, and health outcomes.

This paper will contribute to the debate surrounding the ABAWD work requirement by filling each of these gaps in the academic literature. Using variation in work requirement implementation from 2010-2019 due to temporary waivers to the policy issued to local areas with high unemployment rates, I examine differences in low-income ABAWDs' food security and work outcomes in counties subject to the work requirement compared to low-income ABAWDs in counties with a waiver to the requirement. I employ a series of two-way fixed effects triple differences estimations of county-level data using food security and employment data from the Community Population Survey's (CPS) Food Security Supplement, ABAWD waiver data from the USDA. This approach is a major methodological improvement over most existing studies on the policy's associations with food and labor outcomes, and my estimation of a wide variety of food security and work indicators also provides a far fuller and more accurate understanding of its effects.

I find that, controlling for household income, unemployment rates, and other relevant factors, ABAWDs subject to the work requirement are on average 1 to 5 percentage points more likely to engage in desirable employment-related behaviors like looking for a job, having a job, or working full-time in the first year after its re-implementation compared to low-income ABAWDs in waiver counties. Results vary by estimation approach, but most are statistically significant in at least one approach and almost all continue to grow into the second year of the work requirements enactment. The same population is also between 0.1 to 0.3 points (out of 100) more food insecure on average and between 1 and 4.5 percentage points less likely to self-report SNAP enrollment than low-income ABAWDs not subject to the policy in the first year after implementation, though these differences are not long-lasting. The food insecurity results are insignificant for the full sample but grow to as much as a statistically significant 1.7 points higher for ABAWDs who report working less than ten hours per week.

These findings provide compelling evidence that the ABAWD work requirement effectively counteracts SNAP's and other means-tested welfare programs' inherent incentives to work less, significantly improving earnings outcomes and promoting self-sufficiency for recipients. However, these benefits come at the cost of modestly higher short-run food insecurity rates in the first year after its reimposition, indicating that many of those who lose eligibility for

SNAP are those unable to find work, and not those earning enough additional income to no longer qualify. I also find that ABAWDs subject to the work requirement are 2.5 percentage points less likely on average to be married following the work requirement compared to ABAWDs in counties with a waiver. This indicates that the work requirement disincentivizes marriage, likely by disqualifying all individuals living in the same household from receiving SNAP benefits if any subject to the work requirement do not satisfy it.

In Section 2, I review the history of SNAP and the ABAWD waiver, including institutional changes and relevant academic literature. In Section 3, I describe my data sources. In Section 4, I present the findings of my analysis. In Section 5, I discuss the policy implications of my findings. Section 6 concludes the paper.

2 Policy Background & Literature Review

2.1 A Brief History of SNAP & the ABAWD Work Requirement

Created in 1939, SNAP was one of several major anti-poverty programs created by the federal government in response to the mass unemployment, widespread hunger, and food surpluses that never reached markets brought on by the Great Depression (Food and Nutrition Service 2009). Then known as the Food Stamp Program, SNAP fed over 20 million individuals before expiring after four years once the economy recovered enough to be deemed no longer necessary. A number of unsuccessful attempts to reauthorize the program followed until 1959, when Congress granted the president authority to operate the program again through the executive branch for another three years. At the request of the president, SNAP was finally made permanent in the 1964 Food Stamp Act. Among other changes, the Food Stamp Act shifted control of the program to Congress and changed the focus of the program. No longer about matching hungry families to Great Depression-era food surpluses, SNAP adopted a stated goal of boosting the agricultural economy and improving food access and nutrition among low-income households (Food and Nutrition Service 2023c).

SNAP was both narrowed and expanded several times over the next few decades, but most notable changes occurred in the 1970s. The Food Stamp Act Amendment of 1970 established national eligibility requirements, including a general work requirement, and limited use of the program to 30% of each household's income (Food Stamp Act of 1970). The Agriculture and

Consumer Protection Act of 1973 required all states to allow access to the program statewide, effectively expanding the program to be truly national for the first time (Agriculture and Consumer Protection Act of 1973). The Food and Agriculture Act of 1977 formally codified the poverty line as the eligibility limit for SNAP, officially making the program means-tested (Food and Agriculture Act of 1977).

Following a trend of welfare reform in the early 1990s, the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 added the Able-Bodied Adults Without Dependents (ABAWD) work requirement to SNAP on top of the general work requirement, among other modifications (Personal Responsibility and Work Opportunity Reconciliation Act of 1996). Recognizing that adults who do not have children to take care of generally have more time to work than parents do, the ABAWD requirement, also known as the time limit, adds conditions to the general work requirement that only applies to adults without children or disabilities (Food and Nutrition Service 2024b). ABAWDs who fail to participate in at least 80 hours per month of some combination of work or job training programs for more than three months in any three-year period are disqualified from receiving SNAP until they meet this requirement again (Food and Nutrition Service 2024b).

The work requirements attempt to address the work-disincentivizing nature of the way SNAP benefits are calculated: a household's benefits amount to a certain maximum monthly allotment that varies by household size minus 30% of the household's monthly income (Food and Nutrition Service 2024d). For SNAP households, then, this amounts to an additional 30% income tax rate on top of whatever taxes they are already paying, in that every additional dollar earned only results in $0.70 of take-home pay. This only is after accounting for losses in just SNAP benefits; low-income households receiving benefits from multiple similarly means-tested programs would see much higher marginal effective tax rates on their earnings. The work requirement counteracts the work disincentivizing nature of this effect by setting a benchmark number of hours individuals must work to remain SNAP-eligible; working more may not yield much additional usable income, but failing to work at least the required 80 hours per month would result in a total loss of SNAP benefits.

There are two main differences between the ABAWD requirement and the general requirement: first, merely registering for work with the state SNAP agency satisfies the general work requirement, but if neither the individual nor the agency is able to find work for that

individual, they will still be in violation of the ABAWD work requirement and risk losing SNAP benefits (Food and Nutrition Service 2024b). Second, the general work requirement mandates that SNAP participants earn $217.50, or the equivalent of 30 times the federal minimum wage of $7.25, every week (Food and Nutrition Service 2024b). For those actually earning the federal minimum wage, this amounts to a work requirement of 30 hours per week, but those who earn more would not have to work this much. Someone making $12 per hour, for example, would only need to work just over 18 hours per week to satisfy the general work requirement. Alternatively, SNAP registrants can also meet the general work requirement by either attending school more than half-time, participating in a drug or alcohol rehabilitation program, or participating in a job training program (Food and Nutrition Service 2018). The ABAWD time limit, meanwhile, requires that ABAWDs receiving SNAP do at least 80 hours of any combination of paid work, volunteer service, or job training programs each month regardless of how much they earn (Food and Nutrition Service 2018).

In recognition that unemployment is often the result of poor economic circumstances rather than any individual factors, states can apply for temporary waivers to the ABAWD work requirement during the period of analysis for any area that has either 1) an unemployment rate above 10%, 2) an unemployment rate 20% above the national average, or 3) is designated a Labor Surplus Area by the federal government (Time Limit for Able-Bodied Adults 2000). States must submit data to the USDA demonstrating that each area for which they request a waiver meets at least one of these criteria, and the USDA will either approve or deny the request based on that data. Waivers are typically granted for a year at a time, but states have the option to request a shorter time period.

Since its inception, the federal government has waived the ABAWD work requirement nationwide only twice: once from 2009-2010 due to mass unemployment during the Great Recession (Food and Nutrition Service 2009), and again in 2020 when COVID-19 lockdowns in most states made many jobs impossible or illegal (Families First Coronavirus Response Act 2020). In the decade between these national waivers, though, the national unemployment rate fell from 9.6% in 2010 to 3.7% in 2019 (Federal Reserve Bank of St. Louis 2024b). States gradually began to reimpose the work requirement by county due to these improving economic circumstances, either voluntarily by not requesting a waiver or because parts of the state saw low enough unemployment rates that they no longer qualified for one (Federal Reserve Bank of St. Louis

2024b). With a few exceptions, nearly every state had the work requirement fully waived in 2010, and most had largely reimposed it by 2019 (see Figures 1 and 2).

Figure 1: National ABAWD Waivers in 2010[2]

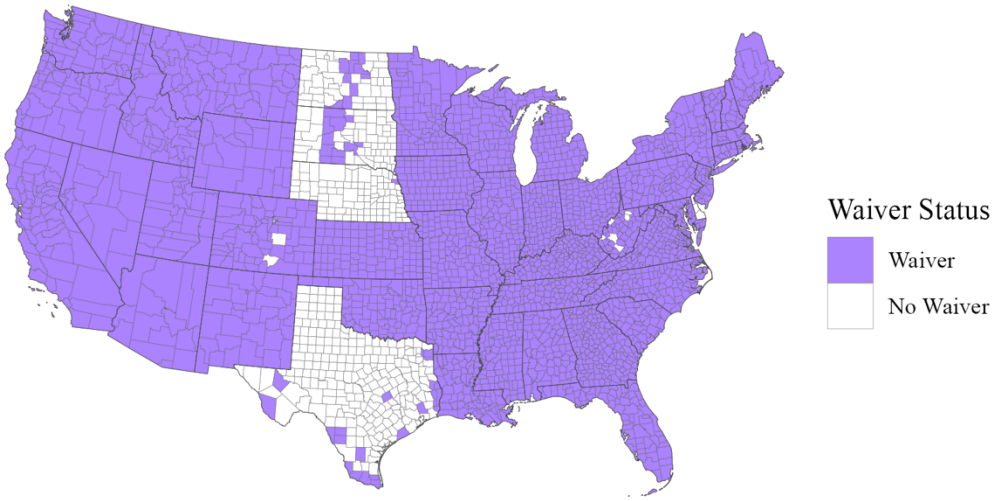
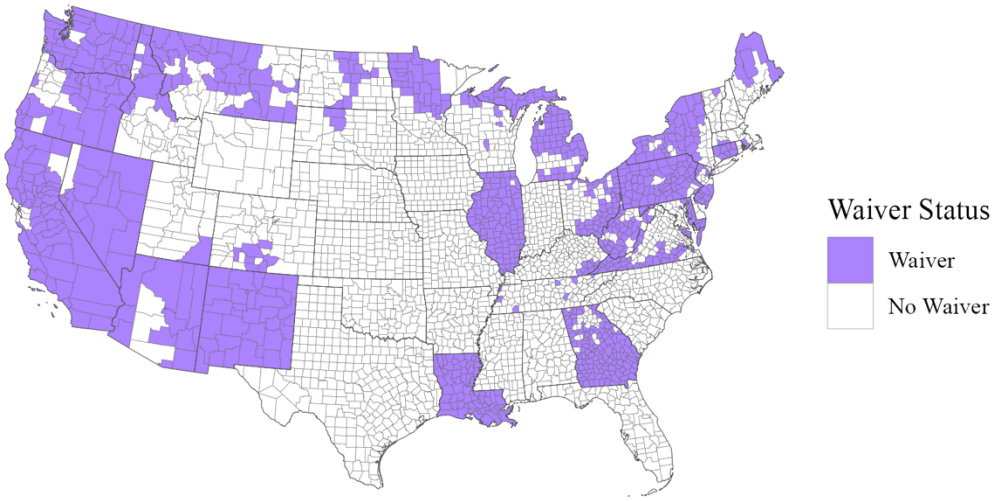


Figure 2: National ABAWD Waivers in 2019

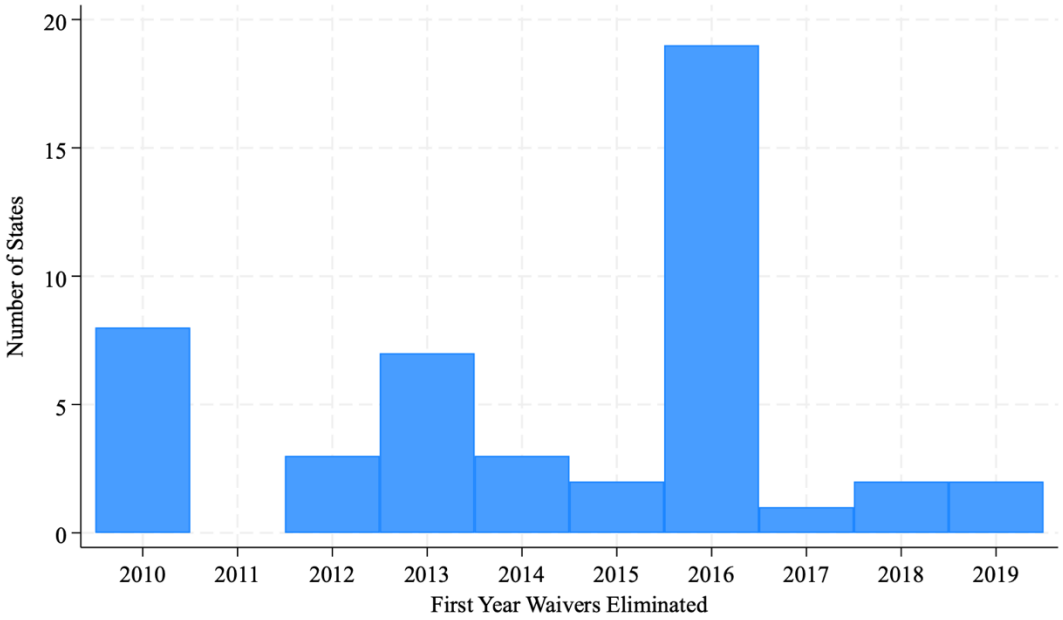


Furthermore, as Figure 3 shows, most states that ever used waivers began to reimpose the ABAWD work requirement in 2013 and 2016. That there is ample variation in county waiver status over time and several years both in which most states had a waiver and in which most states didn't means there is more than enough data for high-quality triple differences analysis. Importantly, although this variation was largely driven by changing unemployment rates, other factors like

[2] Waiver status is designated based on whether the county had a waiver in December of that year. For similar maps of county waiver status for each year of analysis, see Appendix 2.1.

political control of state governments also played a role.[3] This weaker relationship between work requirement status and worse local economic conditions makes separating the effects of the economic factors on the outcome variables from the effects of the work requirement much easier.

Figure 3: Number of States Reimposing ABAWD Work Requirement Each Year[4]



2.2 Review of Existing Literature

Due to SNAP's importance, popularity, and proven efficacy in improving food and nutrition outcomes among low-income adults, debate surrounding the merits, or lack thereof, of the ABAWD work requirement has been intense and extensive. However, perhaps owing to publicly available surveys' tendencies to underreport SNAP participation, summarized well by Meyer et al. (2022), and, until recently, a near-total lack of public information about the requirement's implementation,[5] quality academic literature on the rule is relatively sparse.

[3] See Appendix 2.1 for county waiver status for each year of analysis, Appendix 2.2 for maps comparing county waiver status to county unemployment rates, and Section 5.2.1 for a more detailed discussion of the forces driving variation in waiver status.

[4] Delaware never had an ABAWD waiver in place for any part of the state during the entire period of analysis, and Alaska, Louisiana, New Mexico, and Washington D.C. maintained statewide waivers during the entire period of analysis, so none of these states were counted in this figure (Food and Nutrition Service 2024a).

[5] The email communications between states and the Food and Nutrition Service (FNS) used to construct the waiver variable for this study were only made available in the summer of 2023 after the Fiscal Responsibility Act of 2023 required their publication (Food and Nutrition Service 2024a). Prior to the Act's enactment, the only official public information on states' use of the ABAWD waiver only vaguely detailed waiver implementation and did so at the state, rather than the county, level (states were designated as having adopted the waiver fully, partially, or not at all), and only from 2017 onwards, which made precise estimates of the waiver's effects nearly impossible.

Nevertheless, a handful of studies using government data on either SNAP enrollment or waiver implementation to estimate other related relationships do exist.

Most arguments for and against the policy parallel the standard arguments in favor of or against work requirements generally. Opponents of the work requirement often cite the extensive literature supporting SNAP's effectiveness in improving health outcomes as proof of the program's importance to low-income households. Gregory and Deb (2015), for example, find that SNAP participation is correlated with better self-reported health outcomes, taking fewer sick days, fewer doctor's office and outpatient visits, and more frequent checkups. Keith-Jennings et al. (2019) find that SNAP participants face improved health outcomes both immediately and later in life, nearly 25% lower annual out-of-pocket health care costs, and reduced poverty overall. Schaefer and Gutierrez (2013) find that SNAP participants are on average 12.8% less food insecure than non-participants and significantly less likely to fall behind on other essential expenses such as housing, utilities, and medical bills.

Given these substantial benefits associated with SNAP participation, it seems reasonable to assume that households that lose SNAP benefits will suffer. Adding additional eligibility requirements to a program will inherently reduce participation, and some studies find the drop in SNAP participation to be severe following the work requirement's re-implementation. Gray et al. (2021) find, using a regression discontinuity estimate and administrative SNAP enrollment data, that Virginia's reintroduction of the ABAWD work requirement in 2013 was associated with reduced SNAP enrollment in the state by 23.4 percentage points, but also modestly higher average incomes among those who remained SNAP eligible. However, Han (2020) finds by comparing outcomes in ABAWDs ages 48-49, who are subject to the ABAWD work requirement, and those ages 50-51, who are not, that the absence of a work requirement was followed by only a 1.5 percentage point increase in SNAP enrollment using data from the publicly available American Community Survey (ACS). Ku et al. (2019), find that reimposition of the work requirement was followed by more than a third of previously SNAP-eligible ABAWDs losing their benefits, though this study also uses the less reliable ACS. To the opponent of the work requirement, then, if SNAP participation has such significant benefits, and the work requirement causes potentially severe drops in program enrollment with only modest increases in employment, then the work requirement probably does far more harm than good to low-income ABAWDs.

Proponents of the work requirement, meanwhile, frequently point to the growing pile of evidence demonstrating the existence and negative consequences of disincentive deserts and benefits cliffs created by many government assistance programs. The basic idea of these concepts is that means-tested welfare programs like SNAP, for which benefits decrease as the recipient's income increases, disincentivize work because they reduce the marginal value of each additional dollar of income earned. If earning a certain amount of additional pay causes an individual to lose a similar amount of income from government transfers, then the individual has less reason to work additional hours or accept promotions. SNAP alone amounts to a 30% effective marginal income tax on beneficiaries in this way, without accounting for payroll taxes, and many SNAP recipients also receive benefits from other means-tested programs with similar benefit structures. Over 90% of SNAP households with children, for example, also received benefits from at least one other program, and nearly a third received benefits from two or more (U.S. Census Bureau 2021a). For these households, the amount of take-home pay resulting from additional work would be even lower, which presents a powerful disincentive to work. In this way, poor policy design can discourage work behaviors that promote financial self-sufficiency and, in the long run, escaping poverty.

There is a wealth of empirical support for both the existence of these disincentives and their often-significant effects on low-income individuals' employment behaviors. In an interview-based study, Ballentine et al. (2022) confirm that although low-income workers consider a variety of factors such as administrative burden and work conditions when deciding which combination of work and government assistance take on, effective income, or the ability to support themselves and their families, is chief among those factors. Altig et al. (2020) show that work disincentives are remarkably high for low-income workers, with 10% facing lifetime effective marginal tax rates exceeding 70%, making escaping poverty near impossible. They also find that lifetime effective marginal tax rates for full time work on unemployed individuals hover around 50% depending on the state of residence, which presents a strong disincentive to enter the labor force at all. Bitler and Karoly (2015) examine the effective marginal tax rates resulting from a number of Depression-era welfare programs, finding that although recent reforms to address this issue have been effective, a wide variety of programs, including SNAP, Supplemental Security Income (SSI), the Earned Income Tax Credit (EITC), subsidized housing, and more, continue to discourage work. Most strikingly, Saez (2010) finds that there is a high density of taxpayers concentrated right before the

cutoff level of earnings that maximizes the EITC tax refund ($8,540 per year for households with one child and $12,045 per year for households with more than one child) followed by a steep drop-off, indicating that a large portion of the low-income population plans their earnings around maximizing their government benefits. Similar patterns are found around cutoff points in effective marginal tax rates created by the federal income tax and the Child Tax Credit (Saez 2010). Hoynes and Schanzenbach (2012) find that low-income individuals tend to considerably decrease their work effort after receiving SNAP benefits. The motivation behind building work-promoting conditions into assistance programs like SNAP, therefore, is sound.

Furthermore, while some of the studies cited above call into question SNAP work requirements' effectiveness in promoting work or producing other beneficial outcomes, others paint work requirements, both for SNAP and in general, in a more positive light. In a recent CBO working paper, Falk (2023) finds that Alabama's recently-expanded TANF work requirements increased employment among recipients by 29% (11 percentage points) and earnings by 23% ($130 per month) on average through the duration of the study, though program participation also decreased modestly by 9%. With regards to SNAP's ABAWD requirement, Harris (2018) similarly found that the policy increased employment rates among poverty-level ABAWDs by a modest 0.5 percentage points while decreasing enrollment by 0.9 percentage points (though the latter statistic was produced using self-reported SNAP enrollment data from the ACS, which is known to be unreliable for this particular question; see Meyer et al. 2022). Ribar et al. (2010), using administrative data from South Carolina, found that the ABAWD work requirement pre-Great Recession resulted in program exits both with and without employment, meaning that the work requirement successfully improved employment outcomes and self-sufficiency for some but also withdrew support from others that were unable to find work.

To the proponent of the work requirement, then, the policy is not an arbitrary punishment to those who cannot find work, but an essential tool to ensure the incentives low-income individuals face promote the work choices that are best for their short- and long-term financial success. Without the work requirement, SNAP recipients facing minimal or even negative net returns to working more must make the difficult decision between receiving more benefits or working more in the hopes of advancing their career and future earnings for minimal or negative additional take-home pay now. With the work requirement, the choice is at least clear: working more may not result in much additional income today after SNAP benefits are reduced, but failing

to at least work the full 80 hours per month results in no additional income and a total loss of benefits. While harsh, the result is that SNAP households have a strong motivation to make choices that will promote future higher earnings, self-sufficiency, and, for most, slightly higher income now that may even serve to modestly improve immediate food security outcomes.

In summary, quality academic literature on the ABAWD work requirement is sparse and lacks consensus on several key questions. First, while it seems apparent that the ABAWD work requirement reduces SNAP enrollment and benefits, it is very unclear to what extent.[6] It is also unknown how much of this decreased enrollment is due to households earning more and no longer qualifying for benefits (positive exits from the program) and how much is attributable to households unable to find work and losing much-needed support (negative exits). Much of this confusion is due to difficulties with accurately identifying SNAP recipients using publicly available data (Meyer et al. 2022). Second, it is also not evident to what extent the ABAWD work requirement influences employment behaviors; not many studies on the topic exist, and although many of the few that do exist find little to no change to overall employment rates, very few of these studies consider any changes in work behaviors among those who were already employed. As most SNAP recipients are subject to a general work requirement even when the ABAWD work requirement is waived, this is a major oversight. Finally, it is not known how the work requirement affects other relevant outcomes on average like net income and food security. On one hand, the ABAWD work requirement reduces SNAP enrollment, which is positively correlated with better health outcomes and short-term poverty reduction. On the other hand, there is an abundance of

[6] Each of the studies that examine the work requirement's effect on SNAP enrollment, such as Ribar et al. (2010), Han (2020), Ku et al. (2019), and Gray et al. (2021), find a negative relationship, but estimates of the exact drop in enrollment range from 1.6 percentage points in Han (2020) to almost 35 percentage points in Ku et al. (2019). The wide variance in these estimates is likely the result of vast differences in each of these studies' approaches to identifying SNAP recipients and empirical approaches to measuring the policy's effects. Ku et al. (2019) and Han (2020) each use self-reported data on SNAP enrollment from the ACS, which Meyer et al. (2022) finds to underreport true SNAP enrollment by approximately 30% compared to government administrative records in a non-random way, so these estimates of the work requirement's effect on program enrollment are probably heavily biased. Ribar et al. (2010) and Gray et al. (2021) use the far more accurate administrative records to measure SNAP enrollment, but the weaker design of each study and use of data only from one state (South Carolina and Virginia, respectively) severely limits each's statistical power. In particular, their inability to control for economic trends occurring during the period of the study, like the national recovery from the Great Recession, or other policies unique to each state that may impact employment or SNAP enrollment makes it very difficult to know how much of the observed changes in SNAP enrollment are really due to the ABAWD work requirement. From these studies, it is probably safe to infer a negative association between enrollment and the work requirement, but in light of each study's major methodological flaws and the resulting enormous range in exact estimates, an analysis combining the administrative data used in Ribar et al. (2010) and Gray et al. (2021) and a more rigorous estimation design as in Ku et al. (2019) and Han (2020) is needed to understand the extent.

both theoretical and empirical evidence that income thresholds for means-tested programs like SNAP and others may negatively affect earnings and long-term economic mobility by reducing the short-run payoff of work, and thus worsen net income and health both in the short and long term. At a minimum, more thorough studies of the work requirement's specific effects on SNAP recipients' work behaviors are needed to better infer these relationships, but better still would be an analysis of them directly.

I seek to address each of these questions in this paper. First, I will fully circumvent the difficulties of accurately identifying SNAP recipients in public data with an empirical approach that examines differences in county-level outcomes. Because there is such abundant variation in county waiver status through the duration of the study, it is generally safe to assumed that the only systematic difference between counties with an ABAWD waiver and counties without one is the work requirement.[7] Any systematic differences in outcomes between these groups of counties, then, should be the result of the policy. Because the work requirement only affects ABAWDs in the SNAP universe, it can also be assumed that these differences in outcomes are attributable to current or former SNAP-receiving ABAWDs without ever having to rely on likely inaccurate self-identification questions. These estimates of the work requirement's effects on low-income ABAWDs' food insecurity outcomes will also allow me to infer the extent of the program's SNAP enrollment-reducing effects. Large increases in food insecurity after the enactment of the work requirement will support studies reporting significant impacts on SNAP enrollment, while minor increases will align with research finding minimal effects.

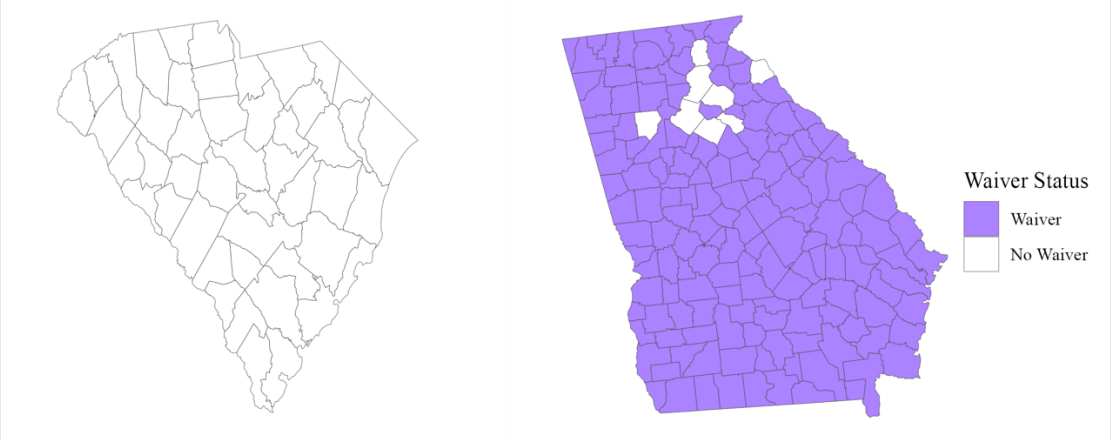
Second, I can more precisely assess the rule's effect on employment outcomes by considering not only whether the work requirement induces unemployed ABAWDs to work, but also how it changes the work behaviors of ABAWDs who are already employed. Not having to rely on self-identification questions in the CPS will additionally these estimates far more accurate than in many existing studies on the work requirement's work-promoting effects. Finally, by explicitly examining the relationship between the ABAWD work requirement and food insecurity, I can directly estimate whether the work requirement helps or hinders SNAP's stated goal of increasing low-income households' nutritional outcomes, a question which until now has mostly

[7] There are, however, some endogeneity concerns; waivers are loosely granted to counties with higher-than-average unemployment rates in a given year, and a worse labor market is associated with worse work and food security outcomes. See Section 3.5 and Section 5.3 for a more detailed discussion of the problem and how I address it with my empirical approach.

been problematically inferred indirectly by studies examining outcomes like employment and earnings (Food and Nutrition Service 2024c).

To date, only one study examining the relationship between the ABAWD requirement and food insecurity specifically exists. Das (2019) similarly uses the CPS to compare food security outcomes in states with and without a waiver to the work requirement. Although Das's approach should have largely addressed the three questions left unanswered by previous studies, it has a host of other methodological issues that make its findings impossible to take seriously, and which I fix in my own analysis, in large part because the Food and Nutrition Service (FNS) waiver data I use was not publicly available at the time of this study. Most egregious, for example, is the way Das identifies waiver status: a state is considered fully "treated" by the work requirement as soon as a waiver expires anywhere in the state. This is a highly inaccurate measure of respondents' waiver status because states whose SNAP population remains almost entirely covered by waivers are treated in the analysis the same as states with no waivers in place at all that year. Figure 4 illustrates the problem: Georgia, which only re-implemented the work requirement in a handful of counties in 2016, is identified in Das (2019) the same that year as South Carolina, which had fully re-implemented the work requirement by that point. My study is a major methodological improvement to Das (2019) in this regard because I identify waiver status at the county level, which provides a far more precise estimate of the waiver's effects.

Figure 4: South Carolina and Georgia Waiver Status in 2016



Furthermore, there is significant overlap between a state's willingness to do away with waivers and political control of state government; states that did away with waivers to the work requirement earlier in the analysis were largely Republican-controlled, and states that retained the waivers through the end of the analysis were predominately Democrat-controlled, especially when

controlling for unemployment. As a result, statewide waiver status is likely highly correlated with a host of other statewide policy differences that may affect food insecurity or work outcomes, such as state minimum wages or varying levels of funding for other benefit programs. This violates a central assumption of the study that areas treated by the work requirement are on average the same as areas with waivers in every way except for this policy. Without this assumption, differences in outcomes between these areas cannot necessarily be attributed to the work requirement. Das (2019) attempts to remedy this problem by including state fixed effects and a control for state governor political affiliation in the analysis, but neither of these fully resolve the issue. The former approach does not account for local policies at all or for state policies adopted or removed after the start of the analysis, and the latter fails to account for varying degrees of each governor's political leanings within each party.

My use of county data also helps to resolve this issue of the waiver's correlation with other statewide policies by capturing the variation in waiver implementation within states. As a result, there are plenty of counties in both blue and red states in the treated and the control groups, which makes it safe to assume differences in outcomes are the result of the ABAWD work requirement after controlling for other potentially endogenous factors.[8] It also enables the use of county, rather than state, fixed effects, which controls for time-invariant policies at both the state and the county level other than the ABAWD time limit that may affect the dependent variable. Finally, I leverage a triple-difference model to identify the variation in the dependent variable that is due to time-varying factors that the fixed effects miss. These include, among other things, policies that were enacted or repealed after the start of the analysis and economic factors that are both specific to each county and time-varying, such as the availability of jobs, local economic conditions, or social support services. I control for this by separating variation in the dependent variable in work requirement counties that is felt only by ABAWDs, who are the sole subjects of the work requirement, from the variation in work requirement counties that is shared by all of their low-income residents.

This triple difference approach with fixed effects amounts to a far stronger identification of the policy's effects than the simpler difference in differences approach employed by Das (2019),

[8] 82% of county-year combinations without a waiver and 57% of county-year combinations with a waiver were in states with a Republican governor. 51% of county-years with a Republican governor had a waiver, and 22% of county-years with a Democrat governor had the work requirement in place.

which compares all systematic differences between work requirement and waiver counties without controlling for the effects that are also experienced by non-ABAWDs and therefore not attributable to the policy. It is likely because of a lack of these controls that Das (2019) finds that the work requirement is associated with significantly better food security outcomes among ABAWDs: the difference in differences approach does not fully account for the fact that states are more likely to request waivers to the work requirement for counties that are experiencing worse economic circumstances. The waiver does not cause these circumstances; it is retained because of them. The model used in Das (2019) is unable to distinguish these very significant endogenous factors from the true causal effects of the work requirement to nearly the same extent that the triple differences approach is by adding the additional control for the effects on non-ABAWDs. As a result, my identification of the policy's effects is a much-needed improvement over Das (2019).

Furthermore, I provide a far more detailed analysis of the work requirement's mechanisms for influencing food security by additionally examining the possible factors, such as employment and work decisions, driving the relationship (see Sections 3 and 4 for more details). I also verify my findings against the potential issue of heterogeneous policy effects by comparing them to estimators that are robust to this problem. This study builds on Das (2019) and most other existing studies on the work requirement's effects by leveraging this improved approach and better, newly released data to estimate the extent and nature of the relationship between the ABAWD work requirement and each food security and labor outcomes far more accurately.

3 Methodology

3.1 Data

The Current Population Survey (CPS), a survey sponsored by the Bureau of Labor Statistics (BLS) and conducted monthly by the Census Bureau, serves as the primary data source for this analysis. Approximately 60,000 randomly selected households across the country voluntarily participate in the survey each month (U.S. Census Bureau 2021b). With questions covering a wealth of topics from income, education, employment, and much more, the CPS is the source of most of the control variables in the analysis. Included in the CPS is the Food Security Supplement (FSS), an annual supplement to the survey which contains a wealth of data about respondents' food expenditure habits, access to food, and quality of nutrition, in addition to general

CPS data on work-related outcomes like the average number of hours worked each week, employment status, and the tendency to search for a job. The FSS and CPS serve as the basis for the food insecurity and work dependent variables in the analysis. I merged this data from 2010, when the ABAWD work requirement was waived nationwide in light of the Great Recession, to 2019, the last year before another national waiver of the ABAWD requirement in response to the COVID-19 pandemic, into a single dataset of annually repeated cross sections.

In compliance with the Fiscal Responsibility Act of 2023, the FNS, the division of the USDA that oversees waivers to the ABAWD work requirement, recently published all existing ABAWD waiver requests from state governments and the FNS's responses detailing either its approval or denial of them since 1997 (Food and Nutrition Service 2024a). Using these communications, I created a dataset indicating waiver status for every county in the country over the entire period of analysis. Because it is at the behest of the state to request waivers for counties that meet federal criteria for an ABAWD waiver, and of the FNS to approve or deny the waivers based on whether states provide adequate support for their request, only areas for which both the state requested a waiver and the FNS granted it are considered to have one in the dataset. Additionally, I sourced annual average county-level unemployment rates from the BLS's Local Area Unemployment Statistics (U.S. Bureau of Labor Statistics n.d.), annual state- and county-level SNAP enrollment rates from the Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program (U.S. Census Bureau 2023b), and municipality population levels from their respective state governments' websites.

The ABAWD work requirement only applies to specific parts of the population, so it was necessary to remove observations who were either ineligible for SNAP or exempt from the work requirement. For example, immigrants are only eligible for SNAP after five years of legal permanent residence in the United States, so I eliminated immigrants from the sample who have resided in the country for less than five years (Food and Nutrition Service 2023a). Students attending college more than half-time are also generally ineligible for SNAP, I removed all full-time college students from the sample (Food and Nutrition Service 2023d). SNAP eligibility is determined by whether a household's income is below a certain threshold, which varies by household size, so I used CPS data on household income and size to remove individuals whose incomes were greater than 200% of their household's SNAP eligibility threshold (Food and Nutrition Service 2024d). I chose to keep households with incomes less than double the SNAP

eligibility limit so that I could accurately test the work requirement's long-term effects, including on those who might have been SNAP-eligible at one point in the dataset but eventually earned enough not to be later on, and used an indicator variable for SNAP eligibility to separate these households from households below the federal poverty line. Finally, the ABAWD work requirement during the period of analysis applied only to adults ages 18-49 without children. However, each individuals with children and individuals just above the age limit served as control observations for parts of my analysis, so I opted to create indicator variables for each and used the variables either as part of the analysis or to remove the observations to which the analysis did not apply as appropriate.

In summary, the final dataset is composed of a wealth of food security, work, and other personal characteristics assessed at the household level from the FSS, with county- and state-level labor and SNAP work requirement variables merged on. Some of the observations are the same household assessed during different years, but my analysis, as a repeated cross section rather than a true panel, does not recognize the two data points as belonging to the same respondent. All regressions use analytic weights provided by the FSS and are clustered at the household level to account for similarities in respondents from the same household.

3.2 Dependent Variables

My primary measure of food insecurity is a composite score of responses to questions in the FSS about respondents' food- and nutrition-related habits. Table 1 displays the full text of each question included in the dependent variable. Each possible response to each question was assigned a certain number of points corresponding to the severity of the response,[9] and the sum of those points served as the respondent's food insecurity score. A score of 0 indicates no food insecurity, and a score of 100 indicates the highest level of food insecurity measured by this variable.

Unsurprisingly, the score is skewed right, indicating that extreme food insecurity is very uncommon in America (see Figure 5), but while a majority of respondents, both in poverty and not in poverty, had a food insecurity score of zero, there is ample variation in the score to serve as a reliable measure for the analysis (see Table 2). 46% of respondents in poverty had a score greater

[9] For example, the score would increase by five points for respondents who reported not eating any meals for a full day, but only by one point for respondents who reported worrying about running out of food. A detailed breakdown of the way this variable was constructed is available in Appendix 3.

than 0 (compared to 20% not in poverty), and 25% in poverty had a score greater than 10 (compared to 7% not in poverty). Only 0.1% of respondents in poverty had a food insecurity score exceeding 90.

Table 1: FSS Questions Included in the Dependent Variable

1	Which of these statements best describes the food eaten in your household: enough of the kinds of food we want to eat, enough but not always the kinds of food we want to eat, sometimes not enough to eat, or often not enough to eat?
2	"We worried whether our food would run out before we got money to buy more." Was that often true, sometimes true, or never true for your household in the last 12 months?
3	"The food that we bought just didn't last, and we didn't have money to get more." Was that often, sometimes, or never true for your household in the last 12 months?
4	"We couldn't afford to eat balanced meals." Was that often, sometimes, or never true for your household in the last 12 months?
5	Frequency … skipping meals or cutting meal size because not enough money for food in past year
6	In the last 12 months, did you ever eat less than you felt you should because there wasn't enough money for food?"
7	In the last 12 months, were you ever hungry but didn't eat because there wasn't enough money for food?
8	In the last 12 months, did you lose weight because there wasn't enough money for food?
9	In the last 12 months, did you or other adults in your household ever not eat for a whole day because there wasn't enough money for food?
10	In the last 12 months, since December of last year, did you ever run short of money and try to make your food or your food money go further?
11	In the last 12 months, did you or other adults in your household ever get emergency food from a church, a food pantry, or food bank?
12	In the last 12 months, did you or other adults in your household ever eat any meals at a soup kitchen or shelter?

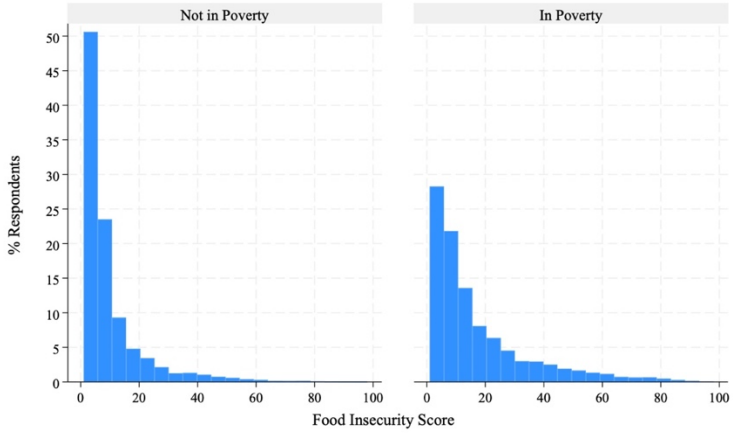
Source: Flood et al. 2023. IPUMS CPS: Version 11.0. Minneapolis, MN: IPUMS. https://doi.org/10.18128/D030.V11.0.

Table 2: Food Insecurity Score Statistics by Poverty Status

	Mean	*Median*	*75th Percentile*	*90th Percentile*	*% Fully Food Secure*
In Poverty	9.00	0	10	32	50.55
Not in Poverty	2.41	0	0	6	78.61

Source: original calculations by author using CPS FSS data

Figure 5: Variation Among Food Insecure ABAWDs



To ensure that changes in food insecurity picked up by the analysis were real and not an anomaly of the way I calculated the composite food insecurity score, I repeated the analysis several times with different individual food insecurity questions as the dependent variable.

I also used a series of CPS questions about respondents' workforce behavior as dependent variables assessing the work requirement's ability to influence labor market outcomes. I used questions about whether the respondent has a job, how many hours per week they work, whether they recently looked for a job, and whether they are currently in school to measure whether the requirement effectively achieves its stated goal of promoting work and education and expanding the labor market. These variables were far simpler, as most of them came directly from the CPS with minimal cleaning required. The sole exception was job searching, which I estimated by examining the work requirement's association with low-income unemployed ABAWDs' probability of being in the labor force. Unfortunately, the CPS lacked data on community service and job training program participation, so I was unable to estimate the work requirement's effect on these behaviors, which also fulfill the work requirement. Other than job training participation and volunteering, though, these variables enabled a holistic evaluation of the work requirement's effects on employment-relevant outcomes.

Finally, I used the CPS's variable for SNAP receipt as a dependent variable in regressions estimating the work requirement's effect on SNAP enrollment rates. As noted in Section 2.2, Meyer et al. (2022) find that the CPS underreports SNAP participation by over 50% compared to government administrative records. Worse, this underreporting is correlated with several relevant household characteristics to this analysis, including income, age, and race. The non-random nature of SNAP receipt underreporting and imputation errors biases any findings calculated using this

variable, and because each of these correlates are difficult to separate from SNAP receipt and may bias the results in different directions, any calculations made with this variable cannot even be used as an approximate upper- or lower-bound for the true estimates. The authors emphasize that without access to government administrative data, this is an issue that cannot easily be fixed. Still, including some measure of the work requirement's association with enrollment is important to fully understanding the work requirement's food security effects on SNAP recipients, even if results must be accepted with significant caution, so these estimates are included. Importantly, though, by examining systematic differences in food security rates and work outcomes across work requirement and waiver counties, the main analysis is done without relying on this self-reported SNAP enrollment variable and is therefore unaffected by the biases resulting from underreporting.

3.3 Independent Variables

3.3.1 Work Requirement Identification Variables

I used two different variables to measure the policy's effect on food insecurity and work. The first is an indicator variable that distinguishes respondents in a work requirement area from those residing in an area with a waiver. For many observations, the FSS provides geographical data as local as the county level. Most states requested waivers on a county-by-county basis, so for the vast majority of observations, this was sufficient. Per their request, however, the FNS occasionally granted some states waivers for individual cities, towns, reservations, or other smaller sections of counties. In these instances, I calculated the ratio of the county covered by a work requirement and rounded to the nearest whole. If less than half of a county's population was covered by a work requirement, that county was treated as though it had a waiver that year in full, while if a majority of the county's population was covered by the time limit, that county was treated as though the whole county had the work requirement in effect that year.

Of the roughly 218,000 observations remaining in the dataset after respondents to whom the policy is irrelevant were removed, all specified their state of residence, but just over 123,000 (56% of the dataset) did not indicate in which county they resided, and this underreporting is non-random. The CPS, like most federally sponsored surveys, does not provide county of residence for respondents living in sparsely populated areas, so those who reported a county are likely to reside in larger cities where their identity cannot be easily guessed based on their responses (U.S. Census Bureau 2023a). A data sample with an outsize proportion of respondents from large metropolitan

areas may bias the results, so preserving observations without a county of residence is an important priority. Of the respondents without an identified county of residence, I was able to determine with certainty half's waiver status because they lived in states in which the work requirement was fully waived or fully imposed during that year, but the rest could not be used with this variable.

To account for this issue, I constructed a second variable for work requirement status with the goal of including the remaining nearly 60,000 observations (30% of the remaining dataset) whose waiver status could not be determined. Like the original work requirement variable, this second variable was equal to 0 for respondents residing in counties with waivers and 1 for those in counties with the time limit in place. However, this second variable was set equal to the ratio of SNAP recipients covered by the work requirement in their state of residence that year. In essence, the second work requirement variable converts the indicator waiver variable into a continuous variable that represents the probability that each observation was covered by the time limit. The advantage of using this variable instead of the indicator variable is to significantly expand the sample, both significantly increasing observations and reducing sampling bias, at the cost of some of the variable's precision.

I also created an indicator variable for ABAWDs subject to the work requirement for more than one year. Specifically, this variable identified ABAWDs living in counties that had the work requirement in place both in the year the respondent took the survey and the year prior. By combining this variable with the standard work requirement variable (and their respective interactions with being an ABAWD), I was able to separate the work requirement's immediate effects within the first year of implementation to its effects more than one year out from implementation. This helped to determine whether the average effects of the work requirement being picked up by the regressions with just the standard work requirement variable were short term or long-lasting. Unfortunately, because so few states went from full waiver coverage one year to no waivers the next year, it was impossible assess the long-term effects of the work requirement using the state-level proportion variable.

3.3.2 ABAWD Identification and Control Variables

I used three different approaches to identifying ABAWDs in the sample, taking advantage of the fact that the work requirement only applied to individuals ages 18-49, below the poverty line, and without children (Food and Nutrition Service 2024b). For each approach, I used an indicator variable to separate adults within the SNAP age range from those above it, adults without

children from those with children, and adults under the poverty line from those just above it. The interaction between one of these ABAWD indicators and one of the waiver variables from Section 3.3.1 served as the primary explanatory variable of interest for each model in the primary analysis (with other types of non-ABAWDs removed from the sample entirely).

In theory, the ABAWD requirement is to be waived only in counties with such excess unemployment or a lack of available jobs that an individual could not be reasonably expected to consistently meet the requirement.[10] Therefore, if applied appropriately, counties with waivers should also be counties with higher proportions of individuals working less, making less income, and, as a result, who are presumably more food insecure. To help control for the likelihood, then, that a county's having a waiver is correlated with higher unemployment rates, worse work outcomes, and heightened food insecurity that has nothing to do with the policy's actual impact, I included the county's unemployment rate that year as a control variable in addition to the controls for this endogeneity generally built into the triple differences model. For models using the state-level proportion work requirement variable, I used the state's unemployment rate. In addition to unemployment, I controlled in each regression for some combination of marital status, household size, disability status, household income, and educational attainment.

3.4 Empirical Strategy

I used a series of fixed effects triple differences regressions to identify systematic differences in the average food security and work outcomes for low-income ABAWDs in counties with the ABAWD work requirement in effect and low-income ABAWDs in counties with a waiver. The advantage of the triple differences approach is that it compares both the average differences in food security and work outcomes (or lack thereof) after the waiver's removal to the average differences in counties where the waiver stayed in place, and the average differences between ABAWDs and non-ABAWDs. In this way, it controls for variation within the same counties over time, variation that is consistent across counties within the same year, and variation in the same year and county that is shared by non-ABAWDs and therefore not attributable to the policy. Furthermore, previous difference in differences studies on the work requirement have consistently

[10] In practice, however, this is not always true – see Section 5.2 for a detailed discussion of loopholes in the ABAWD waiver criteria and Sections 3.4 and 5.3 for discussions of my attempts to resolve the issue of quantifying the waiver's true effects in the face of other confounding factors like state politics and job market size that may be strongly correlated with waiver status.

found that the parallel trends assumption holds true during the period of analysis in this paper, supporting the validity of the triple differences approach for causal inference on this topic (Feng 2016; Harris 2019; Das 2019).

This approach is achieved by adding to a standard difference in differences model an interaction term between waiver status and my ABAWD identification strategy for that regression (poverty status, age, or lack of children) which serves as the primary explanatory variable of interest. This step is crucial to controlling for the variation caused by other factors correlated with waiver status; as long as these factors affect both ABAWDs and non-ABAWDs who receive SNAP in the same way, they will be separated from the policy effect by the waiver variable, and the coefficient on the interaction term will capture the true effects of the work requirement. This is especially important given that waiver status is at least in part driven by economic circumstances, and particularly unemployment, which themselves have significant food security and work ramifications for low-income households. The waiver variable by itself controls for these effects, leaving the interaction between waiver status and being an ABAWD to isolate the effects of the policy.

The primary analysis is broken into three different types of triple differences regressions comparing outcomes of those subject to the ABAWD work requirement to those who are not, combining controls for being in a work requirement county and for being an ABAWD. In the first group of regressions, individuals with children or outside of the age range subject to the work requirement (18 to 49) are dropped, and I use an interaction term to estimate the effect of a waiver on respondents below the poverty line compared to those earning 100%-200% of the poverty line. In the second group, individuals above the poverty line, who have a child, or who are younger than 30 and older than 60 are dropped, and I use an interaction term to estimate the effect of a waiver on ABAWDs ages 30-49 compared to those ages 50-60. In the final group, individuals above the poverty line or outside of the age range subject to the work requirement are dropped, and I use an interaction term to estimate the effect of a waiver on individuals without children to those with children. Because the policy only applied to low-income adults ages 18-49 without children, each of these regressions uses a different approach to comparing outcomes of those to whom the policy applies to those to whom it does not. The variety of approaches provides additional scrutiny of the analysis; a high degree of uniformity in the coefficients on relevant interaction terms across each type of regression would strongly suggest that the analysis is accurately estimating the work

requirement's effect on the dependent variable, while wildly different estimates across models would indicate that these results are less reliable, or that the policy has no significant effects.

Each approach to identifying ABAWDs has its own advantages and drawbacks. The poverty regressions have the largest sample size by a considerable amount, but these particular regressions face the risk of bias in an important way that the child and age regressions do not. Because both poverty status and food security are both heavily affected by many of the same underlying conditions that motivate policymakers to enact a waiver to the work requirement in the first place, these models specifically likely pick up some the effects of these factors on food security outcomes in addition to the waiver's true effects. As a result, these regressions probably make the waiver's effects on food insecurity appear slightly worse, and the effects on labor outcomes appear marginally better, than they really are. Furthermore, because poverty status is so heavily correlated with household income, variation in the latter cannot be controlled for in these models. Adults just above and just below the work requirement cutoff age of 49 are arguably the most similar in all ways besides the work requirement compared to the other approaches, which makes the age approach to identifying ABAWDs ideal, but these regressions have by far the smallest sample size. The child regressions find a balance between the two factors, identifying ABAWDs in a way that makes accurate comparison to non-ABAWDs simple, and leaving a reasonable sample size.

Beyond quantifying the ABAWD waiver's effect on food insecurity broadly, it is important to understand the likely mechanisms by which the waiver influences low-income individuals' food security outcomes. With this in mind, the primary analysis section includes further tests of the prevailing theories surrounding the relationship, that the requirement either increases food insecurity by lowering SNAP enrollment or that it decreases food insecurity by encouraging work and counteracting harmful incentives brought on by assistance program income deserts. Within each group of regressions, I examine the work requirement's effect on a variety of food security and labor market outcomes. The food security regressions use my composite food security score, food stamp enrollment, and four individual FSS food security questions as the outcome variables (see Table 3). The work regressions examine the effect of the work requirement on variables for the number of hours the respondent worked, whether the respondent is employed, whether the respondent works full-time, whether the respondent recently looked for a job, and whether the respondent is in school.

Table 3: Frequencies of Select Food Insecurity Outcome Variables by Poverty Status

Variable	*Values*	*Not in Poverty*	*In Poverty*
Enough & kinds of food eaten in the household	1 – Enough of the kinds of food we want to eat	86.11%	67.68%
	2 – Enough but not always the kinds we want to eat	12.03%	22.79%
	3 – Sometimes not enough to eat	1.55%	7.12%
	4 – Often not enough to eat	0.31%	2.40%
Frequency … skipping meals or cutting meal size because not enough money for food in past year	1 – Not at all	95.97%	84.83%
	2 – At least once	0.01%	0.05%
	3 – Only 1 or 2 months	1.23%	2.87%
	4 – Some months	1.65%	6.07%
	5 – Almost every month	1.14%	6.16%
Ever ran short of money for food in past year	1 – No	87.96%	68.70%
	2 - Yes	12.04%	31.30%
In the last 12 months, did you or other adults in your household ever get emergency food from a church, a food pantry, or food bank?	1 – Not at all	98.37	89.20%
	2 – At least once	0.00%	0.03%
	3 – Only 1 or 2 months	0.71%	3.77%
	4 – Some months but not every month	0.53%	3.62%
	5 – Almost every month	0.39%	3.38%

Source: original calculations by author using CPS Food Security Supplement, 2010-2019 (Flood et al. 2023)

Finally, for each regression type and outcome variable, I use three different approaches to identify the work requirement. The first is the standard indicator for whether the respondent's county had a work requirement in effect currently and for longer than the past three months,[11] and the second is the continuous variable indicating the proportion of SNAP recipients in the state subject to the work requirement that year. These both take the form of Equation (1). The third approach is shown by Equation (2), adding another variable flagging respondents who were subject to the work requirement both the year they took the survey and the year prior to the standard work requirement variable, and its interaction with being an ABAWD. This approach is useful for assessing whether associations between the work requirement and the dependent variable are long term:

$$Y_{ict} = \alpha + \beta_1 ABAWD_i + \beta_2 WR_{ct} + \beta_3 ABAWD_i * WR_{ict} + \gamma X_{ict} + \lambda_c + \delta_t + \varepsilon_{ict} \quad (1)$$

$$Y_{ict} = \alpha + \beta_1 ABAWD_i + \beta_2 STWR_{ct} + \beta_3 LTWR_{ct} + \beta_4 ABAWD_i * STWR_{ct} + \beta_5 ABAWD_i * LTWR_{ct} + \gamma X_{ict} + \lambda_c + \delta_t + \varepsilon_{ict} \quad (2)$$

[11] ABAWDs subject to the work requirement are allowed a total of three months in any thirty-six-month period without work before they lose their benefits, so I assume that ABAWDs without work retain their benefits until three months after the requirement took effect. See Section 2.1 for more information about the requirement's specifications.

where Y_{ict} is the dependent variable. $ABAWD_i$ is an indicator that equals one if the respondent is either below the poverty line, does not have a child, or within the time limit age range, depending on the identification approach. This controls for all variation in the dependent variable that is shared by all ABAWDs in both counties with and without a work requirement. WR_{ct} equals one if the ABAWD work requirement was in effect for the respondent's county of residence that year, or, in the case of the proportion waiver, is equal to the percentage of SNAP recipients subject to the work requirement in that state and year. This variable measures the average relationship between living in a work requirement for all individuals, both ABAWDs and non-ABAWDs. γX_{ict} is a vector of control variables, and λ_c and δ_t are controls for fixed county and time effects, respectively. Equation (2) is largely the same as Equation (1) but separates the predicted effect of the time limit on Y_{ict} into two explanatory variables: $STWR_{ct}$, which captures the dependent variable's short-term relationship with the work requirement in the first year after re-implementation, and $LTWR_{ct}$, which identifies the association between the two variables beyond the first year. $ABAWD_i*STWR_{ct}$ and $ABAWD_i*LTWR_{ct}$ are the interactions between $ABAWD_i$ and each of these variables, respectively.

In practice, $ABAWD_i$ isolates the overall association of being an ABAWD with the dependent variable in both work requirement and waiver counties, and WR_{ct} captures the relationship between living in a work requirement county that is shared by both ABAWDs, to whom the policy applies, and non-ABAWDs, to whom it does not. Thus, their interaction, $ABAWD_i*WR_{ct}$, specifically captures the partial effect of the policy, measuring the additional effects of both being in a work requirement and actually being subject to the policy, compared to any of the groups to whom the policy does not apply, such as ABAWDs in waiver counties. $ABAWD_i*STWR_{ct}$ and $ABAWD_i*LTWR_{ct}$ each also estimate the effects of the policy on ABAWDs, and their sum is the policy's cumulative effect over time.

In summary, the primary analysis consists of a separate regression for each unique combination of the three waiver variables, the seventeen dependent variables, and the three approaches to identifying ABAWDs subject to the work requirement. The result is a primary analysis composed of 153 different regressions measuring the ABAWD work requirement's effects on food security and work behavior from every angle available with my data. Each regression includes controls for state or county unemployment rates (depending on the level of the waiver variable being used), poverty status, marital status, household size, number of children, disability status, age, and interaction terms between waiver status and poverty status, age range, or number

of children. County fixed effects are also included to account for unobserved factors that vary across counties but stay constant throughout the analysis, like state and local policy differences that remain in place through the full duration of analysis, in addition to year fixed effects, which control for unobserved factors that affected all counties in the same year, like national economic trends.

I also examine the requirement's effect on married households and marriage rates, using a separate regression with each measure of waiver status as an explanatory variable and marital status as the dependent variable. SNAP benefits are calculated at the household level, and if any individuals subject to the work requirement do not satisfy it, then the entire household may lose their SNAP benefits (see Section 4.4). This amounts to a large disincentive to live together, because if the two cohabitating individuals were to be living separately, only the one who failed to meet the work requirement would lose their SNAP benefits, while the other individual would retain theirs. The goal of these regressions is to determine whether this feature of the work requirement is significant enough to influence low-income ABAWDs' marriage decisions in a meaningful way. I regress marital status on waiver status to quantify differences in marriage rates in waiver counties, using each of the three approaches to identifying individuals affected by the policy (based on the income, age, and children specifications of the requirement) to ensure the findings are consistent across models. This model takes the form of Equation (1), using an indicator for whether the respondent is married as the dependent variable.

I conclude my analysis with robustness tests of the original regressions. Recent studies, summarized well in Chaisemartin & d'Haultfœuille (2021) and Callaway (2023), call into question difference in differences regressions' reliability in estimating policy effects like the ABAWD waiver that are heterogenous between groups or over time. Difference in differences regressions, both standard and triple differences, assume that the treatment group, in this case low-income ABAWDs subject to the work requirement, is uniformly affected by the introduction of the policy, but this is not always true; policies are executed slightly differently at each level of implementation, and they will affect different populations in a myriad of nuanced ways that can be captured by controls for external factors only up to an extent. This is especially a potential issue with treatments like the ABAWD work requirement, which are staggered in their re-implementation over time, and for which state and local governments have a great deal of freedom in how they implement it and SNAP in general. Similarly, different individuals will vary widely in

their response to policy changes based on their own circumstances. Standard difference in differences and triple differences models' averaging of the treatment effects, therefore, can become a problem when treatment effects vary so widely that an average is not reflective of the policy's effects on entire groups of people. Chaisemartin & d'Haultfœuille (2021) propose estimators that are robust to heterogenous effects, which I use to repeat parts of my analysis to ensure my findings are not significantly biased by heterogeneous policy effects.

3.5 Contribution to Literature

This paper's primary contribution to the literature on the ABAWD work requirement and on work requirements as a condition for government assistance more broadly is the empirical approach. Unlike most previous studies of SNAP work requirements, my analysis of the ABAWD waiver's effect on food insecurity rates does not rely at all on individuals' self-reporting of SNAP receipt. This matters because most surveys are known to systematically underreport SNAP enrollment (see Section 3.2); Meyer et. al (2022), for example, find that around half of SNAP recipients in the CPS specifically do not report SNAP receipt, and in a way that correlates with other important household characteristics. This is a major problem for most of the existing studies on the policy like Harris (2019), Ku (2019), and Han (2020), which use this self-reported data as the primary outcome or identification variable. For nearly all estimates in this paper, though, my use of the interaction between county waiver status and being an ABAWD as the explanatory variable allows me to circumvent this issue entirely. The ABAWD work requirement, and the waiver too as a result, by design only affects those who receive SNAP, so any systematic differences in food security or labor outcomes in counties with a waiver compared to those without one reflect the effects of the policy on SNAP recipients, regardless of whether they are identified in the survey as SNAP users.

Additionally, the fixed effects triple differences approach used in this study is far more rigorous than the approaches taken by other studies on the policy, allowing for a much more accurate estimates of the policy's effects on ABAWDs. Those using standard difference in differences models, like Han (2020) and Das (2019), and especially regression discontinuity designs as in Gray et al. (2021) and the event-history model used by Ribar et al. (2010), struggle to separate changes in outcomes due to the work requirement effects from changes resulting from its correlates. These include local economic trends, other state or local policies, and fundamental

differences between the populations or counties to which the work requirement has been reapplied compared to those to which it has remained waived. The fixed effects triple differences model includes built-in controls for variation in food security or work outcomes within the same counties over time, variation across counties within the same year, and variation in the same year and county that is shared by non-ABAWDs. This alleviates most of the omitted variable and endogeneity concerns that might arise from the work requirement's design to apply only to low-unemployment areas, and from which these other studies likely suffer to a much greater degree.[12] As a result, this study presents major methodological improvements even over existing studies which use administrative SNAP enrollment data and which therefore do not suffer from the underreporting issue of self-reported data on major public surveys.

Of course, this approach comes with its own unique challenges and drawbacks – as the data used in this analysis are repeated cross-sections rather than a pool of individual SNAP recipients whose behavior and incomes can be reliably tracked over time, I cannot, for example, easily examine the work requirement's long-term effects. Furthermore, this analysis's reliance on county identification, rather than self-reported SNAP enrollment, greatly limits the usable sample size because publicly available data does not report county of residence for most observations. I attempt to rectify this issue by incorporating state-level data into the analysis, but this in turn reduces my ability to accurately identify SNAP enrollees as such.

Another major contribution to the literature is the research question itself, which is a powerful and relatively novel way of evaluating the work requirement. SNAP's stated goal is to reduce food insecurity among low-income households, so to estimate the work requirement's effect on food insecurity rates among the SNAP-eligible population seems the best way to measure its effects. Das (2019) is the only other existing academic study that considers the question of the work requirement's ramifications for food security, and its data limitations and methodological flaws make the findings difficult to trust. As I detail in Section 2.2, the study's treating an entire state as fully subject to the work requirement as soon as just one county's waiver expires leads to a severe systematic misidentification of observations still covered by a waiver, and its failure to

[12] Despite the major methodological improvements on this issue over most existing studies, some smaller concerns regarding the potential differential effects of local economic circumstances on ABAWDs subject to the policy remain. See Section 5.3 for a detailed discussion.

account for within-state variation also means any state- and county-level policies that affect food insecurity besides the ABAWD requirement are not effectively controlled for.

My analysis builds on Das (2019), therefore, by incorporating newly published federal data on county waiver status and a more sophisticated empirical approach to far more accurately answer estimate the ABAWD work requirement's food security effects. I also build on previous studies of the work requirement's labor effects like Han (2020), Harris (2018), Ku (2019), and Gray (2021) by using the more rigorous triple differences approach, by evaluating work outcomes from a wide variety of angles including job status, hours worked, job searching, and full-time employment, rather than just employment, and by using national data to ensure estimates are applicable outside of just one or a handful of states. My more thorough examination of the requirement's effect on each food insecurity and labor outcomes paints a fuller picture of the work requirement's effects than simply quantifying the relationship by getting into exactly which components of these broader concepts it affects and how. To my knowledge, this study is also the first to consider whether the work requirement affects marriage rates among affected households.

4 Analysis

In this section, I summarize the findings of my quantitative analysis of the ABAWD work requirement's effects on food security and work-related outcomes. All tables in this section display the results of the regressions that utilize the standard waiver to identify work requirement counties and identify ABAWDs based on whether the respondent has children. The standard work requirement variable is used rather than the proportion work requirement variable because it is perfectly accurate at identifying those affected by the work requirement and allows for a study of the long-term effects of the policy. The child approach to identifying ABAWDs, meanwhile, is the best of the three to be reported by itself in that it is not subject to the additional endogeneity concerns of the poverty approach and has a significantly larger sample size than the age approach. However, each approach has its own unique advantages and disadvantages and should be considered when evaluating any of the work requirement's effects. As such, other results are occasionally referenced and available in full in Appendix 1.

In each of these regressions, the variable of interest is the interaction between being subject to the work requirement and being an ABAWD. The former variable by itself captures systematic differences in outcomes of those living in counties without a waiver to those in counties with a

waiver for all respondents in the dataset. With separate controls for being ABAWD and its interaction with this variable, the standalone work requirement variable really captures differences in outcomes in work requirement counties compared to waiver counties due to any factors other than the time limit such as economic health or average differences in local policies. Depending on the method used for identifying ABAWDs for that regression, the ABAWD variable reflects the association of either being poor, not having children, or being age 30-49, with the outcome variable.

The exact interpretation of the interaction term varies slightly by approach, but for the child ABAWD identification approach, with each of the term's components included as controls, the interaction measures the partial effect of being a low-income ABAWD in a county with the work requirement in place, compared to being a low-income ABAWD in a county where the work requirement is waived, controlled for separately living in a county with the work requirement and for not having children. In other words, this interaction captures the effects of the policy specifically on ABAWDs, with separate controls for being an ABAWD but not being subject to the work requirement, and for living in a work requirement county but not being an ABAWD. In the regressions with a lag, meanwhile, the interaction between work requirement status and ABAWD identification captures the effect of the work requirement on ABAWDs in the first year following its re-implementation, and the sum of this and the interaction between ABAWD identification and the 2-year waiver variable measures the total effect of the waiver two or more years after it is re-enacted.

4.1 Effects on Food Security

This section contains the results of my analysis on the effects of the ABAWD work requirement on a wide variety of food security-related factors. I focus primarily on the waiver to the work requirement's association with my custom food security score, which incorporates and weights answers to twelve food access and nutrition questions from the CPS, but I also examine the waiver's relationship with self-identified SNAP enrollment rates and answers to several individual food security questions. The food insecurity composite score is the ideal choice as the primary dependent food security variable because it captures variation in all measured aspects of food security (Appendix 3 details the score's construction), but the individual components are also beneficial as a robustness check on the way I have scored the variable and to determine whether

heightened food insecurity resulting from the work requirement is concentrated in a particular area over others.

4.1.1 Food Security Score

Table 4 shows the short-run association of the waiver to the SNAP work requirement with low-income ABAWDs' food security outcomes. Most estimates find that ABAWDs subject to the work requirement in effect score an average 0.1 to 0.2 points higher on the food insecurity scale than ABAWDs who are not. The food insecurity score ranges from 0 to 100 (with higher values indicating exacerbated food insecurity), so this is not a meaningful difference at all. Nevertheless, the mostly positive coefficients on the interaction terms across approaches strongly suggest that some low-income ABAWDs are indeed losing their SNAP benefits as a result of the policy change, but not so many that there is an enormous average difference in food insecurity outcomes between counties with the work requirement and counties with a waiver.

Table 4: Effect on Food Insecurity Outcomes

Variables	Food Insecurity, All ABAWDs	Food Insecurity, ABAWDs Working < 10 Hours/Week	SNAP Enrollment (All ABAWDs)
Work Requirement	-0.364	-0.780*	-3.053***
	(0.288)	(0.465)	(0.935)
Is ABAWD	-0.621***	-0.323	-15.01***
	(0.179)	(0.286)	(0.550)
WR * ABAWD	0.0906	1.525***	-1.058
	(0.303)	(0.523)	(0.934)
R^2	0.0858	0.0858	0.195
Observations	93687	93687	93687

Includes controls for county unemployment, educational attainment, household size, marital status, household income, disability status, and county and year fixed effects. Individuals above the poverty line or outside the work requirement age range (18-49) are removed from the sample.
Standard errors in parentheses
* p<0.1, ** p<0.05, *** p<0.01

Unsurprisingly, the work requirement's slightly negative association with exacerbated food insecurity expands dramatically among low-income ABAWDs who reported 10 or less average weekly hours of work in the past year, compared to ABAWDs in waiver counties who worked 10 or less hours each week on average. Despite the small sample size, all approaches find that the former group experienced meaningfully higher average food insecurity rates than the latter, and most estimates are statistically significant. As expected, therefore, it seems that most of the negative effects of the work requirement are concentrated among those who are unable or

unwilling to meet its mandated 80 hours of monthly work. It is encouraging, however, that although there is a clear negative effect on this specific subset of the low-income ABAWD population, this did not translate to a statistically significant or even especially meaningful difference in the full sample. This provides compelling evidence that the number of individuals hurt by the work requirement is quite low. This theory is also supported by the fact that self-reported SNAP enrollment only decreases among all ABAWDs affected by the requirement by a statistically insignificant 1 percentage point after implementation, though the magnitude of this coefficient is probably unreliable due to the problems associated with non-random underreporting (Meyer et. al 2022).[13]

Table 5: Effect on Food Insecurity Outcomes Over Time[14]

Variables	Food Insecurity, All ABAWDs	Food Insecurity, ABAWDs Working < 10 Hours/Week	SNAP Enrollment (All ABAWDs)
WR	-0.404	-0.647	-3.344***
	(0.296)	(0.483)	(0.990)
Is ABAWD	-0.621***	-0.325	-15.00***
	(0.180)	(0.286)	(0.550)
WR 2+ Years	0.120	-0.557	3.106**
	(0.485)	(0.753)	(1.568)
WR * ABAWD	0.178	1.366**	-2.167
	(0.351)	(0.625)	(0.934)
WR 2+ Years * ABAWD	-0.248	0.476	2.957*
	(0.559)	(0.972)	(1.721)
Cumulative Effect	-0.07	1.842	0.79
R^2	0.0858	0.0858	0.0858
Observations	93687	93687	93687

Includes controls for county unemployment, educational attainment, household size, marital status, household income, disability status, and county and year fixed effects. Individuals above the poverty line or outside the work requirement age range (18-49) are removed from the sample.
Standard errors in parentheses
* p<0.1, ** p<0.05, *** p<0.01

Furthermore, some of the negative effects appear to be short term. Regressions in which the policy effect is divided into the effects the first year after enactment and the additional effects

[13] The child regressions also underestimated this statistic relative to the poverty and age regressions; most of those found that the work requirement was associated with closer to a 3.5 percentage point decrease in SNAP enrollment (see Appendix 1.1).
[14] The variables examining the long-term effects are strictly limited to counties which had the work requirement in place for several years continuously, so individuals in counties in which the waivers were removed and then subsequently re-implemented are not considered "treated" by this variable.

more than one year later show that the negative relationship between the work requirement and both food insecurity for all low-income ABAWDs and SNAP enrollment rates is concentrated in the first year (see Table 5). The coefficient on the interaction between being a low-income ABAWD being subject to the time limit for more than a year largely reflects a reversal of these effects, indicating that the food security costs of the policy may be temporary for most individuals who are initially unable to find work after the policy takes effect.

The reversal of the initial drop in SNAP enrollment is especially encouraging because it indicates that the return to original levels of food insecurity by the second year of the work requirement is genuinely the result of households eventually finding enough work to regain their benefits, rather than having to shift their spending around from other important priorities to accommodate the loss of SNAP benefits. Again, this SNAP enrollment variable is likely problematic, but because it responds to the reintroduction of the work requirement with a dip in enrollment as expected, it is possible that the longer-term effects that it picks up are genuine. The negative association between the work requirement and food insecurity for ABAWDs working less than ten hours per week increased slightly in the second year, though, suggesting that although most ABAWDs unable to qualify for SNAP in the first year after the work requirement is re-implemented find work by the second year, those who do not suffer even worse than in the first year.

4.1.2 Food Security Component Questions

To ensure that my findings are the result of true variation in respondents' food security outcomes and not anomalies resulting from the way I constructed the food security score used in Section 4.1.1, I examine the waiver's relationship with answers to individual food security questions from the CPS FSS in this section. Specifically, I focus on questions about the frequency with which the respondent was unable to eat balanced meals, short of money for food, skipped meals due to insufficient money, or relied on a food bank for meals in the past year because each of these variables capture separate and important components of food insecurity. In this section of the analysis, these variables are measured in the percentage likelihood that the respondent has ever exhibited any of these behaviors in the past year.

Table 6: Food Security Component Status for All SNAP-Eligible ABAWDs

Variables	Couldn't Afford Balanced Meals	Short of Money for Food	Skipped Meals	Visited Food Bank
Work Requirement	-0.716	-0.261	-0.384	-1.803***
	(0.872)	(0.967)	(0.696)	(0.0355)
Is ABAWD	-1.627***	-7.242***	-1.764***	-1.741***
	(0.511)	(0.557)	(0.419)	(0.364)
WR * ABAWD	0.744	1.423	0.0282	0.691
	(0.881)	(0.974)	(0.709)	(0.602)
R^2	0.0504	0.0615	0.0495	0.0675
Observations	95557	95716	96229	95182

Includes controls for county unemployment, educational attainment, household size, marital status, household income, disability status, and county and year fixed effects. Individuals above the poverty line or outside the work requirement age range (18-49) are removed from the sample.
Standard errors in parentheses
* p<0.1, ** p<0.05, *** p<0.01

As Table 6 shows, the average predicted effect of the work requirement on the likelihood that the respondent is more food insecure in any of these individual ways seems relatively minimal overall. However, Table 7 demonstrates that, as with the food security score used in Section 4.1.1, the outcomes are much worse for those working 10 hours or less each week, with these respondents in counties with the work requirement in effect more than 3 percentage points more likely to skip meals or rely on external support for food. This both lends support to the reliability of the custom food security score and the regressions using it that found statistically significant and meaningfully worse food security outcomes for low-income ABAWDs who worked less than 10 hours per week in counties with the work requirement in effect.

Table 7: Food Security Component Effects for ABAWDs Working < 10 Hours per Week

	Couldn't Afford Balanced Meals	Short of Money for Food	Skipped Meals	Visited Food Bank
Work Requirement	-1.739	-1.493	-1.183	-2.515**
	(0.0734)	(0.0281)	(0.102)	(0.0628)
Is ABAWD	-1.456*	-5.998***	-1.462**	-2.530***
	(0.757)	(0.799)	(0.639)	(0.616)
WR * ABAWD	3.532**	3.536**	2.139*	2.446**
	(1.394)	(1.487)	(1.148)	(0.0680)
R^2	0.0679	0.0715	0.0691	0.0801
N	37714	37787	37970	37548

Includes controls for county unemployment, educational attainment, household size, marital status, household income, disability status, and county and year fixed effects. Individuals above the poverty line or outside the work requirement age range (18-49) are removed from the sample.
Standard errors in parentheses
* p<0.1, ** p<0.05, *** p<0.01

In line with the composite food insecurity score's minimal growth for ABAWDs working less than ten hours per week in the second year after the work requirement was implemented, Table 8 shows that the long-term associations of the work requirement with each of these components are mostly negative but mixed overall. Over the course of both years, ABAWDs working less than 10 hours per week in counties with a work requirement were over 5 percentage points more likely to be unable to afford balanced meals and more than 7 percentage points more likely to run short of food at least once during the studied period. They were, however, slightly less likely to skip meals at all by the second year after the work requirement was implemented and only modestly more likely to rely on external support for food. The mostly negative coefficients suggest that the food security-reducing effects of the requirement on low-income ABAWDs who do not meet it continue to grow in the long term. Although this population is not more likely to skip meals in the long run than ABAWDs with similar work hours in waiver counties, the fact that they are in the short run suggests that they only avoid doing so by shifting money around from other priorities, so the eventual stability of skipping meals may come at the cost of other non-discretionary spending like paying for rent or transportation.

Table 8: Food Security Effects for ABAWDs Working < 10 Hours per Week Over Time

	Couldn't Afford Balanced Meals	Short of Money for Food	Skipped Meals	Visited Food Bank
Work Requirement	-0.760	-0.800	-0.554	-1.697***
	(1.401)	(1.491)	(0.739)	(0.656)
Is ABAWD	-1.472*	-5.994***	-1.763***	-1.742***
	(0.757)	(0.799)	(0.419)	(0.364)
WR 2+ Years	-4.679**	-1.387	0.575	-0.363
	(2.108)	(2.330)	(1.127)	(1.013)
WR * ABAWD	2.807*	1.564	0.357	0.489
	(1.642)	(1.749)	(0.846)	(0.701)
WR 2+ Years * ABAWD	2.268	5.612**	-0.938	0.577
	(2.620)	(2.792)	(1.279)	(1.109)
Cumulative Effect	5.075	7.176	-0.581	1.066
R^2	0.0679	0.0715	0.0691	0.0801
N	37714	37787	37970	37548

Includes controls for county unemployment, educational attainment, household size, household income, marital status, disability status, and county and year fixed effects. Individuals above the poverty line or outside the work requirement age range (18-49) are removed from the sample.
Standard errors in parentheses.
* p<0.1, ** p<0.05, *** p<0.01

Importantly, though, what these calculations miss is that many low-income ABAWDs who are initially unable to meet the work requirement do by the second year; the regressions on both the food insecurity composite score and the self-reported SNAP variable show that program enrollment and food security more than recover from their initial dip in the first year (see Table 5). This indicates that although the food insecurity consequences are severe for those unable to satisfy the ABAWD work requirement for two full years, this population is probably very small.

4.2 Effects on Labor Outcomes

In this section, I summarize the results of the analysis of the ABAWD work requirement's relationship with a variety of low-income ABAWDs' labor market behaviors, including the average number of hours worked per week, and the likelihood of having a job, searching for a job, working full-time, working multiple jobs, or attending school. The goal of this part of the analysis was to determine the work requirement's ability to motivate SNAP recipients to engage in behaviors that will help their short- and long-term earnings prospects in spite of the program's inherent disincentives to work. As before, the calculations cited in the tables in this section are the from the regressions using the standard waiver variable and child status to identify ABAWDs, but all other results are also included in Appendix 1.2.

The ABAWD work requirement requires that participants complete 80 hours of any combination of work, either paid or on a volunteer basis, or job training program participation each month to remain SNAP-eligible. If it is effective, therefore, ABAWDs in counties without a waiver should see higher rates of employment, labor force participation, and full-time work than non-ABAWDs in the same counties, controlled for being an ABAWD. As Table 9 shows, the work requirement appears to be successful in promoting work across the board. Significance levels vary by approach (see Appendix 1.2), but low-income ABAWDs in counties with a work requirement were approximately 2 to 5 percentage points more likely to have any job at all, full- or part-time, than ABAWDs in counties with a waiver. In counties with the work requirement in effect, unemployed ABAWDs were 1 to 3 percentage points more likely to search for work and between 1 and 4 percentage points more likely to work full-time than ABAWDs not subject to the work requirement.

Table 9: Effect on Labor Outcomes

	Hours Worked	Employed (%)	Work Full Time (%)	Look for Job (%)	Attend School (%)	Have Multiple Jobs (%)
Work Requirement	0.752**	1.041	1.985***	-2.296**	1.291***	-0.517
	(0.302)	(0.700)	(0.729)	(1.048)	(0.376)	(0.425)
Is ABAWD	-2.650***	-6.063***	-6.145***	-1.107	9.487***	0.509*
	(0.199)	(0.473)	(0.480)	(0.680)	(0.342)	(0.280)
WR * ABAWD	0.321	1.931**	1.116	1.180	-0.778	-1.144**
	(0.355)	(0.822)	(0.860)	(1.198)	(0.534)	(0.495)
R^2	0.109	0.107	0.0877	0.0872	0.0759	0.0215
N	91548	96487	96487	36922	65987	59620

Includes controls for county unemployment, educational attainment, household size, marital status, disability status, and county and year fixed effects. Individuals above the poverty line or outside the work requirement age range (18-49) are removed from the sample. Standard errors in parentheses

* p<0.1, ** p<0.05, *** p<0.01

Of note is the positive association between the work requirement and the likelihood of working full-time, and the negative association between the rule and having multiple jobs. Full-time work is not a requirement; ABAWDs need only work 80 hours per month, which translates to only an average 20 hours of work per week. There is also no limit to how many jobs or other sources by which the requirement can be satisfied. Nevertheless, the persistence and, in some cases, statistical significance, of these relationships across approaches suggests that the requirement encourages some to seek the stability of full-time work or, at a minimum, a single job that will consistently provide the hours needed to meet the requirement. Given that higher wages and upwards advancement tend to result from consistent work over time, this is an encouraging result.

Less encouraging is the lack of a significant relationship with school attendance. Students in school on more than a half-time basis are exempt from all SNAP work requirements (and are therefore removed from my sample), but many working adults attend night classes part-time in pursuit of a high school, higher education, or vocational diploma (Food and Nutrition Service 2024b). The different approaches to identifying ABAWDs subject diverged in their estimation of the policy's effect on educational attainment, predicting a roughly 1 percentage point difference in either direction in the likelihood that the respondent was currently attending any school (see Appendix 1.2). This suggests that although there is not a strong trade-off between the additional hours of work mandated by the ABAWD work requirement and part-time school attendance, the policy also does not effectively encourage low-income ABAWDs to further their education. This

is a predictable but unfortunate outcome, given that time spent in class does not count towards the ABAWD work requirement, which I expand on in Section 5.2.5.

Unlike most food insecurity indicators, which tended to return to pre-work requirement levels after the first year, I find compelling evidence that the work-promoting effects of the policy not only remain constant but, in most cases, continue to grow in the long term. Here again, statistical significance varies by approach, but the cumulative effects of the policy tend to be quite meaningful. Particularly encouraging is the policy's correlation with a 3 percentage point higher likelihood of low-income ABAWDs' being employed or searching for a job. The consistency positive cumulative effects over time across approaches and measured work outcomes strongly suggests that although the food insecurity costs are relatively short-lived for most, the positive correlations with work outcomes tend to last.

Table 10: Effect on Labor Outcomes Over Time

	Hours Worked	Employed (%)	Work Full Time (%)	Look for Job (%)	Attend School (%)	Have Multiple Jobs (%)
Work Requirement	0.939***	1.380*	2.153***	-2.188**	1.480***	-0.844*
	(0.319)	(0.736)	(0.770)	(1.109)	(0.373)	(0.436)
Is ABAWD	-2.651***	-6.066***	-6.146***	-1.099	9.486***	0.511*
	(0.199)	(0.473)	(0.480)	(0.680)	(0.342)	(0.280)
WR 2+ Years	-0.801	-1.310	-1.058	0.863	-0.985	1.498**
	(0.511)	(1.163)	(1.220)	(1.723)	(0.615)	(0.729)
WR * ABAWD	0.105	1.415	1.197	0.0777	-0.890	-0.808
	(0.416)	(0.960)	(1.004)	(1.382)	(0.599)	(0.562)
WR 2+ Years * ABAWD	0.638	1.495	-0.161	3.084	0.361	-1.017
	(0.662)	(1.514)	(1.603)	(2.248)	(0.944)	(0.921)
Cumulative Effect	0.743	2.91	1.036	3.154	-0.53	-1.825
R^2	0.109	0.107	0.0877	0.0874	0.0760	0.0217
N	91548	96487	96487	36922	65987	59620

Includes controls for county unemployment, educational attainment, household size, marital status, disability status, and county and year fixed effects. Individuals above the poverty line or outside the work requirement age range (18-49) are removed from the sample.
Standard errors in parentheses
* p<0.1, ** p<0.05, *** p<0.01

4.3 Effects on Marriage

Welfare programs like SNAP often face criticism for their potential to create disincentives for marriage, stemming from benefit structures which provide greater financial support to nonmarried households compared to married ones, due to the way income eligibility is calculated. Neither SNAP nor the ABAWD work requirement speaks directly to marriage, but the work

requirement may discourage individuals from live together, and from marrying as a result, because benefits are issued at the household level (Food and Nutrition Service 2024d). So if anyone in a household of two was to fail to meet the work requirement, then both individuals would lose their SNAP benefits, whereas if they were living separately, then only the one who was not working enough would lose benefits. With this in mind, I test the relationship between waiver status and marriage rates among low-income ABAWDs to determine whether the work requirement discourages marriage. Table 12 shows the results of this analysis.

ABAWDs subject to the work requirement are 2.5 percentage points less likely to be married on average than ABAWDs covered by a waiver (see Table 12). The child identification approach predicted that after two years, the negative association grows slightly, though other approaches' predicted effects were only short run (see Table 35). It seems, then, that the work requirement significantly discourages cohabitation at least in the short run, likely due to the fact that if either household member fails to meet the ABAWD work requirement.

Table 11: Effect on Marriage Rates (% Likelihood)

Variables	Immediate Effects	2+ Years After Re-Implementation
WR	0.771	0.654
	(0.865)	(0.933)
Is ABAWD	-39.61***	-39.61***
	(0.456)	(0.456)
WR 2+ Years		-0.476
		(1.669)
WR * ABAWD	-2.518***	-2.354**
	(0.901)	(1.050)
WR 2+ Years * ABAWD		-0.476
		(1.669)
Cumulative Effect	-2.518	-2.83
R^2	0.0858	0.0858
Observations	93687	93687

Includes controls for county unemployment, educational attainment, household size, household income, disability status, and county and year fixed effects. Individuals above the poverty line, with children, or outside the work requirement age range (18-49) are removed from the sample.
Standard errors in parentheses
* p<0.1, ** p<0.05, *** p<0.01

4.4 Heterogeneous Policy Effects Robustness Check

Difference in difference regressions may have issues with accurately estimating the overall effects of policies like the ABAWD work requirement that vary in their implementation over time. Difference in differences regressions assume that the treatment group, in this case low-income ABAWDs subject to the work requirement, is uniformly affected by the introduction of the policy, but this is not always true; the same policy implemented at different times may have slightly different effects that can only be controlled for by time fixed effects.[15] To address this potential issue, I repeated parts of my analysis using estimators proposed by Chaisemartin and

Table 12: Food Security Effects with Heterogeneous Policy-Robust Regressions

	Coefficient	Standard Errors	Confidence Interval	Switchers
Food Insecurity Score	-1.104093	2.144407	[-5.30713, 3.098944]	1.14e+07
SNAP Enrollment	-7.109383	6.392762	[-19.6392, 5.420431]	8,985,039
Couldn't Afford Balanced Meals	-0.1296991	0.3646695	[-0.8444513, 0.585053]	1.17e+07
Short of Money for Food	0.0518841	0.098791	[-0.1417462, 0.2455144]	1.17e+07
Skipped Meals	-0.1941908	0.6318926	[-1.4327, 1.044319]	1.18e+07
Visited Food Bank	-0.1439419	0.2363186	[-0.6071263, 0.3192424]	1.17e+07

Includes controls for county unemployment, educational attainment, household size, household income, marital status, disability status, and county and year fixed effects. Individuals above the poverty line, with children, or outside the work requirement age range (18-49) are removed from the sample.
* p<0.1, ** p<0.05, *** p<0.01

Table 13: Labor Effects with Heterogeneous Policy-Robust Regressions

	Coefficient	Standard Errors	95% CI	Switchers
Hours Worked per Week	0.5256254	2.144011	[-3.676636, 4.727886]	1.13e+07
Employed (%)	1.666895	4.494389	[-7.142108, 10.4759]	1.19e+07
Work Full-Time (%)	2.413492	5.13062	[-7.642524, 12.46951]	1.19e+07
Look for Job (%)	-0.9609238	3.698086	[-8.209173, 6.287325]	1.19e+07
Attend Any School (%)	4.971542	4.854749	[-4.543766, 14.48685]	4.37e+07
Have Multiple Jobs (%)	-4.649907	2.820088	[-10.17728, 0.8774661]	6,725,944

Includes controls for county unemployment, educational attainment, household size, marital status, disability status, and county and year fixed effects. Individuals above the poverty line, with children, or outside the work requirement age range (18-49) are removed from the sample.
* p<0.1, ** p<0.05, *** p<0.01

[15] See Section 3.4 for a more in-depth discussion of how this issue relates to my study, and Chaisemartin & d'Haultfœuille (2021) or Callaway (2023) for a detailed overview of the problem more broadly.

d'Haultfœuille (2021) that are robust to these heterogenous policy effects to ensure my findings are not significantly biased by heterogeneous policy effects. Tables 13 and 14 display the results.

Unfortunately, these results cannot be compared directly to my findings in previous sections of the analysis; the heterogeneous policy effects regressions are incompatible with interaction terms, so the triple differences approach had to be abandoned in favor of a difference in differences model in which all non-ABAWDs were removed from the sample to isolate the policy's effect on ABAWDs. Between the much smaller sample and the much greater uncertainty that is inherent to these estimators, the standard errors on all tested estimators are so large that no coefficient is statistically significant. Importantly, this does not necessarily mean that the staggered implementation of the work requirement is such an issue that precise estimation of its effects is impossible. In fact, the wide variation in respondents' county of residence and the relatively uniform implementation of the policy makes this very improbable.[16] It is far more likely that most of the imprecision in the heterogeneous policy effects regressions is reflective of additional uncertainty associated with this model's relaxing of several key assumptions of the difference in differences model regarding parallel trends, uniform treatment, and treatment intensity, as well as its working with a sample half the size of the standard child regressions' sample.

In spite of this imprecision, there are important parallels between these estimates and the standard triple differences estimates. For example, most of the coefficients that tended to be significant in the standard triple differences models trend in the same direction in the heterogeneous policy effects regressions. The only surprises, such as the mostly negative coefficients on the food insecurity variables (indicating that the work requirement is associated with better food insecurity outcomes), the steep coefficient on SNAP enrollment, and the strongly positive relationship between the work requirement and school attendance, are the estimates for the effect on some variables that tended to be statistically insignificant and close to zero in the standard models. Given that each of these estimates are also very insignificant in the heterogeneous policy effects regressions, it is likely that these unexpected findings are simply the result of imprecision and not indicative of their true relationship with the work requirement. In sum, the

[16] Work requirement implementation is staggered across the period of analysis, but an outsize share of work requirement re-implementation occurred between 2015 and 2016; see Figure 3 and Appendix 2. Representation of respondents across nearly 400 counties should also help to mitigate some of the heterogeneous policy effects concerns because it introduces significant randomness into the model, which should produce to a relatively accurate overall estimate even if policy effects do vary widely by county and year.

tendency for the heterogeneous policy effects regressions to, despite their imprecision, align with the direction of the relationships estimated by the standard triple differences models lends support to the validity of the standard models, even in the presence of staggered policy implementation and the potential for heterogeneous effects.

4.5 Takeaways

I found strong evidence that the ABAWD work requirement is successful in achieving its goal of promoting work among the SNAP-eligible population. Statistical significance aside, most of these differences in employment outcomes for ABAWDs subject to the requirement compared to ABAWDs covered by waivers are relatively modest, but so too are the differences in the work specifications between the general work requirement, which applies to all individuals and counties regardless of waiver status, and the ABAWD work requirement. Given that the ABAWD work requirement does not typically amount to a significant increase in work above that which is mandated by the general work requirement, relatively small differences in work outcomes should be expected. These findings are consistent across estimation and identification approaches, typically statistically significant, and long-lasting. Regressions using the proportion waiver tend to identify a stronger association between the work requirement and better work outcomes, indicating that the policy's ability to promote work is even stronger when taking into account people residing outside of the larger areas for which respondents' county of residence was reported in the CPS. Furthermore, it is likely that these results underestimate the work requirement's full effects on labor market behavior. The CPS lacked data on respondents' volunteering behavior and job training program participation, so I was unable to test the requirement's effects on these outcomes. Since both of these behaviors count towards satisfying the ABAWD work requirement, it seems reasonable to assume that both would increase with the requirement's reimplementation, as with the other labor behaviors that I could measure.

Nevertheless, these positive outcomes come at a cost. Low-income ABAWDs experience food insecurity at slightly higher rates after the work requirement's implementation due to losing SNAP benefits, and this effect is especially concentrated among ABAWDs who work 10 or less hours per week on average. Most ABAWDs who are originally unable to find work after the requirement is re-implemented eventually do and regain their SNAP benefits, but long-term food insecurity costs continue to grow for those who don't. Again, these findings are consistent across

approaches, though statistical significance varies by population estimated and identification approach. Regressions using the proportion waiver once again typically identified a stronger association between the work requirement and worse food security outcomes, indicating that the policy's food-insecurity heightening costs are highest for those in more rural areas. I also find a significant positive association between the ABAWD work requirement and marriage rates, indicating that SNAP receipt without the work requirement has marriage-discouraging effects, though they are likely to be indirect.

5 Policy Discussion

5.1 Summary & Implications of Findings

My analysis of the effect of the ABAWD work requirement yielded strong evidence of an association between the work requirement and an increase in all work-related activities measured, including average hours worked each week, full-time work status, employment status, education enrollment, and more. I also found a smaller but at times significant relationship between the work requirement's implementation and heightened short-run food insecurity, especially among low-income ABAWDs who reported working ten or less hours on average each week. In practical terms, even statistically significant food security and work differences between work requirement and waiver counties tend to be relatively slim, but this makes sense given that the ABAWD work requirement demands only modestly more work for most SNAP-eligible ABAWDs than what is mandated by the general requirement. Only the changes in work outcomes appear to be long-lasting, with low-income ABAWDs in counties with a work requirement in place working substantially more on average over a year after its implementation compared to ABAWDs in waiver counties, but experiencing slightly worse food insecurity only in the first year after re-implementation. I also find that the work requirement is associated with statistically significantly lower marriage rates, indicating that the work requirement's current benefit structure discourages cohabitation strongly enough to influence ABAWDs' marriage decisions in a systematic way.

Importantly, the food insecurity estimates should not be thought of as the entire extent of the work requirement's harmful effects on those who do not or cannot work after its re-implementation. Food is a necessity of life, which means that especially for low-income individuals, many who lose SNAP will substitute most of their benefits with their own money. In

other words, they might not eat significantly less after they stop receiving benefits, because they can't survive by eating much less than they already were, but this will require them to spend more of their own money on food that would have gone to other important costs like housing, healthcare, or transportation had they remained SNAP-eligible. The estimates in this analysis only capture the food insecurity component, but this may not be the only mechanism by which the work requirement can harm low-income ABAWDs who do not find work, as the lack of SNAP benefits may lead to worse outcomes across the board, and not just heightened food insecurity, in this way.

Yet there is also reason to believe the work-promoting benefits are understated by the labor analysis section. The ABAWD work requirement can be satisfied by any combination of work for pay, job training participation, and volunteer work. My analysis provides a comprehensive exploration of the requirement's effects on the former, but limited data on the latter two made estimation of the work requirement's ability to promote them impossible. Nevertheless, it may be that the ABAWD work requirement's ability to promote work would be strongest for work not for pay, because this is the only option for low-income ABAWDs unable to find work to retain their SNAP benefits. All states are required to implement SNAP Employment and Training (E&T), a program that provides job training to SNAP recipients free of charge, and participation in this program counts towards the ABAWD work requirement (Food and Nutrition Service 2018). This therefore helps to make up the difference between the paid work low-income ABAWDs are able to find and what is required by the time limit, especially for those who cannot work at all, while equipping participants with skills to help find better-paying work by the end of the program.

Furthermore, it seems reasonable to assume that most low-income ABAWDs already work for pay about as much as they can with or without the work requirement, given that they are, by definition, low on financial resources. It follows, then, that many of those who are well short of the hours needed to qualify for SNAP due to limited employment opportunities might seek to make up the difference between the hours they currently work and the hours the time limit requires through volunteer service, given the amount of benefits on the line. And unlike paid work, which is always highly demanded and often exceeds supply, volunteer service is easy to find due to consistently higher supply than demand (Dietz and Grimm 2023). Given volunteer work's widespread availability and often unskilled nature, this may be the easiest way for low-income ABAWDs to meet the work requirement when opportunities for paid work are scarce, and as a result, the most reactive employment factor to the requirements reimplementation.

All in all, my findings show that the work requirement appears to mostly be working as intended in that it is associated with significantly better employment outcomes among low-income ABAWDs. However, it is coming at the cost of modestly heightened food insecurity among those who do not satisfy the requirement. The remainder of this section identifies possible areas of improvement for the policy that may help to either maximize the policy's ability to encourage work-related behaviors while reducing its tendency to increase food insecurity among those unable to work.

5.2 Policy Recommendations

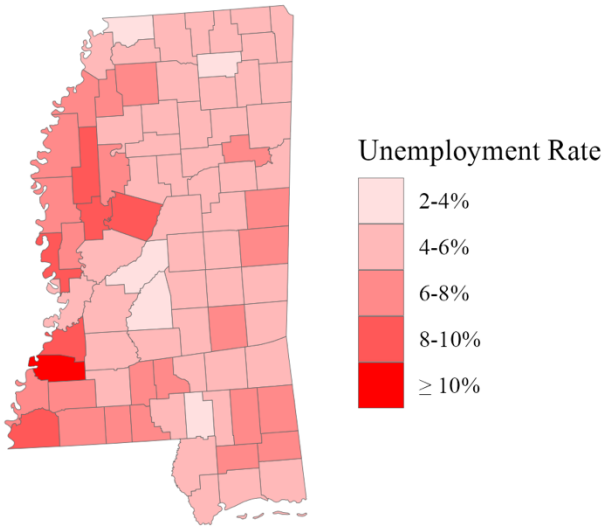
5.2.1 Implementing Waivers Federally

With the understanding that there are significant tangible benefits to ABAWDs and to the broader economy when the work requirement is properly implemented and enforced, it is important to ensure that the requirement is in place wherever jobs are freely available. Yet the work requirement can only be effective when there are sufficient opportunities to work, and my analysis demonstrates the costs to ABAWDs are highest when they are unable to work enough to meet the rule's 80 hour per month threshold. As such, it is imperative that waivers to the work requirement be implemented wherever there exists a shortage of jobs, but no place else. Federal guidelines for waiver implementation are clearly designed to find this balance, but even a cursory glance at the way states are actually implementing waivers reveals that these guidelines afford states too much flexibility to implement (or not implement) waivers based on partisan interests rather than demonstrated need (see Figure 8).

As I expand on in Section 2.1, states may request year-long waivers to the ABAWD work requirement for any area within their borders that the state can prove has had a recent 12-month period of average unemployment above 10% or has a 24-month average unemployment rate 20 percent above the national average for the same 24-month period (Time Limit for Able-Bodied Adults). The process for acquiring a waiver is well-designed to ensure waived counties meet at least one of these criteria; state governments must submit formal requests to the FNS providing evidence that each requested area has met at least one of these criteria, and requests with insufficient evidence are occasionally denied (Food and Nutrition Service 2024a). However, the criteria themselves are overly broad and leave ample room for partisan abuse.

For instance, requesting a waiver at all is a purely voluntary action by state agencies. States can choose not to request any waivers at all, and all otherwise SNAP-eligible ABAWDs will be subject to the ABAWD work requirement regardless of how difficult it might be to find employment. In 2018, for example, despite most of its counties individually qualifying for a waiver,[17] and high unemployment rates in many counties (see Figure 6), Mississippi chose not to request waivers for the following year. As a result, all low-income ABAWDs had to meet the work requirement in 2019 or lose their SNAP benefits.

Figure 6: Mississippi County Unemployment Rates in 2018



Source: BLS Local Area Unemployment Statistics, annual averages

This ability to choose not to request waivers for areas without regard for the availability of work produces inconsistent outcomes that are fundamentally unfair and, at times, deeply counterintuitive. I have shown that the ABAWD work requirement is effective when jobs are freely available to anyone who can work, but when opportunities to work are severely limited as in high unemployment counties, it can only serve to deny food assistance to those who, at no fault of their own, are unable to find employment. It is rather harsh, therefore, to make work a condition for food assistance in areas as in parts of Mississippi in 2019 (see Figure 6), for example, where unemployment exceeds 12%, and without clear benefits. It also makes little sense to expect that

[17] In 2017 and 2018, the annual average national unemployment rate was 4.4% and 3.9%, respectively, or about 4.2% on average for both years, so 20% above the national rate for this time range would have been about 5%. 75% of Mississippi's 84 counties in 2017 and 63% in 2018 had unemployment rates above 5% (Federal Reserve Bank of St. Louis 2024b, U.S. Bureau of Labor Statistics n.d.).

low-income ABAWDs find work in these very high unemployment counties, but not in some counties in other states in the same year where unemployment is just above 2%.

This change may be objectionable to some who favor greater state and local involvement in policymaking, but given that SNAP is a federally funded and implemented program, and that states already must gain FNS permission to implement waivers, this would not be a much of an increase in federal oversight of the program. States interested in acquiring waivers are already required to submit county-level unemployment data to the federal government for approval, so it would not be a major administrative burden to simply require that all states do so regardless of their interest in waivers and then have the FNS decide which counties would remain subject to the requirement based on that data. Requiring only a small change to the waiver approval process, federal implementation of waivers would ensure that low-income ABAWDs are only required to work where employment is available, regardless of their state of residence, and guarantee consistency in work expectations nationally, provided that guidelines are kept consistent from year to year.

The USDA under the Trump administration released a plan at the start of 2020 to implement a new rule that would enact some of these changes. Among other modifications, the proposed rule would have barred states from requesting waivers for groups of counties by limiting states' waiver requests to individual Labor Market Areas (similar to a counties) and limited waiver approvals to areas with unemployment rates above the natural rate of unemployment or greater than 5% (National Conference of State Legislatures 2024). The rule's enactment was delayed by the mass unemployment resulting from COVID-19 shutdowns, and ultimately abandoned by the Biden administration. Insofar as it cracked down on many of the practices states have used to waive the work requirement in areas that would not or should not have individually qualified, many of these changes are a step in the right direction. However, to ensure these additional limitations on areas that can qualify for waivers do not cause heightened food insecurity among low-income ABAWDs who are unable to find work, they should be accompanied by measures to ensure a waiver is being implemented in all counties where work is difficult to find, even in states that are more partial to work requirements.

5.2.2 Modifying the Local Area Eligibility Criteria for Waivers

On the other end, states have complete freedom to decide how to define what is considered an area for each waiver request. This vagueness was likely in recognition of the fact that smaller

areas than counties, such as cities or Native American reservations, may experience very unique economic circumstances, and intended to afford states the flexibility to request waivers for these smaller areas but not the counties that contain them, or vice versa. What many states opposed to implementing the work requirement have taken to doing instead, however, is lumping multiple counties that individually have unemployment rates too low to qualify for a waiver together with counties whose unemployment rates vastly exceed one of the unemployment criteria that year, and requesting a waiver for the entire group. The one county with the high unemployment rate raises the group's collective unemployment rate, and as a result, all of the counties in the group qualify for a waiver. In this way, states are able to in essence gerrymander together counties to ensure the maximum number of low-income ABAWDs qualify for a waiver, regardless of how few of them actually face the scarcity of jobs that the waiver is intended to counteract.

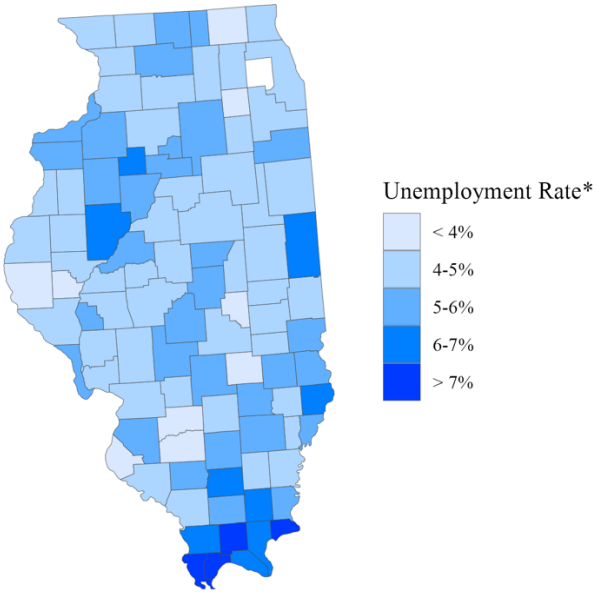
The solution to this issue should not be to limit waiver requests to individual counties, because it makes sense for states with Native American reservations or large cities to implement a waiver for these units instead of the counties that contain them given the potential for large differences in their labor markets compared to their surrounding counties. However, allowing states to request a waiver for multiple counties collectively is unnecessary and leaves too much room for states like Illinois in 2019 take advantage of very high unemployment rates in a handful of counties to bring up the average rate for the group and qualify low-unemployment counties for waivers too. Policymakers should require states to justify waiver requests for each entity, be it a county, city, town, or reservation, separately, so that only the areas actually experiencing high unemployment qualify for a waiver to the work requirement.

5.2.3 Requiring Recent Data to Justify Waiver Requests

States can also rely on old data to receive waivers for counties whose economic state has since improved. States are directed to provide "recent" evidence in their waiver requests, but they are also required to justify their requests with 24 months of unemployment data (Time Limit for Able-Bodied Adults). The combination of a lack of specific guidance on what qualifies as recent evidence and of the requirement of 24 months of data in practice, therefore, has led the FNS to grant waiver requests based on outdated data where more recent data would not have justified the request. Illinois, for example, was granted a waiver in all but one county for calendar year 2019 based on unemployment data going back to January 2016 (Food and Nutrition Service 2024a). Three-year-old data is not predictive of unemployment rates today, especially in the aftermath of

a recession; as unemployment fell from Great Recession levels, with a national unemployment rate of 9.6% in 2010 to 3.7% in 2019, older data typically reflected much higher average unemployment rates than newer data, and Illinois was no exception (Federal Reserve Bank of St. Louis 2024b). Despite only a handful of counties in Illinois experiencing unemployment rates low enough to individually qualify for a waiver by 2018 when Illinois submitted its 2019 waivers request,[18] the combination of older data and the ability to request waivers for groups of counties enabled the state to waive the work requirement almost entirely (see Figure 7).

Figure 7: Illinois County Unemployment Rates in 2018



*DuPage County (upper-right corner) is excluded because it was the sole county without a waiver in 2019

Policymakers should therefore consider amending the evidence requirements for waiver requests to accept only the most recent year's worth of unemployment data. To some extent, relying on old data is inevitable because it takes time for states to calculate unemployment rates for a given month. But it is senseless to require two full years of data, and especially to accept anything other than the most recent two years. 12 continuous months of an area's exceeding whatever unemployment limit has been set in a given year to qualify for a waiver is ample proof to demonstrate that unemployment is higher than average. In the examples above, states used steadily falling unemployment to make current average unemployment rates appear higher than they really were, but it is easy to imagine the opposite being true if unemployment were to rise for a sustained period of time. In either case, this loophole limits the extent to which the waiver can be effective

[18] By 2019, Illinois' annual average unemployment rate was 4.0%, down from 5.9% in 2016 (Federal Reserve Bank of St. Louis 2024a)

in states where partisan interests win out. Policymakers interested in maximizing the work requirement's effectiveness, therefore, should consider changes like reducing the amount of required unemployment data and limiting the time frame from which it is acceptable.

5.2.4 Setting an Absolute Minimum Unemployment Rate for Waivers

Finally, even if states are not deliberately bending the rules to minimize the number of ABAWDs subject to the work requirement, the 20% criterion in particular dulls the extent to which the work requirement can be effective when the economy is performing well. In 2019, for example, the U.S. faced record-low unemployment rates of just 3.3% (Federal Reserve Bank of St. Louis 2024b). Any area with an unemployment rate of just under 4% in 2019, therefore, was 20% above the national average rate and would have therefore qualified for a waiver the next year. Yet 4% is still a very low unemployment rate by any standard, speaking to a booming economy, and, as a result, an abundance of available jobs. The lack of an absolute minimum unemployment rate that may qualify an area for an ABAWD waiver, therefore, means that large portions of the country will always be eligible for a waiver no matter how well the economy is performing.

Figure 8 illustrates the problem nationally. Using 4.5% as a baseline "low" unemployment rate and 6.5% as the "high" unemployment rate, I compare county waiver status to its unemployment rates to examine trends in implementation. Counties without highlighting either had high unemployment rates and a waiver or low unemployment and no waiver; these are counties whose waiver status was appropriately implemented based on these statistics. Red counties, meanwhile, had high unemployment rates but did not receive a waiver, while blue counties had low unemployment rates but received a waiver anyway. These are counties whose waiver status was inappropriate, or not aligned with their unemployment rate.

Of course, these specific unemployment numbers are arbitrary and do not adhere in any of the guidelines the FNS currently uses to grant or deny waiver requests. But the resulting map clearly illustrates the point that multiple years'-old data is not reflective of current unemployment rates, and abuse of this and other flaws in the waiver implementation process is widespread and deeply partisan. Nearly all states overusing ABAWD waivers in counties with low unemployment rates had Democratic governors, and the opposite is also true of the states underusing them in high-unemployment counties. Due to the lack of an absolute baseline unemployment rate for waiver approval and the other loopholes in the waiver request process, it is too easy for states to overuse

Figure 8: 2019 Waiver Status Compared to County Unemployment Rates[19]

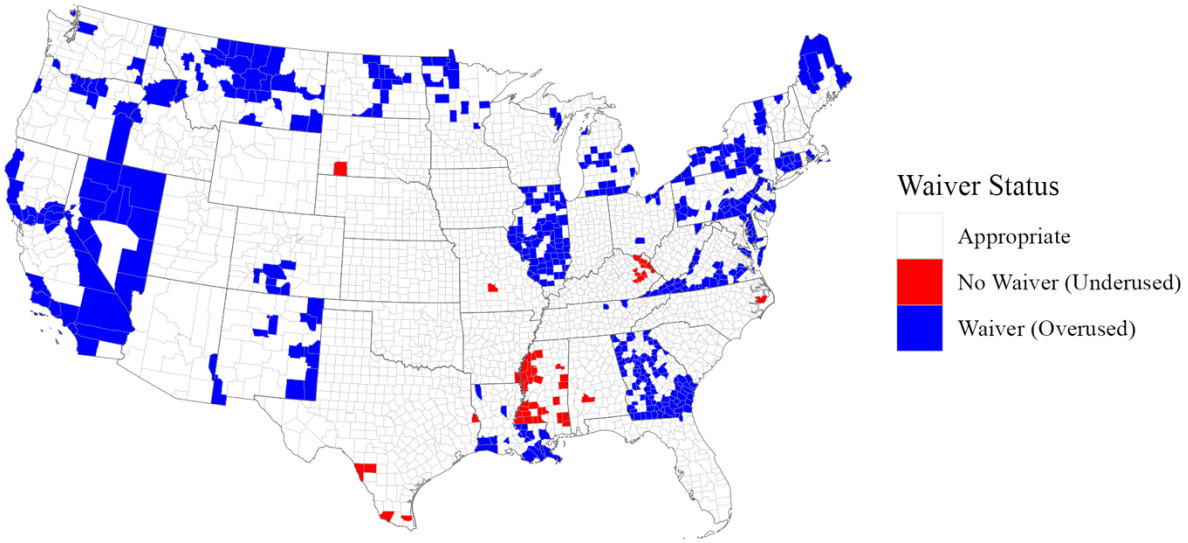
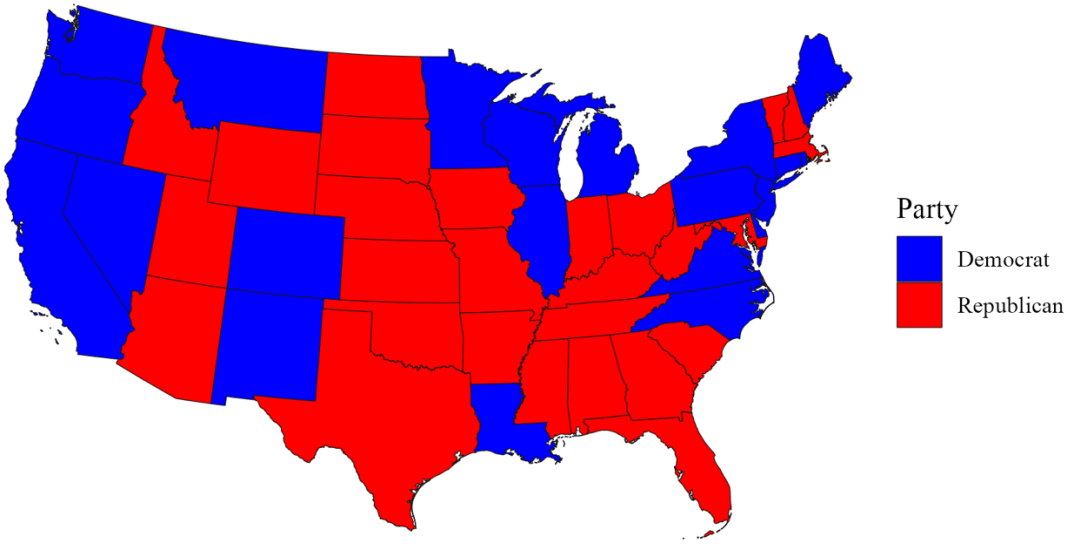


Figure 9: 2019 Governors' Political Affiliation



or underuse waivers for partisan reasons rather than based on would benefit SNAP-receiving ABAWDs the most.

Luckily, a few relatively simple changes to the waiver application and approval process would go a long way in fixing the issue of waiver over- and under-utilization. Policymakers interested in ensuring the ABAWD work requirement is maximally effective at the lowest cost to ABAWDs should consider, for example, adding an absolute minimum unemployment rate for

[19] See Appendix 2.2 for similar breakdowns of county waiver status compared to employment rates for each year in the dataset, 2010-2019

which an area can be eligible for a waiver to the 20% criterion. Areas would remain eligible for a waiver as long as they can demonstrate a recent sustained period of unemployment exceeding 20% above the national average, and, for example, 5% (or any other low unemployment rate) overall. In this way, the unemployment rate qualifying counties for a waiver would continue to change with national trends until national unemployment becomes so low that 20% above the national rate is still less than 5%, as in 2019.

Alternatively, policymakers could abandon the relative waiver-qualifying unemployment rate altogether and stick with a single absolute rate. It makes little sense anyway that a county experiencing 5% unemployment in 2012 would not have qualified for a waiver because the national unemployment rate was so high that year, but the same county in 2019, when the national average was much lower, would. Certainly, these rates are different with respect to the national average, but in both cases, the availability of jobs in that area for the average low-income ABAWD is the same, and this seems a more relevant measure than the somewhat arbitrary comparison to what is going on in the rest of the country. In either case, an absolute benchmark of some kind is needed to ensure that the work requirement can remain effective even when national unemployment rates are very low.

5.2.5 Education and the ABAWD Work Requirement

Currently, the 80 hours of monthly work required by the ABAWD time limit can be met by any combination of work for pay, volunteer service, or participation in a job training program (2024b). Certainly these are each important behaviors that are worth promoting, but policymakers should consider adding education to the list. The inclusion of job training program suggests that policymakers are interested in encouraging low-income ABAWDs to equip themselves with skills that will improve their future employment prospects, and the evidence is clear that individuals who have completed high school, community college, trade school, or college have significantly and increasingly higher earnings, respectively, than individuals without any diploma (National Center for Education Statistics 2023). As such, it makes little sense not to encourage working towards any of these degrees by counting time spent doing so towards the work requirement. Students attending college on a more than half-time basis are exempt from all SNAP work requirements, but this is an expensive commitment that is not realistic for most low-income individuals, and which itself comes with its own set of rules and restrictions (Food and Nutrition Service 2023d). Policymakers should ensure ABAWDs are encouraged to take whatever steps needed to maximize their

employable skillsets and future earnings by allowing ABAWDs to count all time spent in classes, whether in a traditional full-time basis or once-weekly night classes, towards the work requirement.

5.2.6 Expanding the 3-Month Work Requirement Exemption

The long-term analysis of the food security effects of the ABAWD work requirement demonstrates that although there are notable average short-run food security costs immediately after the work requirement is re-implemented, this effect typically vanishes by the end of the first full year without a waiver (see Table 5 in Section 4.1 and Appendix 1.1 for full results). This is true of most composite food security score, individual food security component, and SNAP enrollment estimations. This suggests that most people who become subject to the time limit do eventually find the work needed to satisfy it and regain their program benefits within the first year of re-enactment, but that it often takes longer than the three-month grace period that the policy affords low-income ABAWDs after the rule takes effect.

It is difficult to estimate exactly how long on average it takes most ABAWDs who initially fail to meet the work requirement to do so with this study's dataset because the FSS reports data from December of each year only, and most states' waivers expired at the end of the fiscal year (three months before December) or at the start of the calendar year (twelve months before December). However, it follows that in general, if it takes a sizeable share of low-income ABAWDs more than three months to find enough work to satisfy the 80 hour per month minimum, then many people should benefit by seeing the three-month grace period expanded. Policymakers should consider this, or, at a minimum, more advanced notice that the re-implementation of the work requirement is imminent to all affected individuals, to give low-income ABAWDs enough time and flexibility to meet it without a pause in their benefits. Hopefully, this change would maintain the work-promoting effects of the policy while greatly minimizing the food insecurity-heightening costs. They should also avoid expanding the three-month grace period too much, however, as this might induce some affected ABAWDs to put off searching for more work until the deadline draws closer and therefore delay the requirement's work-promoting effects.

5.2.7 Eliminating the Cohabitation Penalty

The ABAWD work requirement does not explicitly discourage marriage directly, but the work requirement penalizes two individuals living together nearly twice as much as if they were

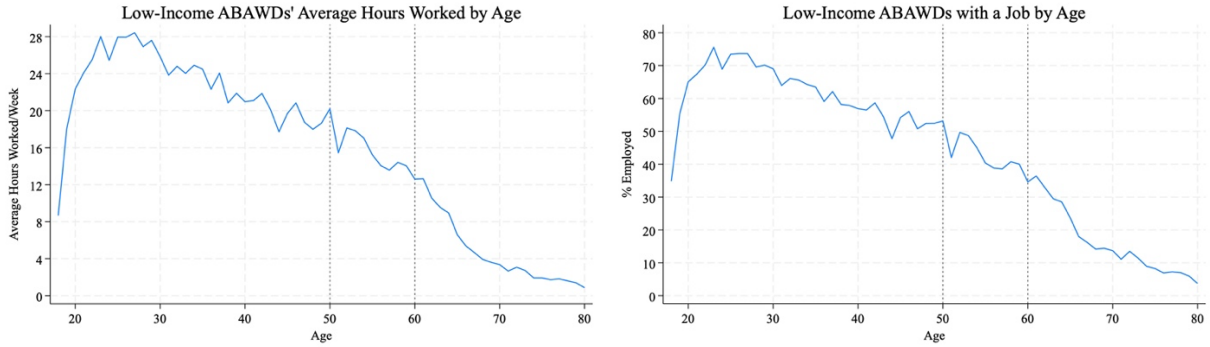
to live apart (Food and Nutrition Service 2024d). As Section 4.4 shows, this amounts to a substantial disincentive to marry, with ABAWDs subject to the work requirement a statistically significant 2.5% less likely to be married than those covered by a waiver. The empirical literature is clear that marriage is associated with improved health, economic, psychological, and other outcomes, both for married individuals and especially for their children (Schwartz 2008; Kearney and Levine 2017). Policymakers should therefore consider eliminating the ABAWD work requirement's marriage penalty by calculating benefits on the individual rather than household level to ensure that two-person households are not treated differently than two individuals living separately.

5.2.8 Raising the Work Requirement Age

For the duration of this analysis, the ABAWD work requirement has only applied to individuals ages 18-49. However, the Fiscal Responsibility Act of 2023 raised the age time limit to 52, and it is scheduled to increase again to age 54 in October 2024 under the same law (Food and Nutrition Service 2024b). This change probably makes sense because it is hard to imagine that these age groups have significantly different work abilities than 49-year-olds. Furthermore, SNAP's general work requirement already applies to all adults up to age 59, and the retirement age in the U.S. is not until age 67. Still, as individuals get older, the number of jobs that they are physically able to consistently perform for 80 hours per month shrinks, and for whom the adverse health and mortality consequences associated with employment gaps are already highest (Kezios et al. 2023). This is especially true of low-income individuals, who are disproportionately likely to work in more physically demanding industries (U.S. Bureau of Labor Statistics 2020). Policymakers wishing to maximize work among SNAP-receiving ABAWDs should therefore carefully weigh these potential benefits against the added risks to more elderly populations in addition to the general food insecurity costs associated with the policy.

It does seem, however, that there is some additional room for raising the work requirement age even further without any more significant food security or other costs to this population than younger low-income ABAWDs already subject to the policy. Figure 10 displays the average number of hours worked each week and employment status of low-income ABAWDs in work requirement counties by age:

Figure 10: Employment Outcomes for Low-Income ABAWDs in Work Requirement Counties, 2016-2019



Source: Flood et al. 2023. IPUMS CPS: Version 11.0. Minneapolis, MN: IPUMS. https://doi.org/10.18128/D030.V11.0.

After accounting for the initial drop in both hours worked and overall employment that likely results from becoming exempt from the ABAWD work requirement at age 50, averages in these employment outcomes are not significantly different for individuals aged 60 than for 51-year-olds. This suggests that extending the requirement to this group could significantly improve work outcomes for this group without significant additional costs. After age 60, however, work outcomes drop off significantly, and although some of this decrease may be attributable to the expiring of SNAP's general work requirement, much of it is also probably due to physical difficulties associated with being older. It is highly likely, then, that extending the work requirement to ABAWDs ages 60 and above would have far steeper costs than benefits, as an increasing share of this population would face physical limitations to meeting the requirement in addition to economic ones. There may be some benefits, therefore, to extending the ABAWD work requirement up to age 59 like the general SNAP work requirement, but going beyond this point would probably hurt far more individuals than it helps.

5.3 Limitations and Future Research

Although this analysis contains several major improvements on existing analyses of the ABAWD work requirements, it still suffers from a number of flaws, largely due to a lack of data, that deserve attention in future research. As I expand on in Section 5.1, for example, data limitations prevented the estimation of the work requirement's effects on several relevant measures of labor behaviors, like volunteer hours and job training participation, and non-discretionary spending on outcomes other than food insecurity. A study that included these measures, though,

would provide a more comprehensive understanding of the work requirement's overall effects, because the short-term nature of the work requirement's estimated food insecurity effects is ambiguous from the data that I do have. The work requirement's association with heightened food insecurity only in the short run could be due to re-enrollment in SNAP by individuals initially unable to find work, or it could be due to those still unable to find enough work to requalify for SNAP shifting their spending away from important priorities to ensure they are able to eat enough.

Furthermore, in order to ensure respondents' identities cannot be determined from their answers, publicly available surveys like the CPS typically only report the county of residence for respondents living in highly populated areas like large cities. For this reason, any findings calculated using the standard waiver variable may not accurately capture the effect of the work requirement outside of these areas, which tend to be importantly different than others in terms of, for example, the availability of nearby employment opportunities, transportation, food banks, and other relevant resources. This is one of the primary reasons why calculations using the proportion waiver variable are relevant; because this variable uses state-level data, the resulting estimates incorporate respondents from all regions. However, this variable has its own problems, in that it is less precise at identifying waiver status and cannot be used to estimate long-term effects. My findings could more easily be universalized, therefore, if more granular data on respondents' place of residence were to become available.

Another minor consideration that my study, and probably any other study on this on the ABAWD work requirement, will be unable to address is the issue of states' ability to extent SNAP eligibility for an additional month for up to 15% of individuals subject to the work requirement each year (Food and Nutrition Service 2018). Likely because these exemptions are distributed on an individual basis, I was unable to find any consistent documentation throughout the period of analysis. The length of these exemptions is just one additional month per individual, so it is unlikely that failing to account for them would significantly bias my results. Nevertheless, by extending a handful of low-income ABAWDs' exemptions to the work requirement in counties without a waiver, this policy has likely led my analysis to slightly understate the work requirement's effects, both positive and negative.

Finally, although my approach to identifying individuals subject to the work requirement is a major improvement over existing studies in that it does not rely on self-reporting in publicly available surveys that are known to broadly misidentify true SNAP recipients, it does not fully

resolve the issue of endogeneity. Waiver status is in principle driven by worse economic conditions, and these same economic conditions also serve to heighten food insecurity. To compare counties with a waiver to counties without one, therefore, is also to an extent to compare counties with inherently different economic conditions. As a result, it is difficult to isolate the food security and labor effects of the waiver itself from the effects of the worse economic conditions that are correlated with waiver status. Worse still, because the relationship between waiver status and worse economic circumstances is inherent to the way waivers are approved, this is an issue that will plague any study of this work requirement.

To a great extent, I am able to mitigate this concern. For example, although counties' unemployment rates are far from a perfect measure of overall economic health, they are the sole measure that the FNS will accept as justification for waiver requests. Including them as a control variable, therefore, will go a long way in addressing the issue of endogeneity between having a waiver and economic health. Controlling for household income also helps because the primary mechanism by which poor economic circumstances would serve to worsen food insecurity specifically is by making opportunities to earn money to spend on food harder to come by. By including a variable for varying levels in income, I am able to pick up this variation without letting it influence my model's calculation of the waiver's effects on food security or labor decisions. The inclusion of county and year fixed effects can also help to considerably alleviate endogeneity related to economic circumstances; year fixed effects control for any broader national trends, such as those related to the national recovery from the Great Recession, and county fixed effects take out economic variation within counties that remains constant over time. Most importantly, the third difference of the model controls for variation in the dependent variable that is systematic across work requirement counties but which is felt by both ABAWDs and non-ABAWDs. This component specifically is able to separate out the effects on the dependent variable caused by the local economic circumstances that may drive counties to apply or waive the work requirement from the effects of the work requirement itself. In doing so, it mitigates most of the confounding variation that has plagued other studies attempting to determine the policy's effects.

Unfortunately, this does not fully resolve the problem; for example, economic downturns affect everyone, and those effects that are shared by non-ABAWDs are separated out from the interaction term by the standalone work requirement variable. But these downturns may affect ABAWDs who are subject to the work requirement more strongly than non-ABAWDs because if

they are unable to find the full 80 hours of work each month, they lose their SNAP benefits in addition to suffering from the same heightened food insecurity that is shared by all low-income individuals in the same local area. Without the ability to control for this variation in the dependent variable that is associated with being subject to the work requirement but really caused by economic factors, the interaction term will attribute these factors to the work requirement and generalize its differential effects in periods of worse economic circumstances to all time periods. As a result, the estimated food security costs of the policy would be exaggerated.

Arguably, this is not a major cause for concern; although these economic factors that affect ABAWDs disproportionately may not be directly caused by the work requirement and only occur under certain conditions, they are still a consequence of its implementation and should therefore be a consideration when predicting the policy's likely effects. Furthermore, as I discuss at length in Section 5.2, the areas with the worst economic conditions are not always the areas that receive waivers to the work requirement.[20] Over the period of analysis, many states uninterested in waiving the work requirement have kept it in effect even in counties with worse than average economic circumstances, and states opposed to the work requirement to have waived it even in counties whose economies are outperforming most others that year. To be sure, there is still significant overlap between worse economic circumstances and waiver status because most states have stayed reasonably close to the policy's intent of keeping the work requirement in areas with ample opportunities to work and waiving it in areas without them. But the considerable variation in waiver status even among very high and very low unemployment counties helps to alleviate this concern substantially because the unemployment variable will be far more successful in removing this variation from the estimated effects of the policy. The differential effects of economic factors on ABAWDs subject to the work requirement are still a potential source of variation that my model is unable to separate from the policy's direct effects and that as a result may bias the findings. But between the variation in waiver status across all sorts of local economic circumstances and the empirical approaches I have taken to correct for endogeneity in the waiver variable, the results of my analysis should be meaningful even in the face of this issue, if imperfect.

[20] The correlation between waiver status and county unemployment was only moderate (0.56 Pearson correlation), and, controlled for state and year fixed effects and political status, a one percentage point increase in a county's unemployment was only associated with an average 3.2% increase in its probability of having a waiver. Variation in county-level unemployment only accounted for 31% of the variation in waiver status.

6 Conclusion

In this study, I estimate whether and to what extent the SNAP ABAWD work requirement is effective in promoting work among low-income ABAWDs, and to what extent it heightens food insecurity by reducing program enrollment. I find that ABAWDs subject to the work requirement are 1 to 5 percentage points more likely to engage in employment-related behaviors like searching for a job, working at all, and working full-time, but are also between 1 and 4.5 percentage points less likely to be enrolled in SNAP and 0.1 and 0.3 (out of 100) points more food insecure on average than those covered by a waiver to the policy. Most increases in average work outcomes continue to grow several years after the work requirement's re-enactment, while the modestly higher food insecurity outcomes associated with the policy tend to return to pre-work requirement levels by the end of the first year after the policy's enactment. These findings are consistent across several identification approaches. Further research with better data is needed to determine the policy's exact effect on SNAP enrollment and certain other work-related behaviors like job training program participation and volunteering, and to shed more light on the short-term nature of its food insecurity effects.

In summary, the work requirement is associated with better work outcomes, but with some costs to ABAWDs who are unable to find employment. These outcomes can be improved by modifying the criteria by which areas become eligible for a temporary waiver to the work requirement to reduce partisan abuse, allowing ABAWDs covered by the policy to count hours spent in school towards the requirement, and expanding the amount of time ABAWDs are allotted to find sufficient work to meet the requirement before they lose benefits.

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Appendix 1 Complete Regression Tables

Each set of regressions uses a combination of interaction terms and dropped observations to identify the effect of the work requirement on ABAWDs. The poverty identification approach uses an interaction term to separate ABAWDs below the poverty line from those just above it, and all individuals with children or outside of the work requirement age range (18-49) are dropped. The child identification approach uses an interaction term to separate individuals with children from individuals without children, and all individuals above the poverty line or outside of the work requirement age range are dropped. Finally, the age identification approach uses an interaction term to separate individuals ages 30-49 from individuals ages 50-64, and all individuals above the poverty line or with children are dropped. Two different approaches are also used to identify work requirement status. The standard waiver is a binary variable indicating whether the respondent lived in a county where the work requirement was in effect that year, and those who did not identify a county of residence (usually those living in sparsely populated areas) were not included in the sample. The proportion waiver is a continuous variable designating the percentage of the respondent's state's SNAP population covered by a work requirement that year. Because all respondents identified a state of residence, these regressions included the full sample of low-income ABAWDs.

Appendix 1.1 Food Insecurity Regression Results

Table 14: Effect on Food Insecurity Score

	Poverty Status Identification			Child Identification			Age Identification		
	Standard Waiver	Proportion Waiver	Standard Waiver + Lag	Standard Waiver	Proportion Waiver	Standard Waiver + Lag	Standard Waiver	Proportion Waiver	Standard Waiver + Lag
Work Requirement (WR)	-0.000659	0.0785	-0.120	-0.364	0.127	-0.404	0.426	0.838*	0.554
	(0.146)	(0.139)	(0.148)	(0.288)	(0.269)	(0.296)	(0.521)	(0.483)	(0.558)
Is ABAWD	6.817***	6.778***	6.814***	-0.621***	-0.705***	-0.621***	0.336	0.413	0.333
	(0.148)	(0.142)	(0.148)	(0.179)	(0.177)	(0.180)	(0.271)	(0.260)	(0.271)
WR 2 Years	-	-	0.419**	-	-	0.120	-	-	-0.815
			(0.201)			(0.485)			(0.783)
WR * ABAWD	-0.553**	-0.152	-0.365	0.0906	0.297	0.178	0.189	0.284	0.221
	(0.282)	(0.286)	(0.326)	(0.303)	(0.297)	(0.351)	(0.531)	(0.527)	(0.636)
WR 2 Years * ABAWD	-	-	-0.465	-	-	-0.248	-	-	-0.0572
			(0.518)			(0.559)			(0.960)
Unemployment Rate	-0.00392	0.0379	-0.0119	-0.0388	0.0300	-0.0389	0.00484	0.0799	0.0172
	(0.0457)	(0.0423)	(0.0462)	(0.0749)	(0.0693)	(0.0750)	(0.121)	(0.113)	(0.121)
Household Size	-0.403***	-0.383***	-0.403***	0.115**	0.138**	0.116**	-0.272**	-0.189*	-0.271**
	(0.0430)	(0.0421)	(0.0430)	(0.0574)	(0.0544)	(0.0574)	(0.118)	(0.112)	(0.118)
Married	-1.289***	-1.286***	-1.288***	-2.238***	-2.407***	-2.238***	-2.471***	-2.482***	-2.476***
	(0.0888)	(0.0830)	(0.0888)	(0.162)	(0.151)	(0.162)	(0.271)	(0.253)	(0.271)
Has Disability	6.162***	6.142***	6.159***	8.173***	8.230***	8.173***	8.061***	8.268***	8.063***
	(0.249)	(0.226)	(0.249)	(0.285)	(0.260)	(0.285)	(0.300)	(0.277)	(0.300)
Education Level	-0.0645***	-0.0627***	-0.0645***	-0.0657***	-0.0656***	-0.0657***	-0.0639***	-0.0638***	-0.0638***
	(0.00218)	(0.00200)	(0.00218)	(0.00330)	(0.00307)	(0.00331)	(0.00586)	(0.00546)	(0.00587)
Family Income	-	-	-	-0.0101***	-0.0103***	-0.0101***	-0.0137***	-0.0134***	-0.0137***
				(0.000462)	(0.000430)	(0.000462)	(0.000717)	(0.000669)	(0.000717)
Constant	10.19***	9.575***	10.30***	21.63***	21.07***	21.63***	22.86***	21.68***	22.67***
	(0.502)	(0.464)	(0.510)	(0.837)	(0.774)	(0.840)	(1.341)	(1.246)	(1.351)
R^2	0.139	0.137	0.139	0.0858	0.0846	0.0858	0.113	0.110	0.113
Observations	134993	161738	134993	93687	113016	93687	38723	46512	38723

Standard errors in parentheses
* p<0.1, ** p<0.05, *** p<0.01

Table 15: Effect on Food Insecurity Score for ABAWDs Working < 10 Hours/Week

	Poverty Status Identification			Child Identification			Age Identification		
	Standard Waiver	Proportion Waiver	Standard Waiver + Lag	Standard Waiver	Proportion Waiver	Standard Waiver + Lag	Standard Waiver	Proportion Waiver	Standard Waiver + Lag
Work Requirement (WR)	-0.480	-0.0158	-0.273	-0.780*	0.207	-0.647	1.217	1.967***	1.210
	(0.423)	(0.390)	(0.449)	(0.465)	(0.435)	(0.483)	(0.780)	(0.705)	(0.824)
Is ABAWD	8.584***	8.471***	8.588***	-0.323	-0.601**	-0.325	0.548	0.488	0.550
	(0.255)	(0.246)	(0.255)	(0.286)	(0.276)	(0.286)	(0.400)	(0.385)	(0.400)
WR 2 Years	-	-	-0.712	-	-	-0.557	-	-	-0.399
			(0.621)			(0.753)			(1.157)
WR * ABAWD	0.636	1.277**	0.412	1.525***	1.664***	1.366**	0.351	0.363	0.704
	(0.536)	(0.543)	(0.644)	(0.523)	(0.522)	(0.625)	(0.835)	(0.831)	(1.013)
WR 2 Years * ABAWD	-	-	0.568	-	-	0.476	-	-	-1.088
			(1.001)			(0.972)			(1.512)
Unemployment Rate	-0.0699	0.00107	-0.0602	-0.0672	0.00256	-0.0625	-0.190	-0.131	-0.179
	(0.113)	(0.105)	(0.114)	(0.119)	(0.111)	(0.120)	(0.171)	(0.162)	(0.171)
Household Size	-1.000***	-0.966***	-1.000***	-0.0390	-0.0309	-0.0391	-0.771***	-0.612***	-0.770***
	(0.0819)	(0.0771)	(0.0819)	(0.0854)	(0.0786)	(0.0854)	(0.152)	(0.146)	(0.152)
Married	-2.497***	-2.473***	-2.498***	-2.154***	-2.410***	-2.155***	-2.861***	-2.939***	-2.867***
	(0.276)	(0.257)	(0.276)	(0.270)	(0.253)	(0.270)	(0.399)	(0.377)	(0.399)
Has Disability	4.786***	4.889***	4.789***	7.137***	7.183***	7.139***	6.823***	6.982***	6.825***
	(0.326)	(0.299)	(0.326)	(0.341)	(0.313)	(0.341)	(0.369)	(0.343)	(0.369)
Education Level	-0.0544***	-0.0539***	-0.0544***	-0.0550***	-0.0566***	-0.0550***	-0.0526***	-0.0525***	-0.0526***
	(0.00554)	(0.00515)	(0.00554)	(0.00571)	(0.00532)	(0.00571)	(0.00842)	(0.00799)	(0.00842)
Family Income	-	-	-	-0.0118***	-0.0116***	-0.0118***	-0.0155***	-0.0148***	-0.0155***
				(0.000660)	(0.000608)	(0.000660)	(0.000997)	(0.000925)	(0.000997)
Constant	12.80***	11.75***	12.67***	23.64***	23.13***	23.57***	27.20***	26.03***	27.01***
	(1.231)	(1.132)	(1.247)	(1.318)	(1.230)	(1.330)	(1.904)	(1.786)	(1.909)
R^2	0.139	0.137	0.139	0.104	0.0998	0.104	0.117	0.108	0.117
Observations	32268	38138	32268	36439	43221	36439	20706	24642	20706

Standard errors in parentheses
* p<0.1, ** p<0.05, *** p<0.01

Table 16: Effect on SNAP Enrollment Rates (% Likelihood Enrolled)

	Poverty Status Identification			Child Identification			Age Identification		
	Standard Waiver	Proportion Waiver	Standard Waiver + Lag	Standard Waiver	Proportion Waiver	Standard Waiver + Lag	Standard Waiver	Proportion Waiver	Standard Waiver + Lag
Work Requirement (WR)	-1.839*	-2.116**	-2.186**	-3.053***	-3.211***	-3.344***	-1.403	-2.488**	-2.005
	(1.007)	(0.950)	(1.061)	(0.935)	(0.853)	(0.990)	(1.304)	(1.221)	(1.367)
Is ABAWD	15.33***	15.60***	15.31***	-15.01***	-14.89***	-15.00***	1.793**	2.156***	1.821***
	(0.567)	(0.546)	(0.568)	(0.550)	(0.528)	(0.550)	(0.705)	(0.680)	(0.705)
WR 2 Years	-	-	3.015**	-	-	3.106**	-	-	5.145**
			(1.505)			(1.568)			(2.174)
WR * ABAWD	-3.539***	-3.740***	-4.320***	-1.058	-0.867	-2.167**	-3.549**	-3.101**	-4.355***
	(1.062)	(1.071)	(1.233)	(0.934)	(0.905)	(1.082)	(1.432)	(1.401)	(1.679)
WR 2 Years * ABAWD	-	-	2.372	-	-	2.957*	-	-	2.053
			(1.909)			(1.721)			(2.650)
Unemployment Rate	-0.0523	0.0758	-0.132	0.236	0.363*	0.167	-0.757**	-0.462	-0.844***
	(0.233)	(0.216)	(0.234)	(0.219)	(0.202)	(0.219)	(0.305)	(0.283)	(0.306)
Household Size	2.924***	2.988***	2.908***	5.446***	5.441***	5.431***	6.635***	6.788***	6.629***
	(0.199)	(0.185)	(0.199)	(0.192)	(0.174)	(0.192)	(0.336)	(0.306)	(0.336)
Married	-0.0674***	-0.0617***	-0.0676***	-0.166***	-0.164***	-0.166***	-0.117***	-0.109***	-0.117***
	(0.00583)	(0.00551)	(0.00583)	(0.00524)	(0.00487)	(0.00524)	(0.00758)	(0.00707)	(0.00758)
Has Disability	20.27***	20.72***	20.24***	16.78***	16.88***	16.75***	18.58***	18.91***	18.55***
	(0.749)	(0.691)	(0.749)	(0.640)	(0.587)	(0.640)	(0.691)	(0.633)	(0.690)
Education Level	-0.259***	-0.250***	-0.259***	-0.254***	-0.251***	-0.255***	-0.219***	-0.220***	-0.220***
	(0.0121)	(0.0112)	(0.0121)	(0.0109)	(0.0100)	(0.0109)	(0.0154)	(0.0141)	(0.0154)
Family Income	-	-	-	-0.0668***	-0.0685***	-0.0668***	-0.0532***	-0.0549***	-0.0533***
				(0.00135)	(0.00123)	(0.00135)	(0.00195)	(0.00179)	(0.00195)
Constant	24.97***	22.61***	26.27***	81.07***	80.45***	82.19***	63.59***	60.93***	65.00***
	(2.634)	(2.426)	(2.652)	(2.541)	(2.332)	(2.553)	(3.418)	(3.155)	(3.432)
R^2	0.145	0.140	0.145	0.195	0.195	0.195	0.176	0.173	0.177
Observations	53332	63773	53332	82265	99074	82265	32686	39313	32686

Standard errors in parentheses
* p<0.1, ** p<0.05, *** p<0.01

Table 17: Effect on Hours Worked (Average Hours per Week)

	Poverty Status Identification			Child Identification			Age Identification		
	Standard Waiver	Proportion Waiver	Standard Waiver + Lag	Standard Waiver	Proportion Waiver	Standard Waiver + Lag	Standard Waiver	Proportion Waiver	Standard Waiver + Lag
Work Requirement (WR)	-0.136	0.213	-0.139	0.752**	1.218***	0.939***	-0.110	1.192***	0.203
	(0.215)	(0.205)	(0.229)	(0.302)	(0.280)	(0.319)	(0.477)	(0.450)	(0.503)
Is ABAWD	-8.065***	-8.250***	-8.065***	-2.650***	-2.822***	-2.651***	3.615***	3.555***	3.612***
	(0.173)	(0.168)	(0.173)	(0.199)	(0.192)	(0.199)	(0.267)	(0.259)	(0.267)
WR 2 Years	-	-	0.0423	-	-	-0.801	-	-	-1.031
			(0.306)			(0.511)			(0.782)
WR * ABAWD	1.257***	1.612***	1.208***	0.321	0.545	0.105	0.564	0.548	-0.0280
	(0.313)	(0.308)	(0.372)	(0.355)	(0.344)	(0.416)	(0.540)	(0.533)	(0.628)
WR 2 Years * ABAWD	-	-	0.139	-	-	0.638	-	-	1.734*
			(0.563)			(0.662)			(1.011)
Unemployment Rate	-0.617***	-0.652***	-0.619***	-0.596***	-0.649***	-0.588***	-0.530***	-0.681***	-0.526***
	(0.0578)	(0.0538)	(0.0580)	(0.0706)	(0.0659)	(0.0707)	(0.110)	(0.103)	(0.110)
Household Size	-1.768***	-1.794***	-1.769***	-0.633***	-0.631***	-0.633***	-0.137	-0.188**	-0.139
	(0.0539)	(0.0507)	(0.0539)	(0.0517)	(0.0480)	(0.0517)	(0.0932)	(0.0872)	(0.0932)
Married	1.297***	1.251***	1.297***	1.605***	1.550***	1.605***	0.661**	0.458*	0.650**
	(0.136)	(0.125)	(0.136)	(0.174)	(0.162)	(0.174)	(0.270)	(0.251)	(0.270)
Has Disability	-16.84***	-16.74***	-16.84***	-16.27***	-16.23***	-16.27***	-16.73***	-16.77***	-16.74***
	(0.224)	(0.207)	(0.224)	(0.204)	(0.193)	(0.204)	(0.212)	(0.197)	(0.212)
Education Level	0.182***	0.180***	0.182***	0.137***	0.139***	0.137***	0.0935***	0.100***	0.0934***
	(0.00319)	(0.00293)	(0.00319)	(0.00413)	(0.00383)	(0.00413)	(0.00572)	(0.00526)	(0.00572)
Constant	26.25***	26.89***	26.28***	20.28***	20.78***	20.15***	16.53***	17.85***	16.49***
	(0.661)	(0.616)	(0.665)	(0.819)	(0.761)	(0.822)	(1.204)	(1.123)	(1.209)
R^2	0.243	0.241	0.243	0.109	0.109	0.109	0.193	0.192	0.193
Observations	130209	155851	130209	91548	110242	91548	38031	45645	38031

Standard errors in parentheses
* p<0.1, ** p<0.05, *** p<0.01

Table 18: Effect on Inability to Afford Balanced Meals in Past Year (% Likelihood)

	Poverty Status Identification			Child Identification			Age Identification		
	Standard Waiver	Proportion Waiver	Standard Waiver + Lag	Standard Waiver	Proportion Waiver	Standard Waiver + Lag	Standard Waiver	Proportion Waiver	Standard Waiver + Lag
Work Requirement (WR)	0.255	0.776*	0.118	-0.716	0.959	-0.102	1.650	3.548***	1.924
	(0.472)	(0.444)	(0.492)	(0.872)	(0.799)	(0.920)	(1.257)	(1.184)	(1.335)
Is ABAWD	18.39***	18.16***	18.39***	-1.627***	-1.914***	-1.632***	0.734	1.055	0.723
	(0.413)	(0.398)	(0.413)	(0.511)	(0.492)	(0.511)	(0.676)	(0.650)	(0.676)
WR 2 Years	-	-	0.309	-	-	-2.959**	-	-	-2.274
			(0.650)			(1.396)			(2.043)
WR * ABAWD	-1.265	0.0343	-0.791	0.744	1.354	0.284	-0.358	-0.158	0.0884
	(0.803)	(0.795)	(0.946)	(0.881)	(0.860)	(1.036)	(1.350)	(1.330)	(1.611)
WR 2 Years * ABAWD	-	-	-1.255	-	-	1.438	-	-	-1.203
			(1.482)			(1.609)			(2.445)
Unemployment Rate	0.282**	0.289**	0.282**	0.284	0.416**	0.321	0.496*	0.587**	0.538*
	(0.135)	(0.124)	(0.136)	(0.213)	(0.197)	(0.213)	(0.300)	(0.279)	(0.301)
Household Size	-0.973***	-0.972***	-0.972***	-0.0747	-0.0540	-0.0716	-0.668**	-0.468*	-0.663**
	(0.127)	(0.117)	(0.126)	(0.172)	(0.158)	(0.172)	(0.305)	(0.282)	(0.305)
Married	-3.379***	-3.381***	-3.377***	-5.813***	-6.027***	-5.813***	-7.082***	-6.791***	-7.092***
	(0.281)	(0.258)	(0.281)	(0.484)	(0.446)	(0.484)	(0.705)	(0.654)	(0.705)
Has Disability	11.41***	11.60***	11.41***	14.48***	14.88***	14.49***	16.01***	16.48***	16.02***
	(0.578)	(0.525)	(0.578)	(0.651)	(0.596)	(0.651)	(0.686)	(0.632)	(0.686)
Education Level	-0.178***	-0.173***	-0.177***	-0.188***	-0.187***	-0.188***	-0.167***	-0.175***	-0.166***
	(0.00651)	(0.00594)	(0.00651)	(0.00994)	(0.00912)	(0.00994)	(0.0144)	(0.0133)	(0.0144)
Family Income	-	-	-	-0.0159***	-0.0164***	-0.0159***	-0.0209***	-0.0208***	-0.0209***
				(0.00126)	(0.00116)	(0.00126)	(0.00177)	(0.00163)	(0.00177)
Constant	25.57***	25.37***	25.56***	51.47***	50.42***	50.89***	50.27***	49.26***	49.60***
	(1.511)	(1.393)	(1.523)	(2.416)	(2.224)	(2.419)	(3.320)	(3.074)	(3.333)
R^2	0.115	0.114	0.115	0.0504	0.0496	0.0505	0.0826	0.0803	0.0828
Observations	136632	163653	136632	95557	115224	95557	39538	47507	39538

Standard errors in parentheses
* p<0.1, ** p<0.05, *** p<0.01

Table 19: Effect on Inability to Afford Balanced Meals in Past Year for ABAWDs Working < 10 Hours/Week (% Likelihood)

	Poverty Status Identification			Child Identification			Age Identification		
	Standard Waiver	Proportion Waiver	Standard Waiver + Lag	Standard Waiver	Proportion Waiver	Standard Waiver + Lag	Standard Waiver	Proportion Waiver	Standard Waiver + Lag
Work Requirement (WR)	0.392	1.377	1.319	-1.739	0.474	-0.760	3.104*	5.954***	3.016*
	(1.289)	(1.171)	(1.441)	(1.320)	(1.216)	(1.401)	(1.693)	(1.592)	(1.778)
Is ABAWD	21.19***	20.94***	21.21***	-1.456*	-2.116***	-1.472*	0.527	0.641	0.531
	(0.666)	(0.646)	(0.666)	(0.757)	(0.729)	(0.757)	(0.922)	(0.890)	(0.922)
WR 2 Years	-	-	-3.497**	-	-	-4.679**	-	-	-0.842
			(1.686)			(2.108)			(2.815)
WR * ABAWD	0.905	2.481*	0.196	3.532**	4.155***	2.807*	-0.351	0.302	0.746
	(1.434)	(1.398)	(1.747)	(1.394)	(1.337)	(1.642)	(1.933)	(1.908)	(2.301)
WR 2 Years * ABAWD	-	-	1.650	-	-	2.268	-	-	-3.384
			(2.685)			(2.620)			(3.606)
Unemployment Rate	0.450	0.568**	0.508*	0.314	0.493*	0.368	0.227	0.361	0.257
	(0.288)	(0.265)	(0.288)	(0.308)	(0.287)	(0.309)	(0.402)	(0.378)	(0.403)
Household Size	-1.900***	-1.902***	-1.899***	-0.244	-0.215	-0.240	-1.384***	-1.162***	-1.381***
	(0.219)	(0.202)	(0.219)	(0.236)	(0.218)	(0.236)	(0.414)	(0.386)	(0.413)
Married	-5.554***	-5.557***	-5.563***	-5.519***	-6.013***	-5.534***	-7.302***	-7.087***	-7.315***
	(0.723)	(0.672)	(0.723)	(0.731)	(0.679)	(0.730)	(0.963)	(0.896)	(0.963)
Has Disability	8.384***	8.838***	8.399***	12.35***	12.71***	12.37***	13.44***	13.69***	13.44***
	(0.754)	(0.692)	(0.754)	(0.785)	(0.722)	(0.784)	(0.830)	(0.770)	(0.830)
Education Level	-0.145***	-0.142***	-0.145***	-0.158***	-0.160***	-0.158***	-0.145***	-0.152***	-0.145***
	(0.0141)	(0.0131)	(0.0141)	(0.0151)	(0.0141)	(0.0151)	(0.0195)	(0.0183)	(0.0195)
Family Income	-	-	-	-0.0180***	-0.0185***	-0.0180***	-0.0232***	-0.0222***	-0.0232***
				(0.00169)	(0.00156)	(0.00169)	(0.00231)	(0.00215)	(0.00231)
Constant	26.69***	24.88***	25.90***	53.21***	51.92***	52.43***	57.48***	55.76***	57.00***
	(3.194)	(2.940)	(3.188)	(3.487)	(3.238)	(3.491)	(4.434)	(4.142)	(4.446)
R^2	0.120	0.119	0.120	0.0603	0.0591	0.0605	0.0922	0.0863	0.0924
Observations	33365	39444	33365	37714	44729	37714	21343	25419	21343

Standard errors in parentheses
* p<0.1, ** p<0.05, *** p<0.01

Table 20: Effect on Running Short of Money for Food in Past Year (% Likelihood)

	Poverty Status Identification			Child Identification			Age Identification		
	Standard Waiver	Proportion Waiver	Standard Waiver + Lag	Standard Waiver	Proportion Waiver	Standard Waiver + Lag	Standard Waiver	Proportion Waiver	Standard Waiver + Lag
Work Requirement (WR)	-0.0642	-0.296	-0.177	-0.261	0.0176	-0.0244	0.730	0.436	1.048
	(0.581)	(0.551)	(0.614)	(0.967)	(0.894)	(1.024)	(1.326)	(1.249)	(1.408)
Is ABAWD	18.31***	18.24***	18.31***	-7.242***	-7.605***	-7.243***	0.530	0.899	0.522
	(0.474)	(0.456)	(0.474)	(0.557)	(0.536)	(0.557)	(0.727)	(0.703)	(0.727)
WR 2 Years	-	-	0.650	-	-	-0.258	-	-	-2.073
			(0.821)			(1.583)			(2.119)
WR * ABAWD	0.610	1.081	0.393	1.423	1.963**	0.515	2.038	2.683*	2.156
	(0.895)	(0.879)	(1.055)	(0.974)	(0.944)	(1.146)	(1.427)	(1.401)	(1.697)
WR 2 Years * ABAWD	-	-	0.659	-	-	2.515	-	-	-0.250
			(1.635)			(1.796)			(2.594)
Unemployment Rate	-0.144	0.0145	-0.165	0.0254	0.245	0.0107	0.0314	0.302	0.0636
	(0.163)	(0.150)	(0.164)	(0.236)	(0.217)	(0.236)	(0.323)	(0.299)	(0.324)
Household Size	-0.00718	-0.0547	-0.00937	0.920***	0.893***	0.915***	0.308	0.391	0.311
	(0.145)	(0.134)	(0.145)	(0.187)	(0.171)	(0.187)	(0.319)	(0.299)	(0.319)
Married	-0.0523***	-0.0520***	-0.0523***	-0.0838***	-0.0846***	-0.0838***	-0.0592***	-0.0587***	-0.0593***
	(0.00352)	(0.00323)	(0.00352)	(0.00534)	(0.00493)	(0.00534)	(0.00772)	(0.00714)	(0.00772)
Has Disability	13.63***	14.18***	13.62***	15.62***	16.33***	15.62***	16.36***	17.47***	16.36***
	(0.629)	(0.573)	(0.629)	(0.658)	(0.601)	(0.658)	(0.696)	(0.640)	(0.696)
Education Level	-0.205***	-0.204***	-0.205***	-0.142***	-0.147***	-0.142***	-0.115***	-0.129***	-0.115***
	(0.00775)	(0.00711)	(0.00775)	(0.0111)	(0.0102)	(0.0111)	(0.0153)	(0.0142)	(0.0153)
Family Income	-	-	-	-0.0164***	-0.0171***	-0.0164***	-0.0191***	-0.0176***	-0.0191***
				(0.00136)	(0.00125)	(0.00136)	(0.00189)	(0.00174)	(0.00189)
Constant	42.26***	40.85***	42.56***	69.10***	67.79***	69.35***	61.63***	58.56***	61.12***
	(1.816)	(1.670)	(1.829)	(2.666)	(2.454)	(2.674)	(3.576)	(3.296)	(3.598)
R^2	0.111	0.108	0.111	0.0615	0.0589	0.0616	0.0792	0.0768	0.0793
Observations	136304	163259	136304	95716	115407	95716	39592	47556	39592

Standard errors in parentheses
* p<0.1, ** p<0.05, *** p<0.01

Table 21: Effect on Running Short of Money for Food in Past Year for ABAWDs Working < 10 Hours/Week (% Likelihood)

	Poverty Status Identification			Child Identification			Age Identification		
	Standard Waiver	Proportion Waiver	Standard Waiver + Lag	Standard Waiver	Proportion Waiver	Standard Waiver + Lag	Standard Waiver	Proportion Waiver	Standard Waiver + Lag
Work Requirement (WR)	-1.347	-2.189*	0.0373	-1.493	0.158	-0.800	2.595	2.850*	2.766
	(1.431)	(1.322)	(1.587)	(1.403)	(1.287)	(1.491)	(1.720)	(1.613)	(1.802)
Is ABAWD	21.26***	21.01***	21.26***	-5.998***	-6.717***	-5.994***	1.085	1.080	1.085
	(0.756)	(0.733)	(0.756)	(0.799)	(0.769)	(0.799)	(0.958)	(0.929)	(0.958)
WR 2 Years	-	-	-3.112	-	-	-1.387	-	-	-1.106
			(1.973)			(2.330)			(2.789)
WR * ABAWD	2.964*	4.714***	0.0423	3.536**	3.458**	1.564	0.421	2.063	0.456
	(1.558)	(1.526)	(1.893)	(1.487)	(1.417)	(1.749)	(1.961)	(1.933)	(2.326)
WR 2 Years * ABAWD	-	-	7.975***	-	-	5.612**	-	-	-0.112
			(2.844)			(2.792)			(3.656)
Unemployment Rate	-0.176	0.151	-0.186	-0.0786	0.182	-0.101	-0.401	-0.133	-0.385
	(0.318)	(0.293)	(0.318)	(0.325)	(0.302)	(0.325)	(0.419)	(0.392)	(0.420)
Household Size	-0.787***	-0.777***	-0.798***	0.785***	0.768***	0.776***	0.148	0.262	0.149
	(0.235)	(0.218)	(0.235)	(0.250)	(0.229)	(0.250)	(0.436)	(0.413)	(0.436)
Married	-0.0661***	-0.0696***	-0.0660***	-0.0774***	-0.0831***	-0.0773***	-0.0648***	-0.0677***	-0.0650***
	(0.00818)	(0.00758)	(0.00818)	(0.00775)	(0.00717)	(0.00774)	(0.0102)	(0.00942)	(0.0102)
Has Disability	9.189***	10.23***	9.177***	12.52***	13.35***	12.51***	13.78***	14.61***	13.78***
	(0.805)	(0.742)	(0.804)	(0.788)	(0.723)	(0.788)	(0.850)	(0.787)	(0.850)
Education Level	-0.141***	-0.132***	-0.141***	-0.109***	-0.114***	-0.110***	-0.0861***	-0.0901***	-0.0862***
	(0.0158)	(0.0147)	(0.0158)	(0.0162)	(0.0151)	(0.0162)	(0.0202)	(0.0189)	(0.0202)
Family Income	-	-	-	-0.0182***	-0.0187***	-0.0182***	-0.0220***	-0.0196***	-0.0220***
				(0.00178)	(0.00164)	(0.00177)	(0.00241)	(0.00225)	(0.00241)
Constant	42.88***	38.49***	43.13***	70.48***	68.95***	70.84***	67.90***	63.85***	67.66***
	(3.519)	(3.249)	(3.526)	(3.658)	(3.391)	(3.666)	(4.620)	(4.293)	(4.639)
R^2	0.117	0.115	0.117	0.0715	0.0685	0.0717	0.0877	0.0820	0.0877
Observations	33331	39401	33331	37787	44808	37787	21384	25461	21384

Standard errors in parentheses
* p<0.1, ** p<0.05, *** p<0.01

Table 22: Effect on Skipping Meals in Past Year (% Likelihood)

	Poverty Status Identification			Child Identification			Age Identification		
	Standard Waiver	Proportion Waiver	Standard Waiver + Lag	Standard Waiver	Proportion Waiver	Standard Waiver + Lag	Standard Waiver	Proportion Waiver	Standard Waiver + Lag
Work Requirement (WR)	0.0495	0.0730	-0.354	-0.384	0.513	-0.554	1.054	0.892	0.681
	(0.351)	(0.334)	(0.360)	(0.696)	(0.657)	(0.739)	(1.067)	(1.000)	(1.125)
Is ABAWD	11.44***	11.38***	11.43***	-1.764***	-1.853***	-1.763***	1.272**	1.449***	1.271**
	(0.337)	(0.326)	(0.337)	(0.419)	(0.408)	(0.419)	(0.576)	(0.558)	(0.576)
WR 2 Years	-	-	1.306***	-	-	0.575	-	-	0.633
			(0.489)			(1.127)			(1.723)
WR * ABAWD	-0.912	-0.303	-0.122	0.0282	0.264	0.357	0.366	0.205	1.483
	(0.636)	(0.635)	(0.752)	(0.709)	(0.693)	(0.846)	(1.142)	(1.120)	(1.358)
WR 2 Years * ABAWD	-	-	-2.005*	-	-	-0.938	-	-	-3.208
			(1.145)			(1.279)			(2.098)
Unemployment Rate	-0.0431	0.0425	-0.0644	-0.117	0.0412	-0.119	0.250	0.429*	0.263
	(0.109)	(0.100)	(0.109)	(0.176)	(0.162)	(0.176)	(0.253)	(0.234)	(0.254)
Household Size	-1.004***	-0.986***	-1.003***	-0.0866	-0.0293	-0.0858	-1.191***	-1.115***	-1.189***
	(0.0969)	(0.0923)	(0.0968)	(0.137)	(0.128)	(0.137)	(0.233)	(0.218)	(0.233)
Married	-0.0234***	-0.0247***	-0.0233***	-0.0428***	-0.0464***	-0.0429***	-0.0461***	-0.0487***	-0.0460***
	(0.00219)	(0.00201)	(0.00219)	(0.00398)	(0.00367)	(0.00398)	(0.00587)	(0.00544)	(0.00587)
Has Disability	9.837***	9.688***	9.829***	13.37***	13.34***	13.38***	13.10***	13.23***	13.11***
	(0.509)	(0.463)	(0.509)	(0.597)	(0.545)	(0.597)	(0.610)	(0.560)	(0.610)
Education Level	-0.103***	-0.0999***	-0.103***	-0.0839***	-0.0825***	-0.0839***	-0.0658***	-0.0649***	-0.0656***
	(0.00526)	(0.00477)	(0.00526)	(0.00785)	(0.00724)	(0.00785)	(0.0122)	(0.0112)	(0.0122)
Family Income	-	-	-	-0.0153***	-0.0156***	-0.0153***	-0.0213***	-0.0206***	-0.0213***
				(0.00106)	(0.000983)	(0.00106)	(0.00153)	(0.00141)	(0.00153)
Constant	18.38***	17.24***	18.66***	35.86***	34.23***	35.89***	33.24***	30.92***	33.00***
	(1.208)	(1.108)	(1.222)	(1.980)	(1.823)	(1.987)	(2.824)	(2.598)	(2.841)
R^2	0.0779	0.0761	0.0780	0.0495	0.0475	0.0495	0.0765	0.0724	0.0766
Observations	137095	164179	137095	96229	115977	96229	39802	47826	39802

Standard errors in parentheses
* p<0.1, ** p<0.05, *** p<0.01

Table 23: Effect on Skipping Meals in Past Year for ABAWDs Working < 10 Hours/Week (% Likelihood)

	Poverty Status Identification			Child Identification			Age Identification		
	Standard Waiver	Proportion Waiver	Standard Waiver + Lag	Standard Waiver	Proportion Waiver	Standard Waiver + Lag	Standard Waiver	Proportion Waiver	Standard Waiver + Lag
Work Requirement (WR)	-1.157	-0.304	-1.294	-1.183	0.859	-1.021	2.450	2.970**	1.723
	(0.893)	(0.839)	(0.946)	(1.061)	(1.020)	(1.143)	(1.499)	(1.383)	(1.572)
Is ABAWD	13.31***	13.08***	13.31***	-1.462**	-1.921***	-1.461**	0.961	1.023	0.969
	(0.551)	(0.533)	(0.551)	(0.639)	(0.616)	(0.639)	(0.811)	(0.782)	(0.811)
WR 2 Years	-	-	0.447	-	-	-0.373	-	-	2.159
			(1.296)			(1.701)			(2.490)
WR * ABAWD	0.959	1.683	1.123	2.139*	1.705	1.724	0.338	-0.355	2.173
	(1.129)	(1.130)	(1.338)	(1.148)	(1.135)	(1.388)	(1.738)	(1.689)	(2.074)
WR 2 Years * ABAWD	-	-	-0.423	-	-	1.188	-	-	-5.590*
			(2.076)			(2.086)			(3.264)
Unemployment Rate	-0.226	-0.0630	-0.231	-0.197	-0.0114	-0.201	-0.222	-0.0444	-0.220
	(0.242)	(0.225)	(0.244)	(0.264)	(0.247)	(0.265)	(0.349)	(0.328)	(0.350)
Household Size	-1.828***	-1.756***	-1.828***	-0.128	-0.0750	-0.130	-2.014***	-1.827***	-2.013***
	(0.178)	(0.167)	(0.177)	(0.196)	(0.183)	(0.196)	(0.306)	(0.291)	(0.306)
Married	-0.0380***	-0.0400***	-0.0380***	-0.0361***	-0.0410***	-0.0361***	-0.0561***	-0.0579***	-0.0559***
	(0.00598)	(0.00551)	(0.00598)	(0.00616)	(0.00573)	(0.00616)	(0.00827)	(0.00763)	(0.00826)
Has Disability	7.542***	7.609***	7.541***	11.87***	11.77***	11.87***	10.86***	11.14***	10.88***
	(0.655)	(0.603)	(0.655)	(0.709)	(0.651)	(0.709)	(0.741)	(0.684)	(0.741)
Education Level	-0.0719***	-0.0702***	-0.0719***	-0.0640***	-0.0626***	-0.0640***	-0.0456***	-0.0420***	-0.0453***
	(0.0119)	(0.0110)	(0.0119)	(0.0124)	(0.0116)	(0.0124)	(0.0171)	(0.0159)	(0.0171)
Family Income	-	-	-	-0.0184***	-0.0184***	-0.0184***	-0.0245***	-0.0234***	-0.0245***
				(0.00145)	(0.00136)	(0.00145)	(0.00201)	(0.00186)	(0.00202)
Constant	22.06***	19.74***	22.13***	38.14***	36.28***	38.19***	41.44***	38.70***	41.35***
	(2.651)	(2.459)	(2.675)	(2.960)	(2.755)	(2.973)	(3.891)	(3.624)	(3.904)
R^2	0.0856	0.0822	0.0856	0.0636	0.0596	0.0636	0.0883	0.0817	0.0886
Observations	33544	39646	33544	37970	45004	37970	21488	25595	21488

Standard errors in parentheses
* p<0.1, ** p<0.05, *** p<0.01

Table 24: Effect on Visiting Food Bank in Past Year (% Likelihood)

	Poverty Status Identification			Child Identification			Age Identification		
	Standard Waiver	Proportion Waiver	Standard Waiver + Lag	Standard Waiver	Proportion Waiver	Standard Waiver + Lag	Standard Waiver	Proportion Waiver	Standard Waiver + Lag
Work Requirement (WR)	-0.256	-0.0814	-0.405	-1.803***	-1.077*	-1.697***	0.0263	0.741	-0.218
	(0.260)	(0.243)	(0.259)	(0.624)	(0.579)	(0.656)	(0.999)	(0.922)	(1.062)
Is ABAWD	9.037***	9.076***	9.029***	-1.741***	-1.931***	-1.742***	-0.824	-0.740	-0.819
	(0.261)	(0.254)	(0.261)	(0.364)	(0.353)	(0.364)	(0.504)	(0.485)	(0.504)
WR 2 Years	-	-	0.716**	-	-	-0.363	-	-	1.307
			(0.335)			(1.013)			(1.569)
WR * ABAWD	-0.393	0.0263	-0.457	0.691	0.764	0.489	-0.300	0.486	-0.190
	(0.539)	(0.531)	(0.614)	(0.602)	(0.588)	(0.701)	(1.008)	(0.998)	(1.213)
WR 2 Years * ABAWD	-	-	0.253	-	-	0.577	-	-	-0.360
			(1.008)			(1.109)			(1.829)
Unemployment Rate	-0.169**	-0.145*	-0.188**	-0.444***	-0.441***	-0.442***	-0.540**	-0.471**	-0.557**
	(0.0811)	(0.0751)	(0.0816)	(0.149)	(0.138)	(0.149)	(0.223)	(0.206)	(0.223)
Household Size	0.241***	0.257***	0.239***	1.307***	1.352***	1.307***	0.996***	1.065***	0.994***
	(0.0878)	(0.0825)	(0.0877)	(0.130)	(0.120)	(0.130)	(0.215)	(0.203)	(0.215)
Married	-0.00647***	-0.00596***	-0.00647***	-0.0328***	-0.0338***	-0.0328***	-0.0305***	-0.0276***	-0.0304***
	(0.00149)	(0.00140)	(0.00148)	(0.00341)	(0.00320)	(0.00341)	(0.00524)	(0.00489)	(0.00523)
Has Disability	9.619***	9.851***	9.614***	13.42***	13.69***	13.42***	12.32***	12.58***	12.32***
	(0.456)	(0.419)	(0.456)	(0.554)	(0.513)	(0.554)	(0.567)	(0.523)	(0.566)
Education Level	-0.0683***	-0.0664***	-0.0683***	-0.115***	-0.114***	-0.115***	-0.101***	-0.105***	-0.101***
	(0.00408)	(0.00371)	(0.00408)	(0.00686)	(0.00641)	(0.00686)	(0.0107)	(0.00995)	(0.0107)
Family Income	-	-	-	-0.0213***	-0.0222***	-0.0213***	-0.0234***	-0.0237***	-0.0234***
				(0.000957)	(0.000899)	(0.000958)	(0.00139)	(0.00129)	(0.00139)
Constant	8.728***	8.222***	9.013***	33.55***	33.86***	33.53***	35.38***	34.53***	35.64***
	(0.901)	(0.840)	(0.908)	(1.709)	(1.588)	(1.711)	(2.493)	(2.295)	(2.504)
R^2	0.0854	0.0851	0.0855	0.0675	0.0661	0.0675	0.0865	0.0830	0.0865
Observations	136494	163478	136494	95182	114762	95182	39434	47388	39434

Standard errors in parentheses
* p<0.1, ** p<0.05, *** p<0.01

Table 25: Effect on Visiting Food Bank in Past Year for ABAWDs Working < 10 Hours/Week (% Likelihood)

	Poverty Status Identification			Child Identification			Age Identification		
	Standard Waiver	Proportion Waiver	Standard Waiver + Lag	Standard Waiver	Proportion Waiver	Standard Waiver + Lag	Standard Waiver	Proportion Waiver	Standard Waiver + Lag
Work Requirement (WR)	-1.042	-0.533	-1.150	-2.515**	-1.218	-2.184*	0.952	1.885	0.750
	(0.796)	(0.710)	(0.780)	(1.078)	(1.002)	(1.139)	(1.478)	(1.378)	(1.554)
Is ABAWD	13.25***	13.39***	13.23***	-2.530***	-2.766***	-2.526***	0.0609	-0.000111	0.0585
	(0.472)	(0.460)	(0.472)	(0.616)	(0.593)	(0.616)	(0.758)	(0.733)	(0.758)
WR 2 Years	-	-	1.403	-	-	-0.430	-	-	1.849
			(1.211)			(1.722)			(2.301)
WR * ABAWD	0.960	1.991*	0.176	2.446**	2.808***	1.343	0.638	1.026	0.168
	(1.040)	(1.016)	(1.170)	(1.132)	(1.073)	(1.305)	(1.627)	(1.618)	(1.937)
WR 2 Years * ABAWD	-	-	2.380	-	-	3.135	-	-	1.469
			(2.062)			(2.176)			(3.036)
Unemployment Rate	-0.412*	-0.430**	-0.464**	-0.656***	-0.683***	-0.674***	-0.983***	-0.886***	-1.016***
	(0.216)	(0.201)	(0.217)	(0.250)	(0.234)	(0.250)	(0.335)	(0.314)	(0.336)
Household Size	-0.588***	-0.513***	-0.594***	0.917***	1.005***	0.912***	0.101	0.203	0.0987
	(0.170)	(0.160)	(0.170)	(0.190)	(0.177)	(0.189)	(0.312)	(0.298)	(0.312)
Married	-0.0190***	-0.0185***	-0.0189***	-0.0396***	-0.0420***	-0.0396***	-0.0377***	-0.0361***	-0.0374***
	(0.00511)	(0.00483)	(0.00511)	(0.00585)	(0.00549)	(0.00584)	(0.00798)	(0.00747)	(0.00798)
Has Disability	7.771***	8.247***	7.754***	11.05***	11.56***	11.04***	9.796***	9.878***	9.795***
	(0.614)	(0.569)	(0.614)	(0.676)	(0.630)	(0.676)	(0.698)	(0.650)	(0.698)
Education Level	-0.0957***	-0.0893***	-0.0958***	-0.128***	-0.123***	-0.128***	-0.101***	-0.105***	-0.101***
	(0.0110)	(0.0102)	(0.0110)	(0.0120)	(0.0113)	(0.0120)	(0.0160)	(0.0150)	(0.0160)
Family Income	-	-	-	-0.0234***	-0.0238***	-0.0234***	-0.0242***	-0.0237***	-0.0243***
				(0.00140)	(0.00132)	(0.00140)	(0.00192)	(0.00180)	(0.00192)
Constant	16.20***	15.40***	16.97***	42.69***	42.72***	42.97***	45.92***	44.28***	46.43***
	(2.391)	(2.240)	(2.393)	(2.836)	(2.652)	(2.835)	(3.732)	(3.477)	(3.744)
R^2	0.0952	0.0949	0.0955	0.0790	0.0755	0.0791	0.0850	0.0776	0.0851
Observations	33302	39356	33302	37548	44527	37548	21275	25344	21275

Standard errors in parentheses
* p<0.1, ** p<0.05, *** p<0.01

Appendix 1.2 Labor Regression Results

Table 26: Effect on Employment Status (% Likelihood Employed)

	Poverty Status Identification			Child Identification			Age Identification		
	Standard Waiver	Proportion Waiver	Standard Waiver + Lag	Standard Waiver	Proportion Waiver	Standard Waiver + Lag	Standard Waiver	Proportion Waiver	Standard Waiver + Lag
Work Requirement (WR)	-0.985**	-0.431	-0.857*	1.041	1.829***	1.380*	0.288	2.341**	0.933
	(0.455)	(0.426)	(0.477)	(0.700)	(0.640)	(0.736)	(1.131)	(1.058)	(1.191)
Is ABAWD	-16.34***	-16.61***	-16.34***	-6.063***	-6.296***	-6.066***	8.874***	8.633***	8.870***
	(0.393)	(0.382)	(0.394)	(0.473)	(0.456)	(0.473)	(0.643)	(0.622)	(0.643)
WR 2 Years	-	-	-0.339	-	-	-1.310	-	-	-2.227
			(0.630)			(1.163)			(1.848)
WR * ABAWD	4.372***	4.825***	4.010***	1.931**	2.212***	1.415	1.915	1.710	0.776
	(0.709)	(0.694)	(0.845)	(0.822)	(0.795)	(0.960)	(1.263)	(1.232)	(1.488)
WR 2 Years * ABAWD	-	-	0.948	-	-	1.495	-	-	3.327
			(1.273)			(1.514)			(2.322)
Unemployment Rate	-1.328***	-1.410***	-1.325***	-1.369***	-1.522***	-1.359***	-1.503***	-1.781***	-1.493***
	(0.128)	(0.118)	(0.128)	(0.166)	(0.154)	(0.166)	(0.262)	(0.243)	(0.262)
Household Size	-2.779***	-2.787***	-2.779***	-1.596***	-1.594***	-1.597***	-0.603***	-0.732***	-0.604***
	(0.115)	(0.108)	(0.115)	(0.120)	(0.111)	(0.119)	(0.218)	(0.206)	(0.219)
Married	0.0110***	0.0105***	0.0110***	0.0140***	0.0138***	0.0140***	0.00554	0.0000752	0.00530
	(0.00284)	(0.00260)	(0.00284)	(0.00408)	(0.00378)	(0.00408)	(0.00636)	(0.00591)	(0.00637)
Has Disability	-40.39***	-39.96***	-40.39***	-41.10***	-40.77***	-41.10***	-42.81***	-42.62***	-42.82***
	(0.559)	(0.514)	(0.559)	(0.542)	(0.504)	(0.542)	(0.548)	(0.511)	(0.548)
Education Level	0.346***	0.341***	0.346***	0.306***	0.314***	0.306***	0.204***	0.223***	0.204***
	(0.00694)	(0.00634)	(0.00694)	(0.00953)	(0.00870)	(0.00953)	(0.0136)	(0.0125)	(0.0137)
Constant	70.17***	71.34***	70.14***	59.36***	60.31***	59.21***	51.89***	53.94***	51.76***
	(1.444)	(1.331)	(1.455)	(1.924)	(1.775)	(1.929)	(2.884)	(2.668)	(2.894)
R^2	0.204	0.203	0.204	0.107	0.107	0.107	0.197	0.196	0.197
Observations	137272	164387	137272	96487	116288	96487	39915	47954	39915

Standard errors in parentheses
* p<0.1, ** p<0.05, *** p<0.01

Table 27: Effect on Full-Time Work (% Likelihood Employed)

	Poverty Status Identification			Child Identification			Age Identification		
	Standard Waiver	Proportion Waiver	Standard Waiver + Lag	Standard Waiver	Proportion Waiver	Standard Waiver + Lag	Standard Waiver	Proportion Waiver	Standard Waiver + Lag
Work Requirement (WR)	-0.205	0.0909	-0.183	1.985***	2.624***	2.153***	0.0621	2.224**	0.438
	(0.516)	(0.485)	(0.546)	(0.729)	(0.667)	(0.770)	(1.101)	(1.028)	(1.157)
Is ABAWD	-18.89***	-19.35***	-18.88***	-6.145***	-6.504***	-6.146***	7.597***	7.288***	7.593***
	(0.418)	(0.405)	(0.418)	(0.480)	(0.464)	(0.480)	(0.630)	(0.608)	(0.630)
WR 2 Years	-	-	-0.227	-	-	-1.058	-	-	-1.599
			(0.737)			(1.220)			(1.800)
WR * ABAWD	3.282***	3.810***	3.484***	1.116	1.558*	1.197	2.354*	2.273*	1.903
	(0.763)	(0.747)	(0.907)	(0.860)	(0.828)	(1.004)	(1.258)	(1.228)	(1.472)
WR 2 Years * ABAWD	-	-	-0.574	-	-	-0.161	-	-	1.342
			(1.368)			(1.603)			(2.335)
Unemployment Rate	-1.226***	-1.218***	-1.217***	-1.081***	-1.151***	-1.063***	-1.049***	-1.282***	-1.035***
	(0.141)	(0.131)	(0.142)	(0.170)	(0.158)	(0.171)	(0.257)	(0.239)	(0.258)
Household Size	-4.240***	-4.278***	-4.239***	-1.386***	-1.418***	-1.384***	0.169	0.0829	0.170
	(0.132)	(0.124)	(0.132)	(0.118)	(0.111)	(0.118)	(0.218)	(0.201)	(0.218)
Married	0.0441***	0.0433***	0.0441***	0.0474***	0.0469***	0.0474***	0.0188***	0.0121**	0.0186***
	(0.00321)	(0.00294)	(0.00321)	(0.00420)	(0.00388)	(0.00420)	(0.00629)	(0.00581)	(0.00629)
Has Disability	-36.97***	-36.67***	-36.97***	-34.96***	-34.71***	-34.95***	-36.50***	-36.55***	-36.50***
	(0.503)	(0.463)	(0.503)	(0.469)	(0.436)	(0.469)	(0.485)	(0.449)	(0.485)
Education Level	0.426***	0.425***	0.426***	0.299***	0.305***	0.299***	0.188***	0.205***	0.188***
	(0.00764)	(0.00698)	(0.00764)	(0.00974)	(0.00893)	(0.00974)	(0.0133)	(0.0122)	(0.0133)
Constant	52.95***	52.97***	52.81***	38.99***	39.20***	38.69***	34.17***	35.88***	33.96***
	(1.596)	(1.479)	(1.609)	(1.957)	(1.812)	(1.967)	(2.820)	(2.612)	(2.828)
R^2	0.216	0.216	0.216	0.0877	0.0868	0.0877	0.164	0.163	0.164
Observations	137272	164387	137272	96487	116288	96487	39915	47954	39915

Standard errors in parentheses
* p<0.1, ** p<0.05, *** p<0.01

Table 28: Effect on Job Searching (% Likelihood Looked for Job in Past Year)

	Poverty Status Identification			Child Identification			Age Identification		
	Standard Waiver	Proportion Waiver	Standard Waiver + Lag	Standard Waiver	Proportion Waiver	Standard Waiver + Lag	Standard Waiver	Proportion Waiver	Standard Waiver + Lag
Work Requirement (WR)	0.110	-0.677	0.952	-2.296**	-0.0632	-2.188**	1.314	2.306**	1.477
	(1.251)	(1.182)	(1.378)	(1.048)	(0.987)	(1.109)	(1.067)	(0.949)	(1.084)
Is ABAWD	2.181***	1.467**	2.171***	-1.107	-1.591**	-1.099	8.471***	8.397***	8.470***
	(0.690)	(0.667)	(0.691)	(0.680)	(0.653)	(0.680)	(0.690)	(0.663)	(0.690)
WR 2 Years	-	-	-1.109	-	-	0.863	-	-	-0.615
			(1.914)			(1.723)			(1.678)
WR * ABAWD	-1.236	2.011	-3.636**	1.180	2.928**	0.0777	-1.555	0.0248	-1.862
	(1.338)	(1.338)	(1.576)	(1.198)	(1.185)	(1.382)	(1.352)	(1.360)	(1.565)
WR 2 Years * ABAWD	-	-	6.722***	-	-	3.084	-	-	0.938
			(2.416)			(2.248)			(2.498)
Unemployment Rate	0.900***	0.649**	0.859***	1.278***	1.044***	1.241***	1.083***	0.908***	1.086***
	(0.281)	(0.262)	(0.282)	(0.257)	(0.241)	(0.257)	(0.294)	(0.274)	(0.295)
Household Size	-1.421***	-1.451***	-1.431***	-1.192***	-1.297***	-1.200***	-0.524**	-0.590***	-0.524**
	(0.189)	(0.174)	(0.189)	(0.164)	(0.150)	(0.164)	(0.242)	(0.220)	(0.242)
Married	-0.117***	-0.120***	-0.117***	-0.112***	-0.115***	-0.112***	-0.0563***	-0.0528***	-0.0563***
	(0.00739)	(0.00684)	(0.00739)	(0.00611)	(0.00564)	(0.00611)	(0.00642)	(0.00595)	(0.00642)
Has Disability	-24.16***	-23.98***	-24.18***	-22.04***	-21.74***	-22.06***	-19.43***	-18.74***	-19.43***
	(0.555)	(0.511)	(0.554)	(0.538)	(0.498)	(0.538)	(0.544)	(0.502)	(0.544)
Education Level	0.210***	0.214***	0.210***	0.0855***	0.0804***	0.0856***	0.0957***	0.0956***	0.0956***
	(0.0142)	(0.0131)	(0.0142)	(0.0131)	(0.0120)	(0.0131)	(0.0131)	(0.0120)	(0.0131)
Constant	19.73***	22.82***	20.39***	27.00***	30.58***	27.56***	12.40***	14.26***	12.36***
	(3.082)	(2.860)	(3.096)	(2.900)	(2.698)	(2.905)	(3.136)	(2.915)	(3.141)
R^2	0.0987	0.0969	0.0991	0.0872	0.0862	0.0874	0.138	0.134	0.138
Observations	32225	38072	32225	36922	43694	36922	21139	25147	21139

Standard errors in parentheses
* p<0.1, ** p<0.05, *** p<0.01

Table 29: Effect on School Attendance (% Likelihood Attend Any Classes)

	Poverty Status Identification			Child Identification			Age Identification		
	Standard Waiver	Proportion Waiver	Standard Waiver + Lag	Standard Waiver	Proportion Waiver	Standard Waiver + Lag	Standard Waiver	Proportion Waiver	Standard Waiver + Lag
Work Requirement (WR)	0.532	0.729*	0.650	1.291***	1.088***	1.480***	-0.883**	-0.937**	-0.851*
	(0.381)	(0.384)	(0.397)	(0.376)	(0.349)	(0.373)	(0.434)	(0.402)	(0.434)
Is ABAWD	-0.774**	-0.428	-0.769**	9.487***	9.478***	9.486***	0.832**	1.059***	0.832**
	(0.338)	(0.322)	(0.338)	(0.342)	(0.323)	(0.342)	(0.358)	(0.327)	(0.358)
WR 2 Years	-	-	-0.503	-	-	-0.985	-	-	-0.271
			(0.550)			(0.615)			(0.679)
WR * ABAWD	1.051*	0.0644	0.980	-0.778	-1.289**	-0.890	1.309***	1.163**	1.354**
	(0.559)	(0.560)	(0.632)	(0.534)	(0.526)	(0.599)	(0.500)	(0.472)	(0.538)
WR 2 Years * ABAWD	-	-	0.145	-	-	0.361	-	-	-0.143
			(0.964)			(0.944)			(0.801)
Unemployment Rate	0.313**	0.333**	0.333**	0.348**	0.318**	0.372**	-0.0899	-0.164	-0.0736
	(0.152)	(0.138)	(0.154)	(0.161)	(0.146)	(0.161)	(0.175)	(0.160)	(0.173)
Household Size	3.345***	3.370***	3.345***	1.508***	1.513***	1.509***	0.213*	0.132	0.213*
	(0.115)	(0.104)	(0.115)	(0.0926)	(0.0827)	(0.0926)	(0.111)	(0.0990)	(0.111)
Married	-0.0664***	-0.0649***	-0.0664***	-0.0418***	-0.0416***	-0.0418***	-0.00772***	-0.00713***	-0.00771***
	(0.00208)	(0.00185)	(0.00208)	(0.00224)	(0.00198)	(0.00224)	(0.00293)	(0.00262)	(0.00293)
Has Disability	-2.002***	-1.990***	-1.998***	-2.878***	-2.807***	-2.873***	-0.398	-0.541**	-0.395
	(0.426)	(0.373)	(0.426)	(0.361)	(0.316)	(0.361)	(0.297)	(0.257)	(0.297)
Constant	11.22***	10.41***	10.96***	4.659***	4.390***	4.326**	0.830	1.407	0.666
	(1.629)	(1.486)	(1.650)	(1.782)	(1.611)	(1.791)	(1.340)	(1.215)	(1.326)
R^2	0.0721	0.0699	0.0721	0.0759	0.0726	0.0760	0.0456	0.0384	0.0457
Observations	100296	123491	100296	65987	82249	65987	16510	20618	16510

Standard errors in parentheses
* p<0.1, ** p<0.05, *** p<0.01

Table 30: Effect on Multiple Jobs (% Likelihood of Having Multiple Jobs)

	Poverty Status Identification			Child Identification			Age Identification		
	Standard Waiver	Proportion Waiver	Standard Waiver + Lag	Standard Waiver	Proportion Waiver	Standard Waiver + Lag	Standard Waiver	Proportion Waiver	Standard Waiver + Lag
Work Requirement (WR)	-0.475	-0.394	-0.718**	-0.517	0.258	-0.844*	-0.101	0.256	0.401
	(0.319)	(0.301)	(0.337)	(0.425)	(0.399)	(0.436)	(0.836)	(0.760)	(0.912)
Is ABAWD	0.757***	0.766***	0.745***	0.509*	0.484*	0.511*	1.143***	0.822*	1.141***
	(0.252)	(0.246)	(0.252)	(0.280)	(0.272)	(0.280)	(0.436)	(0.429)	(0.436)
WR 2 Years	-	-	1.142**	-	-	1.498**	-	-	-1.550
			(0.479)			(0.729)			(1.302)
WR * ABAWD	-0.569	-0.127	-0.657	-1.144**	-0.981**	-0.808	-1.330	-0.0844	-2.234**
	(0.457)	(0.454)	(0.528)	(0.495)	(0.492)	(0.562)	(0.874)	(0.881)	(0.999)
WR 2 Years * ABAWD	-	-	0.355	-	-	-1.017	-	-	2.665
			(0.820)			(0.921)			(1.622)
Unemployment Rate	-0.554***	-0.581***	-0.586***	-0.419***	-0.550***	-0.436***	-0.529***	-0.739***	-0.526***
	(0.0864)	(0.0798)	(0.0866)	(0.102)	(0.0955)	(0.103)	(0.185)	(0.172)	(0.185)
Household Size	-0.340***	-0.389***	-0.343***	-0.242***	-0.225***	-0.243***	-0.640***	-0.697***	-0.641***
	(0.0635)	(0.0590)	(0.0635)	(0.0672)	(0.0622)	(0.0672)	(0.118)	(0.112)	(0.118)
Married	-0.0111***	-0.0114***	-0.0111***	-0.00374	-0.00357	-0.00376	-0.00602	-0.00663*	-0.00621
	(0.00196)	(0.00180)	(0.00196)	(0.00242)	(0.00224)	(0.00242)	(0.00411)	(0.00385)	(0.00409)
Has Disability	1.103*	1.019**	1.097*	-0.0123	-0.241	-0.0131	-0.322	-0.255	-0.327
	(0.580)	(0.509)	(0.580)	(0.550)	(0.494)	(0.550)	(0.644)	(0.592)	(0.644)
Education Level	0.0633***	0.0625***	0.0632***	0.0812***	0.0869***	0.0811***	0.0789***	0.0858***	0.0787***
	(0.00440)	(0.00407)	(0.00440)	(0.00547)	(0.00516)	(0.00547)	(0.0104)	(0.00953)	(0.0104)
Constant	6.549***	6.943***	7.018***	3.118***	3.950***	3.398***	4.487**	6.241***	4.485**
	(0.961)	(0.890)	(0.966)	(1.154)	(1.085)	(1.159)	(2.056)	(1.880)	(2.054)
R^2	0.0131	0.0117	0.0132	0.0215	0.0192	0.0217	0.0534	0.0460	0.0536
Observations	105087	126369	105087	59620	72663	59620	18794	22830	18794

Standard errors in parentheses
* p<0.1, ** p<0.05, *** p<0.01

Appendix 1.3 Secondary Analysis Regression Results

Table 31: Effect on Marriage Rates (% Likelihood)

	Poverty Status Identification			Child Identification			Age Identification		
	Standard Waiver	Proportion Waiver	Standard Waiver + Lag	Standard Waiver	Proportion Waiver	Standard Waiver + Lag	Standard Waiver	Proportion Waiver	Standard Waiver + Lag
Work Requirement (WR)	1.980***	1.220*	2.369***	0.771	1.402*	0.654	-1.777	-2.200*	-0.131
	(0.655)	(0.634)	(0.717)	(0.865)	(0.804)	(0.933)	(1.302)	(1.245)	(1.401)
Is ABAWD	-11.80***	-11.74***	-11.79***	-39.61***	-39.22***	-39.61***	-15.35***	-15.02***	-15.35***
	(0.404)	(0.393)	(0.404)	(0.456)	(0.446)	(0.456)	(0.682)	(0.663)	(0.682)
WR 2 Years	-	-	-1.163	-	-	0.472	-	-	-6.345***
			(1.024)			(1.485)			(2.100)
WR * ABAWD	-2.408***	-2.407***	-3.311***	-2.518***	-3.526***	-2.354**	-0.0826	-0.810	-2.517
	(0.764)	(0.764)	(0.916)	(0.901)	(0.876)	(1.050)	(1.344)	(1.335)	(1.599)
WR 2 Years * ABAWD	-	-	2.328*	-	-	-0.476	-	-	7.166***
			(1.370)			(1.669)			(2.414)
Unemployment Rate	-0.383**	-0.278*	-0.367**	-0.579***	-0.541***	-0.583***	-0.205	-0.185	-0.160
	(0.164)	(0.151)	(0.165)	(0.188)	(0.173)	(0.188)	(0.300)	(0.278)	(0.301)
Has Disability	-3.695***	-3.712***	-3.688***	-3.683***	-3.539***	-3.684***	-10.04***	-9.782***	-10.05***
	(0.463)	(0.430)	(0.463)	(0.518)	(0.483)	(0.518)	(0.591)	(0.556)	(0.590)
Education Level	0.235***	0.236***	0.235***	0.109***	0.112***	0.109***	0.0322**	0.0173	0.0319**
	(0.00793)	(0.00731)	(0.00793)	(0.00983)	(0.00914)	(0.00982)	(0.0148)	(0.0138)	(0.0148)
Family Income	-	-	-	0.0360***	0.0367***	0.0360***	0.0336***	0.0323***	0.0335***
				(0.000978)	(0.000908)	(0.000978)	(0.00156)	(0.00146)	(0.00156)
Constant	15.81***	14.51***	15.61***	35.15***	33.88***	35.21***	25.47***	26.97***	24.86***
	(1.771)	(1.635)	(1.787)	(2.111)	(1.948)	(2.118)	(3.280)	(3.038)	(3.293)
R^2	0.0575	0.0554	0.0575	0.242	0.241	0.242	0.0965	0.0879	0.0970
Observations	137272	164387	137272	96487	116288	96487	39915	47954	39915

Standard errors in parentheses
* p<0.1, ** p<0.05, *** p<0.01

Appendix 2 Complete Waiver Maps, 2010-2019

After the ABAWD work requirement takes effect, ABAWDs have three months in a given thirty-six month period in which they can fail to meet the work requirement before they lose their benefits. In this study, I assume that those unable to find work after the time limit takes effect will choose to use those three months immediately. As a result, work requirement status is coded as being active only three months after the work requirement was re-implemented. Additionally, the FSS, which serves as the data for individual respondents' food security and work outcomes, was collected only in December of each year. For each map, therefore, a county is set as having a waiver if the work requirement was waived in October, November, or December of that year. For counties in which waivers were requested for only part of the county, I calculated the ratio of the county covered by a work requirement and rounded to the nearest whole. If less than half of a county's population was covered by a work requirement, then that county was treated as though it had a waiver that year in full. If a majority of the county's population was covered by the time limit, then that county was treated as though the whole county had the work requirement in effect that year.

Appendix 2.1 Waiver Status by County

Figure 11: County Waivers in 2010

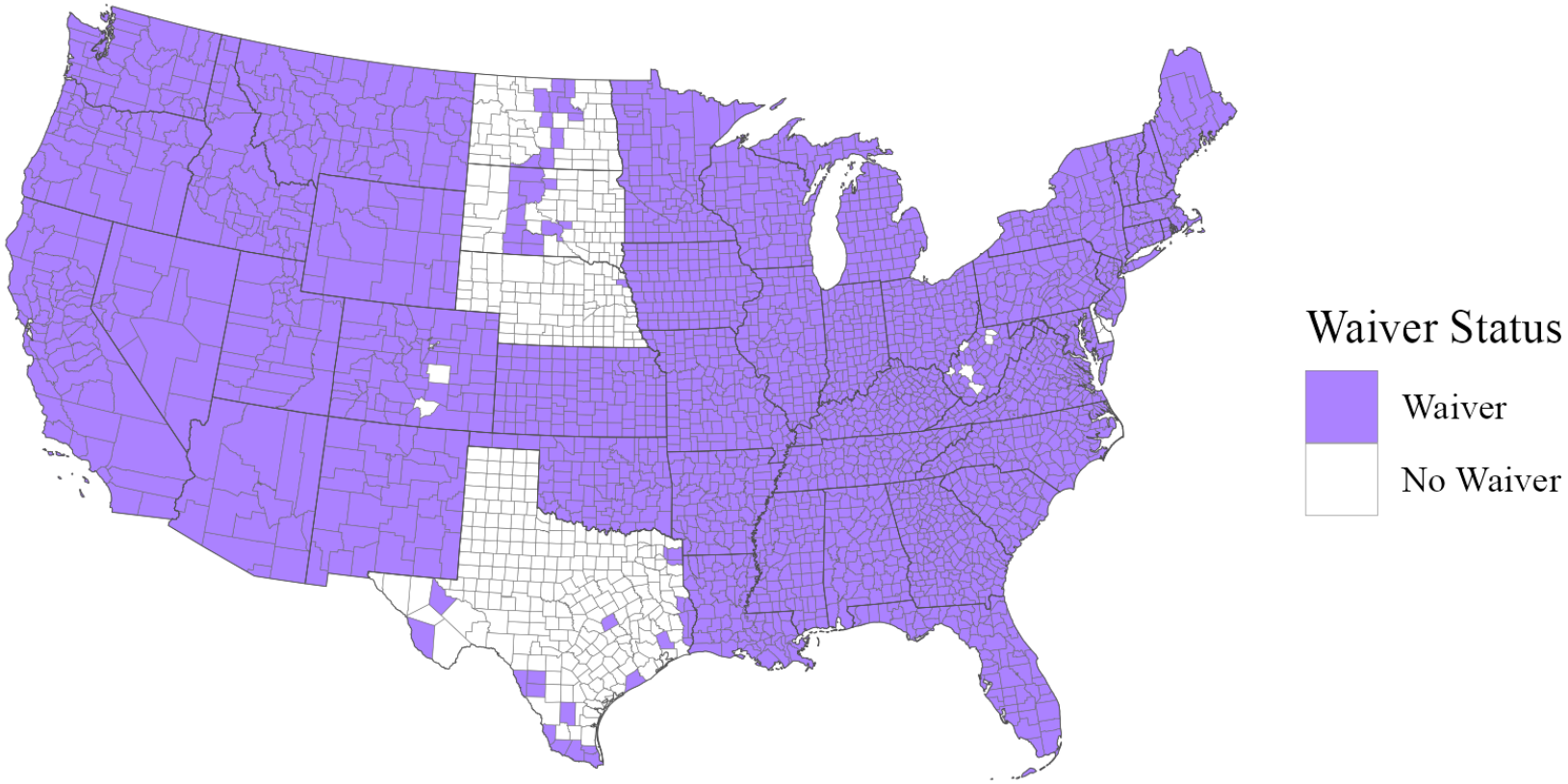


Figure 12: County Waivers in 2011

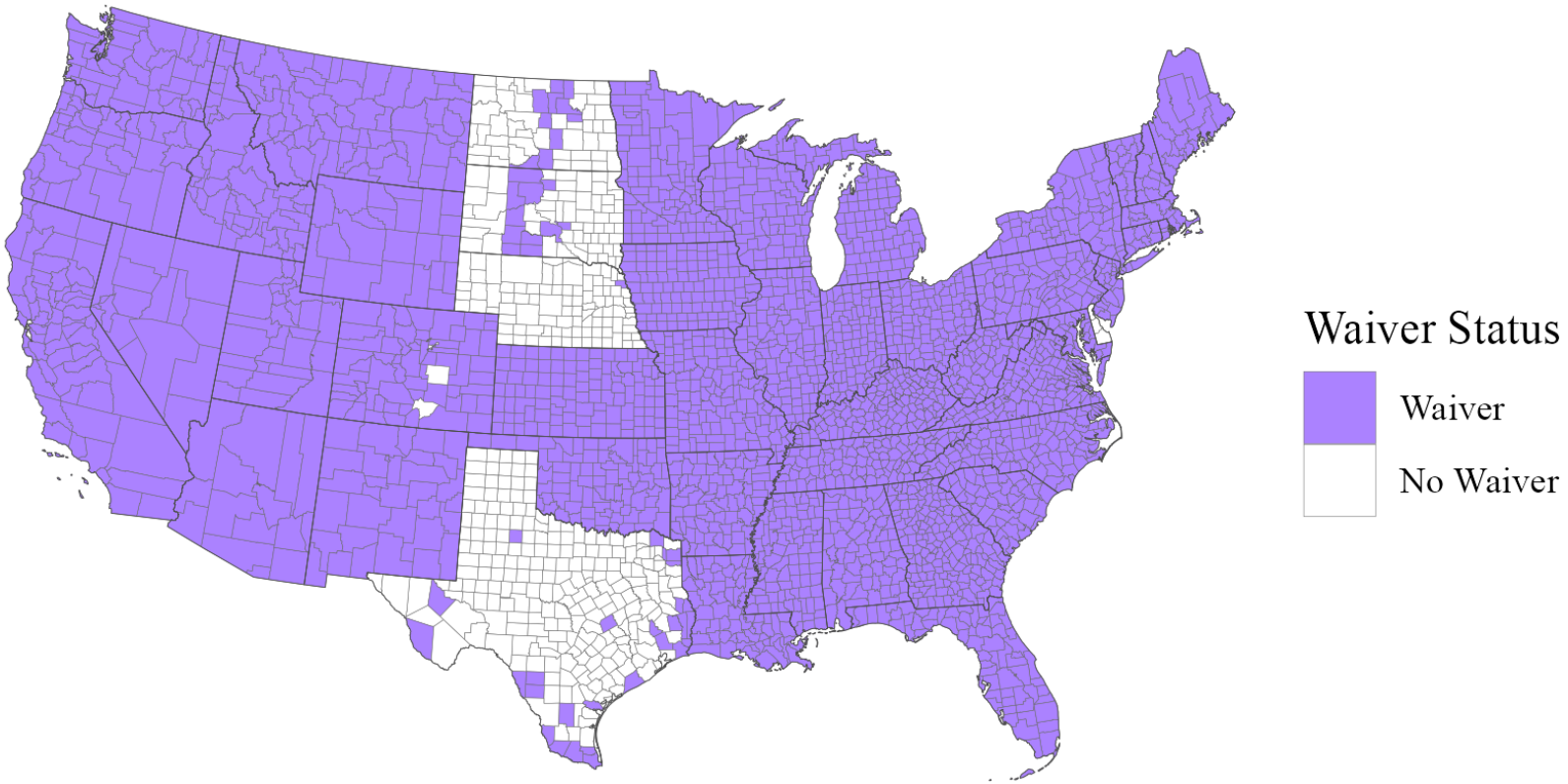


Figure 13: County Waivers in 2012

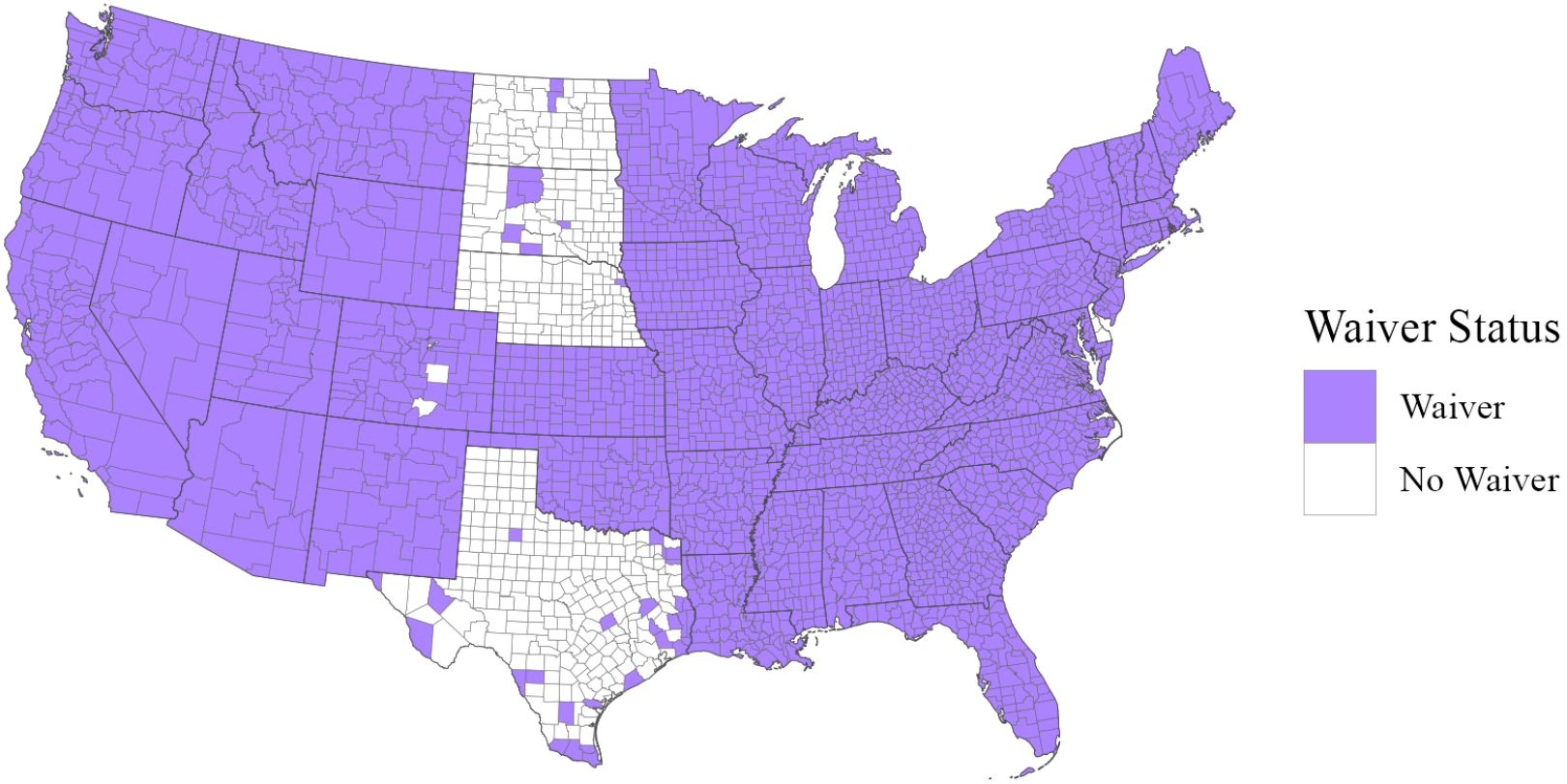


Figure 14: County Waivers in 2013

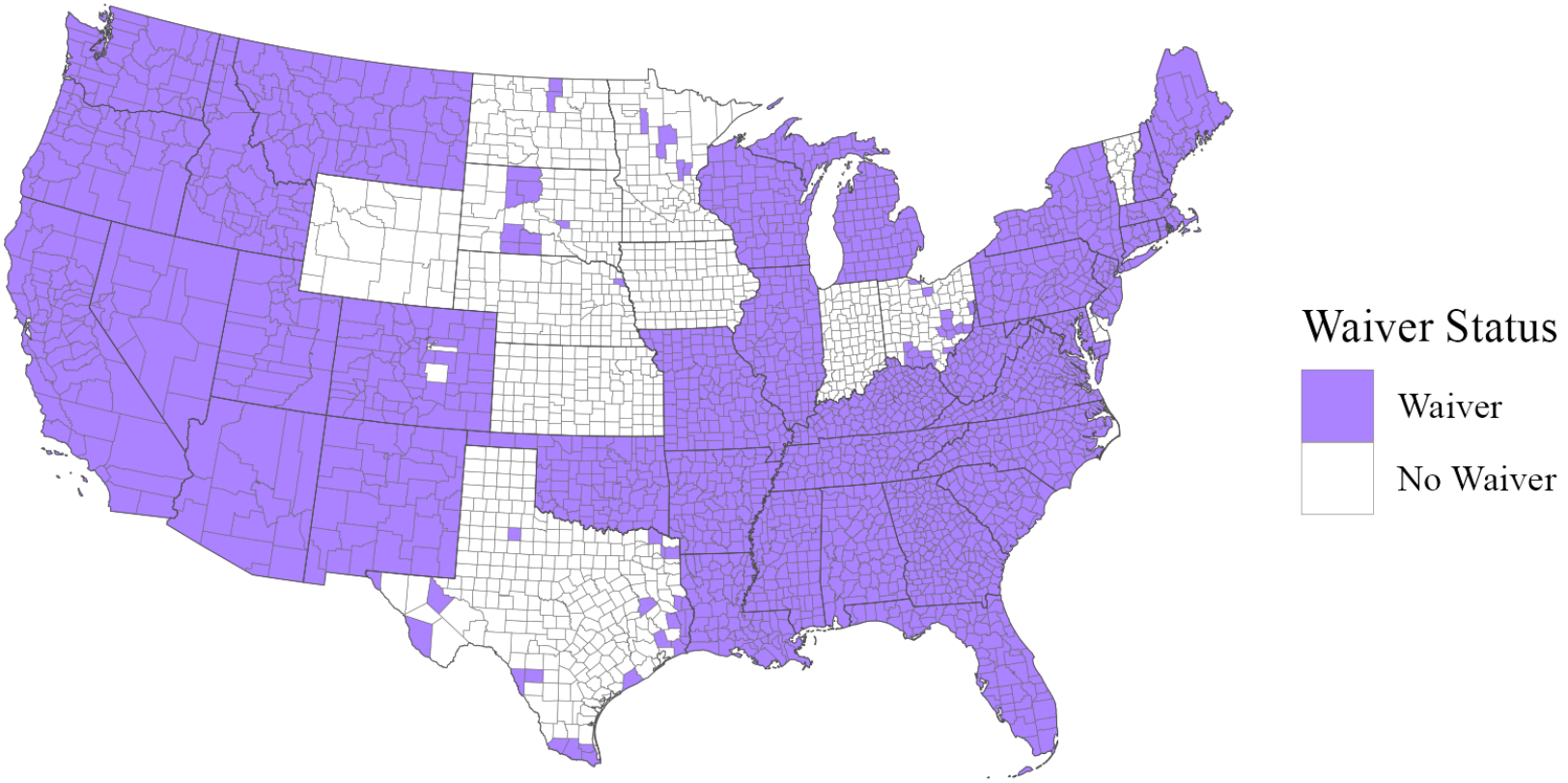


Figure 15: County Waivers in 2014

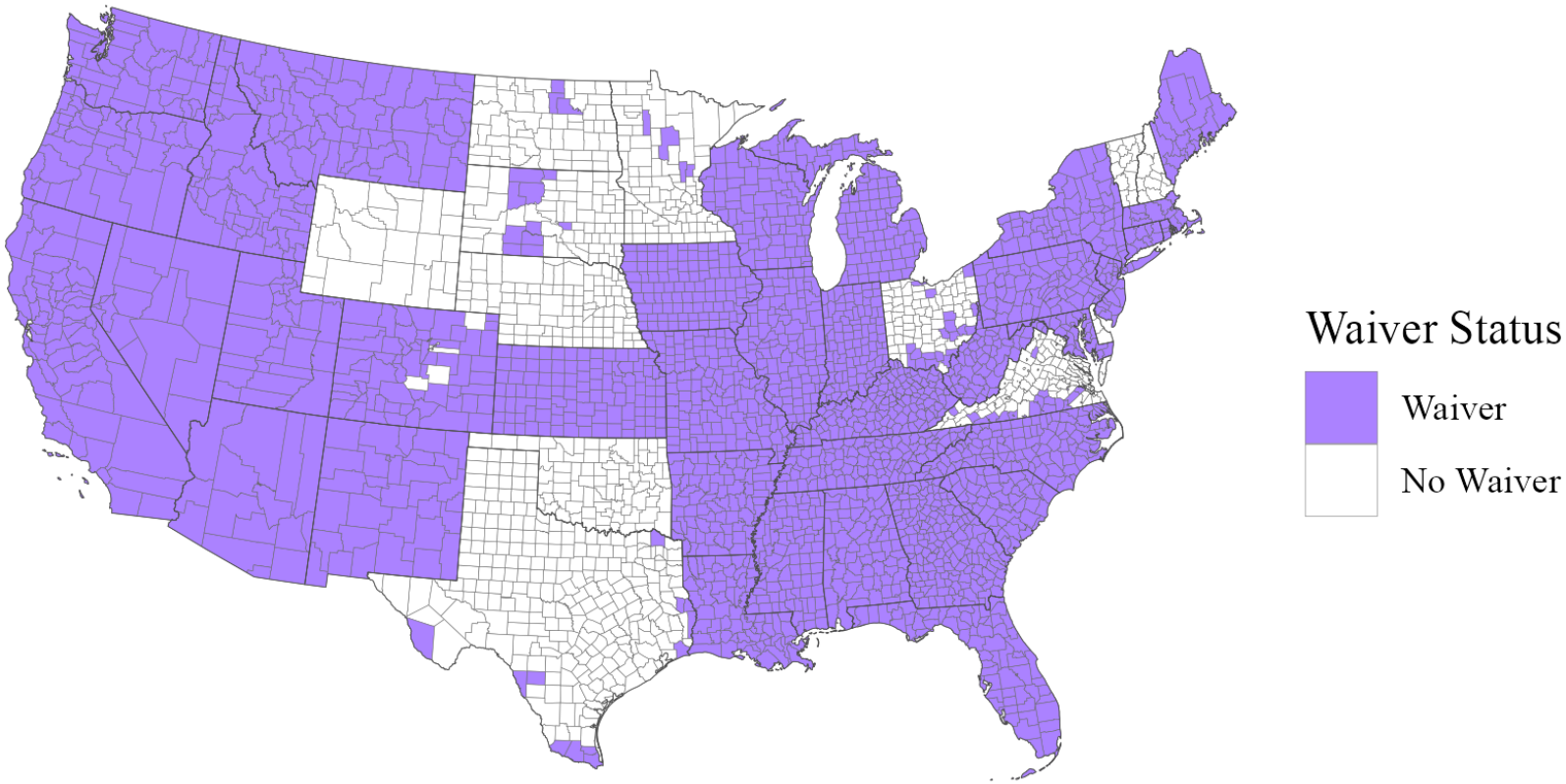


Figure 16: County Waivers in 2015

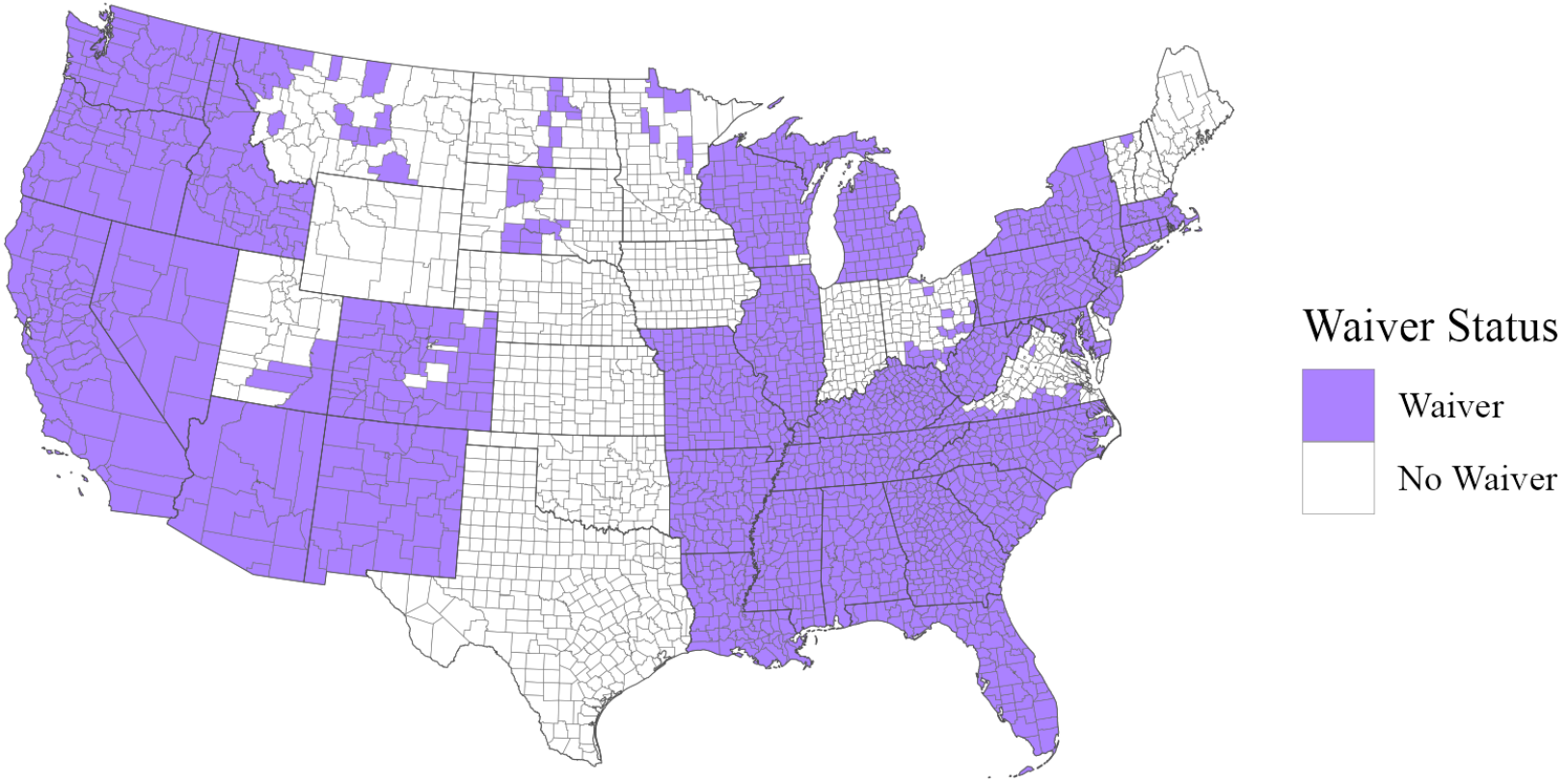


Figure 17: County Waivers in 2016

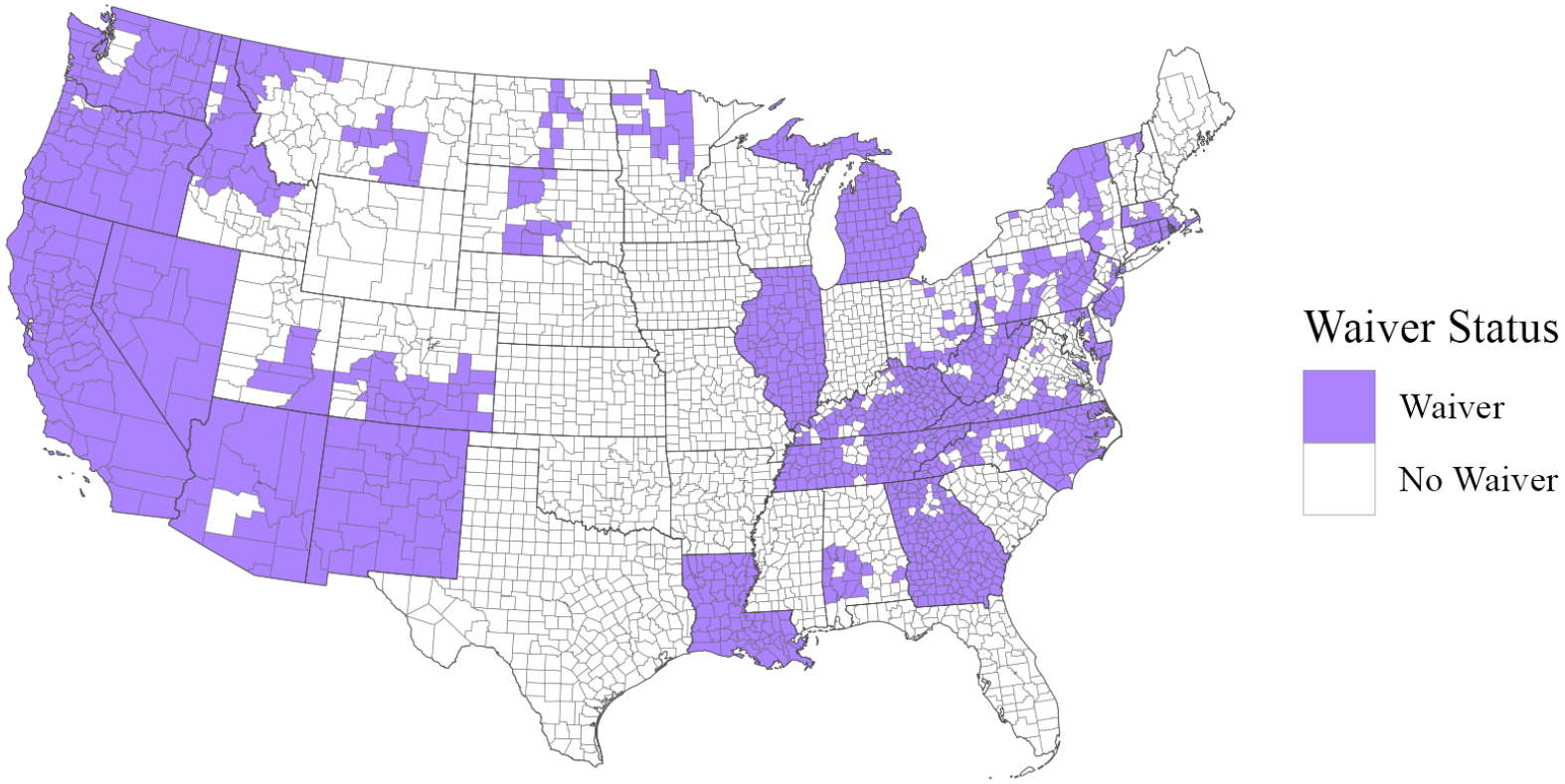


Figure 18: County Waivers in 2017

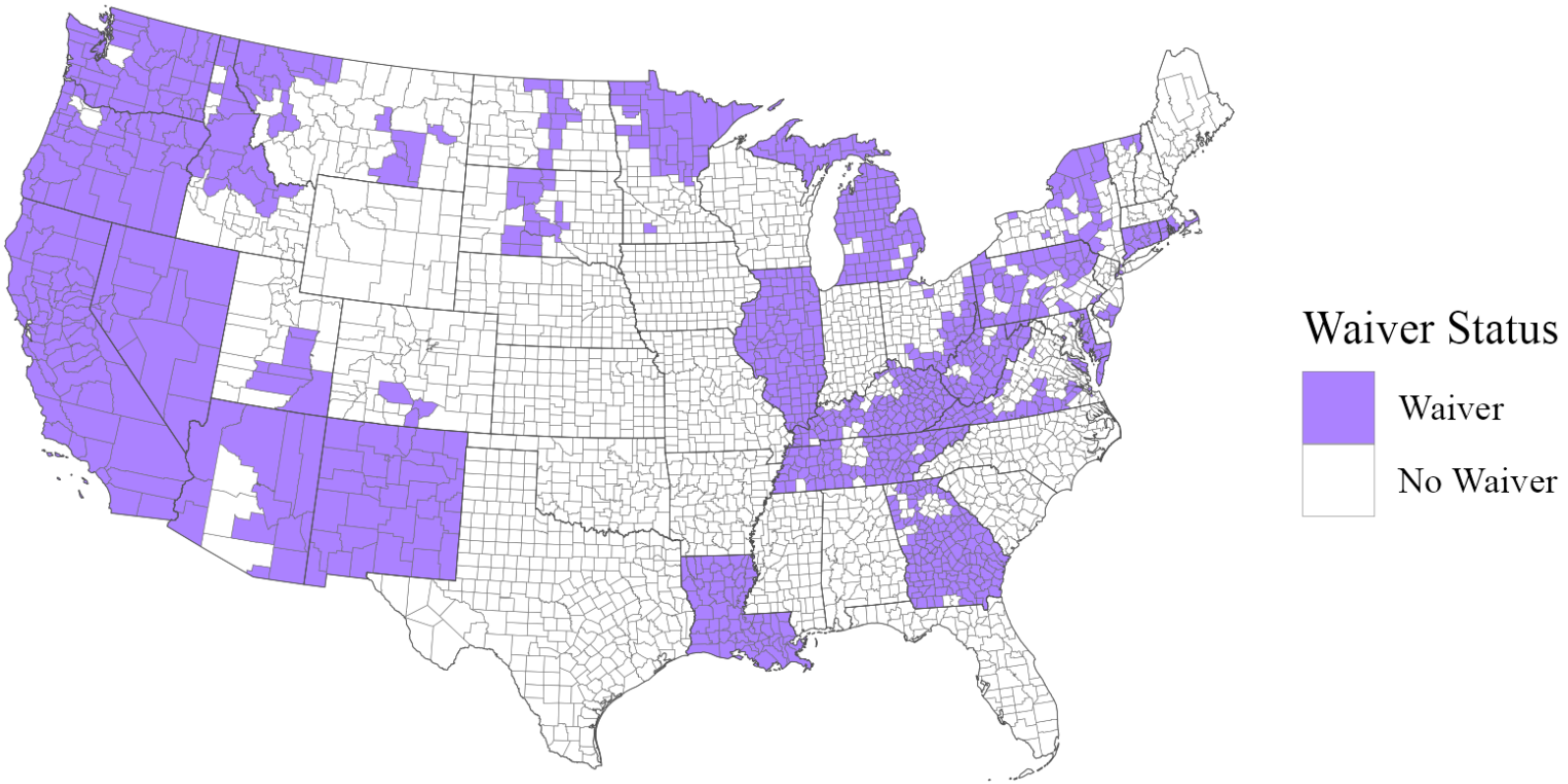


Figure 19: County Waivers in 2018

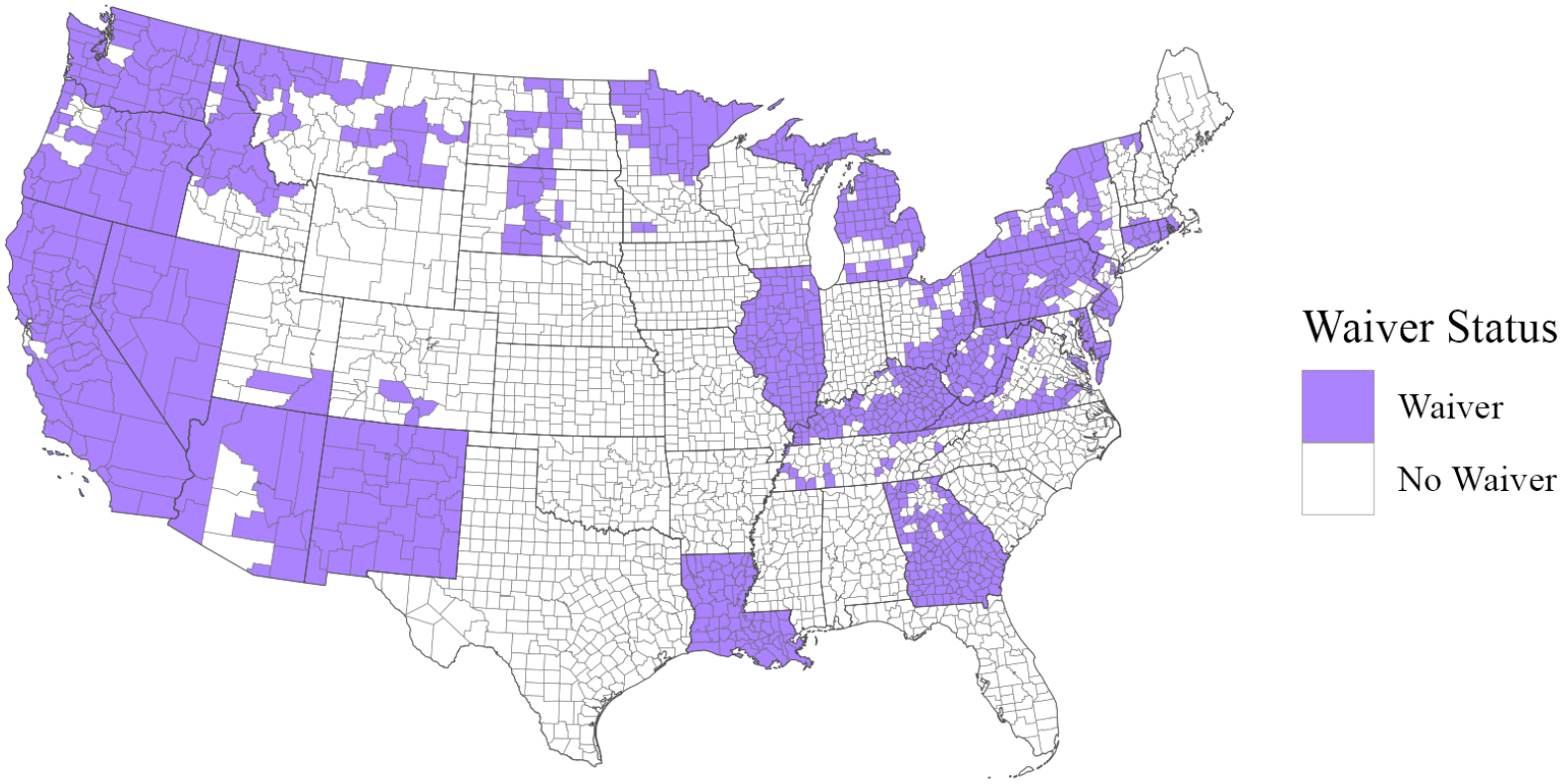
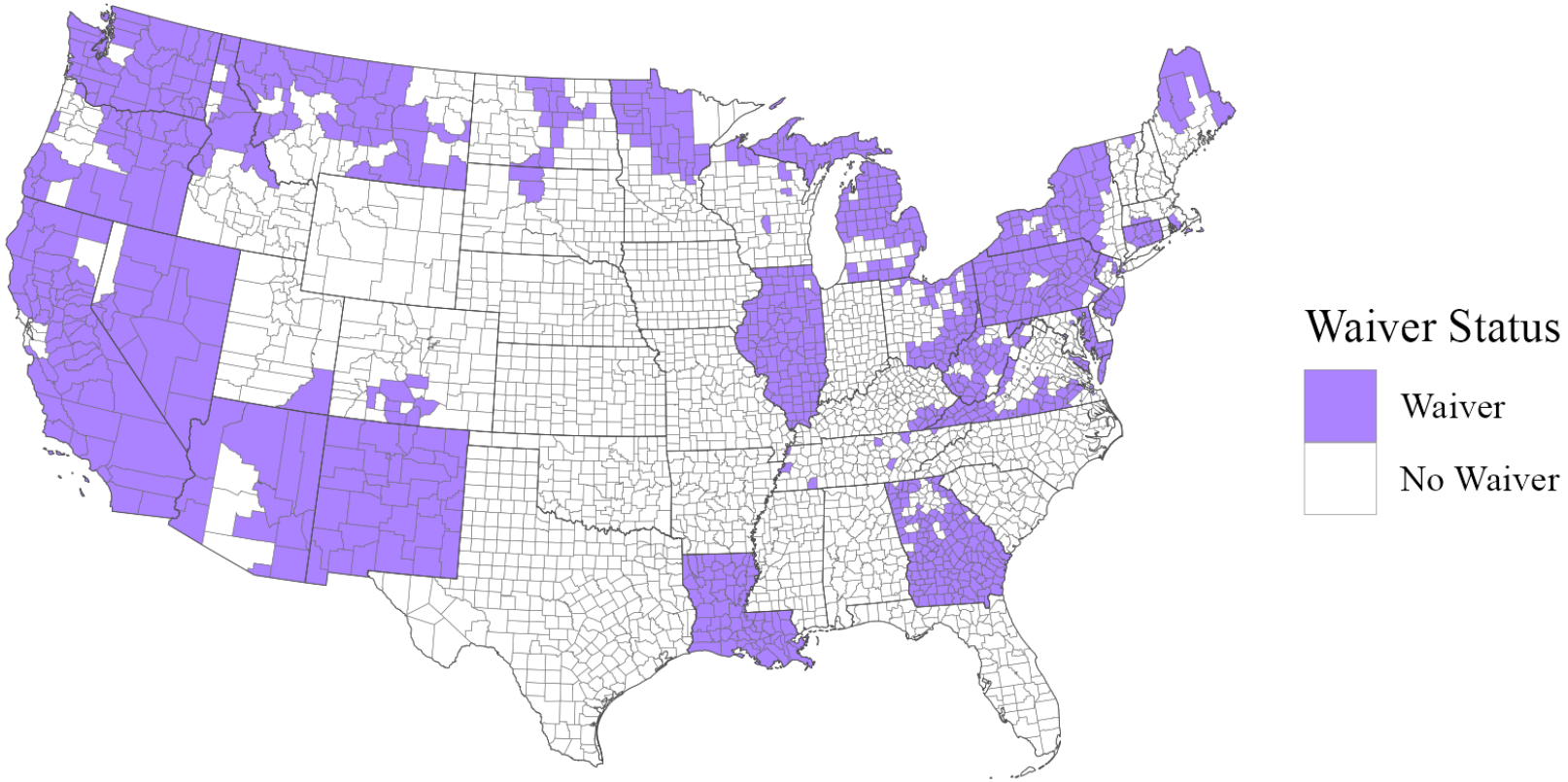


Figure 20: County Waivers in 2019



Appendix 2.2 Appropriate Use of County Waivers by Unemployment

For these figures, I use 4.5% as a baseline "low" unemployment rate and 6.5% as the "high" unemployment rate, and compare county waiver status to its unemployment rates to examine trends in implementation. Counties without highlighting either had high unemployment rates and a waiver or low unemployment and no waiver; these are counties whose waiver status was appropriately implemented based on these statistics. The counties in red, meanwhile, had high unemployment rates but did not receive a waiver, while counties shaded blue had low unemployment rates but received a waiver anyway. These red or blue counties are those whose waiver status was inappropriate, or not aligned with their unemployment rate. It should be noted that these specific figures are purely illustrative; the FNS grants waiver requests using an unemployment figure that is relative to whatever the national rate is and changes each year.

Figure 21: Overuse and Underuse of County Waivers in 2010

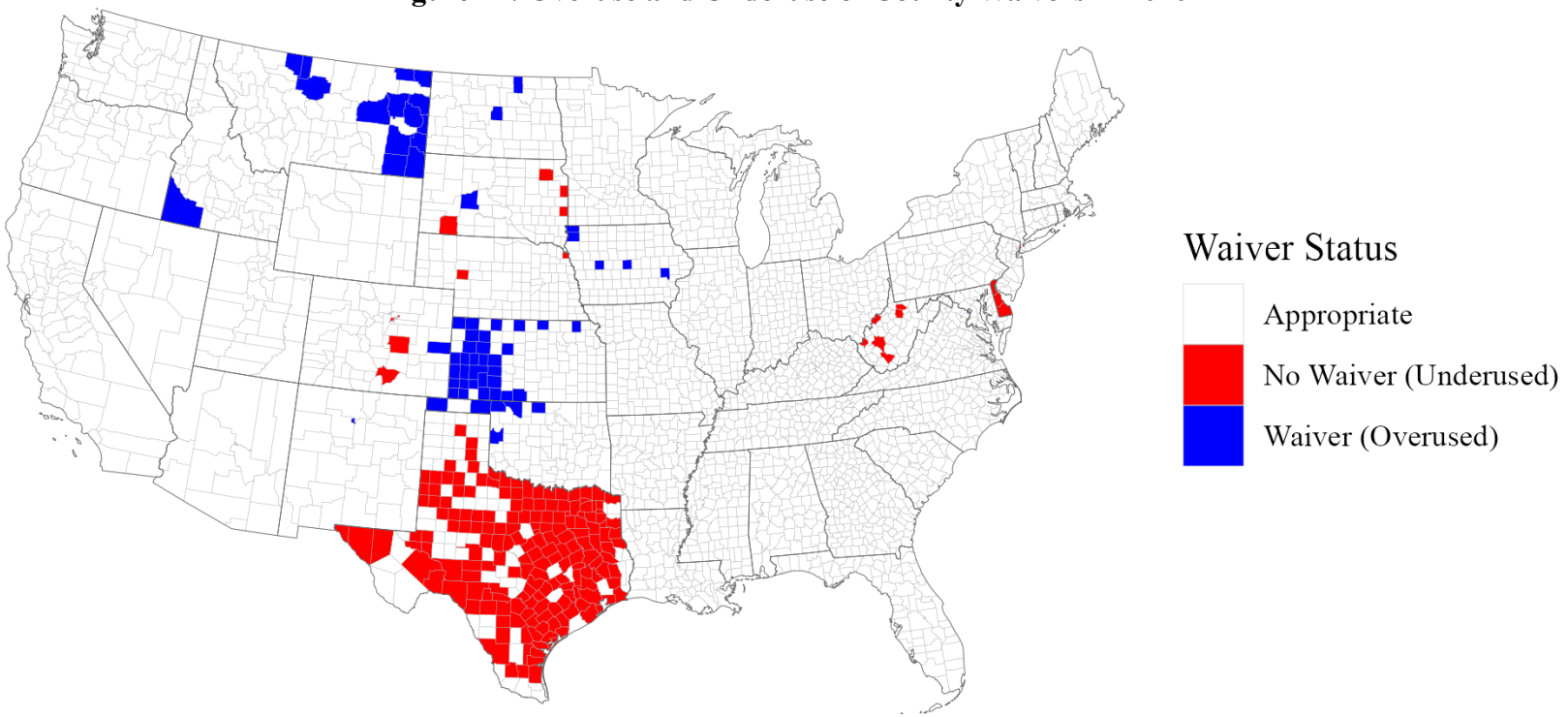


Figure 22: Overuse and Underuse of County Waivers in 2011

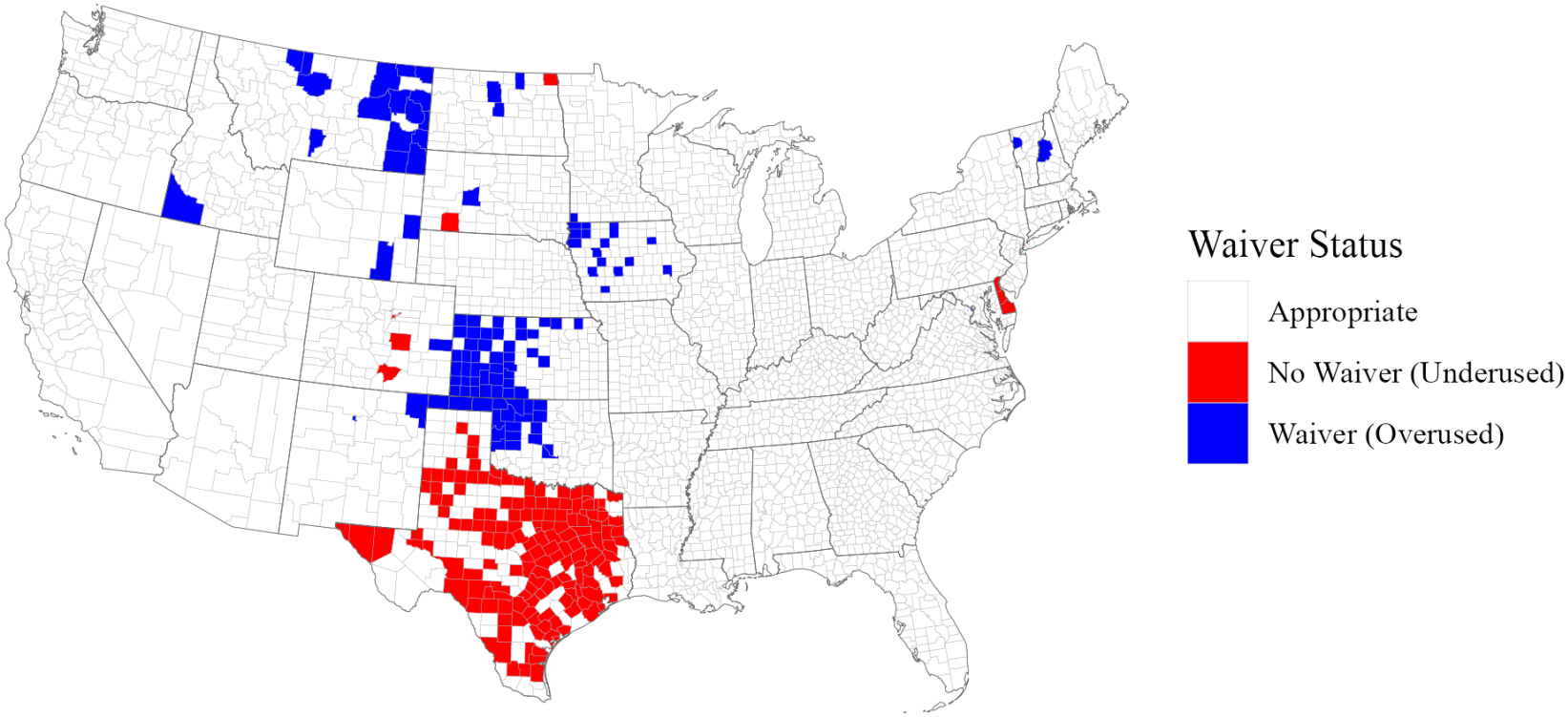


Figure 23: Overuse and Underuse of County Waivers in 2012

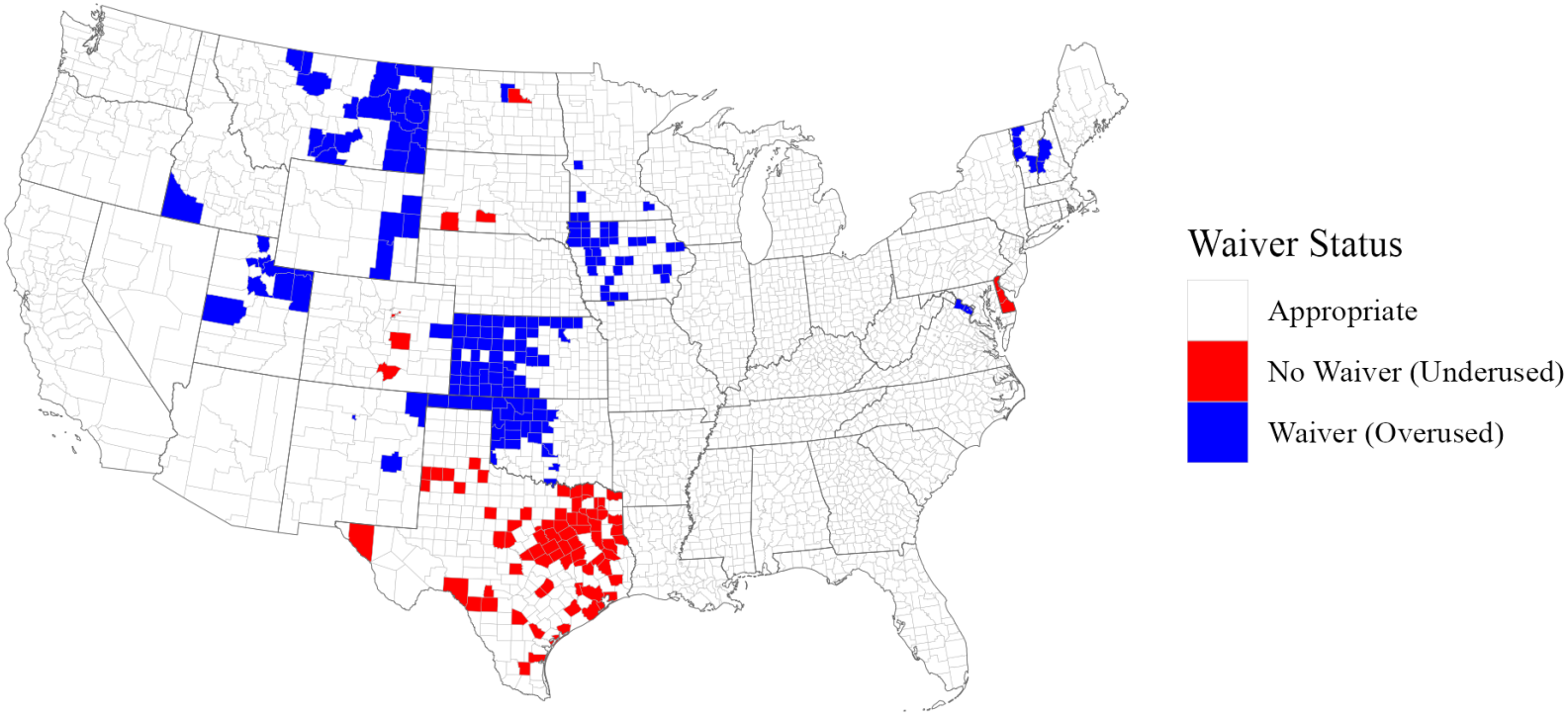


Figure 24: Overuse and Underuse of County Waivers in 2013

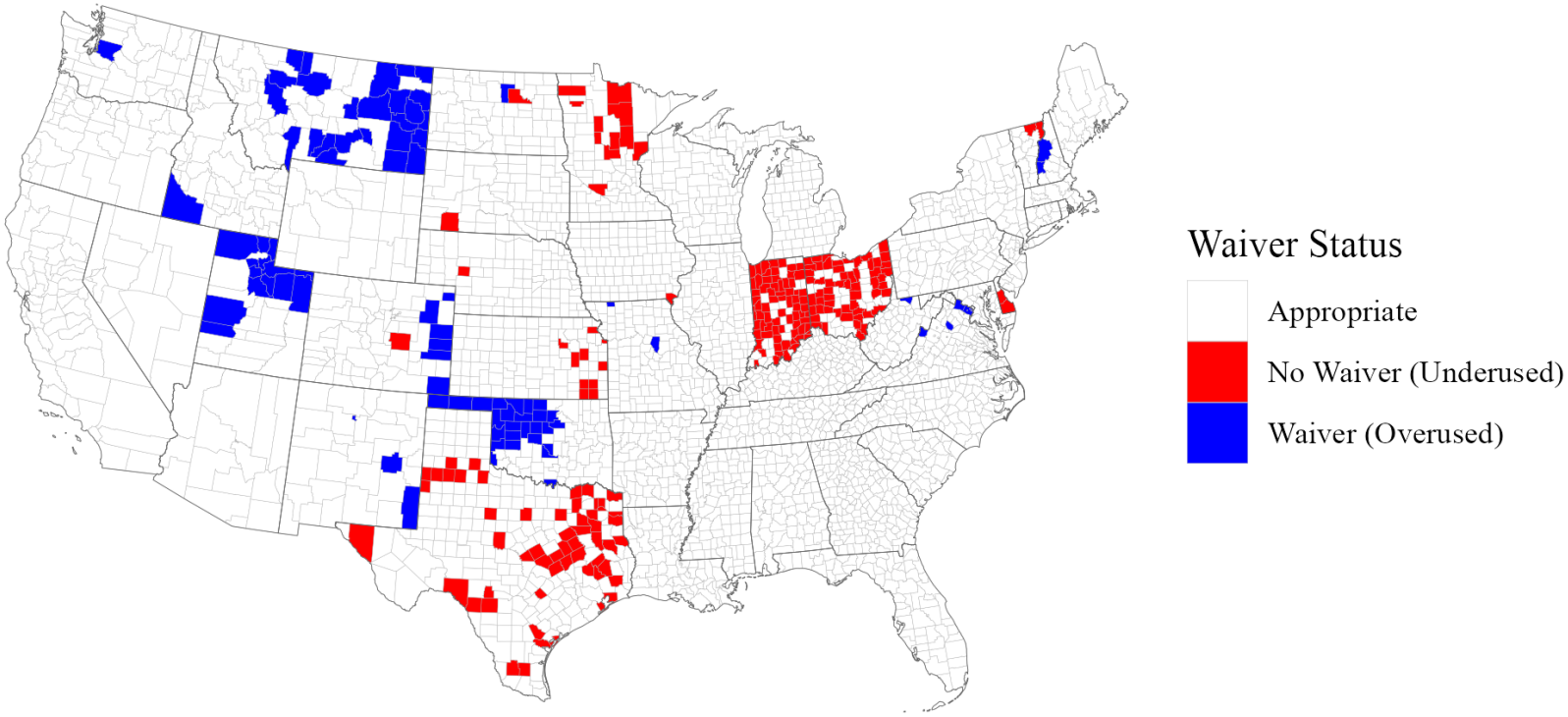


Figure 25: Overuse and Underuse of County Waivers in 2014

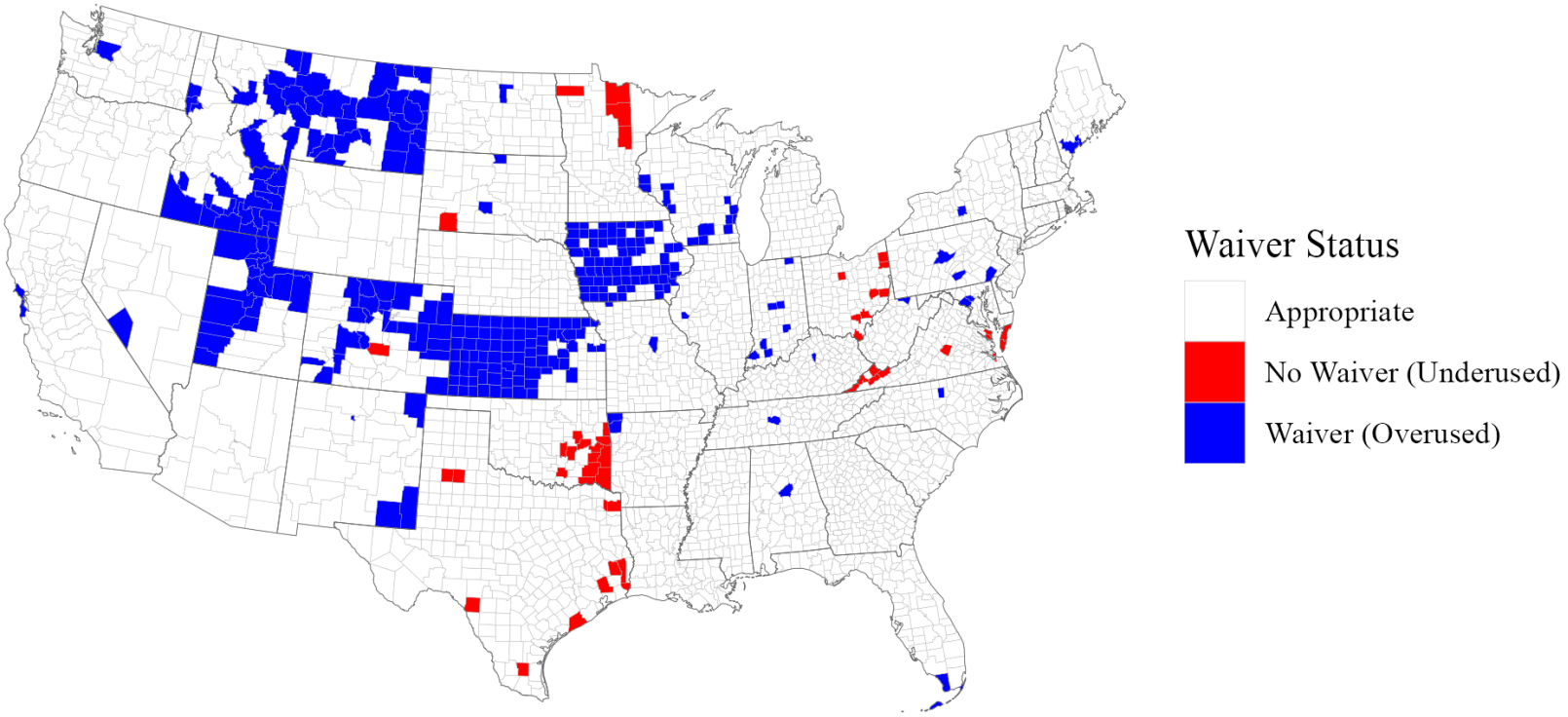


Figure 26: Overuse and Underuse of County Waivers in 2015

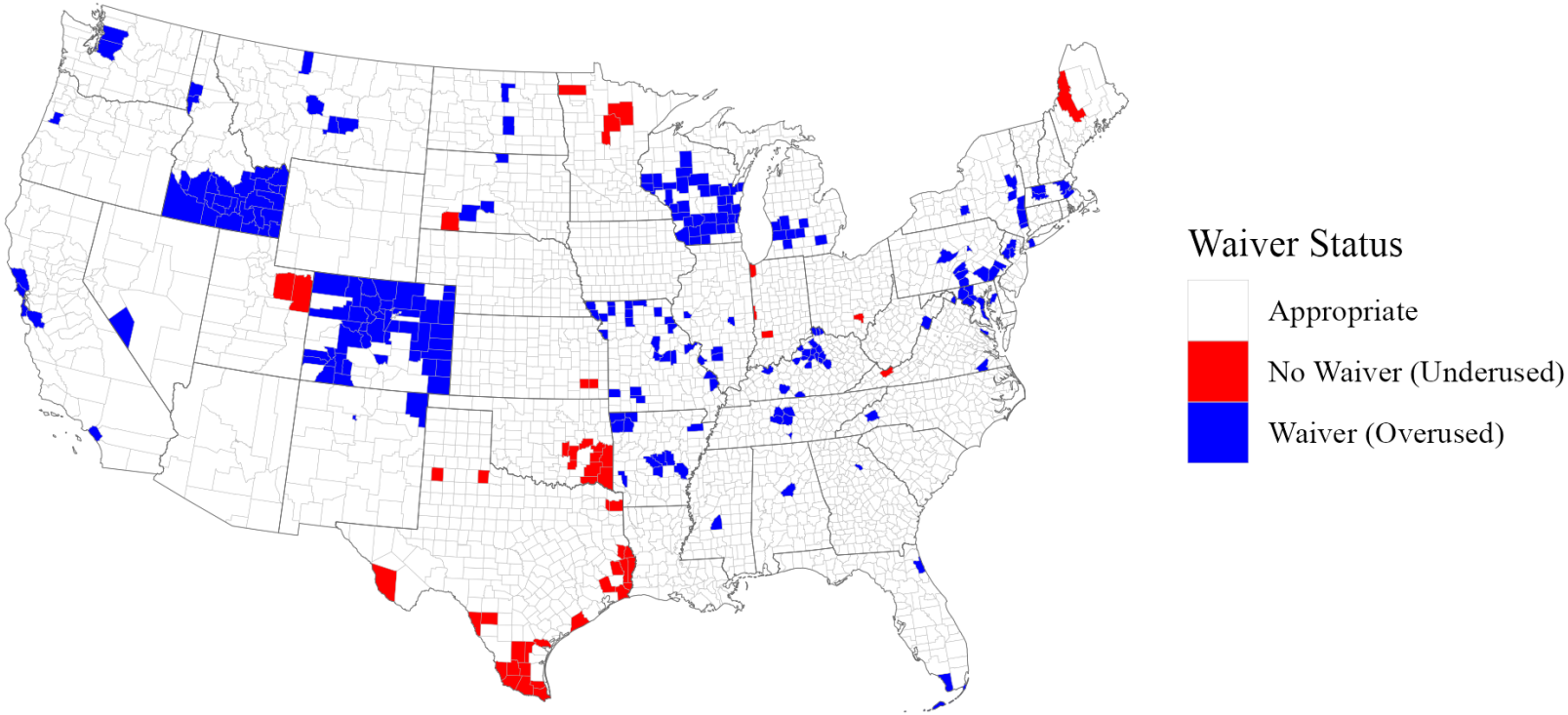


Figure 27: Overuse and Underuse of County Waivers in 2016

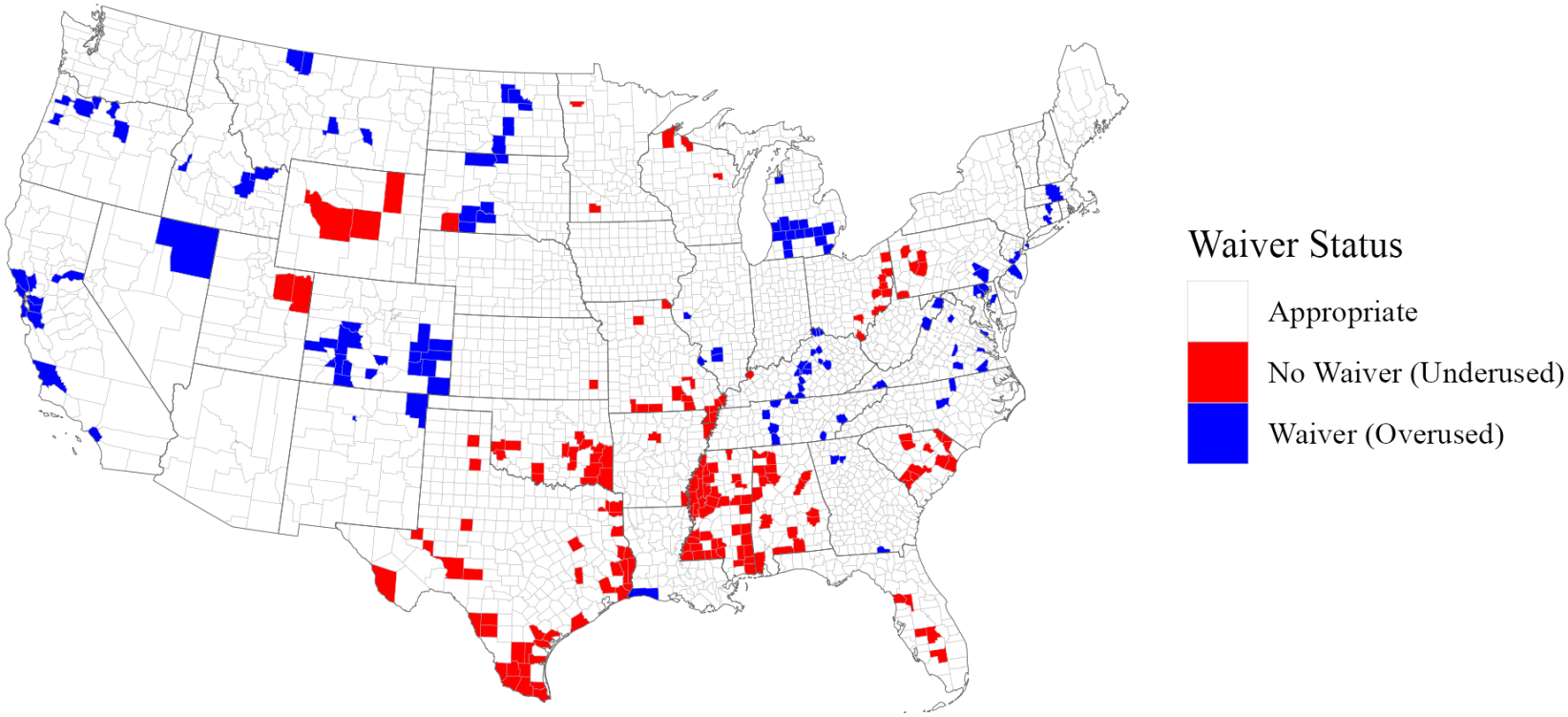


Figure 28: Overuse and Underuse of County Waivers in 2017

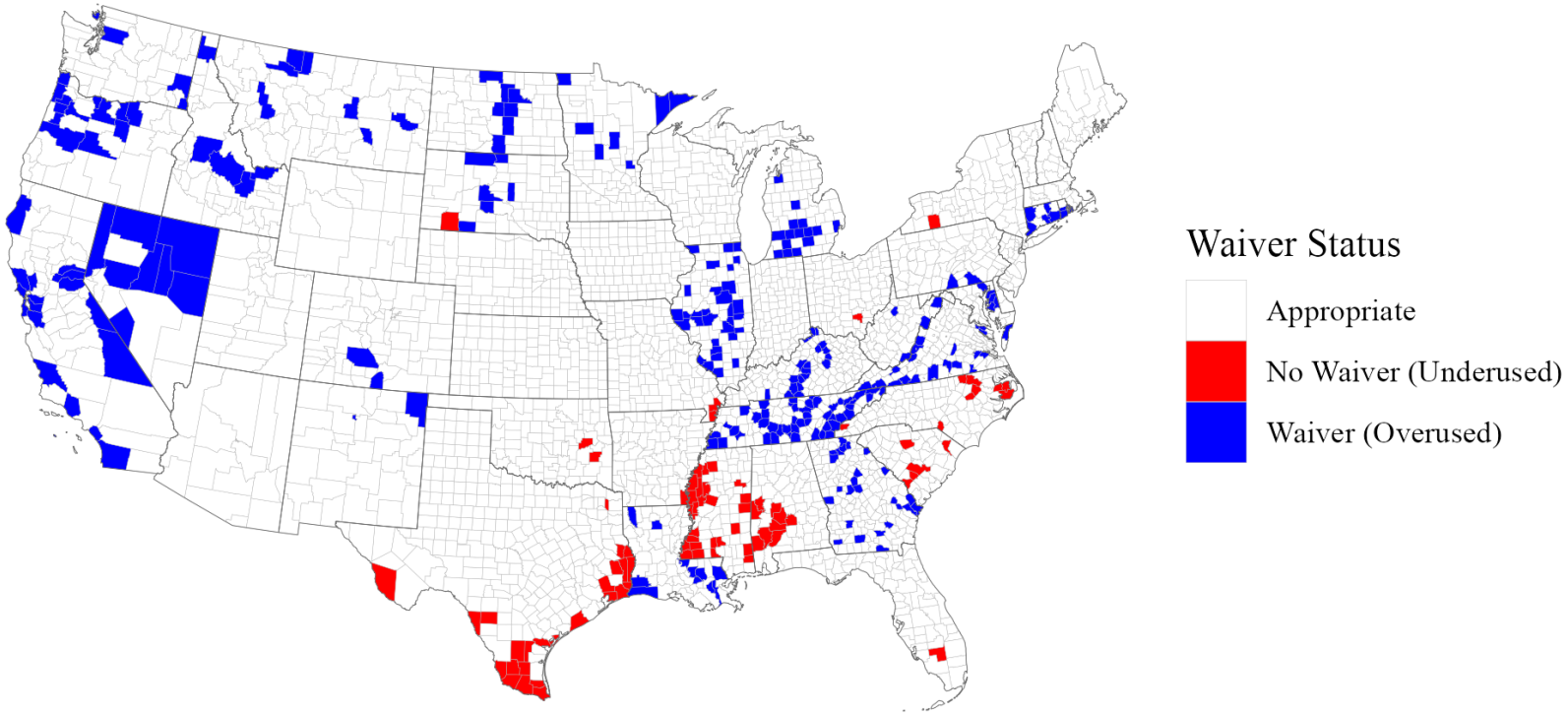


Figure 29: Overuse and Underuse of County Waivers in 2018

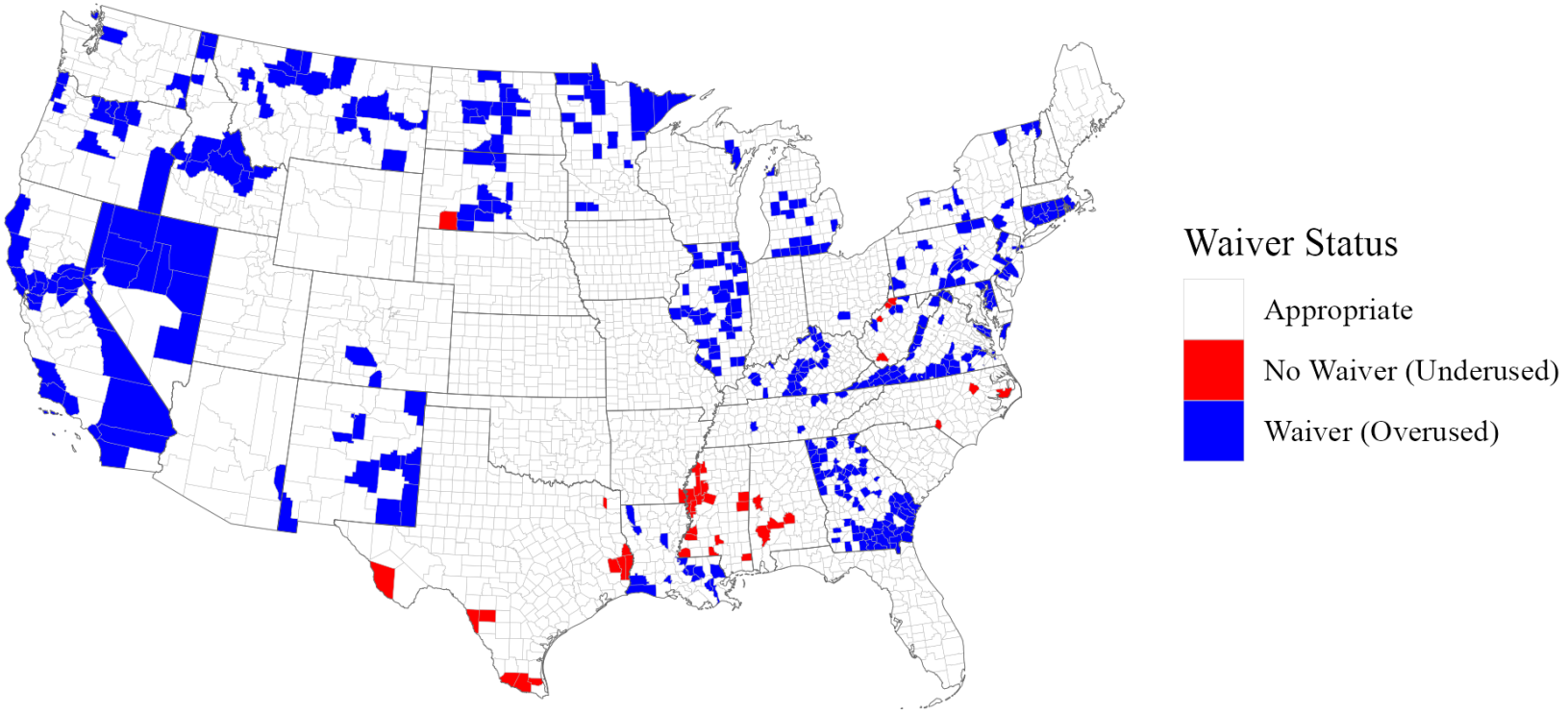
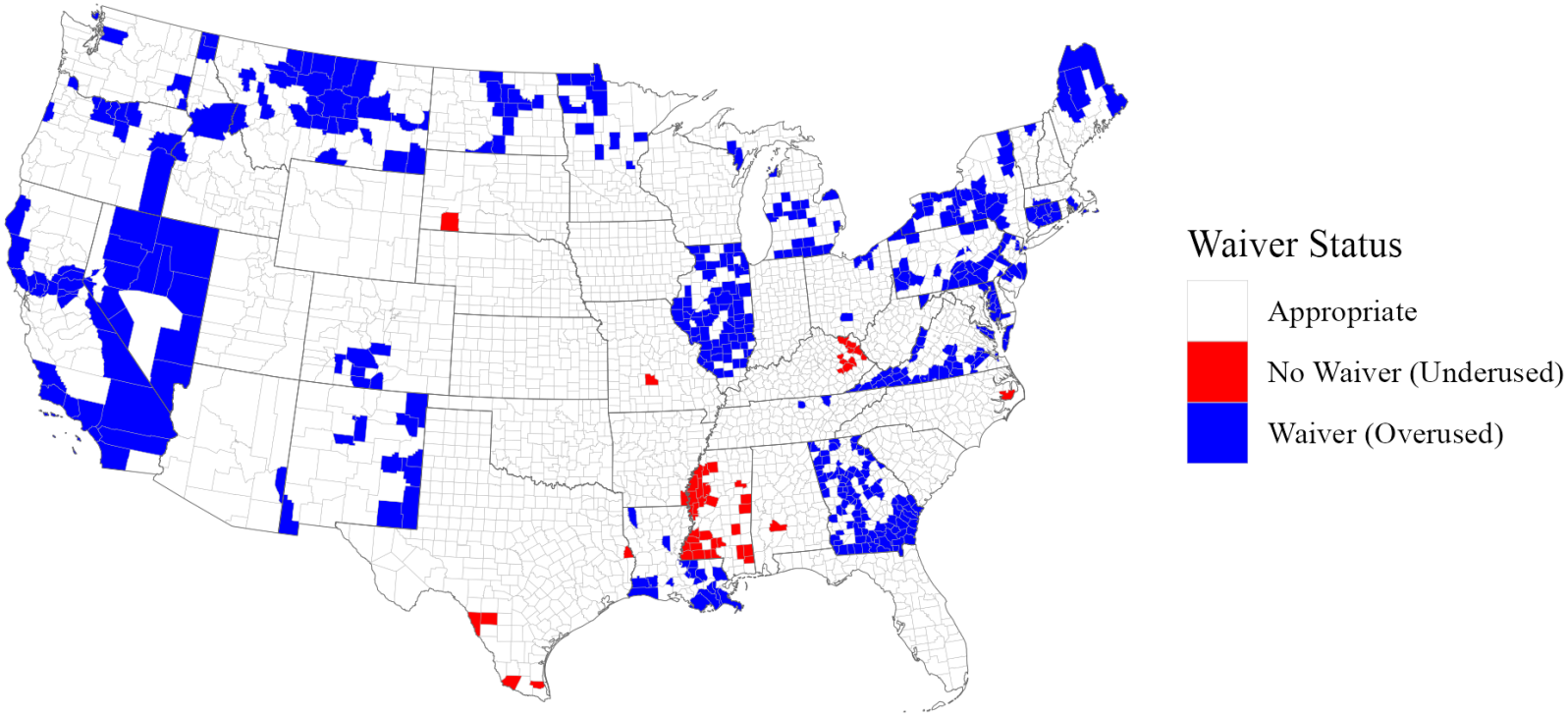


Figure 30: Overuse and Underuse of County Waivers in 2019



Appendix 3: Dependent Variable Construction

Table 32: Food Insecurity Score Construction (0 to 100)

	Variable Description	Response	Points
1	Which of these statements best describes the food eaten in your household: enough of the kinds of food we want to eat, enough but not always the kinds of food we want to eat, sometimes not enough to eat, or often not enough to eat?	Enough of the kinds of food we want to eat	0
		Enough but not always the kinds of food we want to eat	4
		Sometimes not enough to eat	8
		Often not enough to eat	12
2	"We worried whether our food would run out before we got money to buy more." Was that often true, sometimes true, or never true for your household in the last 12 months?	Never true	0
		Sometimes true	1
		Often true	2
3	"The food that we bought just didn't last, and we didn't have money to get more." Was that often, sometimes, or never true for your household in the last 12 months?	Never true	0
		Sometimes true	2
		Often true	4
4	"We couldn't afford to eat balanced meals." Was that often, sometimes, or never true for your household in the last 12 months?	Never true	0
		Sometimes true	4
		Often true	8
5	Frequency … skipping meals or cutting meal size because not enough money for food in past year	Not at all	0
		At least once	3
		Only 1 or 2 months	6
		Some months but not every month	9
		Almost every month	12
6	In the last 12 months, did you ever eat less than you felt you should because there wasn't enough money for food?"	Not at all	0
		At least once	1
		Only 1 or 2 months	2
		Some months but not every month	3
		Almost every month	4
7	In the last 12 months, were you ever hungry but didn't eat because there wasn't enough money for food?	Not at all	0
		At least once	1
		Only 1 or 2 months	2
		Some months but not every month	3
		Almost every month	4
8	In the last 12 months, did you lose weight because there wasn't enough money for food?	No	0
		Yes	14
9	In the last 12 months, did you or other adults in your household ever not eat for a whole day because there wasn't enough money for food?	Not at all	0
		At least once	5
		Only 1 or 2 months	10
		Some months but not every month	15
		Almost every month	20

10	In the last 12 months, since December of last year, did you ever run short of money and try to make your food or your food money go further?	No	0
		Yes	1
11	In the last 12 months, did you or other adults in your household ever get emergency food from a church, a food pantry, or food bank?	Not at all	0
		At least once	2
		Only 1 or 2 months	4
		Some months but not every month	6
		Almost every month	8
12	In the last 12 months, did you or other adults in your household ever eat any meals at a soup kitchen or shelter?	Not at all	0
		At least once	2
		Only 1 or 2 months	4
		Some months but not every month	6
		Almost every month	8

Source: Flood et al. 2023

Table 32 shows how the custom food insecurity score was constructed. Each possible response to the twelve food security component questions from the FSS was assigned a point value, and each respondent's food insecurity score was stored as the sum of the values of each respondent's answer to all of these questions. Higher values indicated higher food insecurity, with a score of 100 indicating the highest possible measurable level of food insecurity, and a score of 0 indicating a fully food-secure individual.

The scores corresponding to each response are recorded in the rightmost column of Table 32 and scaled to roughly corresponded to the magnitude of food security that it captured. For example, a respondent's worrying about not having enough money for food at least once would raise their score by only 1 point, while skipping meals for a full day at least once would raise their score by 5 points. Some questions, like questions 6 and 7 and questions 11 and 12, were downscaled in their point values because they each asked mostly the same thing. This is also why the nutrition-related questions, questions 1 and 4, have comparatively higher values than most of the other questions; the other ten questions each deal with the likelihood of eating or not eating, while questions 1 and 4 are the only two that deal with access to nutritious meals.