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Personal Debt Burden and Union Jobs: Evidence from the United States

CGR Working Paper 122

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Abstract

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1. Introduction

Union density in the United States has been on the decline for several decades, largely due to the shrinking number of unionized jobs, despite renewed organizing efforts in recent years (Naidu, 2022). Meanwhile, recent studies highlight the growing influence of personal debt on employment decisions, showing how it impacts job search behaviour, work contracts, and wages in the U.S. and beyond (Daniels and Smythe, 2019; Ji, 2021). A growing body of interdisciplinary research shows that personal debt shapes workers' job search strategies, contract preferences, and willingness to engage in workplace conflict or wage bargaining (Langley, 2007; Wood, 2017; Kim et al., 2019; Gouzoulis et al., 2023, Gouzoulis, 2024). The securitization of household credit, relaxed borrowing standards, and the growing influence of financial markets on daily life (together often termed as *financialization*) have made many workers, particularly those in lower- and middle-income brackets, more risk-averse in their employment decisions (Lazzarato, 2012; Betti et al., 2007). These trends raise a critical yet underexplored question: Does personal debt discourage workers from joining or remaining in unionised jobs?

To answer this question, this paper draws on longitudinal data from the Panel Study of Income Dynamics (PSID), which provides detailed information on household income and personal debt by type of credit. We focus on the period beginning in 1994, which marks the beginning of a major deregulatory era following the gradual repeal of the Glass-Steagall Act in 1999. This policy shift facilitated the expansion of consumer credit markets and increased financial exposure among American households (Krippner, 2005, 2011). The left panel in Figure 1, shows that union density in the United States declined markedly from nearly 18% in the early 1990s to just under 10% by 2021, while household debt burdens rose steadily over the same period shown in the right panel. Specifically, the mortgage share of household income nearly doubled, increasing from below 10% in 1999 to nearly 20% in 2021.

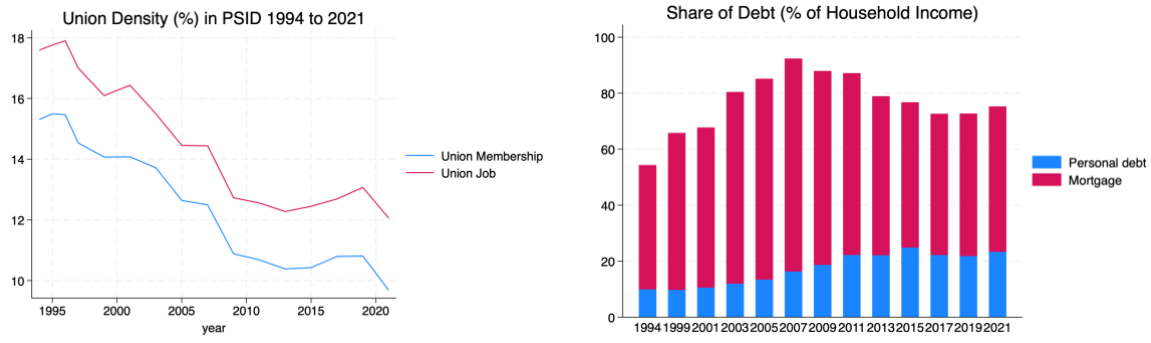


Figure 1. Union density (left panel) and income share of personal debt and mortgage (right panel). Data source: Panel Study of Income Dynamics.

Against this backdrop of rising indebtedness and financial deregulation, we explore how household financial constraints influence labor market preferences, particularly with regard to the choice between a union and a non-union job, which is a fundamental driver of union density in the U. S. It is important to note that not all workers in unionized workplaces are union members in the U.S., reflecting the distinctive legal and institutional features of American labour relations (Freeman, 1988). As of 2023, 26 U.S. states and the territory of Guam have enacted Right-to-Work (RTW) legislation, which permits workers in unionized settings to opt out of both union membership and the associated dues while benefiting from the collective agreement.[1] As such, these laws generally weaken the collective bargaining capacity of unions through lower finances and reduced participation (Fortin et al., 2021). Nevertheless, RTW laws do not necessarily suppress union membership, as unions can offer excludable benefits, like legal representation and workplace protections, that may still incentivise membership (Farber, et al., 2021).

To establish a causal relationship between household debt and union employment choices, we exploit the 2005 Bankruptcy Abuse Prevention and Consumer Protection Act (BAPCPA) as a natural experiment. This legislation introduced stricter means-testing criteria for Chapter 7 bankruptcy eligibility, effectively channeling many high-debt households into Chapter 13 repayment plans that require ongoing debt service over three to five years, rather than allowing complete debt discharge under Chapter 7. While framed as preventing abuse of bankruptcy protections, the creditor-friendly reform increased financial distress for households by making debt relief less accessible and repayment more burdensome. The BAPCPA provides an empirically attractive setting for analyzing debt effects because it created exogenous variation in household debt burdens. By altering the relative costs of different bankruptcy options, the law not only reduced the insurance value of bankruptcy (Gross et al. 2021) but also significantly impacted household financial constraints, our key mechanism of interest. This policy-induced variation allows us to isolate how changes in debt servicing obligations affect union employment decisions.

Our findings show that increased household debt significantly reduces the probability of unionized employment, an effect concentrated in states without RTW laws. Institutional labor market frictions play a key role in non-RTW states where union membership is often compulsory in unionized workplaces. In such settings, financially constrained workers may be disincentivized from pursuing union jobs due to the perceived financial risks and obligations associated with mandatory union participation. Our work draws upon, connects and contributes to different streams of research in management and labor economics through providing the first causal analysis of the household debt-unionisation nexus (Gouzoulis, 2024).

Extensive research in these fields argues that union membership enhances worker welfare by enhancing collective bargaining power, which, in turn, leads to higher wages, improved job

[1] States with RTW laws include Arkansas, Florida, Arizona, Nebraska, Virginia, Tennessee, North Carolina, Georgia, Iowa, South Dakota, Texas, Nevada, Alabama, Mississippi, South Carolina, Utah, Kansas, Wyoming, Louisiana, and Idaho.

security, and more favorable working conditions (among others, see Freeman & Medoff, 1984; Farber et al., 2018). While there is a broad empirical consensus regarding the positive effects of unions on workers, particularly in terms of wage premiums, access to benefits, and protection from arbitrary dismissal (Freeman, 1998; Barth, Bryson & Dale-Olsen, 2020), union density has experienced a persistent decline across advanced industrial economies over the past several decades. In the United States in particular, union jobs are well-documented to offer higher wages and more generous non-wage benefits (Blanchflower & Bryson, 2004). However, liquidity-constrained individuals may instead prioritize employment continuity and income stability. Despite recent unionization efforts in high-profile firms, like Amazon and Starbucks, the aggregate decline in union density remains unmitigated (Silver-Greenberg & Abrams, 2021), union density has fallen from over 30% in the mid-20th century to under 10% in the private sector today. This trend is often attributed to deindustrialization, employer resistance, and institutional erosion (Rosenfeld, 2014) .

Recent research shows that financial and credit constraints faced by corporations often pushes them to undermine labor unions and, overall, leads to worse bargaining outcomes for employees (Kollmeyer and Peters 2019; Towner 2020; Barron et al. 2022; Gouzoulis et al. 2024). Our paper shifts the focus on how financial and credit constraints faced by employees influence their choice of jobs in unionised places or not. As Hu et al. (2025) and Fermand et al. (2024) show, uncertainty related to personal finances and the lack of financial regulation makes households adopt precautionary economic strategies and harms their mental wellbeing. In that regard, we extend this line of reasoning to workplace and job choice strategies, looking at whether personal financial uncertainty stemming from household indebtedness affects unionization rate as part of a broader "precautionary" behavioural adjustment. These effects are likely to be particularly pronounced in sectors where employers may relocate production or outsource to non-unionized labor markets in response to organizing activity (Myers and Saretto 2016).

2. Data

Our primary data source is the Panel Study of Income Dynamics (PSID), a nationally representative, longitudinal survey of U.S. individuals and families. Conducted by the University of Michigan, the PSID was launched in 1968, collecting rich information from over 84,000 individuals and 9,200 families on a broad range of socioeconomic variables, including employment status, income, education, family structure, and health. These families are followed over time, even if the individual members moved out and started their own families in subsequent years. The PSID's panel structure enables us to track individual labor market outcomes and debt accumulation over time, making it well-suited for causal inference in the

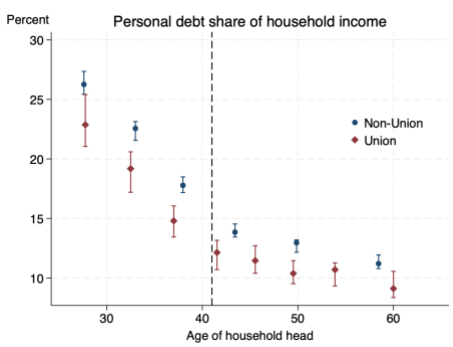
context of policy changes such as the 2005 Bankruptcy Abuse Prevention and Consumer Protection Act (BAPCPA).

Our analysis period starts in 1994, and then includes information from every biennial wave from 1999 to 2021. In 1994, the PSID began incorporating detailed financial modules that capture household assets and liabilities, including various forms of debt such as credit card balances, student loans, medical debt, and mortgages. From 1999 onward, these measures became more standardized and were consistently reported across survey waves, allowing for reliable comparisons over time. Our primary outcome is a binary indicator of unionized employment, coded as one if the respondent reports working in a unionized workplace.

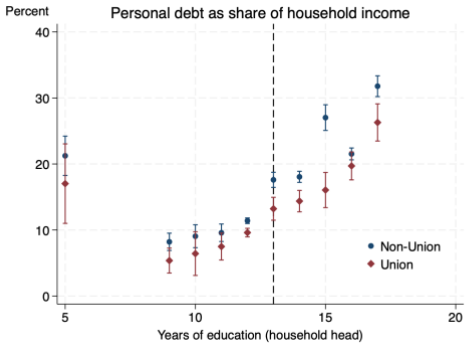
The estimation sample is restricted to households with working heads aged between 25 and 65. To focus on full-time labor market participants, we exclude individuals who report working fewer than 35 weeks in a given year. All monetary values are adjusted to 2019 U.S. dollars using the Consumer Price Index (data available from the U.S. Bureau of Labor Statistics). To reduce the influence of outliers, we exclude households with per capita income below $3,000 or above $140,000—corresponding to the bottom and top 1% of the income distribution in the sample. After applying these sample selection criteria, the final estimation sample comprises approximately 16,000 household heads.

Figure 2 plots the distribution of household debt burdens across key demographic and economic dimensions, disaggregated by union status. Panel a reveals a clear negative association between personal debt (as a share of household income) and the age of the household head, a pattern consistent across both unionized and non-unionized households. However, at any given age, households with union employment consistently exhibit lower personal debt shares, suggesting a potential financial buffer associated with union membership. Panel b shows that personal debt shares increase with educational attainment, likely reflecting the positive correlation between education and lifetime income, as well as the role of student loans. However, conditional on education level, unionized households carry a smaller personal debt burden.

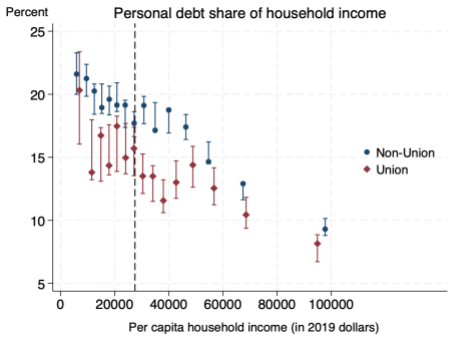
Examining the relationship between debt and income, Figure 2, panel c documents an inverse relationship between personal debt shares and per capita household income, whereas mortgage debt shares rise with income (panel d). Notably, across the income distribution, unionized households maintain consistently lower personal debt shares, while mortgage debt levels are similar between unionized and non-unionized households. These patterns are consistent with the interpretation that union membership provides financial advantages that reduce reliance on borrowing.



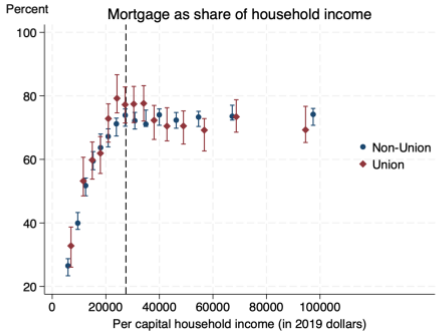
Panel a: Personal Debt and Age



Panel b: Personal Debt and Education



Panel c: Personal Debt and Income



Panel d: Mortgage and Income

Figure 2. The figures are binned scatter plots of personal debt shares of household income over age (panel a), years of completed education (panel b), per capita household income (panel c), and that of mortgage share over per capita household income (panel d). The dotted lines represent the median household, who is 41 years old, with 13 years of completed education, and with USD27,500 income per household member (in 2019 dollars).

Table 1 presents summary statistics of key variables for individuals in our estimation sample, disaggregated into the pre-BAPCPA period (columns 1 and 2) and post-BAPCPA period (columns 3 and 4). The distinction between the two periods is motivated by the need to contextualize post-2005 data within a shifting macroeconomic landscape. The 2008 Global Financial Crisis (GFC) followed shortly after the enactment of BAPCPA, introducing substantial economic dislocation marked by widespread defaults, bank failures, and credit market disruptions, particularly among households with subprime mortgages. The data reflect this deterioration in financial conditions. The average share of personal debt relative to household income more than doubled in the post-BAPCPA period, rising from approximately 9–11% to 16–20%. Mortgage debt as a share of income also increases, from about 60% before 2005 to between 66% and 72% afterward. Across both periods, households with non-unionized heads carry higher personal debt burdens than their unionized counterparts.

Table 1. Summary Statistics

	PSID pre-2005			PSID post-2005		
	Union Job (1)	Non-Union Job (2)	*p-value*	Union Job (3)	Non-Union Job (4)	*p-value*
Individual Characteristics						
Age	42.33	40.35	<0.0001	43.22	43.31	<0.0001
Male	0.79	0.76	0.0005	0.74	0.74	0.2963
White	0.53	0.62	<0.0001	0.51	0.61	<0.0001
High school	0.54	0.47	<0.0001	0.42	0.36	<0.0001
University	0.44	0.51	<0.0001	0.56	0.61	<0.0001
Weeks worked per year	48.33	49.04	<0.0001	48.54	49.11	<0.0001
Public sector	0.16	0.07	<0.0001	0.02	0.03	<0.0001
Labor income	61,592	55,438	<0.0001	61,149	56,579	<0.0001
Household Characteristics						
Household income	93,634	84,930	<0.0001	92,514	86,560	<0.0001
Per capita household income	34,997	32,843	<0.0001	36,400	34,511	<0.0001
Personal debt income share (%)	8.97	10.54	<0.0001	16.56	20.54	<0.0001
Mortgage income share (%)	59.72	60.02	0.8502	71.85	65.91	<0.0001
2nd mortgage share (%)	0.66	0.58	0.1791	0.82	0.72	0.1209
Number of individuals	1,834	6,365	-	2,506	10,078	-

Notes: The table reports the summary statistics of individuals in our estimation sample. We separate observations from before 2005 (columns 1 and 2) and after (columns 3 and 4, the year when the Bankruptcy Abuse Prevention and the Consumer Protection Act was signed into law. Average characteristics of household heads with unionised employment are reported in odd columns; those of household heads without unionised employment are reported in even columns. Source of data is the Panel Study of Income Dynamics (the wave 1994, and then every available wave up to 2021).

Demographic and labor market characteristics of household heads remain broadly similar across union and non-union groups over time. Age, educational attainment, weeks worked, and total labor income show only modest differences. Non-union workers are, on average, slightly more likely to be white and have marginally higher levels of formal education, consistent with existing evidence on the demographic characteristics of union membership in the U.S. during this period (9). Moreover, the average labor income of non-union household heads is about 92% of that of their unionized counterparts, consistent with the documented wage premium associated with union jobs in the literature.

3. Empirical Strategy and Results

3.1 Reduced-form evidence

We begin our analysis by estimating the association between individual indebtedness and the likelihood of being employed in a unionized workplace. To do so, we employ a Linear Probability Model (LPM), which allows us to interpret the effect of indebtedness on the binary outcome of unionized employment in terms of marginal changes in probability. Specifically, we estimate the following specification:

$$Y_{it} = \alpha + \beta Debt_{it} + X_{it}\delta + \gamma_i + \kappa_t + \varepsilon_{it} \quad (1)$$

where Y_{it} is a binary indicator that equals one if individual *i* reports holding a unionized job in PSID wave *t*, and zero otherwise. The key independent variable is household debt, measured as a percentage share of total household income. In Table 2, columns 1 and 2, we use the logarithm of total household debt, combining both personal and mortgage components. In columns 3 and 4, we disaggregate this measure into separate shares for personal debt (e.g., credit card balances, student loans) and mortgage debt. Each is expressed as the natural logarithm of its respective share of household income. This transformation allows us to interpret the coefficients as approximate percentage changes while addressing skewness in the distribution of debt shares.

The vector X_{it} includes time-varying individual-level controls: age, educational attainment, number of weeks worked, and gender of the household head. In Table 2, columns 2 and 4, we additionally control for per capita household income as a proxy for overall household economic well-being. All regressions include individual (worker) fixed effects and year fixed effects to account for unobserved heterogeneity and time trends. Standard errors are clustered at the state-year level to allow for arbitrary correlation within states over time.

Table 2, columns 1 and 2 show that the total share of debt relative to income is not significantly associated with union employment status. This result appears counterintuitive, as union jobs, which typically offer wage premiums, may enable households to assume higher levels of debt, particularly through mortgage borrowing. To explore whether the null result masks the type of debt as a meaningful source of heterogeneity, we decompose total debt into mortgage and personal debt, where the latter includes credit card debt, student loans, medical debt, and legal obligations. Columns 3 and 4 of Table 2 show that the composition of debt is consequential. A 10 percent increase in the personal debt share is associated with a 1.9 to 2.2 percentage point decrease in the probability of unionized employment. We interpret this finding as evidence that highly indebted individuals may avoid union jobs, which are perceived as less stable due to the risk of employer relocation or restructuring. In contrast, mortgage debt share remains positively associated with union employment (column 4), consistent with the notion that higher, stable earnings in unionized settings facilitate access to homeownership.

Table 2. Indebtedness and Union Jobs- Linear Probability Model

	Pr(Union Job)			
	(1)	(2)	(3)	(4)
Total Debt Share	0.000751	0.000683		
	(0.000887)	(0.000773)		
Personal Debt Share			-0.00222**	-0.00189*
			(0.00108)	(0.00108)
Mortgage Share			0.00334***	0.00334***
			(0.000793)	(0.000793)
Year FE	yes	yes	yes	yes
Worker FE	yes	yes	yes	yes
Controls	yes	yes	yes	yes
Per Capita HH Income	no	yes	no	yes
Mean of dep. var.	.184	.184	.184	.184
Observations	47,446	50,240	47,450	47,450
R-squared	0.751	0.749	0.752	0.752

Notes: The table reports estimates from a linear probability model, where the dependent variable = 1 if a worker is employed in a unionised workplace. Debt shares are log transformed. Standard errors are clustered at the state-year level. *** p<0.01, ** p<0.05, * p<0.1.

3.2 Effects of indebtedness on unionised employment

A potential concern with the preceding analysis is that the observed negative correlation between personal indebtedness and unionized employment may be driven by reverse causality. Specifically, rather than indebted workers avoiding union jobs, it is possible that individuals employed in unionized workplaces accumulate less personal debt due to higher and more stable earnings. Under this interpretation, the negative association would reflect selection into lower debt levels as a consequence of union employment, rather than debt inducing sorting away from union jobs.

To overcome this challenge in distinguishing cause from effect in the correlation between indebtedness and unionized employment, we adopt a two-stage approach to leverage the plausibly-

exogenous variation in debt generated by the 2005 BAPCAP reform. In the first stage, we estimate the following difference-in-differences model:

$$Debt_{it} = \gamma_i + \kappa_t + \beta Treatment_i \times After_t + \gamma X_{it} + \varepsilon_{it} \quad (2)$$

where the dependent variable *Debt* denotes income share of personal debt in the household headed by individual i in year t. We control for individual fixed effects, γ_i, and time trends, κ_t. The coefficient of interest, β, is attached to an interaction term identifying the treatment group—households that were highly indebted prior to 2005. We construct a binary treatment indicator based on pre-reform debt levels. Treated households are initially highly indebted, defined as those who had between 100 and 150 percent of their income as personal debt (excluding mortgage) at any PSID wave before 2005.. Control households are moderately indebted, defined as those who had at most 50 to 100 percent of income as debt at any PSID wave prior to 2005. This interaction term equals one for treated households in years following the implementation of the 2005 BAPCPA, and zero otherwise. The parameter β thus captures the differential change in personal debt burden among initially highly indebted households relative to moderately indebted households before and after the reform. Standard errors are clustered at the state-year level to allow for correlated shocks within geographic units over time.

In the first stage, we use household level exposure to the 2005 BAPCPA as an instrument for personal debt with a difference-in-differences model. We then estimate the main equation (Equation 1) as the second stage, where the outcome is the probability of unionized employment. This two-stage approach enables us to identify the causal effect of household indebtedness on union participation, leveraging plausibly exogenous variation in debt burdens induced by the BAPCPA reform.

A key assumption underlying the DD model is that the debt share of income in the treated and control groups would have followed a parallel trend after 2005 in absence of the policy reform. Figure 3 shows that the assumption holds in the data. In both the treatment and control groups, the average debt shares were declining from 2003 to 2005. However, we see that while the debt shares in moderately indebted households (*control*) remained at about 30 percent after the BAPCAP reform, the average share of debt among initially highly-indebted households (*treatment*) increased sharply to almost 60 percent in 2011, before converging to the control group average of about 30 percent from 2017.

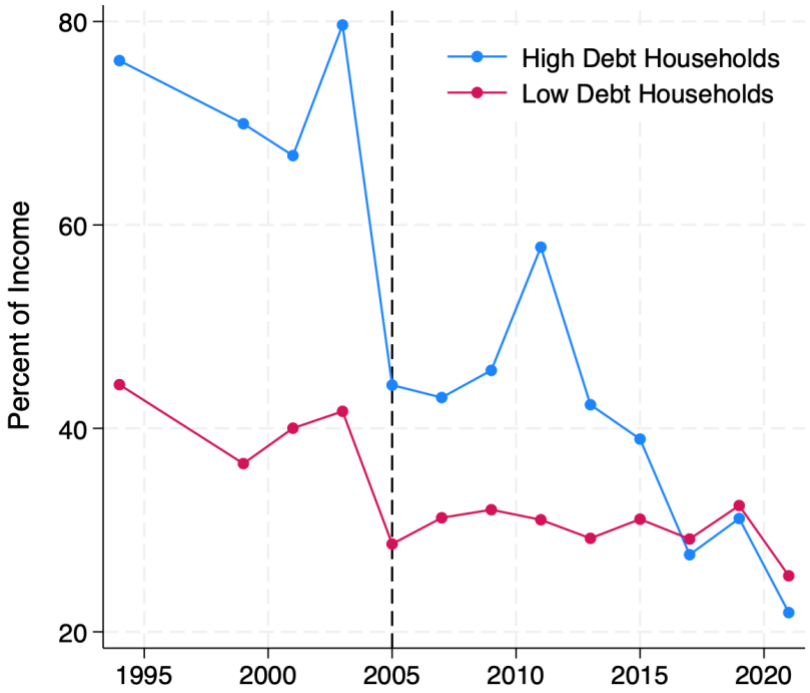


Figure 3. The figure plots the average percentage share of debt in household income in each PSID wave in our analysis period. High debt households are in the treatment group (colored blue), defined as those who had between 100 to 150 percent of debt share in income at any point in time prior to 2005, the year when the BAPCAP reform was signed into law (as indicated by the vertical dotted line). Low debt households are the control group (colored red), defined as those who had at most between 50 to 100 percent of debt share in income prior to 2005.

Table 3, Column 1 reports the first stage, difference-in-differences estimation, showing that the reform led to a statistically significant, approximately 20 percentage point reduction in the personal debt share of income among treated households. This finding is consistent with the mechanism implied by the reform: by restricting access to Chapter 7 bankruptcy, BAPCPA made debt discharge more difficult, thereby incentivizing repayment and reducing overall debt accumulation among affected households.

Table 3. Debt and the 2005 BAPCPA - Difference-in-differences

	Debt Share	Pr(Union Job)		
	All States	All States	RTW States	Non RTW States
	(1)	(2)	(3)	(4)
BAPCAP X AFTER	-19.94***			
	(4.167)			
Debt share (IV)		-0.000758	0.00204	-0.00443*
		(0.00119)	(0.00230)	(0.00255)
Year FE	yes	yes	yes	yes
Worker FE	yes	yes	yes	yes
Weak Identification Test F stat	-	33.261	10.057	13.896
Mean of dep. var.	37	.173	.0762	.292
Observations	4,008	3,313	1,561	1,363
R-squared	0.443	0.752	0.636	0.809

Notes: The table reports estimates from the difference-in-differences (DD) specification (column 1), comparing the income shares of debt among initially high-debt and low-debt households before and after the 2005 BAPCAP. We use the DD estimate to instrument for debt and estimate the effect of debt on unionised employment with a linear probability model for all states (column 2), RTW states (column 3) and non RTW states (column 4). Standard errors are clustered at the state-year level.

In the second stage, we estimate the effect of personal debt, instrumented with exposure to the 2005 BAPCPA, on the probability of unionized employment. Table 3, columns 2 through 4 report the instrumental variables estimates.[2] We find that higher personal debt significantly reduces the likelihood of union employment, with the effect concentrated in states without right-to-work (RTW) laws. For a 10 percentage point increase in the instrument debt share of income, the probability of the household head being in unionised employment declines by 4.4 percentage points (column 4). In non-RTW states where union membership is mandatory in unionized workplaces, financially constrained individuals may be more sensitive to the perceived risks of union jobs, such as lower job mobility or increased exposure to firm-level restructuring, ultimately reducing their likelihood of participating in unionized employment. In contrast, the effect is statistically zero in states with RTW laws.[3]

[2] The Cragg-Donald Wald F-statistics reported in Table 3, columns 2 through 4, fall between the 10% and 15% maximal IV size critical values of the Stock-Yogo weak identification test. This suggests that our instrument, exposure to the 2005 BAPCPA, is sufficiently strong for identifying the causal effect of personal debt.

[3] The analysis excludes initially non-RTW states that have adopted RTW laws during our analysis period. These include Oklahoma (became RTW on Sept 25, 2001), Indiana (became RTW on Feb 1, 2012), Michigan (became RTW on Mar 8, 2013), Wisconsin (became RTW on March 9, 2015), West Virginia (became RTW on Feb 12, 2016), and Kentucky (became RTW on Jan 9, 2017).

5. Conclusion

Our findings provide new evidence that household financial distress can shape labor market decisions, particularly in relation to unionized employment.

Using longitudinal data from the Panel Study of Income Dynamics and leveraging quasi-experimental variation from the 2005 BAPCPA, we identify a causal relationship between higher personal debt and a reduced likelihood of working in a unionized job. This relationship is especially pronounced in non right-to-work (RTW) states. These results suggest that the decline in unionization in recent decades may be partly explained by rising household indebtedness—a factor not traditionally emphasized in labor market analyses. While prior research has focused on macroeconomic, institutional, or ideological explanations for declining union density, our analysis highlights an important household-level mechanism: financially constrained workers may opt out of unionized employment due to perceived risks, such as job insecurity, reduced geographic mobility, or the diminished value of union protections under RTW legislation.

Future work should investigate the specific channels through which debt discourages unionization. For instance, is the effect driven by reduced job mobility, fear of employer retaliation, or diminished trust in collective bargaining? Moreover, our findings raise broader questions about whether rising indebtedness may also influence other forms of institutional or political participation, especially in contexts where consumer credit regulation and debtor protection laws can affect not only financial outcomes, but also institutional labor dynamics.

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