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## The Impact of SNAP Work Requirements

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### **Abstract**

Our paper examines the impact of SNAP work requirements on the labor supply of participants and on overall participation in SNAP. We perform a regression discontinuity analysis of the impact of work requirements for able bodied adults without dependents (ABAWDs) on labor supply and participation, exploiting the fact that the work requirement applies only to individuals under 50 years old. Using a novel dataset containing ABAWD work requirement waiver information merged with SNAP administrative records and American Community Survey (ACS) data, we find the work requirements have no impact on labor force participation and the number of hours worked. We do find that the work requirements reduce participation in SNAP. There is some evidence that those with worse job prospects are especially less likely to participate in SNAP as a result of the work requirements. We find little evidence that ABAWDs respond to the work requirements by claiming disability.

Keywords: Labor Supply; Food Assistance Programs; Work Incentives

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The Supplemental Nutrition Assistance Program (SNAP), formerly known as the Food Stamp Program (FSP), is the largest food assistance program and a key component of the overall safety net. Spending on SNAP peaked at roughly \$80 billion in 2013, nearly as much as that on the Temporary Assistance for Needy Families (\$17 billion) and the Earned Income Tax Credit (\$66 billion) combined. There has been a significant expansion in the number of households enrolled in SNAP following the Great Recession and after a wave of SNAP policies affecting eligibility, administrative burdens, and transaction costs were implemented in the early 2000s (See Ziliak (2015) or Stacy, Tiehen, & Marquardt (2018)). The SNAP caseload expanded from just over 26 million individuals in 2007 to over 42 million ten years later in 2017. As SNAP caseloads have expanded and remained elevated following the Great Recession, there has been renewed attention on whether SNAP caseloads should be reduced and whether participants can be encouraged to work more.

This is part of a larger and ongoing debate on whether or not public assistance programs discourage work, and if so how best to structure them to minimize the problem. Many safety net programs are structured so that benefits fade with income. This ensures that the neediest receive benefits, but it may potentially discourage work. In SNAP, for instance, after deductions, for each dollar earned in the labor market, benefits are reduced by 30 cents. This may reduce the incentive to work for some participants. Further, if an individual is participating in multiple programs, then the benefit reduction rate can be even higher. Peer reviewed estimates of the impact of public assistance participation on labor supply range from a small negative impact to a moderately large negative impact (See for instance H. W. Hoynes & Schanzenbach (2012), Fraker & Moffitt (1988), Keane & Moffitt (1998), and Hagstrom (1996)).

Work requirements have been proposed as a solution to the work disincentives problem. Work requirements generally can be imposed on all or some program participants, and usually involve setting a minimum number of hours of work—per week or per month—that a participant must maintain in order to stay on the program. They are often combined with rules requiring the individual to register for work and not voluntarily reduce hours or quit their job. In the context of SNAP, special work requirements are imposed on able-bodied adults without dependents (ABAWDs). ABAWDs are defined as those who are between 18 and 49 years of age, not disabled, and have no dependents. Generally, ABAWDs are limited to 3 months of SNAP

benefits over a 36 month period, unless working or participating in qualifying education or training activities for a minimum of 80 hours per month, or complying with a workfare program. Besides, potentially helping to address labor supply disincentives, work requirements are sometimes also justified as a screening tool to keep those who are unwilling to overcome barriers, and therefore who may be less needy, off the program. However, it is possible that those who are most needy have poorer job prospects and may therefore be less likely to meet the requirement.

Policy makers have recently shown interest in expanding the number of individuals covered by work requirements and expanding work requirements to other public assistance programs. H.R.2, the Agriculture Improvement Act of 2018, proposed expanding work requirements to adults with no dependents on SNAP up to age 59, and to adults with children over age 6. Aside from SNAP, work requirements are in effect or proposed for several other programs. For instance, as of November 2018, four states (Arkansas, Indiana, Wisconsin, and New Hampshire) have been given approval to impose work requirements on able bodied individuals enrolled in the Medicaid program, and several other states have applied for approval. Additionally, some housing authorities participating in the Moving to Work program impose work requirements, and TANF imposes work requirements on participants, typically after 24 months of enrolling in the program.<sup>1</sup>

In this paper, we analyze the impact of work requirements on SNAP participation among low-income individuals, and for those on SNAP we examine the impact on employment, hours worked, and the length of SNAP participation. Our identification comes from exploiting a sharp age-based discontinuity in SNAP work requirements imposed on ABAWDs. The SNAP work requirement for ABAWDs is lifted at age 50, allowing us to examine differences in outcomes individuals just above and below this age cut-off. We are also able to exploit geographic and temporal variation in ABAWD work requirements.

We use a novel dataset containing ABAWD work requirement waiver information merged with SNAP administrative records and the American Community Survey (ACS) data from 2005 to 2015. Our linked survey and administrative data allow us to overcome well known

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<sup>1</sup> Hahn et al. (2017) provide a helpful discussion of the status of work requirements in several programs.

issues of under-reporting of SNAP participation in survey datasets including the ACS (Meyer, Mok, & Sullivan (2015)). In addition to overcoming misreporting, the use of linked SNAP administrative record with confidential version of the ACS has several other advantages including more precise age, interview date, and geographic information than can be found in the ACS public use records.

We find evidence that work requirements reduce SNAP participation by around 3 percentage points among the population of able-bodied individuals without dependents and under 250% of the poverty line. Among SNAP participants, we find a precisely estimated, null effect of the work requirement on labor supply. Our 95% confidence interval can rule out effects greater than around 5 percentage points on the probability of employment. Additionally, we find some evidence of stronger impacts for participants expected to have worse job prospects. These include participants in high unemployment areas, those with a high school education or less, and those who enrolled in SNAP following the great recession. We find some evidence that these individuals are more likely to be screened off the program. Finally, we look for evidence that ABAWDs sought to maintain their eligibility for SNAP benefits by changing their disability status. To this end, we test whether the work requirements were associated with an increase in disability claims among SNAP participants without dependents around the age 50 cut-off, and we find no evidence of such an effect.

### **Background on SNAP Work Requirements**

Current work rules related to SNAP date to the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA). SNAP generally imposes two sets of rules: general work rules applying to adults 16-60 years old, subject to some exemptions, and special work requirements for ABAWD participants. Under the general work rules, adults between the ages of 16 and 60 years old are required to meet the following rules: register for work, not voluntarily reduce hours to less than 30 hours or quit a job which employs an individual for more than 30 hours per week, take a job if offered, and participate in an employment and training program if assigned. These rules exclude children under 16, those receiving unemployment insurance, seniors above the age of 60, pregnant women, and the

disabled.<sup>2</sup> ABAWD SNAP participants, those who are 18-49 years old, who are not disabled, and have no dependent children must meet special work requirements to maintain eligibility. ABAWDs must spend 80 hours per month working or participating in certain qualifying activities. The qualifying activities include: participating in certain employment and training programs or participating in a workfare program.<sup>3</sup> Failure to comply limits benefits to 3 months over a 36 month period.

States may request waivers for the ABAWD work requirements for all or part of the state in which case ABAWDs are no longer required to meet the special work requirements, although the general SNAP rules remain in effect. Waiver requests are limited to areas that have an unemployment rate greater than ten percent or lack sufficient jobs.<sup>4</sup> Additionally, for most of 2009 and 2010, a nationwide waiver of SNAP ABAWD work requirements was in effect as a result of the American Recovery and Reinvestment Act. States are also given discretionary exemptions which allow them to exempt 15 percent of the ABAWD caseload that is ineligible for waivers. In our paper, we will be using a novel dataset containing ABAWD waivers for each county from 2005 to 2015, which will allow us to identify individual SNAP participants who are exposed to the work requirement.

## **Background and Previous Literature**

Classical labor economics theory suggests that participation in a means tested assistance program may discourage work effort. First because of an income effect, where the additional resources provided may induce individuals to consume more leisure, because leisure is a normal

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<sup>2</sup> See <https://www.fns.usda.gov/snap/eligibility> for more information.

<sup>3</sup> Some states pledge to offer employment and training services to ABAWDs on SNAP in their third month in violation of the work requirement and at risk of losing benefits. These “Pledge States” are granted \$20 million per fiscal year by FNS to help with program costs.

<sup>4</sup> According to a technical report produced by the USDA FNS (accessed here: [https://fns-prod.azureedge.net/sites/default/files/Guide\\_to\\_Serving\\_ABAWDs\\_Subject\\_to\\_Time\\_Limit.pdf](https://fns-prod.azureedge.net/sites/default/files/Guide_to_Serving_ABAWDs_Subject_to_Time_Limit.pdf)), States typically submit the following kinds of documents and data to support ABAWD waiver requests:

- Data that shows a recent 12-month average unemployment rate over 10 percent.
- Data that shows a recent 3-month unemployment rate over 10 percent.
- Evidence of a historical seasonal unemployment rate over 10 percent.
- Evidence that the area has been designated a Labor Surplus Area for the current fiscal year by the Department of Labor (DOL).
- Evidence that the the DOL’s Department of Unemployment Insurance Service has qualified the State for extended unemployment benefits.
- Evidence that the State has a low and declining employment to population ratio.
- Data that shows the State has a 24-month average unemployment rate that is 20 percent above the national average for the same period (the 24-month period must begin

good. Second because of a substitution effect, where because benefits fade with income, the return to work is reduced, and consequently the opportunity cost of leisure is decreased, leading to an increase in leisure. SNAP is structured so that, after deductions, \$1 of wage income leads to a loss of \$0.30 in SNAP benefits. Public assistance programs such as SNAP and Medicaid tend to increase the implicit marginal tax rate faced by participants, but programs such as EITC and the child tax credit phase up benefit levels with income, for some income levels, reducing marginal tax rates. Using Wisconsin administrative data from the year 2000, Holt & Romich (2007) show that implicit marginal tax rates can exceed 100% in some cases, but that the median marginal tax rate for households on SNAP and EITC was 0.355. The authors find that around 28% of those on SNAP and EITC has negative implicit marginal tax rates and around 31% had implicit marginal tax rates greater than 50%.

A wide body of empirical evidence does provide some evidence of a work disincentive for SNAP. For example, H. W. Hoynes & Schanzenbach (2012) examine the effects of enrollment in the food stamps program during the initial program rollout in the late 1960s and early 1970s. The authors find a large negative effect on labor supply, particularly for female heads of household. Fraker & Moffitt (1988), Keane & Moffitt (1998), and Hagstrom (1996), however, find smaller negative impacts on labor supply. Outside of SNAP, a large number of studies have examined the impact of transfer programs on labor supply (Danziger, Haveman, and Plotnick (1981); H. Hoynes (1997); R. Moffitt (1992); R. A. Moffitt (2002)). Researchers find that the Aid to Families with Dependent Children (AFDC) reduced labor supply while the Earned Income Tax Credit (EITC) increased labor supply among program participants (Hausman (1981); R. Moffitt (1983)).<sup>5</sup> Using the EITC program expansions in the 1990s, researchers note that single mothers increased their labor supply especially at the extensive margin (employment) rather than at the intensive margin (hours worked) (Eissa and Hoynes (2006); Meyer (2002)). Moreover, the labor supply response varied depending on the household's marital status. The expansion increased single mothers' labor supply but reduced married mothers' (Eissa & Hoynes (2006); Ellwood (2000)). We should note that for the population of adults with no dependents we study in this paper, the EITC benefit is substantially smaller than the benefit provided to families

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<sup>5</sup> Combinations of transfer programs, such as EITC, AFDC, and the Food Stamp Program (FSP), increase labor supply especially among single mothers (Keane & Moffitt (1998); Meyer & Rosenbaum (2001)).

with children, so it is not clear how these findings impact our population of interest. Additionally, Kaestner, Garrett, Chen, Gangopadhyaya, & Fleming (2017) examined the expansion of Medicaid under the Affordable Care Act and find little effect on labor supply, with most estimates suggesting the expansion modestly increased labor supply.

As discussed in Chan & Moffitt (2018), the static labor supply model suggests that the impact of the work requirement imposed on program participants will only affect labor supply for individuals who would otherwise work less than the 20 hours per week. For these individuals, we would expect labor supply to increase, either because the individual works more to comply with the requirement or because they no longer participate in the program and thus are no longer exposed to the labor supply disincentives that may go with participating. Participation rates for these individuals may also fall because of non-compliance. For ABAWD individuals on SNAP who would otherwise work more than 20 hours per week, the work requirement in theory should have no impact, since these individuals are already complying and thus the work requirement is non-binding.<sup>6</sup> However, as noted in Bauer, Schanzenbach, & Shambaugh (2018), although the majority of SNAP participants exposed to work requirements are attached to the labor force, volatility in employment is high for this group, meaning that over an extended period of time an unemployment spell may cause them to fail to meet the work requirement and lose benefits.

Some research exists on the impact of SNAP ABAWD work requirements on SNAP participation, but relatively little examines the impact on work. Ziliak, Gundersen, & Figlio (2003) examining aggregate caseload data find that a 10 percentage point increase in the share of a state's population waived from the ABAWD work requirement increased the SNAP caseload by 5 percent. Ganong & Liebman (2018) calculate that ABAWD work waivers, imposed following the passage of the ARRA, increased the number of individuals receiving SNAP by 1.9 million or around 10 percent of the total enrollment increase from 2007 to 2011. Using administrative records from South Carolina, Ribar, Edelhoch, & Liu (2010) examine SNAP participation spells for ABAWD households and find that ABAWDs exposed to the work

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<sup>6</sup> The probability that a adult without dependents at the age of 50 on SNAP works under 20 hours per week data is around 0.60 in our ACS sample, which is likely close to the probability that individuals near age 49, who are exposed to the work requirement, would work under 20 hours per week in the absence of the work requirement. This means that static labor supply theory suggest around 60% of individuals could be susceptible to an impact.

requirement have shorter SNAP spells and lower participation rates than other ABAWD households. Matching to unemployment insurance data, the authors also find that the work requirement increased exits into employment but also increased exits into non-employment. The authors do not directly examine the impact of the work requirements on employment probabilities or hours worked.

Some additional, non-peer reviewed works, also examine SNAP work requirements. In a contemporaneous working paper, Harris (2018), uses publicly available data from the American Community Survey from 2010 to 2015 to compare the probability of work and SNAP participation for individuals in waiver and non-waiver counties in a difference in differences analysis. Harris (2018) finds little impact on work and some impact on SNAP participation, but uses ACS survey reports of SNAP participation, which are prone to misreporting. Something we will discuss below. Bolen, Rosenbaum, Dean, & Keith-Jennings (2016) examine the reinstatement of work requirements in Oklahoma and Kansas in 2014 following the Great Recession, and find large caseload declines, suggesting many ABAWDs could not meet the work requirement and were removed from the program.<sup>7</sup> Rector, Sheffield, Dayaratna, & Hall (2016) note that following the reintroduction of work requirements in Maine in 2015, the number of ABAWDs dropped by 80 percent. Ingram & Horton (2016) examine data from Kansas and Maine following the reinstatement of work requirements and find that work rates increased and wages increased with the work requirement in place, although Rosenbaum & Bolen (2016) dispute their interpretation.

The finding in the non-peer reviewed work that the ABAWD caseload tends to decline significantly following the re-introduction of work requirements can be confirmed by examining the SNAP Quality Control (QC) database files.<sup>8</sup> Table 1 shows estimates of the number of ABAWD households participating in SNAP per month using SNAP QC data for the states of Kansas, Oklahoma, Maine, Ohio, and Iowa, who re-imposed work requirements relatively early following the Great Recession. These states reintroduced work requirements in FY2014, or FY2015 in the case of Maine. The states saw ABAWD caseload reductions of 40-60 percent

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<sup>7</sup> The state unemployment rate in Kansas in October 2013, when the work requirement was first re-imposed was 5.0%, which is below the 10% level that typically is used to request waivers from FNS. The unemployment rate in Oklahoma was 5.2%. The unemployment rate in Maine in October 2014 was 6.2%.

<sup>8</sup>For more details see <https://www.fns.usda.gov/snap/quality-control>. Microdata are housed here: <https://host76.mathematica-mpr.com/fns/>



following the re-introduction of work requirements. The total caseload, shown in the bottom panel of Table 1, did not see reductions of a proportionate magnitude, suggesting that the drop in the ABAWD caseload in these states might be due to the imposition of work requirements, although these results should only be seen as descriptive and not necessarily causal.

Table 1. Estimated ABAWD households per month and total SNAP households per month in selected states which re-imposed work requirements following the Great Recession. Household numbers estimated using SNAP QC data from 2012 to 2016.

	Estimated Number of SNAP ABAWD Households from QC Data				
	2012	2013	2014	2015	2016
Kansas	8,352	15,762	9,039	3,484	4,385
Oklahoma	37,097	49,425	21,976	9,711	13,710
Maine	20,175	17,589	14,164	5,174	4,072
Ohio	125,018	116,247	73,231	54,772	55,175
Iowa	14,838	13,136	10,556	8,418	5,630

	Estimated Number of Total SNAP Households from QC Data				
	2012	2013	2014	2015	2016
Kansas	138,626	146,304	132,580	121,521	112,825
Oklahoma	271,644	282,841	270,431	266,028	271,765
Maine	129,943	129,273	122,105	104,115	97,198
Ohio	866,608	874,187	843,023	803,519	779,427
Iowa	189,333	196,421	191,420	183,114	175,296

Year ABAWD Work Requirement Re-Imposed

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Source: Authors' calculations and SNAP QC database files

More evidence exists regarding work requirements in the TANF program. Herbst (2017) finds a connection between work requirements and increased labor supply in TANF. Fang &

Keane (2004) find that work requirements explain 57 percent of the decrease in the TANF caseload from 1993 to 2002 and 17 percent of the increase in work participation rates.

Our paper helps to fill the gap in the literature on the effects of the SNAP ABAWD work requirement on labor supply and participation. We examine the impact using a regression discontinuity design and using the data sources in the next section. Two key data sources are SNAP administrative records on participation and a novel dataset containing ERS collected information on ABAWD waivers at the county level, which will allow us to identify individuals exposed to the ABAWD work requirement.

## **Data**

We use SNAP administrative records on SNAP receipt for individuals from nine states linked to a restricted use version of the American Community Survey (ACS) Microdata Sample-1 year files from 2005 to 2015. Our dataset combining SNAP administrative records to individual survey reports from the ACS provides a number of important advantages over administrative records alone or the public use ACS files. First, we are able to account for misreporting of SNAP in the ACS by verifying SNAP receipt using our administrative records. A number of studies (Meyer & Mittag (2015), Meyer et al. (2015), Kreider, Pepper, Gundersen, & Jolliffe (2012)) have chronicled misreporting of public assistance program participation in survey datasets, including the ACS. Meyer & Goerge (2011) find that while the incidence of false positives is relatively rare, occurring around 1 percent of the time, the incidence of false negatives is potentially much more serious, occurring around 35 percent of the time. Additionally, Meyer, Mittag, & Goerge (2018) find that misreports of SNAP participation are non-random, varying with household characteristics, which may introduce complicated biases in estimation of the impacts of SNAP work requirements. The confidential version of the ACS also allows us to measure age precisely—to the day—rather than relying on the coarser measures available in the public use data. Additionally, the confidential data allows us to identify the date of a respondent’s ACS interview, narrowing the survey reference period to one year.<sup>9</sup> Next, with

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<sup>9</sup> In the public-use ACS, where the month of interview is not disclosed, the rolling survey sample—in which interviews are conducted every month from (roughly) January to December—means that the 12-month reference period could fall anywhere within a two-year period. For example, households interviewed in January 2015 (for the 2015 ACS) will have a reference period that goes back to January 2014, whereas those interviewed in December 2015 will have a reference period that covers December 2014 to December 2015.

the linked administrative records, we are able to measure the number of months of SNAP receipt during the ACS reference period as well as the precise timing of that receipt. Relying on the ACS alone, the researcher can only glean whether SNAP was received at any point during the 12-month reference period; as just noted, without information on the interview month, which actually means that a household reporting SNAP receipt could have participated at any point in a two-year period. Lastly, the public-use ACS only discloses sub-state geographies with populations over 65,000. We are able to identify all counties in the confidential version of the ACS, which we use to link to our county level ABAWD work requirement waiver database. Our ACS sample was limited to individuals under 250% of the poverty line who were prime-age, between the ages of 25 and 54, did not report being disabled, and had no children under the age of 18.

The SNAP administrative records come from a diverse set of nine states, spanning the years 2005 to 2015. The states, with the span of years available for each state in parenthesis, include: Indiana (2005-2015), Tennessee (2005-2015), New Jersey (2006-2015), New York (2007-2015), Illinois (2008-2015), Florida (2009-2015), Maryland (2009-2015), Virginia (2009-2013), and Michigan (2010-2015). From 2010 to 2013, when all nine states had data available, these states represented approximately 32% of the total individual SNAP caseload.<sup>10</sup> In 2005, when we had only data from Indiana and Tennessee, this still represented 5% of the total caseload. The data include all monthly SNAP payments to individuals in each of the nine states.

We linked the SNAP administrative records and individuals records from the ACS using the Person Identification Validation System (PVS) of the U.S. Census Bureau. The PVS system uses information available in the SNAP administrative records, including name, address, and birth date to match to a database of social security numbers, which are then anonymized (known as a PIK), and can be linked to the confidential version of the ACS. PIKs are available for around 99 percent of administrative records. Using the approach in Meyer et al. (2018) and Mittag (2018), we adjust the ACS survey weights to reflect that our data excludes some observations with missing PIKs.<sup>11</sup> Additionally, we combined our linked ACS and SNAP

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<sup>10</sup> These states made their SNAP administrative records available to the U.S. Census Bureau for linking to Census household surveys, and provided a sufficient number of years of data for inclusion in this study.

<sup>11</sup> We use a logit model of a binary indicator for receiving a PIK on individual characteristics in the ACS including age, education, gender, race, the county unemployment rate, state fixed effects, and year fixed effects. We then

administrative data with a novel dataset containing county level ABAWD waiver information for each year from 2005 to 2015.<sup>12</sup> Our county level ABAWD waiver dataset contains an indicator for whether each county in each year from 2005 to 2015 possesses a waiver from the ABAWD work requirement (a waiver county is one in which there is no work requirement). With our ABAWD waiver data, we are able to identify whether or not an individual in our linked SNAP administrative and ACS data is residing in a county with the work requirement in effect.

Table 2 shows summary statistics for able-bodied, adults with no dependents in the ACS nationwide. Overall, there are some differences between ABAWDs on SNAP in waiver areas and work requirement areas, but the differences are relatively small in magnitude. Able bodied, adults with no dependents on SNAP in work requirement areas are more likely to have less than a high school diploma, and more likely to be white than those in waiver areas. There is a larger difference in employment between SNAP participants and non-participants. This is likely due to lower levels of skill and education, and higher levels of unemployment, among SNAP participants.

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generate predicted probabilities of receiving a PIK from this logit model, and multiply the ACS weights by the inverse of the probability of receiving a PIK. This approach is based on Wooldridge (2007).

<sup>12</sup> Our data was collected with the help of researchers at the USDA Food and Nutrition Service, as well as researchers at Mathematica Policy Research.

Table 2. Summary statistics of key variables for adults with no dependents (25-54) on SNAP by ABAWD waiver status.

	All Adults with no dependents	All Adults with no dependents not on SNAP	All Adults with no dependents on SNAP	All Adults with no dependents on SNAP: Work Requirement Counties	All Adults with no dependents on SNAP: Waiver Counties
Employed	67.4%	76.7%	42.8%	43.0%	39.9%
Weekly Hours Worked	24.5	28.4	14.0	14.1	13.3
Age	41.2	40.5	42.9	42.8	43.4
Less High School Diploma	19.0%	15.8%	27.4%	26.6%	37.5%
High School Diploma	33.4%	31.6%	38.3%	38.7%	32.2%
Some College	21.8%	22.0%	21.5%	21.8%	17.7%
College Degree	20.6%	24.1%	11.4%	11.4%	11.0%
Advanced Degree	5.1%	6.5%	1.5%	1.5%	1.7%
White	67.8%	71.1%	58.8%	59.6%	48.1%
Black	20.7%	16.3%	32.6%	32.6%	33.2%
Asian	4.3%	5.4%	1.1%	1.0%	2.5%
Observations	401,000	294,000	108,000	371,000	31,000

Notes: Summary statistics derived from linked ACS microdata and SNAP administrative records from 2005-2015. Observation counts rounded in accordance with U.S. Census Bureau disclosure rules.

Figure A1a – A1f in the appendix are maps of the locations of ABAWD waivers in the years 2005, 2006, 2007, 2008, 2011, and 2015 to provide a sense of where the ABAWD waivers are located in our linked SNAP administrative and ACS dataset and how this changed over our time span. The maps convey three pieces of information. Blank areas on the map could not be

linked to our ACS data, because we did not have administrative data available for linkage in this year. Areas shaded in yellow had the work requirement in place during the year, and areas shaded in red had the work requirement waived during the year.<sup>13</sup> Full maps, showing the areas that could not be matched in the ACS are included in the appendix in tables A2a to A2d, although again no observations from these areas were used in the analysis. One noteworthy feature shown in the maps is that ABAWD waivers were much more prevalent following the Great Recession.

Nationwide, from 2005 to 2015, 34.4 percent of counties in the U.S. had the ABAWD work requirement in effect. For the nine states that provided SNAP administrative data, 13.9 percent of counties had the ABAWD work requirement in effect over this time period. This lower total of counties with work requirements is mostly attributable to the fact that four of the states (FL, VA, MI, MD) only had data available after 2009, when ABAWD work requirement waivers were much more common. For part of the year in 2009 and in all of 2010, all counties were exempt from the ABAWD work requirement as a result of the American Recovery and Reinvestment Act (ARRA). In 2005, among counties for which we can link the SNAP administrative data, 71.7 percent had a work requirement in effect. In 2006, the total was 25 percent. In 2007, the total was 44.4 percent of counties, in 2008 the total was 34.4 percent. After 2011, only 0.74 percent of counties in our linked data had a work requirement in place.

### **Regression Discontinuity Evidence**

As mentioned previously, adults with no dependents 18-49 years old enrolled in SNAP are subject to more strict work requirements than the general adult SNAP population. SNAP ABAWDs under age 50 are required to maintain 80 hours per month of employment or participate in qualified employment and training activities.

The legislated age cutoff for the SNAP ABAWD work requirement provides a way to assess the impact of the work requirement on outcomes. By comparing labor supply decision or

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<sup>13</sup> Areas are typically waved for an entire fiscal year. In some cases, states may revoke a waiver prior to the end of the fiscal year. Unfortunately, we do not possess information on whether or not states revoked the waiver. We code areas as having the waiver for the entire fiscal year, and acknowledge that it is possible that some errors results from this.

SNAP participation decisions for individuals just above the cutoff to those just below the cutoff, we can assess the impact of the policy. As discussed in Imbens & Lemieux (2008), in this approach, we must assume that unobservables affecting labor supply or SNAP participation do not vary discontinuously around the cutoff point of age 50, something we will discuss in further detail below. Our study can best be described as a sharp regression discontinuity design, because an individual's age is not manipulable and because, after we condition on counties that have the work requirement in place, the treatment is not given to those above 50 and generally is given to those below 50.<sup>14</sup>

There are some caveats with this approach. One threat to identification would be if at age 50 SNAP participants experienced changes in status not just with respect to SNAP but other programs as well. For instance, if at age 50 SNAP adults with no dependents became eligible for benefits through another program, the effects of the removal of the SNAP ABAWD work requirements may be confounded with these other changes. It does not appear that this is the case. At age 50, all individuals are eligible for an AARP membership, which provides discounts to several businesses. It seems unlikely, however, that this materially affects labor supply or SNAP participation decisions. Also at age 50, individuals are eligible to make catch-up contributions to their 401k accounts. This could in theory impact labor supply, and although little research exists on retirement contributions by SNAP enrollees, we expect this to only have a minimal impact on the population of interest in this study.

Finally, our last caveat is that, as with nearly any regression discontinuity design, we are identifying a local average treatment effect. In our case, we are identifying the impact of the work requirement for those individuals who are right near the age of 50. It is possible that the impact for individuals in other age ranges could be different, and we have to acknowledge this as a possible issue.

Figures 2a and 2b show plots of employment rates and hours worked per week for adults with no dependents on SNAP by year of age for individuals between 25 and 54. Hours worked

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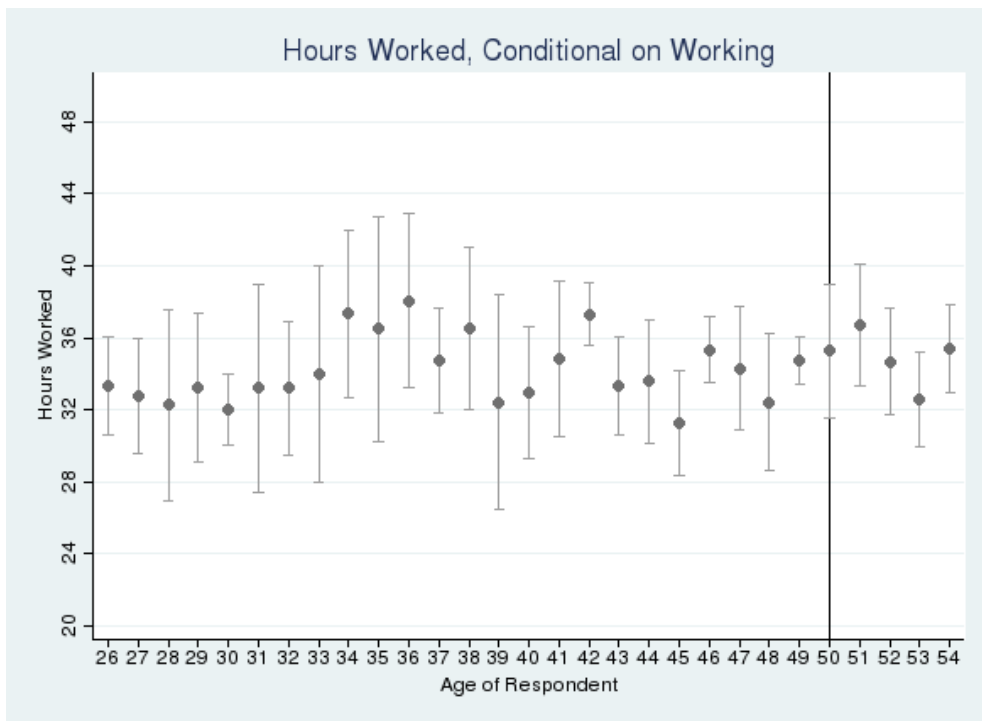
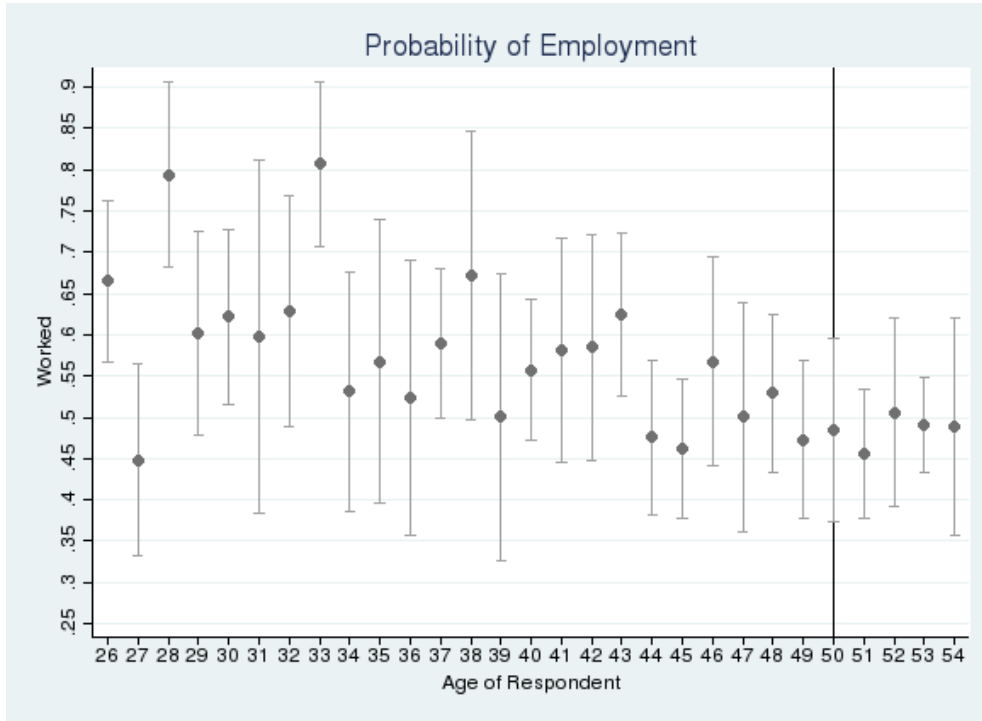
<sup>14</sup> It is possible that even after conditioning on counties that have the work requirement in place that some SNAP ABAWDs under 50 are not subject to the work requirement. Because ABAWDs can be granted one of the 15% exemptions granted to states, there may be some ABAWDs in our sample that we identify as being subject to the work requirement who are not actually subject to it. As an example, states may use one of their 15% exemptions to temporarily exempt an ABAWD from the work requirement until that individual's next SNAP recertification.

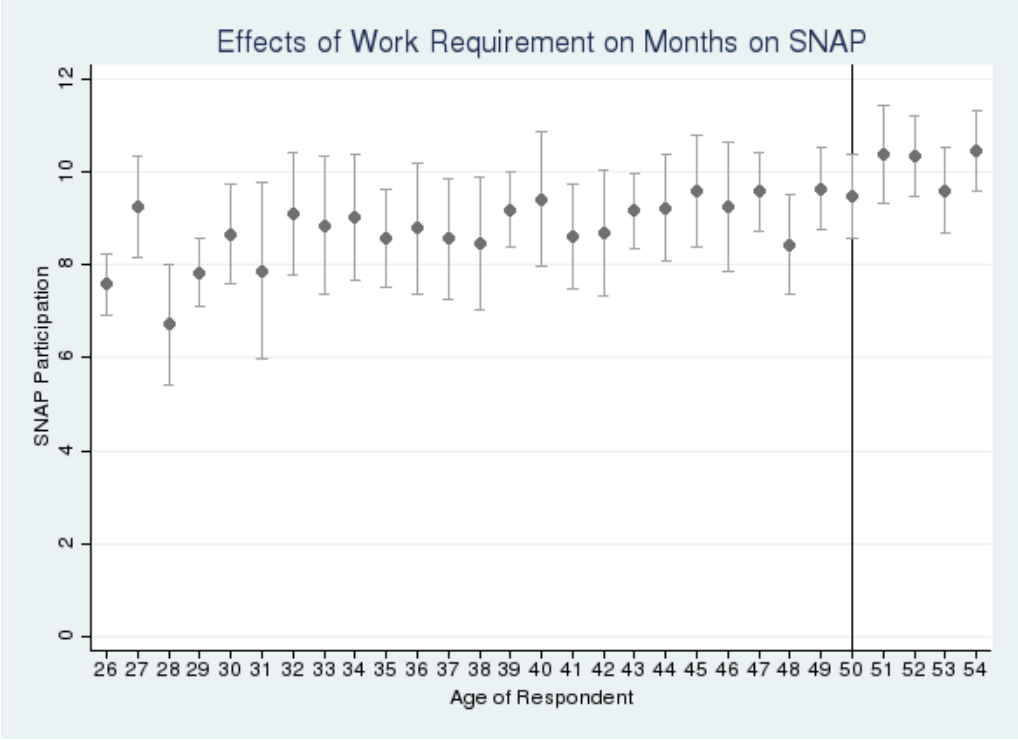
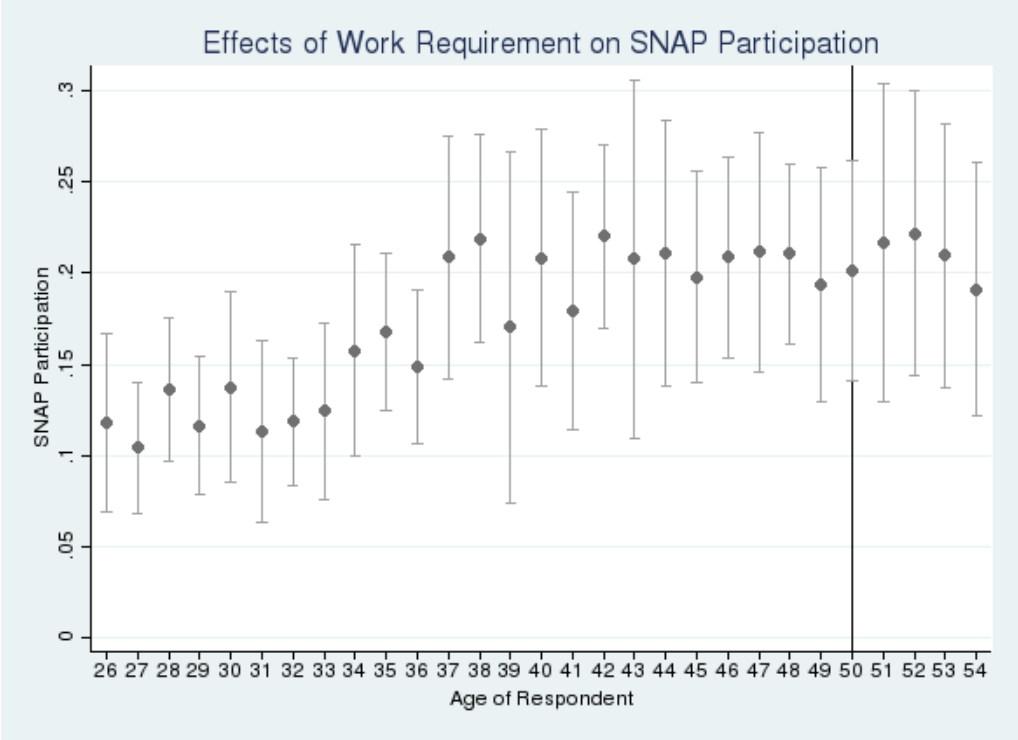
per week are conditional on the individual working, so that the employment rate results describe the extensive margin and the hours worked results describe the intensive margin. Figures 2c and 2d show graphs of SNAP participation and the number of months on SNAP for adults with no dependents between 25 and 54 who are under 250 percent of the poverty line. The number of months of SNAP participation (over the 12-month reference period) is also conditional on SNAP participation to describe the intensive margin. The sample is also restricted to individuals in counties that have the ABAWD work requirement in place. Each dot on the plots represents the mean of the labor supply variable or SNAP measure for each age group. The 95 percent confidence intervals are also included around each point. Finally, individual observations are weighted using the ACS person weights, which are adjusted by the probability of the individual receiving a PIK, as noted above.

Figure 2a suggest an overall decline in the probability of employment from 25-54, although there is little evidence of a discontinuous drop at age 50. SNAP adults with no dependents in counties with the work requirement in place at age 49, work at roughly identical rates as individuals at age 50, who are not exposed to the work requirement, although the difference between employment rates at age 49 and 50 is not statistically different from zero. There is little difference in hours worked, conditional on working, between ages 49 and 50 as well. There is not a large difference for SNAP participation at age 50 in Figure 2c, and some evidence of an uptick in the number of months on SNAP in Figure 2d, suggesting that once the work requirement is lifted participants stay on SNAP for longer, but none of these differences are statistically significant. As a placebo check on our methods, we also show plots of employment, hours worked, and SNAP participation among SNAP ABAWDs in waiver counties, who do *not* have the work requirement in place in Figures A2a--d.



Figure 2a—d. Plots of employment rates, hours worked, conditional on working, SNAP participation rates, and Number of Months on SNAP, conditional on SNAP participation for ABAWDs living in counties with the SNAP ABAWD work requirement in place. Data from ACS 1 year microdata and SNAP administrative records from 2005-2015.





We formally test for effects of the work requirement at the discontinuity using a local difference-in-discontinuity (diff-in-disc) approach, a combination of a regression discontinuity

and difference-in-differences analysis.<sup>15</sup> The estimator exploits the discontinuity imposed at the age 50 cutoff by SNAP work requirement rules. However, the effect of work requirements on employment and SNAP participation are identified by comparing trends in these outcomes around the age cutoff for able-bodied, adults with no dependents in waiver counties to trends around the cutoff for the same group of participants in non-waiver counties. The benefit of the difference-in-discontinuity estimator over the simple regression discontinuity estimator is that provides greater precision by utilizing data from waiver counties, and it allows us to control for other potential confounding discontinuities that may affect SNAP participants at age 50.<sup>16</sup> An identifying assumption is that other factors producing age-50 discontinuities among SNAP participants similarly affect participants in waiver and non-waiver counties. We also include additional covariates to help increase precision by removing variation in the error term. The estimator is “local” in the sense that we perform OLS regression using only observations for individuals within 2 years of age 50.

Our model is as follows.

$$Y_{ict} = \alpha_0 + \alpha_1(Age - 50)_{ict} + \alpha_2D_{ict} + \alpha_3D_{ict}(Age - 50)_{ict} + \alpha_4R_{ict} + \beta R_{ict}D_{ict} + \phi Z_{ict} + \omega_c + \gamma_t + \epsilon_{ict} \quad (1)$$

$Y_{ict}$  is our outcome for an individual  $i$  in county  $c$  and year  $t$ . In our case, the outcome is either an indicator for being employed over the 12 month reference period in the ACS, typical hours worked – conditional on working, SNAP participation over the 12 month reference period (constructed using SNAP administrative data), or the number of months participating in SNAP – conditional on enrolling in SNAP (also constructed using SNAP administrative data). By conditioning on working and conditioning on enrolling in SNAP for the hours worked and months on SNAP outcomes, we can assess the intensive margins or labor supply and SNAP

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<sup>15</sup> For recent examples of the diff-in-disc estimator, see Dickert-Conlin & Elder (2010) or Grembi, Nannicini, & Troiano (2016).

<sup>16</sup> Additionally, we have run a simpler model, which only uses individuals in counties with the work requirement in effect and is a regression of our outcomes on age, an indicator for whether or not the individual is below age 50, which will measure our effect of interest, and an interaction between age and our below age 50 indicator to allow a separate trend in age past the cutoff point. Results are reported in the appendix and are very similar in magnitude, but more imprecise. The model in this case is:

$$Y_{ict} = \alpha + \delta Age_{ict} + \beta D_{ict} + \gamma D_{ict} Age_{ict} + \phi Z_{ict} + \omega_c + \gamma_t + \epsilon_{ict}$$

participation, separate from the extensive margin.  $(Age_{ict} - 50)$  is the number of days since the individual turned 50 years old.  $D_{ict}$  is an indicator for whether the individual is below the age of 50 discontinuity.  $R_{ict}$  is an indicator for whether an individual in year  $t$  is living in a county in which the work requirement is in place.  $\beta$  is the coefficient of interest, and measures difference in outcomes for those below and above age 50 in places with work requirement in place ( $R_{ict} = 1$ ).  $Z_{ict}$  is a vector of other control variables. Control variables include: a year fixed effect, county fixed effect, and controls for gender, indicators for race, indicators for possessing a high school diploma, some college credits, a college degree, or an advanced degree, and the county unemployment rate.<sup>17</sup> We estimate using OLS using observations within two years of age 50. We examine other bandwidths, without much difference, and are available upon request. We weight observations using the ACS person weights adjusted for the probability of receiving a PIK, and standard errors are clustered at the county level.

We interpret  $\beta$  as a causal effect of the work requirement on our outcomes. For our labor supply variables, some discussion is warranted on the interpretation. Essentially we are comparing mean labor supply outcomes just above and below age 50 for SNAP participants who reside in counties with the work requirement in effect. It is possible that a SNAP participation channel could affect the mean on the left hand side of the cutoff. For instance, if there is a strong effect of the work requirements on SNAP participation, which discourages individuals with low rates of employment from participating in SNAP, this could magnify differences in labor supply above and below the cutoff, biasing the effect upwards. This would make our estimate an estimated upper bound of the impact of the work requirement on labor supply.

## Results

Estimates from our difference-in-discontinuities model are reported below in Table 3. Column 1 shows estimates of the effect of the SNAP ABAWD work requirements on an individual's employment status. Column 2 show the impact on hours worked, among those with positive hours worked. Column 3 shows the impact on SNAP participation, and Column 4 shows the intensive margin for SNAP, the number of months on SNAP, conditional on receiving

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<sup>17</sup> The county unemployment rates come from the BLS local area unemployment statistics system.

SNAP. For our employment, hours worked, and months on SNAP outcomes, we use only individuals receiving SNAP in the past 12 months based on our administrative records. For all outcomes, we report the estimate of the dual interaction between the indicator for being below age 50 and the indicator for living in a county where the SNAP work requirement is in place. In each column we report the point estimate, standard errors in parenthesis, and the 95 percent confidence interval in brackets. We also report the number of observations, R-squared from the regression, and the outcome mean at age 50.

Overall, there appears to be little impact of the work requirements on the outcomes in general. The estimated impact on employment is -0.015, which is the unexpected sign, but this is not statistically different from zero. The 95 percent confidence interval rules out an impact greater than 5.3 percentage points on employment, which would amount to a relatively modest effect. The estimated impact on hours worked, conditional on working is -0.727, which is also the unexpected sign but also statistically insignificant. However, we do find an impact on SNAP participation of -3.1 percentage points, suggesting that the work requirement reduces SNAP participation among able-bodied, adults with no dependents by 3.1 percentage points. This finding is statistically significant at the 10% level. There is not statistically significant impact for months on SNAP, but the point estimates suggest a negative impact of the work requirement on the number of months that SNAP participants participate.

Table 3. Regression discontinuity evidence on the impact of ABAWD work requirements. Discontinuity based on age 50 cutoff for work requirement. Bandwidth=2 years.

VARIABLES	Outcome			
	(1) Employment	(2) Hours Worked, Conditional on Working	(3) SNAP Participation	(4) Months on SNAP, Conditional on Receiving SNAP
ABAWD Work Requirement	-0.015 (0.035) [-0.084, 0.053]	-0.727 (2.285) [-5.215, 3.760]	-0.031* (0.018) [-0.067, 0.004]	-0.726 (0.485) [-1.679, 0.228]
Observations	9,300	4,900	45,000	9,300
R-squared	0.115	0.154	0.088	0.135
Mean Outcome at Age 50	0.484	35.29	0.201	9.507
Covariates	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
County FE	YES	YES	YES	YES

Regressions use linked ACS and SNAP admin data and include only prime age individuals without dependents under 250% of the poverty line. Difference in Discontinuity regressions include age, an indicator for whether below 50, and the interaction between age and the below 50 indicator, along with an indicator for the county having the work requirement in force, and the joint interaction between below 50 and living in work requirement county. Reported coefficient is the coefficient on the interaction with the indicator for whether the work requirement is in effect and the individual is below 50. Hours Worked, Conditional on Employment specification includes only individuals who work positive hours. Months on SNAP, conditional on receiving SNAP include only individuals who report receiving SNAP. Covariates include year FE, county FE, gender, indicators for race, indicators for possessing a high school diploma, some college credits, a college degree, or an advanced degree, and the county unemployment rate. Standard errors clustered at the county level. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. 95% confidence interval in brackets.

We find little evidence of a labor supply effect of the work requirement and some impact on SNAP participation. However, for certain subgroups of interest there may be an even larger effect. In the following, we examine the impact on multiple groups that might be classified as those with worse job prospects. This group is interesting for three reasons. First, these individuals may have a more difficult time meeting the SNAP ABAWD work requirements,

meaning the impact on SNAP participation may be greater. Second, because we would expect the work requirement to affect hours worked most for individuals who would otherwise prefer to work under 20 hours per week, and because these groups often tend to work fewer hours, we may expect to see a greater impact on hours worked for these groups.<sup>18</sup> Third, these groups are relatively more likely to be food insecure. While we don't have access to food security data in the ACS, it is plausible that the individuals we define to have poor job prospects are more likely to be food insecure. Coleman-Jensen, Rabbitt, Gregory, & Singh (2018) find that food insecurity rates are elevated for individuals with lower levels of income using data from the CPS Food Security Supplement, which would tend to be the case for those with poorer job prospects. Because the stated goal of SNAP is to reduce food insecurity, it is important to examine whether the individuals who may be screened from the program are food insecure. If so, rather than the work requirement screening the less needy off the program, it may rather be doing the opposite.

In Table 4, we report estimates using observations from three subgroups. Each estimate comes from a regression similar to those reported in Table 3, but use only observations from individuals belonging to that subgroup. Our three subgroups include: those living in counties with an eight percent unemployment rate or greater, those with a high school education or less, and those participating in the aftermath of the Great Recession, from 2009 to 2015 when the labor market was relatively weak.

In Table 4, we do find some evidence that those with weaker job prospects are impacted more by the work requirement, particularly regarding SNAP participation. We find a no significant impact of the work requirement on labor supply in any of our subgroups. We find a large and statistically significant effect on SNAP participation in high unemployment rate counties, suggesting that SNAP participation is reduced by around 5.7 percentage points. For comparison, the SNAP participation rate for our sample at 50 years of age in these counties is 26 percent, so a 5.7 percentage point drop suggests around a 22 percent reduction from that level. There is no statistically significant impact for those with less than a high school education. Our

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<sup>18</sup> Using our ACS data, the chance that an ABAWD at age 50 on SNAP works under 20 hours per week is 60.5% for individuals in counties with greater than 10% unemployment, versus 59.6% for those in counties with under 10% unemployment. The chance is 72.8% for those with less than a high school education versus 56.0% for those with at least a high school education. Finally, the chance is 59.0% for those enrolled after 2009 versus 62.0% for those enrolled before 2009.

estimates suggest that those with less than a high school education have SNAP participation rates that are 2.4 percentage points lower due to the work requirement, although the estimated effect is not significant. For those individuals participating in the aftermath of the Great Recession, we find a statistically significant decrease in SNAP participation of 5.3 percentage points from the ABAWD work requirement. For reference, the mean SNAP participation at 50 for this group is 24.6 percent, suggesting a 21.5 percent reduction from that level. None of the other outcomes are statistically significant.



Table 4. Subgroup analysis of the impact of ABAWD work requirements. Discontinuity based on age 50 cutoff for work requirement. Bandwidth=2 years.

VARIABLES	Outcome			
	(1) Employment	(2) Hours Worked, Conditional on Employment	(3) SNAP Participation	(4) Months on SNAP, Conditional on Receiving SNAP
ABAWD Work Requirement Effect:	-0.044 (0.063) [-0.169, 0.080]	-2.295 (2.669) [-7.530, 2.939]	-0.057* (0.030) [-0.117, 0.002]	-0.523 (0.493) [-1.490, 0.444]
Unemployment Rate >= 8%				
Mean at Age 50	0.370	34.35	0.260	10.38
Observations	5,200	2,700	23,000	5,200
ABAWD Work Requirement Effect: HS	-0.015 (0.063) [-0.138, 0.108]	-1.397 (3.150) [-7.584, 4.790]	-0.024 (0.029) [-0.081, 0.033]	-0.279 (0.482) [-1.225, 0.667]
Diploma or Less				
Mean at Age 50	0.434	34.90	0.211	10.05
Observations	5,700	2,800	25,000	5,700
ABAWD Work Requirement Effect: After 2009	-0.020 (0.029) [-0.077, 0.037]	-2.559 (2.573) [-7.613, 2.496]	-0.053** (0.025) [-0.103, -0.004]	-0.810 (0.547) [-1.884, 0.265]
Mean at Age 50	0.391	33.50	0.246	9.733
Observations	8,800	4,600	41,000	8,800

Regressions use linked ACS and SNAP admin data and include only prime age individuals without dependents under 250% of the poverty line. Difference in Discontinuity regressions include age, an indicator for whether below 50, and the interaction between age and the below 50 indicator, along with an indicator for the county having the work requirement in force, and the joint interaction between below 50 and living in work requirement county. Reported coefficient is the coefficient on the interaction with the indicator for whether the work requirement is in effect and the individual is below 50. Hours Worked, Conditional on Employment specification includes only individuals who work positive hours. Months on SNAP, conditional on receiving SNAP include only individuals who report receiving SNAP. Covariates include year FE, county FE, gender, indicators for race, indicators for possessing a high school diploma, some college credits, a college degree, or an advanced degree, and the county unemployment rate. Standard errors clustered at the county level. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. 95% confidence interval in brackets.

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## Robustness Checks

We perform two robustness checks. First, instead of our difference-in-discontinuities estimator, we deploy a local linear regression model which only uses individuals in counties with the work requirement in effect and is a regression of our outcomes on age, an indicator for whether or not the individual is below age 50, which will measure our effect of interest, and an interaction between age and our below age 50 indicator to allow a separate trend in age past the cutoff point. Results are reported in Table 5 and are very similar in magnitude, but more imprecise. The model in this case is:

$$Y_{ict} = \alpha + \delta Age_{ict} + \beta D_{ict} + \gamma D_{ict} Age_{ict} + \phi Z_{ict} + \omega_c + \gamma_t + \epsilon_{ict}.$$

As another robustness check, we use a “donut discontinuity” estimator, similar to the approach in Bajari, Hong, Park, & Town (2011). SNAP caseworkers have some discretion in assigning exemptions to the ABAWD work requirement by offering what are termed the “15 percent exemption”, where states can give exemptions of up to 15 percent of the ABAWD caseload not waived from the work requirement. It is possible that caseworkers may be more likely to target these waivers toward individuals near the age of 50 cutoff, so that benefits are not disrupted for the individuals. Our donut discontinuity estimator, based on the difference in discontinuity estimator in equation (1), examines differences in labor supply and participation outcomes for individuals near the age of 50, but omits individuals who are age 49—meaning we estimate our model using observations for those between the ages of 46, 47, and 48 and compare them to those aged 50, 51, and 52. The results reported in Table 6 are qualitatively very similar to our main specification, although the SNAP participation effect is no longer statistically significant.

Table 5. Local Linear Regression discontinuity evidence on the impact of ABAWD work requirements. Discontinuity based on age 50 cutoff for work requirement. Bandwidth=2 yrs.

VARIABLES	Outcome			
	(1) Employment	(2) Hours Worked, Conditional on Employment	(3) SNAP Participation	(4) Months on SNAP, Conditional on Receiving SNAP
ABAWD Work Requirement	-0.036 (0.066) [-0.168, 0.095]	-1.850 (5.898) [-13.63, 9.933]	-0.027 (0.032) [-0.090, 0.037]	-0.868 (0.590) [-2.042, 0.306]
Observations	550	250	3,200	550
R-squared	0.254	0.303	0.175	0.323
Mean at Age 50	0.484	35.29	0.201	9.507
Covariates	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
County FE	YES	YES	YES	YES

Regressions include only prime age individuals without dependents under 250% of poverty who reside in counties with work requirements in effect. Local Linear Model regressions include age, an indicator for whether below 50, and the interaction between age and the below 50 indicator. Reported coefficient is the coefficient on the indicator for whether the individual is below 50. Hours Worked, Conditional on Employment specification includes only individuals who work positive hours per week. Months on SNAP, conditional on receiving SNAP include only individuals who report receiving SNAP. Covariates include gender, indicators for race, indicators for possessing a high school diploma, some college credits, a college degree, or an advanced degree, and the county unemployment rate. Standard errors clustered at the county level. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. 95% confidence interval in brackets.

Table 6. Donut regression discontinuity evidence on the impact of ABAWD work requirements. Discontinuity based on age 50 cutoff for work requirement. Bandwidth= 2 years, but omit age 49.

VARIABLES	Outcome			
	(1) Employment	(2) Hours Worked, Conditional on Employment	(3) SNAP Participation	(4) Months on SNAP, Conditional on Receiving SNAP
ABAWD Work Requirement	0.042 (0.046) [-0.047 , 0.132]	-0.982 (1.479) [-3.888 , 1.924]	-0.014 (0.009) [-0.032 , 0.004]	-0.743 (0.0492) [-1.708, 0.223]
Observations	7,600	4,000	37,500	7,600
R-squared	0.131	0.185	0.094	0.132
Mean at Age 50	0.484	35.29	0.201	9.507
Covariates	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
County FE	YES	YES	YES	YES

Regressions use linked ACS and SNAP admin data and include only prime age individuals without dependents under 250% of the poverty line. Difference in Discontinuity regressions include age, an indicator for whether below 50, and the interaction between age and the below 50 indicator, along with an indicator for the county having the work requirement in force, and the joint interaction between below 50 and living in work requirement county. Reported coefficient is the coefficient on the interaction with the indicator for whether the work requirement is in effect and the individual is below 50. Hours Worked, Conditional on Employment specification includes only individuals who work positive hours. Months on SNAP, conditional on receiving SNAP include only individuals who report receiving SNAP. Covariates include year FE, county FE, gender, indicators for race, indicators for possessing a high school diploma, some college credits, a college degree, or an advanced degree, and the county unemployment rate. Standard errors clustered at the county level. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. 95% confidence interval in brackets.

## Impacts on Disability Claims

Because disabled individuals are exempted from the SNAP ABAWD work requirements, some individuals may seek to maintain their SNAP eligibility by claiming disability. This could potentially explain why we see little impact of the work requirements overall on SNAP participation and labor supply. If this were the case, we may expect to see an unexpected number of disability claims prior to age 50 for adults with no dependents on SNAP in counties with the work requirement in place. In order to test this, we exploit our difference in discontinuities estimator in equation (1) to compare self-reported disability claims, Social Security Income receipt, and Supplemental Security Income receipt near age 50 in counties with ABAWD work requirement waivers in place versus those who have the work requirement in effect. To be clear, our specification is identical to that in Table 3, except we replace our outcome variable with the disability claims outcomes. The sample includes only individuals who were enrolled in SNAP at some point during the 12 month reference period. We should note that disability claims data may be under-reported, and this may affect our estimates. Unfortunately, we do not currently have access to administrative records to address this issue, so we acknowledge the issue.

In Table 7 we show estimates of the impact of the ABAWD work requirement on disability claims using the Difference-in-Discontinuity estimator and our ACS data. In column (1), we report the impact on self-reported disability status, based on questions contained in the ACS. In column (2) and (3), we report the treatment effects for whether or not the individual reported receiving social security income or supplemental security income.<sup>19</sup> None of the outcomes or specifications detect a statistically significant impact on disability claims.

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<sup>19</sup> Social Security Disability Insurance is available to disabled individuals who have worked in jobs covered by the Social Security system for a sufficient length of time. Supplemental Security Income is available to disabled individuals with little or no income.

Table 7. Regression discontinuity evidence on the impact of ABAWD work requirements on disability claims. Difference-in-Discontinuity estimator. Bandwidth=2 years.

VARIABLES	Outcome		
	(1) Self-Reported Disability	(2) SSI	(3) SSDI
ABAWD Work Requirement	0.039 (0.031) [-0.021, 0.099]	-0.005 (0.020) [-0.045, 0.036]	-0.007 (0.012) [-0.030, 0.017]
Mean at Age 50	0.530	0.237	0.192
Observations	83,597	83,597	83,597
R-squared	0.066	0.053	0.028
Covariates	YES	YES	YES
Year FE	YES	YES	YES
County FE	YES	YES	YES

Regressions use linked ACS and SNAP admin data and include only prime age individuals without dependents under 250% of the poverty line. Difference in Discontinuity regressions include age, an indicator for whether below 50, and the interaction between age and the below 50 indicator, along with an indicator for the county having the work requirement in force, and the joint interaction between below 50 and living in work requirement county. Reported coefficient is the coefficient on the interaction with the indicator for whether the work requirement is in effect and the individual is below 50. Covariates include year FE, county FE, gender, indicators for race, indicators for possessing a high school diploma, some college credits, a college degree, or an advanced degree, and the county unemployment rate. Standard errors clustered at the county level. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. 95% confidence interval in brackets.

## Conclusions and Discussion

The SNAP caseload expanded from just over 26 million individuals in 2007 to over 42 million ten years later in 2017. While much of that expansion can be attributed to the state of the economy (See Ziliak (2015)), some policy makers are increasingly worried that program benefits are no longer being narrowly targeted towards the neediest or that some individuals in the program may be neglecting work opportunities that are available to them. This has led to proposals to either re-impose or expand work requirements for SNAP ABAWD participants. Our paper informs on these discussions.

In this paper, we use a regression discontinuity design, based on an age of 50 cutoff for the work requirement, to analyze the impacts of SNAP ABAWD work requirements on labor supply and participation in SNAP. We make use of a novel linkage between SNAP administrative records and ACS records, which address misreporting issues for SNAP participation in the ACS and provide more precise age, interview data, and geographic information than can be found in public use versions of the ACS. We find little evidence of an impact on labor supply. However, we do detect an effect on participation, particularly for those expected to have worse job prospects, who may have difficulty meeting the work requirement and may have elevated food insecurity rates. We find little evidence that adults with no dependents respond to the work requirements by claiming disability.

Why do we not detect an impact on labor supply? Chan & Moffitt (2018), using a static labor supply model, note that a work requirement is likely to have an impact for those who otherwise would work less than 20 hours per week. For these individuals, the labor supply model predicts an increase (or at least a non-decrease) in labor supply, either because these individuals increase labor supply to comply with the work requirement, or because they lose benefits and thus are no longer exposed to the work disincentives associated with the program. As noted previously, we estimate that this group makes up around 60 percent of SNAP ABAWDs. Yet despite this relatively large percentage, we are unable to detect an effect on work effort when individuals no longer are required to meet the 20 hours per week requirement at age 50. One possibility is labor supply frictions, such as switching costs, lack of information, or inertia (See Chetty (2012), Chetty & Saez (2013), or Jones (2010)). If labor supply frictions are large enough, then the benefits of meeting the work requirement may not compensate for the loss

in utility associated with the frictions. Chetty (2012) finds that relatively small utility costs caused by frictions can reduce labor supply elasticities in a model of labor supply, particularly at the intensive margin. This could be a topic of future study. Another possibility is that individuals are simply unable to comply, due to insufficient work opportunities. This is consistent with our evidence showing the largest impacts on participation for individuals expected to have weak job prospects.

Given our regression discontinuity design, our results apply best to SNAP participants without dependents near the age of 50. Further research could examine whether the impact differs at the lower end of the age distribution, who will tend to be lower skilled, have less experience, and may be more responsive to the work requirement.

We contribute to a relatively small literature on the impact of SNAP work requirements and work requirements generally. Our results inform ongoing discussions about whether to impose work requirements on able bodied adults in other programs, such as Medicaid. We also inform on ongoing debates at the state level on whether or not to reintroduce ABAWD work requirements that were suspended following the Great Recession or expand work requirements to include a wider range of SNAP participants.



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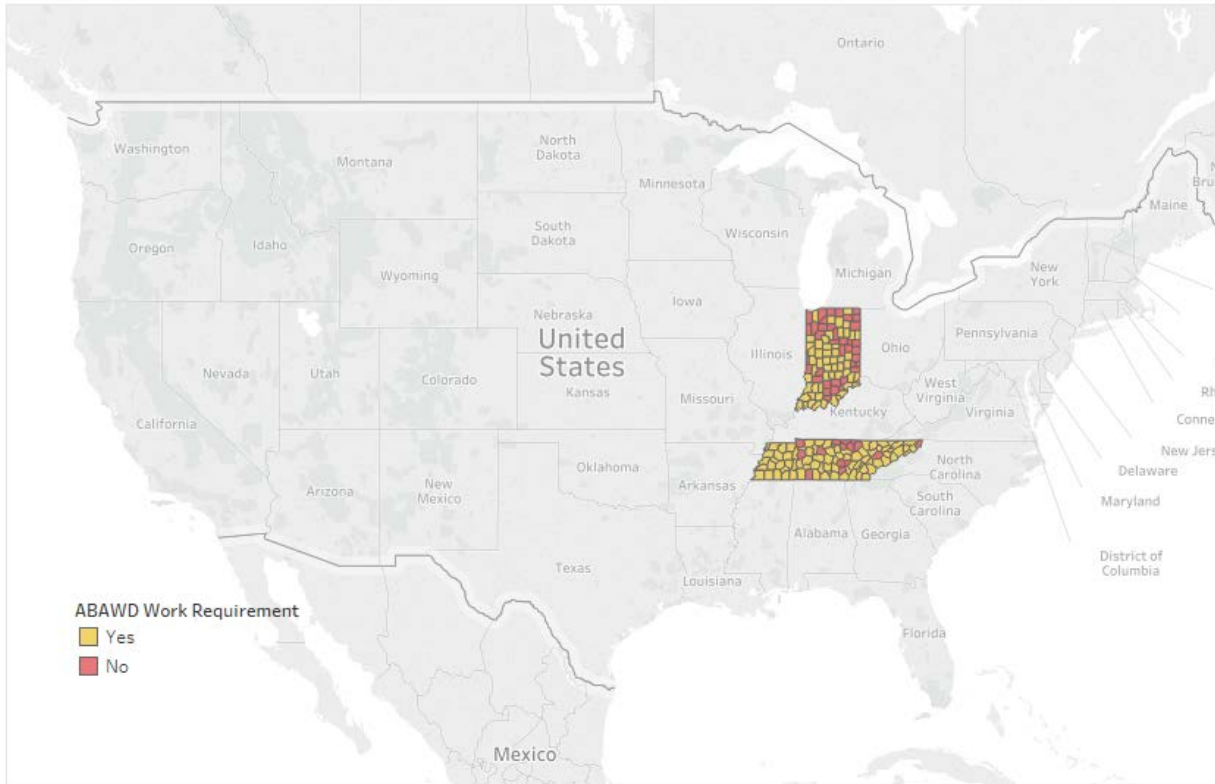
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## Appendix of Tables and Figures

Figure A1a. Map of U.S. Counties in 2005 With and Without ABAWD Work Requirement in Place. Data from ERS database on ABAWD Waivers and ACS.

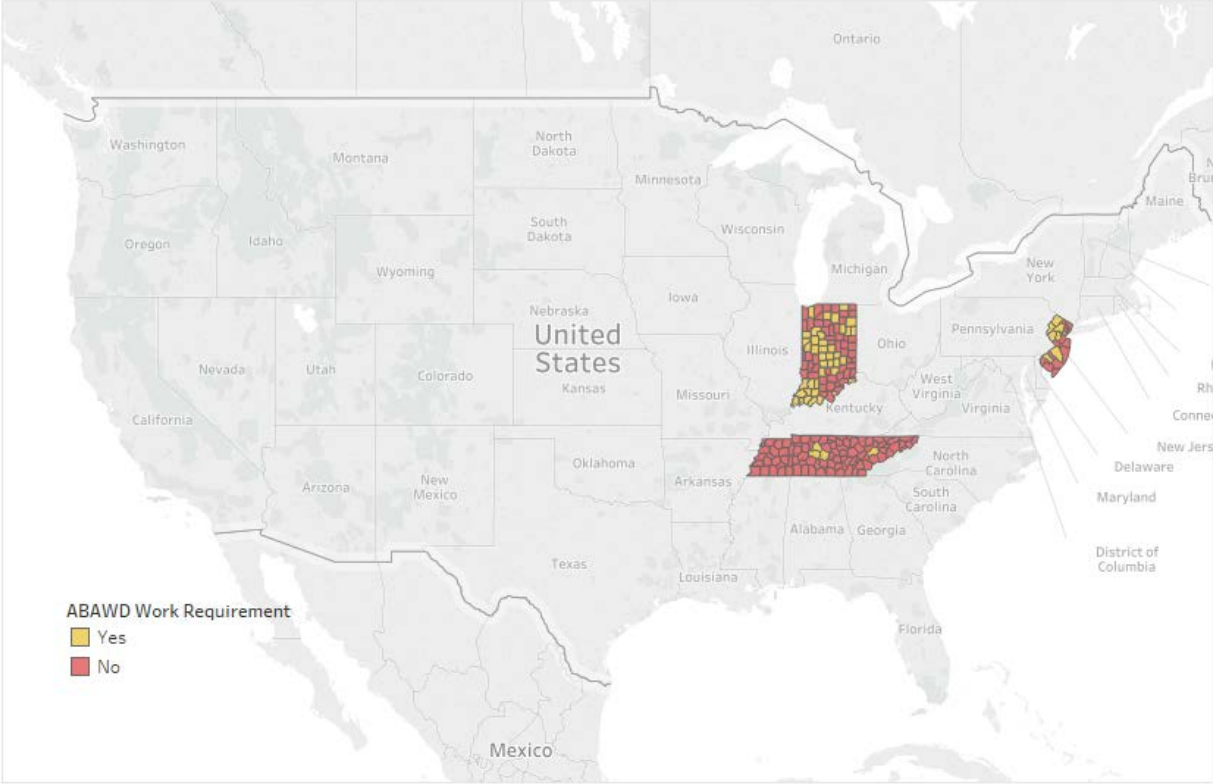
2005 Map - Administrative Data Counties



Blank areas on the map could not be linked to our ACS data, because we did not have administrative data available for linkage in this year.

Figure A1b. Map of U.S. Counties in 2006 With and Without ABAWD Work Requirement in Place. Data from ERS database on ABAWD Waivers and ACS.

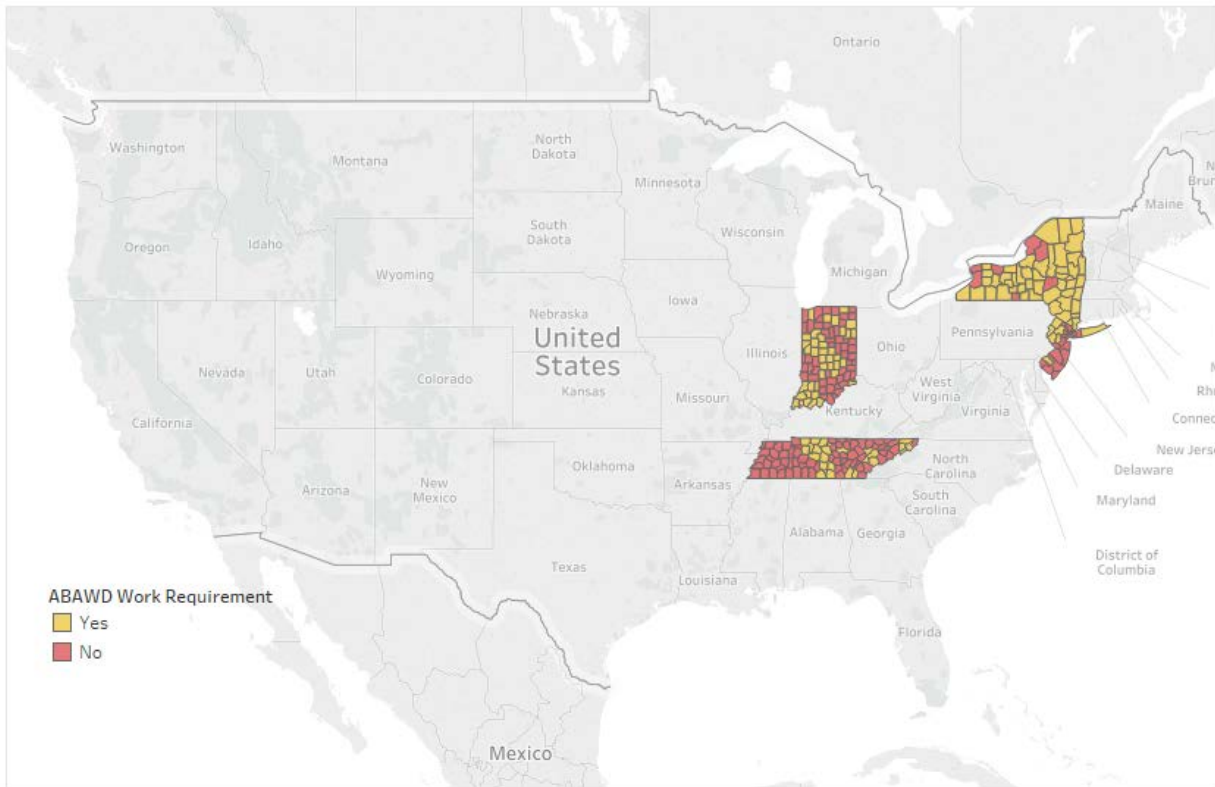
2006 Map - Administrative Data Counties



Blank areas on the map could not be linked to our ACS data, because we did not have administrative data available for linkage in this year.

Figure A1c. Map of U.S. Counties in 2007 With and Without ABAWD Work Requirement in Place. Data from ERS database on ABAWD Waivers and ACS.

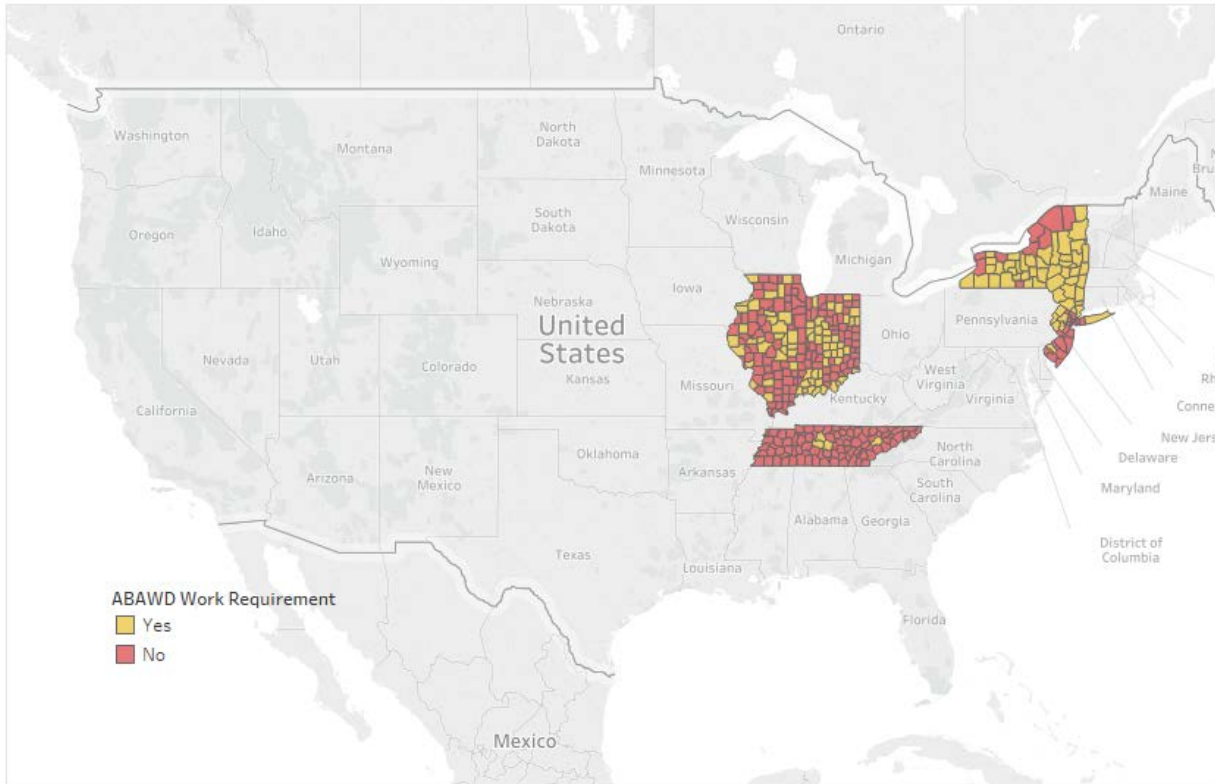
2007 Map - Administrative Data Counties



Blank areas on the map could not be linked to our ACS data, because we did not have administrative data available for linkage in this year.

Figure A1d. Map of U.S. Counties in 2008 With and Without ABAWD Work Requirement in Place. Data from ERS database on ABAWD Waivers and ACS.

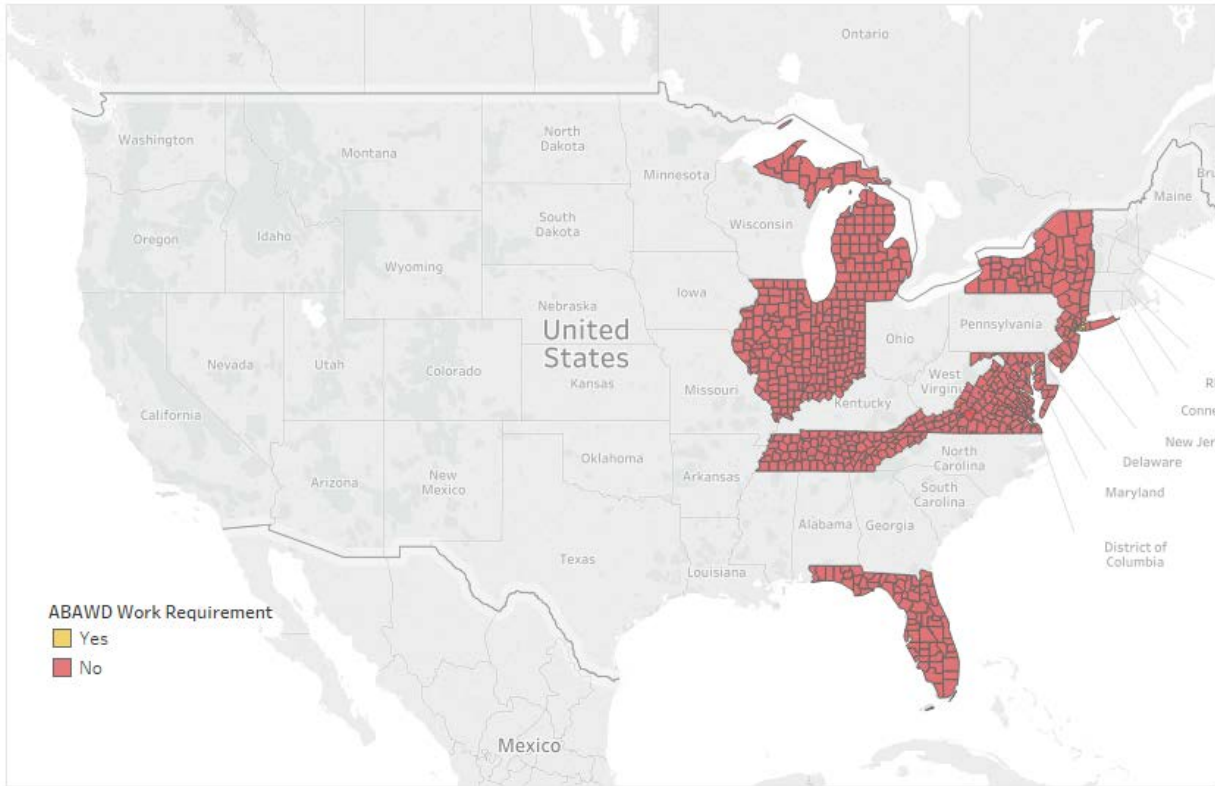
2008 Map - Administrative Data Counties



Blank areas on the map could not be linked to our ACS data, because we did not have administrative data available for linkage in this year.

Figure A1e. Map of U.S. Counties in 2011 With and Without ABAWD Work Requirement in Place. Data from ERS database on ABAWD Waivers and ACS.

2011 Map - Administrative Data Counties

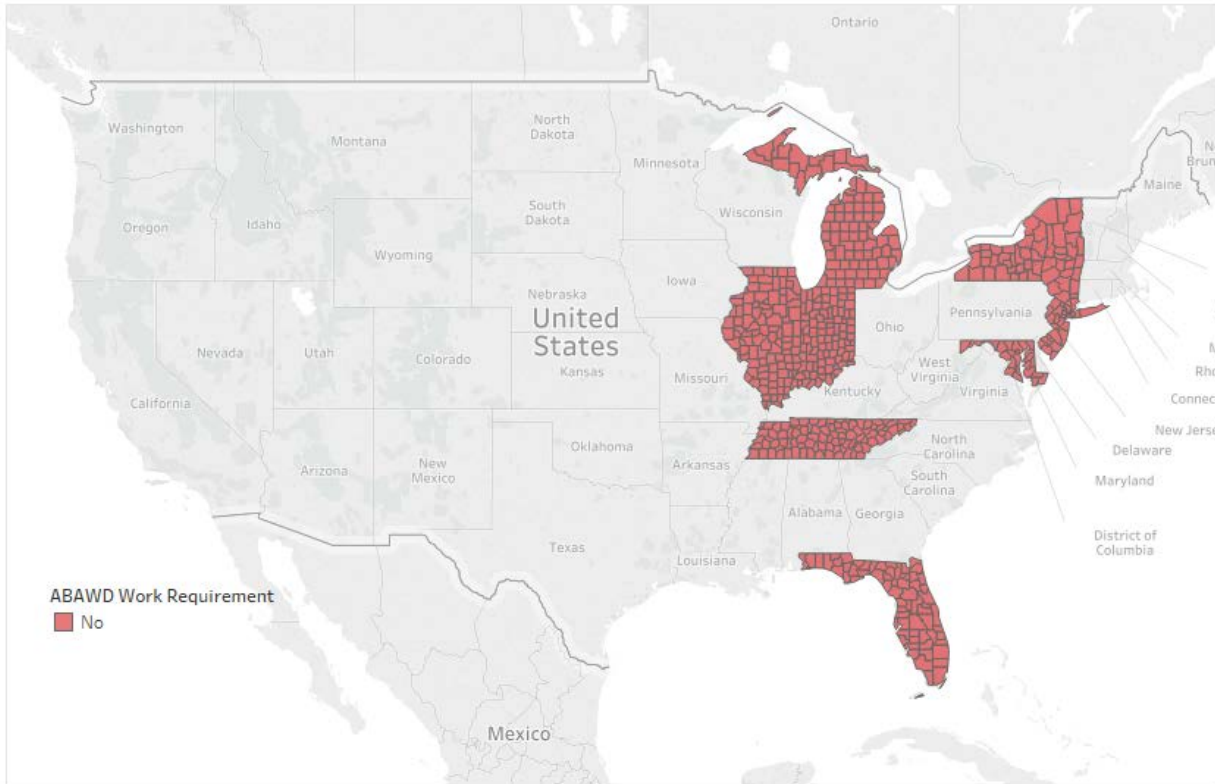


Blank areas on the map could not be linked to our ACS data, because we did not have administrative data available for linkage in this year.



Figure A1f. Map of U.S. Counties in 2015 With and Without ABAWD Work Requirement in Place. Data from ERS database on ABAWD Waivers and ACS.

2015 Map - Administrative Data Counties



Blank areas on the map could not be linked to our ACS data, because we did not have administrative data available for linkage in this year.

Figure A2a. Map of U.S. Counties in 2005 With and Without ABAWD Work Requirement in Place. Data from ERS database on ABAWD Waivers and ACS.

2005 Map - All Counties

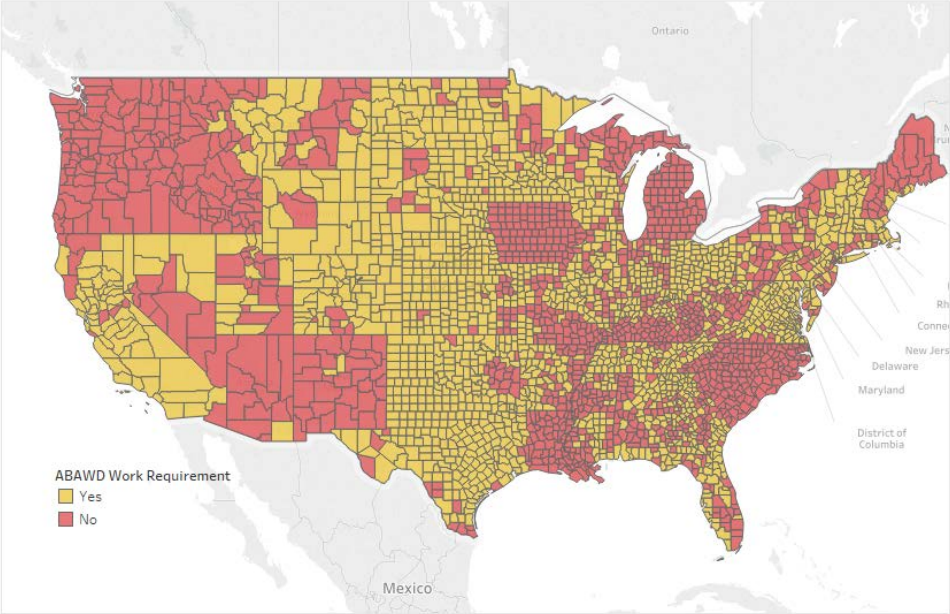


Figure A2b. Map of U.S. Counties in 2008 With and Without ABAWD Work Requirement in Place. Data from ERS database on ABAWD Waivers and ACS.

2008 Map - All Counties

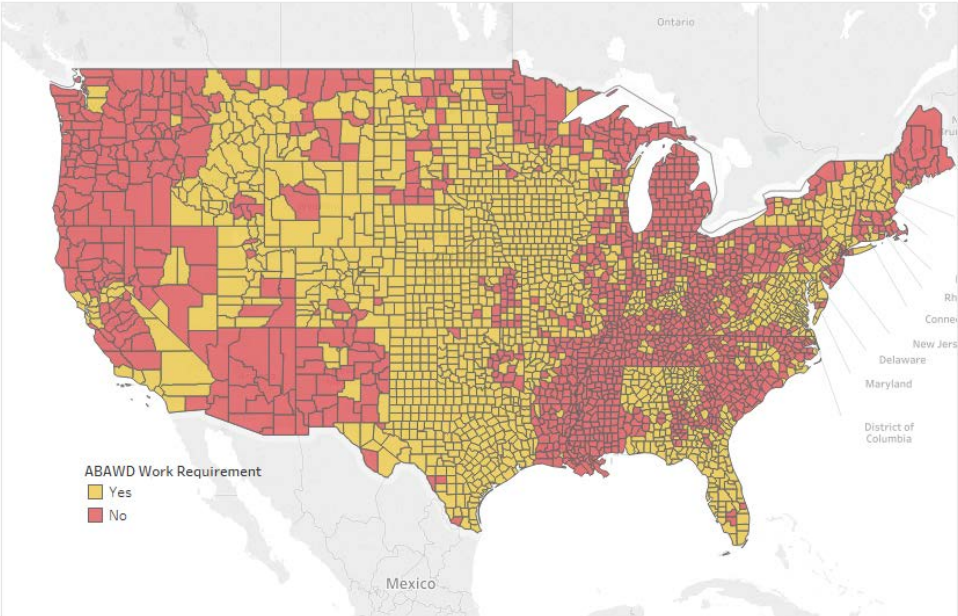


Figure A2c. Map of U.S. Counties in 2011 With and Without ABAWD Work Requirement in Place. Data from ERS database on ABAWD Waivers and ACS.

2011 Map - All Counties

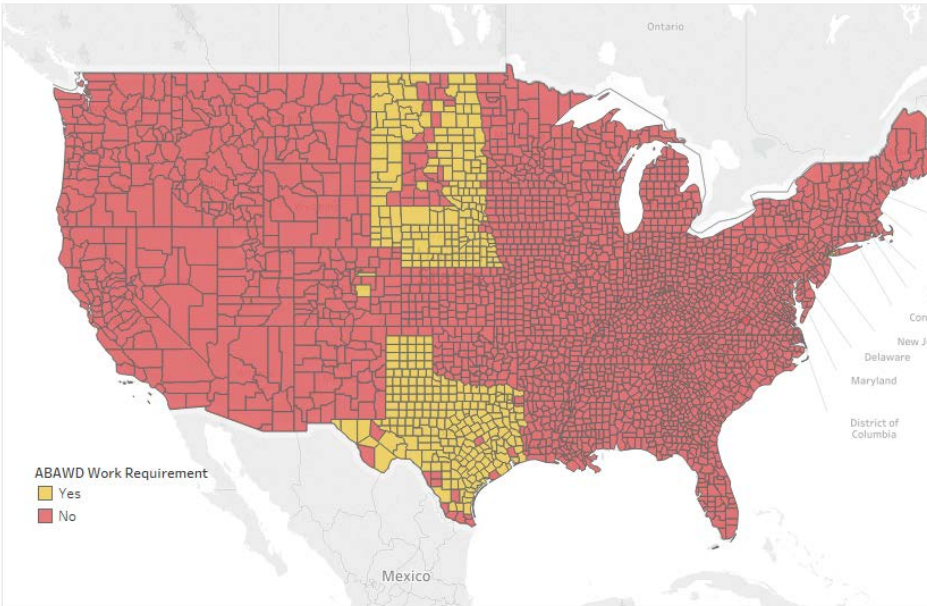


Figure A2d. Map of U.S. Counties in 2015 With and Without ABAWD Work Requirement in Place. Data from ERS database on ABAWD Waivers and ACS.

2015 Map - All Counties

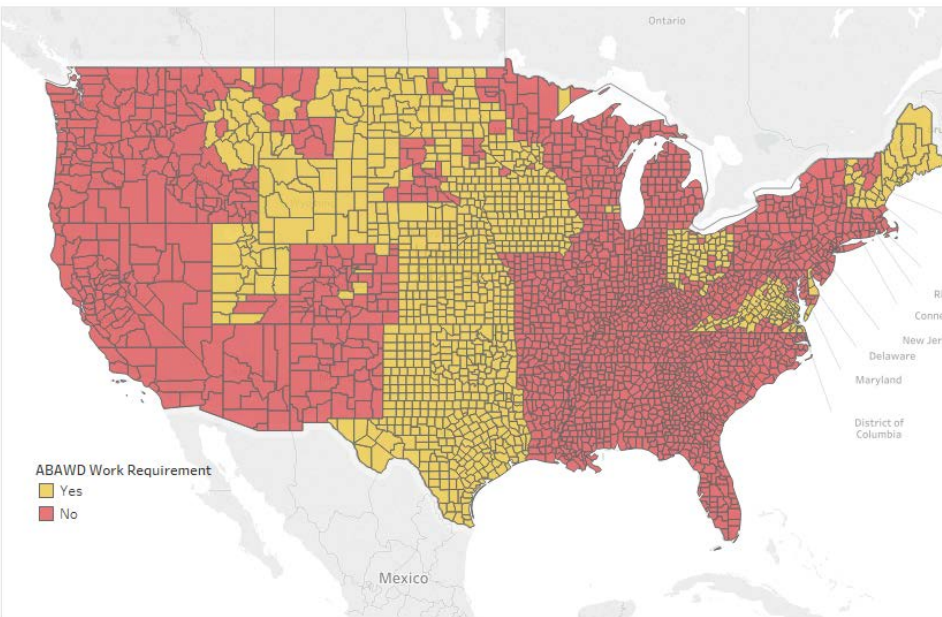


Figure A2a—d. Plots of employment rates, hours worked, conditional on working, SNAP participation rates, and Number of Months on SNAP, conditional on SNAP participation for ABAWDs living in counties with the SNAP ABAWD work requirement NOT in place. Data from ACS 1 year microdata and SNAP administrative records from 2005-2015.

