Asset Limits in Public Assistance and Savings Behavior Among Low-Income Families

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When the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA) replaced Aid to Families with Dependent Children (AFDC) with Temporary Assistance to Needy Families (TANF), new restrictions on eligibility were introduced, including a 60-month lifetime limit and stricter work requirements. Some research indicates that these new restrictions are associated with comparatively negative outcomes for recipients (Cancian, Meyer, and Wu 2005; Connolly and Marston 2005; Hamilton 2016; Lim, Coulton, and Lalich 2009). The PRWORA also allowed states to set their own limits on recipient financial assets, which had been set at $1,000 by President Ronald Reagan's Omnibus Budget Reconciliation Act of 1981 (McDonald, Orszag, and Russell 2005). While some state limits remain at $1,000 after 36 years, other states have raised or eliminated these limits (Hamilton, Alexander-Eitzman, and Royal 2015). It has been posited that stagnant asset limits may exacerbate growing wealth inequality in the United States by creating a disincentive for savings among low-income families (Powers 1998; Zhan, Sherraden, and Schriener 2004).

Ohio was the first state to eliminate its asset test, in 1997, and Virginia followed suit in 2003. Administrators in Virginia estimated that this change saved over $300,000 annually when caseworkers were not required to verify applicant assets (Corporation for Enterprise Development 2013). Since then, six more states have eliminated the asset test for TANF applicants and recipients: Alabama and Louisiana in 2009, Maryland in 2010, Hawaii in 2013, and Illinois in 2014. Colorado increased asset limits to $15,000 in 2006, then eliminated them in 2011 (Corporation for Enterprise Development n.d.; Hamilton, Alexander-Eitzman, and Royal 2015). States that eliminate their limits or raise them to $3,000 or greater report an approximately 2 percent annual administrative savings (The Pew Charitable Trusts 2016).

Still, many worry that liberalizing asset limits in the TANF program would allow families to maintain high assets and still receive public benefits, leading to increased welfare caseloads. The limited available research on asset limits and wealth accumulation is inconclusive. Powers (1998) first analyzed savings behavior among low-income female-headed households under AFDC in the years before and after 1981, when the $1,000 national limit was set. In this study, likely AFDC recipients saved more when limits were higher. Similarly, Nam (2008) analyzed savings behavior after limit setting had again devolved to the states in 1996 and discovered that savings increased with higher asset limits among single-parent households. However, neither Sullivan (2006) nor Hurst and Ziliak (2006) could find any such association between asset limits in AFDC/TANF and household assets.

The relationship between welfare vehicle limits and vehicle ownership is more firmly associated across the relevant research (Bansak, Mattson, and Rice 2010; Hurst and Ziliak 2006; Owens and Baum 2012; Sullivan 2006). Vehicle exemptions from asset limits have been associated with increased likelihood to own a car (Bansak, Mattson, and Rice 2010; Hurst and Ziliak 2006) and higher vehicle value (Owens and Baum 2012; Sullivan 2006). This association is important because ownership of a reliable vehicle is critical to maintaining employment and gaining long-term financial independence (Bansak, Mattson, and Rice 2010).

Whether or not generous asset limits influence savings behavior, there appears to be no net effect on state caseload size (Hamilton, Alexander-Eitzman, and Royal 2015; The Pew Charitable Trusts 2016). Hamilton, Alexander-Eitzman, and Royal (2015) analyzed state caseloads in the 24 months before and

after an asset-limit elimination for six states that repealed the requirement in the midst of the Great Recession. No significant effects were associated with the change. The Pew Charitable Trusts (2016) had similar findings and also discovered that asset limits did not influence the rate at which families apply for TANF.

Still, more research is needed to definitively establish whether low-income families adjust financial decisions based upon TANF asset restrictions. This project will therefore build upon the Nam (2008) study, which analyzed the effects of "liberalizing asset limits" on savings behavior. There has been quite a bit of policy change since 2008, so it is beneficial to update this analysis. For example, six of the eight states to eliminate the asset limit have done so since publication of Nam's work (Urban Institute 2015). This project therefore seeks to understand the following research questions:

1. What is the association (if any) between low-income household assets and asset limits in TANF?
2. Does the time elapsed since elimination of or increase in the limit have an effect on low-income households' likelihood to have savings or own a bank account?
3. What is the association (if any) between low-income household bank account ownership and asset limits in TANF?

Each of these questions includes controls for race and household composition, which can also significantly affect financial well-being.

Methodology

Data acquisition

The project created a panel data set that represents wealth and public policy for the odd-numbered years from 2003 through 2013. Data about families were gathered from the Panel Study of Income Dynamics (PSID), a National Science Foundation-funded project that began in 1968 as a random sample of 5,000 families. The PSID survey instrument includes a broad-ranging selection of questions summarizing the demographic and economic conditions of respondents. The members of these families have been reinterviewed over time, allowing us to build detailed portraits of income and assets. While there have been changes in the PSID schedule and some questionnaire items have been altered, many variables remain available throughout the years under examination. Asset and vehicle limits were collected via the Urban Institute's Welfare Rules Database (2006).

This project builds upon methods described in Nam (2008). Nam compared families at just two time points, 1994 and 2001, in large part because the PSID collected data on wealth at five-year intervals until 1999 (even though the rest of the PSID instruments were collected every two years). Nam's comparison of 1994 and 2001 is thus somewhat coarse. Nam assumed that the impact of a policy change would be linear in time, while we have the opportunity to test that assumption.

After 1999, the PSID program managers elected to collect the wealth data on the same two-year schedule that is followed by the standard PSID questionnaire. As a result, we had an opportunity to build a richer data set. We replaced the before/after comparison in Nam (2008) with a true panel analysis that includes six biennial surveys administered from 2003 to 2013.

Data analysis

The premise of this study is that when the asset limit is low, families are encouraged to avoid accumulating assets. Because building a savings account is a valuable first step toward self-sufficiency and eventual withdrawal from public assistance, a low asset limit appears to be a counterproductive public policy. Families are encouraged to spend down their assets thus staying poor and making unwise financial decisions.

The design used by Nam, dubbed a difference-in-difference approach, is intended to compare the impact of public policy on two groups that are thought to be otherwise comparable. It is worth mentioning that Nam's project was a replication and extension of Hurst and Ziliak (2006). Following their methods, we restrict our attention to families in which the head of household is 44 or younger; we also exclude from consideration families that undergo traumatic dislocations, such as divorce or the death of a spouse. After narrowing the selection by those criteria, we further subdivide the respondents into two groups. The target group is made up of families with children headed by an unmarried female, is thought to be more immediately affected by changes in eligibility requirements for social welfare programs. Following the procedure described by Nam, we eliminate from consideration families in which marital status changes, focusing on households in which the age of the head was between 18 and 44 in 2003. In order to be in the target group, a female head must be in place throughout and there must be children. To mitigate the loss of data due to occasional missing scores, we require only that each household participate in the PSID survey in 2003, 2013, and three of the years between. There are 194 families in the target set. In the analysis, we further subset the respondents by the education level of the head of household, initially considering families in which the head has less than 16 years of formal education, and later reducing to families with less than 13 years of education.

The comparison set begins as a diverse collection that includes both all male-headed households and female-headed households in which there are no children. That first comparison, labeled A in our regression tables, compares 194 families in the target group with a much larger number of male-headed and female-headed households (959 members). We also consider a smaller comparison group (B) that includes only the male-headed households. A third comparison set (C) is made by excluding families in which the head has 13 or more years of education, and then comparing the target (females with children) against males and females without children.

In all of these analyses, the comparison group is expected to be less sensitive to changes in eligibility policies (most in this "nontarget" control group have income that makes them ineligible for TANF). The target group includes lower-income families—the ones for whom TANF eligibility is likely to be an important concern. The members of this target group may already be participating in TANF, or they might be close enough to the income guidelines to anticipate becoming eligible in the future. Table 1 provides the summary information for the target and the largest comparison (set A).

Because events in the economy may cause many families to experience hardship, variables such as the level of unemployment within a state were taken into account. The statistical analysis can incorporate state unemployment as a predictor, but the design of the difference-in-difference study attempts to address the same problem. We "control" for state-level changes by supposing that general, systemwide

fluctuations will affect both the target and the nontarget groups, while policy changes in social welfare should have noticeable impacts only on families in the target group.

Nam's original analysis considered different types of outcome variables. We followed suit, considering separately the ownership of a savings account (a dichotomous true/false variable), the amount of accumulated assets (a numeric variable for which the minimum is zero dollars), and also accumulated asset values that are numerically transformed by logarithm.

Major conceptual departures

Our analysis attempted to verify the central substantive claims advanced by Nam (2008) while exploring some new elements. One of the most important changes in our study is the inclusion of states in which there is no asset limit. Nam chose to exclude the states that did not have asset limits from her analysis because, at the time, only Ohio had eliminated its limit.

The asset-limit policies in effect are presented in Table 2. When the analysis begins in 2003, the limits are, for the most part, similar, and except for Ohio, where no limit was in place, quite low. However, by the end of the period under consideration, quite a few states had dramatically increased the limits or even eliminated them.

To incorporate the states in which there is no limit, the research question is rephrased. The comparison group is, in theory, not expected to respond to changes in the state asset limits for TANF. On the other hand, assets held by the target group may be affected. The effect is estimated by a regression model using interaction variables (referred to as "diff-in-diff" by Nam [2008]). The effect of the state policy is assessed in the following way. There is a dichotomous indicator named "target," and we include it in the model, along with the policy change indicators.

- A dichotomous predictor, "limit increased," is included.
- A second variable, "years since increase," reflects the number of years between the year of the asset-limit increase and 2013.

Finally, we check to see if the change differentially affects the target group by estimating an interaction effect.

Findings

We have estimated a series of regression models with the intention of replicating the result reported in Nam's paper. We compare the years 2003 and 2013. The dollar values reported in 2013 are inflation-adjusted to 2003 constant dollars. All of the dollar-valued variables are reported in thousands of dollars.

The regression models are reported in Tables 3 through 6. The difference among these tables is the reformulation of the outcome variable. The predictors remain the same in each one. In all of these regression tables, we present three sets of regression estimates. The three models result from reframing the comparison of the target group—families for whom social service eligibility standards are likely to be relevant—with other respondents. In each model, the target group is made up of women with children. In the first column of each table, we consider households in which the head's educational attainment is below 16 years. Comparison set A contrasts the target group against a set composed of male-headed households (with or without children) and female-headed households without children. The second

column is similar, except that comparison set B includes male heads of household with children. The third column restricts the analysis to heads of household who have fewer than 13 years of formal education, but the comparison group is similar to the first column. The comparison group includes both males and females without children.

In all of the models, we employ the control variables used by Nam. Briefly, we have:

- The age of the head of household in 2003, in three categories (under 30, ages 30-40, and over 40).
- Race (dichotomized as black or white).
- Family size in 2003.
- The change in the size of the family from 2003 to 2013.
- The family's reported income. This is coded into three variables. One is the average of income over time. In addition, Nam included the square of income, hoping to detect curvature in the effect of income, as well as the change in labor income from 2003 to 2013.
- The change in the unemployment rate within the state from 2003 to 2013.
- The per capita gross state product in 2003.

In Nam (2008), the outcome variable—change in family assets—is coded in several ways. We have explored these.

1. Positive change in assets, coded FALSE (0) or TRUE (1). We follow Nam in reporting estimates from a linear probability model. As Nam mentions, there is reason to be cautious about treating the outcome as a numeric variable, and a logistic regression would deserve consideration. We have estimated that logistic model and, like Nam, we find results that are quite similar to the linear probability model.
2. The change in assets, measured in thousands of dollars.
3. The asset changes after logarithmic transformation. There are two variants considered below.

If the thesis is correct that asset limits affect members in the target group but not in the comparison group, we should not find statistically significant estimates for the variables "asset limit increased" or "years since asset changed." The parameter estimates for those variables apply to all of the respondent families. Again, if the thesis is correct, we should find that those policy variables have meaningful, statistically significant impacts only for the target families. Those effects are to be found in the rows labeled "target x limit increased" and "target x years since increase."

Table 1
Summary Statistics for the Target and Comparison Groups

	Full sample	Target group	Comparison group
On welfare in 2002	0.03	0.19	0
On welfare between 2002 and 2012	0.03	0.12	0

Age	34.03	31.18	34.61
African-American	0.4	0.83	0.31
Head's education in 2003			
• Less than high school	0.14	0.27	0.11
• High school degree	0.44	0.4	0.45
• Some college	0.42	0.33	0.44
Household size in 2003	3.2	3.44	3.15
Change in household size (2003-13)	-0.02	-0.02	-0.01
Number of children	1.35	2.19	1.18
Average family income (2002-12)			
• Mean	$61,161.81	$24,985.94	$68,449.72
• Median	$49,000.00	$20,776.00	$57,570.00
Change in family income (2002-12)			
• Mean	$18,737.21	$9,396.35	$20,626.82
• Median	$15,000.00	$9,915.50	$18,350.00
Change in state unemployment rate (2003-13)	1.42	1.54	1.4
Per capita gross state product in 2003	$43,951.73	$42,827.91	$44,179.07
Financial assets in 2003:			
• Mean	$4,926.50	$879.27	$5,766.16
• Median	$500.00	$0.00	$1,000.00
Change in financial assets (2003-2013)			
• Mean	$3,374.37	-$272.69	$4,103.61
• Median	$100.00	$0.00	$200.00
Had savings in 2003	0.66	0.34	0.72
Had savings in 2013	0.62	0.28	0.69
Owned a vehicle in 2003	0.87	0.65	0.91
Owned a vehicle in 2013	0.86	0.73	0.89
N	1153	194	959

Note: Dollar values are reported in 2003 equivalents.

Table 2
State Asset Limits

State	Asset limit in nominal dollars (by year)						Inflation adjusted	
State	2003	2005	2007	2009	2011	2013	2013 (in 2003 dollars)	Percent change 2003-13 (in constant 2003 dollars)
Alabama	2,000	2,000	2,000	2,000	No limit	No limit		
Alaska	2,000	2,000	2,000	2,000	2,000	2,000	1,579.75	-21.01
Arizona	2,000	2,000	2,000	2,000	2,000	2,000	1,579.75	-21.01
Arkansas	3,000	3,000	3000	3000	3,000	3,000	2,369.62	-21.01
California	2,000	2,000	2,000	2,000	2,000	2,000	1,579.75	-21.01
Colorado	2,000	2,000	15,000	15,000	No limit	No limit		
Connecticut	3,000	3,000	3,000	3,000	3,000	3,000	2,369.62	-21.01
District of Columbia	2,000	2,000	2,000	2,000	2,000	2,000	1,579.75	-21.01
Delaware	1,000	1,000	1,000	1,000	10,000	10,000	7,898.73	689.87
Florida	2,000	2,000	2,000	2,000	2,000	2,000	1,579.75	-21.01
Georgia	1,000	1,000	1,000	1,000	1,000	1,000	789.87	-21.01
Hawaii	5,000	5,000	5,000	5,000	5,000	No limit		
Idaho	2,000	2,000	2,000	2,000	2,000	5,000	3,949.36	97.47
Illinois	2,000	2,000	2,000	2,000	2,000	2,000	1,579.75	-21.01
Indiana	1,500	1,500	1,500	1,500	1,500	1,500	1,184.81	-21.01
Iowa	5,000	5,000	5,000	5,000	5,000	5,000	3,949.36	-21.01
Kansas	2,000	2,000	2,000	2,000	2,000	2,000	1,579.75	-21.01
Kentucky	2,000	2,000	2,000	2,000	2,000	2,000	1,579.75	-21.01
Louisiana	2,000	2,000	2,000	2,000	No limit	No limit		
Maine	2,000	2,000	2,000	2,000	2,000	2,000	1,579.75	-21.01
Maryland	2,000	2,000	2,000	2,000	No limit	No limit		
Massachusetts	2,500	2,500	2,500	2,500	2,500	2,500	1,974.68	-21.01
Michigan	3,000	3,000	3,000	3,000	3,000	3,000	2,369.62	-21.01
Minnesota	5,000	5,000	5,000	5,000	5,000	5,000	3,949.36	-21.01

Mississippi	2,000	2,000	2,000	2,000	2,000	2,000	1,579.75	-21.01
Missouri	5,000	5,000	5,000	5,000	5,000	5,000	3,949.36	-21.01
Montana	3,000	3,000	3,000	3,000	3,000	3,000	2,369.62	-21.01
Nebraska	4,000	4,000	4,000	4,000	4,000	4,000	3,159.49	-21.01
Nevada	2,000	2,000	2,000	2,000	2,000	2,000	1,579.75	-21.01
New Hampshire	2,000	2,000	2,000	2,000	2,000	2,000	1,579.75	-21.01
New Jersey	2,000	2,000	2,000	2,000	2,000	2,000	1,579.75	-21.01
New Mexico	3,500	3,500	3,500	3,500	3,500	3,500	2,764.55	-21.01
New York	2,000	2,000	2,000	2,000	2,000	2,000	1,579.75	-21.01
North Carolina	3,000	3,000	3,000	3,000	3,000	3,000	2,369.62	-21.01
North Dakota	3,000	3,000	3,000	3,000	3,000	3,000	2,369.62	-21.01
Ohio	No limit	No limit	No limit	No limit	No limit	No limit		
Oklahoma	1,000	1,000	1,000	1,000	1,000	1,000	789.87	-21.01
Oregon	10,000	10,000	10,000	10,000	10,000	10,000	7,898.73	-21.01
Pennsylvania	1,000	1,000	1,000	1,000	1,000	1,000	789.87	-21.01
Rhode Island	1,000	1,000	1,000	1,000	1,000	1,000	789.87	-21.01
South Carolina	2,500	2,500	2,500	2,500	2,500	2,500	1,974.68	-21.01
South Dakota	2,000	2,000	2,000	2,000	2,000	2,000	1,579.75	-21.01
Tennessee	2,000	2,000	2,000	2,000	2,000	2,000	1,579.75	-21.01
Texas	2,000	1,000	1,000	1,000	1,000	1,000	789.87	-60.51
Utah	2,000	2,000	2,000	2,000	2,000	2,000	1,579.75	-21.01
Vermont	1,000	1,000	1,000	2,000	2,000	2,000	1,579.75	57.97
Virginia	1,000	No limit	No limit	No limit	No limit	No limit		
Washington	1,000	1,000	1,000	1,000	1,000	3,000	2,369.62	136.96
West Virginia	2,000	2,000	2,000	2,000	2,000	2,000	1,579.75	-21.01
Wyoming	2,500	2,500	2,500	2,500	2,500	2,500	1,974.68	-21.01
Wisconsin	2,500	2,500	2,500	2,500	2,500	2,500	1,974.68	-21.01

Positive change in assets

The first question is whether the inflation-adjusted savings assets held by a family increased from 2003 to 2013. In the regression in Table 3, we present the estimates of a linear probability model. Several predictor and control variables are included, of course—among them, age, race, family size, and income. The coefficients marked with asterisks are statistically significantly different from zero. First we

concentrate on the target group comparison and the policy outcomes. The small, insignificant coefficients for the variables "asset limit increased" and "years since asset change" indicate that neither a liberalization of state asset policy nor the passage of time since the increase has a discernible impact on all households. This is as it should be, because one would expect that social welfare asset limits have an impact only on families that might participate in TANF. However, the estimates indicate that the effect on the target group is not statistically significant either. The parameter estimate "target group" is negative but not statistically significant. This means that after controlling for income, race, family size, and state conditions, the assets held by female-headed households are not noticeably lower than those of the comparison group. Moreover, the interaction variables—"target x limit increased" and "target x years since increase"—are not noticeably different from zero.

The regression models for comparison sets A and C indicate, consistently, that income positively contributes to savings levels, while it appears that age and family size, after controlling for other variables, tend to be associated with a reduced tendency to accumulate assets. Controlling for all of the other predictors, it appears that African-American families were less likely to experience positive asset change.

Magnitude of asset value change

The dependent variable is the difference in the dollar-cost adjusted asset value in Table 4. In comparison with the previous table—which represented a simple "Did this family accumulate assets?"—we are now attempting to predict the magnitude of the increase. The only consistent finding is that families that have higher average incomes, or whose incomes increase over time, tend to accumulate more assets. Race, age, and family size are not linked to the value of asset changes.

The impact of the state policy change is not statistically significant, either on the target group or on the comparison group. An increase in the asset limit is not linked to an increase in assets as reported in 2013, among comparison or target groups. The coefficient for the interaction between the target households and the asset-limit increase is positive in these models, suggesting that raising the asset limit might encourage female-headed households to accumulate assets (recall that these estimates are in thousands of dollars, so an estimate of 3.7 or 2.3 is not trivial). However, the standard errors of the coefficient estimates are quite large as well, so the amount of uncertainty in the predictive model is great enough to prevent us from stating with any confidence that the target group is affected by state policy.

Log-transformed estimates

One of the points of emphasis in Nam (2008) is that the logarithm of the dollar values, rather than the face value, should be used for analysis. The article describes the estimation of a log of the change. When the change is negative, the logarithm is undefined. In that case, the log of the change is set equal to zero. The log-of-change estimates are presented in Table 5. As in the model for the absolute value of the asset change, the coefficients do not indicate that the state policy change had an effect on members in the target group. The coefficients are difficult to interpret, except to say that families with higher incomes appear likely to have higher levels of logged changes in assets. The more usual procedure would be to calculate the logarithm of assets plus 1 (because the asset variable is bounded below by zero), then calculate the change in the logarithm. The estimates are reported in Table 6. The estimates

indicate that the income change is positively linked to the log of the asset increase. It appears that, controlling for the other variables, the households headed by older people have lower rates of asset accumulation, but that difference is noticeable only in comparison sets A and B. However, none of the policy variables have a noticeable impact.

Table 3
Positive Change in Assets, 2003-13

	Comparison A estimate	Standard error	Comparison B estimate	Standard error	Comparison C estimate	Standard error
(Intercept)	0.590***	(0.095)	0.447**	(0.149)	0.405***	(0.108)
Age (30-40)	-0.104**	(0.036)	-0.132**	(0.049)	-0.062	(0.043)
Age (over 40)	-0.136**	(0.042)	-0.123	(0.065)	-0.096*	(0.048)
African-American	-0.130***	(0.034)	-0.054	(0.054)	-0.091*	(0.039)
Family size	-0.030**	(0.011)	0.001	(0.020)	-0.034**	(0.013)
Family size change	-0.010	(0.012)	-0.013	(0.019)	-0.011	(0.013)
Average income	0.004***	(0.001)	0.005***	(0.001)	0.008***	(0.001)
Income squared	0.000***	(0.000)	0.000***	(0.000)	0.000***	(0.000)
Income change	0.000	(0.000)	0.001	(0.000)	0.001*	(0.001)
Unemployment rate change	-0.003	(0.015)	-0.017	(0.021)	-0.001	(0.019)
Per capita gross state product in 2003	-0.003	(0.002)	-0.004	(0.002)	-0.002	(0.002)
Asset limit increased	0.01	(0.100)	0.043	(0.147)	-0.05	(0.129)
Years since asset change	-0.007	(0.014)	-0.004	(0.023)	-0.001	(0.017)
Target group	-0.076	(0.047)	-0.076	(0.068)	-0.056	(0.053)
Target x limit increased	0.126	(0.220)	0.028	(0.241)	0.143	(0.258)
Target x years since increase	-0.024	(0.037)	-0.017	(0.041)	-0.026	(0.040)
N	1064		520		718	
RMSE	0.463		0.454		0.444	
R^2	0.119		0.131		0.165	
adj R^2	0.107		0.105		0.147	

*$p \leq 0.05$ **$p \leq 0.0$l ***$p \leq 0.001$

Note: Comparison set A is households with male heads and female heads without children and less than 16 years of education; comparison set B is male-headed households with children and less than 16 years

of education; and comparison set C is households with male and female heads, without children and with less than 13 years of education.

Table 4
Change in Asset Value, 2003-13

	Comparison A estimate	Standard error	Comparison B estimate	Standard error	Comparison C estimate	Standard error
(Intercept)	1.454	(4.059)	0.471	(5.272)	2.479	(4.185)
Age (30-40)	-0.637	(1.555)	-0.842	(1.725)	-0.692	(1.691)
Age (over 40)	-0.698	(1.785)	-5.007*	(2.298)	-1.113	(1.860)
African-American	0.151	(1.442)	1.554	(1.892)	-0.051	(1.514)
Family size	-0.422	(0.470)	-0.503	(0.715)	-0.421	(0.492)
Family size change	0.382	(0.503)	0.125	(0.655)	0.58	(0.519)
Average income	0.077*	(0.030)	0.112**	(0.042)	0.128**	(0.044)
Income squared	0.000	(0.000)	0.000	(0.000)	0.000	(0.000)
Income change	0.035**	(0.011)	-0.006	(0.016)	-0.046*	(0.022)
Unemployment rate change	-0.152	(0.654)	-0.292	(0.758)	0.067	(0.725)
Per capita gross state product in 2003	-0.046	(0.082)	-0.025	(0.079)	-0.092	(0.081)
Asset limit increased	-3.167	(4.271)	-1.017	(5.184)	-2.998	(5.023)
Years since asset change	-0.052	(0.602)	-0.104	(0.814)	0.037	(0.680)
Target group	0.144	(2.005)	-0.048	(2.419)	0.098	(2.054)
Target x limit increased	3.799	(9.398)	2.387	(8.536)	5.173	(10.026)
Target x years since increase	0.007	(1.590)	-0.049	(1.447)	-0.198	(1.569)
N	1064		520		718	
RMSE	19.736		16.066		17.28	
R^2	0.045		0.04		0.052	
adj R^2	0.032		0.011		0.032	

*$p \leq 0.05$ **$p \leq 0.0$l ***$p \leq 0.001$

Note: Comparison set A is households with male heads and female heads without children and less than 16 years of education; comparison set B is male-headed households with children and less than 16 years of education; and comparison set C is households with male and female heads, without children and with less than 13 years of education.

Table 5
Log of Change in Assets, 2003-13

	Comparison A estimate	Standard error	Comparison B estimate	Standard error	Comparison C estimate	Standard error
(Intercept)	-0.364	(0.255)	-0.346	(0.355)	-0.600*	(0.297)
Age (30-40)	-0.172	(0.098)	-0.179	(0.116)	-0.067	(0.120)
Age (over 40)	-0.017	(0.112)	-0.091	(0.155)	0.072	(0.132)
African-American	-0.242**	(0.091)	-0.084	(0.127)	-0.195	(0.107)
Family size	-0.014	(0.030)	-0.016	(0.048)	-0.031	(0.035)
Family size change	0.052	(0.032)	0.043	(0.044)	0.045	(0.037)
Average income	0.016***	(0.002)	0.017***	(0.003)	0.018***	(0.003)
Income squared	0.000***	(0.000)	0.000***	(0.000)	0.000*	(0.000)
Income change	0.001	(0.001)	0.002	(0.001)	0.003	(0.002)
Unemployment rate change	0.028	(0.041)	0.021	(0.051)	0.043	(0.051)
Per capita gross state product in 2003	0.001	(0.005)	0.000	(0.005)	0.003	(0.006)
Asset limit increased	0.056	(0.268)	0.201	(0.349)	-0.062	(0.356)
Years since asset change	-0.040	(0.038)	-0.065	(0.055)	-0.031	(0.048)
Target group	0.183	(0.126)	0.091	(0.163)	0.219	(0.146)
Target x limit increased	-0.093	(0.591)	-0.292	(0.574)	-0.332	(0.711)
Target x years since increase	0.035	(0.100)	0.071	(0.097)	0.081	(0.111)
N	1064		520		718	
RMSE	1.241		1.081		1.226	
R^2	0.149		0.143		0.140	
adj R^2	0.137		0.118		0.122	

*$p \leq 0.05$ **$p \leq 0.0$l ***$p \leq 0.001$

Note: Comparison set A is households with male heads and female heads without children and less than 16 years of education; comparison set B is male-headed households with children and less than 16 years of education; and comparison set C is households with male and female heads, without children and with less than 13 years of education.

Table 6
Change in Log Assets, 2003-13

	Comparison A estimate	Standard error	Comparison B estimate	Standard error	Comparison C estimate	Standard error
(Intercept)	0.641**	(0.199)	0.471	(0.288)	0.334	(0.207)
Age (30-40)	-0.250**	(0.076)	-0.294**	(0.094)	-0.126	(0.084)
Age (over 40)	-0.290***	(0.087)	-0.331**	(0.126)	-0.122	(0.092)
African-American	-0.111	(0.071)	-0.003	(0.103)	-0.065	(0.075)
Family size	-0.017	(0.023)	0.028	(0.039)	-0.036	(0.024)
Family size change	0.004	(0.025)	0.025	(0.036)	0.009	(0.026)
Average income	0.002	(0.001)	0.003	(0.002)	0.005*	(0.002)
Income squared	0.000	(0.000)	0.000	(0.000)	0.00	(0.000)
Income change	0.001*	(0.001)	0.002*	(0.001)	0.004***	(0.001)
Unemployment rate change	-0.012	(0.032)	-0.010	(0.041)	0.014	(0.036)
Per capita gross state product in 2003	-0.007	(0.004)	-0.010*	(0.004)	-0.005	(0.004)
Asset limit increased	-0.012	(0.209)	0.153	(0.283)	-0.097	(0.248)
Years since asset change	-0.031	(0.029)	-0.021	(0.044)	-0.020	(0.034)
Target group	-0.073	(0.098)	-0.041	(0.132)	-0.038	(0.101)
Target x limit increased	0.285	(0.460)	0.050	(0.466)	0.239	(0.495)
Target x years since increase	-0.017	(0.078)	-0.016	(0.079)	-0.010	(0.078)
N	1064		520		718	
RMSE	0.966		0.878		0.854	
R^2	0.042		0.061		0.059	
adj R^2	0.029		0.033		0.039	

*$p \leq 0.05$ **$p \leq 0.0$l *** $p \leq 0.001$

Note: Comparison set A is households with male heads and female heads without children and less than 16 years of education; comparison set B is male-headed households with children and less than 16 years of education; and comparison set C is households with male and female heads, without children and with less than 13 years of education.

Probability of possessing savings in 2013

The linear probability model for ownership of a savings (or other) account is presented in Table 7. As we expect, the families that held an account in 2003 are more likely to hold an account in 2013. Wealthier families (as indicated by higher average income) are more likely to hold savings accounts. African-American heads of households are less likely to hold savings accounts. In comparison set A, we notice that the target group is less likely to hold a savings account, but the state policy variable of interest (the increase in the limit) is not statistically significant. There is no evidence that raising the limit increases the chances that a family in the target group will become more likely to have a savings account.

Table 7
Possessed Savings in 2013

	Comparison A estimate	Standard error	Comparison B estimate	Standard error	Comparison C estimate	Standard error
(Intercept)	0.578***	(0.083)	0.619***	(0.134)	0.459***	(0.098)
Age (30-40)	-0.01	(0.031)	-0.019	(0.043)	0.032	(0.039)
Age (over 40)	-0.022	(0.036)	0.009	(0.057)	0.025	(0.043)
African-American	-0.160***	(0.029)	-0.122**	(0.046)	-0.144***	(0.035)
Family size	-0.041***	(0.009)	-0.03	(0.018)	-0.045***	(0.011)
Family size change	-0.01	(0.010)	-0.006	(0.017)	-0.009	(0.012)
Average income	0.005***	(0.001)	0.006***	(0.001)	0.008***	(0.001)
Income squared	0.000***	(0.000)	0.000***	(0.000)	0.000***	(0.000)
Income change	0.000	(0.000)	0.000	(0.000)	0.001	(0.001)
Unemployment rate change	-0.005	(0.013)	-0.004	(0.018)	-0.006	(0.016)
Per capita gross state product in 2003	-0.002	(0.002)	-0.005*	(0.002)	-0.003	(0.002)
Possessed savings in 2003	0.242***	(0.030)	0.221***	(0.045)	0.199***	(0.035)
Asset limit increased	0.026	(0.085)	0.108	(0.131)	-0.087	(0.113)
Years since asset change	-0.015	(0.012)	-0.012	(0.021)	0.008	(0.016)
Target group	-0.082*	(0.040)	-0.101	(0.060)	-0.042	(0.047)
Target × limit increased	0.134	(0.183)	0.016	(0.210)	0.35	(0.225)
Target × years since increase	-0.026	(0.029)	-0.022	(0.034)	-0.071*	(0.035)
N	1134		554		764	
RMSE	0.407		0.413		0.409	

R^2	0.308		0.324		0.336	
adj R^2	0.298		0.304		0.322	

*$p \leq 0.05$ **$p \leq 0.0$l ***$p \leq 0.001$

Note: Comparison set A is households with male heads and female heads without children and less than 16 years of education; comparison set B is male-headed households with children and less than 16 years of education; and comparison set C is households with male and female heads, without children and with less than 13 years of education.

Implications

Since the 1970s, median income for low-, middle-, and upper-income families has climbed steadily, if unevenly. For example, the lowest third of American families saw a 28 percent increase in income between 1970 and 2014, compared with a 47 percent increase for the highest third (Pew Research Center 2015). However, this differential has been significantly outpaced by a disparity in the financial assets of the richest and poorest households. Between 1983 and 2010, families in the highest income quintile increased their wealth by approximately 120 percent, while families in the lowest quintile lost wealth, with average assets below zero in 2010 (McKernan, Ratcliffe, Steuerle, and Zhang 2013). Disparities in household wealth are even starker along racial lines. According to Sullivan et al. (2015), median wealth for white families in 2011 was $111,146, compared with just $7,113 for black families and $8,348 for Latino families.

These disparities in wealth grew dramatically during the Great Recession, especially for poor and minority families (Pfeffer, Danziger, and Schoeni 2013). This may explain why the ownership of a bank account and total assets were associated only with income and race in our analysis. The lack of association between TANF asset limits and savings behavior is both good and bad news for state lawmakers. While eliminating or increasing the asset limit does not appear to be the silver bullet for encouraging financial independence among low-income families, it is also clear that liberalizing the asset test does not encourage the sheltering of significant assets while remaining eligible for public assistance. These findings, in addition to the lack of effect on state TANF caseloads (Hamilton, Alexander-Eitzman, and Royal 2015; The Pew Charitable Trusts 2016) and the potential administrative savings (Corporation for Enterprise Development 2013; The Pew Charitable Trusts 2016), support the efforts of advocates and lawmakers seeking to better align the TANF program with other asset-development policies such as mortgage-interest deductions, tax-sheltered retirement accounts, and 529 plans.

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